एनटीपीसी
NTPC

आज़ादी का अमृत महोत्सव

46TH INTEGRATED ANNUAL REPORT 2021-22

Vision

To be the World's Leading Power Company, Energizing India's Growth

MISSION

"Provide Reliable Power and Related Solutions in an Economical, Efficient and Environment Friendly Manner, Driven by Innovation and Agility"

CORE VALUES

ICOMIT

Integrity
सत्यनिष्ठा

Customer Focus
ग्राहक को प्रधानता

Organisational Pride
संगठन पर गौरव

Mutual Respect and Trust
परस्पर विश्वास एवं आदर

Innovation and Learning
नवप्रवर्तन एवं ज्ञानार्जन

Total Quality and Safety
संपूर्ण गुणवत्ता एवं सुरक्षा

CORPORATE OBJECTIVES

BUSINESS PORTFOLIO GROWTH

- To sustain NTPC's position as the leading power generation company in the world.
- To broad base the generation mix with significant proportion of clean energy sources.
- To enable the generation fleet to operate at optimum efficiency while meeting the demand and stability in the grid.
- To diversify into emerging businesses and markets across the power value chain including coal mining, power trading, ancillary services, E-mobility, storage and related adjacencies.
- To establish a strong services brand in domestic and international markets.

CUSTOMER FOCUS

- To foster a collaborative style of working with customers, growing to be a preferred brand for supply of quality and reliable power.
- To expand the customer portfolio through profitable diversification into downstream business inter alia E-mobility and direct supply.
- To ensure rapid commercial decision making, using customer specific information, with adequate concern for the interest of the customer.
- To adapt business models and organisation structures to capture value which is progressively shifting towards the customers.

AGILE CORPORATION

- To ensure effectiveness in business decisions and responsiveness to changes in the business environment by:
    - o Adopting a portfolio approach to new business development.
    - o Continuous and co-ordinated assessment of the business environment to identify and respond to opportunities and threats.
- To create lean organization and business processes.
- To develop a learning organization having knowledge-based competitive edge in current and future businesses.
- To develop a culture of curiosity and innovation in learning and adopting new technologies, business models and operational philosophies in line with the evolving market and changing customer needs.

PERFORMANCE LEADERSHIP

- To continuously strive for innovation in reducing costs, enhancing operational flexibility and in addressing changing customer needs.
- To continuously improve on project execution time and cost in order to sustain long term competitiveness.
- To effectively leverage Information Technology to drive process efficiencies and enable system flexibility in line with the market needs.
- To create capabilities to attain leadership in the new and emerging businesses.
- To embed quality and safety in all systems and processes.
- Support evolution of power markets to meet customer needs through products, platforms, services etc. to create a win-win opportunity across stakeholders.
- To lead development efforts in the Indian power sector through stakeholder consultation.
- To assist in capacity creation of key stakeholders.

HUMAN RESOURCE DEVELOPMENT

- To enhance organizational performance by institutionalizing an objective and open performance management system.
- To align individual and organizational needs and develop business leaders by implementing a career development system.
- To build a lean organization with diverse skills and high ability to adapt to change.
- To build and sustain a learning organization of competent world-class professionals.
- To institutionalize core values and create culture of team-building, ownership, empowerment, equity, innovation and openness which would motivate employees and enable achievement of strategic objectives.

FINANCIAL SOUNDNESS

- To maintain and improve the financial soundness of NTPC by prudent management of the financial resources.
- To continuously strive to reduce the cost of capital through prudent management of deployed funds, leveraging opportunities in domestic and international financial markets.
- To promote innovative funding models to support entry into new businesses and sustain long term growth.
- To develop appropriate commercial policies and processes which would ensure remunerative tariffs, balance capital work-in-progress and minimize receivables.

SUSTAINABILITY AND CORPORATE SOCIAL RESPONSIBILITY

- To deliver business and environmental value through projects which are beneficial for business and larger ecosystem.
- To ensure sustainable power development by ensuring minimal wastage across operations.
- To actively contribute towards societal development.
- To lead the sector in the areas of resettlement and rehabilitation and environment protection including effective ash-utilization, peripheral development and energy conservation practices.

RESEARCH & DEVELOPMENT (R&D)

- To undertake R&D initiatives in sync with the overall business portfolio.
- To pioneer the adoption of reliable, efficient and cost-effective technologies by carrying out fundamental and applied research in alternate fuels and technologies.
- To collaborate with leading institutes, technology players and service providers, particularly in the area of power plant construction, generation technology, operations, renewable energy sources, storage, e-mobility etc. that can contribute towards efficiency, reliability and environment friendliness.

REFERENCE INFORMATION

Registered Office

NTPC Bhawan, SCOPE Complex,
7, Institutional Area, Lodhi Road,
New Delhi-110 003
Phone No.: 011-2438 7333
Fax No. . 011-2436 1018
Email: ntpccc@ntpc.co.in
Web site: www.ntpc.co.in
CIN: L40101DL1975GOI007966

Registrar & Share Transfer Agent for Equity Shares

M/s Beetal Financial & Computer Services Pvt. Ltd.,
99, Madangir, Behind Local Shopping Centre,
Near Dada Harsukhdas Mandir, New Delhi - 110 062
Contact person: Shri Punit Mittal or
Shri Ratan Kumar Karna
Phone: 011-29961281 – 83, 26051061 & 26051064
Email: ntpc@beetalfinancial.com

Depositories

National Securities Depository Limited
Central Depository Services (India) Limited

Shares listed at

National Stock Exchange of India Limited
BSE Limited

NTPC's Subsidiary Companies (as on 31.3.2022)

NTPC Vidyut Vyapar Nigam Limited
NTPC Electric Supply Company Limited
Kanti Bijlee Utpadan Nigam Limited
Nabinagar Power Generating Company Limited
Bhartiya Rail Bijlee Company Limited
Patratu Vidyut Utpadan Nigam Limited
NTPC Mining Limited
North Eastern Electric Power Corporation Limited
THDC India Limited
NTPC EDMC Waste Solutions Private Limited
NTPC Renewable Energy Limited
Ratnagiri Gas and Power Private Limited

Company Secretary

Ms. Nandini Sarkar

Auditors

1. M/s. S K Mehta & Co.
2. M/s. S N Dhawan & Co LLP
3. M/s. Varma & Varma
4. M/s. Parakh & Co.
5. M/s. C K Prusty & Associates
6. M/s. B C Jain & Co.
7. M/s. V K Jindal & Co.

Bankers

AXIS BANK
Bank of India
Bank of Baroda
Central Bank of India
HDFC BANK
ICICI Bank
IDBI BANK
Indian Bank
Indian Overseas Bank
IndusInd Bank
J&K Bank
punjab national bank
State Bank of India
UCO BANK
Union Bank of India
YES BANK

Save Earth

SUPPORT ‘GREEN INITIATIVE‘

GREEN INITIATIVE IN THE CORPORATE GOVERNANCE

The Ministry of Corporate Affairs has takes a “Green Initiative in the Corporate Governance“ by allowing paperless compliances by the companies and has issued circulars stating that service of notice/ documents including Annual Reports can be send by e-mail to its members. To support this green initiative of the Government in full measure, members who have not registered their e-mail addresses, so far, are requested to register their e-mail address, in respect of electronic holdings with the Depository through their concerned Depository Participants. Members who hold shares in physical form are requested to get their e-mail address registered with Beetal Financial & Computer Services Private Limited, RTA of the Company.

CONTENTS

Annual General Meeting

Date	:	30th August, 2022
Time	:	10:30 A.M.
Venue/Mode	:	Video Conferencing (“VC”)/ Other Audio-Visual Means (“OAVM”)

NTPC, Korba Super Thermal Power Plant

About the REPORT

SCOPE OF THE REPORT

The NTPC Integrated* Annual Report has been prepared in accordance with the <IR> Framework laid down by the International Integrated Reporting Council (IIRC). Also, other frameworks such as GRI Standards "Comprehensive" with EUSS, WEF - Stakeholder Capitalism Metrics, National Guidelines on Responsible Business Conduct (NGRBC), United Nations Sustainable Development Goals (UN SDGs) and the United Nations Global Compact (UNGC) principles has been referenced in the content preparation. The financial and statutory information in this report is in accordance with the requirements of the Companies Act, 2013, Indian Accounting Standards, the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 and the Secretarial Standards.

BOUNDARY OF THE REPORT

This report covers the business activities of NTPC Limited and its Joint Ventures & Subsidiaries covering electricity generation (Thermal, Renewables, Hydro), Consultancy, Business Development, NETRA and Energy Trading. All stations/ plants considered in current report are located in India and are under operation. The report covers data and information for the period April 1, 2021 to March 31, 2022. There have been considerable changes in the installed capacity of power generation plants during this reporting period. The details have been provided in the manufacturing capital section of this report.

REPORT METHODOLOGY

For collection of data on performance indicators, a uniform approach is followed across all NTPC stations. Collected data is then processed at individual operating stations in accordance with universally accepted methodologies following approaches of measurement, calculation and analysis. There is no re-statement or significant change in measurement methods applied in this report with respect to the previous report, except if mentioned, wherein applicable. Report content and aspect boundary provided in the report has been reviewed and approved by top management of the company.

ASSURANCE OF THE REPORT

Non-financial information in this report, has been independently assured by M/s KPMG, India. A reasonable assurance was conducted in accordance with ISAE 3000 Standards, covering qualitative and quantitative information.

NTPC appreciates feedback from all stakeholders. For any additional information regarding sustainability report, please reach out to the addresses given below

Headquarter

NTPC Limited
(A Govt. of India Enterprise)
NTPC Bhawan,
Core-7, Scope Complex 7,
Industrial Area, Lodhi Road,
New Delhi-110003

CSO's Office

Engineering Office Complex (EOC)
NTPC Limited
Sector - 24, Noida - 201 301 (U.P.)
Email- sustainability@ntpc.co.in
Phone: (+91) 120 - 2410350,
Fax: (+91) 120 - 2410500

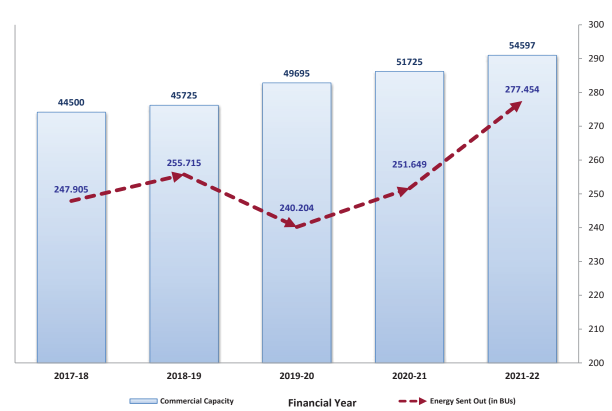
A view of NTPC Ramagundam Super Thermal Power Plant

THE YEAR AT A GLANCE

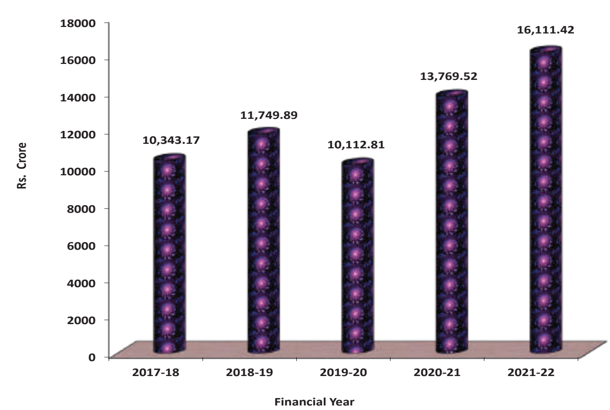
		2021-22	2020-21
Gross Generation	Million Units	299183	270907
Commercial Generation	"	298304	269955
Energy sent out	"	277454	251649
Sale of Energy (including Electricity duty)*	₹ crore	114827	98536
Profit before tax	"	19166	13916
Profit for the year	"	16111	13770
Dividend	"	6933	5531
Retained Profit	"	9178	8238
Total Fixed Assets	"	248763	239887
Net Worth	"	128051	118985
Total non-current borrowings including current maturities	"	164016	160756
Capital Employed	"	189121	174649
Net Cash From Operations	"	35388	27058
Value Added	"	45968	42965
No. of Employees	Number	15786	16798
Value added per employee	₹ crore	2.91	2.56
Debt to Equity	Ratio	1.33	1.46
Debt Service Coverage Ratio (DSCR)	Times	1.97	2.36
Interest Service Coverage Ratio (ISCR)	Times	4.72	4.42
Return on Capital Employed	%	10.85	10.86
Face Value Per share	₹	10.00	10.00
Dividend Per Share	"	7.15	5.65
Book Value Per Share	"	132.06	122.71
Earnings Per Share	"	16.62	13.99

* Including Sale of Energy through trading.

Commercial Capacity & Energy Sent Out



Profit for the Year



THE YEAR AT A GLANCE

Letter to Shareholders

Dear Shareholders,

The global energy landscape is currently facing severe challenges. While resumption of economic activity and the revival of investment have driven demand, supply has been challenged by availability issues and logistics bottlenecks. Globally, the fuel prices have increased significantly, and this has made Energy Security the topmost priority for every nation.

The country faced an unprecedented coal crisis last year which continued this year as well. Domestic coal supply has not kept pace with the required demand, leading to increased need for importing coal. Further, the abnormal increase in LNG and imported coal prices have led to decrease in power generation from these sources which has increased the gap between demand and supply. This led to substantial increase in the electricity generation costs which reflected in the all-time high levels of Market Clearing Prices in the Power Exchange.

Your Company has been carefully monitoring the fuel supply situation and has taken corrective actions on a continuous basis to ensure energy security for the country by ensuring reliable fuel supplies. This has been done by arranging maximum possible coal supplies from domestic sources, ramping up coal production from captive mines and sourcing imported coal to ensure that no station is starved of fuel.

The developments across the globe are expected to accelerate the energy transition plans of every nation. As part of your Company's energy transition programme, along with renewable energy sources, we have started working on storage technologies and discussions are underway for adding Nuclear capacity as well. We are also working with NITI Aayog and have signed a Statement of Intent for preparing our "Net Zero" plan in line with the country's commitment.

On the business front, FY 2021-22 was another transformative year for your Company. We have improved our generation share and rolled out important initiatives that will ensure continued success in the future.

Robust growth despite supply chain disruptions:

The Company's generation crossed the 350 BUs mark for the first time and recorded an all-time high generation of 360 BUs, registering a growth of 15% as compared to the country's generation growth of 8% in the same period. This means, we generated almost 1 BU on an average every day. Further, in FY 2022-23, till Q1, your Company has generated 104.42 BU, registering a growth of 21.7% year-on-year and the coal stations operated at over 80% PLF.

In the current fiscal, your Company achieved the 100 BUs generation mark in 88 days which is the best achievement till date. We have registered the highest single day generation of 1245 MUs on June 10, 2022. These numbers indicate that the growth is substantial and is likely to continue going forward.

Your Company achieved capacity addition of 3372 MW and commercial capacity addition of 4032 MW. Further, 172.52 MW renewable capacity has been added in FY 2022-23 till date taking NTPC group installed capacity to 69,134.2 MW.

Coal production from the captive mines stood at 14.02 MMT for FY 2021-22, registering a growth of 27%. Mining operations started at one more mine, Chatti Bariatu and the captive coal production target for FY 2022-23 has been set as 26 MMT. This will help ensure fuel security for your Company's power stations.

Despite numerous challenges, considerable acceleration in your Company's growth momentum in the recent past encourages me to assure you that the Company will continue to grow and prosper despite the issues emerging on the global and national business horizons.

Renewables – Growth engine for future:

On the renewables front, we won bids totaling 3265 MW in FY 2021-22 and commissioned 502 MW of new capacity. With this, the total renewable capacity won through competitive bidding has reached 7562 MW and total renewable commissioned capacity crossed the 2 GW mark.

It is pertinent to mention that your Company has commissioned India's largest floating solar plant at Ramagundam in Telangana. With this, we have achieved commissioning of 222 MW of floating solar projects and another 40 MW is under construction. These indicate we are progressing well on the renewables side along with the conventional business.

We have formed a new Company, NTPC Green Energy Limited (NGEL) under which

we plan to consolidate almost all our green assets. We have got requisite approvals from the Government for transferring our RE assets to the new Company. We are in the process of identifying strategic investors for NGEL and plan to complete the process in the current fiscal.

We have started putting in place firm plans for achieving 60 GW of renewable capacity by 2032 as committed earlier. Apart from the 2 GW capacity which is already commissioned, over 4 GW of capacity is in the construction stage and 5 GW capacity is in the tendering stage. The work at the largest renewable energy park (4750 MW) at Khavda in Gujarat has started. We have also signed MoU with Government of Rajasthan for allocation of land parcels for setting up aggregate renewable capacity of 10 GW. We have also taken action for setting up of around 1600 MW of merchant capacity.

Your Company is working on multiple fronts and multiple models to realize the targeted capacity addition in the Renewables. Further, efforts are on for partnering with Commercial and Industrial (C&I) consumers for supplying renewable and RTC power.

Your Company is also progressing well in the green hydrogen space. Work is in progress at Leh on an integrated project for mobility, where five intra-city buses would ply using green hydrogen. In addition to the green methanol pilot project at Vindhyachal, the work for blending green hydrogen with natural gas (PNG) at Kawas is also in progress.

Outstanding Financial performance:

Despite several challenges in the business, your Company has posted strong financial results. The total income stood at ₹120,042.43 crore as against previous year income of ₹ 103,552.71 crore, registering an increase of 15.92%. The Company registered its highest ever profit of ₹16,111.42 crore as against ₹ 13,769.52 crore in FY 2020-21, registering an increase of 17.01%.

Consistent efforts made by your Company in improving the performance of JVs and Subsidiaries has yielded high returns. They have earned a profit of ₹4,004 crore in FY 2021-22 against ₹3,033 crore in FY 2020-21. We have accounted for dividend income of ₹ 2,134.34 crore from our JVs and Subsidiaries as against ₹1,274.19 crore during FY 2020-21.

In FY 2021-22, the Board of your Company has recommended final dividend @ 30% of paid-up capital i.e @ ₹3/- per share subject to approval of Shareholders in the Annual General Meeting in addition to the interim dividend @ 40% of paid-up capital, i.e @ ₹4/- per share already paid. This is the 29th consecutive year that the Company has paid a dividend.

Your Company incurred a Capex of ₹ 21,035.87 crore on a standalone basis and group capex of ₹34,490.55 crore. With the commercialization of projects, the regulated equity reached ₹70,890 crore on a standalone basis.

The bills realization stood at ₹ 1,16,148 crore which is 100% of the billed amount. Your Company enjoys the most favored borrower status due to its prudent management of debt financing. The proactive refinancing strategy adopted by your Company to leverage market conditions for availing low-cost debt has resulted in your Company being able to raise the most competitive debt in the market. We are continuously working on optimization, process improvement to reduce the overheads and increase profitability for ensuring sustained returns to the shareholders.

NTPC Renewable Energy Limited obtained the highest domestic credit rating of ‘AAA’ within one year of its incorporation and has been able to tie up its maiden domestic “Green” loan at a very competitive rate.

Sustainability- Growth with inclusiveness:

Sustainability remains one of the key pillars of our business and we at NTPC have been challenging ourselves every day with new targets to better our sustainability performances. We are tirelessly working to make our business model sustainable throughout the entire value chain and we have ensured that our sustainability priorities cover varying geographical, economic and social contexts. We are consistently striving to become more transparent in the timely disclosure of our social, environmental and economic performances. Towards this end, we adopted the integrated reporting framework early and increased the scope through inclusion of many more sustainability standards and ESG frameworks.

Globally energy business is transitioning towards a more secure, resilient, and greener future. We wish to promote a transition that is transparent and just, avoiding inequalities and unemployment and at the same time open and creative which is capable of utilizing talents and unleashing passions, strengthening the bond with communities of engaging customers and suppliers. Our current energy efficiency improvement efforts and energy diversification avenues have helped us in reducing the specific GHG emission by 2% in FY 2021-22 vis-à-vis FY 2011-12. Our current renewable pipeline excluding hydro capacities is over 11 GW and

with the commissioning of new units, we anticipate to reduce our specific CO_2 emissions substantially over the next few years.

We are committed to champion the circular economy through multiple avenues of ash utilization and Waste-to-Wealth projects. Our ash utilization has increased from 41% in FY 2015-16 to 81.67 % in FY 2021-22. To improve safety at our workplace, we have imparted 1.36 million Man-hours of safety training (including contract workers) in FY 2021-22. We have taken efficiency measures at war scale and set tougher targets for reduction of water footprint. We have been able to reduce our specific water consumption by 4.82%.

Being a responsible corporate organization, community engagement is one of our business priorities. In FY 2021-22 we spent ₹356.72 crore towards various CSR activities. As part of our Sustainable Supply Chain policy, we are engaging with our suppliers to assess their sustainability performance and conducting capacity building programmes on ESG. We have resumed the Girl Empowerment Mission programme, which was interrupted for the last two years due to COVID-19 imposed restrictions and trained over 2500 school going girls. The programme is expected to create a long-lasting positive impact on the young girls and on the society itself when they grow up.

Your Company received "Company with Best CSR Practice Award" in 8th Asia Business Responsibility Summit organized by Asian Centre for Corporate Governance and Sustainability.

Power Sector Outlook:

The Indian power sector is one of the most diversified in the world. India is the third largest producer and second largest consumer of electricity worldwide. With installed capacity of over 400 GW, the country registered highest peak demand of 211.86 GW on June 10, 2022, and energy met was 4722 MUs. Growing population along with increasing electrification and per capita usage will further provide impetus to the rising demand for electricity. As per the national infrastructure pipeline 2019-25, energy sector projects accounted for the highest share.

Many power sector reforms are being introduced by the Government to bring efficiency, promote de-carbonization and ensure (24X7) reliable and affordable power supply. As the largest generator of the country, your Company carries the responsibility of providing adequate power to meet the grid requirement. This provides enough opportunities for multifold growth of your Company.

Your Company believes that meeting the long-term energy requirement of the country with reliability and affordability is the prime objective. Considering the changes happening across the globe, while giving utmost thrust for adding renewable capacity, need has been felt for adding some coal-based capacity as it will provide resilience to the sector for meeting the increasing demand. Accordingly, your Company is considering a few expansion projects at the existing pit-head plant locations. In this direction, we have already finalized the tender for (2X660 MW) capacity at Talcher (TTPS) as a replacement project.

Growth with governance – Excellence with ethics:

Your Company takes proactive steps to ensure sound corporate governance and is committed to ethical corporate practices based on conscience, transparency, fairness, professionalism and accountability. Our core values embody the spirit of sound governance and act as a guiding beacon for the employees and management. Your Company saw "Nil" audit observations from Controller and Auditor General of India (CAG) for FY21 and also for FY22.

Your Company is committed to sustainable wealth creation for all its stakeholders by adopting best practices. Transparency, accountability, fairness and extensive communication with stakeholders are integral to our functioning. We believe in system driven performance and performance-oriented systems.

Accomplishments in other areas:

As informed earlier, your Company emerged as the successful bidder in acquisition of Jhabua (1X600 MW) power station in Madhya Pradesh through NCLT. It is pertinent to mention that the resolution plan to facilitate the acquisition has been approved by NCLT recently and it has paved the way for completion of the acquisition process.

Your Company has signed MoU with Energy Vault for development of Gravity Energy Storage System. Fly ash will be used for manufacturing of Blocks. Plans have been chalked out for implementation of 100 MWh storage at one of the existing power stations.

Your Company is actively working on the Biomass and Waste-to-Wealth solutions. We have already fired 77,000 MT of biomass pellets and prevented nearly 45,000 acres of farm fire. Work on the

Municipal Solid Waste (MSW) to Charcoal project at Varanasi is also in advanced stage of commissioning.

NVVNL traded over 24 BUs of power, which is the highest volume since its inception registering a growth of 29% vis-a-vis previous year. NVVNL has also been appointed as the trading licensee for Indian Railways. They have also started electric buses at Bengaluru in addition to Port Blair.

Your Company's International Business Development group has secured PMC contracts for 2,960 MW solar projects in Africa and South & Central America through International Solar Alliance in FY 2021-22. Further, (2X660 MW) coal-based project in Bangladesh will also be made operational in the current fiscal.

Your Company has been conferred "Excellence" in the prestigious CII-ITC Sustainability Award-2021 in "Corporate Social Responsibility" category, twice in a row. We have also won the ATD BEST award-2022. Your Company was also adjudged as one of the "Most preferred workplaces-2022".

I am also happy to inform you that the Flue gas-based desalination plant at Simhadri and Solar desalination plant at Vallur got approvals from BIS. This shall help in supply of treated water commercially.

Commitment for the future:

It is pertinent to mention that that the period of low dispatch of power from our stations and "supply overhang" in the country seems to be over. Due to the strong demand, it is expected that the PLF of coal-based stations may further increase. Even though our coal-based project pipeline has become slim, all the remaining projects are either pithead or situated on the mine. With the commissioning of these projects, our generation share shall see a further rise. As we march ahead in our capacity addition programme, we are planning to achieve 75 GW capacity by August 15, 2023.

We are constantly focusing on strengthening our base of existing businesses while building new business models. We are always looking to improve our maintenance practices so that we operate our fleet most efficiently, economically and reliably. The digital initiatives taken by your Company have already yielded good results. We strongly believe that Digitalization, Process Optimization and Consolidation is the only way forward for progressive organizations.

Your Company is constantly working on creating a future ready workforce by building critical skills. Recent initiative of collaborating with IIT Bombay for re-skilling our workforce in emerging areas is a step in that direction.

Grateful acknowledgements:

I take this opportunity to place on record my sincere thanks and gratitude to the Government of India, particularly Ministry of Power, Ministry of Coal, Ministry of Railways, Ministry of Environment, Forest and Climate Change, Ministry of New and Renewable Energy, DIPAM, CERC, CEA, CAG, State Governments, our valued Customers, Auditors, Vendors, other authorities and agencies that provide unstinted support.

I convey my appreciation to my colleagues on the Board for their invaluable contribution in strengthening the Company. I express my sincere thanks to investors, shareholders, employees and customers for their continued trust and support. Your Company values your trust and confidence and shall continue to work tirelessly to take it forward.

With new hope and resilience, we are focusing on sustaining our high level of performance and achieving the committed targets. We are consolidating our actions in all facets of business which shall lead us from a "Power Generating Company" to a "Sustainable Integrated Energy Conglomerate".

With best wishes,

Yours sincerely,

(Gurdeep Singh)
Chairman & Managing Director

NTPC Limited
CIN: L40101DL1975GOI007966
Regd. Office: NTPC Bhawan, SCOPE Complex, 7, Institutional Area, Lodi Road,
New Delhi-110 003
Tel. no.: 011-24360959 Fax: 011-24360241
Email: csntpc@ntpc.co.in Website: www.ntpc.co.in

NOTICE

NOTICE is hereby given that the 46th Annual General Meeting of the members of NTPC Limited will be held on Tuesday, 30th August 2022 at 10.30 A.M. (IST) through Video Conferencing ("VC")/ Other Audio-Visual Means ("OAVM"), to transact the following businesses:

ORDINARY BUSINESS:

1. **To consider and adopt Audited Standalone & Consolidated Financial Statements of the Company for the financial year ended 31st March 2022, the reports of the Board of Directors and Auditors thereon and, in this regard, to consider and if thought fit, to pass, with or without modification(s), the following resolution as an Ordinary Resolution:**

   Resolved that the audited Standalone & Consolidated financial statement of the Company for the financial year ended 31st March 2022 and the reports of the Board of Directors and Auditors thereon, as circulated to the Members, be and are hereby considered and adopted.

2. **To confirm payment of interim dividend and declare final dividend for the financial year 2021-22 and in this regard, to consider and if thought fit, to pass, with or without modification(s), the following resolution as an Ordinary Resolution:**

   Resolved that an interim dividend@ 40% (₹4.00 per equity share of ₹10/-) on the paid up equity share capital of the Company and final dividend @ 30% (₹ 3.00 on per equity share of ₹10/-) as recommended by the Board of Directors be and is hereby declared out of the profits of the Company for the financial year 2021-22.

3. **To appoint Shri Ramesh Babu V. (DIN:08736805) Director (Operations), who retires by rotation as a Director and in this regard, to consider and if thought fit, to pass, with or without modification(s), the following resolution as an Ordinary Resolution:**

   Resolved that in accordance with the provisions of Section 152 and other applicable provisions of the Companies Act, 2013, Shri Ramesh Babu V. (DIN:08736805), who retires by rotation at this meeting, be and is hereby appointed as a Director of the Company.

4. **To fix the remuneration of the Statutory Auditors for the financial year 2022-23 and, in this regard, to consider and if thought fit, to pass, with or without modification(s), the following resolution as an Ordinary Resolution:**

   Resolved that the Board of Directors of the Company be and is hereby authorised to fix an appropriate remuneration of Statutory Auditors of the Company, appointed by the Comptroller and Auditor General of India for the financial year 2022-23.

SPECIAL BUSINESS:

5. **To appoint Shri Vivek Gupta (DIN:08794502), as an Independent Director of the Company and in this regard to consider and if thought fit, to pass the following resolution as a Special Resolution:**

   Resolved that pursuant to the provisions of Section 149, 152 and other applicable provisions, if any, of the Companies Act, 2013, rules made thereunder, Regulation 17(1C) and other applicable provisions of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, Shri Vivek Gupta (DIN: 08794502), who was appointed as Independent Director, by the President of India vide Ministry of Power Order no. 8/4/2020-Th.1 dated 12th November 2021 for a period of three years or until further orders and subsequently appointed as an Additional Director by the Board of Directors with effect from 30th November 2021, be and is hereby appointed as an Independent Director of the Company on terms & conditions fixed by the Government of India.

6. **To appoint Shri Jitendra Jayantilal Tanna (DIN: 09403346), as an Independent Director of the Company and in this regard to consider and if thought fit, to pass the following resolution as a Special Resolution:**

   Resolved that pursuant to the provisions of Section 149, 152 and other applicable provisions, if any, of the Companies Act, 2013, rules made thereunder, Regulation 17(1C) and other applicable provisions of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, Shri Jitendra Jayantilal Tanna (DIN: 09403346), who was appointed as an Independent Director, by the President of India vide Ministry of Power Order no. 8/4/2020-Th.1 dated 12th November 2021 for a period of three years or until further orders and subsequently appointed as an Additional Director by the Board of Directors with effect from 30th November 2021, be and is hereby appointed as an Independent Director of the Company on terms & conditions fixed by the Government of India.

7. **To appoint Shri Vidyadhar Vaishampayan (DIN:02667949), as an Independent Director of the Company and in this regard to consider and if thought fit, to pass the following resolution as a Special Resolution:**

   Resolved that pursuant to the provisions of Section 149, 152 and other applicable provisions, if any, of the Companies Act, 2013, rules made thereunder, Regulation 17(1C) and other applicable provisions of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, Shri Vidyadhar Vaishampayan (DIN:02667949), who was appointed as an Independent Director, by the President of India vide Ministry of Power Order no. 8/4/2020-Th.1 dated 12th November 2021 read with order dated 22nd November 2021 for a period of three years or until further orders and subsequently appointed as an Additional Director by the Board of Directors with effect from 30th November 2021, be and is hereby appointed as an Independent Director of the Company on terms & conditions fixed by the Government of India.

8. **To appoint Ms. Sangitha Varier (DIN:09402812), as a Woman Independent Director of the Company and in this regard to consider and if thought fit, to pass the following resolution as a Special Resolution:**

   Resolved that pursuant to the provisions of Section 149, 152 and other applicable provisions, if any, of the Companies Act, 2013, rules made thereunder, Regulation 17(1C) and other applicable provisions of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, Ms. Sangitha Varier (DIN:09402812), who was appointed as Woman Independent Director, by the President of India vide Ministry of Power Order no. 8/4/2020-Th.1 dated 12th November 2021 for a period of three years or until further orders and subsequently appointed as an Additional Director by the Board of Directors with effect from 7th December, 2021, be and is hereby appointed as a Woman Independent Director of the Company on terms & conditions fixed by the Government of India.

9. **To appoint Shri Piyush Surendrapal Singh (DIN: 07492389), as Government Nominee Director on the Board of the Company and in this regard to consider and if thought fit, to pass the following resolution as an Ordinary Resolution:**

   Resolved that pursuant to the provisions of Section 149, 152 and other applicable provisions, if any, of the Companies Act, 2013, rules made thereunder, Regulation 17(1C) and other applicable provisions of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, Shri Piyush Surendrapal Singh (DIN: 07492389), who was appointed as Government Nominee Director, by the President of India vide Ministry of Power Order No. 8/6/2018-Th.I dated 30th May, 2022, and subsequently appointed as an Additional Director by the Board of Directors with effect from 31st May 2022 to hold office until the date of this Annual General Meeting, in terms of Section 161 of the Companies Act, 2013 be and is hereby appointed as Government Nominee Director of the Company on terms & conditions fixed by the Government of India and he shall be liable to retire by rotation.

10. **To appoint Shri Jaikumar Srinivasan (DIN: 01220828), as Director (Finance) of the Company and in this regard to consider and if thought fit, to pass the following resolution as an Ordinary Resolution:**

    Resolved that pursuant to the provisions of Section 149, 152 and other applicable provisions, if any, of the Companies Act, 2013, rules made thereunder, Regulation 17(1C) and other applicable provisions of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, Shri Jaikumar Srinivasan (DIN: 01220828), who was appointed as Director (Finance), by the President of India vide Ministry of Power Order No. 8/7/2021-Th-1 dated 15th July 2022 and subsequently appointed as an Additional Director and designated as Director (Finance) by the Board of Directors with effect from 21st July 2022 to hold office until the date of this Annual General Meeting, in terms of Section 161 of the Companies Act, 2013 be and is hereby appointed as Director (Finance) of the Company on terms & conditions as may be fixed by the Government of India and he shall be liable to retire by rotation.

11. **To ratify the remuneration of the Cost Auditors for the financial year 2022-23 and in this regard to consider and if thought fit, to pass the following resolution as an Ordinary Resolution:**

    Resolved that pursuant to the provisions of Section 148 and all other applicable provisions of the Companies Act, 2013 and the Companies (Audit and Auditors) Rules, 2014 [including any statutory modification(s)], the Company hereby ratifies the remuneration of ₹ 46,99,000/- (Rupees Forty-Six Lakh and ninety nine thousand only) as approved by the Board of Directors payable to Cost Auditors appointed by the Board of Directors of the Company to conduct the audit of the cost records of the Company for the financial year 2022-23 as per detail set out in the statement annexed to the Notice convening this Meeting.

Further resolved that the Board of Directors of the Company be and is hereby authorized to do all acts, deeds, matters and things as may be considered necessary, desirable or expedient for giving effect to this resolution.

12. **To raise funds up to ₹12,000 Crore through issue of Bonds/Debentures on Private Placement basis and in this regard to consider and if thought fit, to pass following resolution as a Special Resolution:**

RESOLVED THAT pursuant to Section 42 and other applicable provisions of the Companies Act, 2013 read with Rule 14 (1) of the Companies (Prospectus and Allotment of Securities) Rules, 2014 and any other applicable statutory provisions (including any statutory modification or re-enactments thereof) the Board of Directors of the Company (the "Board") be and are hereby authorized to make offer(s) or invitation(s) to subscribe to the secured/unsecured, redeemable, taxable/tax-free, cumulative/non-cumulative, non-convertible debentures ("NCDs/Bonds") up to ₹12,000 Crore in one or more tranches/series not exceeding 12 (twelve), through private placement, in domestic market for capex, working capital and general corporate purposes, during the period commencing from the date of passing of Special Resolution till completion of one year thereof or the date of next Annual General Meeting in the financial year 2023-24 whichever is earlier in conformity with rules, regulations, notifications and enactments as may be applicable from time to time, subject to the total borrowings of the Company approved by the shareholders under Section 180 (1) (c) of Companies Act, 2013.

RESOLVED FURTHER THAT the Board be and is hereby authorized to do or delegate from time to time, all such acts, deeds and things as may be deemed necessary to give effect to private placement of such NCDs including but not limited to determining the face value, issue price, issue size, tenor, timing, amount, security, coupon/interest rate, yield, listing, allotment and other terms and conditions of issue of NCDs as it may, in its absolute discretion, consider necessary.

By order of the Board of Directors

Nandini Sarkar

(Nandini Sarkar)
Company Secretary

Place: New Delhi
Date: 30th July, 2022

Notes: -

1. In view of the ongoing COVID-19 pandemic, the Ministry of Corporate Affairs ('MCA') has vide its General Circulars dated April 8, 2020, April 13, 2020, May 5, 2020, January 13, 2021, December 14, 2021 and May 5, 2022 (collectively referred to as 'MCA Circulars') permitted the holding of the Annual General Meeting ('AGM') through Video Conferencing ('VC') facility / Other Audio Visual Means ('OAVM'), without the physical presence of the Members at a common venue. In compliance with the applicable provisions of the Companies Act, 2013 ('the Act'), the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 ('SEBI Listing Regulations') and the MCA Circulars, the AGM of the Company is being held through VC / OAVM. The deemed venue for the AGM shall be the Registered Office of the Company.

2. In compliance with the statutory guidelines, Notice of the AGM along with the Annual Report 2021-22 is being sent only through electronic mode to those Members whose email addresses are registered with the Company/Depository participants/ Depositories. Members may please note that the Notice and Annual Report 2021-22 will also be available on the Company's website www.ntpc.co.in, website of the Stock Exchanges, i.e., BSE Limited and National Stock Exchange of India Limited at www. bseindia.com and www.nseindia.com respectively. The AGM Notice is also disseminated on the website of CDSL (agency for providing the Remote e-Voting facility and e-voting system during the AGM) i.e. www.evotingindia.com. Shareholders are advised to contact RTA, at the address mentioned in Para 12 below, with details like name, folio no. and self attested copy of PAN & AADHAR in order to update their email ID.

3. Since this AGM is being held through VC / OAVM pursuant to the MCA Circulars, physical attendance of members has been dispensed with. Accordingly, the facility for appointment of proxies by the members will not be available for this AGM. Hence, Proxy Form and Attendance Slip are not annexed hereto. However, in terms of the provisions of Section 112 and Section 113 of the Act, representatives of the Members such as the President of India or the Governor of a State or body corporate can attend the AGM through VC/OAVM and cast their votes through e-voting.

4. The attendance of the Members attending the AGM through VC/OAVM will be counted for the purpose of ascertaining the quorum under Section 103 of the Companies Act, 2013.

5. Members of the Company under the category of Institutional Investors are requested to attend and vote at the AGM through VC. Corporate Members/ Institutional Investors intending to appoint their authorized representatives pursuant to Section 113 of the Act, to attend the AGM through VC or OAVM or to vote through remote e-voting are requested to send a certified copy of the Board Resolution to the Scrutinizer by e-mail at sachin@companylawworld.com.
6. Pursuant to Section 139 of the Companies Act, 2013, the Auditors of a Government Company are to be appointed or re-appointed by the Comptroller and Auditor General of India (C&AG) and in pursuant to Section 142 of the Companies Act, 2013, their remuneration is to be fixed by the Company in the Annual General Meeting or in such manner as the Company in general meeting may determine. The Members of the Company, in 45th Annual General Meeting held on September 28, 2021, had authorized the Board of Directors to fix the remuneration of Statutory Auditors for the financial year 2021-22. Accordingly, the Board of Directors has fixed audit fee of ₹2,36,78,000/- (Rupees Two Crore Thirty Six Lakh Seventy Eight Thousand only) for the Statutory Auditors for the financial year 2021-22 in addition to applicable GST and reimbursement of actual travelling and out-of-pocket expenses for visit to accounting units. The Statutory Auditors of the Company for the year 2022-23 are yet to be appointed by the C&AG. Accordingly, the Members may authorize the Board to fix an appropriate remuneration of Statutory Auditors as may be deemed fit by the Board for the year 2022-23.
7. The relevant explanatory statement pursuant to Section 102 of the Companies Act, 2013, in respect of Special Businesses, as set out above is annexed hereto.
8. Brief resume of the Directors seeking appointment or re-appointment at Annual General Meeting (AGM), as required under Regulation 36 of SEBI Listing Regulations, is annexed hereto and forms part of the Notice. The company has received requisite notice under section 160 of companies Act, 2013 in respect of Directors proposed to be appointed at this AGM.
9. None of the Directors of the Company is in any way related with each other.

DIVIDEND

10. The Board of Directors, in its meeting held on January 29, 2022 had declared an interim dividend @ 40 % (₹4.00 per share) on the paid-up equity share capital of the company which was paid on February 21, 2022. Further, the Board of Directors, in its Meeting held on May 20, 2022 has recommended a final dividend @ 30% (₹ 3.00 per share) on the paid-up equity share capital of the Company.
11. The Company has fixed August 11, 2022 as record date for the purpose of payment of the final dividend. Final dividend, if approved at the AGM shall be paid on or after September 12, 2022.

TDS on dividend

12. Pursuant to the Finance Act, 2020, dividend income is taxable in the hands of the Shareholders w.e.f. April 1, 2020 and the Company is required to deduct TDS from dividend paid to the Members at rates prescribed under the Income Tax Act, 1961 ("IT Act"). To enable compliance with TDS requirements, Members are requested to complete and / or update their Residential Status, PAN, Category as per the IT Act with their Depository Participants ('DPs') or in case shares are held in physical form, with the Company/RTA by sending the required documents by, August 18, 2022. For the detailed process, please visit website of the Company https://www.ntpc.co.in/investors/Dividend TDS Communication. The aforesaid documents, as applicable, are required to be emailed at tdsdiv@ntpc.co.in and dividend.ntpc@taxcpc.com, to enable the Company to determine the appropriate TDS rates. No communication on the tax determination/deduction received post, August 18, 2022, 17:30 Hours (IST) shall be considered for payment of the Final Dividend.

    Further, in order to receive the dividend in a timely manner, Members holding shares in physical form who have not updated their mandate for receiving the dividend directly in their bank accounts through Electronic Clearing Service or any other means are requested to send the following documents to our RTA - Beetal Financial & Computer Services Pvt. Ltd. at 3rd Floor, Beetal House, 99, Madangir,Delhi-110062 :

    a) A signed request letter by the first holder, mentioning the name, folio number, complete address and following details relating to bank account in which the dividend is to be received:
        i. Name of Bank and Bank Branch;
        ii. Bank Account Number & Type allotted by your bank after implementation of Core Banking Solutions; and
        iii. 11-digit IFSC Code;
        iv. 9 digit MICR Code.
    b) Original cancelled cheque bearing the name of the Member or first holder, in case shares are held jointly;
    c) Self-attested copy of the PAN Card; and
    d) Self-attested copy of any document (such as AADHAR Card, Driving License, Election Identity Card, Passport) in support of the address of the Member as registered with the Company.

    Members holding shares in demat form may please note that their bank details as furnished by the respective DPs to the Company will be considered for remittance of dividend as per the applicable regulations of the DPs and the Company will not entertain any direct request from such Members for change/addition/deletion in such bank details. Accordingly, the

Members holding shares in demat form are requested to update their Electronic Bank Mandate with their respective DPs. Any instruction pertaining to the remittance of dividend would not be entertained other than the particulars that are mapped with the DPs.

INVESTOR EDUCATION AND PROTECTION FUND

13. Pursuant to the provisions of section 124(5) of the Companies Act, 2013, read with Regulation 61A of Securities and Exchange Board of India (LODR) (Fifth Amendment) Regulations, 2021, the Company has transferred the unpaid or unclaimed interim dividend and final dividend for the financial year 2013-14 and unclaimed interest on Tax Free Bonds 2013 paid in 2014-15 to the Investor Education and Protection Fund (IEPF) established by the Central Government. Pursuant to the provisions of IEPF Rules & amendments thereto, the Company shall upload the details of unpaid and unclaimed amounts lying with the Company as on the date of closure of financial year i.e. March 31, 2022 on the website of the Company (www.ntpc.co.in) and also on the website of the Ministry of Corporate Affairs (https://www.iepf.gov.in) as per timelines stated in IEPF Rules.
14. Attention of the members is drawn to the provisions of Section 124(6) of the Act which require a company to transfer all shares in respect of which dividend has not been paid or claimed for 7 (seven) consecutive years or more, in the name of IEPF Authority. In accordance with the aforesaid provisions of the Act read with the Investor Education and Protection Fund Authority (Accounting, Audit, Transfer and Refund) Rules, 2016, Company has transferred shares to the IEPF authority from time to time. Members are advised to visit the web-link: https://www.ntpc.co.in/en/Investors/miscellaneous-download to check details of shares transferred to IEPF authority. The procedure for claiming shares from IEPF account is also available on the website of the Company.
15. Unclaimed final dividend for the financial year 2014-15 and Interim dividend for the financial year 2015-16 will be due for transfer to the Investor Education and Protection Fund of the Central Government on or before November 18, 2022 and March 30, 2023 respectively pursuant to the provisions of Section 124 of the Companies Act, 2013. Accordingly, corresponding shares on which dividend has not been paid or claimed for seven consecutive years shall also be liable to be transferred to the account of IEPF. Further, application money refund on Tax Free Bonds 2015 and unclaimed interest on Tax Free Bonds 2013 paid in 2015-16 will be due for transfer to the Investor Education and Protection Fund of the Central Government on or before October 5, 2022 and December 16, 2022 respectively.

WEBCASTING

16. In compliance with the provisions of Regulation 44(6) of the SEBI Listing Regulations, the Company shall provide live webcast of proceedings of AGM from 10.30 A.M. (IST) onwards on Tuesday, 30th August 2022 .

PROCEDURE FOR INSPECTION OF DOCUMENTS:

17. The Register of Directors and Key Managerial Personnel and their shareholding maintained under Section 170 of the Act, the Register of Contracts or Arrangements in which the directors are interested, maintained under Section 189 of the Act will be available electronically for inspection by the members during the AGM. All documents referred to in the Notice will also be available electronically for inspection without any fee by the members from the date of circulation of this Notice and up to the date of AGM. Members seeking to inspect such documents can send an email to agm2022@ntpc.co.in.

OTHER INFORMATION:

18. Members holding shares in multiple folios in physical mode are requested to apply for consolidation to the Company or its Registrar & Transfer Agent (RTA) along with relevant Share Certificates.
19. **As per SEBI notification dated 8th June, 2018 read with notification dated 24th January 2022, any requests for effecting transfer/tranmission/ transposition of securities shall not be processed unless the securities are held in the dematerialized form with a depository. Accordingly, Shareholders holding shares in physical form, are advised to dematerialize their shares.**
20. Members, holding shares in physical form, may avail the facility of nomination in terms of Section 72 of the Companies Act, 2013 by nominating in the Form-SH 13 as prescribed in the Companies (Share Capital & Debentures) Rule, 2014, any person to whom their shares in the Company shall vest on occurrence of event stated in the Form. Persons holding shares in physical form may send Form-SH 13 in duplicate to RTA of the Company. In case of shares held in dematerialized form, the nomination has to be lodged with the respective DP.
21. The Securities and Exchange Board of India (SEBI) has mandated the submission of Permanent Account Number (PAN) by every participant in securities market. Members are, therefore, requested to update their PAN with their DP/ RTA of the Company.
22. Annual listing fee for the year 2022-23 has been paid to all Stock Exchanges wherein shares of the Company are listed. Also, the Annual Custodian Fee for the year 2022-23 was paid to both Depositories i.e. Central Depository Services (India) Limited and National Securities Depository Limited.
23. Since the AGM will be held through VC/OAVM, the route map of the venue of the Meeting is not annexed hereto.

EXPLANATORY STATEMENT
PURSUANT TO SECTION 102 OF THE COMPANIES ACT, 2013

The following statement sets out all material facts relating to Special Businesses mentioned in the accompanying notice:

Item No. 5: To appoint Shri Vivek Gupta (DIN:08794502), as an Independent Director

Shri Vivek Gupta (DIN:08794502) was appointed as an Independent Director, by the President of India vide Ministry of Power letter no. 8/4/2020-Th.1 dated 12th November 2021 for a period of three years or until further orders. The appointment of Shri Vivek Gupta as Independent Director was also recommended by the Nomination & Remuneration Committee including PRP of the Board through resolution passed on 29th November 2021. He was appointed as an Additional Director with effect from 30th November 2021, to hold office up to this Annual General Meeting.

Shri Vivek Gupta is a Management Graduate with a degree of Law. Shri Vivek Gupta has given a declaration to the effect that he meets the criteria of Independence as prescribed under Section 149 of the Companies Act, 2013, read with the Companies (Appointment & Qualification) Rules, 2014 & Regulation 16 of the SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015.

His brief resume, inter-alia, giving nature of expertise in specific functional area, shareholding in the Company, other Directorship, Membership/ Chairmanship of Committees and other particulars are enclosed with this notice.

None of the Directors, Key Managerial Personnel of the Company or their relatives except Shri Vivek Gupta, is in any way, concerned or interested, financially or otherwise, in the resolution except as may be deemed to be concerned or interested in the proposed resolution to the extent of their shareholding in the Company, if any.

The Board recommends the resolution for your approval.

Item No. 6: To appoint Shri Jitendra Jayantilal Tanna (DIN: 09403346), as an Independent Director

Shri Jitendra Jayantilal Tanna (DIN: 09403346) was appointed as an Independent Director, by the President of India vide Ministry of Power letter no. 8/4/2020-Th.1 dated 12th November 2021 for a period of three years or until further orders. The appointment of Shri Jitendra Jayantilal Tanna as Independent Director was also recommended by the Nomination & Remuneration Committee including PRP of the Board through resolution passed on 29th November 2021. He was appointed as an Additional Director with effect from 30th November 2021, to hold office up to this Annual General Meeting.

Shri Jitendra Jayantilal Tanna is a Chartered Accountant by profession. He is also a Commerce Graduate. He has expertise in areas of Direct Taxation, Audit and Finance Management. Shri Jitendra Jayantilal Tanna has given a declaration to the effect that he meets the criteria of Independence as prescribed under Section 149 of the Companies Act, 2013, read with the Companies (Appointment & Qualification) Rules, 2014 & Regulation 16 of the SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015.

His brief resume, inter-alia, giving nature of expertise in specific functional area, shareholding in the Company, other Directorship, Membership/ Chairmanship of Committees and other particulars are enclosed with this notice.

None of the Directors, Key Managerial Personnel of the Company or their relatives except Shri Jitendra Jayantilal Tanna, is in any way, concerned or interested, financially or otherwise, in the resolution except as may be deemed to be concerned or interested in the proposed resolution to the extent of their shareholding in the Company, if any.

The Board recommends the resolution for your approval.

Item No. 7: To appoint Shri Vidyadhar Vaishampayan (DIN:02667949), as an Independent Director

Shri Vidyadhar Vaishampayan (DIN:02667949) was appointed as an Independent Director, by the President of India vide Ministry of Power letter no. 8/4/2020-Th.1 dated 12th November 2021 read with order dated 22nd November, 2022 for a period of three years or until further orders. The appointment of Shri Vidyadhar Vaishampayan as Independent Director was also recommended by the Nomination & Remuneration Committee including PRP of the Board through resolution passed on 29th November 2021. He was appointed as an Additional Director with effect from 30th November 2021, to hold office up to this Annual General Meeting.

Shri Vidyadhar Vaishampayan is M-Tech from IIT-Mumbai and he has also completed Executive Development Study from IIM-Bangalore. Shri Vidyadhar Vaishampayan has given a declaration to the effect that he meets the criteria of Independence as prescribed under Section 149 of the Companies Act, 2013, read with the Companies (Appointment & Qualification) Rules, 2014 & Regulation 16 of the SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015.

His brief resume, inter-alia, giving nature of expertise in specific functional area, shareholding in the Company, other Directorship, Membership/ Chairmanship of Committees and other particulars are enclosed with this notice.

None of the Directors, Key Managerial Personnel of the Company or their relatives except Shri Vidyadhar Vaishampayan, is in any way, concerned or interested, financially or otherwise, in the resolution except as may be deemed to be concerned or interested in the proposed resolution to the extent of their shareholding in the Company, if any.

The Board recommends the resolution for your approval.

Item No. 8: To appoint Ms. Sangitha Varier (DIN:09402812), as a Woman Independent Director

Ms. Sangitha Varier (DIN:09402812) was appointed as an Independent Director, by the President of India vide Ministry of Power letter no. 8/4/2020-Th.1 dated 12th November 2021 for a period of three years or until further orders. The appointment of Ms. Sangitha Varier as Independent Director was also recommended by the Nomination & Remuneration Committee including PRP of the Board through resolution passed on 3rd December 2021. She was appointed as an Additional Director with effect from 7th December 2021, to hold office up to this Annual General Meeting.

Ms. Sangitha Varier is a Commerce Graduate and Bachelor in Education (B. Ed.). Ms. Sangitha Varier has given a declaration to the effect that she meets the criteria of Independence as prescribed under Section 149 of the Companies Act, 2013, read with the Companies (Appointment & Qualification) Rules, 2014 & Regulation 16 of the SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015.

Her brief resume, inter-alia, giving nature of expertise in specific functional area, shareholding in the Company, other Directorship, Membership/ Chairmanship of Committees and other particulars are enclosed with this notice.

None of the Directors, Key Managerial Personnel of the Company or their relatives except Ms. Sangitha Varier, is in any way, concerned or interested, financially or otherwise, in the resolution except as may be deemed to be concerned or interested in the proposed resolution to the extent of their shareholding in the Company, if any.

The Board recommends the resolution for your approval.

Item No. 9: To appoint Shri Piyush Surendrapal Singh (DIN: 07492389), as a Government Nominee Director

Shri Piyush Surendrapal Singh (DIN:07492389) was appointed as a Government Nominee Director, by the President of India vide Ministry of Power letter no. 8/6/2018-Th.1 dated 30th May 2022. He was appointed as an Additional Director with effect from 31st May 2022, to hold office up to this Annual General Meeting. The appointment of Shri Piyush Surendrapal Singh as Government Nominee Director was also recommended by the Nomination & Remuneration Committee including PRP of the Board in its meeting held on 31st May 2022.

Shri Piyush Surendrapal Singh has done B. Tech (Civil) from IIT Delhi. He worked in various capacities in District Administration, Department of Social Justice & Empowerment and Department of health & family welfare, Government of Maharashtra. He is not disqualified from being appointed as a Director.

His brief resume, inter-alia, giving nature of expertise in specific functional area, shareholding in the Company, other Directorship, Membership/ Chairmanship of Committees and other particulars are enclosed with this notice.

None of the Directors, Key Managerial Personnel of the Company or their relatives except Shri Piyush Surendrapal Singh, is in any way, concerned or interested, financially or otherwise, in the resolution except as may be deemed to be concerned or interested in the proposed resolution to the extent of their shareholding in the Company, if any.

The Board recommends the resolution for your approval.

Item No.10: Appointment of Shri Jaikumar Srinivasan (DIN:0122828) as Director (Finance)

Shri Jaikumar Srinivasan (DIN: 0122828), was appointed as Director (Finance), by the President of India vide Ministry of Power Order No. 8/7/2021-Th.1 dated 15th July, 2022 till the date of superannuation or until further orders, whichever is earlier and was accordingly appointed as an Additional Director w.e.f. the date of taking over charge and to hold office up to this Annual General Meeting on the basis of recommendation of Nomination & Remuneration Committee including PRP. He has taken charge as Director (Finance), NTPC on 21st July, 2022.The terms and conditions regulating the appointment of Shri Jaikumar Srinivasan as Director (Finance) shall be determined by the Government of India.

His brief resume, inter-alia, giving nature of expertise in specific functional area, shareholding in the Company, other Directorship, Membership/ Chairmanship of Committees and other particulars are enclosed with this notice.

None of the Directors, Key Managerial Personnel of the Company or their relatives except Shri Jaikumar Srinivasan, is in any way, concerned or interested, financially or otherwise, in the resolution.

The Board recommends the resolution for your approval.

Item No. 11: Ratification of Remuneration payable to Cost Auditors

Based on recommendation of Audit Committee, appointment of Cost Auditors for the Financial year 2022-23 was decided by the Board of Directors. The Board of Directors in its meeting held on 5th March 2022 has accorded approval for payment of total fee of ₹ 46,99,000/- (Rupees Forty-Six Lakh and ninety nine thousand only) for cost audit for the Financial year 2022-23. The fee structure for cost audit is broadly based on station capacity and number of stations. The reimbursement of applicable statutory taxes/ levies shall be in addition to fees.

As per Rule 14 of Companies (Audit and Auditors) Rules, 2014 read with Section 148(3) of the Companies Act, 2013, the remuneration recommended by the Audit Committee shall be considered and approved by the Board of Directors and ratified subsequently by the shareholders.

Accordingly, members are requested to ratify the remuneration payable to the Cost Auditors for the financial year 2022-23.

The Board of Directors recommended the passing of the proposed Resolution by members of the Company.

The Directors or Key Managerial Personnel or their relatives do not have any concern or interest, financial or otherwise, in passing of the said Ordinary Resolution, except to the extent of their shareholding in the Company.

Item No. 12: To raise funds up to ₹ 12,000 Crore through issue of Bonds/Debentures on Private Placement basis

The Company is the largest power producer in India. As the Company is under capacity expansion mode, major portion of capital expenditure requirement of the Company has to be funded by debt. The Company borrows in the form of NCDs, rupee term loans from banks and financial institutions, foreign currency borrowings, foreign currency bonds etc. The NCDs are raised by the Company under public issue route or through private placement basis.

In addition to capital expenditure requirement as explained above, Company also needs to borrow for meeting its working capital requirement and other general corporate purpose which is partly proposed to be met through issuance of NCDs.

The provisions of Section 42 of Companies Act, 2013 read with Rule 14(1) of the Companies (Prospectus and Allotment of Securities) Rules, 2014 require the Company to seek a Special Resolution from its shareholders for raising the NCDs on private placement basis. However, in case of offer or invitation for "non-convertible debentures", it shall be sufficient, if the Company passes a previous Special Resolution only once in a year for all the offers or invitations for such debentures during the year.

In view of the above, approval of the Shareholders of the Company is being sought to authorize the Board of Directors to make offer(s) or invitation(s) to subscribe to the secured/unsecured, redeemable, taxable/tax-free, cumulative/non-cumulative, non-convertible debentures ("NCDs/Bonds") up to ₹12,000 Crore in one or more tranches/series not exceeding 12 (twelve), through private placement, in domestic market for capex, working capital and general corporate purposes during the period commencing from the date of passing of Special Resolution till completion of one year thereof or the date of next Annual General Meeting in the financial year 2023-24 whichever is earlier, subject to ceiling approved by the shareholders under Section 180 (1) (c) of Companies Act, 2013.

The Board of Directors of the Company in its Meeting held on 29th July 2022 has approved the proposal and recommends the passing of the proposed Special Resolution.

The Directors or key managerial personnel or their relatives do not have concern or interest, financial or otherwise, in passing of the said Special Resolution, except to the extent of their shareholding in the Company.

By order of the Board of Directors

Nandini Sarkar

(Nandini Sarkar)
Company Secretary

Place: New Delhi
Date: 30th July, 2022

A. GENERAL INSTRUCTIONS FOR SHAREHOLDERS JOINING MEETING, REMOTE e-VOTING AND E-VOTING DURING AGM:

1. The Members can join the AGM in the VC/OAVM mode 15 minutes before and after the scheduled time of the commencement of the Meeting by following the procedure mentioned in the Notice. The facility of participation at the AGM through VC/OAVM will be made available to at least 1000 members on first come first served basis. This will not include large Shareholders (Shareholders holding 2% or more shareholding), Promoters, Institutional Investors, Directors, Key Managerial Personnel, the Chairpersons of the Audit Committee, Nomination and Remuneration Committee and Stakeholders Relationship Committee, Auditors etc. who are allowed to attend the AGM without restriction on account of first come first served basis.

2. The voting period begins on **Friday, 26th August, 2022 at 9:00 AM (IST)** and ends on **Monday, 29th August, 2022 at 5:00 PM. (IST)** During this period, shareholders of the Company, holding shares either in physical form or in dematerialized form, as on the cut-off date of **Tuesday, 23rd August 2022** may cast their vote electronically. The e-voting module shall be disabled by CDSL for voting thereafter. The voting rights of Members shall be in proportion to their share of the paid-up equity share capital of the Company as on the cut-off date.

3. Shareholders who have voted through Remote e-Voting will be eligible to attend the meeting. However, they will not be eligible to vote at the AGM.

4. Shareholders are encouraged to join the Meeting through Laptops / IPads for better experience.

5. Further, shareholders will be required to allow Camera and use Internet with a good speed to avoid any disturbance during the meeting.

6. Please note that Participants Connecting from Mobile Devices or Tablets or through Laptop connecting via Mobile Hotspot may experience Audio/Video loss due to fluctuation in their respective network. It is therefore recommended to use Stable Wi-Fi or LAN Connection to mitigate any kind of aforesaid glitches.

7. Shareholders who would like to express their views/ask questions during the meeting may register themselves as speakers by sending their request in advance at least seven days prior to meeting mentioning their name, Demat account number/folio number, email id, mobile number at agm2022@ntpc.co.in. The Company reserves the right to restrict the number of questions and number of speakers, depending upon availability of time as may be appropriate for smooth conduct of the AGM. Members who are not able to join this Meeting over video conferencing will be able to view the live webcast of proceedings of AGM on the website of the Company. The shareholders who do not wish to speak during the AGM but have queries in respect of items of businesses proposed to be transacted at the meeting, may send their queries in advance 7 (Seven) days prior to meeting mentioning their name, demat account number/folio number, email id, mobile number at agm2022@ntpc.co.in. These queries will be replied by the company suitably by email.

8. Those shareholders who have registered themselves as speakers will only be allowed to express their views/ask questions during the meeting.

9. Only those shareholders, who are present in the AGM through VC/OAVM facility and did not cast their vote on the Resolutions through remote e-Voting and are otherwise not barred from doing so, shall be eligible to vote through e-Voting system available during the AGM.

10. If any Votes are cast by the shareholders through the e-voting available during the AGM and if the same shareholders have not participated in the meeting through VC/OAVM facility, then the votes cast by such shareholders shall be considered invalid as the facility of e-voting during the meeting is available only to the shareholders attending the meeting.

B. LOGIN METHOD FOR E-VOTING AND JOINING VIRTUAL MEETINGS FOR INDIVIDUAL SHAREHOLDERS HOLDING SECURITIES IN DEMAT MODE

1. In terms of SEBI circular no. SEBI/HO/CFD/CMD/CIR/P/2020/242 dated December 9, 2020 on e-Voting facility, Individual shareholders holding securities in demat mode are allowed to vote through their demat account maintained with Depositories and Depository Participants. Shareholders are advised to update their mobile number and email Id in their demat accounts in order to access e-Voting facility.

2. Pursuant to abovesaid SEBI Circular, Login method for e-Voting and joining virtual meetings for Individual shareholders holding securities in Demat mode is given below:

Type of shareholders	Login Method
Individual Shareholders holding securities in Demat mode with CDSL	Users who have opted for CDSL Easi / Easiest facility, can login through their existing user id and password. Option will be made available to reach e-Voting page without any further authentication. The URL for users to login to Easi / Easiest are https://web.cdslindia.com/myeasi/home/login or visit www.cdslindia.com and click on Login icon and select New System Myeasi. After successful login the Easi / Easiest user will be able to see the e-Voting option for eligible companies where the evoting is in progress as per the information provided by company. On clicking the evoting option, the user will be able to see e-Voting page of the e-Voting service provider for casting your vote during the remote e-Voting period or joining virtual meeting & voting during the meeting. Additionally, there is also links provided to access the system of all e-Voting Service Providers i.e. CDSL/NSDL/KARVY/LINKINTIME, so that the user can visit the e-Voting service providers' website directly. If the user is not registered for Easi/Easiest, option to register is available at https://web.cdslindia.com/myeasi/Registration/EasiRegistration Alternatively, the user can directly access e-Voting page by providing Demat Account Number and PAN from a e-Voting link available on www.cdslindia.com home page. The system will authenticate the user by sending OTP on registered Mobile & Email as recorded in the Demat Account. After successful authentication, user will be able to see the e-Voting option where the e-voting is in progress and also able to directly access the system of all e-Voting Service Providers.
Individual Shareholders holding securities in demat mode with NSDL	If you are already registered for NSDL IDeAS facility, please visit the e-Services website of NSDL. Open web browser by typing the following URL: https://eservices.nsdl.com either on a Personal Computer or on a mobile. Once the home page of e-Services is launched, click on the "Beneficial Owner" icon under "Login" which is available under 'IDeAS' section. A new screen will open. You will have to enter your User ID and Password. After successful authentication, you will be able to see e-Voting services. Click on "Access to e-Voting" under e-Voting services and you will be able to see e-Voting page. Click on company name or e-Voting service provider name and you will be re-directed to e-Voting service provider website for casting your vote during the remote e-Voting period or joining virtual meeting & voting during the meeting. If the user is not registered for IDeAS e-Services, option to register is available at https://eservices.nsdl.com. Select "Register Online for IDeAS "Portal or click at https://eservices.nsdl.com/SecureWeb/IdeasDirectReg.jsp Visit the e-Voting website of NSDL. Open web browser by typing the following URL: https://www.evoting.nsdl.com/ either on a Personal Computer or on a mobile. Once the home page of e-Voting system is launched, click on the icon "Login" which is available under 'Shareholder/Member' section. A new screen will open. You will have to enter your User ID (i.e. your sixteen digit demat account number held with NSDL), Password/OTP and a Verification Code as shown on the screen. After successful authentication, you will be redirected to NSDL Depository site wherein you can see e-Voting page. Click on company name or e-Voting service provider name and you will be redirected to e-Voting service provider website for casting your vote during the remote e-Voting period or joining virtual meeting & voting during the meeting.
Individual Shareholders (holding securities in demat mode) login through their Depository Participants	You can also login using the login credentials of your demat account through your Depository Participant registered with NSDL/CDSL for e-Voting facility. After Successful login, you will be able to see e-Voting option. Once you click on e-Voting option, you will be redirected to NSDL/CDSL Depository site after successful authentication, wherein you can see e-Voting feature. Click on company name or e-Voting service provider name and you will be redirected to e-Voting service provider website for casting your vote during the remote e-Voting period or joining virtual meeting & voting during the meeting.

Important note: Members who are unable to retrieve User ID/ Password are advised to use Forget User ID and Forget Password option available at above mentioned website.

Helpdesk for Individual Shareholders holding securities in demat mode for any technical issues related to login through Depository i.e. CDSL and NSDL

Login Type	Helpdesk Details
Individual Shareholders holding securities in Demat mode with CDSL	Members facing any technical issue in login can contact CDSL helpdesk by sending a request at helpdesk.evoting@cdslindia.com or contact at toll free no. 1800 22 55 33
Individual Shareholders holding securities in Demat mode with NSDL	Members facing any technical issue in login can contact NSDL helpdesk by sending a request at evoting@nsdl.co.in or call at toll free no.: 1800 1020 990 and 1800 22 44 30

C. LOGIN METHOD FOR E-VOTING AND JOINING VIRTUAL MEETING FOR SHAREHOLDERS OTHER THAN INDIVIDUAL SHAREHOLDERS HOLDING IN DEMAT FORM & PHYSICAL SHAREHOLDERS.

1) The shareholders should log on to the e-voting website www.evotingindia.com.

2) Click on “Shareholders” module.

3) Now enter your User ID

   a. For CDSL: 16 digits beneficiary ID,

   b. For NSDL: 8 Character DP ID followed by 8 Digits Client ID,

   c. Shareholders holding shares in Physical Form should enter Folio Number registered with the Company.

4) Next enter the Image Verification as displayed and Click on Login.

5) If you are holding shares in demat form and had logged on to www.evotingindia.com and voted on an earlier e-voting of any company, then your existing password is to be used.

6) If you are a first-time user follow the steps given below:

	For Shareholders holding shares in Demat Form other than individual and Physical Form
PAN	Enter your 10 digit alpha-numeric PAN issued by Income Tax Department (Applicable for both demat shareholders as well as physical shareholders) • Shareholders who have not updated their PAN with the Company/Depository Participant are requested to use the sequence number sent by Company/RTA or contact Company/RTA.
Dividend Bank Details OR Date of Birth (DOB)	Enter the Dividend Bank Details or Date of Birth (in dd/mm/yyyy format) as recorded in your demat account or in the company records in order to login. • If both the details are not recorded with the depository or company, please enter the member id / folio number in the Dividend Bank details field as mentioned in instruction (3).

7) After entering these details appropriately, click on “SUBMIT” tab.

8.) Shareholders holding shares in physical form will then directly reach the Company selection screen. However, shareholders holding shares in demat form will now reach ‘Password Creation’ menu wherein they are required to mandatorily enter their login password in the new password field. Kindly note that this password is to be also used by the demat holders for voting for resolutions of any other company on which they are eligible to vote, provided that company opts for e-voting through the CDSL platform. It is strongly recommended not to share your password with any other person and take utmost care to keep your password confidential.

9) For shareholders holding shares in physical form, the details can be used only for e-voting on the resolutions contained in this Notice.

10) Click on the EVSN for the relevant <Company Name> on which you choose to vote.

11) On the voting page, you will see "RESOLUTION DESCRIPTION" and against the same option "YES/NO" for voting. Select the option YES or NO as desired. The option YES implies that you assent to the Resolution and option NO implies that you dissent to the Resolution.

12) Click on the "RESOLUTIONS FILE LINK" if you wish to view the entire Resolution details.

13) After selecting the resolution, you have decided to vote on, click on "SUBMIT". A confirmation box will be displayed. If you wish to confirm your vote, click on "OK", else to change your vote, click on "CANCEL" and accordingly modify your vote.

14) Once you "CONFIRM" your vote on the resolution, you will not be allowed to modify your vote.

15) You can also take a print of the votes cast by clicking on "Click here to print" option on the Voting page.

16) If a demat account holder has forgotten the login password then Enter the User ID and the image verification code and click on Forgot Password & enter the details as prompted by the system.

17) Facility for Non – Individual Shareholders and Custodians –Remote Voting

- Non-Individual shareholders (i.e. other than Individuals, HUF, NRI etc.) and Custodians are required to log on to www.evotingindia.com and register themselves in the "Corporates" module.
- A scanned copy of the Registration Form bearing the stamp and sign of the entity should be emailed to helpdesk.evoting@cdslindia.com.
- After receiving the login details a Compliance User should be created using the admin login and password. The Compliance User would be able to link the account(s) for which they wish to vote on.
- The list of accounts linked in the login should be mailed to helpdesk.evoting@cdslindia.com and on approval of the accounts they would be able to cast their vote.
- A scanned copy of the Board Resolution and Power of Attorney (POA) which they have issued in favour of the Custodian, if any, should be uploaded in PDF format in the system for the scrutinizer to verify the same.
- Alternatively Non-Individual shareholders are required to send the relevant Board Resolution/ Authority letter etc. together with the attested specimen signature of the duly authorized signatory who is authorized to vote, to the Scrutinizer at email ID sachin@companylawworld.com and to the Company at the email address viz; agm2022@ntpc.co.in (designated email address by company), if they have voted from individual tab & not uploaded same in the CDSL e-voting system for the scrutinizer to verify the same.

D. INSTRUCTIONS FOR SHAREHOLDERS ATTENDING THE AGM THROUGH VC/OAVM & E-VOTING DURING MEETING ARE AS UNDER:

1. The procedure for attending meeting & e-Voting on the day of the AGM is same as the instructions mentioned above for Remote e-voting.

2. The link for VC/OAVM to attend meeting will be available where the EVSN of the Company will be displayed after successful login as per the instructions mentioned above for Remote e-voting.

If you have any queries or issues regarding attending AGM & e-Voting from the CDSL e-Voting System, you can write an email to helpdesk.evoting@cdslindia.com or contact at toll free no. 1800 22 55 33
All grievances connected with the facility for voting by electronic means may be addressed to Mr. Rakesh Dalvi, Sr. Manager, (CDSL,) Central Depository Services (India) Limited, A Wing, 25th Floor, Marathon Futurex, Mafatlal Mill Compounds, N M Joshi Marg, Lower Parel (East), Mumbai - 400013 or send an email to helpdesk.evoting@cdslindia.com or call on toll free no. 1800 22 55 33

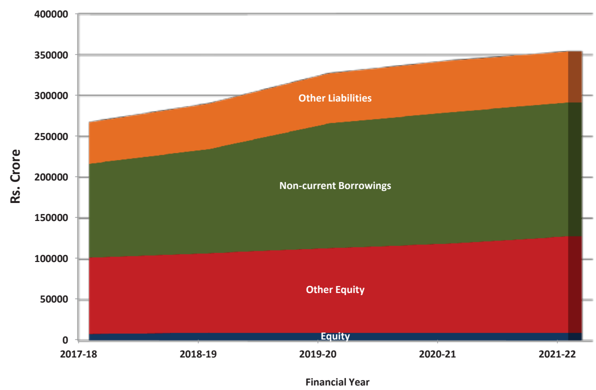
Brief resume of Directors seeking appointment/re-appointment:

Name	Shri Vivek Gupta	Shri Jitendra Jayantilal Tanna	Shri Vidyadhar Vaishampayan	Ms. Sangitha Varier	Shri Piyush Surendrapal Singh	Shri Jaikumar Srinivasan	Shri Ramesh Babu V
Date of Birth & Age	10/03/1973 49 years	31/08/1974 47 years	15/08/1963 58 years	02/05/1964 58 years	26/10/1976 45 years	29/12/1966 55 years	7/1/1964 58 Years
Date of Appointment	30/11/2021	30/11/2021	30/11/2021	07/12/2021	31/05/2022	21/07/2022	1/5/2020
Qualifications	Management Graduate with a degree of Law.	Chartered Accountant by profession and Graduate in Commerce.	M-Tech from IIT-Mumbai and Executive Development Study from IIM-Bangalore	Graduate in Commerce and Bachelor in Education (B. Ed.).	IAS Officer from Maharashtra Cadre and B.Tech (Civil) from IIT Delhi	Commerce Graduate and an Associate Member of the Institute of Cost Accountants of India.	Mechanical Engineering graduate from NIT Srinagar and Masters in Thermal engineering from IIT Delhi
Expertise in specific functional area	He is founder CEO in Jaipur scientific instrument, Jaipur Scientific Agriculture Research Sol. Pvt. Ltd.	He has functional expertise in areas of Direct Taxation, Audit and Finance Management.	He is an active member of various social organizations and groups. He was associated with TJSB Sahakari Bank Ltd., Thane Maharashtra, since 1994 and was elected as a Board Member for tenure of 1994-2002 and was member of various sub committees. From 2002-2005, he has been elected as Vice-chairman, then in 2005-2015, he has been elected as a Chairman and in 2015-2020, he was a Director of the Bank. He was also Director in National Federation of Urban Co-Operative Bank and was member of RBI Task Force from 2014 to 2019.	She is Director of The Arya Vaidya Pharmacy Ayurveda Hospital & Training Academy, a wing of The Arya Vaidya Pharmacy (Coimbatore) Ltd. She also headed the Administration and Academics of four Chinmaya Vidyalaya Schools as Correspondent. Presently she is State General Secretary in Seva Bharathi, Tamil Nadu.	He has worked in various capacities in District Administration, Department of Social Justice & Empowerment and Department of health & family welfare, Government of Maharashtra. He also served in Uttarakhand in Planning department, Dehradun. He has wide experience in the area of Public Administration and Planning.	He has more than 30 years of experience in Power and Mining sector in State and Central PSUs in the field of Finance, Accounts, Taxation, Commercial, Electricity regulation, Renewables, IT, Project development etc. with 8 years Board level exposure. Before his appointment as Director (Finance), NTPC Limited, he has served as Director (Finance) of NLC India Limited. He has also served as Director (Finance) of Maharashtra State Electricity and Distribution Company Limited & MAHAGENCO.	He joined NTPC as 12th batch Executive Trainee (ET) in 1987. He has over 34 years of vast experience with outstanding contribution in management of large size plants in the area of power plant operation & maintenance, Renovation & modernization of old units and in area of efficiency and systems improvement of thermal plants.
Directorship held in other companies	Drinkbucket Private Limited.	NIL	NIL	NIL	NIL	NIL#	1. Kanti Bijli Utpadan Nigam Limited. 2. NTPC Tamil Nadu Energy Co. Ltd. 3. Nabinagar Power Generating Company Limited 4. Bhartiya Rail Bijlee Co. Limited 5. Meja Urja Nigam Pvt. Limited
Memberships/ Chairmanship of Committees across all Public Companies*	Audit Committee: NTPC Limited - Member Stakeholder's Relationship Committee: NTPC Limited - Chairman	Audit Committee: NTPC Limited - Chairman Stakeholder's Relationship Committee: Nil	Audit Committee: NTPC Limited - Member Stakeholder's Relationship Committee: NTPC Limited - Member	Audit Committee: NTPC Limited - Member Stakeholder's Relationship Committee: NIL	Audit Committee: NIL Stakeholder's Relationship Committee: NIL	Audit Committee: NIL# Stakeholder's Relationship Committee: NIL#	Audit Committee: NIL Stakeholder's Relationship Committee: NIL
No. of Shares held in NTPC Limited as on 31.03.2022	NIL	NIL	NIL	NIL	NIL	5#	3240
Attendance in Board Meetings held during 2021-22	No. of meetings held: 6 No. of meetings attended: 6	No. of meetings held: 6 No. of meetings attended: 6	No. of meetings held: 6 No. of meetings attended: 6	No. of meetings held: 5 No. of meetings attended: 5	No. of meetings held: N.A. No. of meetings attended: N.A.	No. of meetings held: N.A. No. of meetings attended: N.A.	No. of meetings held: 15 No. of meetings attended: 15

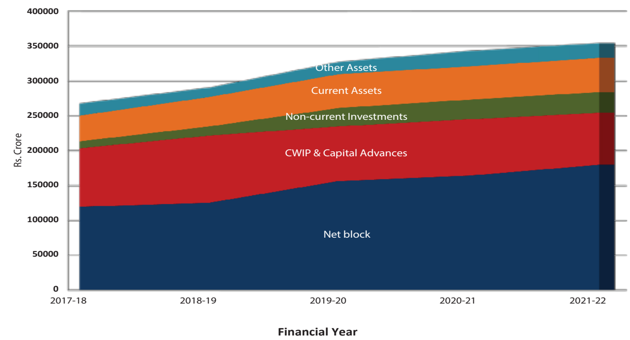
*In line with Regulation 26 of SEBI (Listing Obligations and Disclosure Requirements) Regulations 2015, membership of the Audit Committee and Stakeholders' Relationship Committee have only been taken into consideration.

as on 30th July 2022

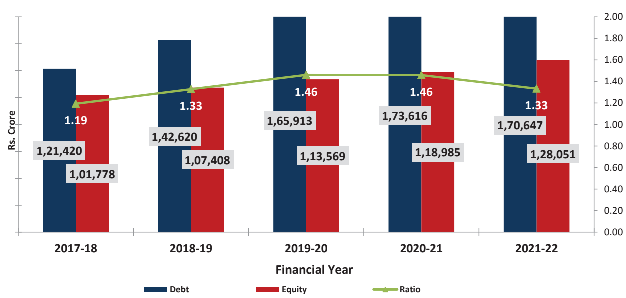
Source of Funds



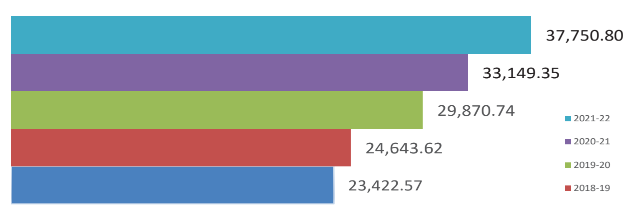
Application of Funds



Debt to Equity

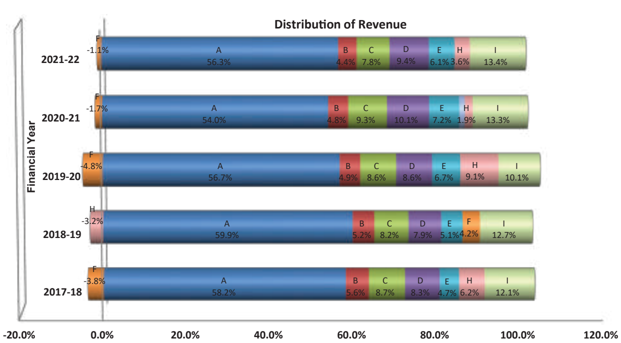


EBITDA* (₹ in Crore)



** Excluding Movements in regulatory deferral account balances*

Distribution of Revenue



A B C D E F G H I

A: Fuel (including Energy purchased for trading)
B: Employee Benefit Expenses
C: Other Expenses
D: Depreciation,Amortization & Impairment
E: Finance Costs
F: Movements in Regulatory Balances
G: Exceptional Items
H: Tax
I: Profit

Generating Power & Smiles 24x7 for the Nation

STATION & REGION WISE NTPC GROSS GENERATION 2021-22

Coal Stations	Gross Capacity (MW)	Gross Generation (MU)
NR		
Singrauli	2000	14454
Rihand	3000	22406
Unchahar	1550	8243
Tanda	1760	8616
Vindhyachal	4760	35730
Auraiya Gas	**663**	**361**
NR SOLAR		
Singrauli	15	20.05
Unchahar	10	12.17
Auraiya	20	32.19
Bilhaur	225	464.33
Singrauli small Hydro	8	22.44
TOTAL NR(C+G+S+Sh)	**14011**	**90362**
DBF		
Dadri Coal	**1820**	5724
GAS		
Dadri	830	787
Faridabad	432	120
SOLAR		
Dadri	5	6.39
Faridabad	5	6.79
TOTAL DBF(C+G+S)	**3091**	**6645**
WR-1		
Mouda Station	2320	12208
Solapur	1320	5081
GAS		
Anta	419	106
Kawas	656	256
Gandhar	657	396
SOLAR		
Bhadla	260	442
Jetsar	160	64
Fatehgarh	200	68
Wind		
Rojmal	50	103.5
WR-1 TOTAL(C+G+S+W)	**6043**	**18725**
WR-2		
Korba	2600	21245
Sipat	2980	21221
Gadarwara	1600	7966
Lara	1600	11366
Khargone	1320	6344
SOLAR		
Rajgarh	50	74.28
Mandsaur	250	383.40
WR -2 TOTAL(C+S)	**10400**	**68599**
ER-1		
Farakka	2100	12422
Kahalgaon	2340	16027
Barh	1980	9153
Barauni	720	2411
ER-1 TOTAL(Coal)	**7140**	**40012**
ER-2		
Talcher Kaniha	3000	22123
Bongaigaon	750	4201
Darlipali	1600	9208
SOLAR		
Talcher Solar	10	13.19
ER 2 Total (C+S)	**5360**	**35546**
SR		
Ramagundam	2600	17450
Simhadri	2000	11570
Kudgi	2400	6709
RGCCPP LIQUID	360	0
SOLAR		
Ramagundam	10	12.93
Ramagundam(F)	80	20.85
Ananthapuram	250	377.92
Simhadri (F)	25	29.95
Kayamkulam (F)	22	0.05
Andaman & Nicobar	5	5.41
SR TOTAL(C+G+S)	**7752**	**36176**
HYDRO		
Koldam	800	3120
NTPC TOTAL	**54597**	**299184**

Share of installed Capacity (as on 31st March 2022)

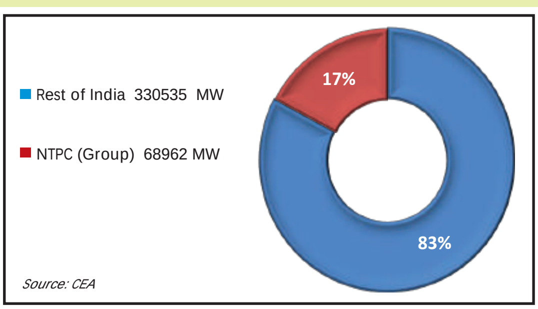
	Installed Capacity (MW)	% Share
NTPC Group	**68962**	17.26
Rest of India (Incl.RE)	**399497**	82.74

Share of electricity generated (FY 2021-22)

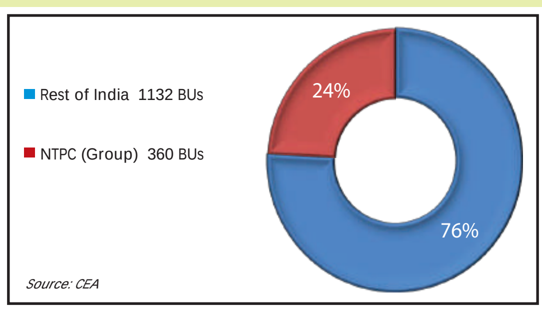
	Electricity generated (BU)	% Share
NTPC Group	**360.52**	24.29
Rest of India (Incl.RE) *	**1484.37**	75.71

*All India generation is excluding Bhutan Import

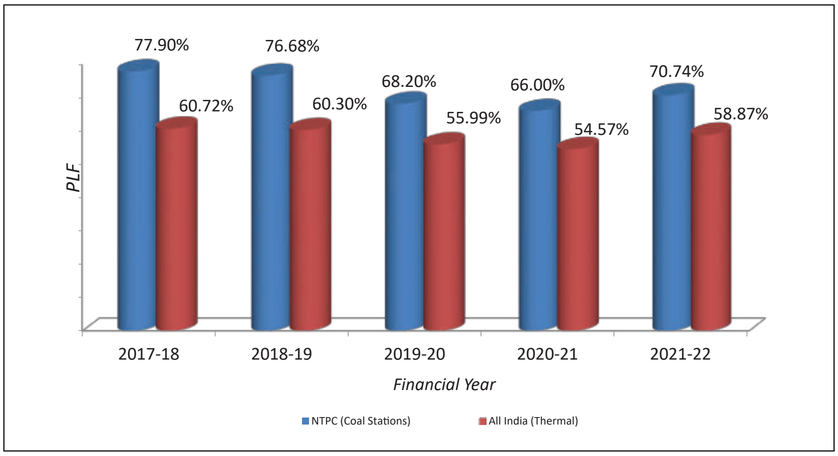
Share of Installed Capacity



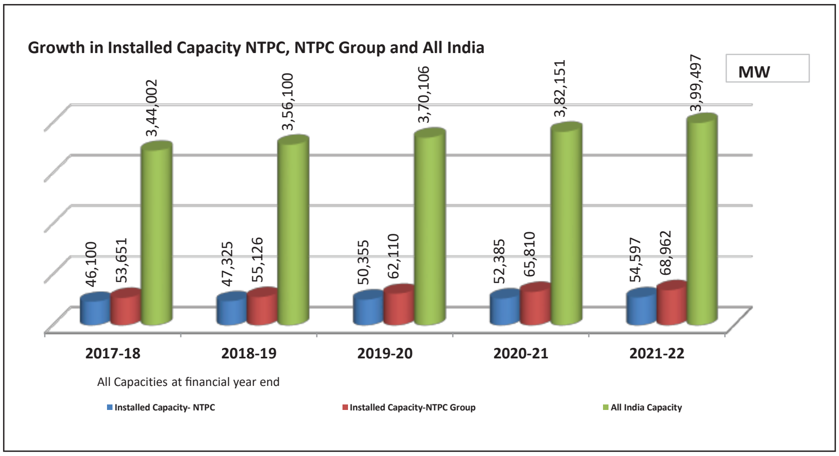
Share of Electricity Generated



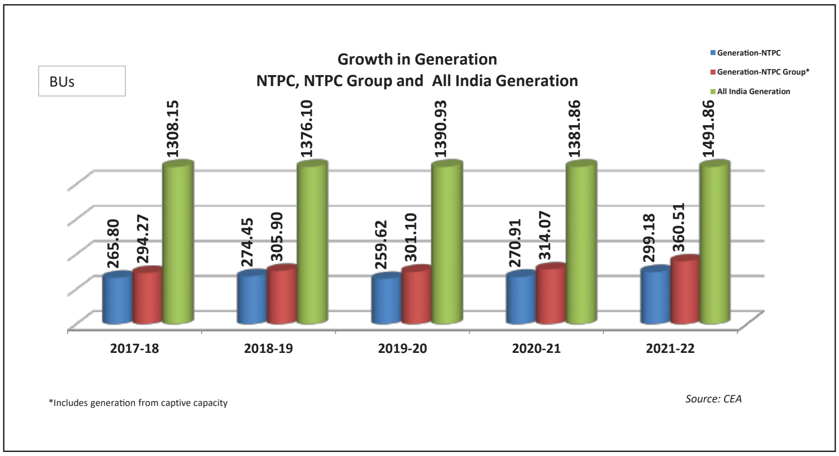
NTPC PLF Vs All India PLF



Growth in Installed Capacity NTPC, NTPC Group and All India



Growth in Generation NTPC, NTPC Group and All India Generation



GRAPHS REPRESENTING NTPC's GROWTH

SELECTED FINANCIAL INFORMATION*

(₹ Crore)

		2021-22	2020-21	2019-20	2018-19	2017-18
A	**Revenue**					
	Revenue from operations	1,16,137.33	99,206.72	97,700.39	90,307.43	83,452.70
	Other income	3,905.10	4,345.99	2,778.02	1,872.13	1,755.25
	Total revenue	**1,20,042.43**	**1,03,552.71**	**1,00,478.41**	**92,179.56**	**85,207.95**
B	**Expenses**					
	Fuel	64,163.68	52,849.64	54,241.82	52,493.74	48,315.47
	Energy purchased for trading	3,450.22	3,031.25	2,776.44	2,713.68	1,313.51
	Employee benefits expense	5,289.51	4,942.19	4,925.60	4,779.89	4,734.67
	Other expenses	9,388.22	9,580.28	8,663.81	7,548.63	7,421.73
	Profit before depreciation, finance cost and tax	**37,750.80**	**33,149.35**	**29,870.74**	**24,643.62**	**23,422.57**
	Depreciation, amortization and impairment expense	11,234.14	10,411.80	8,622.85	7,254.36	7,098.86
	Profit before finance cost and tax	**26,516.66**	**22,737.55**	**21,247.89**	**17,389.26**	**16,323.71**
	Finance costs	7,350.91	7,459.03	6,781.97	4,716.74	3,984.25
	Profit before exceptional items tax and regulatory account deferral account balances	**19,165.75**	**15,278.52**	**14,465.92**	**12,672.52**	**12,339.46**
	Exceptional Items (+) income/ (-) loss	-	-1,363.00	-	-	-
	Profit before tax	**19,165.75**	**13,915.52**	**14,465.92**	**12,672.52**	**12,339.46**
	Total Tax expense	4,366.39	1,925.39	9,181.95	-2,918.71	5,257.14
	Profit for the year before regulatory deferral account balances	**14,799.36**	**11,990.13**	**5,283.97**	**15,591.23**	**7,082.32**
	Net movement in regulatory deferral account balances (net of tax)	1,312.06	1,779.39	4,828.84	-3,841.34	3,260.85
	Profit for the year	**16,111.42**	**13,769.52**	**10,112.81**	**11,749.89**	**10,343.17**
	Other comprehensive income/(expense) for the year (net of income tax)	-87.63	-68.19	-327.22	-201.87	-14.48
	Total comprehensive income for the year	**16,023.79**	**13,701.33**	**9,785.59**	**11,548.02**	**10,328.69**
	Dividend	6,933.12	5,531.06	2,968.37	4,922.55	4,040.28
	Dividend tax	-	-	607.80	1,000.49	816.40
	Retained profit	9,178.30	8,238.46	6,536.64	5,826.85	5,486.49
C	**Assets**					
	Property, plant & equipment	1,79,580.37	1,63,892.12	1,56,273.02	1,25,290.68	1,19,427.57
	Capital work-in-progress	68,598.66	75,343.60	73,066.76	90,808.89	78,606.91
	Intangible assets	485.41	556.74	538.28	329.94	331.60
	Intangible assets under development	98.47	94.90	292.52	397.80	469.36
	Total Fixed Assets (Net block)	2,48,762.91	2,39,887.36	2,30,170.58	2,16,827.31	1,98,835.44
	Investments in Subsidiaries, JVs & Others (Non-current)	29,881.07	28,125.65	26,400.89	13,145.94	10,047.48
	Other non-current financial assets	2,306.38	2,686.96	2,003.86	1,968.67	2,288.53
	Other non-current assets	12,083.22	13,790.02	11,464.50	13,269.30	11,547.73
	Current assets	48,874.25	47,543.21	48,504.86	42,133.74	36,731.25
	Regulatory deferral account debit balances	12,588.97	11,143.72	9,122.76	3,406.00	8,381.66
	Total Assets	**3,54,496.80**	**3,43,176.92**	**3,27,667.45**	**2,90,750.96**	**2,67,832.09**
D	**Liabilities**					
	Borrowings					
	Non-current borrowings	1,47,374.75	1,50,509.00	1,46,538.70	1,19,698.08	1,08,697.60
	Current maturities of non-current borrowings	16,641.07	10,247.45	6,154.92	7,732.40	6,406.69
	Total borrowings	1,64,015.82	1,60,756.45	1,52,693.62	1,27,430.48	1,15,104.29
	Other Non-current liabilities	14,239.08	13,638.31	10,182.85	6,151.34	12,716.06
	Current liabilities	62,858.51	58,049.71	54,704.16	55,354.00	42,554.76
	Less: Current maturities of non-current borrowings	16,641.07	10,247.45	6,154.92	7,732.40	6,406.69
	Net Current liabilities	46,217.44	47,802.26	48,549.24	47,621.60	36,148.07
	Deferred Revenue	1,973.39	1,994.41	2,672.30	2,139.37	2,085.90
	Regulatory deferral account credit balances	-	-	-	-	-
E	**Net-worth**					
	Equity	9,696.67	9,696.67	9,894.56	9,894.56	8,245.46
	Other Equity	1,18,354.40	1,09,288.82	1,03,674.88	97,513.61	93,532.31
	Networth	1,28,051.07	1,18,985.49	1,13,569.44	1,07,408.17	1,01,777.77
	Networth excluding Fly ash utilisation reserve fund, Corporate social responsibility (CSR) reserve & reserve for Equity instruments through OCI	1,27,391.38	1,18,306.11	1,13,031.54	1,06,780.48	1,01,138.76
	Total Liabilities	**3,54,496.80**	**3,43,176.92**	**3,27,667.45**	**2,90,750.96**	**2,67,832.09**
F	**Capital employed (excluding under construction projects)**	1,89,120.67	1,74,649.34	1,47,014.07	1,31,354.03	1,19,711.03
G	**Value added**	45,967.59	42,965.45	37,586.93	33,570.80	31,163.69
H	**Number of shares #**	9,69,66,66,134	9,69,66,66,134	9,89,45,57,280	9,89,45,57,280	9,89,45,57,280
I	**Number of employees**	15,786	16,798	17,398	18,359	19,739
J	**Ratios**					
	Return on capital employed (excluding under construction projects) (%)	10.85	10.86	10.48	12.51	11.52
	Return on Net Worth (Profit for the year/Average Shareholder's Equity) (%)	13.04	11.84	9.15	11.23	10.45
	Book value per Share (₹)	132.06	122.71	114.78	108.55	102.86
	Earnings per share (₹) @	16.62	13.99	10.22	11.88	10.45
	Current ratio	0.78	0.82	0.89	0.76	0.86
	Debt equity ratio {(Non Current Borrowings+Current Borrowings)/(Total Equity)}	1.33	1.46	1.46	1.33	1.19
	Value added per employee (₹ crore)	2.91	2.56	2.16	1.83	1.58

* Standalone

During FY 2018-19, 164,90,92,880 bonus shares were issued. Number of shares for all previous years have been changed accordingly for comparability.

@ Earning per share for the year ended 31 March 2021 has been computed on the basis of weighted average number of shares outstanding during the year i.e., 984,46,77,868 shares considering buy back of 19,78,91,146 fully paid-up equity shares completed on 30 December 2020.

DIRECTORS' PROFILE

Chairman & Managing Director

Gurdeep Singh, [DIN: 00307037], is the Chairman & Managing Director of NTPC Limited since 2016. Prior to joining NTPC, he was Managing Director of Gujarat State Electricity Company Limited.

He has an illustrious career spanning over three decades in the power sector. He started his career in 1987 as an Engineer Trainee with NTPC and has worked his way through various ranks in public and private sector including MNCs.

He graduated in mechanical engineering from NIT Kurukshetra and has undergone Management Education Program from IIM Ahmedabad. He has also received management and leadership inputs from renowned global institutions like Saïd Business School-Oxford (UK), Harvard-Kennedy School (USA), Darden School of Management - Virginia (USA), Singapore Civil Services College (Singapore) and ISB Hyderabad (India).

He is a member of IEA's High Level advisory group on Coal in the Global Net Zero transition and also a member of the Clean Energy Ministerial H2I advisory group. He served as Co-chair for the taskforce on Energy & Resource efficiency, B20 Italy 2021.

He has launched a series of initiatives to sustain NTPC's growth and bring about cultural changes necessary to maintain NTPC's position as a leading global energy company. He has positioned NTPC at the forefront of energy transition and has started many initiatives like aggressive renewable addition, green Hydrogen, acquisitions, Biomass, Waste-to-Wealth, CCU, global presence etc. to transform NTPC from merely a "Coal based Power Generating Company" to a "Sustainable Integrated Energy Company".

His strong focus on increasing competitive edge helped NTPC winning various tenders and emerged as a strong player in renewables. His thrust on minimizing environmental footprint, maximizing sustainability efforts and a focussed approach of 'Low-Cost Low Emission' aligns with India's ambitious target of cleaner and affordable power for all and helped in conceptualisation of coal swapping, freight rationalisation, priority in scheduling of cheaper stations and flexibility in scheduling schemes.

Director (HR)

Dillip Kumar Patel, [DIN:08695490], has taken charge as Director (HR), NTPC on 1st April 2020. He started his career in NTPC way back in 1986 as an Engineering Executive Trainee (XI batch). Mr. Patel's ascent from his humble beginning as an Executive Trainee to the top echelons of HR function in NTPC signifies his passion, commitment and hard work. He graduated in Mechanical Engineering from NIT, Rourkela and did his Post Graduate Diploma in Business Management (HR & Finance) from MDI, Gurgaon. He has also received management and leadership training inputs from ESCP-EAP (Paris, Berlin & Turin), Harvard Business School (USA), ISB Hyderabad & XLRI Jamshedpur.

He has an illustrious career spanning over more than three decades entailing both line and HR functions. After initial exposure of working in Operation & Maintenance, he took a leap in his career and switched to core HR function in 1997. He looked after various facets of HR and subsequently moved on to become the Head of HR of Koldam, the first hydro project of NTPC. He had been Head of HR at various projects of NTPC such as NSPCL-Bhilai, Sipat, and Tanda for about 13 years. He had a short stint as Regional Head of HR of Easter Region-II before being appointed to the post of Director (HR) in NTPC.

He has undertaken various challenging assignments and has successfully managed HR functions while working at various locations comprising of thermal, hydro, JVs as well as taken-over projects. He firmly believes in the philosophy of "People before PLF". His rich and varied experience will help the Organization to deal with energy transition effectively and take NTPC to new heights in the days to come. Shri Patel, in addition to his prime responsibilities as Director (HR), he is also part time Chairman on the board of NTPC SAIL Power Company Limited (NSPCL) and Aravali Power Company Private Limited (APCPL).

Director (Operations)

Ramesh Babu V, [DIN:08736805], a Mechanical Engineering graduate from NIT Srinagar and Masters in Thermal engineering from IIT Delhi, joined NTPC as 12th batch Executive Trainee in 1987. He has over 34 years of vast experience with outstanding contribution in management of large size plants in the area of power plant operation & maintenance, Renovation & modernization of old units and in area of efficiency and systems improvement of thermal plants. He, as a Professional Manager and Strategic Planner has led several initiatives for improving reliability and efficiency of Plants.

His experience in power sector includes Senior Management level exposure as a “Business Unit Head” of NTPC Talcher Kaniha & NSPCL Durgapur. Prior to elevation to the post of Director (Operations), he was working as ED to CMD & was working on system improvement activities and strategies related to operational excellence of NTPC power plants.

He is also Part time Chairman on the Board of NTPC Tamil Nadu Energy Company Ltd. (NTECL), Kanti Bijlee Utpadan Nigam Ltd. (KBUNL). Bhartiya Rail Bijli Corporation Limited (BRBCL) and Nabinagar Power Generation Company Limited (NPGCL). He is also holding Part time Chairman on the Board of Meja Urja Nigam Private Limited (MUNPL). He is permanent Invitee on the board of Northern Coalfields Limited & member of Central Pollution Control Board.

As Director (Operations), NTPC, he is responsible for overall planning for Safe, Reliable, sustainable and Efficient operation of all power generating stations of NTPC group Portfolio, while ensuring fuel security, safety & environmental compliance of all Power Stations.

Director (Commercial)

Chandan Kumar Mondol, [DIN:08535016], has taken charge as Director (Commercial), NTPC Limited w.e.f. 1st August, 2020.

He has joined NTPC as 9th Batch Executive Trainee (ET) in 1984. He has 38 years of experience and comprehensive knowledge of the power Sector in the area of Project execution, Commercial, Corporate Planning, Coal Mining, Contracts and Business Development etc.

Shri Mondol, as Director (Commercial), is responsible for overall planning and execution of works related to Commercial, Coal Mining, Renewable Energy, Business Development, Consultancy & Corporate Contracts & Materials department.

Shri Mondol, in addition to his prime responsibility as Director (Commercial) on board of NTPC, is also part time chairman on Board of 4 wholly owned subsidiary companies namely NTPC Renewable Energy Ltd, NTPC Green Energy Ltd, NTPC Mining Ltd and NTPC Vidyut Vyapaar Nigam Ltd. and also part time director on board of 3 companies Energy Efficiency Service Limited (EESL), Convergence Energy Services Limited (CESL), Bangladesh India Friendship Power Company Ltd. (BIFPCL) and played key role in guiding, providing them appropriate direction to maintain their competitive edge and growth.

Before his appointment as Director (Commercial), he has worked as RED-WR1, RED (DBF & Hydro), ED (PP&M) and ED (Commercial) and Business unit Head of Khargone Super Thermal Power Project (2x660MW).

Director (Projects)

Ujjwal Kanti Bhattacharya, [DIN: 08734219], joined NTPC in the year 1984 as Ninth Batch of Engineering Executive Trainees and was initially posted at NTPC Korba.

He is an Electrical Engineering Graduate from Jadavpur University, Kolkata and a PG Diploma in Management from MDI, Gurgaon.

He started his career in Green Field Project Construction in 2600 MW Korba STPP, followed by 2100 MW Farakka STPP working in the areas of Project management, Power Plant Operation & Maintenance, Renovation & Modernization, Environment Management, Technical Services at 1600 MW Farakka STPP.

After serving in Farakka in various departments, he moved to Talcher Thermal Power Station (450 MW), an Old and Underperforming asset, taken over from State Electricity Board. He, along with his team, created history in turning around the station, which went on to become a top performing station for years thereafter, till as recent as 2021.

He has significantly contributed for NTPC's vertical & horizontal business diversification as well as growth through inorganic route.

He has had an illustrious career in Business Development function of NTPC in Domestic as well as International Arena with special focus on NTPCs diversification into hydroelectricity with acquisition of Koldam and setting up of subsidiary company NESCL for electricity distribution business. Structuring and setting up Trincomalee Power Company Ltd, a 50:50 Joint venture Power company in Srilanka way back in 2010-11.

He has been at the forefront of JV formulation & Project conceptualization for 1320 MW Maitree Power Project at Bangladesh.

Prior to Director (Projects), he has worked as MD and CEO of BIFCL (Bangladesh India Friendship Power Company Limited), ED (Business Development) and ED (Projects) in NTPC.

He is directly responsible for entire portfolio of Engineering, Projects, R&D, Dispute resolution cell and International Business Development (IBD) , IT and ERP activities, as functional Director of these important verticals of NTPC.

Apart from Board member in NTPC board, he is chairman in Patratu Vidyut Utpadan Nigam Limited (PVUNL), NTPC GE Power Services Pvt. Ltd. (NGSL) (JV between NTPC and GE), NTPC-BHEL Power Projects Private limited (NBPPL), Vice Chairman in Hindustan Urvarak & Rasayan limited (HURL), Director on Board of THDC India Limited (THDC) and North Eastern Eletric Power Corporaton Limited (NEEPCO).

Director (Finance)

Jaikumar Srinivasan, [DIN: 01220828], has taken charge as Director (Finance), NTPC on 21.7.2022. He is a Commerce Graduate and an Associate Member of the Institute of Cost Accountants of India.

He has more than 30 years of experience in Power and Mining sector in State and Central PSUs in the field of Finance. Accounts, Taxation, Commercial, Electricity regulation, Renewables, IT, Project development etc. with 8 years Board level exposure.

Before his appointment as Director (Finance), NTPC Limited, he has served as Director (Finance) of NLC India Limited. He has also served as Director (Finance) of Maharashtra State Electricity and Distribution Company Limited, prior to which he was the Director (Finance) of Maharashtra State Power Generation Company (MAHAGENCO), Govt of Maharashtra entities. He also served as part time Director in Mahaguj Colliery Company Limited, UCM Coal Company Ltd. and other subsidiary company of MAHAGENCO.

Government Nominee Director

Ashish Upadhyaya, [DIN: 06855349], IAS, Additional Secretary & FA, Ministry of Power, Govt. of India joined as a Part-time Official Director on the Board of NTPC on 22.1.2020. Shri Upadhyaya is an IAS Officer of 1989 Batch belonging to Madhya Pradesh cadre. Having done his post-graduation in History from St. John College, Agra, he joined the civil services and has served for more than 31 years in various capacities in the State Government of M.P. including tenure in coal bearing areas of Anuppur, Shahdol and Umaria as the Addl. District Collector. He has been Collector for more than 5 years in 3 districts of M.P. & Chhattisgarh. Shri Upadhyaya has served at the State level as Secretary and Principal Secretary of various departments including Home, Higher Education and Finance for many years. As Joint Secretary, Coal, he has been instrumental in developing systems by application of space technology for curbing the menace of illegal mining. He has academic bent of mind and while being in the service, he continued his pursuit of education and completed post-graduation in Economics and L.L.B. He also did his Master's degree in Public Administration from Maxwell School of Citizenship, Syracuse University in U.S.A. Shri Upadhyaya has been working as Additional Secretary & FA, Ministry of Power since 14th November 2019.

Government Nominee Director

Piyush Singh, [DIN: 07492389], is a 2000 Batch IAS officer from Maharashtra Cadre.

He has done B. Tech (Civil) from IIT Delhi. He worked in various capacities in District Administration, Department of Social Justice & Empowerment and Department of health & family welfare, Government of Maharashtra. He also served in Uttarakhand in Planning department, Dehradun. He has wide experience in the area of Public Administration and Planning.

He does not hold any shares of NTPC and he is not inter-se-related with other director on the Board of the Company. Further, he is not debarred from holding the office of director by virtue of any SEBI order or any other such authority.

Independent Director

Sangitha Varier, [DIN: 09402812], is a Corporate Leader. She is a Commerce Graduate and Bachelor in Education (B. Ed.).

During her career, she has held various positions. She is Director of The Arya Vaidya Pharmacy Ayurveda Hospital & Training Academy, a wing of The Arya Vaidya Pharmacy (Coimbatore) Ltd. She also headed the Administration and Academics of four Chinmaya Vidyalaya Schools as Correspondent. Presently she is state General Secretary in Seva Bharathi, Tamil Nadu.

She does not hold any shares of NTPC and she is not inter-se related with other directors on the Board of the Company. Further, she is not debarred from holding the office of director by virtue of any SEBI order or any other such authority.

Independent Director

Jitendra Jayantilal Tanna, [DIN: 09403346], is a Chartered Accountant by profession. He is also a Commerce Graduate. He has functional expertise in areas of Direct Taxation, Audit and Finance Management.

He does not hold any shares of NTPC and he is not inter-se related with other directors on the Board of the Company. Further, he is not debarred from holding the office of director by virtue of any SEBI order or any other such authority.

Independent Director

Vidyadhar Vaishampayan, [DIN: 02667949], is a M-Tech from IIT-Mumbai and he has also completed Executive Development Study from IIM-Bangalore. He is an active member of various social organizations and groups.

He was associated with TJSB Sahakari Bank Ltd., Thane, Maharashtra, since 1994 and was elected as a Board Member for the tenure of 1994-2002 and was a member of various sub committees. In tenure of 2002-2005, he has been elected as Vice-chairman then in the tenure of 2005-2015, he has been elected as a Chairman of the Bank and in the tenure of 2015-2020, he was a Director of the Bank. He was also Director in National Federation of Urban Co-Operative Bank and was member of RBI Task Force from 2014 to 2019. In technical field, he has developed multilevel parking system, which is essential requirement of present as well as future.

He does not hold any shares of NTPC and he is not inter-se related with other directors on the Board of the Company. Further, he is not debarred from holding the office of director by virtue of any SEBI order or any other such authority.

Independent Director

Vivek Gupta, [DIN: 08794502], is a serial entrepreneur. He is a Management Graduate with a degree of Law. He is founder CEO in Jaipur scientific instrument, Jaipur Scientific Agriculture Research Sol. Pvt. Ltd. and Director in Drinkbucket Pvt. Ltd.

He does not hold any shares of NTPC and he is not inter-se related with other directors on the Board of the Company. Further, he is not debarred from holding the office of director by virtue of any SEBI order or any other such authority.

SENIOR MANAGEMENT TEAM
(As on 1.8.2022)

S. No.	Executive Directors S/Shri	Position Held
1.	Naresh Anand	RED (SR)
2.	Debashis Sen	RED (NR)
3.	Anil Kumar Pandey	RED (WR-2 & USSC)
4.	Partha Mazumder	RED (Coal Mining)
5.	Mohit Bhargava	ED (Renewable Energy)
6.	Ashwini Kumar Tripathy	ED (OS)
7.	Ashim Kumar Goswami	RED (ER-2)
8.	Munish Jauhari	RED (WR-1)
9.	Manish Kumar Srivastava	ED (Engineering)
10.	DSGSS Babji	RED (ER-1)
11.	Vinay Kumar	RED (Hydro)
12.	Harekrushna Dash	ED (CC&M)
13.	C Sivakumar	ED (USSC)
14.	Renu Narang	ED (Finance)
15.	Dileep Kumar	ED (FM)
16.	Subrata Mandal	ED (Bongaigaon)
17.	Satish Upadhyay	ED (Rammam)
18.	Aditya Dar	ED (Finance)
19.	MVR Reddy	ED (SAFETY/LA/R & R/ CSR-CD)
20.	Shambhu Nath Tripathi	ED (PM)
21.	Sudip Nag	ED (Biomass)

Posted in NTPC Subsidiaries and Joint Venture Companies

S. No.	Executive Directors S/Shri	Position Held
1.	Praveen Saxena	CEO-NVVN
2.	A K Samanta	ED-(Ratnagiri)
3.	Prem Prakash	ED-Patratu
4.	Sital Kumar	CEO-UPL
5.	Debasish Chattopadhyay	CEO-NSPCL

NTPC - Among the Best employers in the Country

DIRECTORS' REPORT

Dear Members',

Your Directors are pleased to present the 46th Integrated Annual Report on the business and operations of the Company along with the Audited Standalone and Consolidated Financial Statements for the year ended March 31, 2022 and Auditors' Report thereon on behalf of the Board of Directors.

Financial Year 2021-22 had been yet another year of achievements for your Company despite being many challenges imposed by the second wave of COVID-19.

Performance highlights of your company for the financial year 2021-22 are briefly mentioned here to give an overview of accomplishments on all fronts:

- Your company has achieved over 106% of the capex target. Your company realised 100% of the billed amount, thus achieving realization of Rs. 1,16,148 crore. Further, your company trade receivables are less than 45 days.
- Your company has registered growth of 10.44% (Standalone) & 14.78% (NTPC Group) in power generation.
- Plant Load Factor (PLF) of 70.74 % as against all India Coal PLF of 58.76% with Korba Thermal station of your Company recording highest PLF of 93.28 %. 8 Stations (including JVs) were in the top 25 in the country in terms of PLF.
- Your company has registered a growth of 27% in coal production from our captive mines by achieving 14.01 MMT of coal production.
- Your company has achieved capacity addition of 3,372 MW and commercial capacity addition of 4,032 MW including 502 MW capacity from renewable. Your Company (Group) is now nearly 69 GW company.
- Your company raised a loan in US Dollar 750 million for its funding its capex plan at a very competitive rate. Further, through proactive refinancing, the weighted average cost of borrowings stood at 5.94%, which is one of the best in the market.
- Group Capital Expenditure (CAPEX) including CAPEX of JV/ subsidiaries of your Company for the year 2021-22 on cash basis was ₹ 34,490.55 crore and on standalone basis was ₹ 21,035.88 crore.
- Revenue from operations was ₹ 1,16,137.33 crore and total revenue was ₹ 1,20,042.43 crore. Net Profit after Tax (PAT) was ₹ 16,111.42 crore.
- Dividend of ₹7.00/- per share comprising interim dividend of ₹ 4.00/- per equity share paid in February 2022 and recommended final dividend of ₹ 3.00 per equity share for the year 2021-22, subject to your approval in the ensuing Annual General Meeting.
- Cash contribution of ₹7,039.07 crore to Government of India's exchequer through dividend and income tax in the financial year 2021-22.
- Planted approx. 10.44 lakh trees during 2021-22 to mitigate the GHG emissions arising out of plant operations, thereby bringing total to about 3.70 crore planted trees till end of 31.3.2022.
- Your company has been selected as a 2022 ATD BEST Award winner. This is the 5th time that NTPC has been selected for this prestigious global award in the talent development space. This award recognizes organizations that demonstrate enterprise-wide success through talent development.
- Your company has recognised as a Great Place to Work for the 15th year in a row by the Great Place to Work Institute and it was the only PSU to consistently feature in India's Top 50 Best Workplaces.
- Your company, the largest power Utility of the country has been conferred "Excellence in Corporate Social Responsibility" in the prestigious CII-ITC Sustainability Awards 2021, consecutive 2nd time in a row. This is the highest award conferred by CII-ITC. This award recognises companies that have positively impacted both business and society by taking a strategic approach to CSR through collaborative programmes with government and civil society.
- In its endeavour towards more sustainable power generation, your Company has started using agro- residue-based pellets.
- Your Company is saving every year nearly 3.4 crore paper which is equivalent to 4,100 fully grown trees annually by going paperless. Project "PRADIP" (Pro-Active and Digital Initiatives to become Paperless) has been implemented for digitization of documents and paperless processes.

You will appreciate the fact that your company recorded growth and excellent performance despite numerous challenges before the sector like Environmental concerns, lower availability of coal, Non-availability of Gas, strict emission norms, etc.

Despite many operational challenges imposed by the second wave of COVID-19, your company has worked (24X7) to provide uninterrupted power supplies every day to millions of Indians. Further, as a responsible corporate citizen, it is our duty to follow the directives issued by Government of India (GoI) from time to time to fight against COVID-19 pandemic.

1. FINANCIAL RESULTS (STANDALONE)

Particulars	2021-22		2020-21	
	₹ Crore	US $ Mn*	₹ Crore	US $ Mn*
Income				
Revenue from operations (including energy sales, sale of energy through trading, consultancy fee etc.)	1,16,137.33	15,215.16	99,206.72	12,997.08
Other income	3,905.10	511.61	4,345.99	569.37
Total income	1,20,042.43	15,726.77	1,03,552.71	13,566.45
Expenses				
Fuel cost	64,163.68	8,406.09	52,849.64	6,923.84
Electricity purchased for trading	3,450.22	452.01	3,031.25	397.12
Employee benefits expense	5,289.51	692.98	4,942.19	647.48
Finance costs	7,350.91	963.04	7,459.03	977.21
Depreciation and amortisation expense	11,234.14	1,471.79	10,411.80	1,364.05
Other expenses	9,388.22	1,229.95	9,580.28	1,255.11
Total expenses	**1,00,876.68**	**13,215.86**	**88,274.19**	**11,564.81**
Profit before exceptional items, tax and regulatory deferral account balances	**19,165.75**	**2,510.91**	**15,278.52**	**2,001.64**
Exceptional Items	-	-	1,363.00	178.57
Profit before tax and regulatory deferral account balances	**19,165.75**	**2,510.91**	**13,915.52**	**1,823.07**
Tax expense	4,366.39	572.04	1,925.39	252.25
Profit for the year before regulatory deferral account balances	**14,799.36**	**1,938.87**	**11,990.13**	**1,570.82**
Net movement in regulatory deferral account balances (net of tax)	1,312.06	171.89	1,779.39	233.12
Profit for the year	**16,111.42**	**2,110.76**	**13,769.52**	**1,803.94**

Appropriations	2021-22		2020-21	
	₹ Crore	US $ Mn*	₹ Crore	US $ Mn*
Transfer to general reserve	-	-	6,500.00	851.57
Dividend paid	6,933.12	908.31	5,531.06	724.62
Tax on dividend paid	-	-	-	-

*1US $= ₹ 76.33 as on March 31, 2022

2. FORMATION OF NTPC GREEN ENERGY LIMITED (NGEL)

Your Company is taking various steps to make its energy portfolio greener by adding significant capacities of Renewable Energy (RE) Sources.

In this regard, your Company has incorporated NTPC Green Energy Ltd. ("NGEL") as a wholly owned subsidiary of your Company on 7th April 2022 for consolidation of the identified RE portfolio in which RE assets of your Company and NTPC Renewable Energy Limited (NREL), wholly owned subsidiary of your Company is proposed to be transferred. Monetization of NGEL is proposed through strategic stake sale to Financial/ Strategic/Private Equity investors and/ or IPO.

3. MERGER OF KANTI BIJLEE UTPADAN NIGAM LIMITED AND NABINAGAR POWER GENERATING COMPANY LIMITED (WHOLLY OWNED SUBSIDARY COMPANIES) WITH YOUR COMPANY

Your Company has filed application to the Ministry of Corporate Affairs on 5 February, 2021 for approval of Scheme of Amalgamation of Nabinagar Power Generating Co. Limited and Kanti Bijlee Utpadan Nigam Limited (wholly owned subsidiaries of the Company) with your Company under provisions of Section 230-232 of the Companies Act, 2013. The scheme has been approved by the shareholders and Unsecured Creditors of the Company in their respective meetings held on 18 April 2022 as per the Order of the Ministry of Corporate Affairs. Approval of the Scheme of merger had received on 29.7.2022 from the Ministry of Corporate Affairs.

4. DIVIDEND

Interim and Final Dividend:

Your Company has declared and paid interim dividend of ₹ 4.00/- per equity share in February 2022 and the Board of Director of your Company has recommended a final dividend of ₹ 3.00/- per equity share for the financial year (FY) 2021-22. If approved by shareholders, total dividend for FY 2021-22 will be ₹ 7.00/- per share. This will be the highest ever dividend per share in the history of Company.

The dividend pay-out ratio during the last five year was as under:

S.No.	Financial Year	Dividend Pay-out Ratio
1	2017-2018	40.82%
2	2018-2019	46.18%
3	2019-2020	30.82%
4	2020-2021	43.31%
5	**2021-2022**	**42.13%**

The final dividend shall be paid after your approval at the ensuing Annual General Meeting.

The dividend has been recommended in accordance with your Company's Dividend Distribution Policy. Further, as per Regulation 43A of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 (SEBI Listing Regulations), the top 1,000 listed companies shall formulate a dividend distribution policy. Accordingly, the policy was adopted to set out the parameters and circumstance that will be taken into account by the Board in determining the distribution of dividend to its shareholders and / or retained profits earned by the Company. The policy is also available on the Company's website https://www.ntpc.co.in/sites/default/files/downloads/DividendDistributionPolicyofNTPCLimited.pdf.

5. OPERATIONAL PERFORMANCE

During the year, the power stations of your Company generated 299.20 BUs (360.50 BUs including JVs & Subsidiaries) of electricity. This was 20.16% (24.29% including generation by JVs and Subsidiaries) of the total power generated in India. Previous years' generation was 270.9 BUs by your Company (314.10 BUs including JVs & Subsidiaries).

The total generation contributed by coal stations is 291.90 BUs during the year against generation of 260.40 BUs last year. Generation from coal-based units could have been still higher. However, due to less generation schedule there was opportunity loss of 66.3 BUs. The coal-based stations operated at an average Plant Load Factor (PLF) of 70.74 % (All India Coal PLF was 58.76%) and average Availability Factor (DC %) of 88.76% during the year.

Korba Thermal Power Station with a PLF of 93.28 % was ranked 2nd in the country and 8 Stations (including JVs) of your Company were in the top 25 in the country in terms of PLF. Three coal-based stations out of twenty-three commercial Stations achieved PLF more than 85%.

The gas stations having a capacity of 4,017 MW achieved annual generation of 2.03 BUs at a PLF of 5.76 % as against 5.7 BUs last year generation. Opportunity loss due to less generation schedule on Gas was 30.43 BUs. Generation contributed by Koldam Hydro Power Station was 3.12 BUs against 3.22 BUs achieved in last year. Less generation was due to low water inflow. Generation contributed by RE Projects/stations (Solar, wind, small hydro) of your Company was 2.16 BUs.

6. COMMERCIAL PERFORMANCE

6.1 Billing and Realisation

Your Company has realized 100% of its current bills raised for energy supplied in 2021-22. Your Company has also successfully achieved the target for realization of dues set by Government of India (GoI) for energy supplied in 2021-22. Most of the beneficiaries have made timely payments and availed attractive rebates as per Company's Rebate Scheme.

Your Company has in place a robust payment security mechanism in the form of Letters of Credit (LC) backed by the Tri-Partite Agreement (TPA). Apart from the LCs, payment is secured by the Tri-Partite Agreements (TPAs) signed amongst the State Governments, Government of India (GoI) and Reserve Bank of India (RBI). As per the TPAs, any default in payment by the State owned Discoms can be recovered directly from the account of the respective State Governments in association with RBI. The original TPAs signed during 2000-01 were valid up to 31.10.2016. As per the decision of the Union Cabinet and as agreed by the various States and the RBI, these TPAs have been extended for a further period of 10 to 15 years. As of now, 29 out of total 31 States/UTs have signed the TPAs extension documents. The signing of TPAs extension by remaining States is being taken up.

6.2 Rebate Scheme for realization of dues

In order to encourage early and full realization of dues, your Company issued 'Rebate Scheme' for the year 2021-22. 1.65% rebate was allowed for amounts credited to your Company's accounts for any payments against provisional bills and advance payments made on 1st day of the Billing Month and graded gradually to 1.590% till 5th day of the billing month. 1.575% rebate was allowed for amounts credited to your Company's accounts for any payments made on 6th day and graded gradually to 1.5% till 11th day of the billing month. For amounts credited to your Company accounts from 12th day of the Billing Month till 18th day of the month next to Billing Month, graded rebate was offered from 1.485% to 0.020%.

6.3 Commercial Capacity

Commercial Capacity totaling to 4,032 MW of your Company including those of JV's and subsidiary companies was added during the year 2021-22:

Project/ Unit	Capacity (MW)	COD*
1. Owned by your Company		
(A) Coal Based Power Projects		
Tanda-II Unit#2	660	1.7.2021
Darlipali Unit#2	800	1.9.2021
Barh-1 Unit#1	660	12.11.2021
Barauni-II Unit#2	250	1.11.2021
Total (A)	**2,370**	
(B) Renewable Projects		
Bilhaur Solar (85MW)	15	8.4.2021
Simhadri Floating Solar PV (25MW)	10	30.6.2021
	15	21.8.2021
Jetsar Solar PV (160MW)	80	22.10.2021
	80	25.3.2022
Ramagundam Floating Solar PV (100MW)	17.50	28.10.2021
	20	22.12.2021
	42.50	24.3.2022
Fatehgarh Solar PV (296MW)	49.92	30.12.2021
	74.88	5.2.2022
	74.88	5.3.2022
Kayamkulam Floating Solar PV (92MW)	22	31.3.2022
Total (B)	**502**	
Total (A+B)-I	**2,872**	
2. Under JVs & Subsidiaries		
Coal Based Power Projects		
NPGCL Unit#2	660	23.7.2021
BRBCL Unit #4	250	1.12.2021
Rourkela, NSPCL	250	29.3.2022
Total II	**1,160**	
Total Capacity declared commercial during 2021-22 (I)+(II)	**4,032**	

* COD- Commercial Operation Date

As on 31.3.2022, the Commercial Capacity of your Company stood at 54,597 MW (51,725 MW as on 31.3.2021) and your Company Group's Commercial Capacity stood at 68,302 MW (64,490 MW as on 31.3.2021):

Owned by your Company	Capacity MW
Coal based projects	48,120
Gas based projects	4,017
Renewable Energy Projects	1,660
Hydro Projects	800
Sub-total (I)	**54,597**

Joint Ventures & Subsidiaries	
Coal based projects	8,094
Gas based projects	2,494
Renewable Energy Projects	168
Hydro Projects	2,949
Sub-total (II)	**13,705**
Total (I+II)	**68,302**

6.4 Tariff Regulations

Central Electricity Regulatory Commission (CERC) has issued the CERC (Terms and Conditions of Tariff) Regulations, 2019 on 7.3.2019, which are applicable for the period starting from 1.4.2019 to 31.3.2024. The tariff of electricity generated from various stations of your Company is in the process of determination by CERC based on station specific petitions filed as per these Regulations for the above-mentioned period. Further, CERC has also issued the First Amendment to Tariff Regulations, 2019 regarding servicing of capital and operational expenditure incurred on installation and operation of Emission Control Systems through determination of supplementary capacity charges and supplementary energy charges. CERC has also issued Second Amendment to the Tariff Regulations, 2019 regarding determination of transfer price of coal from captive coal mines by the generating company.

CERC (Sharing of Inter State Transmission Charges and Losses) Regulations, 2020 effective from 1 November 2020 provide the framework for sharing of interstate transmission charges and losses by the various users.

6.5 Relinquishment of power from stations that have completed 25 years from COD

Ministry of Power (MOP) has issued Guidelines on enabling the Discoms to either continue or exit from the PPA after completion of the term of the PPA i.e., beyond 25 years or a period specified in the PPA and allow flexibility to the Generators to sell power in any mode after State/ Discom exit from PPA. These guidelines provide a detailed methodology to be followed by Discoms to exit from PPAs with central generating stations beyond 25 years. The Discoms are required to take approval from their respective SERC and give a 6-month notice to the generating company before exiting from the PPA of stations that have completed 25 years from COD. Further, CERC Tariff Regulations 2019 also provide Discoms the first right of refusal to accept the special tariff arrangement offered by generating company for procuring power from stations that have completed 25 years.

Certain states like Odisha, Rajasthan and Delhi have relinquished their allocation from coal stations, such as, Farakka-I&II, Kahalgaon-I, Unchahar-I and Dadri-I, which has been re-allocated by MoP to other needy States requiring power. Further, Punjab, Haryana, Rajasthan, Himachal Pradesh and Delhi have sought to relinquish their allocation in Anta GPS, Auraiya GPS and Dadri GPS while MP has sought relinquishment of its allocation in Kawas and Gandhar GPS.

6.6 Security Constrained Economic Dispatch (SCED)

- The mechanism of Security Constrained Economic Dispatch (SCED) is under implementation on Pilot basis starting from 1.4.2019. This mechanism helps in optimization of total schedule of the Inter State Generating Stations based on the variable cost, resulting in savings in cost of procurement for the Discoms.

- Subsequently, the scope of the SCED has been expanded to include the state regulated generating stations and the merchant generators based on their willingness to participate in the scheme. Vide Order dated 31.3.2022, it has now been extended indefinitely until further orders. POSOCO has been asked to submit a detailed feedback report on six-monthly basis.

- SCED has resulted in cumulative savings of ₹ 2,116 crore in generation cost from start of the SCED pilot in April 2019 up to March 2022 thereby resulting in increased saving in the cost of power procurement of the Discoms.

- The generating stations of your Company are participating in the SCED mechanism starting from April 2019 and contributing in a significant way in reduction in power purchase cost of the Discoms.

6.7 Strengthening Customer Relationship

Customer Focus is one of the core values of your Company (ICOMIT). In line with this, your Company has taken up several initiatives targeted towards the external Customers. Customer Relationship Management (CRM) and Customer Satisfaction Index (CSI) are some of the important parts of these initiatives. As part of the CRM, your Company has been implementing several structured activities with the objective of sharing its experiences and best practices with the customers, capturing their feedbacks and expectations, and addressing their issues. Some of these activities are described below:

- Your Company offers training programs to the representatives of beneficiary companies at Power Management Institute (PMI), the apex training institute of your Company on free of cost basis. In 2021-22, 53 participants from various customer organizations attended training in 8 programs.

- Your Company has also put in place Customer Satisfaction Index (CSI) Survey scheme, to gather customer's feedbacks through a survey and respond to their requirements. This CSI survey has been conducted in 2021-22 and the score falls under Excellent category.

- To further strengthen customer relationship, your Company has sponsored 10 officials of beneficiaries / Discoms to the PGDM (Executive) programme of the NTPC School of Business for the year 2021-22 as a capacity building initiative of power sector personnel equipping them with managerial and leadership skills.

6.8 Power Trading in Power Exchange

In line with CERC (IEGC) (5th Amendment) Regulations 2017, a generating company can sell the un-requisitioned surplus (URS) power based on consent of the beneficiary states. The gains realized from the sale of URS are to be shared with beneficiaries in the ratio of 50:50, subject to a cap of 7 paisa per kwh. The URS power can be sold both in the Day Ahead Market (DAM) and Real Time Market (RTM) platforms of the Power Exchanges. Your Company has been participating in various trading platforms for sale of any un-requisitioned surplus (URS) power as under:

i. **Day Ahead Market (DAM)** - Any sale of URS power in the Day Ahead Market (DAM), which operates during 10:00 to 12:00 Hrs of the previous day requires prior consent of the Discoms, as they would have to give up their right to reschedule this power after it is sold in the Market. This Market constitutes around 75%-80% of the volume of power traded in the Power Exchanges. Apart from selling the URS power based on consent of the Discoms, your Company also sells the Regulated power of Discoms due to non- payment of outstanding dues, as and when opportunities arise.

ii. **Real Time Market (RTM)** - Real Time Market has been implemented in the country since 1st June 2020 with participation on voluntary basis. The main objective of RTM is to provide a market mechanism to the generating stations to sell their surplus power in the market and to provide an opportunity to the Discoms to buy power from the market to meet their contingent requirements. RTM is being implemented in the form of 48 half-hourly auctions conducted during the delivery date and provides options to the generators and the Discoms to participate in the market through price sensitive bidding. For generators, to sell their URS in the RTM, no consent is required from the beneficiaries. The gain sharing principle remains same as that the URS sale in the Day Ahead Market (DAM).

Your Company has been participating in both the DAM and the RTM for selling URS power in the Power Exchange through its trading arm NTPC Vidyut Vyapar Nigam Limited, subsidiary co. Besides selling the URS power, it has also been selling any regulated power or merchant power also in the Power Exchanges. In the FY 2021-22, around 1,949 Million Units of power has been sold in the DAM and RTM in Power Exchanges. Corresponding gains for this sale has been shared with the beneficiaries as per the extant regulatory provisions.

6.9 **Renewable Energy:**

Following PPA / Power Usage Agreements (PUA) have been signed:

a. PSA for 200 MW for ABC Renewable Project under Developer mode signed with MPPMCL.

b. PSA for 190 MW Nokh solar project under Developer mode signed with CSPDCL.

c. PUA for 735 MW solar power under CPSU scheme Phase-II Tranche-III signed with Telangana Discoms.

7. INSTALLED CAPACITY

During the year 2021-22, your Company added 3,372 MW to its installed capacity (including those of JV & Subsidiary Companies) as per details given below:

Project/ Unit installed	Capacity (MW)
Owned by your Company	
(A) Coal based Power Projects	
Darlipali Unit#2	800
Barauni Unit# 9	250
Barh Unit#1	660
Total (A)	**1710**
(B) Renewable Projects	
Bilhaur	15.00
Simhadri (F)	25.00
Ramagundam	80.00
Jetsar	160.00
Fatehgarh	199.68
Kayamkulam(F)	22.00
SOLAR TOTAL (B)	**501.68**
Total (A+B)	**2,211.68**
Under Subsidiaries and Joint Ventures	
Coal Based Power Projects	
NPGCL Unit#3	660
BRBCL Unit#4	250
NSPCL, Rourkela	250
Total by Subsidiaries and JVs	**1,160**
Total Addition during FY 2021-22	**3,372**

The total installed capacity of your Company Group as on 31.3.2022 has become 68,962* MW (65,810** MW as on 31.3.2021) as tabulated below:

Owned by your Company	Capacity MW
Coal based projects	48,120
Gas based projects	4,017
Renewable Energy Projects	1,660
Hydro Projects	800
Sub-total	**54,597**
Joint Ventures & Subsidiaries	**Capacity MW**
Coal based projects	8,754
Gas based projects	2,494
Hydro	2,925
Renewable Energy Projects	192
Sub-total	**14,365**
Total	**68,962**

* Kanti Stage- 1 (220 MW) Decommissioned w.e.f. 31.1.2022 and

** Talcher thermal 460 MW Decommissioned on 31.3.2021

8 CAPACITY ADDITION PROGRAMME

8.1 Projects under Implementation

In addition to furthering Capacity Addition through Coal based power projects, your Company has been pursuing enhancement of its power generation portfolio through Hydro and Renewable Energy projects.

Various projects of your Company having aggregate capacity of 15,675.32 MW including 7,494 MW being undertaken by Joint Venture and Subsidiary companies are under implementation in India and abroad. Total Capacity under Construction comprises of 9,980 MW of Coal (Including 5,080 MW being undertaken by Joint Venture and subsidiary companies), 2,255 MW of Hydro (Including 1,444 MW being undertaken by Joint Venture and subsidiary companies) and 3,440 MW of Renewable projects (Including 970 MW being undertaken by subsidiary company).

The details of such projects as on 31.3.2022 are as under:

Ongoing Projects	
Your Company Owned Projects/Units	**Capacity (MW)**
I.A. Coal Based Projects	
1. Barh-I, Bihar (3x660MW)	1,320
2. North Karanpura, Jharkhand (3x660 MW)	1,980
3. Telangana Phase-I, Telangana (2x800 MW)	1,600
Sub Total (A)	**4,900**
I.B. Hydro Electric Power Projects (HEPP)	
4. Tapovan Vishnugad, Uttarakhand (4x130 MW)	520
5. Lata Tapovan, Uttarakhand (3x57 MW)@	171
6. Rammam Hydro, West Bengal (3x40 MW)	120
Sub Total (B)	**811**
I.C Renewable Energy Projects	
7. Ramagumdam, Solar F, AP	20
8. Kayamkulam, Solar F, Kerala	70
9. Rihand, Solar G, UP	20
10. Auraiya, Solar F, UP	20
11. CPSU-I: Shimbhoo Ka Burj, Solar G	250

DIRECTORS' REPORT

Ongoing Projects	
Your Company Owned Projects/Units	**Capacity (MW)**
12. CPSU-I: Devikot, Solar G, Rajasthan	150
13. CPSU-I: Shimbhoo Ka Burj, Solar G	300
14. CPSU-II: Nokhra, Solar G, Rajasthan	300
15. CPSU-II: Fatehgarh, Solar G, Rajasthan	96.32
16. CPSU-II: Ettayapuram, Solar G	230
17. CPSU-II: Devikot, Solar G, Rajasthan	90
18. CPSU-I: Gandhar, Solar G, Rajasthan	20
19. Kawas Solar G/F	56
20. Anta Solar G	90
21. Solapur Solar G	23
22. Nokh Solar, G	735
Sub Total (C)	**2,470.32**
Total I (A)+(B)+(C)	**8,181.32**
II Projects under JVs & Subsidiaries	
(A) Coal Based Projects	
23. Patratu Expansion, JV with JBVNL	2,400
24. Durgapur, JV with SAIL (NSPCL), West Bengal (2x20MW)	40
25. Khulna, JV with BPDB (BIFPCL), Bangladesh (2x660MW)	1,320
26.THDC - Khurja (2x660 MW)	1,320
Total II (A)	**5080**
II (B) Hydro Projects	
27.THDC - Tehri PSP, Uttarakhand	1,000
28.THDC - Vishnugad Pipalkoti, Uttarakhand	444
Total II (B)	**1,444**
II (C) Renewable Projects	
29.Chattargarh, Solar G	150
30. Bhensara, Solar G	320
31. Amreshwar, Solar G	200
32 Limbi, Mithapur, Mesanka Solar G	150
33 Dayapar, Wind	150
Total II (C)	**970**
Total II (A+B+C)	**7494**
Total On-Going Projects as on 31.3.2022 (I)+(II)+(III)	**15675.32**

Note: 1. @Work of Lata Tapovan HEPP stopped as per orders of the Hon'ble Supreme Court dated 7.5.2014 .

8.2 New Technology & Initiatives

Your Company has always laid stress on efficient utilization of resources and use of technological advancements for improving energy efficiency.

With emphasis on efficiency of electricity generation, your Company has adopted Ultra-super critical (USC) technology by improving the steam parameters for Khargone (2X660MW) and Telangana (2X800 MW) steam parameter are 270 kg/ cm2, 600oC/ 600oC. Plant efficiency of USC units is expected to be around 41.5% which is higher by 3.5% percentage point over a conventional sub-critical 500 MW unit.

Ultra-super critical based units of Khargone (2X660MW) STPP have already been commissioned.

For the first time in your Company, Air Cooled Condenser (ACC) system has been adopted at North Karanpura STPP and Patratu STPP, JV Co. which will bring a significant reduction in specific water consumption for these projects.

8.2.1 Biomass Co-firing Utilization of Agro residue for Power Generation & reduce pollution

As part of its commitment towards clean environment, your Company has taken a new initiative to utilise agro residue for power generation. This is intended to cut down carbon emissions and also to discourage crop residue burning by farmers after harvesting by adding economic value to the crop residue and providing extra income to farmers and employment in rural sector. Biomass co-firing is a unique method to utilize coal-based power plant infrastructure to produce renewable energy by simply replacing some of the coal with biomass-based fuel. Being carbon neutral fuel, biomass co-firing is a technology recognized by UNFCCC as a measure of reducing greenhouse gas emission.

After successfully demonstrating biomass co-firing at your Company Dadri plant, your Company has started commercial scale biomass co-firing at other stations also. Your Company has so far awarded contracts for procurement of 12.35 LMT of biomass pellet for 20 stations of your Company under various short-term contracts (3 months, 6 months and 9 months) and Long-term contract (4 Years) for Dadri station. Supply has been already started at 13 stations of your Company. Your Company is the highest consumer of Biomass pellets in coal-based power sector with 77,456 metric tonnes of biomass pellets fired in 13 stations of your Company as on 20.7.2022.

As mandate by Guidelines issued by Ministry of Power on 8.10.2021 for utilisation of Agro-residue based biomass in coal-based power plants, your Company was the first company to initiate procurement process on long term basis. In the first lot, your Company is procuring 9.20 MMT of biomass pellets for seven years for stations in NCR or in close proximity to NCR. Tender has been floated for Dadri, Unchahar, Tanda stations and Joint Venture APCPL-Jhajjar. The tender is in advance stage of finalisation and the orders will be placed soon.

8.2.2 Waste to energy (WtE) and disposing municipal solid waste (MSW)

Keeping its commitment towards clean & green environment and Swachh Bharat Mission (SBM), your

Company has taken several initiatives to support & leverage Government of India's effort towards realising SBM thereby ensuring pollution free environment for people's health and welfare.

Your Company has successfully revamped and made functional the "Waste to Compost" plant at Karsara, Varanasi and is now managing Operation & Maintenance (O&M) of this entire 600 Tons per Day (TPD) capacity plant. The plant is processing about 600 TPD of MSW and generating about 60-80 TPD of compost. Sanitary land fill facility and Leachate treatment facility have also been created at Varanasi to ensure scientific disposal of municipal solid & liquid waste.

In addition, your Company has commissioned 24 TPD thermal gasification-based demonstration scale WtE plant at Varanasi. The Municipal Solid Waste (MSW) is first converted to produce gas, which is then used to generate approximately 200 kW of electric power. Further, to promote Make in India concept, this Project has been awarded to Micro, Small & Medium Enterprises (MSME) vendor.

8.2.3 Renewable energy

Renewable energy is central focus for your Company. To be in step with ambitious targets, the Company is exploring all avenues for renewable capacity addition to look beyond conventional large scale solar and wind parks. Your Company is utilizing roofs of power plant buildings for solar power generation and integrating to the existing plant infrastructure. Your Company is also going ahead with floating solar at reservoirs of its projects which is a step towards saving of land and water conservation by reducing water surface evaporation.

8.2.4 Welding

There is immense application of welding during manufacturing of various power plant components, during erection and maintenance/overhauling of units. The advanced metallurgy of components exposed to high temperatures in new coal based Supercritical/ Ultra Super Critical 660 MW & 800 MW thermal units of your Company, imposes much greater challenges in welding. The challenge to achieve defect free weld joints always requires highly skilled, well trained and qualified manpower to do the welding and also to conduct quick, accurate and correct inspection of weld joints through advance Non-Destructive Testing (NDT) techniques meeting the governing standard requirements. All these require proper understanding of metallurgy, welding, advanced NDT techniques and the governing standards.

To meet all these challenges, several new initiatives in welding & NDT were taken by your Company especially in Welding Skill Development, Competency Development in Welding Inspection and advanced NDT techniques through world renowned "The Welding Institute (TWI) – UK/India". Welding Failure Analysis were conducted to understand the root cause and suitable corrective actions were taken to ensure that such failures do not happen again in any other unit. Repair Welding were ensured by following proper welding procedure specifications and initiatives were taken to make aware the latest welding equipment, welding techniques & its implementation at site. New initiatives were also taken in meeting the challenges of developing Welding procedures & NDT techniques in even higher & complex metallurgy involved in Advance Ultra Super Critical (AUSC) components.

A small welding training center is envisaged to train & hone skill of high pressure welders at new upcoming project sites.

For welding competency development of the operating personnel, your Company has established welding simulators at Sipat Plant & Patratu sites, Subsidiary Co.

8.2.5 Smart Township & Eco Park

Smart Township:

In CPSE conclave 2018, idea to convert some of CPSE townships to "Mini Smart Cities" was mooted. Earlier, your Company awarded the work of converting two of its townships located at "Solapur" and "Khargone" to "Smart Townships". Smart township at Solapur has been commissioned on 17.7.2021. At Khargone, integration of all the smart systems with integrated Township command & control center is in progress. This smart township shall be commissioned shortly.

The work in these townships involves applications of smart solutions like Pan-Township security and surveillance system, smart water metering, leakage identification and water quality monitoring, smart energy metering and use of renewable energy sources, robust IT infrastructure and FTTH connectivity, rainwater harvesting, solid and liquid waste management, use of smart bicycles, electric vehicle (golf carts), Electric Vehicle (EV) Chargers, open gym and citizen services etc. Application of these smart solutions will provide enhanced quality of life to the residents in an environment friendly and sustainable manner.

Eco Park:

Your Company is developing an Eco Park on the ash disposal area of Badarpur Thermal Power Station (which has since been shut down), to have environmentally sustainable neighborhood and to enhance quality of life. The design concept is taken from the immediate surroundings of Yamuna River itself and the area is being developed as a green island to become a breathing space for the urban area of Delhi, NCR apart from becoming a lively and attractive space. This shall also help in conservation of natural ecosystem and protection of environment.

The work in Eco Park involves Wet lands, Bird sanctuary, theme gardens, green house, butterfly park, Forest, Fish pond, Musical fountain, recreational Boating facility, Garden of light, Lotus plaza & Jungle safari along with other recreational features.

Contracts have been awarded & work is in progress for this world class Eco Park.

8.2.6 Initiative for Use of Treated Sewage Water from Municipal Sewage Treatment Plants (STP)

Your Company has taken up active steps to use treated sewage water from STPs of nearby Municipal bodies for bulk water requirement in its power plants, replacing precious fresh water from rivers/lakes/reservoirs/dams meant for other priority uses like agriculture, drinking, etc. Your Company has explored some projects viz. Meja, Mouda, Solapur, Korba, Sipat, Barh, Kahalgaon, Dadri and Telangana falling within 50 km distance from existing/ under construction STPs as notified in Tariff Notification of GOI dated 28.1.2016 and identified Korba, Barh, Meja, Kahalgaon for further feasibility study where treated STP water can be used for the plant cooling water system while meeting the order of closeness criteria. Further, based on various recent orders & guidelines issued from time to time by Ministry of Power (MoP) & Central Electricity Authority of India (CEA), specifying scope division, modalities, quality standards etc. for use of treated sewage water in thermal power plants, discussions are under process with respective municipal bodies associated with above stations of your Company.

8.2.7 Advanced digital and control technology use

Your Company is on the Digital path and implementing its Digital Strategy Roadmap. The initiatives of Advance Process Control (APC) for enabling flexible operation and Advanced Monitoring of Stockyard (hot spot detection and 3D profiling of stock pile) have been commissioned as a pilot project. Further pilot study for sustained operation of unit at technical minimum load has also been taken up.

Your Company has also taken initiatives of Advanced Performance Management-APM (Maintenance optimization suite), Application of IIOT in General-AIG (IIOT to enhance process visibility), Asset Information Management-AIM (digital twin with lifecycle documentation) to enhance reliability of equipment and processes. Further ART (Augmented reality/Virtual Reality based training) has been completed as a pilot and Turbine Training modules of ART is on the verge of completion and training to start shortly.

For capacity building of operating personnel, your Company is developing full-fledged replica Simulators for all available combinations of SG & TG sets of supercritical units, out of which 9 nos. have already been commissioned.

Technology intensive security system with centralized control and multiple layers of security is being envisaged in place of manpower. Implementation in two of the five projects is going to be completed shortly in your Company's Dadri station. Further, it is being implemented at five (5) projects of your Company. Your Company has taken the initiative to further secure control systems by augmenting the present defense-indepth Cyber Security Posture for Operational Technology (OT). Pilot implementation in one of the projects is going to be completed shortly.

Initiatives have also been taken for upgradation against obsolescence which will patch all cyber vulnerability of obsolete systems and make the latest upgraded systems much more secure. System wise Obsolescence have been identified and taken up for phase wise upgradation.

Your Company has further taken initiatives for pilot study for implementation of Robotics in various process applications of power plant.

8.2.8 Dry Bottom Ash Handling System

To minimize water consumption, in recent times your Company has taken initiative for adopting Dry Bottom Ash Handling System instead of conventional Wet Bottom Ash Handling System for Coal Based Thermal Power Project at Patratu (subsidiary company), which is under construction. With extraction of bottom ash in dry form and requirement of meagre quantity of water for conditioning and dust suppression, water requirement will be practically eliminated for handling bottom ash. The system not only reduces water consumption required for disposal of bottom ash in wet form, but also results in reduction in power consumption for Bottom Ash Disposal and facilitates better utilization of bottom ash.

8.2.9 Change-over to safer Chlorine-di-oxide system from conventional gas Chlorination system for disinfection of plant water system

Keeping commitment to environment and safety, your Company has embarked upon to the more advanced, safer and compact in-situ Chlorine-di-oxide generation system from earlier practice of Gas chlorination system through a comprehensive policy change for its entire fleet of existing power stations as well as all upcoming power stations which is under implementation in various projects and stations of your Company.

8.2.10 Zero Liquid Discharge (ZLD) from Thermal Power Plants

Your Company has already taken proactive approach to become a Zero Liquid Discharge company for all its operating station by identifying and implementing water management initiative, adopting innovation in water use in its Thermal Power Plant. Some of the stations of your Company have already become zero liquid discharge compliant and implementation is under progress in balance stations. Under the scheme, plant effluent water is segregated from storm water and is reused after treatment in the area of Ash handling plant, Coal Handling Plant, FGD make up, Service Water etc.

Your Company has already taken proactive approach to become a Zero Liquid Discharge company for all its operating station by identifying and implementing water management initiative, adopting innovation in water use in its Thermal Power Plant. Out of 40 stations (37 closed cycle and three open cycle except TTPS), ZLD is targeted in 36 stations. 16 stations of your Company has already achieved ZLD, 15 more stations are likely to complete the ZLD related work by December 2022, balance 5 Stations will become ZLD compliant by March 2023.

8.2.11 Successful Commissioning of Barh Unit-1

Your Company Barh Unit#1 (660 MW) which has a unique type of boiler in the world having T-pass, steam to steam reheat was successfully commissioned and taken to full load by completing the remaining engineering, reverse-engineering and making available balance materials by indigenisation of critical equipment parts.

8.2.12 Energy Conservation, Technology Absorption and Foreign Exchange Earnings and outgo

Details of conservation of energy, technology absorption and foreign exchange earnings and outgo in accordance with Section 134(3)(m) of the Companies Act, 2013 read with Companies (Accounts) Rules, 2014 forms part of this Director report is placed at Annex-III.

8.2.13 Agility, Innovativeness & Commitment- Setting up of PSA based oxygen generation plants

Engineering department of your Company demonstrated its agility and commitment to serve the nation during peak Covid period, when there was huge crisis of medical oxygen in the country, by successfully setting up PSA (Pressure Swing Adsorption) based oxygen generation plants at various NTPC stations in war footing mode.

8.3 Project Management

Your Company has adopted an integrated system for the planning, scheduling, monitoring and control of approved projects under implementation. To co-ordinate and synchronize all the support functions of project management, the Issuer relies on a three-tiered project management system known as the Integrated Project Management Control System (IPMCS), which integrates its engineering management, contract management and construction management control centres. The IPMCS addresses all stages of project implementation, from concept to commissioning.

Your Company has established state-of-the-art IT enabled Project Monitoring Centre (PMC) for facilitating fast track project implementation. PMC has advanced features like Web-based Milestone Monitoring System (Web miles), Project Review and Internal Monitoring System (PRIMS), etc. PMC facilitates monitoring of key project milestones and also acts as decision support system for the management.

PMC is an integrated enterprise-wide collaborative system to facilitate consolidation of project related issues and their resolution. Features like SMS based information delivery; real time video capture, storage and retrieval facility and video conference facility are extensively utilized for project tracking, issues resolutions and management interventions. PMC has helped in providing effective coordination between the agencies and has provided enhanced/ efficient monitoring of the projects leading to better and faster project implementation.

In addition to above, in order to make monitoring of projects more effective, Your Company is now adopting Integrated Software monitoring tool for integrating progress of Engineering, Supplies and Erection at one place, and capturing progress online. Features like mobile app based updation of progress and role based access make the tool more user-friendly which will result into regular updation of progress. It will help in taking timely remedial actions. This tool has been included in the bid documents of EPC packages of upcoming projects of your Company.

In a changing global scenario, your Company has added various other project management tools which are Online CAPEX monitoring system/ Digital Hindrance register/ Digital Chronology register/ Safety Register etc.

8.4 Details of Subsidiaries and Joint Ventures (JVs) of your Company engaged in power generation

Besides adding capacities on its own, your Company develops power projects through its subsidiaries and joint ventures, both in India and abroad.

The information of Indian Subsidiaries and JV Companies along with details of partners of joint ventures engaged in power generation is given below:

Name of Company	JV Partner(s)	Details
KBUNL (Kanti Bijlee Utpadan Nigam Limited)	A wholly owned subsidiary of your Company (under merger with your Company)	The installed capacity of KBUNL is 390 MW (Stage-II: 2X195 MW). On expiry of validity of the PPA entered into with erstwhile BSEB, and ageing of the units, power generation from Stage-I (2X110 MW) of KBUNL has been stopped w.e.f. 8th September 2021. Generation in FY 2021-22 was 2850 MUs at 66.87% PLF and Availability Factor was 83.65%. KBUNL has paid dividend of ₹ 20.94 crore for FY' 2021-22 to your Company.

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Name of Company	JV Partner(s)	Details
BRBCL (Bhartiya Rail Bijlee Company Limited)	Ministry of Railways	A subsidiary of your Company in joint venture with Ministry of Railways with equity contribution in the ratio of 74:26 respectively for setting up power project of 1000 MW (4X250 MW) capacity at Nabinagar in Bihar. All units are under commercial operation. Generation in FY 2021-22 was 5700 MUs at PLF 77.48%, and Availability Factor was 88.47%. BRBCL has paid dividend of ₹ 125.80 crore for FY 2021-22 to your Company.
NSPCL (NTPC-SAIL Power Company Limited)	Steel Authority of India Ltd. (SAIL)	A 50:50 Joint Venture Company between your Company and SAIL, owns and operates Captive Power Plants of SAIL at Durgapur (2 x 60 MW), Rourkela (2 x 60 MW) and Bhilai (2 x 30 + 1 x 14 MW). NSPCL has also implemented 2 x 250 MW Bhilai Expansion Power Plant. 250 MW NSPCL Rourkela Project COD was done on 29.3.2022. With this NSPCL has become a 1064 MW Company. NSPCL generated 6049 MUs at 84.43% PLF and Availability Factor was 91.27 in FY 2021-22. NSPCL has paid dividend of ₹ 100 Crore for FY 2021-22 to your Company. Under Implementation- New Coal based Capacity at Durgapur PP-III (2 x 20 MW) is under construction.
NTECL (NTPC Tamil Nadu Energy Co. Ltd.)	Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO)	A 50:50 JVC has commissioned 3x500 MW coal-based power project at Vallur, Tamil Nadu. Generation of NTECL during FY 2021-22 was 7913 MUs at 60.22% PLF and Availability factor was 89.56 %. NTECL has paid dividend of ₹ 244.19 Crore for FY' 2021-22 to your Company.

Name of Company	JV Partner(s)	Details
APCPL (Aravali Power Company Pvt. Ltd.)	Indraprastha Power Generation Company Ltd. (IPGCL) and Haryana Power Generation Corporation Ltd. (HPGCL)	This JVC is operating 3X500 MW coal-based Indira Gandhi Super Thermal Power Project. Your Company, IPGCL and HPGCL have contributed equity in the ratio of 50:25:25. Generation of APCPL during FY 2021-22 was 7051 MUs at 53.66% PLF & Availability factor was 94.65%. APCPL has paid dividend of ₹ 750 crore for FY 2021-22 to your Company.
MUNPL (Meja Urja Nigam Pvt. Ltd.)	Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd. (UPRVUNL)	A 50:50 JVC has commissioned 1,320 MW (2X660 MW) coal-based power project in the state of Uttar Pradesh. Unit-1 of 660 MW capacity has been declared commercial on 30th April 2019. Unit-2 on 31st January 2021. Generation of MUNPL during FY 2021-22 was 7,573 MUs at 65.49% PLF and Availability was 78.90%.
NPGCL (Nabinagar Power Generating Company Ltd.)	A wholly owned subsidiary of your Company (under merger with your Company)	NPGCL is setting up a 3x660 MW Coal based plant at Nabinagar. Unit#1 declared commercial on 6.9.2019 and Unit#2 was declared commercial on 23.7.21. Trial Operation of Unit-3 of 660 MW has been done on 2.3.2022. Generation of NPGCL during FY 2021-22 was 8,264 MUs, at 81.05% PLF and Availability was 91.30%. NPGCL has paid dividend of ₹ 377.32 Crore for FY' 2021-22 to your Company.

Name of Company	JV Partner(s)	Details
RGPPL (Ratnagiri Gas and Power Pvt. Ltd.)	MSEB Holding Co. Ltd.	RGPPL owns and operates gas based Dabhol Power Project of 1967 MW (1 X 640 MW + 2 X 663.5 MW) in Ratnagiri district of Maharashtra. Consequent upon one time settlement (OTS) of debt with the lenders and purchase of shares of GAIL in RGPPL during the previous year 2020-21, your Company share in RGPPL has increased to 86.49%. Generation of RGPPL during FY 2021-22 was 3144 MUs at 18.24% PLF and availability was 99.52%.
ASHVINI (Anushakti Vidhyut Nigam Ltd.)	Nuclear Power Corporation of India Ltd. (NPCIL)	Your Company is having a stake of 49% in the JVC. The JV company was formed to set up Nuclear Power Project as may be mutually discussed and agreed between the parties, subject to establishment of techno-commercial viability. JVC is exploring the possibilities of entering into business activities related with the Nuclear Power generation and front-end fuel at an appropriate stage. Joint working group with representation from your Company and NPCIL is formed to work on modalities of execution of (2x700) MW Gorakhpur Haryana Anu Vidyut Pariyojana (GHAVP) at Haryana by the JVC.
PVUNL (Patratu Vidyut Utpadan Nigam Limited)	Jharkhand Bijli Vitran Nigam Limited (JBVNL)	PVUNL has been incorporated on 15.10.2015 as a subsidiary of your Company with 74% stake in the Company and 26% of stake held by JBVNL. PVUNL plans to set up 4000 MW Coal-based power project in two phases. Phase-I of (3X800) MW has been awarded to BHEL on 8.3.2018. Construction work is in progress.

Name of Company	JV Partner(s)	Details
NTPC Renewable Energy Ltd.	A wholly owned subsidiary of your Company	NTPC Renewable Energy Limited (NTPC REL), a wholly owned subsidiary of NTPC was incorporated on 7.10.2020 with a target to accelerate the RE capacity addition plan to achieve target of 60 GW by 2032. NTPC RE is taking up large Solar, Wind and Hybrid Projects all over the country and developing Gigawatt scale Renewable Energy Parks and Projects in different states under UMREPP (Ultra Mega Renewable Energy Power Park) scheme of Government of India. In addition to this Green Hydrogen based Mobility and Environmental, Social and Governance (ESG) projects are also being pursued.
THDC India Ltd	Government of Uttar Pradesh	THDC India Ltd was a joint venture of the Government of India (74.496%) and the Government of Uttar Pradesh (25.504%) and a Mini-ratna Category-I CPSE. Your Company executed Share Purchase Agreement with GoI and acquired 74.496% equity stake in THDCIL on 27.3.2020. THDC is now a subsidiary Company of your Company. Presently, THDCIL has a portfolio of 11 projects (Hydro, Thermal, Wind & Solar), with a total capacity of 4696 MW comprising of 1587 MW Operational plants and 2764 MW under construction Projects. The balance 345 MW projects are under various stages of development/ implementation. Generation of THDC during FY 2021-22 was 4671 MUs at 34.8% PLF of Hydro and 23.7% PLF of Wind plants. THDC has paid dividend of ₹ 378.59 crore for FY 2021-22 to your Company.

Name of Company	JV Partner(s)	Details
North Eastern Electric Power Corporation Limited (NEEPCO)	A wholly owned subsidiary of your Company	North Eastern Electric Power Corporation Limited (NEEPCO) was 100 % GOI held Mini-ratna Category I Central Public Sector Enterprise. Your Company executed a Share Purchase Agreement with GoI and acquired 100% equity stake in NEEPCO on 27.3.2020 NEEPCO is primarily engaged in the business of generation and sale of electricity in the north-eastern region of India. NEEPCO operates 7 hydro, 3 thermal and 1 solar power stations with a combined installed capacity of 2057 MW. Generation of NEEPCO during FY 2021-22 was 8120 MU with 35.1% PLF for Hydro and 74.3% PLF for thermal plants and availability of 79.30% for Hydro and 76.16% for thermal plants NEEPCO has paid dividend of ₹ 90 crore for FY 2021-22 to your Company.

8.5 Hydro Power Projects

Your Company, as you are already aware, has been in renewable energy sector and now has solid footprints in green energy by developing hydro projects as detailed below:

A. **Koldam HEPP (4x200 MW)** is on the river Satluj, in District Bilaspur (Himachal Pradesh). All the four units of 200 MW each were declared commercially operational in 2015. Since then, the project is running exceedingly well. The generation for the financial year 2021-22 was 3120.13 MUs against design energy of 3055 MUs. Owing to excellent operation and maintenance practices, the Station achieved yearly availability of 98.5% and DC of 108.82% in FY 2021-22, which is highest amongst all the Hydro Power Stations in the country for the last 5 years in a row.

Koldam has been accorded Integrated Management Systems (IMS) Certification which includes ISO 9001:2015 for Quality Management System, ISO 45001:2015 for Environment Management System & ISO 14001:2018 for Occupational Health & Safety Management System in March 2021.

Koldam in FY 2021-22 has been bestowed with Golden Peacock Environment Management Award (winner amongst all Stations in power generation category) for its commitment for Environmental improvement. Koldam HPP was also awarded with Greentech Energy Conservation Award & Greentech Safety Award for its best practices for energy conservation and accident free performance. Towards water conservation, backwash water from the Water treatment plant and effluent from the Sewerage Treatment plant is being used for Horticulture purposes in Township area.

Koldam in Nov'21 has also organized an O&M Workshop (HydroCon'2021) with participation from several hydro power producing companies including NHPC, THDC, NEEPCO, SJVN, AD Hydro, JSW Energy, and equipment manufacturers for sharing of experiences and best practices of Hydro O&M which turned out to be a great success.

B. **Tapovan Vishnugad HEPP (4x130 MW)** is on River Dhauliganga, in District Chamoli (Uttarakhand). The Project is under advance stage of construction with a physical progress of nearly 75%. Generator Transformer & Switchyard (GIS) Package is completed. Powerhouse Building works are completed and architectural works are in progress. Erection (Box-up) of two out of four turbines is completed.

On 7.2.2021, unprecedented devasting glacier debris flow in Dhauligaga river caused by glacier rock fall in Nanda Gunti Glacier in the catchment of Rishigaga River (a tributary of Dhauligaga River) which inundated the under-construction Barrage of your Company Tavopan Vishnugad HEPP. The debris/silt/deposit material entered and chocked the Desilting Basin including Intake Adit tunnel, Head Race Tunnel (HRT), Silt Flushing Tunnel (SFT), Barrage & Gate Operating Chamber Area etc., entrapping the manpower & equipment/vehicles engaged in these areas. This devastating flood resulted in extensive damage to breast wall, bridge deck, washing away of spillway gates along with hydraulic cylinders and a pier control room. All the approach roads/access to the project components located in Barrage, Desilting, Intake area, Chormi Adit, Tail Race Tunnel were either washed away or damaged. The progress of work has been affected due to this natural disaster.

Presently all the muck from Barrage, Intake, Desilting Chamber, Conduit, Gate Operating Chamber, Transfer Structure has been removed. 28% of muck have also been removed from HRT and SFT. A comprehensive testing of various structures of barrage has been conducted by SERC & CBRI Team in Dec'2021 & March'2022 and all structures were found integral and repairable. The repair, restoration and balance works are in progress and first Unit is likely to be commissioned by Sept. 2024.

C. **Lata Tapovan HEPP (3x57 MW)** is in upstream of Tapovan-Vishnugad HEPP, in District Chamoli in

Uttarakhand. All Construction activities at LTHPP have been stopped since 8.5.2014 in line with Hon'ble Supreme Court order dated 7.5.2014 for 24 Hydro Projects in the State of Uttarakhand including Lata-Tapovan. MOEF&CC had constituted an expert body which, in October 2015, recommended for implementation of Lata-Tapovan with compliance of certain additional conditions. Your Company submitted in Court that the conditions recommended by expert body shall be strictly complied. On the hearing held on 26.4.2016 also, Additional Solicitor General of India has informed the Apex Court that Lata-Tapovan Project must be implemented. Last hearing was held on 28.2.2020, wherein further information was sought by the Hon'ble court from MoEF & CC and Government of Uttarakhand. The matter was listed for next hearing after 4 weeks, however the hearing could not be scheduled because of limited activities in the Hon'ble Supreme Court due to various reasons. The matter is still pending with Hon'ble Supreme Court.

D. **Rammam-III HEPP (3x40MW)** is situated on river Rammam in Teesta Basin, with Darjeeling (West Bengal) in south and Sikkim in north. Construction activities at Power House, Switchyard, HRT and Barrage structures are in progress at site. In Barrage, 2nd stage river diversion achieved on 27.3.2022 to carry out construction activities at other bays. The first Unit is likely to be commissioned by March 2025. Switchyard erection work is approximately 86% complete and is in progress, likely to be completed by July 2022. For conservation of water, Bio-digester & Bio-toilets have been installed at Office, Bachelor accommodation & Labour colonies of Rammam Project. Effluent water bio digester is being used for horticulture purpose. Motion sensing emergency lights have been installed at Pre-Fabricated Administrative Office & Bachelor accommodation. IP camera installed for project monitoring purpose at different project locations. Rammam project received Greentech Effective Safety Culture award in August'2021. Process of installing Flood Warning System is scheduled for August 2022 with help from CWPRS, Pune.

E. **Pumped Storage Plants (PSP) in Andhra Pradesh:** Your Company has been taken interest in development of PSPs and has identified 3 PSPs in Andhra Pradesh. A memorandum of understanding has been approved by your Company and Govt. of Andhra Pradesh (GoAP) for renewable energy projects including PSPs. However formal communication from GoAP for signing of MOU is awaited.

8.6 Capacity addition through Renewable Energy (RE) Sources

Your Company plans to have over 60 GW capacity by 2032, through RE sources constituting nearly 50% of NTPC's overall power generation capacity. The Company is pursuing avenues for capacity addition to look beyond conventional large scale solar and wind projects including UMREPP (Ultra Mega Renewable Energy Power Park), Green Hydrogen and Energy Storage.

The green hydrogen initiatives are a step towards decarbonization and various pilot projects are being taken-up in domains like mobility, green chemical, energy storage and blending with natural gas. The green chemical covers green methanol as well as green ammonia. Green hydrogen shall also be used in future as feed stock for petrochemical, steel making and different chemical processes.

Your Company is adding capacity in two modes namely Own Project mode and Outsource Mode. Own investment is done in the former whereas in Outsource Mode, the company acts as an intermediary procurer. Own Project mode includes CPSU projects where domestically manufactured cells and modules with VGF support from MNRE are deployed. Further, the CPSU power is sold in WTO compliant manner only to government entities under a power usage agreement.

Projects under Own Capacity Addition

A) Your Company has a commissioned capacity of 1,645 MW of RE projects including 192 MW owned by the subsidiaries. It covers solar (ground and floating), wind and small hydro installations spread over the country.

B) Your Company won 3,265 MW in FY 21-22 under TBCB Mode including 1,990 MW CPSU Scheme and 502 MW of RE capacity was commissioned in FY 21-22.

C) 3,440 MW of RE projects are under execution comprising of solar (ground and floating) projects.

D) Your Company is also promoting large scale floating solar projects at reservoirs of its plants which is a step towards saving land and water by evaporation. The largest three such projects are in your Company's Simhadri (25 MW), Kayamkulam (22 MW) and Ramagundam (80 MW).

A. **Commissioned RE Projects (1,837 MW):-**

S No.	Project	State/UT	Capacity (MW)
A	**Solar** (ground mounted)		
1	Dadri	Uttar Pradesh	5
2	Port Blair	Andaman & Nicobar	5
3	Faridabad	Haryana	5
4	Ramagundam	Telangana	10
5	Talcher Kaniha	Odisha	10
6	Unchahar	Uttar Pradesh	10
7	Singrauli	Uttar Pradesh	15

S No.	Project	State/UT	Capacity (MW)
8	Auraiya	Uttar Pradesh	20
9	Kayamkulam Floating	Kerala	22
10	Simhadri Floating	Andhra Pradesh	25
11	Rajgarh	Madhya Pradesh	50
12	Ramagundam Floating	Telangana	80
13	Jetsar	Rajasthan	160
14	Fatehgarh	Rajasthan	200
15	Bilhaur-I & II	Uttar Pradesh	210
16	Mandsaur	Madhya Pradesh	250
17	Ananthapuramu	Andhra Pradesh	250
18	Bhadla	Rajasthan	260
B	**Wind**		
1	Rojmal	Gujarat	50
C	**Small Hydro**		
1	Singrauli	Uttar Pradesh	8
	SUB-TOTAL		**1,645**
D	**Subsidiaries**		
1	Patan Wind (THDC)	Gujarat	50
2	Devbhumi Dwarka Wind (THDC)	Gujarat	63
3	Dhukwan Small Hydro (THDC)	Uttar Pradesh	24
4	Kasargod Solar (THDC)	Kerala	50
5	TGBPP Solar (NEEPCO)	Tripura	5
	SUB-TOTAL		**192**
	GRAND-TOTAL		**1,837**

B) RE Projects Under Implementation (3,440 MW):-

S No.	Projects	State	MW
A	**Solar** (floating) 110 MW		
1	Auraiya	Uttar Pradesh	20
2	Ramagundam	Telangana	20
3	Kayamkulam II	Kerala	70
	SUB-TOTAL		**110**
B	**Solar** (ground) 3,330 MW		
1	Rihand	Uttar Pradesh	20
2	Gandhar	Gujarat	20
3	Solapur	Maharashtra	23
4	Kawas	Gujarat	56
5	Anta	Rajasthan	90
6	Fatehgarh	Rajasthan	96
7	Limbdi (60), Mithapur (60), Mesanka (30)	Gujarat	150
8	Dayapar	Gujarat	150
9	Chhattargarh	Rajasthan	150
10	Amreshwar	Gujarat	200
11	Ettayapuram	Tamil Nadu	230
12	Devikot-I & II	Rajasthan	240
13	Nokhra	Rajasthan	300
14	Bhensara	Rajasthan	320
15	Sambhu Ki Bhurj-I &II	Rajasthan	550
16	Nokh	Rajasthan	735
	SUB-TOTAL		**3,330**
	GRAND-TOTAL		**3,440**

Green Hydrogen Initiatives:

- Green hydrogen mobility including filling station and 10 FCEVs at Ladakh and Delhi.
- Green hydrogen-based Energy storage at your Company, Simhadri deploying electrolyser and fuel cell.
- Green hydrogen blending in Natural gas at NTPC, Kawas.

UMREPP (Ultra Mega Renewable Energy Power Park):

MNRE has issued UMREPPs scheme on 15.6.2020 to provide land upfront to the project developers and facilitate transmission infrastructure for adding RE capacities with solar/wind/hybrid mode and also with storage system, if required.

Projects totaling about 24 GW are under various stages of development in states of Gujarat (4.75 GW), Maharashtra (2.64 GW), Rajasthan (10 GW), Madhya Pradesh (0.6 GW) and Andhra Pradesh (4 GW), DVC (2 GW).

RE in foreign nations:

Your Company has associated with International Solar Alliance (ISA) as its corporate partner. Project Management Consultancy (PMC) support for development of around 4 GW solar projects in ISA member countries are being provided as given below:

Nation	Capacity (MW)
Niger	50
Malawi	100
Nicaragua	100

Nation	Capacity (MW)
Togo	285
Zambia	400
Ethiopia	410
Mali	500
Paraguay	500
Cuba	1,150
DR Congo	1,000
Total (MW)	**4,405**

8.7 The Electricity (Timely Recovery of Costs due to Change in Law) Rules, 2021

The Central Government has notified on 22 Oct 2021 the Electricity (Timely Recovery of Costs due to Change in Law) Rules, 2021 applicable to generating companies and transmission licensees. These rules provide mechanism to compensate the affected party on account of Change in Law so as to restore the affected party to the same economic position as if the change in law had not occurred. It provides a formula for determination of impact in tariff or charges due to change in law and mechanism for adjustment or recovery on a monthly or one-time basis.

8.8 The Electricity (Late Payment Surcharge) Rules, 2021

The Central Government has notified the Electricity (Late Payment Surcharge) Rules, 2021 dated 22nd Feb. 2021 applicable to Power Purchase Agreements (PPAs), Power Supply Agreements (PSAs) and Transmission Service Agreements (TSAs), where tariff is determined under Section 62 and Section 63 of the Electricity Act.

These rules provide for a graded and reduced late payment surcharge, applicable on outstanding amounts beyond the due date. It has provision for debarment of DISCOMs from procuring power from a power exchange or grant of short-term open access if the dues remain unpaid beyond seven months.

8.9 Green Day Ahead Market (GDAM)

As part of the Policy of Ministry of Power (MoP) dated 24.3.2021 on "Development of Integrated Day Ahead Market (DAM) in Power Exchange with separate price formation for RE Power and Conventional Power", CERC has allowed starting of the Green Day Ahead Market (GDAM) on the Power Exchange Platforms vide its order 17th October 2021 and the same has been rolled out by the Power Exchanges. The GDAM along with the earlier launched Green Term Ahead Market (GTAM) provides another avenue for sale of RE power in the market. As per this mechanism, the power is sold in the same DAM with the provision of separate pricing for the RE power and the conventional power. The buyers in the GDAM are eligible for utilising this power against their RPO targets. There is also an option for the RE sellers to sell the unsold RE power in the conventional DAM and claim renewable energy certificates (RECs) for this power.

8.10 Waiver of Inter State Transmission System (ISTS) charges and losses

The Ministry of Power vide its order dated 15 January 2021 has provided that no ISTS charges will be levied on transmission of the electricity generated from solar and wind power plants (including solar-wind hybrid) with or without storage, commissioned up to 30 June 2023.

This waiver shall be applicable for power sale to distribution licensees, irrespective of whether this power is within the RPO or not, provided that the power has been procured competitively under the guidelines issued by the MOP.

Power from such solar and wind plants may also be used for charging of storage including Hydro pumped storage plants. The waiver shall be applicable for twenty-five years from commissioning of such projects.

8.11 Market Based Ancillary Services Mechanism

CERC on 31st Jan 2022 has issued the Ancillary Services Regulations 2022 which ushers a new era in Ancillary Services procurement in the country. With this, the procurement of the Tertiary Reserve Ancillary Services (TRAS), which is equivalent to the existing RRAS, will be done through bidding in the market platform, unlike the current administrative mechanism whereby the available URS power of the ISGS are being utilised for meeting Ancillary Services requirement. The Secondary Reserve Ancillary Services (SRAS), which is equivalent to the current AGC would continue to be met through the administrative process based on the consent of the willing participants. For implementation of the new mechanism, POSOCO has been asked to prepare the detailed guidelines and the actual date of implementation of this new mechanism will be notified by CERC.

8.12 New Deviation Settlement Mechanism

CERC on 14th March 2022 has issued the Deviation Settlement Mechanism Regulations 2022, which intends to introduce a new paradigm in the settlement of the Deviations. As per these Regulations, pricing of Deviation has been delinked from the administrative based frequency linked deviation charge regime. As per this, the charges of Deviation from Schedule would be same as the weighted average Ancillary Service Charges deployed at that point of time (block). For a period of one year or any date to be notified by the Commission, the deviation charges would be the maximum of the prices of Day Ahead Market, Real Time Market and the Ancillary Services Mechanism. For the generators, the band of deviations has been narrowed whereby within a band of 2% only there is no penalty and beyond this band the penalty increases for both over and under-injections. The actual date of implementation of these Regulations will be notified by CERC.

8.13 Utilization of Agro-residue for power generation & to reduce pollution

The Government has taken initiatives to utilize Agro-residue for power generation. This is intended to reduce emissions by discouraging farmers from burning crop residue and to provide extra income to them through sale of crop residue. Biomass has been recognised as a carbon neutral fuel and biomass co-firing is a technology recognized by UNFCCC as a measure of reducing greenhouse gas emission. MOP has issued revised policy for biomass utilization for power generation through cofiring in coal-based power plants dated 8 Oct 2021 which provides for mandatory use of 5% blend of biomass pellets made from Agro-residue along with coal by all coal based thermal plants on annual basis with effect from one year of date of issue of the guidelines.

8.14 Capacity addition through acquisition

Final Resolution Plan for acquisition of Jhabua Power Limited (1X600 MW) has been successfully negotiated and submitted to CoC by your Company on 14.6.2021. The same was approved by 100% vote share of CoC. Resolution Professional has filed the Resolution Plan for approval of National Company Law Tribunal (NCLT) which was obtained in July 2022.

Your Company along with PFC & REC is participating in the Lenders' backed resolution plan for Lanco Amarkantak Power Ltd. (LAPL) & KSK Mahanadi Power Company Ltd. (KSKMPCL) under NCLT. EOI for LAPL has been submitted on 29.11.2021.

9. STRATEGIC DIVERSIFICATION

9.1 In order to strengthen its competitive advantage in power generation business, your Company has diversified its portfolio to emerge as an integrated power major, with presence across entire power value chain through backward and forward integration into areas such as coal mining, power equipment manufacturing, power trading and distribution.

Your Company continuously explores business opportunities through market scanning and adopts new business plans accordingly.

9.2 The details of subsidiary companies engaged in business other than in power generation are as under:

9.2.1 NTPC Electric Supply Company Limited (NESCL), a wholly owned subsidiary, transferred and vested all its operations, with effect from April 1, 2015, to your Company.

NESCL was incorporated for the distribution business and later started deposit and consultancy works. Although currently NESCL does not have any business operations in retail distribution, the same will be taken-up at an appropriate time when the opportunity becomes visible.

NESCL is actively looking for acquisition of power distribution in UTs/state discoms and had participated in the bid process for privatization of UT Discoms of Chandigarh, Daman & Diu and Dadra &Nagar Haveli and emerged as a competitive bidder in Chandigarh. Your Company is looking forward to participating in the bid process of Puducherry Discom through NESCL as and when it takes place.

9.2.2 NTPC Vidyut Vyapar Nigam Limited (NVVN), a wholly owned subsidiary, is engaged in the business of Power trading. NVVN has a trading License under Category I (highest category). It undertakes sale and purchase of electric power, to effectively utilize installed capacity and thus enable reduction in the cost of power. The Company has been nominated as Settlement Nodal Agency (SNA) for settlement of Grid operation related charges with neighboring countries, namely, Bangladesh, Bhutan, Nepal and Myanmar. In the FY 2021-22, NVVN traded 24.152 (provisional) billion units (BUs). NVVN has played a key role in meeting the power demand of A&N by supplying 15 MW DG power to A&N islands. Approx. 40% of total A&N power requirement is being fulfilled by NVVN. The Company is also implementing a 50 MW gas power project in Andaman & Nicobar.

Besides this NVVN is undertaking various other Business activities such as e-mobility segment including providing vehicles and related services in various vehicle segments, Roof top Solar, Waste to Wealth etc. NVVN is actively bidding for e-mobility projects of State / City Transport Authorities / Corporates / Govt. bodies etc. on commercial arrangements.,

NVVN is actively looking for opportunities to expand its current business portfolio and as a strategic opportunity NVVN has acquired 5% Equity stake in PXIL exchange on 29.1.2022.

NVVN has paid dividend of ₹ 30 Crore for FY 2021-22.

9.2.3 NTPC Mining Limited (NML), In order to ensure focused management of mining business, your Company has incorporated a wholly owned subsidiary, NTPC Mining Limited (NML) on 29th August 2019 for handling its mining business.

Ministry of Coal has allowed for transfer of Pakri-Barwadih coal mine of your Company, to NML on 16.12.2020. Ministry of Coal on 24.3.2021 conveyed that the request for transfer of other mines allotted under the coal mines (Special provisions) act, 2015 (CMSP) & The Mines and Minerals Act (MMDR) Acts cannot be acceded to.

However, your Company with the support of Ministry of Power is pursuing with Ministry of Coal for transfer of all the mines of your Company to NML.

9.2.4 NTPC EDMC Waste Solutions Private Limited (NEWS), In order to develop & operate state of art/modern integrated waste management and energy generation facility using municipal solid waste, your Company has incorporated a JV Company with East Delhi Municipal Corporation (EDMC) with shareholding in the ratio of 74:26 respectively.

However, due to non-availability of clear land site and Power Purchase Agreement, Waste to energy project could not be taken forward. Your Company is taking up with EDMC to buy out EDMC's stake in NEWS.

9.3 The details of joint venture companies incorporated in India which are taking up activities in other related business areas are given below:

Name of Company	JV Partner	Activities Undertaken
UPL (Utility Powertech Ltd.)	Reliance Infrastructure Limited, Space Trade Enterprises Private Limited, Skyline Global Trade Private Limited and Species Commerce And Trade Private Limited	A 50:50 JVC takes up assignments of construction, erection and supervision of business in power sector and other sectors like O&M services, Residual Life Assessment Studies, non-conventional projects etc. UPL has paid dividend of ₹17.50 Crore to your Company for FY'2021-22.
NGSL (NTPC GE Power Services Private Limited)	GE Power India Limited	A 50:50 JVC provides R&M services for coal-based power plants in India and RLA, utilizing state of art technology. NGSL has already diversified in new business areas like O&M services and EPC for RE Projects. It is also looking for diversification in the EPC of FGD and Ash utilisation areas.
EESL (Energy Efficiency Services Ltd.)	PFC, PGCIL and REC	Your Company is having a stake of 33.33%. The Company was formed for implementation of Energy Efficiency projects and to promote energy conservation and climate change. EESL is working on Energy Audit of Buildings, standard & leveling work of BEE, Consultancy work, implementing Bachat Lamp Yojana and Agricultural & Municipal Pump replacement with energy efficient pumps for various State Governments. The Company is taking up different energy efficiency improvement related works like replacement of bulbs, Street Light National Programme (SLNP), & other new business areas like Electric Vehicle (EV), Electric Charging Infrastructure etc.

Name of Company	JV Partner	Activities Undertaken
NHPTL (National High-Power Test Laboratory Pvt. Ltd.)	NHPC, PGCIL, DVC and CPRI	Your Company is having a stake of 20.0% in JVC. The JV Company was formed to establish a research and test facility for the power sector such as an "Online High Power Test Laboratory" for short circuit testing facility for transformers. HVTR test Laboratory set up at Bina, M.P. was declared Commercial w.e.f 1.7.2017.
NBPPL (NTPC-BHEL Power Projects Pvt. Limited)	Bharat Heavy Electricals Limited	A 50:50 JVC was incorporated for taking up activities of engineering, procurement and construction (EPC) of power plants and manufacturing of Power sector and components. In 2018 both Promoters had approached respective Ministries to exit from NBPPL/winding up of NBPPL. MoP had advised NTPC to consider buyout of BHEL stake in NBPPL. NTPC in its response had proposed that any decision regarding the subject may be taken after completion of balance works of NBPPL at Unchahar (1X500MW) project of your Company. At present, NBPPL is in the advance stage pf completing the EPC work for balance of plant areas.
BF-NTPC (BF-NTPC Energy Systems Limited)	Bharat Forge Limited	Your Company is having a stake of 49.0% in JVC. This Company was incorporated to manufacture castings, forgings, fittings and high pressure piping required for power projects and other industries. However, since the project could not take off, it has been decided to wind up BFNESL. Liquidator has been appointed and voluntary liquidation of the company is in progress.

Name of Company	JV Partner	Activities Undertaken
TELK (Transformers and Electricals Kerala Limited)	Govt. of Kerala	Your Company is having a stake of 44.6% in JVC. The Company deals in manufacturing and repair of Power Transformers. Your Company has accorded in-principle approval for withdrawal of your Company from TELK in 2016. Accordingly, GoK was informed. However. GoK requested NTPC to review the decision to quit TELK. Your Company has again approached GoK to allow NTPC to exit in December' 2021.Modalities of exit of your Company from TELK are in discussion with GoK.
ICVL (International Coal Ventures Private Limited)	CIL, SAIL, RINL, NMDC	Your Company is having a stake of 0.11% in JVC. ICVPL was formed under Ministry of Steel for acquisition of stake in coal mines/ blocks/ companies overseas for securing coking and thermal coal supplies. In view of lack of suitable commercially viable opportunities for thermal coal, your Company has decided to exit from ICVPL. As the Company was formed by a directive from the Cabinet, matter is being taken up with Ministry of Power to pursue with Ministry of Steel for the requisite Cabinet approval for exit of your Company from ICVPL
HURL (Hindustan Urvarak & Rasayan Limited)	CIL, IOCL, Fertilizer Corporation of India Limited (FCIL) and Hindustan Fertilizer Corporation Limited (HFCL)	Your Company is having a stake of 33.33 % in JVC. HURL was incorporated on 15.6.2016 to establish and operate new fertilizer and chemicals complexes (urea, ammonia and associated chemicals) at Gorakhpur, Sindri and Barauni and market its products. Lumpsum Turnkey contract was awarded for Gorakhpur, Barauni and Sindri with a completion schedule of 36 months. Gorakpur project has been commissioned in Feb.'2022 and construction work of Barauni and Sindri project are in full swing.
(CNUPL) CIL NTPC Urja Private Limited	Coal India Ltd. (CIL)	A 50:50 JVC was incorporated on 27 April 2010 between NTPC Ltd. and Coal India Ltd to undertake the Development of Brahmini and Chichro-Patsimal coal mine blocks in Jharkhand and subsequently their operation. In June'2011, Ministry of Coal, GoI has de-allocated Brahmini and Chichro-Patsimal coal blocks. CNUPL is exploring new business area for implementation of solar projects. CNUPL has signed MoU with Northern Coalfields Limited (NCL) to support as Project Coordinator for development of 50 MW Solar PV Power Project at NCL Nigahi coal mine in M.P.

9.4 Foray in Packaged Drinking Water Business

Your Company's research arm, NETRA, has developed technology for sea water desalination using waste heat from flue gases from the power plant. The cost-effective technology is now being utilized for packaged drinking water. An MoU in this regard has been signed with IRCTC on January 15, 2018 for setting up a packaged drinking water facility at your Company's Simhadri Power Station. The bottling plant is commissioned by IRCTC. BIS and FSSAI license received. Commercial production expected in Aug'2022.

9.5 Asset Monetization

Under the broad contours of the National Monetization Pipeline (NMP), your Company has been allotted a monetization target of ₹ 15,000 crore to be achieved in tranches over FY22 to FY25. In this regard, your Company has proposed monetization of its identified RE portfolio & divestment of equity stake in NTPC SAIL Power Company Limited (NSPCL).

a) Monetization of RE assets:

Your Company has proposed monetization of identified RE assets of 2,861 MW which are on NTPC's balance sheet along with NTPC Renewable Energy Ltd. (the wholly owned subsidiary of your Company for organic RE growth).

In this regard, for better marketability, your Company has incorporated NTPC Green Energy Ltd. ("NGEL") as a wholly owned subsidiary of your Company on 7th April 2022 for consolidation of the identified RE portfolio in which RE assets of your Company and NTPC Renewables Energy Limited (NREL) are proposed to be transferred. Monetization of NGEL is proposed through strategic stake sale to Financial/ Strategic/Private Equity investors and/ IPO.

The scheme for asset monetization has already been approved by Ministry of Power and Gazette notification issued by Ministry of Finance on 15th June 2022.

b) **Divestment of your Company's stake in NSPCL:**

Your Company has proposed divestment of its 50% equity stake in NSPCL. In this regard, SAIL has also expressed interest to divest its 24% equity stake and thus joint sale of 74% stake in NSPCL to interested 3rd party investors is being explored. SBICAPs has been appointed by SAIL for carrying out investors' consultation.

9.6 New Business Areas

9.6.1 Exploring business opportunities for setting up Industrial Park at your Company Power Stations

To support the Government's vision of Atmanirbhar Bharat for manufacturing, your Company had floated an EOI inviting energy intensive industries for setting up an Industrial Park within the surplus land available in three of its power plants. Through this unique initiative, your Company plans to supply (24x7) reliable electricity at competitive tariff directly to energy intensive industries, which is a primary requirement for their sustainability. Industries while getting reliable electricity supply get a host of other ready infrastructure facilities like rail, road airport connectivity, township, medical facilities, water supply etc available at your Company power plant which will help industries set up their units at lower Capex with fast gestation time and help realize the vision of Atmanirbhar Bharat Based on the response in EOI Industrial Park at your Company Kudgi is being implemented as a pilot project.

In principle approval by Government of Karnataka and concurrence from MoP has been obtained in November'21 and February'22 respectively and tendering process is ongoing for activities related to setting up of Industrial Park at Kudgi.

9.6.2 Pilot Plant for capturing CO_2 to Methanol production in NTPC plants as part of CCU initiative

Your Company is actively exploring options to decarbonize its power plants and transition to green energy. In this regard a pilot scale CO_2 capture to Methanol synthesis plant of 10 TPD is being set up at your Company's Vindhyachal project for demonstration purpose.

9.6.3 EoI for setting up of CO2 to Methanol production in NTPC plants

As a step forward, a global EOI was also published in January 2021 seeking responses from Industries for setting up commercial scale CO_2 capture, H_2 generation and conversion to Methanol production facility. The company is now in discussion with NITI Aayog and other stakeholders on ways to make a decarbonization project of Carbon Capture and utilization commercially feasible.

9.6.4 Bamboo based Bio Refinery at Bongaigaon

Your Company is currently pursuing a Techno economic Feasibility Study through EIL to setup a Bamboo based 2G Bio-Refinery project at Bongaigaon Thermal power station. Through this project, your Company aims to extract valuable bio-chemicals from naturally available bamboo in the region and use the remaining as a fuel to replace part of coal in Bongaigaon power plant.

9.6.5 Partnering with Battery Manufacturers

Your Company published a Global Expression of Interest for collaborating/associating in Advanced Chemistry Cell Battery Manufacturing facility in India on 21.12.2021.

9.6.6 MoU with IOCL

Your Company has signed an MoU with Indian Oil in November 2021 for exploring options for supply of around 650 MW Low carbon / Renewable Energy Round the Clock (RE RTC) power for captive use at IOCL refineries.

9.6.7 MoU signed with NIIF and BPP

Your Company has signed an MoU in January 2022 with National Investment and Infrastructure Fund (NIIF) and BP India Private limited to jointly explore opportunities for participation in Gas based RTC tenders and also to supply gas based blended power to C&I consumers.

9.7 Initiatives for Start Up Eco-system

Your Company is working towards developing a holistic Innovation and Start-Up Ecosystem in your Company, to look for innovative and out of the box solutions to its existing problems, In this context, an MoU has been signed with i-Hub (Gujarat Student Start-up and Innovation Hub) to organize open innovation challenge focused on power sector and allied domains for innovative solutions for the challenges being faced by your Company's stations. Further a Grand Energy Challenge for your Company – was launched by Start-up India at their portal on 17.12.2021 for three problem statements related to business of your Company. Your Company is looking forward to offering mentoring support to these shortlisted Innovators, Start-ups and facilitate them in implementing or piloting their products/solutions.

10. GLOBAL INITIATIVES

10.1 Bangladesh-India Friendship Power Company Private Limited (BIFPCL), a 50:50 JV company with Bangladesh Power Development Board (BPDB), is implementing a (2x660) MW Maitree Super Thermal Power Project at Khulna in Bangladesh.

10.2 JV with Sri Lanka- A 50 MW solar PV power project (extendable to 100 MW) at Sampur, Trincomalee shall be developed by Trincomalee Power Company Limited (TPCL), the existing JV Company between Ceylon Electricity Board (CEB) & NTPC for which a new JVSHA has been signed on 11th March 2022 to modify the earlier JVA to enable solar power project. Feasibility studies have been carried out and the draft report has been shared with Sri Lankan side for their acceptance.

Your Company and CEB, Sri Lanka have signed a JVSHA to incorporate a new 50:50 JV Company for the development of the 300 MW LNG Power Project at Kerwalapitiya, Sri Lanka in 2019 and supplementary JVSHA was initialled in January 2022.

10.3 Other Opportunities Abroad:

a. Project Management Consultancy (PMC) assignments under ISA platform secured for a total of 4245 MW so far viz Malawi (100 MW), Niger (50 MW), Ethiopia (410 MW), Cuba (900 MW), Nicaragua (100 MW), Paraguay (500 MW), Zambia (400 MW), DRC (1000 MW) in the year 2021-22 and Togo (285 MW), Mali (500 MW) in the preceding year.

b. Collaboration for international business through signing of MoUs with UEGCL in August 2021, EDF France in October 2021 and with Inter Rao, Russia in December 2021. Through this route, your Company intends to have more effective presence in respective focus regions and be able to contribute further in power sector development.

c. Your Company has competitively secured two consultancy assignments, one from UNDP Myanmar in December 2021 for carrying out feasibility studies for the adoption of solar based technologies in Agriculture sector of Myanmar which include selection of 30 sites for Solar based Pumping systems and conduct of training and the other one from Central Electricity Board (CEB), Mauritius in March 2022 for setting up of 2 MWp Floating Solar PV Plant at Tamarind Falls Reservoir in Mauritius which include preparation of DPR, EIA report, Tender documents and post award Site Supervision & Project Management. Both the assignments are under progress and part payments have been released against milestones achieved for the UNDP assignment.

d. Your Company is providing Project Management Consultancy & DPR preparation services under ISA platform to 21 LDC & SIDS member countries of ISA for implementation of solarisation pilot projects such as solar water pump, solar powered cold storage and solar rooftop solutions to primary healthcare centers. The DPRs have been approved by ISA and the tendering process is under progress for implementation of the projects in 09 countries.

e. A total of 28 RFPs, 5 RFQs and 34 EOIs have been submitted for power sector opportunities overseas in the financial year 2021-22. Your Company has won 2 assignments out of 14 tenders for which results are out and the others are under different stages of evaluation.

11. CONSULTANCY SERVICES

Consultancy wing of your Company supports Indian Power Industry with its vast experience & expertise and offers Consultancy services "From Concept to Commissioning and beyond…." for large power stations in the areas of Engineering, O&M, Project Management, Contracts & Procurement, Renovation & Modernization, Quality & Inspection, Training & Development, Human Resource, IT, Solar & renewable power projects, compliance to Environmental norms for power stations etc.

Consultancy services are being provided in India and abroad viz. Gulf countries, Bangladesh, Myanmar, Mali, Togo, Malawi, Mauritius, Ethiopia, Cuba, Paraguay, Niger & other ISA Member countries. Around 138 consultancy assignments are presently under execution.

Some of the Major ongoing assignments are as follows:

- Project Management Consultancy (PMC) for thermal power projects to THDC & SJVN.
- Post Award services to various thermal power projects of UPRVUNL.
- Consultancy services for O&M Support of thermal power project to UPRVUNL.
- Preparation of DPR and Providing Pre-Award Services for thermal power project to SCCL.
- Post award consultancy services for installation of FGD for thermal power project to SCCL.
- Computerization Project on turnkey basis for Ministry of Jal Shakti, Government of India.
- Consultancy services for procurement of imported coal to JVs companies of your Company.
- Consultancy services for replacing existing C&I System with new DDCMIS for thermal power projects to MPPGCL.
- Preparation of PFSR of the 4 Nos. hydro pump storage projects for TANGEDCO.
- Several Consultancy Assignments pertaining to compliance of new environment norms through implementation of Flue Gas Desulphurization (FGD), Combustion modification and ESP R&M etc.
- Consultancy services for several solar projects from 50 MW to 900 MW for various national clients and international clients.

Consultancy clientele of your Company includes Central & State Government organizations, private companies, Joint Venture companies of your Company, international clients and member countries of International Solar Alliance (ISA).

Highlights of FY 21-22

- Consultancy wing has received an all-time highest order value of ₹ 629.74 crore during this FY (including international orders in association with International Business Development department).
- Consultancy Wing has added new business portfolios in new energy generation & storage areas.
- Your Company has participated in 47 competitive biddings opportunities including domestic & international clients, highest ever number in a FY. We have won consultancy assignments in domestic as well as international market.
- Consultancy Wing has received ISO 9001:2015 certification on 15.6.2021.

Consultancy wing of your Company is further exploring business opportunities in emerging areas such as providing consultancy services in the area of PMC for implementation of new environmental norms e.g FGD, ZLD, De-NOx & ESP R&M, development of Solar & Renewable power projects, O&M and performance improvement of Thermal Power Plants, Owner's Engineer services for brownfield power projects, IT services e.g. ERP implementation, PRADIP, Dreams 2.0, PI systems, CLIMS etc.

12. FINANCING OF NEW PROJECTS

The capacity addition programs shall generally be financed with a debt to equity ratio of 70:30, in case of thermal and hydro projects of your Company and that of 80:20 in case of solar/ wind projects. Your directors believe that internal accruals of the Company would be sufficient to finance the equity component for the new projects. Given its low-geared capital structure and strong credit ratings, your Company is well positioned to raise the required borrowings.

Your Company is exploring domestic as well as international borrowing options including overseas development assistance provided by bilateral agencies to mobilize the debt required for the planned capacity expansion program.

Further, your Company is consistently doing debt swapping in case of domestic loan and cheaper loans are being utilised to repay the older loans with higher rate of interest without paying any repayment penalty to bank.

The details of funding are discussed in the Management and Discussion Analysis Report which forms part of this Report.

13. FIXED DEPOSITS

Your Company has discontinued the acceptance of fresh deposits and renewal of deposits under Public Deposit Scheme with effect from 11.5.2013. As such, there were no deposits which were not in compliance with the requirements of Chapter-V of the Companies Act, 2013.

The details relating to deposits, as per the Companies Act, 2013 are as under:

(a)	Accepted during the year	Nil
(b)	Remained unpaid or unclaimed as at the end of the year	6 Deposits amounting to ₹ 15.91 lakh*
(c)	Whether there has been any default in repayment of deposits or payment of interest thereon during the year and if so, number of such cases and the total amount involved:	
	(i) At the beginning of the year	NIL
	(ii) Maximum during the year	NIL
	(iii) At the end of the year	NIL

* Pending for completion of legal formalities/ restraint orders/ non-receipt of claims.

14. FUEL SECURITY

During the year 2021-22, the supply position of coal and gas is given as under:

14.1.1 Long Term Coal Supply Agreements

- In line with the Model Coal Supply Agreements agreed between your Company and Coal India Limited (CIL) in 2009, 2012 and under Shakti Policy, Long-term Fuel Supply Agreements (FSAs) are in place with the subsidiary coal companies of CIL for an Annual Contracted Quantity (ACQ) of 167.85 Million Metric Tonnes (MMT), as on 31.3.2022 for the existing thermal stations. In addition, FSAs are in place with Singareni Colliery Company Ltd. (SCCL) for Ramagundam and Solapur Unit-2 of your Company for an ACQ of 13.74 MMT. FSAs are generally valid for a period of 20 years with a provision of review after every 5 years.
- In FY 2021-22, your Company has signed Long Term FSA for 2.54 MMT per annum with SCCL for Solapur Unit-2 (660 MW) pursuant to its coal linkage transfer from distantly located MCL sources, thereby reducing cost of generation from the plant. Further, as per decision of SLC(LT) to enhance ACQ of eligible plants upto 100% of normative quantity (i.e., quantity for 85% PLF), your Company has signed supplementary/ amendment agreements with coal companies for various plants viz., Rihand-III Unit-6, Vindhyachal-IV Unit-11&12, Mouda-II Unit-3&4, Unchahar-IV Unit-6, Gadarwara Unit-1&2 for total additional quantity of 1.75 MMT per annum.
- Due to suspension of coal mining activities at NEC (CIL) and pursuant to the Govt. policy of linkage rationalization, coal linkage of Farakka-I&II Unit-1 to 5 with NEC has been transferred and FSA is signed

with ECL, whereas for Bongaigaon Unit-1&2 of your Company, the FSA with NEC has been transferred and signed with CCL (1.171 MMT) and ECL (0.15 MMT).

Fresh long-term coal linkages under para-B(i) of SHAKTI policy:

- In FY 2021-22, based on your Company request, SLC (LT) dated: 22.12.2021 recommended coal linkage for Khargone Unit-1 (660 MW) from CIL. Subsequently, CIL has allocated linkage for annual quantity of 3.336 MMT from MCL. Issuance of Letter of Assurance from MCL and signing of FSA is expected in FY 2022-23.
- Pursuant to termination of existing Letter of Assurances (LOA) of Barh-I (Unit 2 & 3) and North Karanpura (Unit 1 to 3) of your Company as per the terms of para A(i) of SHAKTI policy, Standing Linkage Committee (Long-term), SLC(LT) in its meeting held on 29.3.2022 has recommended for grant of fresh coal linkages for the plants from CIL under para B(i) of SHAKTI policy.

Coal under Bridge Linkage and other short-term Memorandum of Understanding (MoU):

- Bridge linkages of Barh-II, Tanda-II, Lara, Darlipali, Kudgi and Barauni-II: In terms of the Govt. policy of Bridge Linkage, your Company plants viz. Barh-II, Tanda-II, Lara, Darlipali, Kudgi and Barauni-II were allocated Bridge Linkages to bridge the gap between coal from linked captive mine and requirement of the plant. The bridge linkages were granted by SLC(LT), MoC for Tanda-II, Lara and Darlipali each upto 2022; Barh-II upto 2023 and Barauni-II upto 1.9.2022. Based on above and coal quantification by CCO as per tapering based on approved mining plan of respective linked mines, MoUs with allocated coal companies are valid upto March'2022. In view expiry of Bridge Linkages, your Company has taken up before Ministry of Power / Ministry of Coal for further extension of Bridge Linkages considering present production plan of the linked captive mines. Further, Ministry of Power has recommended to Ministry of Coal for grant of extensions of the Bridge Linkages. The matter was discussed in the SLC(LT) meeting held on 29.3.2022. However, it was deliberated to consider the matter in next SLC(LT) after examination of the company proposal by Nominated Authority, Ministry of Coal.
- In relation to Kudgi, against your Company request for grant of long-term coal linkage, SLC(LT) in the meeting held on 29.3.2022 has recommended for extension of Bridge Linkage by another 01 year (w.e.f. April'2022) or till surrendering of the linked mine, Bhalumuda is completed.
- Tapering linkage of Telangana Ph-I (2X800 MW): Pursuant to transfer of tapering linkage of Telangana Ph-I (granted against linked captive mine, Mandakini-B) from WCL cost-plus to SCCL, your Company in the FY 2021-22 has signed MoU for 6.846 MMT per annum with SCCL, with validity upto March'2023.
- MoU with SCCL: A bilateral MoU was signed with SCCL for FY 2021-22 for a quantity of 8.00 MMT on best effort basis for supply of coal to Kudgi plant under Bridge Linkage and other company stations (except Ramagundam) as per requirement.
- MoU with NLC India Ltd.: Pursuant to Govt. notification of MMDR (Amend) Act, 2021 and Mine Concession (Amend) Rules, 2021, permitting commercial sale of captive mine coal up to a percent of the annual production after meeting the end use requirement, your Company has entered into a bilateral MoU with NLC India Ltd. for supply of coal from its Talabira II & III mine to the company plants during period Oct-Dec'2021. Further, your Company and NLC India Ltd. have to entered into bilateral MoU for supply of Talabira coal for 3 years for annual quantity of 3 MMT on best effort basis.

Flexible Utilization of Domestic Coal

- To leverage potential of rationalization of coal linkages, your Company had signed a Supplementary Agreement with CIL and CIL subsidiaries for all owned JV/ Subsidiary stations on 12.4.2017 for implementation of Govt. policy on "Flexibility in utilization of domestic coal for reducing cost of power generation". Under the Supplementary Agreement, your Company can allocate coal to any station of its own or any JV/ Subsidiary for optimising the Energy Charges. During the year 2021-22, Company has used 23 MMT of coal under Flexibility Utilization to address AFC under recovery and generation loss.

Agreements for supply of imported Coal

- In compliance of Govt. of India (GOI) envision to lessen use of imported coal, the company had initially reduced ~8 LMT imported coal quantity from the previous years' awarded contracts. However, revival of economy led to unprecedented demand and consumption of electricity. During the period August to September, share of coal-based generation has increased from about 62% in 2019 to 66% in 2021. As a consequence, total coal consumption during Aug-Sept, 2021 has increased by about 18% in comparison to corresponding period in 2019. This led to a gap between coal supply and coal requirement of various power plants in the country. To tide away the coal crisis emanating out of coal shortage as per directions of MoP & CEA vide letters dated 30.8.2021, 11.10.2021 and 12.10.2021, and Minutes of Meeting chaired by Hon. Minister of Power (MoP) and NRE on 18.10.2021 package quantity of running contracts was enhanced by 1.42 MMT for blending of domestic coal with Imported coal.
- Further, as per directions of Ministry of Power (MoP),

a new contract for procurement of 1.0 MMT of imported coal for 8 stations of your Company was awarded in Dec'21.

- MoP vide letter dated 7.12.2021, further advised your Company and the JVs to procure 16 MMT and 2.5 MMT respectively of imported coal for blending @ 10% of coal requirement for 85% availability.

- Based on MoP directive your Company is procuring 16 MMT of Imported coal in 03 tranches of 7.0 MMT, 5.0 MMT and 4.0 MMT. Contracts have already been awarded for procurement of 6.75 MMT while procurement of 6.25 MMT is under process. For JVs, contracts have been awarded for 1.8 MMT while 0.67 MMT is under process.

- NTPC group of companies (on consolidated basis) have consumed imported coal amounting to ₹ 3029.86 crore in FY 2021-22 as compared to ₹ 719.09 crore imported coal consumed in FY 2020-21.

14.1.2 Domestic Coal and Imported Coal Supplies

During 2021-22, your Company received 195.03 MMT of Coal as against 173.37 MMT in FY 2020-21. Out of 195.03 MMT of Coal, 169.77 MMT was from annual contracted quantity of Coal, 8.09 MMT through Bridge Linkage/SCCL Bilateral MoU, 14.70 MMT from Captive Mines and 2.47 MMT from Imported Coal.

14.1.3 Gas & RLNG supplies

- Your Company has long-term Gas Supply Agreements (GSAs) with GAIL for supply of Administered Price Mechanism (APM) gas and Non-APM gas, which are valid upto 6th July 2026. However, because of diversion of allocated gas to CGD (City Gas Distribution) sector as per MoP&NG guidelines, APM & Non-APM gas supplies to your Company became Nil w.e.f. 16.6.2021. Your Company also has a long-term agreement with GAIL for supply of 1.1 MMSCMD RLNG on firm basis, valid upto December 2023.

- To meet the shortfall in supply of long-term domestic gas/RLNG, your Company procures Spot RLNG on limited tender basis from domestic suppliers and on 'Single Offer' basis from Public Sector gas marketing companies. These RLNG supplies are contracted on 'Reasonable Endeavour' basis with no penalty on either party for short supply/short offtake. Further, your Company has arrangement for procuring Spot RLNG on commitment basis, subject to consent of the beneficiary Discoms. Further, adequate stock of liquid fuel is maintained for meeting Grid/Discom's power requirement.

- During 2021-22, your Company received average 0.40 MMSCMD of Domestic gas as against 2.48 MMSCMD of Domestic gas received during 2020-21. Long Term RLNG & Spot RLNG offtakes during 2021-22 were 0.61 & 0.28 MMSCMD as against 0.43 & 0.54 MMSCMD during 2020-21 respectively.

14.2.1 Snapshot of Coal Mining Portfolio of your Company is as under:

Your Company currently has seven coal blocks with an estimated peak rated mine capacity of 71 MMTPA. Your Company is already producing coal from three mines i.e. Pakri-Barwadih, Dulanga & Talaipalli. Despite being affected by COVID-19 pandemic, your Company has achieved a total coal production of 14.02 MMT from its mines during FY 2021-22, which is 27% higher production than FY 2020-21 and cumulative production was 46.39 MMT till Mar'22. Coal dispatch was 14.86 MMT during FY21-22.

For Chatti-Bariatu coal block, all statutory clearances and priority land for commencement of mining are available. Mine Developer cum Operator (MDO) is also appointed for this mine and mining activities are expected to start in Q1 of FY22-23. For Kerandari mine, appointment of MDO is under process and major statutory clearances are also in place. Rehabilitation & land possession are under progress.

In Badam coal block, though Stage-I Forest Clearance and Environment Clearance have been transferred to your Company by Ministry of Environment, Forest, and Climate Change (MOEF&CC), GoI. Proposals for Stage-II Forest Clearance, Government land transfer, Mining lease, etc. are under process with Govt. of Jharkhand for which your Company is constantly pursuing. Tender for appointment of MDO is also floated for Badam mine. Mining operations in Kerandari and Badam coal blocks are expected to start in FY 2023-24.

In Talaipalli mine coal production is continuing from the South pit. The MDO for the main pit, appointed in Aug'20, raised disputes over Mining Plan approved by Ministry of Coal (MOC) and the matter is sub-judice. Your Company has gone ahead with the termination of the contract. To meet the coal requirement of its power plant, Lara STPP, which is already operational, your Company has planned for continuation of coal production from 3 pits, South (and its extension), West & East. Tendering of Talaipalli South pit & Talaipalli West pit have already been done.

The mine could not be declared commercial within two years from commencement of coal production due to contractual / legal issues with the MDO. NTPC has informed the issues of MDO to Ministry of Coal and Ministry of Power and requested for their support. Issuance of fresh NIT for appointment of MDO is in progress. The delay in declaration of COD will be appropriately taken up with CERC.

Pakri-Barwadih coal project has been awarded "National Safety Award (Runner Up) – LTIFR (lost time injury frequency rate)" for large opencast mines in FY 2021-22. Talaipalli mine has secured First prize in Opencast Mines category in Annual Safety week organized by DGMS.

14.3 Initiatives through Joint Ventures and Subsidiaries:

Banhardih coal block is being developed by Patratu Vidyut Utpadan Nigam Limited (PVUNL), a subsidiary company incorporated between your Company & Govt. of Jharkhand. Mining plan for this mine has been approved by MOC on 15.7.2021. For land acquisition, Section 11 notification under The Coal Bearing Areas (Acquisition and Development) Act, 1957 (CBA Act) issued by Ministry of Coal (MOC) on 15.6.2021. Public hearing for Environment Clearance conducted on 29.12.2021 and the process for Environment & Forest clearances have been initiated. After receipt of various statutory clearances, appointment of MDO shall be done.

Your Company incorporated a wholly-owned subsidiary company named NTPC Mining Ltd. (NML) for its coal mining business. Ministry of Coal has allowed for transfer of Pakri-Barwadih coal mine of your Company, to NML on 16.12.2020. Ministry of Coal on 24.3.2021 conveyed that the request for transfer of other mines allotted under the coal mines (Special provisions) Act, 2015 (CMSP) & The Mines and Minerals Act (MMDR) Acts cannot be acceded to. However, your Company with the support of Ministry of Power is pursuing with Ministry of Coal for transfer of all the mines of your Company to NML.

15. BUSINESS EXCELLENCE (BE): GLOBAL BENCHMARKING

Your Company has developed and adopted a customized business excellence Model called 'NTPC Business Excellence Model' on the lines of globally accepted Performance Excellence frameworks such as the Malcolm Baldrige Model USA and EFQM Model of Europe.

The assessment process is aimed at identifying the areas for enhancing stakeholders' engagement, improving critical processes and developing leadership potential. The outcome of this model is identification of organizational strengths, opportunities for improvement, issues of concern and best practices.

In the financial year 2021-22, twenty-one generating stations of your Company were assessed by a team of certified assessors. Business Excellence Award for overall excellence was given to Rihand station of your Company. All twenty-one stations are now in yellow band i.e., score band above 501+. Capacity building in BE Model was undertaken and 87 senior level executives were trained in three batches.

BE Model of your Company has revised this year to make it dynamic, contextual and relevant in line with the changes in business environment and organisational requirements for current and next few years. The new revised BE Model 2021 of your Company lays special emphasis on planning and strategy, safety, and key areas of importance like stake holder engagement, digitization, employee wellness and learning & development.

Other contemporary TQM concepts and techniques like ISO, Quality Circles, Professional Circles, 5S etc. have been deployed across the organization. Dadri & Rihand are certified by JUSE for 5S system. Annual Professional Circle Convention of your Company was held at Kudgi station of your Company on 15th March 2022 where in 15 teams participated. Likewise, your Company's Quality Circle convention was held at Kahalgaon station of your Company on 10th March 2022 with 12 teams participating in the convention. Quality Circle teams Lakshya from Barh Station and Urja Jyothi from Simhadri Station of your Company had won Par- Excellence award and Excellence award respectively in the International QC Convention 2021 held at Hyderabad.

16. RENOVATION & MODERNISATION

Renovation and Modernization (R&M) of various units of your Company, especially the ones which have completed 25 years of commercial operation, is considered essential to achieve the objectives such as SAFE operation of the Units, compliance of latest statutory norms/revised Environmental norms / IEGC Code, Recovery/improvement of Efficiency of the Units, Reliability Improvement, flexible operations necessitated due to large scale integration of renewables, Sustenance of operations considering equipment health assessment observed during last 2 to 3 years, overcoming constraints on account of current operating conditions (changes in coal quality, water supply arrangements, change in law, etc.).

Investment approval accorded till date for R&M of 20 stations (Coal & Gas based) is ₹ 16,547.71 crore. As against this, cumulative expenditure till 31.3.2022 is ₹ 9,050.03 crore which includes R&M capital expenditure of ₹ 478.25 crore during financial year 2021-22.

As a responsible corporate citizen, it has always been your Company's endeavour to ensure low levels of pollution from its power stations. With a view to maintain a clean atmosphere in and around the power plant by reduction of particulate emission levels from generating stations, Renovation and Retrofitting of Electrostatic Precipitator (ESP) packages have been awarded for 52 Units in 10* Stations, namely Tanda – (4 x110MW), Singrauli - I & II (5X200MW+2X500MW), Korba-I&II (3X200MW+3X500MW), Farakka - I & II (3X200MW+2X500MW), Vindhyachal - I & II (6X210MW+2x500MW), Rihand – I (2x500MW), Unchahar - I (2x210MW), Talcher STPS – I & II (2X500MW+4X500MW), Unchahar - II (2x210MW), Ramagundam - I (3x200 MW), Ramagundam - II (3x500 MW) and Kahalgaon - I (4 x 210 MW). ESP R&M work has been completed, during 2021-22, in 3 units namely 1x200 MW & 1x500 MW of Farakka and 1x500 MW of Singrauli and total no. of units in which ESP R&M has been completed till Mar'22 is 39 in 08* stations of your Company.

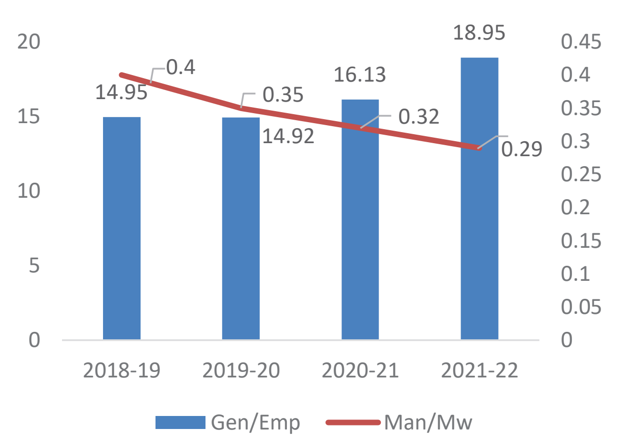
With a view to removing technological obsolescence, renovation of Control & Instrumentation (C&I) has been taken up in 9 coal based stations namely Singrauli-I (5X200MW) & Singrauli – II (2X500 MW), Korba –I (3X200MW) & Korba – II (3X500 MW), Ramagundam -I (3X200MW) & Ramagundam – II (3X500MW), Farakka-I (3X200MW) & Farakka-II (2X500 MW), Dadri Thermal- I (4X210MW), Unchahar- I (2X210MW), Talcher STPS-I (2X500MW), Kahalgaon-I (4X210 MW) and Rihand – (2X500 MW) comprising a total of 38 units. C&I R&M has been completed in total 37 nos. units till Mar'22.

Renovation of Control & Instrumentation (C&I) has been completed in 05 gas-based stations namely Anta (419.33 MW, 3 GT + 1 ST), Auraiya (663.36 MW, 4 GT + 2 ST), Kawas (656.20 MW, 4 GT + 2 ST), Dadri Gas (829.78 MW, 4 GT + 2 ST) and Faridabad (432 MW, 2 GT + 1 ST). On completion of these schemes, C&I systems in these units have now been brought nearly on par with the new builds. R&M of Gas Turbines was completed in 14 Gas Turbines in 4 stations namely (4x106) MW in Kawas, (4x111.19) MW in Auraiya, (3x88.71) MW in Anta and (3x144.30) MW in Gandhar.

*ESP R&M was awarded and completed in 04 units in 02 stations [Badarpur – II (2x210MW) & Talcher TPS-II (2X110MW]) but is not included above since these units are no longer in the generation portfolio of NTPC Ltd.

17. HUMAN RESOURCE MANAGEMENT

17.1 Your Company takes pride in its highly motivated and competent Human Resource that has contributed its best to bring the Company to its present heights. The productivity of employees is demonstrated by consistent reduction of Man-MW ratio year after year. The overall Man-MW ratio for the year 2021-22 excluding JV/ subsidiary capacity is 0.29 and 0.26 including capacity of JV/ Subsidiaries. Generation per employee was 18.95 MUs during the year based on generation of your Company's stations.



The total employee strength of your Company (including JV/ subsidiaries) stood at 17,474 as on 31.3.2022 against 18,509 as on 31.3.2021.

Particular	FY 2021-22	FY 2020-21
Your Company		
Number of employees	15,786	16,798
Subsidiaries & Joint Ventures		
Employees of your Company in Subsidiaries & Joint Ventures	1,688	1,711
Total employees	**17,474**	**18,509**

The attrition rate of your Company is very low as most employees choose a lifetime career with your Company. During FY 21-22, our employee turnover rate was 0.37%.

17.2 Employee Relations

Employees are the driving force behind the sustained stellar performance of your Company over all these years of company's ascendancy. As a commitment towards your Company's core values, employees' participation in Management was made effective based on mutual respect, trust and a feeling of being a progressive partner in growth and success. Communication meetings with unions and associations, workshop on production and productivity, etc. were conducted at projects, regions and corporate level during the year.

Both employees and management complemented each others' efforts in furthering the interest of your Company as well as its stakeholders, signifying and highlighting overall harmony and cordial employee relations prevalent in your Company.

17.3 Safety and Security

Occupational health and safety at workplace is one of the prime concerns. Utmost importance is given to provide safe working environment and to inculcate safety awareness among the employees. Your Company has a 3-tier structure for Occupational Health and Safety Management, namely at Stations/ Projects, at Regional Head Quarters and at Corporate Centre. Safety issues are discussed in the highest forum of Management like Risk Management Committee (RMC), Management Committee Meeting (MCM), ROPR, ORTs, PRTs etc. Consultants are also engaged to strengthen process safety. On various occasions, CMD and the board members of your Company addressed Senior leaders and employees.

Thirty stations of your Company are already certified with ISO:45001 and other stations are migrating to ISO:45001.

Regular plant inspection and review with Heads of Projects/ Stations is being done to guide them from time to time and to ensure that safety systems are in place. Internal Safety Audits by team of Safety Officers are carried out every year, and FY 2021-22, all your Company running stations have completed the Internal Safety Audit. External Safety Audits by reputed organizations as per Statutory requirement are carried out for each Project/

Station. Recommendations of auditors are regularly reviewed and complied with.

The Central Electricity Authority of India (CEA) Safety audit of your Company Farakka station has been done with high appreciation from audit team for Safety Management practices. Thirty employees from your different plants have been trained for National Occupational Safety Association (NOSA) internal auditor certification.

Safety Policy was reviewed and updated to ensure accountability for Safety at all levels. In line with Safety Policy, a comprehensive Safety Framework is developed and is linked with SAP for uniform Safety Management across Organization. Fourteen number of Company level documents like Operation Directives (OD) and Operation Guidance Note (OGN) have been prepared and shared with all stations. Twenty-three specific safety training modules for contract workers have been launched and trainings as per job requirement is imparted by qualified and trained persons to enhance the safety knowledge and competency of workers. Safety modules have been released by Power Management Institute (PMI) for learning and enriching knowledge of the engineers working in O&M. New initiatives viz. Key Opinion Maker (KOM-Suraksha Mitra), Swearing-In ceremony, Surakshavali booklet, focused review of Safety by standardized format by BUH have been taken to improve safety culture across Organization.

Various safety systems at work like Permit to Work (PTW), Job Safety Analysis (JSA), Standard Operating procedures (SOP) etc. are in place for ensuring safe work practices. Height work permit, hot work permit, confined space work permit, excavation permits, and related check lists are implemented to ensure safety of workers while carrying out such specific jobs. Adequate numbers of qualified safety officers are posted at all units as per statutory rules/ provisions to look after safety of men & materials. Emergency Management Plan has been prepared by each of your station. Trainings have been done by each of your station to explain the responsibilities of key persons and regarding their role in handling of the emergency situations. Mock drills are conducted regularly to check the effectiveness of the system. Mock drills were conducted with NDRF to prepare for any extreme on-site emergency. Sites are engaging the safety consultant of international repute to uplift safety standards.

For strict compliance & enforcement of safety norms and practices by the contractors, safety clauses are included in General Conditions of Contract / Erection Conditions of Contract. Non-negotiable safety terms and conditions are a part of the corporate awarded packages during tendering.

In FY 2021-22, fourteen stations of your Company have received prestigious International Safety Award from British Safety Council. In addition, two of your Company stations have received Safety Award from DGFASLI, Govt. of India. Various other safety awards have been received by many of your stations from National Safety Council, State Governments & Independent bodies in recognition of implementing innovative safety procedures and practices.

Considerable improvement is noted in Safety performance this FY 2021-22 compared to last FY 2020-21.

Security: Your Company has established and is maintaining a secured working environment for all its installations, employees and associates by deploying CISF or SISF and / or DGR sponsored security agencies in all units as per norms / guidelines of Ministry of Home Affairs and Department of Public Enterprises. Further time to time concrete steps are being taken for upgrading surveillance and security systems at all projects/ stations as per security Inspection Report of Intelligence Bureau.

17.4 Training and Development

Your Company is successfully attracting, grooming, motivating and engaging talent. It believes in sustaining the organization as a learning organization and ensuring commitment and expertise at all times and situations so as to enable and drive business success. The Learning and Development (L&D) delivery infrastructure comprises the Power Management Institute (PMI) at the apex, the 7 Regional Learning Institutes (RLIs), the Safety Academy at Unchahar station of your Company and the Employee Development Centres (EDCs) at the stations. L&D is actively engaged in making our people future ready in terms of technology, business acumen and leadership so as to unleash their full potential towards achieving the desired business outcomes in today's VUCA world. The initiatives / programs are derived from business needs and designed to achieve the Company's strategic objectives and create value for stakeholders.

PMI has the state-of-the-art physical and digital infrastructure to impart learning in world class ambience. Its classrooms are equipped with modern facilities including smart boards, video conferencing and session-recording which supports contemporary pedagogy. Delivery modes include classroom, simulators, online (web based and Video-Conferencing), Virtual Reality and eLearning with increasing emphasis on technology driven platforms. In fact, in the wake of Covid-19, almost all programs were being delivered virtually on MS Teams / other such platforms.

Newly recruited Executive Trainees (ETs) undergo the Company's flagship ET training program of 1 year which involves on-the-job and simulator training besides technical, managerial and soft-skills modules. 2 ET batches were regularized during the year. Training of 4 batches including 1 all girls batch is currently underway. Planned Interventions (Foundation Course, Enhancing Managerial Competence (EMC) and Advance Management program (AMP) linked to career growth of 11 days are provided at three identified stages of careers of executives along with job-rotation and transfer to ensure experiential learning. During the year 596 executives were exposed to the planned interventions. Total 2,055 training programs were conducted during FY 21-22, resulting in a total of approximately 1,40,416 learning man-days.

Your Company takes pride in being a people friendly organization and strives to ensure safe work places. Besides safety training for employees and contract workers, your Company is imparting safety related certificate courses across the organization.

Some of the innovative talent development initiatives are as follows :

1. Technical and safety modules (mandatory and non-mandatory) and location management instructions customized as per work area and peculiarities of technology at location of posting have been assigned to 6215 O&M executives on the GpiLearn platform. They are required to complete at least the mandatory modules followed by assessments within a specified timeframe. This ensures bridging of functional competency gaps and acquisition of the required proficiency.
2. Procurement of Virtual Reality (VR) equipment, development of 50 VR modules (300 minutes) for training on Safety, Isolation and normalization of critical power plant equipments and train the trainer programs to facilitate training on VR.
3. Targeted Competency Development Programs on identified managerial competencies for those coming out as needing development on those competencies based on CPV assessment undertaken. 363 executives were covered during the year.
4. During the year 290 O&M executives underwent Samarth (job-rotation facilitation) training on the various standardized O&M modules. Similarly, 46 executives transferred to C&M and 51 executives transferred to RE underwent Samarth (C&M) and Samarth (RE) training, respectively. Samarth (Commercial) module was finalized.
5. (24*7) online Employee Assistance Program launched for all employees and family members. Includes unlimited phone/video/chat/e-counselling, assessments, recommendations, risk tagging, articles, videos, podcasts on Stress management, Coping mechanisms, Relationships, Parenting, Sleep, Diet & Nutrition, Grief, Anxiety and Restlessness, etc.
6. Training on Operation Training Simulators through remote besides off-line simulator training.
7. Considering the future of work, new age digital courses like AI, IoT, Block-Chain etc. was made available through the NASSCOM-MeITY Future Skills platform.
8. Special program for selected executives through IIT Bombay on Energy Storage (2 batches), Solar Thermal Systems (1 batch) and Carbon Capture (1 batch).
9. Preparatory course for BOE certification examination in three batches. First class Mining Operator preparatory course for 20 executives.

In the L&D domain, your Company has received the globally acknowledged ATD Best Award for 2017, 2018, 2019, 2020 and 2022, Brandon Hall HCM Excellence Awards 2019 & 2020, the nationally acclaimed ISTD award for Innovative Training Practices for 2017-18, 2018-19 and 2019-20 and the BML Munjal Award in the Sustained Excellence category for 2018 (runner) and 2019 (winner).

17.5 Employee Welfare Trusts

Your Company has established following Trusts for welfare of employees: -

- **NTPC Limited Employees Provident Fund Trust** manages Provident Fund of employees of your Company.
- **NTPC Post Retirement Employees Medical Benefit Trust** manages post-retirements medical benefit fund of the employee including separated employee of your Company.
- **NTPC Employee Gratuity Fund** manages the gratuity fund of the employees for payment of gratuity as per the "The Payment of Gratuity Act" of your Company.
- **NTPC Limited Defined Contribution Pension Trust** manages the defined Contribution Pension fund of the Employee of your Company.

17.6 Women Empowerment

Women employees constituted nearly seven percent (as on 31.3.2022) of your Company's workforce. During the year, programmes on women empowerment and development, including programmes on gender sensitization were organized. Your Company actively supported and nominated its women employees for programmes organized by reputed agencies. To maintain work life balance and to manage career aspiration, paid childcare leave is provided to women employees. Further to improve the gender diversity, your Company conducted a special recruitment drive for women.

17.7 Other Welfare Measures

In your Company, an entire gamut of benefits, from paid Childcare leave, telemedicine, medical smart card for hospitalization cases to Post-retirement Medical benefits (PRMS) to Family Economic Rehabilitation to Sneh Kiran Scheme are extended to employees to meet any exigency that may arise in a person's life.

17.8 Employee Welfare, Career Advancement & Opportunities & Quality of Work-Life

Your Company is committed to provide quality work life for its employees. Far removed from the buzz of cities, our townships are the epitome of serenity, natural beauty and close community living. A range of welfare and recreation facilities including schools, hospitals, shopping centres, recreation centres, club, gym, pool etc. are provided at the townships to enhance the quality of life and the well-being of employees and their families. In addition, cultural programmes involving employees and their families are also conducted.

Providing Urban Facilities at Projects/Stations (PUPs) of your Company has been another unique initiative to create better working & living conditions for employees & their families, to meet the changing needs & aspirations of young employees. From feedback of employees the concept of Club Cinema through for screening of latest movies, wi-fi facilities in hostels, recreation centers, guest houses and offices, facility for e-book in the libraries of recreation centers have been started in your Company power stations.

Further, on the occasion on 7th International Day of Yoga, a session on yoga and meditation was organized for employees and their family at various Projects/stations/ region/CC of your Company.

Your Company has well-established talent management system comprising of Performance Management System, Leadership Development System, Career Development Scheme and Succession Planning Scheme is in place to ensure that we fulfill our promise of meaningful growth and relevant challenges for our employees.

The career development of individuals is linked to diverse job exposure, location exposure, learning input through planned interventions, clearance of online e-learning functional & cross-functional modules and administration of assessment tools.

Your Company recognize the importance of Rewards and Recognition to employees in building the performance culture of the organization. To this end, we have created a culture of rewards and appreciation through celebration of various achievements and recognizing the contributions behind each success.

Your Company has introduced numerous initiatives that seek to enhance the creativity, innovation and spirit of healthy competition among its employees. These platforms give individuals the opportunity to enhance their personal growth, and at the same time, contribute to the organization. These initiatives include NTPC Open Competition for Executive Talent (NOCET-a theme based annual competition), NTPC Business Minds (Simulation Game Challenge). Medha Pratiyogita, an annual quizzing event for employees and families is a unique employee engagement activity which witnessed an overwhelming participation every year. There are 150+ active Professional circles in your Company and nearly 2000 employees participate in the Quality Circles to find solutions to problems in shop floor level.

Your Company has partnered with Archery Association of India (AAI), through this partnership, your Company aims to provide platform to Indian youth to showcase their talent and elevate India's reputation in the field of Archery Globally.

Your Company has launched e-Paramarsh which helps employees and their families to access telemedicine and help to consult a Doctor in any of the reputed hospitals of the country.

Your Company is conducting online coaching facility for children of employees of your Company studying in classes 9th to 12th. The initiatives will help the children to get exposure of various professional courses and prepare for National and state-level engineering and Medical entrance exams.

17.9 HR Unified Services

Your Company introduced HR Unified Services wherein certain HR functions of all units of a region have been centralized. A Unified HR Services portal facilitates the process where employees can login into the portal and raise their service requests.

A Shared HR Services Group from a common location in the region delivers these services resulting in reduction of manpower engaged in these activities and greater economies of scale due to centralization of activities. Application status can be tracked at employee's end resulting in greater accountability. Also, with no requirement of sending hard copies to HR the functioning supports the paperless initiative of the company.

17.10 COVID Response: Health & Safety

During the year, disruptions caused by the pandemic were effectively managed through collective and concerted efforts, leveraging the learnings from the first wave. To control workplace COVID transmission, your Company followed best practices on air management in indoor spaces while also complying with masking and sanitation protocols. Periodic inspections across business locations were conducted to ensure compliance with laid down protocols, thereby ensuring business continuity.

18. SUSTAINABLE DEVELOPMENT

Sustainability at your Company is being driven by two motives:

a. To make fundamental changes in the way we operate our businesses to transform ourselves as the most sustainable power producer.

b. To become more transparent in the timely disclosure of our social, environmental and economic performances.

To achieve the first objective, your Company has become a pioneer among its peers (Power sector/ PSUs) by developing its Sustainability Strategies i.e. The Brighter Plan 2032. As part of this strategy, your Company has identified Decarbonization, Water, Biodiversity, Circular Economy, Safety, Supply chain and Business Ethics as priority sustainability areas and strategizing on them to ensure your Company's business sustainability. Your Company has developed short-term and long-term measurable goals and objectives pertaining to these areas which is also aligned to the Company's Corporate Plan 2032. Your Company has adopted the triple bottom line approach for focusing on people, planet and profit treating them as primary pillars for business sustainability. Your Company believe that development should not endanger the environment & natural eco-systems.

Your Company has become one of the pioneers among Public Sector Undertakings (PSU) to publish Integrated Annual Report since FY'20 in compliance with Global Reporting Initiative (GRI) standard and as per IIRC pattern. Additionally, your Company is increasingly working towards improving the scale and size of sustainability disclosures. Currently, your Company is reporting on 7+ reporting standards and frameworks including TCFD, CDP, Stakeholder Capitalism Matrix (WEF) report etc. Sustainability Disclosures also include data of entire "NTPC group" data instead of only stations of your Company. A credible and fair third-party assurance of our Sustainability Report is a critical part of our sustainability disclosures. Your Company has received reasonable assurance (highest level) as per ISAE 3000 assurance standard by M/s KPMG.

Sustainable Development (SD) Plan for FY 2021-22 was prepared and approved by Board of Directors of your Company. As part of SD agenda, your Company is focusing on waste management, water management, promotion of renewable energy and biodiversity / afforestation activities. Action plan-based activities have been implemented at various stations of your Company during the year. To further strengthen sustainable development activities, following new initiatives were taken during 2021-22.

- Awareness programs on Sustainability/ESG and The Brighter Plan 2032 were organized covering all major stations/ regions/ departments of your Company.
- Capacity building of your Company's suppliers on Sustainable Supply Chain Policy covering the evolving environmental, social and governance/ compliance aspects of sustainable development.
- In FY'22 5 Stations of your Company (Sipat, Rihand, Tanda, Talcher Super, Kudgi and Jhajjar, JV Co.) have won the CII-ITC Sustainability Award 2021. It is one of the most coveted awards for sustainability in the country. Winning the Award has placed your Company among the top performers and further enhanced brand image of your Company.
- Your Company has increased frequency of regular communications with notable Environmental, Social, and Governance (ESG) rating analysts at global level to address controversies and sharing of data for improvement of ESG rating of your Company.
- Developed ESG profile of your Company in association with a third party for ESG disclosures as per prevalent 12 ESG platforms.
- Your Company has co-founded the "Global Alliance for Sustainable Energy" along with 16 global energy players such as ENEL, Iberdrola, 3M to ensure renewables are wholly sustainable for people and the planet and lead a just transition way towards cleaner fuel.
- In collaboration with US-AID, your Company is supporting a unique Biodiversity Project titled "Narmada Landscape Restoration Project" along River Narmada between Maheshwar and Omkareshwar dams. With an investment of about ₹ 25 crore, this project will be benefitting the local population, Indore City and Madhya Pradesh at large as the project is aimed to enhance green cover, improve water retention, the crop diversity including to promote organic farming and marketing.

18.1 Inclusive Growth –Initiatives for Social Growth

18.1.1 Corporate Social Responsibility

CSR has been synonymous with your Company's core business of power generation. Your Company's spirit of caring and sharing is embedded in its mission statement. Your Company has a comprehensive Resettlement & Rehabilitation (R&R) policy covering community development (CD) activities, which has been revised and updated from time to time. CD activities in green field area are initiated as soon as project is conceived and thereafter-extensive community / peripheral development activities are taken up along with the project development. CSR Policy was formulated in July 2004 and revised in 2010, 2016 and 2019 as "NTPC Policy for CSR & Sustainability" in line with Companies Act, 2013 and Department of Public Enterprises (DPE) Guidelines for CSR. It covers a wide range of activities including implementation of a few key programmes through NTPC Foundation- a charitable Trust set up by your Company to mainly serve and empower the Physically Challenged and Under Privileged Sections of the Society & women.

Focus areas of your Company's CSR & Sustainability activities are Health, Sanitation, Safe Drinking Water and Education. Moreover, Capacity Building, Women Empowerment, Social Infrastructure livelihood creation and support through innovative agriculture & livestock development, support to Physically Challenged Person (PCPs) and activities contributing towards Environment Sustainability have also been taken up. Your Company commits itself to contribute to the society, discharging its corporate social responsibilities through initiatives that have positive impact on society, especially the community in the neighborhood of its operations by improving the quality of life of the people, promoting inclusive growth and environmental sustainability.

Preference for CSR & Sustainability activities is being given to local areas around Company's operations, ensuring that majority CSR funds are spent for activities in local areas. However, considering Inclusive Growth & Environment Sustainability and to supplement Government effort, activities are also taken up anywhere in the country. During the year, about 450 villages and more than 400 schools have been benefitted by your Company's various CSR initiatives at different locations. Your Company's CSR initiatives have touched, in one way or the other, the lives of around 14 lakh people, residing at remote locations.

Apart from the CSR activities undertaken in and around stations to improve the living conditions of the local communities, other CSR initiatives undertaken pan- India are mentioned in the Annual Report on CSR activities annexed with this Report.

Your Company spent ₹ 356.72 crore during the financial year 2021-22 towards CSR initiatives, which surpassed the prescribed two percent amount of ₹ 281.80 crore, thus achieving a CSR spend of 2.53%.

18.1.2 NTPC Foundation

NTPC Foundation, funded by your Company, is engaged in serving and empowering the differently abled and economically weaker sections of the society.

Details of expenditure incurred and initiatives undertaken by your Company under CSR are covered in the Annual Report on CSR annexed as Annex-VI to this Report.

18.1.3 Rehabilitation & Resettlement (R&R)

Your Company is committed to helping the population affected on account of land acquisition. Your Company has been making efforts to improve the Socio-economic status of the Project Affected Families (PAFs). As a part of its decision-making process, your Company has an R&R Policy since the year 1993 which has been amended from time to time to keep abreast with the Govt. guidelines. Your Company's latest R&R Policy-2017 is in line with the extant Land Acquisition Act - The RFCTLARR Act, 2013 (The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013).

R&R activities are initiated at your Company's projects by undertaking need-based community development activities in the areas of health & sanitation, education, drinking water, capacity building, infrastructure, solar electrification, etc. by formulating the 'Initial Community Development (ICD) Plan' in consultation with concerned Panchayats, District Administration and other Stakeholders. Your Company addresses the R&R issues in line with the extant R&R Policy of your Company/ Central Govt./ State Govt. / extant Land Acquisition Act, with an objective, that after a reasonable transition period, the conditions of PAFs improve or at least they regain their previous standard of living, earning capacity, and production levels.

As per your Company's R&R Policy-2017, which has been aligned with the 'The RFCTLARR Act 2013', a Social Impact Assessment (SIA)/Census Survey will be conducted by the State Govt. during the process of land acquisition for the project, so as to collect detailed demographic data of the area. This shall form the basis for the preparation of the 'Rehabilitation and Resettlement (R&R) Scheme' by the 'Appropriate Government'. The R&R Scheme consists of measures for Rehabilitation & Resettlement and need-based CD infrastructure in Resettlement Colony (RC).

Additionally, your Company has retained the good practices on the Community Development (CD) activities which are primarily aimed at socio-economic development in the PAVs (Project Affected Villages) and the Project's vicinity. This is to ensure that the displaced families in the RC (Resettlement Colony) or the affected families settling in the neighboring villages may secure for themselves a reasonable standard of community life.

Expenditure on implementation of the R&R Plan is part of the Capital cost of the project. The Plan is implemented in a time-bound manner so as to complete it by the time of the project's commissioning. Upon completion of the R&R Plan implementation, a Social Impact Evaluation (SIE) is conducted by a professional agency to know the efficacy of the R&R Plan implementation for future learning & corrective actions, if any.

A. R&R Achievements during the year:

- **Rehabilitation and Resettlement (R&R) Plan:**

  R&R activities were implemented at the Greenfield / Brownfield Thermal Power projects of your Company - Barh, Darlipali, Gadarwara, Kanti, Khargone, Kudgi, Lara, Meja, Mouda, North-Karanpura, NPGC, Patratu, Solapur, Tanda-II, Telangana, Hydro projects–Tapovan- Vishnugad & Rammam-III and Coal Mining Projects at Pakri-Barwadih, Chatti-Bariatu, Kerendari, Dulanga and Talaipalli as per the R&R / CD Plans, which were finalized earlier in consultation with the stakeholders and approved by the State Govt.

  Re-appropriations in cost provisions of R&R / CD Plans, as required on a case-to-case basis, for specific activities in view of the request/ needs of stakeholders/ district administration, were also approved to take care of the local needs & requirements.

B. Focus Areas for Community Development activities:

The CD activities are generally initiated by your Company under ICD (Initial Community Development) Policy and subsequently under the R&R/ CD Plan of the Project. Your Company is sensitive to the needs and aspirations of the Project Affected Families (PAFs). Your Company also provides for Stakeholder's Participation through its Public Information Centers/ R&R Offices/ Village Development Advisory Committee (VDAC) Meetings to disseminate useful information sought by the villagers. Other useful information is also communicated through notices, pamphlets, letters, etc. from time to time.

In the last 8 years up to FY 2021-22, more than ₹ 2,022 crore worth of expenditure were incurred by your Company towards Community Development (CD) works by various Projects under R&R Plans.

- **Drinking water** – Planning and implementation of activities towards access to drinking water for 100% coverage of all Project Affected Villages are undertaken. Your Company's Policy- Jal Jyoti Mission embarks upon ensuring safe drinking water and rejuvenation of ponds in its project-affected villages.

- **Capacity building / Skill up-gradation** – Training programs were conducted by various projects towards the skill enhancement of youths. The specific focus was on imparting training to the villagers on modern farming methods. The support to dependents of PAFs for ITI training was also extended to increase their employability.

- **Education** – Infrastructure created for Medical College cum Hospital at Sundargarh (Odisha) is ready. A portion with 200-bed facility was utilized by the District Administration as Covid Care Centre cum Isolation ward for Corona virus-infected patients. It helped in contributing to Govts. efforts towards saving the precious lives. Financial assistance was extended towards up-gradation of infrastructure and other basic amenities including setting up of latest equipment in the existing Govt. Medical College at Raigarh (Chhattisgarh).

  Construction of the Engineering College at Shivpuri (MP) has been completed and its Academic Sessions have already started (since Nov. 2020). Support has been extended for the construction of Hydro Engineering College, Bilaspur (Himachal Pradesh). Building constructed for Govt. Polytechnic at Dhak (Joshimath) is now being utilized by the Govt.

  Your Company has the Policy on Improving Learning Outcomes & Quality of Education for children studying in Government Schools of its project-affected villages

- **Health** - For the benefit of PAFs and neighboring populations, medical outreach through Mobile Health Clinics & Medical Camps/ NTPC's own Hospital set-ups is ensured. Support is extended by the projects in augmenting the existing health- care infra in the vicinity of various projects. Your Company has the Policy on Maternal and Child Health Care to provide 650 days of antenatal/prenatal & postnatal preventive health care to expectant & new mothers and new born babies.

- **Covid related support by Your Company**

  ❖ Covid ICU beds at District Hospital Khargone station & Oxygen Bed Set-ups in 05 Blocks of Khargone station of your Company.

  ❖ Support extended by the Projects to the District Authorities and neighboring communities by providing provisions such as food items, beddings, sanitizers, masks, etc. besides carrying out sanitization & awareness drives in villages.

  ❖ PPE Kits, Ambulances, Infrared Thermometers, DG Set, etc. to Uttarakhand.

  ❖ Installation of Ventilators & Oxygen Piping at Hazaribagh Govt. Hospital.

18.2 Environment Management –

Environment Policy of your Company:

"To provide cleaner energy by committing to highest possible levels of performance in environmental compliance, practices and stewardship."

Your Company has always envisaged environment protection and management along with optimized usage of natural resource as inherent feature at the time of inception of all projects of your Company and focuses its efforts to minimize the impact of its plant operations on surrounding environment and concerned ecosystem.

Your Company undertakes comprehensive environment management plan right from conception of project, selection of site, source selection (Land, Coal & Water resources) and technology for power generation and pollution control. In case of old stations, your Company has undertaken massive renovation & modernization to upgrade pollution control equipment's wherever necessary. Your Company has also taken initiative for installation of Flue gas desulfurization (FGD) system for SOx emission control and Combustion Modification for NOx emission control to comply with revised emission norms as per The Ministry of Environment, Forest and Climate Change (MOEF&CC) notification.

In new projects, around 18-23% of the project cost is spent on main environment pollution control systems such as High Efficiency Electrostatic Precipitators (ESPs), Effluent Treatment Plant (ETP), Ash Water Recirculation System (AWRS), Coal Settling and Separation Pit (CSSP), Dry Ash Extraction System (DAES), Dust Extraction & Dust Suppression system (DE&DS), Sewage Treatment Plant (STP), Flue Gas Desulfurization (FGD) and DeNOx systems. For Online monitoring of emissions and effluent monitoring, Continuous Emission Monitoring System (CEMS), Effluent Quality Monitoring System (EQMS), Continuous Ambient Air Quality Monitoring System (CAAQMS) are operational at all operating stations and included in main EPC packages for the upcoming units/projects. Your Company has adopted advanced and high efficiency technologies such as super critical boilers at new stations.

Your Company is augmenting its capacity with green power by installing Solar Power, hydel power, wind power, hybrid power plant in combinations e.g. Wind & Solar, Solar & Thermal and small hydel power systems attached to its thermal power stations to encourage garnering of renewable energy resources. These measures are aimed not only to achieve reducing dependency on fossil fuel based thermal power, it also minimizes its contribution to pollution along with optimized consumption of precious natural resources. These efforts further lead to reduction in water and Carbon footprints of your Company. All stations of your Company are ISO 14001 certified or in process of acquiring certification for their sound environment management systems and practices.

Your Company has signed Memorandum of Understanding (MoU) with Indian Institute of Technology, Kanpur to conduct comprehensive study on Source Apportionment Study of air pollution at and around Dadri and Jhajjar station, JV Co. to evaluate the contribution of various pollution sources in ambient area of that region and contribution of coal based station in particular, if any.

Towards its commitment to reduce, reuse and recycle the most prestigious natural resource i.e. water in eco-friendly manner your Company has revised and released "Water Policy-2022" to minimize the water footprint to extent possible levels on basis of techno-economic approach in Company's operations.

Your Company has signed CEO water mandate (UN Global Compact initiative that mobilizes business leaders on water, sanitation, and the Sustainable Development Goals) on 23.3.2021, which is a highly collaborative partnership between the United Nations Global Compact, the Government of Sweden and a group of committed companies and specialized organizations dealing with the problems of water scarcity and sanitation. CEO Water mandate is designed as a private-public initiative with a focus on developing strategies and solutions to contribute positively to the emerging global water crisis.

18.2.1 Control of Air Emissions:

High efficiency Electro-static Precipitators (ESPs) with efficiency of the order of 99.97% and above with advanced control systems have been provided in all coal-based stations to maintain Particulate Matter (PM) emissions well below the applicable permissible limits. All upcoming units have been planned & designed with state of art Air Pollution Control systems (ESPs, De-NOx and FGD system) with high efficiency to meet new emission norms. Performance enhancement of ESPs operating over the years is being enhanced to achieve the desired emission level to meet revised emission levels by augmentation of ESPs size (increased height, additional fields, charging of dummy fields, retrofitting of advanced ESP controllers, new technology i. e. MEEP (Moving electrode Electrostatic Precipitators) and adoption of sound O&M practices. Your Company has planned for Renovation & Modernization of ESP's in 50 units, out of which R&M of ESP's work has been completed in 37 units and in balance 13 units work is in progress.

For control of SOx, first wet FGD has been commissioned and operational at Vindhyachal Station of your Company. Your Company has also commissioned Dry Sorbent Injection (DSI) based FGD in four units of Dadri Stage-I. Your Company has awarded FGD packages for 60GW+ capacity and execution is in progress to comply the new norms for SOx emission as per the timeline Notified by MoEF&CC vide notification dated 31.3.2021. Erection and commissioning of FGD is in advance stage at various Plants of your Company.

NOx control in coal-fired plants is presently achieved by controlling its production by adopting best combustion practices (primarily through excess air and combustion temperatures optimization). To lower down the NOx emission to the extent possible levels, combustion modification has been awarded for 20GW+ capacity. Combustion modification work has already been completed in 29 units and work will be completed in balance units within the timeline given by MOEF&CC. To comply with new norms for NOx emission applicable to units commissioned after 1.1.2017, pilot study based on Selective catalytic reduction/ Selective non-catalytic reduction (SCR/SNCR) technology was conducted and report submitted to concerned authorities for consideration and finalization of technically viable emission limit and finalize the optimal solution and suitable technology for De-NOx system suitable for Indian Coal.

Change of secondary fuel from Heavy Fuel Oil (HFO) to alternative fuel Light Diesel Oil or Low Sulphur Heavy Stock (LDO or LSHS having low sulfur content) scheme implemented in all stations in NCR and state of UP and Haryana to minimize the SOx emission during the startup of coal-based units.

Your Company has installed Dust Extraction and Dust Suppression systems in coal crusher house, transfer points, coal staking yard and coal unloading locations in the CHP areas in all coal-based stations. Your Company has taken appropriate measures for fugitive dust control system in ash handling areas and ash dyke areas to mitigate remote chance of fugitive dust scenario.

18.2.2 Control of water pollution:

Your Company as a responsible corporate entity for environment has proactively initiated steps towards water stewardship in power generation sector. Your Company released its revised Water Policy-2022 and Rainwater harvesting Policy-2018 to set own benchmark in water consumption in power generation by setting its aim & objectives for various water conservation and management measures by using 3Rs (Reduce, Recycle & Reuse) as guiding principle. Water bodies rehabilitation, rejuvenation & restoration, water withdrawal optimization depending on the sustainable water withdrawal capacity and rejection of water bodies as probable water source, which are recognized as environmentally sensitive due to their relative size and habitat for ecologically sensitive species. Rainwater potential study is being conducted on "PAN NTPC" basis to create facilities for harvesting full Rainwater potential.

All stations of your Company are equipped with advanced wastewater treatment facilities such as state of art technology-based Sewage Treatment Plant (STP), Liquid Waste Treatment Plants (LWTP), Coal Slurry Settlement Pit (CSSP), Ash Water Recirculation System (AWRS) for treatment and reuse of treated effluents.

Your Company is having closed cycle condenser cooling water systems with higher Cycle of Concentration (COC), high concentration slurry disposal (HCSD) system, rainwater harvesting system to optimize water consumption. Reuse of treated effluent in ash slurry disposal and reuse of treated sewage effluent for horticulture purposes are few measures implemented in all stations. For effective monitoring of water use, flow meters with integrators installed at all designated locations in all stations. Real time specific water consumption is also being monitored in water dashboard.

In view of water stressed scenario and new norms for specific water consumption, water conservation and reduction in specific water consumption enables your Company to ensure compliance of new norms on specific water consumption. Your Company has installed Air Cooled Condenser at Patratu and North Karanpura, which will be trend breaking initiative in specific water consumption in power sector of country. Dry bottom ash disposal system is also being installed at North Karanpura and Patratu to save water consumption.

18.2.3 New Environmental Norms Implementation Plan and Challenges:

➢ **SOx, NOx & SPM reduction**

Indian power sector is undergoing a significant change that has redefined the industry outlook. The focus has now shifted to ensure a safer environment along with sustainable power generation. Being the premier power generating company in the country, the onus is on your Company for achieving the stringent new emission limits for the power plants across the country.

In order to comply with the applicable new environmental norms notified by MOEF & CC vide gazette notification dated 7.12.2015 pertaining to SO_2, FGD system will be required to be installed in the existing as well as under construction coal fired power plants. Your Company along with its JV Companies is having around 149 units (operating units as well as under construction units) of 64.2 GW capacity. Your Company is taking a lead role in the implementation of FGD. Your Company has already issued tenders for all units that covers operating as well as under construction units. Further, FGD in Vindhyachal Stage-V is already in operation and Dry Sorbent Injection (DSI) system (for reduction of SO_2) is commissioned in 4 units of 210 MW at Dadri Station of your Company. FGD installation Work in 60,940 MW is underway. This has also set up an example in the Industry for your Company's commitment towards the greener environment.

As a corporate trend setter, your Company is also providing consultancy for installation of various environmental control system to state utilities like HPGCL, PSPCL, UPRVUNL, DVC, SSCL, NALCO etc. Your Company is also continuously assisting CEA/MoP in formulating various measures in implementing new environmental norms.

For controlling the NOx, various De-NOx technique shall be implemented based on the limits prescribed in the norms. Your Company has started working on this. Combustion Modification in 28 units of around 13 GW including units located in NCR i.e. 2 units of Dadri, 3 units of Jhajjar have already been completed. Further, award is already placed for Combustion modification for 50 units of around 21 GW. According to the latest environmental norm, NOx emission from power plants installed after 1.1.2017 will have to be below the limit of 100 mg/N.Cu.m. Selective Catalytic Reduction (SCR) is a proven technology for low ash coal for Nox emission control, however, it is yet to be proven for abrasive & high ash content Indian coal. In view of this, Pilot tests have been conducted at seven stations of your Company by various SCR system suppliers to assess the suitability of SCR technology for Indian coal. Results of the tests submitted to Hon'ble Supreme Court. Hon'ble Supreme Court has constituted a committee to review the NOx norm. Based on decision on NOx Norm, plan & strategy for future will be prepared.

For particulate emission reduction, most of the units of your Company are complying with the SPM norms. ESP R&M is underway in around 4 GW capacity in 13 units for meeting the new environmental norm.

The SO_2 & NOx emission levels in the country will plummet to 30% of what it is presently after installation of FGD technology even after adding capacity of another 70 GW from the present year.

➢ **Facilitation for Ash Utilization**

To facilitate ash utilisation, in recent time your Company has taken various initiatives like installation of dry bottom ash handling system, installation of de-watering bins, rail loading system for transportation of dry fly ash, feasibility study for large capacity Silo etc.

Dewatering bins for bottom ash are under implementation stage in North Karanpura Station. It is also under planning stages in few other projects/stations of your Company like Ramagundam, Sipat, Korba, Barauni etc.

In its endeavor to promote fly ash utilization, your Company is considering implementation of fly ash classification and Bagging Plant system for its future coal based thermal power projects. Further, feasibility report has been prepared for implementation of Classification system & Technical Specification of Bagging plant has been prepared for studying the feasibility of installation of bagging plants in your Company's different coal fired power stations. New Project for Fly ash classification, grinding & bagging system has been taken-up at Talcher-Kaniha to facilitate export of Fly ash.

Large scale ash utilization will be supplemented greatly when huge quantities of ash produced from coal fired thermal power plants could be transported to the distant location where demand of ash is more. To transport ash from power stations to distant demand Centres, rail transportation is being actively considered. To facilitate rail transportation of fly ash, ash rail loading system is under implementation in your Company's upcoming and under-construction coal fired projects. Further, plans are afoot for provision of such ash rail loading system in various operating power stations like Barauni, Sipat, Singrauli etc. Furthermore, for enabling temporary storage of massive quantities of fly ash at demand Center, initial study for construction of large capacity fly ash Silo at distant demand centre has been made. For unloading of huge quantities of fly ash from railway wagons at demand Centre, Technical Specification for fly ash unloading system from railway wagons has been prepared for implementation at Dadri Station. Discussions are also underway with Railways for required logistic supports. New Project has been taken-up for Dry Fly ash transportation up to Gorbi Mine end from

Vindhyachal by Rail wagons and subsequently disposal into Mine Void in Slurry form.

18.2.4 Real Time Environment Monitoring System

Your Company remains a benchmark setter in Environment monitoring & protection. As pioneer in environment monitoring your Company have already installed Ambient Air Quality Monitoring Stations (AAQMS) consisting of SO_2, NOx, CO, PM 2.5, PM 10 analysers and Continuous emission monitoring systems (CEMS) consisting of SO_2, NOx and Particulate matter analysers for Stack emission and Effluent Quality Monitoring System (EQMS) consisting of pH, TSS and Temperature analyzers for Effluent monitoring in all its operating Stations/ Units.

Mercury analysers for emission monitoring are installed in all units wherever central or state regulator stipulated condition for the same. All ambient air quality monitoring data from CAAQMS, Stack emission data from CEMS and effluent monitoring data from EQMS is being transmitted to CPCB & SPCB as per statutory stipulations.

18.2.5 Tree Plantation

Your Company has undertaken massive tree plantation in mission mode covering vast areas of land in and around its projects since inception. A total of more than 37 million trees have been planted throughout the country including 10 million trees planted during 2016-17 under accelerated afforestation programme. Your Company has planted 10.44 lakh saplings during financial year 2021-22 even after Covid-19 pandemic.

After successful demonstration of pilot project based on Miyawaki plantation technology at Ramagundam station during 2019-20, Your Company has replicated the Miyawaki plantation technology-based plantation and planted more than 62000 saplings whose biomass production per unit area is 16 times higher than the conventional plantation. Replication of this technology in plantation will create more efficient carbon sink for Company.

The afforestation has not only contributed to the 'aesthetics' but also helped in carbon sequestration by serving as a 'sink' for pollutants and thereby protecting the quality of ecology and environment. Further, your Company has embarked upon long-term Memorandums with State authorities to assist National Commitment of NDC in COP 21, by planting 4.0 million saplings during 2022-26 @ 1 million per year.

18.2.6 ISO 14001 & OHSAS 18001 Certification

Amongst all commercially operational stations of your Company, 23 stations have ISO-14001 and OHSAS 18001 certifications and for four stations, certifications are under renewal by reputed National and International certifying agencies in recognition of its sound environmental management systems and practices. Certification is in process for newly commercial stations of your Company.

18.2.7 New Projects, expansions and Station Engineering

NIT has been published for Talcher Thermal Power Station-III expansion for (2x660 MW) units by your Company.

Further, your Company is exploring the options to develop the following projects:

a. Singrauli STPP, Stage-III

b. Lara STPP, Stage-II

These projects are under different stages of development.

In order to provide prompt engineering support to our stations at your Company, a dedicated Station Engineering team has been formed which interacts with the stations on continuous basis and ensures that site engineering issues including ash dyke modifications/augmentations are resolved expeditiously which is of prime importance to the generation sustenance of your Company. Station Engineering team also strives for continuous system improvement based on feedback from various stations.

Your Company is also gearing up for tapping into the huge R&M potential of existing coal fired stations in the country.

18.2.8 Nuclear Technology

Prime Minister of India recently committed at the COP26 climate change conference in Glasgow, Scotland, United Kingdom that India would achieve net-zero emissions by 2070. It is imperative that to meet this target all RE and low carbon power generation resources will have to be mobilized. Nuclear Power plays a major role to meet base load due to its high availability and continuous generation as against other RE and hydro resources. India needs speedier and cost competitive nuclear capacity to meet its Net Zero targets and expedite clean energy transition.

Your Company is preparing a Roadmap for Nuclear Generation considering the current generation size of your Company as well as load growth and the net zero energy system target that India has established for 2070. The roadmap shall address both near term and longer-term nuclear options that are best suited for India.

In addition, the Nuclear Roadmap will address the needs of both your Company and the Indian Civil Nuclear Industry to deliver this transition to nuclear thereby addressing issues such as training and development of your Company to become a nuclear utility owner/operator, licensing requirements for the new plants, nuclear export control considerations, civil nuclear liability status and development needs, operational and maintenance infrastructure to support a new fleet of reactors, as well as nuclear waste considerations.

Additionally, your Company's development of nuclear technology may also include consideration of light water reactor (LWR), Small Modular Reactors (SMRs), and advanced reactor SMRs (Gen IV plants).

18.3 Quality Assurance and Inspection (QA&I)

Your Company lays great emphasis on the quality of plant and machinery that are sourced for power plant construction and also on the spares and consumables that are required to support the day-to-day operations of your Company.

The model followed for Quality Assurance seeks to ensure that the Plant Reliability is realized through thoughtful planning and building. Quality attributes start from raw materials, manufacturing, inspection and testing up to erection and commissioning. Each item/sub-system required for construction is subject to rigorous tests and inspection at the appropriate stages to ensure conformity to specified requirements.

Your Company has committed adequate resources for maintaining effective Quality Management System. This includes corporate level Quality Assurance team, Inspection Engineers at various locations and Field Quality experts at projects/ sites of your Company.

Your Company's robust performance on all operational parameters, is a testimony to the soundness of the quality system which is in operation. Your Company is represented in various technical committees of International Organization for Standardization (ISO), Bureau of Indian Standards (BIS) and Importer -Exporter Code (IEC) and is actively contributing in upgradation of power sector related standards and technology to promote align with best practices followed internationally.

Your Company's digitalization initiatives are further strengthened with the Integrated PRADIP (Pro-Active and Digital Initiatives to become Paperless) based QA & I business processes.

2nd & 3rd wave of COVID-19 pandemic has affected the entire world and India is no exception to it. Your Company managed inspections at manufacturer works by utilising digital technologies in carrying out remote inspections by various Regional Inspection Offices (RIOs) thereby maintaining the continuity of project supplies with specified quality & Re-affirmed the 'can do spirit'.

Advanced NDE technology, latest welding equipment & smart monitoring of storage area has been envisaged for the upcoming projects.

18.4 Clean Development Mechanism (CDM)

Your Company is pioneer in undertaking climate change issues proactively. The company has taken several initiatives in CDM Projects in Power Sector.

Five of its renewable energy projects viz. 5 MW Solar PV Power Project at Dadri, 5 MW Solar PV Power Project at Port Blair (A&N), 5 MW Solar PV Power Project at Faridabad and 8 MW small hydro power project at Singrauli and 50 MW Solar PV Plant at Rajgarh (MP) have already been registered with United Nations Framework Convention on Climate Change (UNFCCC) CDM Executive Board.

15 MW Solar PV Power project at Singrauli, 10 MW Solar PV project at Talcher and 10 MW Solar PV Power Project at Unchahar are registered in UNFCCC CDM Programme of Activities (PoA).

Registration work is under progress for 200 MW capacity of 250 MW Anantpur solar Power project under GCC Program (voluntary mechanism promoted by the Gulf Organization for Research and Development which has been introduced recently) and 1,502,416 ACCs are expected to generated after verification exercise for first 5 years.

Further, registration work of 22 nos. (3202 MW) RE project(s) is proposed to be taken up under GCC (Global Carbon Council) program.

6173 nos. of Certified Emission Reductions (CERs) for 5 MW Solar PV Power Project at Port Blair (A&N) has been issued by UNFCCC CDM Executive Board. Another 5842 nos. of CERs have also been issued by UNFCCC CDM Executive Board for 5 MW Solar PV Power Project at Dadri and 21,011 nos. of Certified Emission Reductions (CERs) has been issued for 5 MW Solar PV Power Project at Faridabad. Further, 80,278 nos. of CERs are expected shortly, after completion of verification exercise of 50 MW Rajgarh Solar project.

Further, Registration of 50 MW Solar PV power project at Anantpur, 260 MW Solar PV power project at Bhadla, 250 MW Solar PV power project at Mandsaur and 50 MW Wind power project at Rojmal has been done in Verified Carbon Standard (VCS) program. A total of 10,85,005 and 20,89,638 Voluntary Emission Reduction (VERs) has been issued for these projects after completion of 1st and 2nd Verification exercise. Further, 11,76,114 VERs are expected shortly after completion of 3rd verification exercise for these projects.

Prior consideration forms have been sent to United Nations Framework Convention on Climate Change (UNFCCC) and Ministry of Environment and Forests (MoEF) for our upcoming following Solar Projects : 140 MW and 85 MW at Bilhaur, 20 MW at Auraiya,100 MW floating solar at Ramagundam, 25 MW floating solar at Simhadri, 70 MW & 22 MW floating solar at Kayamkulam, 160 MW at Jetsar, 20 MW floating solar at Auraiya, 20 MW at Rihand, 1692 MW CPSU Scheme (Trench-I & Tranche-II projects), 90 MW at Anta and 23 MW at Solapur.

Further, Prior consideration forms have also been sent for NREL projects (Wholly owned subsidiary of NTPC Limited): 150 MW at Chhatagarh, 320 MW at Bhensara,150MW at Limdi, 200MW at Waghodia and 150MW wind energy project at Dayapar, Gujarat.

18.5 Ash Utilisation

During the year 2021-22, 711.74 lakh tonnes of Ash was generated and 80.94 % viz. 576.10 lakh tonnes of Ash had been utilized for various productive purposes by your Company.

Important areas of Ash utilization are – Cement Industry, Ready Mix Concrete plants (RMC), Road Projects / Embankment, Brick / Block manufacturing, Mine filling & Land development. 8 nos. of your Company stations achieved Ash utilization value of 100 % or above.

Your Company is also pursuing new initiatives for Fly Ash utilization like Fly Ash based Geo-Polymer Concrete Road, setting up Ash based Light Weight Aggregate (LWA) plant, Fly Ash based Nano Concrete Aggregate (NACA), Use of Fly Ash in Agriculture, Production of zero cement ash based Geo Polymer Concrete aggregate and sand and also use of Fly Ash in Gypsum Vermiculate Plaster (GVP) for plastering work.

Dry Fly Ash and Pond Ash from all stations of your Company is being issued through transparent bidding to all users.

Your Company has an Ash Utilization Policy, which is a vision document dealing with the Ash utilization issue in an integral way from generation to product. This policy aims at maximizing utilization of Ash for productive usage along with fulfilling social and environmental obligations as a green initiative in protecting the nature and giving a better environment to future generations.

The quantity of Ash produced, Ash utilized and percentage of such utilization during 2021-22 from your Company's Stations is at Annex-VII of this Director Report.

18.6 Centre for Power Efficiency and Environmental Protection (CenPEEP) – towards enhancing efficiency and protecting Environment

CenPEEP is an instrumental in implementation of Energy Efficiency Management System (EEMS) consisting of periodic assessments, field tests, performance gap analysis deviations and updating of action plans at all stations of your Company.

CenPEEP is working for efficiency and reliability improvement in stations through strategic initiatives, development and implementation of systems, performance and guarantee tests in new units and introduction of new techniques & practices. Critical efficiency parameters, draft power consumption, efficiency improvement through overhauling is monitored. PI based real time programs and dashboards are in use for real time tracking of plant parameters. These programs also assist operating engineers in tracking the gaps in heat rate and auxiliary power consumption, trending the degradation of equipment performance and taking corrective measures.

Your Company initiated a unique voluntary program of Greenhouse gases (GHG) emission reduction by establishing 'Centre for Power Efficiency and Environmental Protection (CenPEEP)' and under this program, it is estimated that cumulative CO_2 avoided is 60.28 million tonnes since 1996, by sustained efficiency improvements.

CenPEEP is also working towards reduction in specific water consumption and auxiliary power consumption in coal and gas stations. A dedicated group conducts regular energy audits to identify potential improvement areas and improvement actions. Further CenPEEP is also associated in carrying out water audits of stations and taking corrective actions for reduction in water consumption.

CenPEEP is also involved in structured and statutory energy audits, which helps to identify potential areas of improvement in APC reduction to be addressed within time bound implementation schedule.

CenPEEP is actively involved in training and development of power professionals for the Company and other utilities in the power sector in the areas of performance improvement of Boiler & Auxiliaries, Turbine & Auxiliaries, Cooling Towers, new technologies like Reverse Charge Mechanism (RCM), Product data management (PDM) technologies etc.

Your Company has taken Electric Power Research Institute (EPRI) membership in the areas of Boiler life & Availability improvement, Steam Turbine-Generators & Aux. system and Combustion & Coal Quality impacts to increase the knowledge, expertise of the company and undertake collaborative research projects for improving efficiency and reliability of units.

All coal & gas stations of the company have participated under Perform, Achieve & Trade (PAT) scheme of Government. Till now Energy Savings Certificates of PAT Cycle-I and II have been issued by Bureau of Energy Efficiency (BEE). Overall, currently your Company has 1.81 Lakh surplus ESCerts for further trading, as & when resumed by BEE.

Your Company has taken an initiative for complete replacement of existing lighting with LED light fittings at its all stations including townships, which is nearing completion.

Water Withdrawal per year (in lakh KL)

Sl. No.	Type of Water	Quantity Consumed 2021-22
1	Total Water withdrawal	**6626.74 Lakh KL***
2	Per unit withdrawal	**2.96* Litre/kwh**
***NTPC coal and gas stations on closed cycle system**		

19. NTPC Energy Technology Research Alliance (NETRA)

Your Company understands the importance of Research and development (R&D) in the ever-changing dynamics of the energy sector. It also firmly believes that assimilation of knowledge and its conversion into technologies shall be the key differentiator in coming times. Technological progress thus achieved, in aggregation, improves the country's energy security, economic growth and environmental sustainability. Concurrently, it plays a crucial role in determining the competitiveness of companies in the marketplace - both nationally and internationally.

We, in your Company, fully recognize R&D as the cornerstone of technological advancement. Therefore, we have incorporated R&D in our long-term vision and strategy for the benefit of the company and society at large. Your Company has been assigning around 2% of Profit before Tax (PBT) consistently for R&D related activities.

As we gaze towards the future, it is of paramount importance that your Company as power generation company needs to adapt to counter emerging challenges of power sector and at the same time it is equally important that we as a company should increase our presence across entire electricity supply chain and R&D is a vital step to achieve that. Your Company has always taken upon itself to incorporate innovative technologies to enhance the safety, reliability, and efficiency of power plants through a prudent mix of development, adoption, and adaption of frontier technologies. Through our R&D centre, NETRA, we are constantly making efforts to address the major concerns of the power sector - as well as exploring and tapping the potential opportunities available.

Your Company has always taken upon itself to incorporate innovative technologies to enhance the safety, reliability, and efficiency of power plants through a prudent mix of development, adoption, and adaption of frontier technologies. We are constantly making efforts to address the major concerns of the power sector - as well as exploring and tapping the potential opportunities available. Towards this direction, we established NETRA in 2009 as state-of-the-art center for research, technology development and scientific services.

NETRA collaborates with leading institutes, technology players and service providers both at national and international level. A Research Advisory Council (RAC) comprising of eminent scientists and experts from India and abroad has been constituted to steer NETRA for high end research. In-house Scientific Advisory Council (SAC) has also been constituted to provide directions for improving plant performance & reducing cost of generation of your Company.

The focus areas of NETRA are continuously evolving with respect to the dynamic nature of power sector and presently our main focus for R&D is Carbon capture and utilization technologies, ash utilization technology, Waste to energy, water technology, in addition to earlier focus areas of Efficiency Improvement & Cost Reduction; New & Renewable Energy; Climate Change & Environmental protection which includes water conservation, and utilization & Waste Management. NETRA also provides Advanced Scientific Services to its stations and other utilities in the area Non-Destructive Examination (NDE), Metallurgy & Failure analysis, Oil/water chemistry, Environment, Electrical, Computational Fluid Dynamics (CFD), etc. for efficient and reliable performances. NETRA laboratories are ISO 17025 accredited and NETRA NDT laboratory is also recognized as Remnant Life Assessment Organization under the Boiler Board Regulations, 1950.

Our R&D activities are constantly guided and steered by the Research Advisory Council (RAC) comprising of eminent scientists and experts from India and abroad. Padma Bhushan Dr. V.K. Saraswat, former Secretary, DRDO, and member of NITI Aayog is the Chairman of RAC. In addition, the Scientific Advisory Council (SAC) having Functional Director, Director (Operations) and other senior of your Company officials as members gives direction for improving plant performance & reducing cost of generation.

At NETRA, our focus is both on in-house technology development as well as collaborative research. We have networked with various prestigious national and international institutions to harness the specialized knowledge and expertise lying with those institutes. By collaborating with various institutes, we have been successful in promoting research in the field of Ash Utilization, Hydrogen, Carbon Capture, Sensors CFD, Robotics, Drones, Renewables, Environment, NDE and Water chemistry, etc. NETRA has collaborations with National Institutes such as IIT-Delhi, IIT–Bombay, IIT-Madras, IIT–Kanpur, IIT–Kharagpur, IIT-Dhanbad, IISc-Bangalore, RGIPT-Amethi, CSIR lab's such as IIP- Dehradun, CMERI-Durgapur, CGCRI-Kolkata, NCCBM-Ballabgarh, CBRI-Roorkee, etc. We have also collaborated with international institutions such as NETL-USA, Curtin University-Australia; DLR-Germany and ISE-Germany etc.

Various institutional building activities such as training programs, workshops on various topics such as Advanced NDE & Metallurgy etc were conducted. NETRA journal, compendium of Metallurgy focused case studies, compendium on advance NDE methods and numerous research papers were published.

Further to boost our R&D activities, the Phase-II Building of NETRA has been constructed as a state of the art technologically advanced with all R&D facilities by your Company.

20. IMPLEMENTATION OF OFFICIAL LANGUAGE

Your Company took several initiatives for the progressive use of Hindi in the day-to-day official work and implementation of official language policy of the Union of India in your Company. The compliance of official language policy in your Company projects and regional headquarters was inspected and need based suggestions were given to the respective heads of offices in this regard.

Quarterly meeting of official language implementation committee were held in which extensive discussions took place on progressive use of Hindi and the ways and means to bring about further improvements.

Hindi Divas was celebrated on 14th September 2021 and Hindi Fortnight was organised from 01-15 September, 2021 at the Corporate Centre as well as regional headquarters and projects/stations of your Company to create awareness among the employees, Associates and their family members. Our biannual Hindi magazine 'Vidut Swar' published (in digitized from) to promote creative writing in Hindi.

Employees were motivated to use Hindi in official work by organising Hindi workshops, Unicode Hindi Computer Training along with Hindi e-tools and popularization of Hindi incentive schemes. Hindi webpage was updated with improvement important information of Rajbhasha for employees.

The second sub-committee of Parliament on official

Language had inspected our units; reviewed the progress of Rajbhasha implementation and appreciated our efforts.

Your Company's website also has a facility of operating in a bilingual form, in Hindi as well as in English.

21. WEB BASED CONTRACTORS' LABOUR INFORMATION AND MANAGEMENT SYSTEM (CLIMS)

Your Company has implemented an in house 'captive private cloud' based solution; 'Contractors' Labour Information Management System (CLIMS)' to streamline the labour management processes, to ensure physical and social welfare of workers, statutory compliances and to get accurate picture of real time availability of workers.

It has also resulted in proper keeping of records in a digitalized format and ensuring that the wages and other benefits of labourers deployed at Plants of your Company are disbursed correctly and in time. The CLIMS application also has inbuilt features like bio-metric attendance, medical fitness, safety training/ clearances, ESI registration and other regulatory checks.

22. VIGILANCE

22.1 Vigilance Mechanism:

To ensure transparency, objectivity and quality of decision making in various operations, your Company has a Vigilance Department headed by Chief Vigilance Officer. The Vigilance set up in your Company consists of Vigilance Executives in Corporate Centre as well as in sites. In sites, the Vigilance Executives report to the Project Head in administrative matters and they report to the Chief Vigilance Officer in functional matters.

Your Company Corporate Vigilance Department consists of four Cells as under:

- Vigilance Investigation and Processing Cell
- Departmental Proceedings Cell
- Technical Examination Cell
- MIS Cell

These cells deal with various facets of vigilance mechanism. The vigilance works have been assigned region-wise to Vigilance officers at Corporate Centre (Regional Vigilance Executives) for speedier disposal. Senior officials of Vigilance Department comprising GM (Vigilance), Regional Vigilance Executives and Head of DPC/MIS Cell meet regularly to discuss common issues to ensure uniform working in all Regions of your Company. This facilitates transparency, efficiency and effectiveness of Vigilance functionaries by making use of collective knowledge, experience and wisdom of Vigilance Executives as well as breaking of compartmentalization and abridging of strengths & weaknesses.

22.2 Vigilance work during 2021-22

During the year 2021-22 total 63 Vigilance complaints were investigated, out of which 52 complaints have been finalized and remaining 11 are under various stages of investigation as on 31.3.2022. Appropriate disciplinary action has also been initiated against the involved employees along with system improvements, wherever found necessary. 414 Preventive Vigilance Checks (Surprise, Routine, CTE Type & Scrutiny of Files) were conducted during the period and recovery of ₹ 99,76,784 was effected against various discrepancies detected during investigation by your Company. During the last year a total of 89 Preventive Vigilance Workshops were conducted at various projects/ places of your Company.

22.3 Implementation of Integrity Pact

Integrity Pact has been implemented in the Company since 2009. Presently, tenders having estimated value of ₹10 crore (excluding taxes and duties) and above are covered under the Integrity Pact in your Company.

22.4 Implementation of various policies

Fraud Prevention Policy has been implemented in your Company and suspected fraud cases, referred by the Nodal Officers to Vigilance Department are investigated immediately to avoid/stop fraudulent behaviors as defined in "Fraud Prevention Policy". Based on extant guidelines Fraud Prevention Policy has been revised in 2021. Whistle Blower Policy has also been in place at your Company as per The Securities and Exchange Board of India (SEBI) guideline to strengthen a culture of transparency and trust in the organization, providing employees with a framework/ procedure for responsible and secure reporting of improper activities (whistle blowing) within your Company and to protect employees wishing to raise a concern about improper activity/serious irregularities within your Company. A complaint handling policy is also in place which is designed to provide guidance on the manner in which your Company receives and handles complaints against its employees, suppliers / contractors etc.

22.5 Vigilance Awareness Week 2021

In line with the directive from Central Vigilance Commission (CVC) vide Circular ref. no. 021/VGL/045 dated 1.9.2021 Vigilance Awareness Week 2021 has been observed in all the offices and Power plants of your Company, including the Joint Ventures and Subsidiaries spread across the country from 26th October to 1st November, 2021 on the given theme "Independent India @ 75: Self Reliance with Integrity; स्वतंत्र भारत @ 75: सत्यनिष्ठा से आत्मनिर्भता". It was advised to give special emphasis on dissemination of awareness on PIDPI mechanism.

To align all your Company Units for conducting the Vigilance Awareness Week-2021 (VAW 2021) activities with strict adherence to extant COVID - 19 prevention guidelines, strict compliance to the economy measures issued by the Ministry of Finance vide the Department of Expenditure OM No. 7(2)E. Coord/2020 dated 4.9.2020 and following the code of conduct guidelines where elections were scheduled, review meetings were conducted through video conferencing with all sites on

4.10.2021. The meetings were chaired by Chief Vigilance Officer (CVO) of your Company and attended by Regional Heads of HR, Coordinators as identified for VAW 2021 and Vigilance executives from all locations of your Company.

Following activities were undertaken to observe VAW 2021: -

I. Administering Integrity Pledge

Vigilance Awareness Week 2021 formally commenced on 26.10.2021 with administration of Integrity-Pledge. At the Corporate Office, the pledge was administered by CMD of your Company. On this inaugural day of VAW 2021, CMD unveiled the ISO-9000:2015 certificate awarded to Corporate Vigilance Department. At Regional Head Quarters and power plants, the pledge was administered by respective Business Unit Heads. Pledge was also administered to CISF Personnel and contract labors at different sites.

II. Publicity

Banners were displayed at strategic public locations inside plant premises and prominent locations in townships on the PIDPI Awareness and the VAW 2021 theme. E-banners were widely used in local digital displays/ notice boards and online trainings and activities on the VAW theme. As a part of public outreach and to disseminate awareness messages in surrounding areas pamphlets were distributed and hoardings were put up on the VAW theme. Awareness messages and wide publicity for general public was done through publishing, short film in DD and radio jingles.

III. Competitions /Activities involving employees and stakeholders

Various activities were scheduled during this week for employees, their spouses, children, other residents in townships and contract labours to generate vigilance awareness among wide section of the society. Further, local schools and colleges were involved in these activities.

Slogan writing, drawing/poster making, essay, speech, elocution competitions on the VAW theme were conducted for employees and stakeholders of your Company. At various sites competitions were held in local schools inside the township and in surrounding villages to make the children aware about the importance of honesty & integrity, ill effects of corruption etc.

IV. Trainings /Workshops

An online workshop on e-Vigilance was organized on 28.10.2021 by Corporate Vigilance Department for all executives where the faculties from IIT Madras shared overview of cyber security & defence assessment of cyber risk, cyber security governance & compliance, best practices, digital forensics etc. In various power plant sites various workshops on Preventive Vigilance were organized where faculty from local district administration, CBI, retired senior executives from Vigilance function, academicians who delivered talks on role of an organization in curbing corruption, cybercrimes. Gender sensitization programs were also held across your Company during the week.

As a part of public outreach programs Walkathons and gramsabhas were organized at various units of your Company where employees, family members, CISF, associates and school children participated with enthusiasm. PIDPI banners were displayed on these occasions and talks on PIDPI was delivered by Vigilance Executives in surrounding Villages. Nukkad nataks were organised at many stations of your Company on PIDPI Theme / on theme of Honesty and self-reliance / anti-corruption themes.

V. Suggestions/Feedbacks/Grievance redressal of Stakeholders

Vendor Meets were conducted at multiple locations where your Company officials made presentations on new development in tendering, new initiative taken by your Company & Govt. e-procurement Representative from various industries association also joined & expressed their views & suggestion for further improvement of your Company procurement & award processes. The vendors were also informed about the Vigilance Mechanism with elaborate discussion on PIDPI mechanism. Open house discussion was carried out with stake holders by your Company.

22.6 System improvement measures undertaken during 2021-22

1. Green Channel system of providing Vigilance status introduced on PRADIP platform. In cases where there are no adverse entries in SAP records against employees, HR department is able to get the Vigilance Status of employees instantly at their end. Only in case where there is an entry in the Vigilance records in SAP against any employee , the request comes to Vigilance for providing the status.
2. In September 2021 Corporate Vigilance Department was certified by M/s BIS for ISO 9001 (the processes followed by the Department).
3. Based on CVC advice to introduce a common application for house allotment, NIKETAN-the online quarter management system pan NTPC has been rolled out in 2021. NIKETAN has greatly enhanced the transparency and policy compliance of all processes of quarter management system in your Company.

23. REDRESSAL OF PUBLIC GRIEVANCES

Your Company is committed for resolution of public grievance in efficient and time bound manner. General Manager (HR) has been designated as Director (Grievance) to facilitate earliest resolution of public grievances received from President Secretariat, Prime Minister's Office, Ministry of Power etc.

In order to facilitate resolution of grievances in transparent and time bound manner, Department of Administrative Reforms & Public Grievances, Department of Personnel & Training, Government of India has initiated web-based monitoring system at www.pgportal.gov.in.

As per directions of Govt. of India, public grievances are to be resolved within 45 days time. If it is not possible to resolve the same within this period, an interim reply is to be given. Your Company is making all efforts to resolve grievances in above time frame.

24. RIGHT TO INFORMATION (RTI)

Your Company has implemented Right to Information Act 2005 in order to provide information to Citizens and to maintain accountability and Transparency. It has designated a Central Public Information Officer (CPIO), an Appellate Authority and APIOs at all Sites and Offices of your Company.

During 2021-22, there were 1,974 applications (including 46 pending applications from FY 2020-21), out of which 1,924 were replied and 50 are pending to be replied/ resolved, under the RTI Act, 2005. Further, under the section 4(1)(b) of the RTI Act, your Company also got audited its voluntary disclosures by Indian Institute of Public Authority (IIPA) New Delhi.

25. Using Information and Communication Technology for Productivity Enhancement

The Information Technology in your Company is not only a service provider but also being used as a key business driver. Since 2008, your Company has implemented Enterprise Resource Planning (ERP) application to integrate all its business functions. PI data system has been implemented to capture, display and analyze the plant performance parameters on real time basis which is helping the operation and maintenance of our power plants. Non-ERP web based applications have been developed in balance areas such as Engineering Drawings approval, Quality Control Management, Hospital Management, Contractor's Labour Information Management, Transit Camp Management, RTI, Security Control, Safety, Ash Utilization etc.

As a commitment towards environment, your Company has reengineered and redesigned the business processes to paperless mode. The digitization initiative in the form of Project PRADIP resulted in implementation e-Office, digitization of documents and paperless processes for different functions. This has not only saved tons of paper but also resulted in faster decision making, transparency and improved efficiency for your Company. This was the mainstay of the company when lockdown was imposed.

Your Company was quick to switch to IT enabled virtual office when normal working was affected during the pandemic induced lockdown. PRADIP, Virtual office and internet access to major applications through Secured Virtual Private Network Access helped your Company perform as usual during the lockdown. This in a way enhanced efficiency and speed. This practice continues now after the lockdown also.

Your Company plants and offices across India, are connected to Corporate Office and main Data-Centre (DC) through 2x68/155 Mbps high-speed MPLS links at each site to facilitate seamless communication. The DC and DR (Disaster Recovery) site is connected with high bandwidth 2x400 Mbps MPLS links for data replication. Both the Data Centers at Noida & Hyderabad are ISO 27001 compliant. The progress of ongoing projects and issues of the running power stations are discussed regularly over high definition Video Conferencing system at Project Monitoring Centre of Corporate Office. Desktop/laptop to desktop/laptop VC facility is now available to all executives in the company as part of virtual office and its widely used.

To further leverage IT in your Company, an IT Digital Strategy has been finalized. The IT Digital Strategy aims to achieve 100% Paperless Office, Data Analytics for decision making, induction of new technology such as IIOT, AI, Machine learning etc. over next 2 years. A number of Pilots and proof of concepts have been completed in these areas.

Some of the highlights of the progress in IT/ERP area during the year 2021-22 are as follows:

- **Digitization** – All approve processes under E-Office was completed. Processes were redesigned for working in paperless mode and to enable Unified Shared Service center model. Digital invoicing was implemented, and all vendors were onboarded on PRADIP to submit their digital invoices and to track them. Also, management dashboard made ready to track payment status.
- **ERP** – A number of new modules were introduced in ERP as part of process improvements. ERP was implemented in NTPC JV company, MUNPL. Safety framework has been implemented in NTPC.
- **M365 Implementation** – A Comprehensive Cloud based SaaS solution implemented across your Company including JVs for mail and messaging services, Teams, Share Point, Power App, Power BI etc. along with Single Sign On (SSO).
- **Security** – No major security breach was observed during the year 2021-22. A 24x7 Cyber Security Operation Centre (CSOC) is in operation where round the clock monitoring of all external and internal data traffic is being done. All latest threat management and security tools are being applied to prevent any cyber-attack or data theft. Timely communications are being sent to all users and admins based on threat perception. Your Company's data centers at Noida and Hyderabad are ISO 27001 compliant for ensuring adequate security posture.
- A number of new web applications and mobile apps such as Day Ahead Market, Real Time Market, Shram Kaushal Portal, Samvaad 2.0, Suraksha App 2.4, Technical Diary, e-Gen Portal, Samarth Portal (Biomass) etc. have been

launched to take care of requirements of various internal departments and ministry of power.

- **New Technology** – Rail Asset Management System (RAMS) has been implemented for monitoring maintenance activities.
- IT Consultancy assignments towards power sector improvement –
  - o SAP modules roll out in MUNPL, JV Co.
  - o SAP support in JV companies of your Company.
  - o PI System implementation in JVs.
  - o M365 implementation in JVs.
  - o MCCS implementation in NTECL, JV Co. for Material & Service Classification and Codification.

All together consultancy works for ₹ 4.15 crore were carried out.

26. GROUP COMPANIES: SUBSIDIARIES AND JOINT VENTURES

Your Company has 12 number of subsidiary companies as on 31st March 2022 and 17 nos. joint venture (including 2 foreign Companies) companies for undertaking specific business activities.

Further with an objective to hive-off the identified Renewable Energy Assets of your Company along with NTPC Renewable Energy Limited and carrying out monetization of the wholly owned Company through IPO or strategic investment route, subject to requisite approvals/clearances, your Company had incorporated wholly owned subsidiary named "NTPC Green Energy Limited" on 7th April 2022.

Your Company had decided to exit from International Coal Ventures Private Limited, in view of lack of suitable commercially viable opportunities for thermal coal and in respect of BF-NTPC Energy Systems Limited, after getting approval from Ministry of Power, the process of Winding Up had started and Liquidator was appointed for voluntary Liquidation of this JV Company.

A statement containing the salient feature of the financial statement of your Company's Subsidiaries, Associate Companies and Joint Ventures as per first proviso of section 129(3) of the Companies Act, 2013 is included in the consolidated financial statements.

27. Information Pursuant to Statutory and other Requirements

Information required to be furnished as per the Companies Act, 2013 and as per SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015 and any amendments thereto are as under:

27.1 Statutory Auditors

The Statutory Auditors of your Company are appointed by the Comptroller & Auditor General of India. Joint Statutory Auditors for the financial year 2021-22 were (i) M/s S K Mehta & Co., Chartered Accountants, New Delhi (ii) M/s S.N. Dhawan & Co. LLP, Chartered Accountants, New Delhi, (iii) M/s Varma & Varma, Chartered Accountants, Hyderabad, (iv) M/s Parakh & Co., Chartered Accountants, Jaipur, (v) M/s C K Prusty & Associates, Chartered Accountants, Bhubaneshwar, (vi) M/s B C Jain & Co., Chartered Accountants, Kanpur and (vii) M/s V K Jindal & Co., Chartered Accountants, Ranchi.

The appointment of the Statutory Auditors for the financial year 2022-23 is yet to be made by the Comptroller & Auditor General of India.

27.2 Management comments on Statutory Auditors' Report

The Statutory Auditors of the Company have given an un-qualified report on the accounts of the Company for the financial year 2021-22. However, they have drawn attention under 'Emphasis of Matter' to the following notes:

(i) Note No. 37(a) regarding billing and accounting of sales on provisional basis.

(ii) Note No. 60(iii)(b) with respect to appeal filed by the company with the Hon'ble High Court of Delhi in the matter of Arbitral award pronounced against the Company and the related provision made/disclosure of contingent liability as mentioned in the said note.

The issues have been adequately explained in the respective Notes referred to by the Auditors.'

27.3 Review of accounts by Comptroller & Auditor General of India (C&AG)

The Comptroller & Auditor General of India, through letter dated 22.7.2022, has given 'NIL' Comments on the Standalone Financial Statements of your Company for the year ended 31st March 2022 after conducting supplementary audit under Section 143(6)(a) of the Companies Act, 2013.

The Comptroller & Auditor General of India, through letter dated 22.7.2022, has also given 'NIL' Comments on the Consolidated Financial Statements of your Company for the year ended 31st March 2022 after conducting supplementary audit under Section 143(6)(a) read with Section 129(4) of the Companies Act, 2013.

As advised by the Office of the Comptroller & Auditor General of India (C&AG), the comments of C&AG for both the stand-alone and consolidated financial statements of your Company for the year ended 31st March 2022 are being placed with the report of Statutory Auditors of your Company elsewhere in this Annual Report.

27.4 Cost Audit

As prescribed under the Companies (Cost Records and Audit) Rules, 2014, the Cost Accounting records are being maintained by all stations and Coal mines of your Company.

The firms of Cost Accountants appointed under Section 148(3) of the Companies Act, 2013 for the financial year 2021-22 were (i) M/s Chandra Wadhwa & Co., Cost Accountants, Delhi, (ii) M/s S. C. Mohanty & Associates, Cost Accountants, Bhubaneshwar, (iii) Dhananjay V. Joshi & Associates, Cost Accountants, Pune, (iv) M/s DGM & Associates, Cost Accountants, Kolkata, (v) M/s Tanmaya S. Pradhan & Co., Cost Accountants, Odisha, (vi) M/s K. L. Jaisingh & Co., Cost Accountants, U.P., (vii) M/s Niran & Co., Cost Accountants, Bhubaneshwar (viii) M/s A. C. Dutta & Co., Cost Accountants, Kolkata (ix) M/s R.M. Bansal & Co., Cost Accountants, Kanpur and (x) M/s ABK & Associates, Mumbai.

The due date for filing consolidated Cost Audit Report in XBRL format for the financial year ended March 31, 2021 was upto December 31, 2021 and the consolidated Cost Audit Report for your Company was filed with the Central Government on October 4, 2021.

The Cost Audit Report for the financial year ended March 31, 2022 shall be filed within the prescribed time period under the Companies (Cost Records & Audit) Rules, 2014.

27.5 Exchange Risk Management

Your Company is exposed to foreign exchange risk in respect of contracts denominated in foreign currency for purchase of plant and machinery, spares and fuel for its projects/ stations and foreign currency loans.

In term of its Exchange Risk Management Policy, during financial year 2021-22, your Company has entered into derivative contracts amounting to USD 293.85 million in respect of foreign currency loans exposure.

27.6 Policy for Selection and appointment of Directors' and their remuneration

Your Company being a Government Company, the provisions of Section 134(3)(e) of the Companies Act, 2013 do not apply in view of the Gazette notification dated 5.6.2015 issued by Government of India, Ministry of Corporate Affairs.

27.7 Performance Evaluation of the Directors and the Board

Ministry of Corporate Affairs (MCA), through General Circular dated 5th June, 2015, has exempted Government Companies from the provisions of Section 178(2) of the Companies Act, 2013 which requires of performance evaluation of every director by the Nomination & Remuneration Committee. The aforesaid circular of MCA further exempted Govt. Companies from provisions of Section 134(3)(p) of the Companies Act, 2013 which requires mentioning the manner of formal evaluation of its own performance by the Board and that of its Committees and Individual Director in Board's Report, if directors are evaluated by the Ministry or Department of the Central Government which is administratively in charge of the company, or, as the case may be, the State Government as per its own evaluation methodology.

Further, as per MCA Notification dated 5.7.2017, in case the matters of performance evaluation are specified by the concerned Ministries or Departments of the Central Government or as the case may be, the State Governments and such requirements are complied with by the Government companies, provisions of Schedule IV w.r.t. performance evaluation of Directors are exempted for the Government Companies.

In this regard, Deptt. of Public Enterprises (DPE) has already laid down a mechanism for performance appraisal of all functional directors. DPE has also initiated evaluation of Independent Directors.

Your Company enters into a Memorandum of Understanding (MOU) with Government of India each year, demarcating key performance parameters for the company. The performance of the Company are evaluated by the Department of Public Enterprises vis-à-vis MOU entered into with the Government of India.

In terms of Regulation 25 of SEBI LODR, 2015, the performance of the Board as a whole and non-independent directors including Chairman & Managing Director were evaluated by the Independent Directors in a separate Meeting held by them on 27th March 2022.

27.8 Declaration by Independent Directors

During the year, all the Independent Directors have met the requirements specified under Section 149(6) of the Companies Act, 2013 for holding the position of 'Independent Director' and necessary declaration from each Independent Director under Section 149 (7) of the Companies Act, 2013 was received. Also, declaration under Regulation 25 of SEBI (LODR) Regulations, 2015 and Rule 6 of the Companies (Appointment and Qualification of Directors) Rules, 2014 are also obtained from all the Independent Director of your Company.

27.9 Management Discussion and Analysis

In addition to the issues stated in the Directors' Report, some issues have been brought out in report on Management Discussion and Analysis placed at Annexure-I and forms part of this Director Report, as per the terms of regulations 34(2)(e) of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015.

27.10 Corporate Governance

A detailed report on Corporate Governance as stipulated under Regulation 34(3) of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 is placed at Annexure-II and forms part of the Directors' Report.

27.11 Business Responsibility Report

The Business Responsibility Report, as stipulated under Regulation 34 (2) of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015, is given in Annexure-IX and forms part of this Directors' Report.

27.12 Investor Education and Protection Fund (IEPF)

Details of transfer of unclaimed dividends and eligible shares to IEPF have been placed in the Corporate Governance Report at Annexure-II, which forms part of the Directors' Report.

27.13 Secretarial Audit

The Board had appointed M/s J. K. Gupta & Associates, Company Secretaries, to conduct Secretarial Audit for the financial year 2021-22. The Secretarial Audit Report for the financial year ended March 31, 2022 is annexed here with marked as Annexure X to this Directors' Report.

The Managements' Comments on Secretarial Audit Report are as under:

Observations	Management's Comments
Compliance with the provisions of Section 149 of the Act read with Regulation 17 of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 regarding the requirements of having at least half of the Board of Directors as the Independent Directors. Further half of the Board of the Company was not "non-executive" for a certain period.	During the financial year 2021-22, Independent Director was less than the required limit. As per the provisions of the Articles of Association of the Company, the power to appoint Directors vests with the President of India. The Company had requested Ministry of Power, Government of India, being administrative ministry for appointment of Independent Director from time to time for compliance of the above regulations.
Compliance of Regulation 17(10) of Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, the Company has not carried out the performance evaluation of the Directors.	Refer Para 26.6 & 26.7
Compliance of Regulation 19(4) read with Schedule II Part D of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, the required policies/criteria for Board of Directors were not formulated	As the Government of India (GOI) is making appointment of Directors, evaluation of Directors are done by the GOI.

27.14 Particulars of contracts or arrangements with related parties

During the period under review, your Company had not entered into any material transaction with any of its related parties. The Company's major related party transactions are generally with its subsidiaries and associates. All related party transactions were in the ordinary course of business and were negotiated on an arm's length basis except with Utility Powertech Limited, which are covered under the disclosure of Related Party Transactions in Form AOC-2 (Annexure-VIII) as required under Section 134(3)(h) of the Companies Act, 2013. They were intended to further enhance your Company's interests.

Web-links for Policy on Materiality of Related Party Transactions and also on Dealing with Related Party Transactions have been provided in the Report on Corporate Governance, which also form part of the Annual Report.

27.15 Significant and material orders passed by the regulators or courts or tribunals impacting the going concern status and company's operations in future

No significant and material orders were passed by any regulator or court or tribunal impacting the going concern status and company's operations during the FY 2021-22.

27.16 Adequacy of internal financial controls with reference to the financial reporting

Your Company has in place adequate internal financial controls with reference to financial reporting. During the year, such controls were regularly tested and no reportable material weakness in the design, implementation and operation effectiveness was observed.

27.17 Loans and Investments

Details of Investments covered under the provisions of Section 186 of the Companies Act, 2013 forms part of financial statement, attached as a separate section in the Annual Report for FY 2021-22.

Details of Loans granted to subsidiaries and Joint venture companies are disclosed at Note 56 to the standalone financial statements for the year 2021-22.

27.18 Prevention, Prohibition and Redressal of Sexual Harassment of Women at Workplace

Your Company has in place a policy on Prevention, Prohibition & Redressal of Sexual Harassment of Women at Workplace in line with the requirements of the Sexual Harassment of Women at Workplace (Prevention, Prohibition & Redressal) Act, 2013.

Internal Committees (ICs) have been constituted at all Projects/Locations of your Company to redress complaints received regarding Sexual Harassment. All female employees (regular, contractual, temporary, trainees) are covered under the policy. Every three years, the constitution of these committees is changed and new members are nominated.

During the year 2021-22, two cases were reported to different ICCs across your Company, both were resolved and currently no case is pending.

27.19 Procurement from Micro and Small Enterprises (MSEs)

The Government of India has notified a Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012. The total procurement* made from MSEs during FY 2021-22 was ₹ 2,791.24 crore which was 42.95% of the total procurement of ₹ 6,498.56 crore against the minimum threshold of 40% as stipulated by the Public Procurement Policy for Micro and Small Enterprises (MSMEs) Order.

The total procurement percentage made from MSMEs owned by SC/ST and Women entrepreneurs during the year 2021-22 was 0.32% and 0.63% respectively.

*Excluding Primary fuel, Secondary fuel, steel, cement, project procurement including Renovation & Modernization and procurement from Original Equipment Manufacturer (OEM)/ Original Equipment Supplier (OES)/ Proprietary Article Certificate (PAC) as per Order of the Development Commissioner, Ministry of MSME vide letter No. F. No. 21(9)/2017-MA(Pt-I) (E-17230) dated 31.8.2021.

Your Company has organized 15 Vendor Development Programs (VDPs), including 2 Special VDPs for MSEs owned by SC/ST and Women Entrepreneurs across the company in FY 2021-22.

Your Company has on-boarded all the three TReDS platforms approved by Reserve Bank of India. Invoices worth ₹ 61.03 Lakh are discounted through the TReDS platform.

Annual procurement plan for 2021-22 from MSEs is uploaded on www.ntpc.co.in.

27.20 Particulars of Employees

As per provisions of Section 197(12) of the Companies Act, 2013 read with Rule 5 of the Companies (Appointment and Remuneration of Managerial Personnel) Rules, 2014, every listed company is required to disclose the ratio of the remuneration of each director to the median employee's remuneration and details of employees receiving remuneration exceeding limits as prescribed from time to time in the Directors' Report.

However, as per notification dated 5th June, 2015 issued by the Ministry of Corporate Affairs, Government Companies are exempted from complying with provisions of Section 197 of the Companies Act, 2013. Therefore, such particulars have not been included and do not form part of this Directors' Report.

27.21 Extract of Annual Return

Annual Return pursuant to Section 92 (3) of the Companies Act, 2013, read with Section 134(3)(a) and rule 12(1) of the Company (Management & Administration) Rules, 2014 for the Financial Year ended 31st March 2022 is available on the Company's website i.e www.ntpc.co.in.

27.22 Credit rating

Your Company's financial discipline and prudence is reflected in the strong credit ratings ascribed by rating agencies. The details of credit ratings are disclosed in the Management Discussion and Analysis Report, which forms part of the Annual Report.

27.23 Reporting of frauds by Auditors

During the year under review, neither the statutory auditors nor the secretarial auditor has reported to the audit committee, under Section 143 (12) of the Companies Act, 2013, any instances of fraud committed against your Company by its officers or employees, the details of which would need to be mentioned in the Director's report.

27.24 Compliance with Secretarial Standards

Your Company is in compliance with the applicable Secretarial Standards issued by the Institute of Company Secretaries of India and approved by the Central Government under Section 118(10) of the Companies Act, 2013.

27.25 Key Financial Ratios

Key Financial Ratios for the financial year ended 31st March, 2022, are provided in the Annexure forming part of this Report.

27.26 Consumption of Imported Goods (On consolidated basis)

The consumption of imported goods for your Group companies is as follows:

Import Consumption	FY 2021-2022 (₹ crore)	FY 2020-2021 (₹ crore)
Coal	3,029.86	719.09
Others Spares	65.08	58.96
Total Import	**3,094.94**	**778.05**

27.27 Proceeding pending under the Insolvency and Bankruptcy Code, 2016

During the year under review, no application made or any proceeding pending under the Insolvency and Bankruptcy Code, 2016 during the year.

27.28 One-time Settlement and Valuation

During the financial year 2021-22, no event has taken place that give rise to reporting of details w.r.t. difference between amount of the valuation done at the time of one-time settlement and the valuation done while taking loan from the Banks or Financial Institutions.

27.29 Other Information

Information on Number of Meetings of the Board held during the year, composition of committees of the Board and their meetings held during the year, a chart or a matrix setting out the skills/expertise/competence of the board of directors, Total fees for all services paid by the listed entity and its subsidiaries, on a consolidated basis, to the statutory auditor and all entities in the network firm/network entity of which the statutory auditor is a part, Details of utilization of funds raised through preferential allotment or qualified institutions placement as specified under Regulation 32(7A), if any, establishment of vigil mechanism/ whistle blower policy and web-links for familiarization/ training policy of directors, Policy on Materiality of Related Party Transactions and also on Dealing with Related Party Transactions and Policy for determining 'Material' Subsidiaries have been provided in the Report on Corporate Governance, which forms part of the Directors Report at Annex-II.

27.30 Para on development of risk management policy including therein the elements of risks are given elsewhere in the Annual Report.

27.31 Your Company has followed the applicable Secretarial Standards, i.e. SS-1 and SS-2, relating to 'Meetings of the Board of Directors' and 'General Meetings' respectively.

27.32 No disclosure or reporting is required in respect of the following items as there were no transactions on these items during the year under review:

1. Issue of equity shares with differential rights as to dividend, voting or otherwise.
2. Issue of shares (including sweat equity shares) to employees of the Company under any scheme.

The particulars of annexure forming part of this report areas under:

Particulars	Annexure
Management Discussion & Analysis	I
Report on Corporate Governance	II
Information on conservation of energy, technology absorption and foreign exchange earnings and outgo	III
Statistical information on persons belonging to Scheduled Caste / Scheduled Tribe categories	IV
Information on Differently Abled persons	V
Annual Report on CSR Activities	VI
Project Wise Ash produced and utilized	VII
Disclosure of Related Party Transactions in Form AOC-2	VIII
Business Responsibility Report for the year 2021-22	IX
Secretarial Audit Report in Form MR-3	X

28. INTEGRATED REPORT

Your Company being one of the top companies in the country in terms of market capitalization, has voluntarily provided Integrated Report, which encompasses both financial and non-financial information to enable the Members to take well informed decisions and have a better understanding of the Company's long-term perspective. This Report also touches upon aspects such as organization's strategy, governance framework, performance and prospects of value creation based on the six forms of capital viz. financial capital, manufactured capital, intellectual capital, human capital, social and relationship capital and natural capital.

29. BOARD OF DIRECTORS & KEY MANAGERIAL PERSONNEL (KMP)

Shri Jitender Jayantilal Tanna has been appointed as Independent Director w.e.f. 30.11.2021.

Shri Vivek Gupta has been appointed as Independent Director w.e.f. 30.11.2021.

Shri Vidyadhar Vaishampayan has been appointed as Independent Director w.e.f. 30.11.2021.

Smt. Sangitha Varier has been appointed as Independent Director w.e.f. 7.12.2021.

Shri Piyush Singh has been appointed as Govt. Nominee Director w.e.f. 31.5.2022.

Shri Jaikumar Srinivisan has been appointed as Director (Finance) w.e.f. 21.7.2022

Dr. K P K Pillay and Dr. Bhim Singh ceased to be Independent Director of the company w.e.f. 16.7.2021 on completion of three years' tenure.

Shri Vivek Kumar Dewangan ceased to be Govt. Nominee Director of the Company w.e.f. 30.5.2022 due to change in nomination by Ministry of Power.

Shri A K Gautam ceased to be Director (Finance) of the Company w.e.f. 31.5.2022 on attaining the age of his superannuation.

The Board wishes to place on record its deep appreciation for the valuable services rendered by Dr. K P K Pillay, Dr. Bhim Singh, Shri Vivek Kumar Dewangan & Shri A K Gautam during their association with the Company.

The Board welcomes Shri Jitender Jayantilal Tanna, Shri Vivek Gupta, Shri Vidyadhar Vaishampayan, Smt. Sangitha Varier, Shri Piyush Singh and Jaikumar Srinivisan on the Board of your Company.

30. MATERIAL CHANGES AND COMMITMENTS AFFECTING FINANCIAL POSITION BETWEEN THE END OF THE FINANCIAL YEAR AND DATE OF THE REPORT

There have been no material changes and commitments, which affect the financial position of the Company, that have occurred between the end of the financial year to which the financial statements relate and the date of this report.

31. DIRECTORS' RESPONSIBILITY STATEMENT

As required under Section 134(3)(c) & 134(5) of the Companies Act, 2013, your Directors state that:

1. in the preparation of the annual accounts for the year ended March 31, 2022, the applicable accounting standards had been followed along with proper explanation relating to material departures;
2. the Directors had selected such accounting policies and applied them consistently and made judgments and estimates that are reasonable and prudent so as to give a true and fair view of the state of affairs of the company as at March 31, 2022 and of the profit of the company for the year ended on that date;
3. the Directors had taken proper and sufficient care for the maintenance of adequate accounting records in accordance with the provisions of the Companies

Act, 2013 for safeguarding the assets of the company and for preventing and detecting fraud and other irregularities;

4. the Directors had prepared the Annual Accounts on a going concern basis;

5. the Directors had laid down internal financial controls to be followed by the company and that such internal financial controls are adequate and were operating effectively; and

6. the Directors had devised proper systems to ensure compliance with the provisions of all applicable laws and that such systems were adequate and operating effectively.

32. ACKNOWLEDGEMENT

The Directors of your Company acknowledge with deep sense of appreciation, the co-operation received from the Government of India, particularly the Prime Minister's Office, Ministry of Power, Ministry of New & Renewable Energy, Ministry of Finance, Ministry of Environment, Forests & Climate Change, Ministry of Coal, Ministry of Petroleum & Natural Gas, Ministry of Railways, Ministry of Corporate Affairs, Ministry of Labour and Employment, the Ministry of Environment and Forests, the Central Board of Direct Taxes, the Central Board of Indirect Taxes and Customs, GST authorities, Department of Public Enterprises, Department of Investment and Public Asset Management, Central Electricity Authority, Central Electricity Regulatory Commission, Comptroller & Auditor General of India, Appellate Tribunal for Electricity, State Governments, Regional Power Committees, State Utilities, Stock exchanges, Governments of various countries and Office of the Attorney General of India.

The Directors of your Company also convey their gratitude to the shareholders, various international and Indian Banks and Financial Institutions for the confidence reposed by them in the Company.

The Board also appreciates the contribution of contractors, vendors and consultants in the implementation of various projects of the Company.

We also acknowledge the constructive suggestions received from the Office of Comptroller & Auditor General of India, Statutory Auditors and Cost Auditors.

We wish to place on record our appreciation for the untiring efforts and contributions made by the NTPC's family at all levels to ensure that the company continues to grow and excel.

The Directors of your Company regret the loss of life due to COVID-19 pandemic (2nd Wave) and are deeply grateful to and have immense respect for every person who risked his life and safety to fight this pandemic.

For and on behalf of the Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Dated: 30th July, 2022

DIRECTORS' REPORT

Generating Power & Smiles 24x7 for the Nation

Empowering the Girl Child through Girl Empowerment Mission (GEM) & taking care of people

MANAGEMENT DISCUSSION AND ANALYSIS

ECONOMIC AND SECTOR OUTLOOK

According to provisional estimates of annual national income for the financial year 2021-22 and quarterly estimates of GDP for the fourth quarter (Q4) of the financial year 2021-22, released by the National Statistical Office of MOSPI on 31 May 2022, the growth rate of GDP is estimated at 8.7%, as compared to a contraction of 6.6% in the previous year. IMF, in the World Economic Outlook, released in April 2022, has placed the growth projection for India at 8.9% for the calendar year 2021, which is the highest among the Emerging Market and Developing Economies.

Quarterly growth rate analysis depicts that GDP has grown by 20.1%, 8.4%, 5.4% and 4.1% during Q1, Q2, Q3, and Q4 of the financial year 2021-22, respectively. After robust growth in Q1, the growth trajectory remained tepid in the other three quarters on account of higher prices of Oil and other commodities, hiccups in the recovery of the contact-intensive services due to the emergence of the Omicron variant, and the geopolitical situation in Russia and Ukraine.

For the electricity sector, Indices of Industrial Production (IIP) has shown a growth of 7.9% over the last fiscal. The growth is, however, less as compared to that of the mining and manufacturing sectors, which have grown by 12.2% and 11.7% respectively.

Further, as per World Economic Outlook, April 2022, the growth projection for India in the calendar year 2022 has been pegged at 8.2%, slightly lower as compared to the calendar year 2021 due to the spill-over effect of the geopolitical conflict between Ukraine and Russia, considering India as a net oil importer. This may reflect weaker domestic demand as higher oil prices are expected to weigh on private consumption and investment. However, as gathered from the report, projections for India are still highest among the Emerging Market and Developing Economies.

Financial year 2021-22 has seen India's power sector move further along the path of meeting the aspirations of our rapidly developing nation. Universal access to affordable power in a sustainable manner has been the guiding principle for the Power sector. India has twin goals, to ensure 24x7 adequate and reliable energy access and simultaneously, accelerate the clean energy transition by reducing the country's reliance on fossil-based energy and shifting to cleaner and renewable energy sources. To meet these goals following major reforms were taken up during the financial year 2021-22:

Draft National Electricity Policy 2021

Intending to make electricity available 24x7 to all households in the next five years, MOP released the Draft National Electricity Policy (NEP) on 27 April 2021. The key highlights of the draft NEP are as follows:

- The NEP 2021 covers multiple areas such as the financial health of distribution utilities, aggregate technical & commercial losses, balancing and ramping requirements, and the development of an efficient transmission system.
- Introduction of suitable market mechanisms for developing efficient markets for electricity. Introduction of capacity markets and auction mechanisms, longer duration forward contracts and derivatives, market-based ancillary services, and new green markets.
- The gradual shift towards light-touch regulations and shifting of focus on emerging tasks such as market monitoring and surveillance, ensuring resource adequacy, balancing, demand response, etc. and achieving 100% prepaid metering within 3 years.
- Promotion of manufacturing goods and services in the power sector under the Make in India initiative and Atmanirbhar Bharat Abhiyan.

Policies for Promotion of RE

With a commitment to increase non-fossil energy capacity to 500 GW by 2030, the following initiatives have been taken to promote RE capacity addition.

- Electricity (Promotion of Generation of Electricity from Must-Run Power Plant) Rules, 2021
- Introduction of Green Day Ahead Market (GDAM)
- Waiver of ISTS Charges and Losses for Solar & Wind Power
- Bundling with RE and Storage Power for Flexibility in Generation and Scheduling of Thermal/Hydro Power Stations. The Scheme seeks to improve the operational efficiencies and financial sustainability of all DISCOMs/ Power Departments.

Green Hydrogen and Ammonia policy

Notified by MOP, the green hydrogen and ammonia policy offers to set up manufacturing zones for the production of these chemicals, connectivity to the ISTS (inter-state transmission system) on a priority basis and waiver of transmission charges for 25 years subject to production facility being commissioned before June 2025.

Policies for DISCOMs empowerment

During the financial year 2021-22, GOI launched the Revamped Distribution Sector Scheme (RDSS) to help DISCOMs. Further, MOP has issued various guidelines for improving the financial health of DISCOMs. Some of them are:

- Short-term Procurement of Power by Distribution Licensee, through a tariff-based bidding process.
- Timeline for replacement of existing meters with smart meters with pre-payment feature.

Electricity (Transmission Planning, Development, and Recovery of ISTS Transmission Charges) Rules, 2021

These rules underpin a system of transmission access which is termed as General Network Access in the inter-state transmission system.

These reforms are likely to help the sector's growth in terms of renewable capacity, increase in investment in the sector, improvement in the health of DISCOMs, reduction in pending receivables of the generating companies etc.

INDUSTRY STRUCTURE AND DEVELOPMENTS

The power sector is a key enabler of India's economic development. The sector with its three pillars: Generation, Transmission and Distribution, is crucial to India's infrastructure and economic growth. The global stature of the Indian Power Sector is depicted well by its positioning in terms of generation capacity. India is ranked 3rd in the world in terms of electricity generation, 4th in installed renewable energy capacity, and 6th in installed Hydro capacity, as reported by international agencies like IEA, Statista, IRENA etc.

The achievements and various issues/ challenges faced by the Power Sector and key initiatives taken by the Ministry of Power are discussed in the following paragraphs.

Snapshot 2021-22

- The gross annual generation of the country (including imports from Bhutan) increased from 1,382 BUs in the previous year to 1,492 BUs in the financial year 2021-22 (including renewables), a growth of about 8%.
- Generation from Renewable sources increased by about 16% from 147 BUs to 171 BUs (excluding Hydro) while generation from conventional sources increased by about 7% from 1,235 BUs to 1,321 BUs.
- A generation capacity of 4,878 MW (excluding renewables) was added during the financial year 2021-22 compared to 5,436 MW added during the previous year.
- With the addition of 15,964 MW, renewable energy capacity has reached 156.6 GW (including large hydro) at the end of the financial year 2021-22, an increase of 11.3% over the previous year.
- 14,895 Ckms of transmission lines were added during the year as compared to 16,750 Ckms in the previous year.
- 78,982 MVA of transformer capacity was added during the year as against 56,575 MVA in the previous year.
- PLF of coal-based stations increased to 58.76% in the financial year 2021-22 from 54.62% in the previous year.
- During the financial year 2021-22, the energy deficit has remained constant at 0.4% however peak demand deficit has increased from 0.4% to 1.2%, YoY basis.

Existing Installed Capacity

The total installed capacity in the country as on 31 March 2022 was more than 399 GW (including renewables) with Private Sector contributing about 49% of the installed capacity followed by State Sector with 26% share and Central Sector with 25% share.

Sector	Total Capacity (MW)	% share
Central	99,005	25
State	1,04,855	26
Private	1,95,637	49
Total	**3,99,497**	**100**

Mode-wise installed capacity in the country as on 31 March 2022 is as under:

Mode	Total Capacity (MW)	% share
Thermal	2,36,109	59
Nuclear	6,780	2
Hydro	46,723	12
RES (Renewables)	1,09,885	27
Total	**3,99,497**	**100**

(Source: Central Electricity Authority)

Capacity Utilization and Generation

Sector wise PLF in % (Coal based stations)

Sector	2021-22	2020-21
Central	69.62	63.78
State	54.98	46.71
Private	66.95	57.18
Private IPP	52.62	54.23
All India	**58.76**	**54.62**

(Source: Central Electricity Authority)

Generation

Sector-wise and fuel-wise break-up of conventional generation (in BUs) for the financial year 2021-22 is detailed as under:

Sector	Thermal	Hydro	Nuclear	Bhutan Import	Total
Central	415	58	47	--	**520**
State	336	79	--	--	**415**
Private	364	14	--	--	**378**
Bhutan Import	--	--	--	8	**8**
Total	**1115**	**151**	**47**	**8**	**1321**

(Source: Central Electricity Authority)

Sector-wise share in Installed Capacity (conventional) vis-a-vis share in Generation (conventional):

Sector	Share in installed capacity (%)	Share in generation (%)
Central	25	39
State	26	31
Private	49	29
	100	**100**

(Source: Central Electricity Authority)

Central sector utilities have performed better as compared to State and Private sector utilities in terms of share in generation vis-a-vis share in installed capacity.

Consumption

The total electricity consumption in India increased from 1,271 BUs in the financial year 2020-21 to 1,370 BUs in the financial year 2021-22 growing by 7.8%, due to economic recovery post-pandemic.

Major end-users of power are broadly classified into 6 categories: Agricultural, Commercial, Domestic, Industrial, Traction & Railways, and others. Their shares of electricity consumption during the financial year 2020-21, were approximately 17.5%, 8.3%, 25.7%, 41.1%, 1.5% and 5.9%, respectively. During the financial year 2021-22, although absolute consumption of all the sectors has increased, the percentage consumption of agriculture and domestic consumption in the total consumption has increased marginally whereas for other sectors it has decreased slightly.

In this context, Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA) launched with the objective to provide energy access to all by providing last-mile connectivity, has played an important role. Under this scheme, about 99.99% of households have been electrified. Out of the remaining 17,301 un-electrified & partially electrified villages, infrastructure work has been completed in 17,297 Villages (97%) while physical work has been completed in 14 out of 15 districts.

Transmission

The total inter-regional transmission capacity of the country has increased from 1,05,050 MW as at 31 March 2021 to 1,12,250 MW as at 31 March 2022, recording a growth of 6.8%. This augmentation of the national grid is essential for supporting the higher injection of renewables into the grid for the transfer of power from RE-rich states to other states.

Distribution

Distribution is the key link in realizing the Government of India's vision of supplying reliable 24x7 Power for All. For this, the financial health of distribution companies is of prime importance so that they can discharge their functions & responsibilities efficiently. However, their poor financial health has remained a matter of concern.

Accumulated losses have increased at a CAGR of around 8.6% from the financial year 2015-16 to the financial year 2019-20. To reverse this trend, reduction of AT&C losses and the closure of the gap between ACS (Average Cost of Supply) and ARR (Average Revenue Realization) are critical factors.

GOI has launched the Revamped Distribution Sector Scheme (RDSS) to help DISCOMs improve their operational efficiencies and financial sustainability by providing result-linked financial assistance to strengthen supply infrastructure based on meeting pre-qualifying criteria and achieving basic minimum benchmarks. RDSS has an outlay of ₹ 3,03,758 Crore over 5 years i.e., FY 2021-22 to FY 2025-26. The outlay includes an estimated Government Budgetary Support (GBS) of ₹ 97,631 Crore. The main objectives of RDSS are:

- Reduction of AT&C losses to pan-India levels of 12-15% by FY 2024-25.
- Reduction of ACS-ARR gap to zero by FY 2024-25.
- Improvement in the quality, reliability, and affordability of power supply to consumers through a financially sustainable and operationally efficient distribution sector.

The Scheme comprises of two components:

- Part A: Financial support for Prepaid Smart Metering, System Metering, and Upgradation of Distribution Infrastructure; and
- Part B: Training and capacity building and other enabling and supporting activities.

The scheme is expected to play a major role in improving the financial conditions of DISCOMs.

Power Trading

In India, power is transacted largely through long-term Power Purchase Agreements (PPA) entered between Generating companies and the distribution utilities. A small portion is transacted through various short-term (contract period<1 Year) mechanisms. This includes Day Ahead Market and Real-Time Market (RTM), followed by bilateral contracts (through traders, term-ahead contracts on power exchanges, and directly between DISCOMs) and through Deviation Settlement Mechanism (DSM).

In the financial year 2021-22, around 95% of power generated in the country was transacted through the long-term PPA route and about 5% of the power was transacted through short-term trading mechanisms.

Key Initiatives/Reforms & Regulatory Changes in Power Sector

1. **CERC Regulations**

   a. **CERC Ancillary Services Regulations 2022**

      Notified in January 2022, the salient features of the regulations are:

      - Maintaining the grid frequency close to 50 Hz

- Restoring the grid frequency within the allowable band
- Relieving congestion in the transmission network
- Procurement of Ancillary services will be based on the market-based approach through Power Exchange.

b. **CERC Draft REC Regulations 2022**

CERC issued Draft CERC (Terms and Conditions for Renewable Energy Certificates for Renewable Energy Generation) Regulations, 2022 in Feb'22. Amendment in the extant REC mechanism was done to align it with the emerging changes in the power sector. According to regulations, RE generating station and Captive Power Plants, Distribution licensee, and Open Access consumers will be eligible for issuance of Certificates under certain conditions. A DISCOM or an Open Access consumer, which purchases RE more than its RPO target will also be eligible for the issuance of Certificates.

c. **CERC Draft Deviation Settlement Mechanism and Related Matters Regulations, 2022**

As notified in March 2022, these regulations amend the DSM calculation rules. According to these regulations' charges will be calculated based on percentage deviation (range-based) and have been delinked from grid frequency. Further, the rate for deviation for a time block will be equal to the Weighted Average Ancillary Service Charge.

2. **MOP Rules/Guidelines/Directives**

a. **Electricity (Timely Recovery of Costs due to Change in Law) Rules, 2021**

Notified on 22 October 2021, for timely recovery of the costs due to changes in law and to prevent developers from getting financially stressed. These Rules will help in securing investors' interest as the investment in the power sector largely depends upon timely payments.

b. **Directives on new Environmental Norms**

According to these directives, the impact of operating costs incurred in the implementation of new Environmental Norms is not to be considered for Merit Order Despatch (MOD) till the timelines as mentioned in the MOEF&CC notification dated 31 March 2021. Further, TPPs not complying with new emission norms would be required to pay a penalty and may be kept below the compliant units, in the Merit Order.

c. **Short-term Procurement of Power by Distribution Licensee**

Draft amendments to the guidelines for short-term power procurement through the tariff-based bidding process. According to these guidelines, the procurer is entitled to claim damages if the seller fails to offer contracted power as per the existing agreement. Generators can even be debarred from participating in the Power Exchange and scheduling power in long/medium/short-term contracts in case of complaints by DISCOMs.

d. **Electricity (Transmission System Planning, Development and Recovery of Inter- State Transmission Charges) Rules, 2021**

The objective is to underpin a system of transmission access termed a General Network Access (GNA) in Inter-State Transmission System (ISTS), to empower state distribution & transmission companies to determine transmission requirements & build them. Under the rules, the CEA will prepare a yearly short-term plan on a rolling basis for 5 years and a perspective plan every alternative year on a rolling basis for 10 years. The CTU will prepare a yearly implementation plan for the ISTS system on a rolling basis for up to the next 5 years. Rules also enable transmission capacity to be sold, shared, or purchased by the states and generators.

e. **Timeline for installation of Smart Meters**

In August 2021, the MOP notified timelines for the replacement of existing meters with smart meters with a pre-payment feature. The given timelines for installing Smart Meters are as follows:

By December 2023 for:

- All Union Territories
- Electrical divisions with 50% urban residents and where AT&C losses exceed 15% in the financial year 2019-20
- Other electrical divisions with AT&C losses more than 25% in the financial year 2019-20
- All Block-level government offices
- All industrial and commercial users

By March 2025: All other areas

f. **Guidelines for operationalizing optimum utilization of generating stations as per the requirement in the Electricity Grid**

Issued on 8 October 2021 by MOP, according to these guidelines, if a procurer does not schedule power for any period, from generating station with PPA, more than 24 hours in advance, then the generator is free to sell un-requisitioned power in the power exchanges. The developer and procurers to share gains in a 50:50 ratio.

g. **Revised/New Coal Stocking Norms in Coal-Based Plants**

To ensure sufficient fuel security for coal-based plants and truly reflect the coal stocks positions, existing coal stocking norms have been revised by CEA in December 2021. The revised norms mandate 12 to 17 days of coal stock at pit head stations and 20 to 26 days of coal stock at non-pit head stations with month-wise variation based on coal despatch/coal consumption pattern during the year corresponding to 85% PLF. The power plants are graded as red, yellow, and green for not maintaining the coal stocks; and would be penalized for not maintaining their normative availability due to reduced coal stocks and their fixed charges shall be reduced in a graded manner.

h. **Allowance of sale of surplus coal from captive blocks**

At the end of financial year 2020-21, the Ministry of Coal (MOC) had issued notification of the Mines and Minerals (Development and Regulation) Amendment Act, 2021 allowing the sale of up to 50% coal or lignite, by the lessee of a captive mine, after meeting the requirement of the end-use plant linked with the mine.

In October 2021, MOC has amended Mineral Concession Rules and with these amendments, the government has paved the way for releasing additional coal in the market by greater utilization of mining capacities of captive blocks, which were being only partly utilized owing to limited production of coal for meeting their captive needs.

i. **Empanelment of Third-party sampling agency in addition to M/s CIMFR**

To have additional third-party agencies other than CIMFR, MOP has empanelled M/s S.K. Mitra Pvt. Ltd. for sampling and testing of coal at the loading end, with the Coal Consumer having the choice for taking services from empanelled agencies.

j. **Utilization of Agro-residue for Power Generation & reduce pollution**

Biomass has been recognized as a carbon-neutral fuel and biomass co-firing is a technology recognized by UNFCCC as a measure of reducing greenhouse gas emissions. National Biomass Mission on the use of Biomass is initiated by MOP to institutionalize the use of Biomass as a fuel. The mission will work on logistics, regulatory framework, and research on boiler modification to enable biomass firing.

k. **Electricity (Late Payment Surcharge and Related Matters) Rules, 2022**

Notified on 3 June 2022, the salient features of these rules are as under and supersedes earlier rules on the subject:

- Total outstanding dues including Late Payment Surcharge up to the date of the notification of these rules shall be rescheduled and the due dates re-determined for payment by a distribution licensee in 6 to 48 equated monthly instalments.
- Late Payment Surcharge shall be payable on the payment outstanding after the due date at the base rate of Late Payment Surcharge applicable for the period for the first month of default.
- Rate of Late Payment Surcharge for the successive months of default shall increase by 0.5 percent for every month of delay provided that the Late Payment Surcharge shall not be more than three percent higher than the base rate at any time.
- All payments by a distribution licensee to a generating company or a trading licensee for power procured from it or by a user of a transmission system to a transmission licensee shall be first adjusted towards Late Payment Surcharge and thereafter, towards monthly charges, starting from the longest overdue bill.
- A distribution licensee or other user of transmission system, as the case may be, shall maintain unconditional, irrevocable and adequate payment security mechanism.

3. **RE Promotion**

a. **Electricity (Promotion of generation of Electricity from Must-Run Power Plant) Rules, 2021**

Notified by MOP on 22 October 2021, for promotion of the generation from renewable sources. This will ensure that the consumers get green and clean power and secure a healthy environment for the future generations.

b. **Introduction of Green Day Ahead Market (GDAM)**

Launched on 25 October 2021, GDAM facilitates the accomplishment of green targets as well as supports the integration of green energy in a most efficient, competitive, and transparent manner. The GDAM is within the existing Day-Ahead Market (DAM) structure but creates a separate clearing mechanism and price discovery for renewable and conventional energy sources. It brings transparency to the purchase of green power as well as facilitates the obligated entities to meet their Renewable Purchase Obligation (RPO).

c. **Waiver of ISTS Charges and Losses for Solar & Wind Power**

MOP vide order dated 21 June 2021 has extended the waiver of ISTS charges for transmission of the electricity generated from solar and wind projects commissioned up to 30 June 2025. Moreover, the waiver of ISTS charges shall also be allowed for Hydro Pumped Storage Plant (PSP) and Battery Energy Storage System (BESS).

d. Green Hydrogen Policy 2022

In February 2022, MOP issued Green Hydrogen Policy to facilitate the transition from fossil fuel/fossil fuel-based feedstocks to Green Hydrogen/Green Ammonia, both as energy carriers and as chemical feedstock for different sectors. Key features of the policy are:

- Waiver of ISTS charges: The Inter-State Transmission System (ISTS) charges have been waived for 25 years to the producer of Green Hydrogen and Green Ammonia from projects commissioned before 30 June 2025.
- Open Access (OA): The manufacturing plants will be granted Open Access for sourcing renewable power within 15 days of receipt of the application completed in all respects.
- Banking: Banking to be permitted for 30 days for RE, used for making Green Hydrogen/Green Ammonia

RPO: RE consumed to produce Green Hydrogen/ Ammonia to be counted towards RPO compliance of the consuming entity. RE consumed beyond the obligation of the producer to be counted towards RPO compliance of the DISCOM in whose area the project is located.

e. Scheme for Flexibility in Generation and Scheduling of Thermal/ Hydro Power Stations through bundling with Renewable Energy and Storage Power

MOP repealed the scheme for flexibility in generation and scheduling of thermal/hydro power stations through bundling with standalone renewable energy (RE) projects and storage power, notified by it in November 2021 and has notified a fresh scheme on 12 April 2022. As per the new scheme, any generating company (thermal or hydro) may establish or procure RE from a renewable power plant which is either co-located within the premises or at new locations. In case of RE power plant co-located within the premises of a generating station, the appropriate commission will determine the tariff of RE supplied, provided that such RE power plant will be established through a competitive engineering, procurement, and construction tendering. In all other cases, RE will be procured on a competitive bid basis. Further, no additional transmission charges will be levied for bundling RE power with thermal/ hydro power when the RE power plant is co-located within the premises of a generating station, among others.

f. Trajectory for replacement of Thermal Energy with about 58,000 MU (30,000 MW) of Renewable Energy by 2025-26

MOP has notified, vide notification dated 26 May 2022, the trajectory for the replacement of thermal power and supplement it with Renewable Energy.

As per the notification, approximately 58,000 million units of thermal power (MUs), provided by public, private, and state generating stations, can be replaced with 30,000 MW of renewable electricity by 2025-26.

A capacity utilisation factor (22%) has been considered to determine the amount of renewable energy needed to replace thermal power. The ministry intends to replace coal at 81 thermal power stations in the central, private, and state sectors by 2026.

Notification states that the thermal power plants (TPP) can be operated at the technical minimum of 40 percent in order to accommodate cheaper renewable energy.

All power generation utilities must take the appropriate actions to reach the target. That is, 20% in FY 2023-24, 35% in FY 2024-25 and 45% in FY 2025-26.

OPPORTUNITIES AND THREATS/CHALLENGES

OPPORTUNITIES

India has an unwavering commitment to the preservation of the Environment and reduction in GHG emissions to fight the menace of global warming. Honourable Prime Minister has reemphasized this through the 5 key commitments coined as 'Panchamrit', at COP-26, Glasgow. While two out of the five key commitments announced by the PM, namely,

- India will reach its non-fossil energy capacity of 500 GW by 2030 and
- India will meet 50% of its energy requirements from renewable energy by 2030; have put further emphasis on expediting RE capacity addition.

The other three commitments, namely

- India will reduce the total projected carbon emissions by 1 Billion Tonnes from now onwards till 2030.
- By 2030, India will reduce the carbon intensity of its economy by less than 45%
- India will achieve the target of Net-Zero by the year 2070; provide an opportunity for electrification of other sectors, particularly transportation and manufacturing.

Various policy initiatives to fulfil these commitments, coupled with the increase in power demand due to the recovery of the economy post-pandemic, have provided ample growth opportunities for NTPC as elaborated below.

1. Renewable Energy (RE)

As India targets to achieve 500 GW of RE capacity by 2030, some of the key opportunities in the renewable energy sector are as below.

a. Ultra-Mega Renewable Energy Power Park (UMREPP)

MNRE issued the UMREPP scheme on 15 June 2020 to provide land, upfront to the project developers and facilitate transmission infrastructure for adding RE capacities with solar/wind/hybrid mode and with storage system if required.

b. Energy Storage

CEA has a projected Battery Energy Storage (BES) capacity of 132 GWh as a part of the installed capacity in 2032. The storage requirement for grid balancing and grid support activities is an opportunity for RE deployment and countering intermittency. Further, MOP has issued guidelines for Procurement and Utilization of Battery Energy Storage Systems as part of Generation, Transmission, and Distribution assets, along with Ancillary Services in March 2022 to facilitate the integration of BES systems into the grid.

c. Round the Clock (RTC) power for DISCOMS & C&I

The requirement of round-the-clock RE power is becoming a necessity for the power procurer providing an opportunity for growth of RE with Battery Energy Storage and Pumped Storage Hydro. Large C&I consumers require RTC power to meet their ESG/Sustainability goals and of late for making green hydrogen in bulk.

d. Offshore wind

Offshore wind policy is under preparation and National Institute of Wind Energy (NIWE) has also started to gather wind mast data in the offshore region. NTPC is tying up with ONGC which has rich experience in deep-sea structures for pursuing Offshore wind generation. In contrast to onshore wind, these offer more consistent power generation opportunities.

e. Green hydrogen

The green hydrogen initiatives are a step toward decarbonization, and various pilot projects are being taken up in domains like mobility, chemical, energy storage, and natural gas blending. The green chemical covers green methanol as well as green ammonia. Green hydrogen shall also be used in the future as feedstock for petrochemical, steel making, and different chemical processes. For making green hydrogen, RE power is essential in bulk quantity.

To support the above measures, your Company has made a roadmap for achieving 60 GW of RE-based capacity by 2032, which will be as large as our present thermal capacity. Your Company is also assisting the Government of India in National Solar Mission. Following are the result of the initiatives taken by your Company in this regard, during the financial year 2021-22:

- 3,265 MW RE Capacity won under competitive bidding.
- Won 1st RE Hybrid project of 450 MW.
- 502 MW RE capacity commissioned.
- Commissioned three of the largest floating solar projects in India having a total capacity of 127 MW at Ramagundam, Simhadri, and Kayamkulam.
- A total of 24 GW UMREPPs are in different stages of development in six states. MNRE has accorded approval to NTPC Renewable Energy Limited (NREL) for setting up India's largest UMREPP of 4.75 GW capacity in Kutch. NREL has received LOI from the Government of Rajasthan for development of 10 GW RE Parks/ Projects in Rajasthan.

2. Green Chemicals

The government of India has notified Green Hydrogen and Green Ammonia Policy to facilitate the transition from fossil fuel/fossil fuel-based feedstocks to Green Hydrogen/Green Ammonia, both as energy carriers and as chemical feedstock for different sectors.

Your Company is exploring opportunities to produce green hydrogen using electricity from RE sources for various applications. These are for mobility, production of green fuel (methanol, ammonia), establishing microgrids, natural gas blending with hydrogen for City Gas Distribution (CGD) system, etc. Following initiatives have been taken by your Company in this direction.

- NTPC has awarded India's first green hydrogen-based micro-grid project of 50KW capacity to be located at Simhadri STPP
- Setting up of 10 TPD Flue Gas CO2 to Methanol (FG-CTM) Plant at NTPC Vindhyachal Thermal Power Station
- Setting up of 25 KW Green Hydrogen Based Micro Grid at its NETRA campus

However, cost-effective production of hydrogen alongside its compression and storage technology needs to be developed. Further, the development of high-temperature steam electrolyser and seawater electrolyser is also required.

3. **E-Mobility**

GOI has approved the FAME-II (Faster Adoption and Manufacturing of Hybrid and Electric Vehicles) scheme with a total outlay of ₹10,000 crore over the period 2019-20 to 2021-22. The scheme envisages supporting 10 Lakhs e-2Wheeler, 5 Lakhs e- 3Wheeler, 55,000 e-4Wheelers, and 7,000 e-Buses and the establishment of charging infrastructure across the country. At least one charging station shall be installed in a grid of 3 km x 3 km, charging stations are also proposed on major highways at an interval of about 25 km.

Your Company is envisaging providing hydrogen and pure electric powertrain-based green mobility solutions for public transport which includes providing hydrogen fuel cell-based electric vehicles as well as pure battery-operated electric buses. It is also playing an important role as an e-Mobility 'enabler' by creating a favourable ecosystem.

Your Company's subsidiary NVVN has supplied 40 E-buses to the Department of Transport, Andaman & Nicobar and 90 E-buses to Bengaluru Metropolitan Transport Corporation. Also, tendering for Fuel Cell Electric Vehicles for 5 buses each in Leh and Delhi has been completed and LOA shall be issued shortly. NVVN plans to set up 204 charging stations in 8 cities under FAME-II. Each location would have approx. 4 to 6 nos. chargers i.e., approximately 1000 nos. chargers are planned for installations at the 204 locations. NVVN is also offering complete e-bus solutions to state transport units.

Green mobility in Ladakh and Delhi

Besides Battery based e-mobility, your Company has also planned to enter the green mobility business. Green Hydrogen mobility projects are planned to be set up in Leh and Delhi with Fuel cell electric buses at each location. Delhi has been chosen to set up hydrogen filling stations so that intercity transport using FCEV buses is supported. Through these steps, your Company envisages contributing toward a low-carbon pathway.

4. **Cross Border Power Trading**

The guidelines issued by MOP, and CERC regulations for cross-border trading of power have opened opportunities to export power to neighbouring countries. Presently, India exports electricity to Nepal, Bangladesh, and Myanmar. India imports power from Bhutan but exports power during the lean hydro season.

NVVN has been assigned the role of Nodal Agency for cross-border trading of power by GOI. NVVN has also been nominated as Settlement Nodal Agency (SNA) for the settlement of Grid operation-related charges with neighbouring countries, Bangladesh, Bhutan, Nepal, and Myanmar. Following this, NVVN has signed an SNA agreement with Nepal Electricity Authority and an SNA agreement with Bangladesh Power Development Board shall be signed shortly.

NVVN has signed various Power Purchase Agreements with Bangladesh and Nepal aggregating to 742 MW and up to 150 MW respectively. Also, the agreement to supply 192 MW of power to BPDB through Tripura has been renewed till March 2026. The draft Power Sale Agreement for the supply of 500 MW power from GMR Upper Karnali Hydro Power Project, Nepal to Bangladesh has been finalized between BPDB, GMR, and NVVN.

NVVN has commenced Cross-Border Electricity Trading in the power exchange platform with Nepal Electricity Authority (NEA) through Indian Energy Exchange (IEX). This is a first-of-its-kind initiative by your Company that would help to further expand its cross- border portfolio.

5. **International Business:**

Your Company, by its growing project management and O&M experience with an expanding power generation portfolio, has made a global presence in various countries as below:

a. **Bangladesh-India Friendship Power Company Private Limited**

Your Company has formed a joint venture company with the Bangladesh Power Development Board (BPDB), called Bangladesh India Friendship Power Company Limited (BIFPCL), which is constructing a coal-based power plant of 1,320 MW capacity at Rampal (Khulna) which has been christened 'Maitree Super Thermal Power Plant'.

b. **Trincomalee Power Company Limited (TPCL)**

A 50:50 joint venture between your Company and the Ceylon Electricity Board was formed to undertake the development, construction, establishment, operation, and maintenance of an electricity generating station in Trincomalee in Sri Lanka. TPCL shall develop a 50 MW solar power project (extendable to 100 MW) at Sampur. The Joint Venture & Shareholders' Agreement (JVSHA) has been signed on 11 March 2022. Further, NTPC and CEB, Sri Lanka have signed a JVSHA to incorporate a new 50:50 JV Company for the development of the 300 MW LNG Power Project at Kerwalapitiya, Sri Lanka in 2019, and a supplementary JVSHA was initiated in January 2022.

c. **Your Company is associated as a corporate partner with International Solar Alliance (ISA) and has been awarded the following Project Management Consultancy (PMC) jobs abroad:**

- ISA Solar Park PMC assignment: Appointed as PMC for implementation of a 285 MW solar project in Togo, 500 MW in Mali, 100 MW in Malawi, 50 MW in Niger, 900 MW in Cuba, 500 MW in Paraguay, 410 MW in Ethiopia (including 10 MW floating solar), 400 MW in Zambia, 100 MW in Nicaragua, 1000 MW in DR Congo.

- Promotion of solar-based technologies in the agriculture sector of Myanmar by UNDP Myanmar.
- Consultancy Assignment for setting up of 2 MWp Floating Solar PV Plant at Tamarind Falls Reservoir in Mauritius by CEB Mauritius.

Further, your Company has been registered as an overseas company in Kenya and has opened representative offices in Dubai in the Middle East and Togo in Africa through local representatives. Your Company is also exploring business opportunities in the areas of power generation, PMC, O&M contracting, R&M of power plants, capability building, etc. in the regions such as the Middle East, South East Asia, CIS regions, Latin America and Africa.

6. Inorganic growth opportunities

Your Company is looking for suitable opportunities for the acquisition of stressed power projects subject to techno-commercial viability. In the financial year 2021-22, your Company has submitted the final Resolution Plan for Jhabua Power Limited (1x600 MW), which has been successfully negotiated and submitted to the Committee of Creditors (CoC). The same was approved unanimously during the meeting of CoC. Resolution Professional has filed the Resolution Plan for approval of NCLT.

Your Company is also in discussions with PFC and REC for the possible acquisition of power assets with a minority stake and O&M support under a lender-backed resolution plan.

Your Company through NVVN has purchased a 5% equity stake in M/s PXIL on 31 January 2022 for participating in the Energy Exchange business. Discussions with M/s HPX, the third Energy Exchange is in progress.

7. Efficiency improvement

Your Company has laid major stress on the efficient utilization of resources and the use of technological advancements for improving energy efficiency. Till March 2022, your Company along with its JVs and Subsidiaries, has implemented 17,620 MW capacity based on Super Critical technology with commissioning of 3,580 MW of Supercritical power plant capacity.

Your Company has commissioned the country's first two Ultra-Super Critical (USC) power units with a capacity of 1,320 MW (2 units of 660 MW each) at Khargone. Your Company aims to enhance the overall efficiency of its coal plants, thereby achieving a substantial reduction in CO2 emissions. Adoption of USC parameters shall result in a reduction of CO2 emission (as also others like NOx and SOx) by around 8% when compared to conventional subcritical power plants for every unit of electricity generated.

Further, for reduction of CO2 emission, Torrefied biomass co-firing up to 20% and provision of CCU of up to 10-20% is being kept in the future thermal projects.

For the first-time, Air-Cooled Condenser (ACC) System has been adopted at North Karanpura STPP and Patratu STPP, which will bring a significant reduction in specific water consumption for the projects.

8. Consultancy

NTPC Consultancy Wing has been offering services related to the power sector in India and abroad in the areas like Owner's Engineer Services, Lender's Engineer Services, Project Management & Construction Supervision, O&M, Renovation & Modernization, Quality Assurance, Inspection services, Customized Training & IT related Services, ERP, Procurement, Recruitment, FGD/ De-NOx installations, Renewable energy, coal mining, etc.

THREATS/CHALLENGES/CONCERNS

1. RE Power Capacity Growth

The following factors may increase the input cost leading to challenges for the fast-paced growth of RE projects:

- Imposition of basic customs duty on imported solar cells and modules (starting from 1 April 2022), and an increase in the GST rate for 'specified renewable energy parts,' from 5% to 12% will adversely affect the growth of the RE sector.
- Supply chain disruption for solar PV cells and modules has led to unprecedented volatility in the prices. The present geopolitical situation has further increased the landed prices of modules which have negatively affected the growth of the RE sector.
- The lack of reliable data sources for wind mast data and the unavailability of good wind land locations has not allowed a boost to wind growth in the country.
- There is an increasing trend of unavailability of connectivity for RE projects which is also slowing the RE growth.

Your Company intends to have a long-term contract for sourcing solar modules, to mitigate the effects of fluctuating prices of solar components.

2. Flexible operation of Thermal Units

To integrate variable RE into the grid, coal-based power plants must regulate their generation to maintain grid balance. Therefore, the influx of more RE power in the grid would require many coal-based plants to operate at technical minimum capacity, frequent load fluctuations, and two-shift operations. This will result in lower efficiency at partial load leading to a higher cost of generation. Other factors like the cost of balancing services and reduced life due to flexible operation of the thermal plant would also adversely affect the cost of generation.

Most of the NTPC plants have achieved the ramping rate required for flexible operation and policy advocacy for compensating the additional cost due to flexible operation is also being taken up at various levels.

3. **Environmental Concerns**

The environmental concerns particularly relating to coal-based thermal stations have emerged as a major challenge to the sector. To comply with new standards for water consumption, PM, SOx, NOx and mercury, thermal power plants need to install emission control equipment like FGDs (Flue Gas Desulphurisation), and DSI (Dry Sorbent Injection) along with necessary combustion modifications and retrofitting of ESPs (Electrostatic Precipitator). The cost of retrofitting appropriate systems to meet these norms will have an adverse impact on tariffs. Logistics and supply chain for sourcing the consumables and disposing of the waste generated impose additional challenges.

Further, as per new environment norms, all plants must achieve 100% ash utilization within a 'compliance period' based on their level of Ash utilization during FY'22. Environmental compensation may have to be paid if these norms are not met.

Various initiatives have been undertaken for the development of new products and processes for bulk Ash utilization and as a result novel technologies & products such as Geo Polymeric (GPC) Road, Geo polymeric Pavers & Tetrapod, etc. have been successfully developed and implemented.

4. **Non-availability of Gas**

GOI has accorded higher priority for allocation of domestic gas to CGD (City Gas Distribution) sector. Due to the diversion of allocated gas to the CGD sector as per MOP&NG guidelines, allocated domestic gas (APM/Non-APM) supplies to your Company became Nil w.e.f. 16 June 2021. Further, due to high reserve prices and onerous terms & conditions, the Power sector is not able to tie up new domestic gas from the KG basin.

Gas stations are dependent upon costlier RLNG for declaring capacity/generation, however, the generation schedule on RLNG is not available on a sustained basis.

5. **Coal Shortage**

The unprecedented rise in power demand coupled with constraints in coal transportation and a steep rise in the price of imported coal may result in inadequate coal stock at thermal plants, pushing them below critical levels. Your Company is making all efforts to secure fuel supply from captive coal mines as well as other domestic sources. Import of coal has also been undertaken as per the requirement and in alignment with Government guidelines.

OUTLOOK FOR THE COMPANY

Strategic focus of the Company

Your Company is a market leader in power generation, supplying more than 24% of the Country's electricity supply with around 17% of installed capacity, and thus plays a key role in India's economic activity. As a State-owned utility, your Company's priority is to provide accessible, affordable and reliable power to the consumers and support the country's economic development. Your Company has a diversified portfolio of coal, gas, solar, wind, hydro, and small hydro-based power plants and has integrated both backward and forward, into coal mining and power trading respectively. The stature of your Company is well depicted by its worldwide rankings such as 2nd Independent Power Producer (IPP) in the S&P Global Energy Company rankings, 14th in Fortune India 500 companies (2021) and 11th largest among Indian companies (Global Rank: 484) in Forbes Global 2000 companies (2022).

During the first half of the financial year 2021-22, the Indian economy recovered at a fast pace, but the growth trajectory flattened during the latter half, largely because of the impact of Russia's invasion of Ukraine. As the crisis unfolded, it resulted in the rising prices of Oil, Coal, and other commodities. The coal sector in India also grappled with demand-supply imbalances for reasons which include a sharp rise in power demand, supply disruptions caused by extended monsoon, and a reduction in imports on the back of a steep rise in international prices. Despite these difficulties, your Company has managed to secure sufficient fuel and supply power to the beneficiaries as per their demand. This is also reflected in the fact that during the financial year 2021-22, the average PLF of the NTPC coal stations at 71%, was way higher than the country average of 59%.

Your Company is continuing to pursue its long-term plan with a target to achieve a total installed capacity of 130 GW by 2032. The focus is on RE capacity addition with a roadmap of adding 60 GW by 2032. For consolidation and unlocking the value of the green business, your Company has incorporated a wholly owned subsidiary, NTPC Green Energy Limited (NGEL) on 7 April 2022. The purpose is to hive off the identified Renewable Energy Assets of NTPC along with NREL to NGEL and carrying out monetization of NGEL through IPO or strategic investment route.

Your Company envisages enhancing its current presence in consultancy services, power trading, and ancillary services and has targeted a 25% market share in ancillary services and storage by 2032 under its long-term plan. It is also planning to make a foray into the Hydrogen Economy and production of Green Chemicals (Methanol & Ammonia) supported by research & development and collaboration with OEM/OES, research institutes, etc.

Growth opportunities

Your Company is looking for opportunities to expand and diversify its business in new areas both domestically and globally by working in close coordination with the Indian and global energy community. Some of the key growth opportunities identified by the Company are discussed below.

New Business Areas Initiatives

Your Company is exploring opportunities to produce green hydrogen using electricity from RE sources and using green hydrogen for various applications. These are for mobility, production of green fuel (methanol, ammonia), establishing microgrids, natural gas blending with hydrogen for the City Gas Distribution system, etc. These are the steps of a low carbon transition effort of the Company.

In this regard, the following initiatives are pursued at different locations:

1. Green mobility in Ladakh and Delhi

a. MoU is being planned with UT, Ladakh, and Ladakh Autonomous Hill Development Council (LAHDC) for allied green hydrogen initiatives and setting up hydrogen filling stations etc.

b. Delhi has been chosen to set up hydrogen filling stations so that intercity transport using FCEV buses is supported.

2. Green Hydrogen

a. Design and setup of 25 kW Green Hydrogen Based Micro Grid at its NETRA campus.

b. NTPC has awarded India's first green hydrogen-based micro-grid project of 50KW capacity to be located at Simhadri STPP.

c. NTPC has taken up an initiative of blending green hydrogen in the PNG network of GGL (Gujarat Gas Limited) at NTPC's Kawas station. Green Hydrogen produced by 1 MW floating solar will be blended with PNG in a predetermined proportion and will be used for cooking applications in NTPC Kawas township.

d. Development of Metal Hydride-based energy-efficient hydrogen storage & compression solution by NETRA.

3. Green Chemicals

CO_2 from thermal power plants can be captured and processed in value-added products like Liquid fuels. Following initiatives have been taken up for this

a. Installation of 10 TPD Flue Gas CO_2 to Methanol (FG-CTM) Plant at NTPC Vindhyachal Thermal Power Station.

b. Development of Indigenous Catalyst for hydrogenation of CO_2 to Methanol by NETRA.

Diversification

To diversify its business further, your Company has also signed MOUs with multiple organizations as below.

- MOU signed on 6 January 2022 amongst NTPC, National Investment and Infrastructure Fund (NIIF), and BP for utilization of gas-based capacity by blending with RE power to supply RTC power to Railways, DISCOMs or C&I consumers and participation in RTC tenders with Gas based capacity with BP to bring competitive options for gas supply and NTPC to explore the availability of its gas-based plants like RGPPL.

- MoU signed with IOCL for exploring options for the supply of Low carbon / RE RTC captive power. Evaluation of various options for supplying 600 MW low carbon/RE RTC power to IOCL for its captive need and formulation of a practical roadmap is in progress through a Consultant.

Your Company has floated Global EOIs for exploring the following new business opportunities:

a. CO_2 to Chemicals

EOI was published seeking responses from Industries for setting up CO_2 capture, hydrogen generation, and CO_2 to Methanol production in NTPC Plants. Policy advocacy for Green Methanol manufacturing is being pursued with NITI Aayog. Discussion with M/s Maersk, Denmark for off-taking of Green Methanol is under progress.

b. Replacement of DG set with Hydrogen Fuel Cell

EOI has been floated on 10 June 2021 to set up two pilot projects, a standalone fuel-cell based backup power system at NTPC- EOC and a standalone fuel-cell based microgrid system with hydrogen production using electrolyser at NTPC Guest House at Simhadri. The Fuel cell microgrid project at Simhadri is awarded and under implementation.

c. Partnering with Battery Manufacturers

Global EOI floated for collaborating/associating in Advanced Chemistry Cell Battery Manufacturing facility in India. Four responses were received from M/s Delectrik, M/s Lucas TVS, M/s BASF, and M/s NRPS which are being discussed for future opportunities.

Your Company is exploring new business opportunities in different areas as summarised below:

a. Industrial Parks

NTPC Kudgi - Kudgi is being developed as the pilot industrial park for energy intensive industries as it received a maximum response from industries in the EOI floated in September 2020. The award of contract for the development of common infrastructure is at an advanced stage and direct power supply from NTPC Kudgi to Kudgi Industrial Park is being pursued. The park is envisaged to host industries from early 2023.

Industrial Park at Pudimadaka - Opportunity is being explored for setting up Industrial Park / Hydrogen Ecosystem Park on available land at Pudimadaka in collaboration with the State Government and bidding for a manufacturing zone scheme of MOP by forming an SPV.

b. Bamboo-based Bio-Refinery at Bongaigaon

An opportunity is being explored to set up Bamboo based Bio-Refinery project at the Bongaigaon Thermal power station. M/s Engineers India Limited (EIL) has been engaged as a consultant for a techno-economic feasibility study. Evaluation of Expression of Interest floated by M/s EIL, for providing the technical know-how for the project, is in progress.

c. Distribution Business Opportunities

NTPC through its wholly owned Subsidiary NESCL is participating in the Bid process for the privatization of UT DISCOMs with due diligence completed in-house. NTPC/ NESCL Bid emerged as a competitive bidder in its bid submitted for the privatization of Chandigarh.

NTPC is also exploring the opportunity for partnering with State DISCOMs for supporting the distribution sector.

d. Initiatives for Start-Up Eco-system

Your Company is working towards developing a holistic Innovation and Start-Up Ecosystem, looking for innovative and out-of-the-box solutions to its existing problems. An MoU has been signed with i-Hub (Gujarat Student Start-up and Innovation Hub) to organize open innovation challenge focused on the power sector and allied domains for the problems being faced by NTPC.

In another pursuit, Grand Energy Challenge for NTPC was launched by Start-up India at their portal on 17 December 2021. For 3 problem statements identified by the various fraternities across NTPC, a total of 125 applications were received by Start-up India till 31 January 2022. Several evaluation rounds were conducted by a joint committee of NTPC, Start-up India, and experts from Academia and Industry. NTPC is looking forward to offering mentoring support to these shortlisted Innovators, and Start-ups and facilitating them in implementing or piloting their products/solutions.

e. Commercial operation of Desalinated Distillate/ Mineral Water generated at NTPC Simhadri

NETRA, the R&D wing of NTPC, has set up a demonstration Plant of Water Treatment to convert Seawater into distillate/ Mineral water, based on waste Flue Gas heat utilization. The Water Treatment Plant (WTP) has a capacity of producing 120 TPD of Desalinated Water and is now fully operational. The packaged Drinking water plant has been set up by IRCTC at Simhadri under MOA with NTPC. The plant has been commissioned while BIS and FSSAI licenses are awaited. Commercial production is likely to commence in June 2022 after receipt of licenses.

f. Setting up Energy Intensive Chemical Manufacturing Plants at NTPC Stations

M/s Industrial Development Services (IDS) carried out a market survey for Chlorine-based chemical industries in the Southern & Western Region. Based on the Market study Solapur was identified as an opportune site for Chemical Park. Caustic Soda manufacturers are being contacted for possible collaboration.

Fuel Security

Your Company has achieved fuel security through its long-term coal supply agreements. The materialization of Annual Contracted Quantity was 94.2% in the financial year 2021-22. Your Company's reliance on imported coal is negligible, thereby contributing to the reduction in the cost of power. During the financial year 2021-22, approximately 1.1% of your Company's coal consumption was from imported sources. Imported coal consumed during the year amounts to ₹ 3,029.86 crore in FY 2021-22 as compared to ₹ 719.09 crore imported coal consumed in FY 2020-21, on a consolidated basis.

In line with the MOC amendment in Mines and Minerals (Development and Regulation) Amendment Act, 2021, allowing the sale of coal, by the lessee of a captive mine for up to 50% of the total coal produced in a financial year, after meeting the requirement of the end-use plant linked with the mine, NTPC has entered into a bilateral MoU with NLC India Ltd for purchase of surplus coal from their Talabira II & III captive mine.

Your Company has started coal production from three mines i.e., Pakri-Barwadih, Dulanga & Talaipalli. Total coal production during the financial year 2021-22 stood at 14.02 MMT. Cumulative production till 31 March 2022 stands at 46.39 MMT (34.52 MMT from Pakri-Barwadih, 10.45 MMT from Dulanga, and 1.42 MMT from Talaipalli). Mining operations started in April 2022 in the Chatti-Bariatu coal mine. Other mines i.e., Kerandari & Badam are in different stages of development and the process for appointment of MDO (Mine Developer cum Operator) is in progress. Development activities are also going on in the Banhardih mine, allocated to Patratu Vidyut Utpadan Nigam Ltd. (PVUNL), a JV company incorporated between your Company & Government of Jharkhand. With the start of production from the remaining coal mines, your Company aspires to become one of the largest captive coal mining company in the country.

NTPC has also incorporated a wholly owned subsidiary company, NTPC Mining Ltd. (NML) for its coal mining business. The Ministry of Coal (MOC) is yet to allow for the transfer of the mines, allotted to NTPC under the CM (SP) Act & MMDR Act, to NML. NTPC requested the MOP to pursue with MOC for transfer of all coal blocks of NTPC to NML considering the proposal as a special dispensation. MOP also requested the same from the MOC.

Renewable Energy

Renewable energy is the central focus of your Company. To be in step with the ambitious targets of the GOI, the Company is attempting to explore all avenues for renewable capacity in addition to looking beyond conventional large-scale solar and wind projects. Your Company is also going ahead with floating solar at reservoirs of its projects which is a step toward saving land and water conservation by reducing water surface evaporation. Your Company is also utilizing roofs of power plant buildings for solar power generation. As of 31 March 2022, your Company has a commissioned capacity of 1,852 MW. The projects developed under own capacity and through developer mode are described below.

Projects under Own Capacity Addition

a. Commissioned Projects

1,852 MW (including 192 MW owned by the subsidiaries). It covers solar (ground and floating), wind, and small hydro installations spread over the country.

b. Projects Under Implementation

3,440 MW (Ground/Floating solar & wind) projects are spread across UP, Rajasthan, Telangana, Tamil Nadu, Maharashtra, Gujarat, and Kerala.

Developer Mode Projects

MNRE has accorded its approval to the Company to act as a designated agency for the issue of tenders for setting up renewable power projects covering wind and solar under developer mode. Under this, 4,783 MW of RE projects has been commissioned and 790 MW of RE projects are under implementation as of 31 March 2022.

Your Company is pursuing its initiatives for hydrogen technologies through RE and it is envisaged that the RE capacity of NTPC shall power the future hydrogen initiatives. The green hydrogen, thus generated, shall be utilized for various applications ranging from mobility to green chemicals to energy storage.

Realisation

Your Company has realized 100% of its current bills raised for energy supplied in the financial year 2021-22. Your Company has also successfully achieved the target for the realization of dues set by the Government of India (GOI) for energy supply in the financial year 2021-22. Most of the beneficiaries have made timely payments and availed of attractive rebates as per Company's Rebate Scheme.

Your Company has in place a robust payment security mechanism in the form of Letters of Credit (LC) backed by the Tri-Partite Agreements (TPA) signed by the State Governments, the Government of India (GOI) and the Reserve Bank of India (RBI). As per the TPAs, any default in payment by the State-owned DISCOMs can be recovered directly from the account of the respective State Governments in association with RBI. The original TPAs signed were valid up to October 2016. As per the decision of the Union Cabinet and as agreed by the various States and the RBI, these TPAs have been extended for a further period of 10 to 15 years. As of now, 29 out of a total of 31 States/UTs have signed the TPAs extension documents. The signing of TPAs extension by remaining States is being taken up.

Leveraging on Strengths for Delivering Better Future Performance

Your Company derives its competitive edge from its strengths and is confident of meeting future challenges in the sector.

a. Project Management

Your Company has adopted an integrated system for planning, scheduling, monitoring and controlling of approved projects under implementation. To coordinate and synchronise all the support functions of project management it relies on a three-tiered project management system known as the Integrated Project Management Control System (IPMCS), which integrates its engineering management, contract management and construction management control centres. The IPMCS addresses all stages of project implementation, from concept to commissioning. The IPMCS system provides regular monitoring, analysis of variations identified both within the external and internal control parameters and taking managerial action based on "Management by Exception" philosophy.

In addition to above, in order to make monitoring of projects more effective, your Company is now adopting Integrated Software monitoring tool for integrating progress of Engineering, Supplies and Erection at one place and capturing progress online. Features like mobile app based updation of progress and role-based access make the tool more user-friendly as it enables regular updation of progress and taking timely remedial actions. In a changing global scenario, your company has added various other project management tools which are Online CAPEX monitoring system/ Digital Hindrance register/ Digital Chronology register/ Safety Register etc.

b. Operational Efficiency

The operating performance of your Company has been consistently above the national average. During the financial year 2021-22, PLF of Company's coal stations was 70.74% against All India PLF of Coal stations at 58.76%. Over the years, the Company has consistently operated at much higher operating efficiency as compared to All India operating performance.

The total generation of the Company was 299.18 BUs during the financial year 2021-22 as against 270.91 BUs in the financial year 2020-21, thereby registering a growth of 10.44% over previous year.

In order to achieve cost-competitive, environment friendly, efficient & reliable power generation, the Company has adopted following strategies:

- To improve reliability of the units and to reduce the forced outages, close monitoring of start-ups & shutdowns and root cause analysis of all the outages is carried out and action plan generated to mitigate the outages.
- Continuous real time monitoring of critical parameter deviations (both reliability & efficiency related) and implementation of action plan to mitigate the deviations.

- Optimizing planned outage period through implementation of Overhaul Preparedness Index (OPI), ensuring all quality checks and time bound monitoring of each activity.

- Improvement in Heat Rate & Auxiliary Power Consumption achieved by parametric optimization, specially at part loads by operation of units in sliding pressure mode & optimizing excess air.

- To minimize efficiency losses in stations, Plant Information (PI) system-based applications for real time efficiency & loss calculations.

- Structured & regular energy audits to identify potential areas of improvement in APC reduction and Implementation of action plans.

- To reduce cost of generation steps have been taken to reduce Energy Charge Rate (ECR) by swapping of coal supplies and optimizing operations.

- Use of Comprehensive Performance Evaluation Matrix (PEM) for relative evaluation of the performance of various power plants to create an environment of in-house challenge and competition. The parameters are reviewed annually to include new parameters commensurate with market dynamics and developments in power sector.

- Adopting advanced technologies in new units e.g., commissioning of super critical units, which improves system efficiency & reduces carbon footprint and retrofits of DeNOx & DeSOx technologies in older units.

- Renovation & modernization for reduction of greenhouse gas emissions, effective modernized control systems for environment friendly economic generation and particulate emission control.

- Water conservation measures like increasing Cycle of Concentration (CoC) of circulating water, implementation of zero effluent discharge, increasing ash water recirculation, implementation of high concentration ash-slurry discharge, implementation of dry evacuation of ash etc.

- Strict compliance of Grid Code, Restricted Governor Mode Operation (RGMO) implementation, Automatic Generation Control and other system requirements.

c. Human Resources

Your Company has a highly talented team of committed professionals and has been able to induct, develop and retain the best talent. Your Company has a very low executive attrition rate. The HR vision of your Company is "To enable its people to be a family of committed world class professionals, making NTPC a learning organisation." Your Company is deeply passionate about ensuring the holistic development of all its employees as distinct individuals and good citizens. Competence building, Commitment building, Culture building and Systems building are the four pillars on which HR Systems of your Company are based.

Your Company has been conferred with various HR Awards over the years by reputed institutions and consistently features among the "Great Places to Work for". The commitment of the employees is also reflected in consistent improvement of financial parameters such as sales per employee, value added per employee etc.

d. Sound Corporate Governance

Your Company's corporate governance practices have been recognised and awarded at several forums. Your Company believes in following the highest standards of transparency, integrity and accountability. It enjoys the confidence of all stakeholders alike. Your Company not only believes in adopting best practices but also includes public interest in its corporate priorities and has developed extensive social outreach programmes.

e. Robust Financials and Systems

Your Company has strong financial systems in place. It believes in prudent management of its financial resources and strives to reduce the cost of capital. Your Company enjoys highest credit-rating assigned by CRISIL, ICRA, CARE and India Ratings. The foreign ratings by Fitch, S&P & Moody's are at par with sovereign ratings. It has robust financials leading to strong cash flows which are being progressively deployed in generating assets. Your Company has a strong balance-sheet coupled with low gearing and healthy coverage ratios. As a result, your Company has been able to raise resources for its capital expansion projects at very competitive interest rates in domestic as well international market.

RISK MANAGEMENT

The growing opportunities in the power sector equally possess certain strategic, functional, and operational risks. As your Company expands and diversifies it continues to focus on a system-based approach to Risk Management. To build a business portfolio that matches market opportunities and achieves the long-term objectives, Enterprise Risk Management has been embedded in the strategy and business processes of your Company.

This is reflected in the elaborate Enterprise Risk Management framework established at your Company, set up in compliance with provisions of the Companies Act and SEBI regulations. Risk Management Committee (RMC), a Functional Director level Sub-Committee of the Board, is in place. Further to bring an external perspective, the committee has been reconstituted in May 2021 to include one Independent Director.

The RMC is responsible for identifying, accessing, and reviewing the risks and formulating action plans and strategies to mitigate risks on a short-term as well as long-term basis. Our assessment of risk considers both short and long-term risks, including how these risks are changing, together with emerging risk areas. The

RMC has identified 26 risks, out of which 9 have been classified as the top risks for the Company:

1. Threats to the safety & security of people & property
2. Compliance with emission, ash utilization, and regulatory norms
3. Legal risks
4. Delay in the execution of projects
5. Difficulties in the acquisition of land
6. Inadequate fuel supply
7. Risks pertaining to hydro projects
8. Risks related to coal mining
9. Sustaining efficient plant operations

For each of these top risks, the ERM framework details out have controls and responsibility centres for managing and mitigating the risk. The risks are regularly monitored through reporting of key risk indicators of identified risks. The risk assessment and the action required to be taken are reported regularly to the Board of Directors.

Internal Control

To ensure regulatory and statutory compliances as well to provide highest level of corporate governance, your Company has robust internal systems and processes in place for smooth and efficient conduct of business and complies with relevant laws and regulations. A comprehensive delegation of power exists for smooth decision making which is periodically reviewed to align it with changing business environment and for speedier decision making. Elaborate guidelines for preparation of accounts are followed consistently for uniform compliance. To ensure that all checks and balances are in place and all internal control systems are in order, regular and exhaustive internal audits are conducted by experienced firms of Chartered Accountants in close co-ordination with the Company's own Internal Audit Department. Besides, the Company has two committees of the Board viz. Audit Committee and Committee on Management Controls to keep a close watch on compliance with Internal Control Systems.

A well-defined internal control framework has been developed identifying key controls. The supervision of operational efficiency of designed key controls is done by Internal Audit. The framework provides an elaborate system of checks and balances based on self-assessment as well as audit of controls conducted by Internal Audit at the process level. Gap tracking report for operating efficiency of controls is reviewed by the management regularly and action is taken to further strengthen the Internal Control System by further standardizing systems & procedures and implementing process changes, wherever required, keeping in view the dynamic environment in which the Company is operating. The Internal Control Framework system presents a written assessment of effectiveness of Company's internal control over financial reporting by the process owners to facilitate certification by CEO and CFO and enhances reliability of assertion.

FINANCIAL DISCUSSION AND ANALYSIS

A detailed discussion and analysis on financial statements is furnished below. Reference to Note(s) in the following paragraphs refers to the Notes to the standalone financial statements for the financial year 2021-22 placed elsewhere in this report.

A. Financial position

The items of the Balance Sheet are as discussed under:

1 Property, plant & equipment (PPE), Capital work-in-progress, Intangible assets and Intangible assets under development (Note-2 to Note-5)

The PPE, Capital work-in-progress, Intangible assets and Intangible assets under development of the Company are detailed as under:

(₹ Crore)

Particulars	As at March 31		% Change
	2022	2021	
Gross block of PPE (Note-2)	2,38,390.91	2,11,557.37	13%
Net block of PPE (Note-2)	1,79,580.37	1,63,892.12	10%
Capital work-in-progress (Note-3)	68,598.66	75,343.60	(9)%
Net block of Intangible assets (Note-4)	485.41	556.74	(13)%
Intangible assets under development (Note-5)	98.47	94.90	4%

During the year, total gross block of PPE increased by ₹26,833.54 crore over the previous year i.e., by 13%. This was mainly because of declaration of commercial operation of 2,871.68 MW capacity during the financial year 2021-22 and capitalisation of some other assets. Further, net block has increased by 10% and capital work-in-progress has decreased by 9%.

2 Non-current financial assets (Note-6 to Note-9)

(a) Investments in subsidiary and joint venture companies (Note-6)

The break-up of investments in subsidiary and joint venture companies is as follows:

(₹ Crore)

Particulars	As at March 31	
	2022	2021
Investment in Subsidiaries	21,904.89	20,748.77
Investment in Joint ventures	7,873.70	7,279.80
Total	**29,778.59**	**28,028.57**

During the year, investments in subsidiary and joint venture companies increased by 6%. The increase/ (decrease) in the Company's investment in the subsidiary and joint venture companies is as under:

(₹ Crore)

Name of Company	Amount
Hindustan Urvarak and Rasayan Ltd.	497.66
NTPC Renewable Energy Ltd.	436.12
Patratu Vidyut Utpadan Nigam Ltd.	350.00
Nabinagar Power Generating Co. Ltd.	310.00
Bangladesh-India Friendship Power Co. Pvt. Ltd.	86.78
Kanti Bijlee Utpadan Nigam Ltd.	60.00
Meja Urja Nigam Private Ltd.	25.76
Total investment during the year	**1,766.32**
Less: Provision for impairment made during the year	
National High Power Test Laboratory Private Ltd.	16.16
Trincomalee Power Company Ltd.	0.14
Net increase in Investment	**1,750.02**

(b) Other Non-current financial assets (Note-7 to Note-9)

Other Non-current financial assets mainly comprise of investment in equity instruments, loans to related parties, employees & others, share application money, claims recoverable, finance lease receivables and mine closure deposit.

(₹ Crore)

Particulars	As at March 31		% Change
	2022	2021	
Other investments (Note-7)	102.48	97.08	6%
Loans (Note-8)	1,288.40	1,498.12	(14)%
Other financial assets (Note-9)	1,017.98	1,188.84	(14)%
Total	**2,408.86**	**2,784.04**	**(13)%**

Investments mainly comprise of investment in equity instruments of PTC India Ltd. The carrying value of equity instruments of PTC India Ltd. has increased from ₹93.30 crore as at 31 March 2021 to ₹98.70 crore as at 31 March 2022 due to increase in market value of shares of PTC India Ltd.

Loans have decreased from ₹1,498.12 crore as at 31 March 2021 to ₹1,288.40 crore as at 31 March 2022. Decrease in loans is mainly due to decrease in loans to subsidiary and joint venture companies from ₹1,001.36 crore as at 31 March 2021 to ₹782.08 crore as at 31 March 2022.

Other financial assets include share application money pending allotment in subsidiary companies, claims recoverable, finance lease receivables and mine closure deposit.

(₹ Crore)

Other financial assets (Note-9)	As at March 31		% Change
	2022	2021	
Share application money pending allotment in subsidiary companies	-	96.00	(100)%
Claims recoverable	696.19	702.27	(1)%
Finance lease receivables	281.93	366.88	(23)%
Mine closure deposit	39.86	23.69	68%
Total	**1,017.98**	**1,188.84**	**(14)%**

Claims recoverable includes ₹696.19 crore (31 March 2021: ₹700.30 crore) towards the cost incurred up to 31 March 2022 in respect of one of the hydro power projects, the construction of which has been discontinued on the advice of the Ministry of Power (MOP), GOI which includes ₹456.85 crore (31 March 2021: ₹449.88 crore) in respect of arbitration awards challenged by the Company before Hon'ble High Court of Delhi. In the event the Hon'ble High Court grants relief to the Company, the amount would be adjusted against Current liabilities - Provisions - Provision for arbitration awards (Note-34). Management expects that the total cost incurred, anticipated expenditure on the safety and stabilisation measures, other recurring site expenses and interest costs as well as claims of contractors/vendors for various packages for this project will be compensated in full by the GOI. Hence, no provision is considered necessary.

3 Other non-current assets (Note-10)

Total other non-current assets as at 31 March 2022 were ₹12,083.22 crore as against ₹13,790.02 crore as at 31 March 2021. The other non-current assets as at 31 March 2022 and 31 March 2021 and the changes therein are as follows:

(₹ Crore)

Other non-current assets (Note-10)	As at March 31		% Change
	2022	2021	
Capital advances	5,524.19	5,336.03	4%
Security deposits	305.35	362.04	(16)%
Advances to contractors and suppliers (other than capital advances)	2,014.03	2,137.08	(6)%
Advance tax and tax deducted at source (net of provision for tax)	2,633.12	3,936.04	(33)%

Other non-current assets (Note-10)	As at March 31		% Change
	2022	2021	
Deferred foreign currency fluctuation asset	1,480.72	1,889.55	(22)%
Others	125.81	129.28	(3)%
Total	**12,083.22**	**13,790.02**	**(12)%**

Other non-current assets consist of advances for capital expenditure, advances other than capital advances, security deposits, advance tax net of provision for tax, deferred foreign currency fluctuation asset, deferred payroll expenditure etc. Other non-current assets have decreased by ₹1,706.80 crore. The decrease is mainly due to decrease in advance tax net of provision for tax from ₹3,936.04 crore to ₹2,633.12 crore.

Further, Foreign exchange rate variation (FERV) on foreign currency loans and interest thereon is recoverable from/ payable to the customers in line with the Tariff Regulations. Keeping in view the opinion of the EAC of ICAI, the Company is recognizing deferred foreign currency fluctuation asset by corresponding credit to deferred income from foreign currency fluctuation in respect of the FERV on foreign currency loans adjusted in the cost of property, plant and equipment, which is recoverable from the customers in future years. Accordingly, an amount of ₹1,480.72 crore has been accounted under this head up to 31 March 2022 (31 March 2021: ₹1,889.55 crore).

4 Current assets (Note-11 to Note-18)

The current assets as at 31 March 2022 and 31 March 2021 and the changes therein are as follows:

(₹ Crore)

Particulars	As at March 31		Y o Y	% Change
Current assets	2022	2021	Change	
Inventories (Note-11)	9,487.21	9,178.94	308.27	3%
Investments (Note-12)	-	499.99	(499.99)	(100)%
Trade receivables (Note-13)	22,293.32	22,976.26	(682.94)	(3)%
Cash and cash equivalents (Note-14)	17.04	90.05	(73.01)	(81)%
Bank balances other than cash and cash equivalents (Note-15)	2,438.55	2,248.41	190.14	8%
Loans (Note-16)	477.70	416.82	60.88	15%
Other financial assets (Note-17)	5,291.13	3,604.87	1,686.26	47%
Other current assets (Note-18)	8,869.30	8,527.87	341.43	4%
Total current assets	**48,874.25**	**47,543.21**	**1,331.04**	**3%**

(a) Inventories (Note-11)

Inventories as at 31 March 2022 were ₹9,487.21 crore as against ₹9,178.94 crore as at 31 March 2021. Inventories mainly comprise of coal and stores & spares, which are maintained for operating plants. Value of coal inventory decreased from ₹3,539.68 crore as at 31 March 2021 to ₹2,819.54 crore as at 31 March 2022. However, stores and spares inventory has increased from ₹4,335.60 crore as at previous year end to ₹4,946.65 crore, mainly on account of newly declared commercially operative units.

(b) Current Investments (Note-12)

Current investments as at 31 March 2022 were ₹ Nil as against ₹499.99 crore as at 31 March 2021. Current investments comprised of Liquid Mutual Fund holdings as at 31 March 2021.

(c) Trade receivables (Note-13)

As on 31 March 2022, trade receivables amounted to ₹22,293.32 crore (including debts which have been impaired for) and the corresponding trade receivables as on 31 March 2021 were ₹22,976.26 crore. Trade receivables include unbilled revenue for the month of March amounting to ₹9,482.38 crore (31 March 2021: ₹9,291.35 crore) billed, net of advance, to the beneficiaries after 31 March. Excluding the unbilled revenue trade receivables are equivalent to ~40 days of sales as on 31 March 2022 in comparison to ~50 days of sales as on 31 March 2021.

Based on arrangements between Company, banks and beneficiaries, the bills of the beneficiaries have been discounted. Accordingly, trade receivables have been disclosed net of bills discounted amounting to ₹6,892.03 crore (31 March 2021: ₹16,295.05 crore).

(d) Cash and cash equivalents (Note-14) & Bank balances other than cash and cash equivalents (Note-15)

Cash and cash equivalents & Bank balances other than cash and cash equivalents have increased from ₹2,338.46 crore as at 31 March 2021 to ₹2,455.59 crore as at 31 March 2022.

(e) Loans (Note-16)

Loans have increased from ₹416.82 crore as at 31 March 2021 to ₹477.70 crore as at 31 March 2022. The main reason for this is increase in loans to joint venture and subsidiary companies which have increased from ₹168.80 crore as at 31 March 2021 to ₹220.65 crore as at 31 March 2022.

(f) Other financial assets (Note-17)

Other current financial assets mainly include advances to subsidiary and joint venture companies and other related parties, employees & others, claims recoverable, contract assets and finance lease receivables. Other current financial assets have increased from ₹3,604.87 crore as at 31 March 2021 to ₹5,291.13 crore as at 31 March 2022. This increase is mainly due to increase in Contract assets from ₹2,987.87 crore as at 31 March 2021 to ₹4,649.50 crore as at 31 March 2022.

Contract Assets represent Company's right to consideration in exchange for goods and services that the Company has transferred / provided to customers when that right is conditioned on matters, other than passage of time, like receipt of income tax assessment orders, truing up orders from CERC etc. and are net of credits to be passed to customers.

(g) Other current assets (Note-18)

Other current assets comprise of security deposits, advances to related parties, contractors and suppliers, short term advances to employees, claims recoverable etc.

(₹ Crore)

Particulars	As at March 31		% Change
	2022	2021	
Security deposits (unsecured)	1,988.92	1,773.91	12%
Advances	2,857.29	2,981.55	(4)%
Claims recoverable	3,892.66	3,602.31	8%
Others	130.43	170.10	(23)%
Total	**8,869.30**	**8,527.87**	**4%**

Other current assets have increased from ₹8,527.87 crore as at 31 March 2021 to ₹8,869.30 crore as at 31 March 2022 mainly due to increase in Security deposits and Claims recoverable.

Claims recoverable includes claims amounting to ₹1,874.72 crore (31 March 2021: ₹1,747.94 crore) made against coal companies in accordance with the fuel supply agreements mainly towards grade slippages. Claims recoverable also includes claims against Railways amounting to ₹1,918.62 crore (31 March 2021: ₹1,752.74 crore) mainly towards diversion of coal rakes. These are regularly reviewed and reconciled with the Coal Companies and Indian Railways periodically.

5 Regulatory deferral account debit balances (Note-19)

Expense/income recognized in the Statement of Profit & Loss to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized as 'Regulatory deferral account balances'. Regulatory deferral account balances are adjusted from the year in which the same become recoverable from or payable to the beneficiaries.

Considering the methodology followed by the CERC for allowing impact of the previous pay revision, various tariff orders issued by the CERC under Regulations, 2014 and the provisions related to the change in law of CERC Tariff Regulations, 2014, a regulatory asset has been created (Regulatory deferral account debit balance) towards the increase in O&M expenditure due to the pay revision. This was taken up with CERC through truing up tariff petition. CERC has been allowing the same progressively and during the year, the expenditure has been allowed in respect of few stations. Balance orders are expected in the coming years. Accordingly, an amount of ₹272.80 crore as at 31 March 2022 has been accounted for as 'Regulatory deferral account debit balance' (31 March 2021: ₹759.40 crore).

Further, exchange differences arising from settlement/ translation of monetary items denominated in foreign currency to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized on an undiscounted basis as 'Regulatory deferral account debit/credit balance' by credit/debit to 'Movements in Regulatory deferral account balances' and adjusted from the year in which the same becomes recoverable from or payable to the beneficiaries. Accordingly, an amount of ₹109.36 crore as at 31 March 2022 has been accounted for as 'Regulatory deferral account debit balance' (31 March 2021: ₹874.92 crore).

CERC Regulations provide that deferred tax liability up to 31 March 2009 shall be recovered from the beneficiaries as and when the same gets materialized. Further, for the period commencing from 1 April 2014, CERC Tariff Regulations provide for grossing up of the return on equity based on effective tax rate for the financial year based on the actual tax paid during the year on the generation income. The Company has recognized a regulatory deferral account debit balance for such deferred tax liabilities (net) in the financial statements. Regulatory deferral account debit balance for deferred tax liability for the period commencing from 1 April 2014 will be reversed in future years when the related deferred tax liability forms part of current tax. Accordingly, an amount of ₹8,992.68 crore as at 31 March 2022 (31 March 2021: ₹7,567.94 crore) has been accounted for as 'Regulatory deferral account debit balance'.

The petition filed by the Company before CERC for reimbursement of the expenditure on transportation of ash has been favorably considered by CERC vide order dated 5 November 2018 and it was allowed to reimburse the actual additional expenditure incurred towards transportation of ash in terms of MOEF notification under change in law, as additional O&M expenses, w.e.f. 25 January 2016, subject to prudence check. Keeping in view the above, regulatory asset has been created towards ash transportation expenses in respect of stations where there is shortfall in revenue from sale of ash over and above ash transportation expenses. Accordingly, an amount of ₹3,214.13 crore as at 31 March 2022 (31 March 2021: ₹1,830.65 crore) has been accounted for as 'Regulatory deferral account debit balance'.

CERC Regulations provide that the capital expenditure in respect of existing generating station incurred /projected to be incurred, inter-alia, towards liabilities to meet award of arbitration (i) within the original scope of work after the COD up to the cut-off date; (ii) within the original scope of work and after the cut-off date; and (iii) beyond the original scope of work, will be admitted by CERC subject to prudence check. Keeping in view the above, regulatory deferral account debit balance has been accounted amounting to Nil as at 31 March 2022 (31 March 2021: ₹110.81 crore). 'Regulatory deferral account debit balance' amounting to ₹110.81 crore has been reversed based on assessment of its recoverability.

The regulatory assets recognized in the books to be recovered from the beneficiaries in future periods are as follows:

(₹ Crore)

Particulars	Regulatory deferral account debit balances
A. Opening balance as on 1 April 2021	11,143.72
B. Additions during the year	1,808.25
C. Amount realized/recognised during the year	(218.42)
D. Regulatory deferral account balances recognized in the statement of profit and loss (B+C)	1,589.83
E. Adjustments during the year	(144.58)
F. Closing balance as on 31 March 2022 (A+D+E)	12,588.97

The Company expects to recover the carrying amount of regulatory deferral account debit balance over the life of the projects.

6 Total equity (Note-20 & Note-21)

The total equity of the Company at the end of financial year 2021-22 increased to ₹1,28,051.07 crore from ₹1,18,985.49 crore in the previous year, an increase of 8%. Major reasons for the same are tabulated below:

(₹ Crore)

Particulars	Total Equity
Opening balance as on 1 April 2021	1,18,985.49
Profit for the year	16,111.42
Other comprehensive income and other adjustments to reserves	(112.72)
Dividend paid during the year	(6,933.12)
Balance as on 31 March 2022	**1,28,051.07**

The President of India, acting through the Ministry of Power, holds 495,53,46,251 shares constituting 51.10% of total equity shares and balance 474,13,19,883 i.e., 48.90% equity shares are publicly held as at 31 March 2022.

The increase in total equity resulted in book value per share rising to ₹132.06 from ₹122.71 as at the end of previous year.

7 Non-current and current liabilities (Note-22 to Note-35)

Details of non-current and current liabilities are discussed below:

a. Non-current financial liabilities-Borrowings (Note-22):

Total non-current borrowings as at 31 March 2022 were ₹1,64,015.82 crore in comparison to ₹1,60,756.45 crore as at 31 March 2021. Current maturities out of non-current borrowings have been shown under current financial liabilities. Details of the total borrowings are as under:

(₹ Crore)

Particulars	As at March 31	
	2022	2021
Non-current financial liabilities-Borrowings (Note-22)	1,47,374.75	1,50,509.00
Current maturities of non-current borrowings included in current financial liabilities-Borrowings (Note-29)	16,641.07	10,247.45
Total borrowings*	**1,64,015.82**	**1,60,756.45**

*Includes adjustments for transaction costs on borrowings as per Ind-AS.

Total non-current borrowings have increased by 2% over the previous financial year. Debt amounting to ₹15,034.80 crore was raised during the financial year 2021-22. The amount raised through term loans, bonds and foreign currency borrowings is used for capital expenditure, refinancing, recoupment of capital expenditure and other general corporate purposes.

Details in respect of proceeds and repayment of borrowings for the financial year 2021-22 are as under:

(₹ Crore)

Source (Principal Amount)	Debt raised	Repayment	Net
Rupee term loans	3,332.34	4,089.37	(757.03)
Domestic bonds	8,171.00	1,194.50	6,976.50
Foreign borrowings	3,531.46	6,061.50	(2,530.04)
Total	**15,034.80**	**11,345.37**	**3,689.43**
FERV on foreign borrowings			(427.35)
Transaction costs			(2.71)
Total			**3,259.37**

Rupee Term loans: Banks and domestic financial institutions continued to support the capex program of the Company by extending term loans for financing the on-going capacity expansion plans. During the financial year 2021-22, agreements for term loans of ₹4,500 crore were entered into with various banks. An amount of ₹3,332.34 crore was drawn from domestic banks & financial institutions during the year and an amount of ₹4,089.37 crore was repaid during the year. The undrawn balance available under various sanctioned loans from domestic banks and financial institutions was ₹4,131.58 crore as at 31 March 2022.

Domestic bonds: During the financial year 2021-22, Company raised ₹8,171 crore through private placement of domestic bonds. Bonds amounting to ₹1,194.50 crore were redeemed during the year.

Foreign borrowings:

During the financial year 2021-22, the Company has signed a syndicated term loan of US$750 million. The loan is first SOFR (Secured Overnight Financing Rate) based floating rate of loan. The loan proceeds shall be utilised by the Company to finance the capital expenditure of ongoing/new capacity addition program including, renewable energy projects, coal mining & washeries, refinancing of existing ECBs/Rupee loans availed domestically for CAPEX etc. to the extent, the same is in compliance with end-use, as permitted under ECB guidelines of RBI. The facility has a door-to-door maturity of ten years with the seven equal annual repayment instalments starting from fourth year from Weighted Average Disbursement Date (WADD) of the facility agreement. Amount drawn under this facility till 31 March 2022 is ₹ NIL.

In all, the Company has drawn ₹3,531.46 crore during the year as foreign currency loans and repaid foreign currency debts amounting to ₹6,061.50 crore.

The Company continues to enjoy highest credit ratings for its bonds program and borrowings from banks, while Company's International Ratings are at par with sovereign ratings as detailed hereunder:

Credit Rating Agency	Rating	Remarks
Domestic		
CRISIL	CRISIL AAA/Stable	Highest ratings
ICRA	[ICRA] AAA (Stable)	
CARE	CARE AAA; Stable	
INDIA Ratings	IND AAA/Stable	
International		
S&P	BBB-/Stable	Equivalent to sovereign ratings
Fitch	BBB-/Negative	
Moody's	Baa3/Stable	

The maturity profile of the principal amount of borrowings by the Company is as under:

(₹ Crore)

Particulars	Domestic Borrowings	Foreign Borrowings	Total
Up to 1 year	10,041.01	6,600.06	16,641.07
Beyond 1 and within 3 years	26,145.65	9,354.15	35,499.80
Beyond 3 and within 5 years	21,612.66	11,733.05	33,345.71
Beyond 5 and within 10 years	48,621.87	14,038.31	62,660.18
Beyond 10 years	15,556.76	615.44	16,172.20
Total	**1,21,977.95**	**42,341.01**	**1,64,318.96**

*Excluding transaction costs

b. **Non-current financial liabilities - Lease liabilities (Note-23), Trade payables (Note-24) & Other financial liabilities (Note-25)**

Lease liabilities have increased from ₹720.62 crore as at 31 March 2021 to ₹815.07 crore as at 31 March 2022. The lease liabilities are repayable in instalments as per the terms of the respective lease agreements generally over a period of more than 1 year and up to 99 years.

Non-current trade payables have increased from ₹80.01 crore as at 31 March 2021 to ₹84.62 crore as at 31 March 2022.

Other financial liabilities primarily consist of liabilities for capital expenditure and others. Other financial liabilities have decreased from ₹1,390.67 crore as at 31 March 2021 to ₹805.47 crore as at 31 March 2022.

c. **Non-current liabilities - Provisions (Note-26):**

Non-current provisions consist of amounts provided towards employees' benefits as per actuarial valuation, which are expected to be settled beyond a period of 12 months from the Balance Sheet date. Non-current provisions also consist of Mine closure obligations and Stripping activity adjustments. Non-current provisions as at 31 March 2022 were ₹1,446.02 crore as compared to ₹1,174.21 crore as at 31 March 2021.

d. Non-current liabilities - Deferred tax liabilities (net) (Note-27)

Deferred tax liabilities (net) have increased from ₹9,160.99 crore as at 31 March 2021 to ₹10,006.29 crore as at 31 March 2022. The increase in deferred tax liability during the year is mainly because of capitalisation of new units of 2,871.68 MW during the year 2021-22.

e. Other non-current liabilities (Note-28)

Other non-current liabilities have decreased from ₹1,111.81 crore as at 31 March 2021 to ₹1,081.61 crore as at 31 March 2022. Other non-current liabilities comprise of government grants received in advance amounting to ₹522.31 crore (31 March 2021: ₹592.20 crore) for which attached conditions are to be fulfilled / works to be completed relating to various solar power plants. These amounts will be recognized as revenue corresponding to the depreciation charge in future years on completion of related projects. Other non-current liabilities also include un-amortised portion of grants received from Solar Energy Corporation of India under MNRE Scheme for setting up Solar PV power projects amounting ₹534.94 crore (31 March 2021: ₹493.43 crore). These amounts will be recognized as revenue corresponding to the depreciation charge in future years.

f. Current liabilities (Note-29 to Note-35)

The current liabilities as at 31 March 2022 were ₹62,858.51 crore as against ₹58,049.71 crore as at the end of previous year. The break-up of current liabilities is as under:

(₹ Crore)

Particulars	As at March 31		Y o Y Change	% Change
	2022	2021		
Borrowings (Note-29)	23,272.33	23,107.19	165.14	1%
Lease liabilities (Note-30)	168.01	151.80	16.21	11%
Trade payables (Note-31)	9,326.31	7,182.47	2,143.84	30%
Other financial liabilities (Note-32)	21,834.93	19,610.02	2,224.91	11%
Other current liabilities (Note-33)	1,027.00	1,070.14	(43.14)	(4)%
Provisions (Note-34)	7,095.76	6,928.09	167.67	2%
Current tax liabilities (net) (Note-35)	134.17	-	134.17	-
Total	**62,858.51**	**58,049.71**	**4,808.80**	**8%**

Borrowings (Note-29) comprise of short-term borrowings and current maturities of long-term borrowings. In order to finance the mismatches in the short-term fund requirement, short-term borrowings in the form of commercial papers and cash credit were resorted to by the Company. Commercial papers outstanding net of un-amortised discount as on 31 March 2022 were ₹6,631.26 crore as against ₹12,859.74 crore as on 31 March 2021.

Current financial liabilities - Lease liabilities (Note-30) comprise of current maturities of lease liabilities. The same has increased from ₹151.80 crore as at 31 March 2021 to ₹168.01 crore as at 31 March 2022.

The trade payables (Note-31) mainly comprise amount payable towards supply of goods & services, deposits & retention money from contractors etc. Trade payables have increased by ₹2,143.84 crore i.e., from ₹7,182.47 crore as at 31 March 2021 to ₹9,326.31 crore as at 31 March 2022.

Other current financial liabilities (Note-32) mainly comprise of interest accrued but not due on borrowings and payables towards capital expenditure. The details of other current financial liabilities are as under:

(₹ Crore)

Particulars	As at March 31	
	2022	2021
Interest accrued but not due on borrowings	2,365.33	1,977.56
Payables for capital expenditure	16,035.60	14,748.47
Others	3,434.00	2,883.99

Other current financial liabilities have increased mainly due to; increase in payable for capital expenditure which has increased from ₹14,748.47 crore as on 31 March 2021 to ₹16,035.60 crore as on 31 March 2022 and increase in interest accrued but not due on borrowings which has increased from ₹1,977.56 crore as on 31 March 2021 to ₹2,365.33 crore as on 31 March 2022.

Other current liabilities (Note-33) mainly consist of advances from customers & others and statutory dues. Other current liabilities have decreased by ₹ 43.14 crore i.e., from ₹1,070.14 crore as at 31 March 2021 to ₹1,027 crore as at 31 March 2022.

Current liabilities - Provisions (Note-34) mainly consist of provisions for employee benefits, provision for obligations incidental to land acquisition, provision for tariff adjustments, provision for arbitration awards and other provisions. As at 31 March 2022, the Company had outstanding current liabilities-provisions of ₹7,095.76 crore as against ₹6,928.09 crore as at 31 March 2021. The provision for employee benefits has increased from ₹1,423.30 crore as on 31 March 2021 to ₹1,528.23 crore as on 31 March 2021.

Provision for tariff adjustment has become ₹482.28 crore as at 31 March 2022 as against ₹360.28 crore as at 31 March 2021 as detailed below:

(₹ Crore)

Opening Balance as at 1 April 2021	**360.28**
Add: Provision for interest, which could be payable on the differential amount considered for revenue recognition and billing	122.00
Closing Balance as at 31 March 2022	**482.28**

Provision for arbitration awards has increased from ₹2,003.01 crore as on 31 March 2021 to ₹2,256.40 crore as on 31 March 2022 while provision for obligations incidental to land acquisition has decreased from ₹3,027.84 crore as on 31 March 2021 to ₹2,683.39 crore as on 31 March 2022.

Provision for others has increased from ₹ 113.66 crore as on 31 March 2021 to ₹145.46 crore as on 31 March 2022. Provision for others mainly comprise ₹111.96 crore (31 March 2021: ₹103.88 crore) towards cost of unfinished minimum work program demanded by the Ministry of Petroleum and Natural Gas (MOP&NG) including interest thereon in relation to Block AA-ONN-2003/2 and ₹7.25 crore (31 March 2021: ₹2.62 crore) towards provision for shortage in property, plant and equipment on physical verification pending investigation and ₹17.86 crore (31 March 2021: ₹ Nil) towards expected loss on investments of Provident Fund Trust.

Current tax liabilities (net) (Note-35) amounting to ₹134.17 crore (31 March 2021: ₹ Nil) being the excess of tax provision for the year over advance tax deposited.

8 Deferred revenue (Note-36)

Deferred revenue consists of income from foreign currency fluctuation detailed as under:

(₹ Crore)

Deferred revenue on account of	**As at March 31**	
	2022	**2021**
Income from foreign currency fluctuation	1,973.39	1,994.41

Foreign exchange rate variation (FERV) on foreign currency loans and interest thereon is recoverable from/payable to the customers in line with the Tariff Regulations. Keeping in view the opinion of the EAC of ICAI, the Company is recognizing deferred foreign currency fluctuation asset by corresponding credit to deferred income from foreign currency fluctuation in respect of the FERV on foreign currency loans adjusted in the cost of property, plant and equipment, which is recoverable from the customers in future years as per accounting policy. This amount will be recognized as revenue corresponding to the depreciation charge in future years. The amount does not constitute a liability to be discharged in future periods and hence, it has been disclosed separately from equity and liabilities.

B. Results from operations

1 Total Income (Note-37 & Note-38)

Sl.	Particulars	FY 2021-22	FY 2020-21	% Change
	Units of electricity sold (MUs)	**277,454**	**251,649**	**10.25%**
	Revenue			**₹ Crore**
1	Energy sales (Including electricity duty)	111,276.92	95,423.48	16.61%
2	Sale of energy through trading	3,549.65	3,112.51	14.04%
3	Consultancy & other services	175.66	247.37	(28.99)%
4	Lease rentals on assets on operating lease	19.59	156.18	(87.46)%
5	Sale of Captive coal to Subsidiary company	-	100.09	(100.00)%
6	Energy internally consumed	63.51	60.97	4.17%
7	Interest from beneficiaries	857.02	27.82	2980.59%
8	Provision written back- others	122.50	-	-
9	Interest income on assets under finance lease	45.07	51.54	(12.55)%
10	Recognized from -government grant	27.41	26.71	2.62%
11	Income from E-mobility business	0.00	0.05	(100.00)%
	Revenue from operations	**116,137.33**	**99,206.72**	**17.07%**
12	Other income	3,905.10	4,345.99	(10.14)%
	Total income	**120,042.43**	**103,552.71**	**15.92%**

The income of the Company comprises of income from energy sales, sale of energy through trading, consultancy and other services, operating lease rentals on assets, interest and surcharge received from the beneficiaries, interest earned on investments such as term deposits with banks, interest on loan to employees & subsidiary and joint venture companies and dividend from long-term investment in subsidiary, joint venture and other companies. The total income for financial year 2021-22 is ₹120,042.43 crore as against ₹103,552.71 crore in the previous year registering an increase of 15.92%. The main reasons for increase in total income are increase in the energy sales, dividend from long-term investment in subsidiary, joint venture and other companies, increase in interest from beneficiaries and provisions written back-others & unserviceable capital works.

The major revenue comes from energy sales. The tariff for computing energy sales is determined in terms of CERC Regulations as notified from time to time, which are briefly discussed below:

Tariff for computation of sale of energy (Note-37)

The CERC notified the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 vide Order dated 7 March 2019 (Regulations, 2019) for determination of tariff for the tariff period 2019-2024. Further, CERC vide notifications dated 25 August 2020 and 19 February 2021 notified the CERC (Terms and Conditions of Tariff) First Amendment Regulations 2020 and Second Amendment Regulations, 2021, respectively. CERC has issued provisional tariff orders in respect of Nine stations for the tariff period 2019-24. Pending issue of provisional/final tariff orders in respect of balance stations with effect from 1 April 2019, Capacity charges are billed to beneficiaries in accordance with the tariff approved and applicable as on 31 March 2019, as provided in Regulations, 2019. In case of projects declared commercial w.e.f. 1 April 2019 and projects where tariff applicable as on 31 March 2019 is pending from CERC, billing is done based on capacity charges as filed with CERC in the tariff petitions. Energy charges are billed as per the operational norms specified in the Regulations 2019.

Capacity charges

Tariff regulations 2019 are applicable from 1 April 2019, the capacity charge shall be recovered under two segments of the year, i.e., High Demand Season (period of three months) and Low Demand Season (period of remaining nine months), and within each season in two parts viz., Capacity Charge for Peak Hours of the month and Capacity Charge for Off- Peak Hours of the month. Capacity charges for 2021-22, has been billed as per the provisions of Tariff Regulations 2019.

Energy charges

The energy charges cover the primary and secondary fuel cost and limestone consumption cost (where applicable). Energy charges for coal-based station are to be calculated based on normative heat rate, normative APC, weighted average landed price of primary fuel & secondary fuel and weighted average GCV of coal on 'as received' less 85 Kcal/kg on account of variation during storage & weighted average GCV of secondary fuel respectively as per the Tariff Regulations 2019.

Energy charges for gas-based station have been calculated based on normative heat rate, weighted average landed price of primary fuel and weighted average GCV of primary fuel.

Other charges

Besides the capacity and energy charges, the other elements of tariff are:

- Special Allowance: For the financial year 2021-22, special allowance has been considered for units which have completed 25 years as on 31 March 2021 in terms of Tariff Regulations 2019.
- Sharing of gains due to variation in norms: As per Regulation 60, financial gains on account of controllable parameters- station heat rate, auxiliary consumption and secondary fuel oil consumption, have been accounted for based on monthly operating parameters, to be shared with the beneficiaries on annual basis, in the ratio of 50:50.
- CERC has issued order dated 6 December 2021, accordingly, financial gains for all generating stations may now be computed for the period 2014-19 as per Regulation 8(6) of Tariff Regulations 2014 based on difference of Normative Energy Charge Rate for the month considering normative SHR, APC & SOC and actual Energy Charge Rate for the month considering actual SHR, actual APC and actual SOC on cumulative basis up to the month of a Financial year. The difference in financial gains already accounted for the period 2014-19, computed as per above order has been accounted in the current year.
- Sharing of Non-Tariff Income: As per Regulation 62, non-tariff income from rent of land or building, sale of scrap and advertisements has been accounted for, to be shared with beneficiaries on annual basis, in the ratio of 50:50.
- Compensation for degradation: Compensation for degradation of heat rate, APC and secondary fuel consumption due to part load operations and multiple start/stop of units are being accounted as per CERC order dated 5 May 2017 relating to operating procedures and the compensation mechanism in terms of Grid Code.
- Incentive: As per Regulation 49(B)(a), incentive to be accounted for ex-bus schedule energy corresponding to scheduled generation in excess of ex-bus energy corresponding to 85% PLF.

With effect from 1 April 2019, CERC issued directions for implementation of the pilot project on Security Constrained Economic Dispatch (SCED) for inter-state generating stations. This mechanism helps in optimization of total schedule of the Inter State Generating Stations based on the variable cost, resulting in savings in cost of procurement for the DISCOMs. CERC has extended the implementation of the SCED pilot until further orders to gain more insights on different aspects related to optimal scheduling and dispatch across multiple market avenues.

Each element of total revenue is discussed below:

Energy sales (including electricity duty)

Your Company sells electricity to bulk customers, mainly electricity utilities owned by State Governments as well as private DISCOMs operating in States. Sale of electricity is generally made pursuant to long-term Power Purchase Agreements (PPAs) entered into with the beneficiaries.

Income from energy sales (including electricity duty) for the financial year 2021-22 was ₹111,276.92 crore constituting ~93% of the total revenue. The income from energy sales (including electricity duty) has increased by 16.61% over the previous year's income of ₹95,423.48 crore.

During the year, there is an increase in the commercial capacity by 2,871.68 MW as detailed below:

Project/Unit	Capacity (MW)	Commercial Operation Date
Bilhaur Solar	15	8 April 2021
Simhadri Floating Solar	25	30 June 2021 and 21 August 2021
Tanda	660	1 July 2021
Darlipali	800	1 September 2021
Jetsar Solar PV	160	22 October 2021 and 25 March 2022
Ramagundam Floating Solar	80	28 October 2021, 22 December 2021 and 24 March 2022
Barauni	250	1 November 2021
Barh	660	12 November 2021
Fatehgarh Solar	199.68	30 December 2021, 5 February 2022 and 5 March 2022
Kayamkulam Floating Solar	22	31 March 2022
Total	**2,871.68**	

Further, the commercial capacity of 2,490MW comprising one unit of 800 MW at Gadarwara, one unit of 800 MW at Lara, one unit of 660 MW at Khargone and 230 MW solar capacity at Bilhaur and Auraiya, which were declared under commercial operation during the financial year 2020-21, were available for the entire financial year 2021-22 as compared to part of financial year in 2020-21.

Capacity charges provisionally billed to beneficiaries for the year ended 31 March 2022 is ₹43,624.68 crore (31 March 2021: ₹41,394.94 crore).

Energy and other charges are billed as per the operational norms specified in the Regulations 2019. The amount billed for the year ended 31 March 2022 is ₹63,734.93 crore (31 March 2021: ₹51,877.08 crore).

Capacity charges for the year ended 31 March 2022 have been provisionally recognized considering the provisions of CERC Tariff Regulations amounting to ₹43,404.30 crore (31 March 2021: ₹41,986.12 crore). Energy and Other charges for the year ended 31 March 2022 have been recognized at ₹64,043.74 crore (31 March 2021: ₹51,652.25 crore) as per the operational norms specified in the Regulations 2019.

Capacity charges for the year ended 31 March 2022 include ₹1,317.57 crore (31 March 2021: ₹107.71 crore) pertaining to earlier years on account of impact of CERC orders and other adjustments. Energy and other charges for the year ended 31 March 2022 include ₹620.48 crore (31 March 2021: ₹1,046.94 crore) pertaining to earlier years on account of revision of energy charges due to grade slippages and other adjustments. Sales also include ₹87.60 crore (31 March 2021: ₹81.88 crore) on account of deferred tax materialized which is recoverable from beneficiaries as per Regulations, 2019.

The average tariff for the financial year 2021-22 is ₹3.98/kWh as against ₹3.77/kWh in the previous year. The average tariff includes adjustments pertaining to previous years. If the impact of such adjustments were to be excluded, the average tariff would be ₹3.91/kWh in the financial year 2021-22 as against ₹3.76/kWh in the previous year.

Most of the beneficiaries have opened letters of credit of average monthly billing. In order to ensure prompt and early payment of bills for supply of energy to beneficiaries, your Company has formulated a rebate scheme by way of providing graded incentive for early payment based on the bill (s) raised on state utilities who are the members of NTPC's rebate scheme. The rebate is netted off from energy sales.

Sale of energy through trading

Your Company is purchasing power from the developers and selling it to the DISCOMs on principal-to-principal basis. During the financial year, your Company has accounted sales of energy purchased from solar power plants set up under National Solar Mission of ₹3,549.65 crore (31 March 2021: ₹3,112.51 crore).

Consultancy and other services

Accredited with an ISO 9001:2008 certification, the Consultancy division of your Company undertakes consultancy and turnkey project contracts for domestic and international clients in the different phases of power plants viz. engineering, project management, construction management, operation & maintenance of power plants, research & development, management consultancy etc.

During the financial year 2021-22, Consultancy division posted a revenue of ₹175.66 crore as against ₹247.37 crore achieved in the previous financial year.

Lease rentals on assets on operating lease

The Power Purchase Agreements (PPA) signed in respect of two power stations (one thermal and one gas) were operative initially for a period of five years with the respective beneficiaries which may be extended, renewed or replaced as the parties mutually agree. The Company has continued to classify these arrangements with its customers as lease based on the practical expedient provided in Appendix C of Ind AS 116. Accordingly, recovery of capacity charges towards depreciation, interest on loan capital & return on equity (pre-tax) components from the beneficiaries are considered as lease rentals on the assets which are on operating lease. The operations of Talcher Thermal Power Station was suspended on 31 March 2021 and hence there are no revenues from the station during the year. Accordingly, the lease rentals amounting to ₹19.59 crore has been recognised in the financial year 2021-22 (31 March 2021: ₹156.18 crore).

Sale of captive coal

CERC vide notification dated 19 February 2021, notified the Second amendment to Tariff Regulations 2019, which inter alia includes mechanism for determination of transfer price of coal from integrated coal mines to generating stations and are effective for the period 2019-24. Coal extracted from Company's captive mines and supplied to generating stations have been accounted considering these Regulations. The supply of coal from such mines under operation to a subsidiary company are disclosed as 'Sale of captive coal to subsidiary company'. During the financial year, your Company has accounted sale of Captive coal to Subsidiary company of ₹ NIL crore (31 March 2021: ₹100.09 crore).

Energy internally consumed

Energy internally consumed relates to own consumption of power for construction works at station(s), township power consumption, etc. It is valued at variable cost of generation and is shown in 'Revenue from operations' with a debit to corresponding expense head under power charges. The value of energy internally consumed during the financial 2021-22 was ₹63.51 crore as compared to ₹60.97 crore in the previous financial year.

Interest from beneficiaries

CERC Regulations provides that where after the truing-up, the tariff recovered is less/more than the tariff approved by the Commission, the generating Company shall recover from /pay to the beneficiaries the under/over recovered amount along-with simple interest. Accordingly, the interest recoverable from the beneficiaries amounting to ₹857.02 crore (31 March 2021: ₹27.82 crore) has been recognised during the year as 'Interest from beneficiaries'.

Interest income on assets on finance lease

The Company had ascertained that the PPA entered into for Stage-I of a power station with the beneficiary falls under the definition of finance lease. Accordingly, the written down value of the specified assets was derecognized from PPE and accounted as Finance Lease Receivable (FLR) on transition date to Ind AS. The Company has continued to classify this arrangement with its customer as lease based on the practical expedient provided in Appendix C of Ind AS 116. Accordingly, recovery of capacity charges towards depreciation (including AAD), interest on loan capital & return on equity (pre-tax) components from the beneficiary are continued to be adjusted against FLR. The interest component of the FLR and amount received on account of revision of tariff of previous periods in respect of the above three elements are continued to be recognised as 'Interest income on Assets under finance lease'. Accordingly, an amount of ₹45.07 crore has been recognised in the financial year 2021-22 as compared to ₹51.54 crore in the previous financial year.

Other income (Note 38)

'Other income' mainly comprises of income from interest on term deposits with banks, interest on loan to employees, dividend from investments in subsidiary & joint venture companies and 'Other non-operating income' comprising mainly surcharge received from beneficiaries, sale of scrap, miscellaneous income & provisions written back.

'Other income' in the financial year 2021-22 was ₹3,905.10 crore as compared to ₹4,345.99 crore in the previous year. Broadly, the break-up of other income is as under:

(₹ Crore)

Particulars	FY 2021-22	FY 2020-21
Income from deposits/loans, current investment in mutual funds, profit on redemption of current investments	61.03	47.56
Dividend from JVs and Subsidiary Companies/Interest from Subsidiary Company	2,239.99	1,323.83
Surcharge from beneficiaries	754.23	2,315.74
Provision written back	178.66	132.04
Income earned on other heads such as hire charges, profit on disposal of assets, dividend from PTC, etc.	723.93	569.21
Total	**3,957.84**	**4,388.38**
Less: Transfer to EDC/development of coal mines	52.74	42.39
Net other income	**3,905.10**	**4,345.99**

The Company has earned ₹2,134.34 crore as dividend from its investments in subsidiaries and joint venture companies. Further, ₹105.65 crore has been earned as interest from loan to subsidiary companies. Also, an amount of ₹1,656.82 crore has been earned from various other sources mainly consisting of surcharge from beneficiaries ₹754.23 crore, miscellaneous income ₹175.35 crore, sale of scrap ₹161.68 crore, interest on loans to employees ₹ 65 crore, interest on income tax refunds ₹146.34 crore, interest on advance to contractors ₹118.05 crore and provision written back on unserviceable capital works ₹134.81 crore.

2. Expenses (Statement of Profit & Loss and Note-39, 40, 41, 42 & 43)

2.1 Expenses related to operations

Year	FY 2021-22		FY 2020-21	
Commercial generation (MUs)	**298,304**		**269,955**	
Expenses	**₹ Crore**	**₹ per kWh**	**₹ Crore**	**₹ per kWh**
Fuel	64,163.68	2.15	52,849.64	1.96
Employee benefits expense	5,289.51	0.18	4,942.19	0.18
Other expenses	9,388.22	0.31	9,580.28	0.35
Total	**78,841.41**	**2.64**	**67,372.11**	**2.49**

Expenses indicated above includes expenses of consultancy division and coal supplied to subsidiary company.

The expenditure incurred on fuel, employee benefits expense and other expenses for the financial year 2021-22 was ₹78,841.41 crore as against the expenditure of ₹67,372.11 crore incurred during the previous year. In terms of expenses per unit of power produced, it was ₹2.64 per unit in the financial year 2021-22 as against ₹2.49 per unit in the previous year. In absolute terms, component-wise, there has been increase in the fuel cost, employee benefits expenses and decrease in the other expenses. The increase in commercial generation due to commercial operation of new units i.e., units declared under commercial operations during the year as well as units declared under commercial operation during financial year 2020-21 which were under operation for part of the previous year as against under operation for the full year during the current year has resulted in an additional operational expenditure of ₹6,154.10 crore.

A discussion on each of these components is given below:

2.1.1 Fuel

Expenditure on fuel constituted ~81% of the total expenditure relating to operations. Expenditure on fuel was ₹64,163.68 crore in the financial year 2021-22 in comparison to ₹52,849.64 crore in the financial year 2020-21 representing an increase of 21.41%. The break-up of fuel cost in percentage terms is as under:

Particulars	FY 2021-22	FY 2020-21
Fuel cost (₹ Crore)	**64,163.68**	**52,849.64**
		% break-up
Coal including Biomass pellets	95.75%	95.90%
Gas	2.62%	2.94%
Oil	1.53%	1.03%
Naphtha	0.10%	0.13%

For the financial year 2021-22, the expenditure towards fuel has increased by ~13.44% mainly due to price variation mostly on account of more quantity of Coal transported through Railways. There is further increase in fuel cost by ~9.60% because of quantity variation as a result of increased commercial generation in coal & gas plants. However, there is a decrease of ~1.63% due to decrease in previous year fuel cost.

An increase of ₹5,486.33 crore in fuel cost is attributable to new commercial capacity added during the year as well as on commercial capacity added during previous year which was operational for part of the previous year as compared to full year operations during the current year.

Overall, fuel cost per unit generated increased to ₹2.15 in the financial year 2021-22 from ₹1.96 in the financial year 2020-21.

The power plants of the Company use coal and natural gas as the primary fuels. Oil is used as a secondary fuel for coal-fired plants and naphtha as an alternate fuel in gas-fired plants. Under the tariff norms set by the CERC, your Company is allowed to pass on fuel charges through the tariff, provided the Company meets specified operating parameters.

2.1.2 Employee benefits expense (Note 40)

Employee benefits expense includes salaries & wages, bonus, allowances, benefits, contribution to provident & other funds and welfare expenses.

Employee benefits expense have increased to ₹5,289.51 crore in the financial year 2021-22 from ₹4,942.19 crore in the financial year 2020-21.

An amount of ₹195.55 crore is attributable to new commercial capacity added during the year as well as on commercial capacity added during previous year which was operational for part of the previous year as compared to full year operations during the current year.

In terms of expenses per unit of generation, it is ₹0.18 in the financial year 2021-22. These expenses account for approximately 7% of operational expenditure in the financial year 2021-22.

2.1.3 Other expenses (Note 43)

Other expenses primarily consist of the expenses for repair and maintenance of plant & machinery, buildings, cost of captive coal produced, water charges, security expenses, corporate social responsibility, electricity duty, travelling, power charges, insurance, training and recruitment and provisions. These expenses are approximately 12% of operational expenditure in the financial year 2021-22. In absolute terms, these expenses decreased to ₹9,388.22 crore in the financial year 2021-22 from ₹9,580.28 crore in the financial year 2020-21, registering a decrease of approximately 2%.

During the financial year 2021-22, the decrease in other expenses is mainly due to decrease in Provisions by ₹572.06 crore, decrease in Loss on disposal of investments by ₹139.75 crore, and increase in (gain) in foreign currency transactions and translations to the tune of ₹460.73 crore in comparison with previous year. The decrease in the aforesaid mentioned expenses have been offset to some extent due to increase in Repairs and maintenance expenses by ₹171.76 crore, Ash utilization and marketing expenses (after transfer to fly ash reserve) by ₹438.70 crore, Electricity duty by ₹132.70 crore etc.

In terms of expenses per unit of generation, it is ₹0.31 in the financial year 2021-22 as compared to ₹0.35 in the previous year. An increase of ₹472.22 crore is on account of new commercial capacity added during the year as well as on commercial capacity added during previous year which was operational for part of the previous year as compared to full year operations during the current year.

Other expenses also include provisions amounting to ₹342.59 crore made during the year as against ₹914.65 crore in the previous year.

2.2 Energy purchased for trading

Company has incurred expenditure of ₹3,450.22 crore in the financial year 2021-22 as compared to ₹3,031.25 crore in the previous year on purchase of energy for trading from solar power plants set up under National Solar Mission.

2.3 Finance costs (Note 41)

The finance costs for the financial year 2021-22 are ₹7,350.91 crore in comparison to ₹ 7,459.03 crore in the financial year 2020-21. The details of interest and other borrowing costs are tabulated below:

₹ crore

Particulars	FY 2021-22	FY 2020-21
Interest on:		
Borrowings	9,730.19	9,954.76
Finance cost of commercial papers and unwinding of discount on vendor liabilities	400.97	659.79
Others	4.89	5.24
Total interest	**10,136.05**	**10,619.79**
Other borrowing costs	30.63	32.16
Exchange differences regarded as adjustment to interest costs	(74.88)	(412.63)
Total	**10,091.80**	**10,239.32**
Less: Transfers to		
Expenditure during construction period	2,525.29	2,511.77
Development of coal mines	215.60	268.52
Total Finance costs	**7,350.91**	**7,459.03**

Total interest (including interest during construction) has decreased by 1.45% over previous financial year due to decrease in finance costs on commercial papers from ₹556.95 crore in FY 2020-21 to ₹281.82 crore in FY 2021-22 and decrease in the average cost of borrowing from 6.24% to 5.94% on account of lower rate of interest on new/existing borrowings. However, the same is offset to some extent due to impact of change in Exchange differences regarded as an adjustment to borrowing costs (after EDC) from (-) ₹240.00 crore to (-) ₹90.49 crore.

For the financial year 2021-22, an amount of ₹2,525.29 crore relating to finance costs of projects under construction was capitalized while the corresponding amount for the previous year was ₹2,511.77 crore. In addition, finance cost of ₹215.60 crore has been capitalized in respect of development of coal mines as against ₹268.52 crore in the previous year.

2.4 Depreciation and amortization expense (Note 42)

The depreciation and amortization expense charged to the Statement of Profit and Loss during the financial year 2021-22 was ₹11,234.14 crore as compared to ₹10,411.80 crore in the financial year 2020-21, registering an increase of ~8%. This is due to increase in the gross PPE by ₹26,833.54 crore in the financial year 2021-22 over the previous year.

The increase in gross block is largely on account of increase in commercial capacity by 2,871.68 MW resulting in additional capitalization on account of commercial declaration of new units. The depreciation on new units capitalized during the year is on pro-rata basis. Further, depreciation for units declared commercial during financial year 2020-21 aggregating to 2,490 MW has been charged for the entire financial year 2021-22 as against a pro-rata charge during the financial year 2020-21. The impact on depreciation on this account for the financial year 2021-22 is ₹975.43 crore.

As per the accounting policy of the Company, depreciation on the assets of the generation of electricity business, integrated coal mining and on the assets of Corporate & other offices of the Company except the assets of Solar / Wind Power plants which are not governed by CERC Regulations, is charged on straight line method following the rates and methodology notified by the CERC Tariff Regulations in accordance with Schedule II of the Companies Act, 2013 and depreciation on the assets of the oil & gas exploration and consultancy business, is charged on straight line method following the useful life specified in Schedule II of the Companies Act, 2013. In respect of assets of Solar /Wind power plants which are not covered by CERC regulations, depreciation is charged on straight line method over the useful life of 25 year as technically assessed by the management.

In case of certain assets, the Company has continued to charge higher depreciation based on technical assessment of useful life of those assets.

2.5 Net movement in regulatory deferral account balance (Net of tax) (Note 67)

The Company is mainly engaged in generation and sale of electricity. The price to be charged by the Company for electricity sold to its beneficiaries is determined by the CERC, which provides extensive guidance on the principles and methodologies for determination of the tariff for the purpose of sale of electricity. The tariff is based on allowable costs like interest, depreciation, operation & maintenance expenses, etc. with a stipulated return. This form of rate regulation is known as cost-of-service regulations, which provide the Company to recover its costs of providing the goods or services plus a fair return.

Exchange differences arising from settlement/ translation of monetary item denominated in foreign currency to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized on an undiscounted basis as 'Regulatory deferral account debit/credit balance' by credit/debit to 'Movements in regulatory deferral account balances' during construction period and adjusted from the year in which the same becomes recoverable from or payable to the beneficiaries. Accordingly, an amount of (-) ₹729.75 crore for the year ended as at 31 March 2022 has been accounted for as 'Regulatory deferral account debit balance' (31 March 2021: (-) ₹382.42 crore accounted as 'Regulatory deferral account debit balance'.). Further, an amount of ₹35.82 crore (31 March 2021: ₹13.92 crore) has been realized/ recognized during the year.

Considering the methodology followed by the CERC for allowing impact of the previous pay revision, various tariff orders issued by the CERC under Regulations, 2014 and the above-mentioned provision related to the change in law of CERC Tariff Regulations, 2014, a regulatory asset has been created (Regulatory deferral account debit balance) towards the increase in O&M expenditure due to the pay revision. This was taken up with CERC through truing up tariff petition. CERC has been allowing the same progressively and during the year, the expenditure has been allowed in respect of few stations and accordingly an amount of ₹127.02 crore (31 March 2021: Nil) has been adjusted and an amount of ₹359.58 crore (31 March 2021: Nil) has been reversed. Balance orders are expected in the coming years.

CERC Regulations provide that deferred tax liability up to 31 March 2009 shall be recovered from the beneficiaries as and when the same gets materialized. Further, for the period commencing from 1 April 2014, CERC Tariff Regulations provide for grossing up of the return on equity based on effective tax rate for the financial year based on the actual tax paid during the year on the generation income. The Company has recognised a regulatory deferral account debit balance for such deferred tax liabilities (net) in the financial statements. Regulatory deferral account debit balance for deferred tax liability for the period commencing from 1 April 2014 will be reversed in future years when the related deferred tax liability forms part of current tax. Accordingly, an amount of ₹1,569.33 crore (31 March 2021: ₹1,437.85 crore) for the year ended 31 March 2022 has been accounted for as 'Regulatory deferral account debit balance'.

The petition filed by the Company before CERC for reimbursement of the expenditure on transportation of ash has been favourably considered by CERC vide order dated 5 November 2018 and it was allowed to reimburse the actual additional expenditure incurred towards transportation of ash in terms of MOEF notification under change in law, as additional O&M expenses, w.e.f. 25 January 2016, subject to prudence check. Keeping in view the above, regulatory asset has been created towards ash transportation expenses in respect of stations where there is shortfall in revenue from sale of ash over and above ash transportation expenses. Accordingly, an amount of ₹1,439.06 crore (31 March 2021: ₹1,003.79 crore) for the year ended 31 March 2022 has been accounted for as 'Regulatory deferral account debit balance'. Further, the expenditure has been allowed by CERC during the year in respect of few stations and accordingly an amount of ₹55.58 crore (31 March 2021: Nil) has been adjusted.

CERC Regulations provide that the capital expenditure in respect of existing generating station incurred /projected to be incurred, inter-alia, towards liabilities to meet award of arbitration (i) within the original scope of work after the COD up to the cut-off date (Regulations 24); (ii) within the original scope of work and after the cut-off date (Regulations 25); and (iii) beyond the original scope of work (Regulation 26), will be admitted by CERC subject to prudence check. Keeping in view the above, regulatory deferral account debit balance has been accounted corresponding to the amount debited to Statement of profit & loss in respect of arbitration cases amounting to Nil for the year ended 31 March 2022 (31 March 2021: ₹110.81 crore). Further, 'Regulatory deferral account debit balance' amounting to ₹110.81 crore (31 March 2021: Nil) has been reversed based on assessment of its recoverability, by debit to Statement of profit and loss.

Accordingly, for the financial year 2021-22, net movement in regulatory deferral account balances (net of tax) is ₹1,312.06 crore whereas for the financial year 2020-21, ₹1,779.39 crore was recognized as net movement in regulatory deferral account balances (net of tax).

3. Profit before tax & Regulatory deferral account balances

The profit of the Company before tax is tabulated below:

(₹ Crore)

Particulars	**FY 2021-22**	**FY 2020-21**
Total Income	120,042.43	103,552.71
Less:		
Expenditure related to operations	78,841.41	67,372.11
Energy purchased for trading	3,450.22	3,031.25
Finance cost	7,350.91	7,459.03
Depreciation and amortization expenses	11,234.14	10,411.80
Profit before exceptional items, tax and regulatory deferral account balances	19,165.75	15,278.52
Exceptional items	-	1,363.00
Profit before tax and regulatory deferral account balances	**19,165.75**	**13,915.52**

4. Tax expense (Note 52)

The Company provides for current tax in accordance with provisions of Income Tax Act, 1961 and for deferred tax considering the accounting policy of the Company.

Provision for current tax

A provision of ₹3,376.50 crore has been made towards current tax for the financial year 2021-22 as against the provision of ₹723.23 crore made for the financial year 2020-21. Current tax provision is higher mainly due to reversal of tax provision of ₹1,889.05 crore in the previous year ended 31 March 2021 consequent to adjustment of tax provision created in accordance with Vivad se Vishwas Scheme (VsVs Scheme) notified through 'The Direct Tax Vivad Se Vishwas Act, 2020'.

Provision for deferred tax

The net increase in deferred tax liability during the year amounting to ₹989.89 crore (31 March 2021: ₹1,202.16 crore) has been debited to the Statement of Profit and Loss.

Details of tax provision

(₹ Crore)

Particulars	FY 2021-22		
	Current tax	Deferred tax	Total
Provision for financial year 2021-22	3,377.36	4,548.26	7,925.62
Adjustments for earlier years	(0.86)	-	(0.86)
MAT credit entitlement	-	(3,558.37)	(3,558.37)
Net provision as per Statement of Profit and Loss	3,376.50	989.89	4,366.39

(₹ Crore)

Particulars	FY 2020-21		
	Current tax	Deferred tax	Total
Provision for financial year 2020-21	2,597.35	4,267.50	6,864.85
Adjustments for earlier years	(1,874.12)	-	(1,874.12)
MAT credit entitlement	-	(3,065.34)	(3,065.34)
Net provision as per Statement of Profit and Loss	723.23	1,202.16	1,925.39

Net provision of tax for the financial year 2021-22 was ₹4,366.39 crore in comparison to ₹1,925.39 crore for the financial year 2020-21.

5. Profit after tax

The profit of the Company after tax is tabulated below:

(₹ Crore)

Particulars	FY 2021-22	FY 2020-21
Profit before tax and regulatory deferral account balances	**19,165.75**	**13,915.52**
Less: Tax expense	4,366.39	1,925.39
Add: Net movement in regulatory deferral account balances (net of tax)	1,312.06	1,779.39
Profit after tax	**16,111.42**	**13,769.52**

6. Other comprehensive income

The other comprehensive income net of tax for the financial year 2021-22 is (-) ₹87.63 crore in comparison to (-) ₹68.19 crore for the financial year 2020-21. For the financial year 2021-22, net actuarial loss on defined benefit plans is (-) ₹93.03 crore, while net gain on fair value of equity instruments is ₹5.40 crore as against net actuarial loss on defined benefit plan and net gain on fair value of equity instrument amounting to (-) ₹114.99 crore and ₹46.80 crore respectively in the previous year.

7. Segment-wise performance

The Company has two reportable segments, i.e., 'Generation of energy' and 'Others', which are the Company's strategic business units. The Company's principal business is generation and sale of bulk power to State Power Utilities. Other segment includes providing consultancy, project management and supervision, energy trading, oil and gas exploration and coal mining. The strategic business units offer different products and services and are managed separately because they require different technology and marketing strategies.

The profit before unallocated corporate interest and other income & unallocated corporate expenses, interest and finance charges, in the generation business for the financial year 2021-22 was ₹25,341.25 crore as against ₹23,799.44 crore for financial year 2020-21. The profit before unallocated corporate interest and other income & unallocated corporate expenses, interest and finance charges from other segment was ₹461.21 crore for financial year 2021-22 as against a loss of (-) ₹34.34 crore in the previous year.

C. Cash flows

Cash & cash equivalents and cash flows on various activities are given below:

(₹ Crore)

Particulars	FY 2021-22	FY 2020-21
Opening cash & cash equivalents	**90.05**	**20.37**
Net cash from/ (used in) operating activities	35,388.19	27,057.78

Particulars	FY 2021-22	FY 2020-21
Net cash from/ (used in) in investing activities	(16,365.84)	(17,341.63)
Net cash flow from/ (used in) financing activities	(19,095.36)	(9,646.47)
Exchange difference on translation of foreign currency cash and cash equivalents	-	-
Net increase / (decrease) in cash and cash equivalents	(73.01)	69.68
Closing cash & cash equivalents	**17.04**	**90.05**

Statement of cash flows comprises of cash flows from operating activities, investing activities and financing activities.

Net cash generated from operating activities increased to ₹35,388.19 crore during the financial year 2021-22 as compared to ₹27,057.78 crore in the previous year.

Cash outflows on investing activities arise from expenditure on setting up power projects, acquisition of power plants, investments in joint ventures & subsidiaries and tax outflow on income from investing activities. Cash inflows arise from interest from banks and dividend income from joint ventures and subsidiaries and mutual funds. Cash invested on purchase of fixed assets (property, plant and equipment & intangible assets) decreased from ₹18,307.09 crore in financial year 2020-21 to ₹17,792.86 crore in financial year 2021-22. Cash inflow on account of dividend received has increased from ₹1,283.19 crore in previous year to ₹2,143.34 crore in the financial year 2021-22. Considering all the investing activities, the net cash used in investing activities was ₹16,365.84 crore in the financial year 2021-22 as compared to ₹17,341.63 crore in the previous year.

During the financial year 2021-22, the Company had an inflow of ₹15,034.80 crore from non-current borrowings as against ₹30,431.12 in the previous year and outflow of ₹6,228.48 crore from current borrowings as against outflow of ₹1,189.62 crore in the previous year. Cash used for repayment of non-current borrowings during the financial year 2021-22 was ₹11,345.37 crore as against ₹20,364.45 crore repaid in the previous year. Interest paid during the year was ₹9,587.59 crore as compared to ₹10,186.07 crore during the previous year. Cash used for paying dividend was ₹6,933.12 crore and cash used for buyback of equity share capital was Nil during the financial year 2021-22 as compared to ₹5,531.06 crore and ₹2,763.82 crore respectively in the previous year. Thus, from financing activities during the year, the Company has an outflow of ₹19,095.36 crore as against an outflow of ₹9,646.47 crore in the previous year.

FINANCIAL SUMMARY OF SUBSIDIARY COMPANIES

The Company has 12 subsidiary companies as on 31 March 2022, out of which 7 (NESCL, NVVN, KBUNL, NPGCL, NML, NEEPCO & NREL) are wholly owned by the Company. Equity investments in subsidiaries are measured at cost (net of impairment), as same represents the appropriate estimate of fair value in case of these investments.

A summary of the financial performance of the subsidiary companies during the financial year 2021-22 based on their audited results is given below:

(₹ Crore)

Sl.	Company	NTPC's investment in equity	Total Income	Profit/ (Loss) for the year
1	NTPC Electric Supply Company Ltd	0.08	1.50	0.30
2	Bhartiya Rail Bijlee Company Ltd.	1,774.12	2,607.69	324.55
3	NTPC Vidyut Vyapar Nigam Ltd.	30.00	3,989.75	150.26
4	Patratu Vidyut Utpadan Nigam Ltd.	1,237.62	0.22	(0.03)
5	Nabinagar Power Generating Company Ltd.	4,961.03	3,521.22	436.99
6	Kanti Bijlee Utpadan Nigam Ltd.	1,670.67	1,612.23	131.84
7	NTPC Mining Limited	0.05	-	-
8	North Eastern Electric Power Corporation Ltd.	4,000.00	3,301.96	212.28
9	THDC India Ltd.	7,500.00	2,243.68	893.75
10	NTPC Renewable Energy Limited	731.17	0.78	0.11
11	NTPC EDMC Waste Solution Pvt. Ltd.	0.15	0.01	(2.05)
12	Ratnagiri Gas & Power Pvt. Ltd.*	-	2,012.98	(201.23)
	Total	**21,904.89**	**19,292.02**	**1,946.77**

*Entire investment of ₹ 834.55 crore in Ratnagiri Gas Power Pvt. Ltd. has been impaired.

FINANCIAL SUMMARY OF JOINT VENTURE COMPANIES

Your Company has interests in the following joint venture companies as at 31 March 2022. Proportion of ownership and financial performance of the companies for the financial year 2021-22 are given below:

(₹ Crore)

Sl	Company	NTPC's interest (Ex. Share application Money) (%)	NTPC's investment in equity (net of impairment)	Total Income	Profit/ (Loss) for the year
A.	**Joint venture companies incorporated in India**				
1	Utility Powertech Ltd.	50.00	1.00	1,608.39	40.82
2	NTPC-GE Power Services Private Ltd.	50.00	3.00	270.42	5.99
3	NTPC-SAIL Power Company Ltd.	50.00	490.25	2,955.34	358.00
4	NTPC-Tamil Nadu Energy Company Ltd.	50.00	1,436.40	4,925.00	798.11
5	Aravali Power Company Private Ltd.	50.00	1,433.01	4,449.73	823.11
6	Meja Urja Nigam Private Ltd.	50.00	1,750.00	3,524.03	278.01
7	NTPC BHEL Power Projects Private Ltd.	50.00	-	24.35	(40.52)
8	National High-Power Test Laboratory Private Ltd.	20.00	14.24	15.03	(20.03)
9	Transformers & Electricals Kerala Ltd.	44.60	31.34	141.39	(25.88)
10	Energy Efficiency Services Ltd.	33.334	463.61	1,567.12	(139.99)
11	CIL NTPC Urja Private Ltd.	50.00	0.08	-	(0.01)
12	Anushakti Vidhyut Nigam Ltd.	49.00	0.05	-	-
13	Hindustan Urvarak and Rasayan Ltd.	29.67	1,629.42	6.29	(19.84)
B.	**Joint venture companies incorporated outside India**				
14	Trincomalee Power Company Ltd., Sri Lanka	50.00	0.92	-	(0.41)
15	Bangladesh-India Friendship Power Company Private Ltd., Bangladesh	50.00	620.38	-	0.01
	Total		**7,873.70**	**19,487.09**	**2,057.37**

Consolidated financial results of NTPC Ltd.

A brief summary of the results on a consolidated basis is given below:

(₹ Crore)

Particulars	FY 2021-22	FY 2020-21
Total income	134,994.31	115,546.83
Profit before exceptional items, tax and regulatory deferral account balances	20,520.91	16,998.93
Exceptional items-(income) / expense	-	1,512.19
Tax Expense	5,047.10	2,420.53
Profit before regulatory deferral account balances	15,473.81	13,066.21
Net movement in regulatory deferral account balances (net of tax)	1,486.48	1,903.19
Profit for the year	16,960.29	14,969.40
Other comprehensive income (net of tax)	(87.25)	(99.09)
Total comprehensive income for the year	16,873.04	14,870.31

CAUTIONARY STATEMENT

Statements in the Management Discussion and Analysis and in the Directors' Report, describing the Company's objectives, projections and estimates, contain words or phrases such as "will", "aim", "believe", "expect", "intend", "estimate", "plan", "objective", "contemplate", "project" and similar expressions or variations of such expressions, are "forward-looking" and progressive within the meaning of applicable laws and regulations. Actual results may vary materially from those expressed or implied by the forward-looking statements due to risks or uncertainties associated therewith depending upon economic conditions, government policies and other incidental factors. Readers are cautioned not to place undue reliance on these forward-looking statements.

For and on behalf of the Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Dated: 30th July, 2022

A panoramic view of NTPC Talcher Kaniha

REPORT ON CORPORATE GOVERNANCE

Corporate Governance is the system of practices, processes, policies and rules by which a company is directed, administered or controlled. The basic purpose of Corporate Governance is to allocate resources of the Company in a manner that maximizes value for all stakeholders i.e. shareholders, investors, employees, customers, suppliers, environment and the community. Corporate Governance casts responsibility on the officials at the helm of affairs of the Company to be accountable to its stakeholders by evaluating their decisions on the parameters of transparency, conscience, fairness, accountability and professionalism.

1. CORPORATE GOVERNANCE PHILOSOPHY

Our Corporate Governance philosophy has been scripted as under:

"As a good corporate citizen, our Company is committed to sound corporate practices based on conscience, openness, fairness, professionalism and accountability besides building confidence in its various stakeholders, thereby paving the way for long term success."

The above philosophy of corporate governance is guiding us in managing the company in a transparent manner for maximizing long-term value of the company for its shareholders and all other stakeholders.

2. THE BOARD OF DIRECTORS

The Board of Directors is the apex body constituted by Shareholders, for overseeing the Company's overall functioning. The Board provides strategic direction, leadership and guidance to the Company's Management and also monitors the performance of the Company with the objective of creating long-term value for the Company's stakeholders. The Board of Directors function in accordance with the powers delegated under the Companies Act, 2013, SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 as amended {hereinafter referred as SEBI (LODR)}, Memorandum & Articles of Association, Maharatna Guidelines issued by Department of Public Enterprise (DPE) and other guidelines issued by the Government of India from time to time, as may be applicable on the Company.

2.1 Size & Composition of the Board

NTPC is a Government Company within the meaning of Section 2(45) of the Companies Act, 2013. As per the provisions of the Articles of Association of the Company, the strength of Board shall not be less than four Directors or more than twenty Directors. The Articles of Association further provide that the power to appoint Directors vests with the President of India. Presently, the sanctioned strength of the Board of Directors is as under:

(i) Six Functional Directors including the Chairman & Managing Director,

(ii) Two Government Nominee Directors and;

(iii) Eight Independent Directors including one woman Independent Director as per the requirement of the SEBI (LODR).

However, against the sanctioned strength, as on 31st March, 2022 the Board of Directors of the Company comprises six (6) Functional Directors, two (2) Government Nominee Directors and Four (4) Independent Directors. The number of Independent Directors were less than 50% of total number of Directors as of 31st March 2022.

During the financial year, the number of Independent Directors were less than 50% of total number of Directors and during the period from 17th July 2021 to 29th November 2021, there was no Independent Director in the Company. Further, the position of Woman Independent Director was vacant during the financial year upto 6th December 2021.

As NTPC is a Government Company, the request for the appointment of requisite number of Independent directors has been made to the Administrative Ministry i.e. Ministry of Power from time to time.

The details of the Board of Directors viz. their names, designation, the number of Directorships and Committee Chairmanships / Memberships held by them in other public limited companies and names of other listed entities in which the Director is a director as on 31st March, 2022 are given herein below:

S. No.	Names of Directors	Designation	No. of other Directorship in other Companies	Directorship in other Listed entities & Category	No. of Committee membership in other Companies	
					As Chairman	As Member
1.	Shri Gurdeep Singh	Chairman & Managing Director	-	-	-	-
2.	Shri Anil Kumar Gautam[1]	Director (Finance)	4	-	1	1
3.	Shri Dillip Kumar Patel	Director (Human Resource)	3	-	-	-
4.	Shri Ramesh Babu V.	Director (Operations)	4	-	-	-

S. No.	Names of Directors	Designation	No. of other Directorship in other Companies	Directorship in other Listed entities & Category	No. of Committee membership in other Companies	
					As Chairman	As Member
5.	Shri Chandan Kumar Mondol	Director (Commercial)	6	-	-	-
6.	Shri Ujjwal Kanti Bhattacharya	Director (Projects)	6	-	-	-
7.	Shri Ashish Upadhyaya	Govt. Nominee Director	-	-	-	-
8.	Shri Vivek Kumar Dewangan[2]	Govt. Nominee Director	1	-	-	-
9.	Shri Vidyadhar Vaishampayan[3]	Independent Director	-	-	-	-
10.	Shri Vivek Gupta[3]	Independent Director	1	-	-	-
11.	Shri Jitendra Jayantilal Tanna[3]	Independent Director	-	-	-	-
12.	Smt. Sangitha Varier[4]	Women Independent Director	-	-	-	-

1. Ceased to be Director on 31/05/2022
2. Ceased to be Director on 30/05/2022
3. Appointed as Director on 30/11/2021
4. Appointed as Director on 07/12/2021

Ministry of Power acting on behalf of the President of India, has, vide order no. 8/6/2018-Th.I dated 30th May, 2022, appointed Shri Piyush Surendrapal Singh, Joint Secretary, Ministry of Power as Government Nominee Director on the Board of NTPC. Shri Piyush Surendrapal Singh has been appointed as Additional Director (Govt. Nominee Director) with effect from 31st May, 2022.

Further, Ministry of Power acting on behalf of the President of India, has, vide order no. 8/7/2021-Th.I dated 15th July, 2022, appointed Shri Jaikumar Srinivasan as Director (Finance) on the Board of NTPC. Shri Jaikumar Srinivasan has taken charge as Director (Finance), NTPC on 21st July, 2022.

None of the directors on the Board is a member of more than 10 Committees or Chairperson of more than 5 Committees across all the Public companies in which they are a Director as prescribed under Regulation 26 of SEBI (LODR).

None of Directors of the Company is inter-se related to other directors of the Company.

2.2 Tenure of Directors

The Chairman & Managing Director and other whole-time Directors are generally appointed for a period of five years from the date of taking over the charge or until the date of superannuation or until further orders from the Government of India, whichever event occurs earliest. The tenure of the whole-time director can be extended further by the Government of India till the age of superannuation i.e. 60 years. Independent Directors are generally appointed by the Government of India for tenure of three years. Government Nominee Directors are appointed on ex- officio basis during their tenure in Ministry of Power (MOP).

2.3 Resume of Directors

Brief resume of directors seeking appointment or re-appointment at the Annual General Meeting is appended to the Notice calling the Annual General Meeting.

2.4 Core competencies of Directors

The Board comprises qualified members who bring in the required skills, competence and expertise to effectively contribute in deliberations at Board and Committee meetings.

The Board of Directors, in its 251st meeting held on 25th November 2003, had approved the job description, qualification and experience for Board level posts including that of the Chairman & Managing Director. The desirable qualification and experience of the incumbents are as per the requirements in the functional areas i.e. Finance, Operations, Projects, Human Resource and Commercial. At the time of recruitment of the Functional Directors, job description, desirable qualification & experience of candidates are sent to the Public Enterprise Selection Board through the Administrative Ministry for announcement of vacancy and recruitment of candidates.

Further, Board of Directors, in 288th meeting held on 26th June 2006, had deliberated on the areas of expertise of Independent Directors required on the Board of the Company. In the above Board meeting, the Board decided that the Independent Directors, to be nominated by the

Government of India on the Board of NTPC should be having expertise in the diverse areas like Economics, Human Resources Management, Regulatory Framework, Management Consultant, Research and Development, Academics , Energy & Power Sector, Finance & Banking etc.

The matrix given at Annexure-1 summarizes a mix of skills, expertise and competencies possessed by Directors. It is pertinent to mention that being a Government Company, appointment of Director is made by the Government of India in accordance with the DPE Guidelines.

2.5 Board Meetings

The meetings of the Board of Directors are convened by giving appropriate advance notices. To address any urgent needs, sometimes Board meetings are also called at a shorter notice subject to observance of statutory provisions. In case of urgency, resolutions are also passed through circulation, if permitted under the statute.

Detailed agenda notes, management reports and other explanatory statements are normally circulated at least a week before the Board Meeting in a defined format amongst the Board Members for facilitating meaningful, informed and focused discussions in the meeting. Video-conferencing facilities for participation in Board/ Committee meetings are also being provided to the Directors.

Fifteen (15) meetings of the Board of Directors were held during the year under review and gap between two meetings did not exceed one hundred and twenty days. The said meetings were held on 24th April 2021, 22nd May 2021, 19th June 2021, 15th July 2021, 31st July 2021, 23rd August 2021, 14th September 2021, 30th September 2021, 28th October 2021, 30th November 2021, 30th December 2021, 29th January 2022, 5th March 2022, 14th March 2022, and 26th March 2022.

Details of attendance of Directors in the Board meetings, Committee Meetings & Annual General Meeting held during the Financial Year 2021-22 are given in Annexure-2.

2.6 Board Independence

All the Independent Directors have given the declaration that they meet the criteria of independence to the Board of Directors as per the provisions of the Companies Act, 2013 and SEBI (LODR). Terms and conditions for appointment of independent directors are hosted on the website of the Company at https://www.ntpc.co.in/en/investors/corporate-governance/letter-terms-and-conditions-appointment-independent-directors.

2.7 Performance Evaluation of Board Members

Ministry of Corporate Affairs (MCA) vide General Circular dated 5th June, 2015 has exempted Government Companies from the provisions of Section 178 (2) which provides about manner of performance evaluation of Board of Directors, Committee of Board of Directors and director by the Nomination & Remuneration Committee. The aforesaid circular of MCA further exempted listed Govt. Companies from provisions of Section 134(3)(p) which requires mentioning the manner of formal evaluation of its own performance by the Board and that of its Committees and Individual Director in Board's Report, if directors are evaluated by the Ministry or Department of the Central Government which is administratively in charge of the company, or, as the case may be, the State Government as per its own evaluation methodology. In this regard, Department of Public Enterprise (DPE) has already laid down a mechanism for performance appraisal of all functional directors. In case of Government Nominee Directors, their evaluation is done by the Ministry or Department of the Central Government which is administratively in charge of the company as per the procedure laid down by them. DPE has also initiated evaluation of Independent Directors. In view of above, as per requirement of Regulation 17(10) of the SEBI (LODR), evaluation of Independent Director were not made by the Board of Directors.

The Company enters Memorandum of Understanding (MoU) with Ministry of Power (MoP) every year wherein Company is evaluated on various financial and non-financial parameters. The performance of the Company & Board of Directors is evaluated by the Department of Public Enterprises in terms of MoU entered into with MoP.

2.8 Separate Meeting of Independent Directors:

A separate meeting of Independent Directors was held on 27th March 2022. The meeting was attended by all Independent Directors. In this meeting, Independent Directors assessed the performance of the Board as a whole and also the quality, quantity and timeliness of flow of information between the Company management and the Board which is necessary for the Board to effectively and reasonably perform their duties. Independent Directors also reviewed the performance of the Chairman & Managing Director and Non-independent Directors.

2.9 Information placed before the Board of Directors:

The Board has complete access to any information within the Company to be able to take informed decisions, exercise control over the organisation as well as to review the progress of implementation of the strategic decisions and corporate plans formulated by the Board. Information provided to the Board normally includes:

- Annual operating plans and budgets and any updates.
- Capital Budgets and any updates.
- Quarterly financial results.
- Financial Statements and Board's Report (including the Annexures thereto).

- Major investments, formation of subsidiaries and Joint Ventures or collaboration agreement, Strategic Alliances, etc.
- Minutes of meetings of Audit Committee, Board meetings and other Committees of the Board.
- Minutes of meetings of Board of Directors of subsidiary companies.
- Fatal or serious accidents, dangerous occurrences, etc.
- Operational highlights and substantial non-payment for goods sold by the Company.
- Award of large value contracts.
- Disclosure of Interest by Directors about directorships and committee positions occupied by them in other companies.
- Declaration of independence by Independent Directors.
- Quarterly Report on foreign exchange exposures.
- Quarterly status of investors complaints.
- Quarterly Report on Foreign Travel of Chairman & Managing Director, Functional Directors and Employees.
- Quarterly Report on Short Term Deposits and Investments.
- Report on Contract awarded on nomination basis.
- Quarterly Report on Reconciliation of Share Capital Audit.
- Quarterly Report on Business Activities of various Joint Venture Companies and Subsidiaries of NTPC.
- Quarterly Report on Compliance of various laws including show cause demand, prosecution notices.
- Quarterly Report on Compliance with Corporate Governance norms.
- Non-compliance of any regulatory, statutory or listing requirements and shareholders services such as non-payment of dividend, delay in share transfer, etc.
- Appointment of Key Managerial Personnel and information on recruitment and promotion of senior officers to the level of Executive Director which is just below the Board level and Company Secretary.
- Any significant development in Human Resources/ Industrial Relations like signing of wage agreement, implementation of Voluntary Retirement Scheme, etc.
- Information relating to major legal disputes.
- Highlights of important events from last meeting to the current meeting.
- Any other information as may be required to be presented to the Board for information or approval.

The important decisions taken at the Board/Committee meetings are communicated to the concerned departments promptly.

3. COMMITTEES OF THE BOARD OF DIRECTORS

With a view to ensure effective decision making, the Board of Directors has constituted various Statutory and Non-Statutory Committees to have focused attention on crucial issues. The details of such committees are given herein below.

3.1 Audit Committee

The composition, quorum, scope, etc. of the Audit Committee are in line with the Companies Act, 2013, SEBI (LODR) and DPE Guidelines on Corporate Governance.

Composition

As on 31st March 2022, the Audit Committee comprised the following members:-

S.No.	Name of the Member	Designation
1.	Shri Jitendra Jayantilal Tanna, Independent Director	Chairman of the Committee
2.	Shri Vivek Gupta, Independent Director	Member
3.	Shri Vidyadhar Vaishampayan, Independent Director	Member
4.	Smt. Sangitha Varier, Independent Director	Member
5.	Shri Ashish Upadhyaya, Govt. Nominee Director	Member

Due to non-availability of Independent Directors, from 17th July 2021 to 30th December 2021, the constitution of Audit Committee was not as per the Regulation 18 of SEBI (LODR).

Director (Finance) is the permanent invitee to the Audit Committee meetings. Head of Internal Audit Department and Senior Executives are invited to the Audit Committee Meetings for interacting with the members of the Committee, if required. The Joint Statutory Auditors and Cost Auditors of the Company are also invited to the meetings of the Audit Committee while discussing financial statements/ financial results and Cost Audit Reports respectively.

The Company Secretary acts as the Secretary to the Committee.

Scope of Audit Committee

The scope of Audit Committee is as follows:-

1. Before commencement of Audit, discussion with the auditors about the nature and scope of audit and

after the completion of Audit, deliberation on area of concern.

2. Provide an open avenue of communication between the independent auditors, internal auditors and the Board of Directors.

3. Approval or any subsequent modification of transactions of the company with related parties

4. Scrutiny of inter-corporate loans and investments

5. Reviewing, with the management, the quarterly financial statements before submission to the Board for approval.

6. Reviewing, with the management, the annual financial statements and draft auditor's report thereon before submission to the board for approval, with particular reference to:

   a. Matters required to be included in the Director's Responsibility Statement to be included in the Board's report in terms of clause (c) of sub-section 3 of section 134 of the Companies Act, 2013;

   b. Changes, if any, in accounting policies and practices and reasons for the same;

   c. Major accounting entries involving estimates based on the exercise of judgement by management;

   d. Significant adjustments made in the financial statements arising out of audit findings;

   e. Compliance with listing and other legal requirements relating to financial statements;

   f. Disclosure of related party transactions;

   g. Qualifications in the draft audit report.

7. Noting the appointment and removal of independent auditors. Recommending audit fee of independent auditors and also approval for payment for any other service.

8. Recommending to the Board the appointment and remuneration of the cost auditors of the Company.

9. Review of observations of C&AG including status of Government Audit paras.

10. Reviewing with the management, statement of uses/application of funds raised through an issue (public issue, rights issue, preferential issue etc.), statement of funds utilised for purposes other than those stated in the offer documents/prospectus/notice and the report submitted by the monitoring agency monitoring the utilisation of proceeds of a public or rights issue, and making appropriate recommendations to the board to take up steps in this matter.

11. Valuation of undertakings or assets of the company, wherever it is necessary

12. Evaluation of internal financial controls and risk management systems.

13. To look into the reasons for substantial defaults in the payment to the depositors, debenture holders, shareholders (in case of non-payment of declared dividends) and creditors.

14. To review the functioning of the Whistle Blower mechanism.

15. Reviewing the findings of any internal investigations by the internal auditors into matters where there is suspected fraud or irregularity or a failure of internal control systems of a material nature and reporting the matter to the Board.

16. To review the follow up action taken on the recommendations of Committee on Public Undertakings (COPU) of the Parliament.

17. Review of:

   a. Management discussion and analysis of financial condition and results of operations;

   b. Management letters/ letters of internal control weaknesses; issued by the statutory auditors

   c. Internal Audit Reports relating to internal control weaknesses.

18. Oversight of the company's financial reporting process and the disclosure of its financial information to ensure that the financial statement is correct, sufficient and credible.

19. Review with the independent auditor the co-ordination of audit efforts to assure completeness of coverage, reduction of redundant efforts and the effective use of all audit resources.

20. Reviewing the adequacy of internal audit function, if any, including the structure of the internal audit department, staffing and seniority of the official heading the department, reporting structure coverage and frequency of internal audit.

21. Consider and review the following with the independent auditor and the management:

   a) The adequacy of internal controls including computerized information system controls and security, and

   b) Related findings and recommendations of the independent auditors and internal auditors, together with the management responses.

22. Consider and review the following with the management, internal auditor and the independent auditor:

   a) Significant findings during the year, including the status of previous audit recommendations.

b) Any difficulties encountered during audit work including any restrictions on the scope of activities or access to required information.

23. Review of appointment and removal of the Chief Internal Auditor.
24. Reviewing with the management, the performance of the internal auditors and of the independent auditors and effectiveness of the audit process.
25. Review of internal audit observations outstanding for more than two years.
26. Reviewing the utilization of loans and/ or advances from/ investment by the holding company in the subsidiary exceeding rupees 100 crore or 10% of the asset size of the subsidiary, whichever is lower including existing loans / advances / investments.
27. To review compliance with the provisions of SEBI Insider Trading Regulations at least once in a financial year
28. To verify that the systems for internal control are adequate and are operating effectively.
29. To consider and comment on rationale, cost-benefits and impact of schemes involving merger, demerger, amalgamation etc., on the listed entity and its shareholders.
30. Any matter referred to it by the Board or any other terms of reference as amended by the Companies Act, 2013 & rules made thereunder, SEBI (LODR) and DPE Guidelines .

Meetings and Attendance

During the financial year 2021-22, eight (8) meetings of the Audit Committee were held 23rd April 2021, 19th June 2021, 31st July 2021, 23rd August 2021, 14th September 2021, 28th October 2021, 29th January 2022 and 26th March 2022. Details of attendance of members of the Committee are given in Annexure-2.

3.2 Stakeholders' Relationship Committee

This Committee has been constituted in line with the provisions of SEBI (LODR) and Companies Act, 2013. It considers and resolves the grievances of security holders of the Company inter-alia including grievances related to transfer of shares, non-receipt of Annual Report, non-receipt of dividend etc. The Committee also reviews measures taken for effective exercise of voting rights by shareholders, adherence to the service standards adopted by the listed entity in respect of various services being rendered by the Registrar & Share Transfer Agent and measures and initiatives taken by the listed entity for reducing the quantum of unclaimed dividends and ensuring timely receipt of dividend warrants/annual reports/statutory notices by the shareholders of the Company.

Composition

As on 31st March 2022, this committee comprised the following Directors:

S.No.	Name of Members	Designation
1.	Shri Vivek Gupta, Independent Director	Chairman of the Committee
2.	Shri Vidyadhar Vaishampayan, Independent Director	Member
3.	Shri Ashish Upadhyaya, Govt. Nominee Director	Member
4.	Shri Anil Kumar Gautam, Director (Finance)[1]	Member

1. Ceased to be Director on 31/05/2022.

Due to non-availability of Independent Directors, from 17th July 2021 to 30th December 2021, the constitution of Stakeholders' Relationship Committee was not as per the Regulation 20 of SEBI (LODR).

Meeting and Attendance

During the year 2021-22, two (2) meetings of the Stakeholders' Relationship Committee were held on 19th June 2021 and 28th January 2022. Details of attendance of members of the Committee are given in Annexure- 2.

Name and designation of Compliance Officer

The Board of Directors has appointed Ms. Nandini Sarkar, Company Secretary as the Company Secretary & Compliance Officer of NTPC Limited in terms of Regulation 6 of SEBI (LODR).

Investor Grievances:

The Company has always valued its investors' relationship. During the financial year ended on 31st March 2022, Company has attended its investors grievances expeditiously except for the cases constrained by disputes or legal impediments. The details of the complaints received, resolved and disposed off during the year under review are as under:

Particulars	Opening Balance	Received	Resolved	Pending
Complaints relating to				
Equity Shares	0	1235	1235	0
Bonus Debentures	0	994	994	0
Private Placement of Bonds	0	0	0	0
Public Issue of Bonds	0	96	96	0

3.3 Nomination and Remuneration Committee including PRP

As per the requirements of Section 178 of the Companies Act, 2013, Regulation 19 of SEBI (LODR) and DPE Guidelines, a Nomination & Remuneration Committee (NRC) including Performance Related Pay (PRP) has been constituted. The scope of this Committee includes approval of annual bonus/ variable pay pool and policy for its distribution across the executives and non-unionized supervisors within the prescribed limit in addition to scope as defined under the Companies Act, 2013 and SEBI (LODR). The Committee also recommend to the Board, all remuneration, in whatever form, payable to the senior management.

Being a Government Company, as per the Articles of Association, all Directors including the Chairman & Managing Director are appointed by the Government of India. Their tenure and remuneration are also fixed by the Government of India.

As appointment of Directors are made by the Government of India, accordingly, evaluation of Directors are done by the Government of India. It may also be noted that Ministry of Corporate Affairs (MCA) vide notification dated 5th June, 2015, has exempted Government Companies from the provisions of section 178(2), (3) and (4) which requires formulation of criteria for determining qualifications, positive attributes, independence and annual evaluation of Directors & policy relating to remuneration of Directors. In view of above, Nomination & Remuneration Committee including PRP has not formulated criteria for evaluation of performance of independent directors and the board of directors as required under Regulation 19 read with Schedule II Part D of the SEBI (LODR).

As on 31st March 2022, the NRC including PRP comprised the following members:

S.No.	Name of Members	Designation
1.	Smt. Sangitha Varier, Independent Director	Chairman of the Committee
2.	Shri Ashish Upadhyaya, Govt. Nominee Director	Member
3.	Shri Vivek Gupta, Independent Director	Member
4.	Shri Vidyadhar Vaishampayan, Independent Director	Member
5.	Shri Jitendra Jayantilal Tanna, Independent Director	Member

Due to non-availability of Independent Directors, from 17th July 2021 to 30th December 2021, the constitution of Nomination & Remuneration Committee was not as per the Regulation 19 of SEBI (LODR).

Meeting and Attendance

During financial year 2021-22, three (3) meetings of Nomination and Remuneration Committee including PRP were held on 18th June 2021, 13th July 2021, 05th March 2022 . Details of the attendance of members of the Committee are given in Annexure-2.

3.4 Corporate Social Responsibility and Sustainability Committee-

This Committee has been constituted in line with the provisions of Section 135 of the Companies Act, 2013 and DPE guidelines on Sustainability (SD). This Committee is constituted to formulate and recommend to the Board, Corporate Social Responsibility Policy as per Schedule VII of the Companies Act, 2013 as amended from time to time; to recommend the amount of expenditure to be incurred on the activities specified in the CSR Policy; to monitor the Corporate Social Responsibility Policy of the company from time to time; and any other matter as the Board may delegate from time to time.

As on 31st March 2022, the Committee comprised the following members:

S.No.	Name of Members	Designation
1.	Shri Dillip Kumar Patel, Director (HR)	Chairman of the Committee
2.	Shri Ramesh Babu V., Director (Operations)	Member
3.	Shri Vivek Gupta, Independent Director	Member
4.	Shri Jitendra Jayantilal Tanna, Independent Director	Member
5.	Smt. Sangitha Varier, Independent Director	Member

NTPC's Policy on CSR & Sustainability can be viewed at the weblink: https://www.ntpc.co.in/sites/default/files/downloads/ntpc-policy-csr-sustainability.pdf.

Meeting and Attendance

During 2021-22, six (6) meetings of the Committee for CSR & Sustainability were held on 20th May 2021, 10th June 2021, 14th July 2021, 12th October 2021, 22nd November 2021 and 26th March 2022. Details of the attendance of members of the Committee are given in Annexure-2.

3.5 Risk Management Committee

Pursuant to Regulation 21 of the SEBI (LODR), Risk Management Committee has been constituted to finalise risk assessment including cyber security under the Risk Management Framework; monitor and review risk management plan/ framework as approved by the Board; informing the Board about the risk assessed and action required to be taken/ already taken for mitigating the risks and take up any other matter as directed by the Board from time to time.

Details on risk management mechanisms are given in the Management Discussion and Analysis report annexed with the Directors' Report.

As on 31st March, 2022, the Committee comprised the following Members:

S.No.	Name of Members	Designation
1.	Shri Ujjwal Kanti Bhattacharya, Director (Projects)	Chairman of the Committee
2.	Shri Ramesh Babu V., Director (Operations)	Member
3.	Shri Vidyadhar Vaishampayan, Independent Director	Member
4.	Shri Animesh Jain, General Manager	Member

Due to non-availability of Independent Directors, from 17th July 2021 to 30th December 2021, the constitution of Risk Management Committee was not as per the Regulation 21 of SEBI (LODR).

The scope of the committee is in line with the requirement of SEBI (LODR).

Meeting and Attendance

During 2021-22, two (2) meetings of the Risk Management Committee were held 10th September, 2021 and 4th March, 2022. Details of the attendance of members of the Committee are given in Annexure-2.

3.6 Other Committees of the Board of Directors:

Some of other major sub-committees of the Board of Directors including their constitution are as under:

S.No.	Name of the Committee	Role & Responsibility	Members (As on 31.3.2022)
1.	Committee on Management Controls	Review of significant deviations in project implementation and construction, operation and maintenance budgets etc.	1. Shri Anil Kumar Gautam* 2. Shri Ramesh Babu V. 3. Shri Ashish Upadhyaya 4. Shri Vivek Gupta 5. Smt. Sangitha Varier
2.	Projects Sub-Committee	To examine and give recommendations to the Board on proposals for Investment in New/ Expansion Projects and approves Feasibility Reports of new projects.	1. Shri Ujjwal Kanti Bhattacharya 2. Shri Anil Kumar Gautam* 3. Shri Ramesh Babu V. 4. Shri Vivek Gupta 5. Shri Vidyadhar Vaishampaya 6. Shri Jitendra Jayantilal Tanna
3.	Committee of Functional Directors for Contracts	Award of works or purchase contracts or incurring of commitments exceeding ₹ 300 crore but not exceeding ₹ 500 crore.	1. Shri Gurdeep Singh 2. Shri Anil Kumar Gautam* 3. Shri Dillip Kumar Patel 4. Shri Ramesh Babu V. 5. Shri C.K. Mondol 6. Shri Ujjwal Kanti Bhattacharya
4.	Contracts Sub-Committee	Award of works or purchase contracts or incurring commitments of value exceeding ₹ 500 crore but not exceeding ₹ 1000 crore, Consultancy assignments including foreign consultancy assignments exceeding ₹ 10 crore each and Appointment of Sponsor/ Agents for Overseas Consultancy Assignments involving sponsorship/ agency commission exceeding ₹ 10 crore each.	1. Shri Gurdeep Singh 2. Shri Anil Kumar Gautam* 3. Shri Ujjwal Kanti Bhattacharya 4. Shri Vivek Kumar Dewangan** 5. Shri Jitendra Jayantilal Tanna 6. Smt. Sangitha Varier
5.	Committee for Allotment and Post-Allotment Activities of NTPC's Securities	To approve allotment, issue of Certificate(s)/Letter of allotment(s), transfer, transmission, re-materialisation, issue of duplicate certificate(s), consolidation/ split of NTPC's domestic and foreign Securities.	1. Shri Dillip Kumar Patel 2. Shri C. K. Mondol/ Shri Ujjwai Kanti Bhattacharya 3. Shri Ramesh Babu V./ Shri Anil Kumar Gautam*

S.No.	Name of the Committee	Role & Responsibility	Members (As on 31.3.2022)
6.	Committee for Vigilance Matters	To examine all the petitions which are submitted before the Board as appellate/ reviewing authority in terms of CDA rules. It also reviews other major complaints as referred to it from time to time other than complaints registered under whistle blower mechanism under purview of Chief Vigilance Officer.	1. Shri Ashish Upadhyaya, 2. Shri Vivek Kumar Dewangan** 3. Shri Dillip Kumar Patel 4. Shri Vidyadhar Vaishampayan 5. Smt. Sangitha Varier
7.	Exchange Risk Management Committee	To review the foreign currency loan portfolio, hedged and un-hedged exposures and effectiveness of hedging strategy, approve amendments in Exchange Risk Management Policy, new derivative instruments, etc.	1. Shri Anil Kumar Gautam* 2. Shri C.K. Mondol 3. Shri Ashish Upadhyaya 4. Shri Vivek Gupta
8.	Committee for Guiding Acquisition of Power Assets	To guide the process of acquisition of power assets and to make recommendation to the Board	1. Shri Jitendra Jayantilal Tanna 2. Shri Ashish Upadhyaya 3. Shri Anil Kumar Gautam* 4. Shri C.K. Mondol 5. Shri Ujjwal Kanti Bhattacharya 6. Shri Vivek Gupta 7. Smt. Sangitha Varier
9.	Committee of Directors on Fuel Management and Development & Operation of Coal Blocks	To examine proposals for appointment of MDO, review of availability of fuel at NTPC Stations and to recommend measures for improvement etc.	1. Shri Vidyadhar Vaishampayan 2. Shri Anil Kumar Gautam* 3. Shri Ramesh Babu V. 4. Shri C.K. Mondol 5. Shri Vivek Kumar Dewangan** 6. Shri Vivek Gupta 7. Shri Jitendra Jayantilal Tanna 8. Smt. Sangitha Varier
10.	Committee for Considering the Proposal Having Financial Implication Beyond Provisions of the Contract	For considering the proposal having Financial Implication beyond provisions of the Contract	1. Shri Jitendra Jayantilal Tanna 2. Shri Anil Kumar Gautam* 3. Shri Ujjwal Kanti Bhattacharya 4. Shri Vidyadhar Vaishampayan 5. Smt. Sangitha Varier
11.	Committee for Supervising Legal Matters	For supervising legal matters and giving guidance regarding handling of legal matters	1. Shri Vivek Kumar Dewangan** 2. Shri Dillip Kumar Patel 3. Shri C.K. Mondol
12.	Sub-Committee of the Board of Directors for Business Development	For giving in-principle approval for new business initiatives/ Pilot Projects etc.	1. Shri Vidyadhar Vaishampayan 2. Shri Jitendra Jayantilal Tanna 3. Shri C.K.Mondol
13.	Standing committee of the Board regarding wholesome compliance with rules and regulations of Govt. of India	To monitor compliance with rules and regulations issued by the Govt. of India from time to time	1. Shri Dillip Kumar Patel 2. Shri C.K. Mondol 3. Shri Vivek Kumar Dewangan**

*Ceased to be Director on 31/05/2022 ** Ceased to be Director on 30/05/2022

4. REMUNERATION OF DIRECTORS

The remuneration of Functional Directors and employees of the Company is fixed as per extant guidelines issued by DPE, from time to time. The Part time Non- official Independent Directors are paid sitting fees for attending Board and Committee meetings. As per the norms of Government of India, the Government Nominee Directors are not entitled to get any remuneration/sitting fee from the Company.

Sitting fee of ₹40,000/- is payable to Independent Directors for attending each meeting of the Board and ₹30,000/- for attending each meeting of the Committee.

No stock option was given to any Director during the financial year 2021-22.

Details of remuneration of Functional Directors for the financial year 2021-22 are given below:-

(in '₹')

Name of CMD & Directors	Salary	Benefits	Performance Linked Incentives	Total
Shri Gurdeep Singh	7,240,353	3,203,605	3,322,333	13,766,291
Shri Anil Kumar Gautam#	4,884,096	2,003,070	1,801,656	8,688,822
Shri Dillip Kumar Patel	4,370,143	2,786,605	2,196,953	9,353,701
Shri Ramesh Babu V.	4,495,695	1,969,329	2,230,992	8,696,016
Shri Chandan Kumar Mondol	5,030,733	1,210,860	2,022,849	8,264,442
Shri Ujjwal Kanti Bhattacharya	5,038,956	1,146,480	1,942,584	8,128,020

Ceased to be Director w.e.f. 31/05/2022.

Note:-

1.Performance linked incentives paid is based on the incentive scheme of the Company.

2. Besides above, Functional Directors are also entitled for medical benefit as per the applicable rules of the company.

Details of payments towards sitting fees, for attending Board/ Committee meetings, to Independent Directors during the financial year 2021-22 are given below:

Name of Independent Directors	Sitting Fees (Excluding GST) (₹)		
	Board Meeting	Committee Meeting	Total
Dr. K.P. K. Pillay[1]	160000	270000	430000
Dr. Bhim Singh[1]	160000	330000	490000
Ms. Sangitha Varier[2]	200000	270000	470000
Shri Vivek Gupta[3]	240000	330000	570000
Shri Vidhyadhar Vaishmpayan[3]	240000	330000	570000
Shri Jitendra Jayantilal Tanna[3]	240000	270000	510000

1. Ceased to be Director on 16/07/2021
2. Appointed as a Director on 7/12/2021
3. Appointed as a Director on 30/11/2021

5. MATERIAL SUBSIDIARY:

In accordance with Regulation 16(1)(c) of SEBI (LODR), the Company has a Policy for determining 'Material Subsidiaries' which is available at the weblink: http://www.ntpc.co.in/download/policy-determining-material.

In the year 2021-22, the Company had no 'Material Subsidiary' as defined under Regulation 16(1)(c) of SEBI (LODR).

6. FAMILIARIZATION PROGRAMME FOR DIRECTORS

Directors are being imparted training organised from time to time by the Company and other agencies/ institutions with a view to augment leadership qualities, knowledge and skills. The training also enables them to get a better understanding of sector as well as the Company. Directors are also briefed from time to time about changes/ developments in Indian as well as international corporate and economic scenario including Legislative/ Regulatory changes.

At the time of induction, new Directors undergo a familiarization programme which highlights organisation structure, subsidiaries/ joint ventures, business model of the company, risk profile of the business etc. Web link for details of familiarization programme imparted to independent directors is as under: https://www.ntpc.co.in/en/Familiarisation%20Program%20to%20Directors.

7. GENERAL BODY MEETINGS

Annual General Meetings

Date, time and location where the last three Annual General Meetings along with details of Special Resolutions passed are as under:

Date & Time	21st August, 2019	24th September, 2020	28th September, 2021
Time	10:30 A.M.	10:30 A.M.	10:30 A.M.
Venue	Manekshaw Centre, Parade Road, New Delhi - 110010	NTPC Bhawan, SCOPE Complex, Lodhi Road, New Delhi 110003 through Video Conferencing/Other Audio Visual Means	NTPC Bhawan, SCOPE Complex, Lodhi Road, New Delhi 110003 through Video Conferencing/Other Audio Visual Means
Special Resolution	i) Re-appointment of Dr. Gauri Trivedi, Independent Director ii) Enhancing borrowing limit from ₹1,50,000 Crore to ₹ 2,00,000 Crore. iii) Authorisation to the Board for creation of mortgage and /or charge over the movable and immovable properties of the Company. iv) Authorization to Board to raise funds upto ₹15,000 Crore through issue of secured/ unsecured, redeemable, taxable/ tax-free, cumulative/ non-cumulative, non-convertible Bonds/ Debentures on Private Placement Basis in one or more tranches through Private Placement in domestic market and authorising the Board to decide the terms and conditions of the Issue.	i) To alter the object clause of the Memorandum of Association of the Company. ii) To alter Articles of Association of the Company. iii) Authorization to Board to raise funds upto ₹15,000 Crore through issue of secured/ unsecured, redeemable, taxable/ tax-free, cumulative/ non-cumulative, non-convertible Bonds/ Debentures on Private Placement Basis in one or more tranches through Private Placement in domestic market and authorising the Board to decide the terms and conditions of the Issue.	i) To increase borrowing powers of the Company from₹ 2,00,000 Crore to ₹ 2,25,000 Crore. ii) Authorization to Board to mortgage or create charge over the movable and immovable properties of the Company in favour of lenders in connection with the borrowings of the Company. iii) Authorization to Board to raise funds upto ₹18,000 Crore through issue of Bonds/ Debentures on Private Placement basis.

45th Annual General Meeting of the Company was held on 28th September, 2021 through Video Conferencing/Other Audio Visual Means in line with the Ministry of Corporate Affairs ("MCA") circular dated May 5, 2020 read together with other circulars issued from time to time. Meeting was attended by the partner/authorised representative of five statutory auditors firms. Meeting was also attended by the Scrutiniser appointed by the Board for Remote e-voting/ e-voting at AGM and Secretarial Auditor of the Company.

In accordance with Regulation 44 of the SEBI (LODR) and Section 108 of Companies Act 2013, remote e-voting facility was provided to the shareholders, in respect of resolutions passed at the AGM held on 28th September, 2021. In addition to above, facility of voting during the AGM was also provided to those shareholders who did not, cast their vote through remote e-voting through link appearing in their log-in.

Special Resolution passed through Postal Ballot

No special resolution was passed during last year through postal ballot. There is no immediate proposal for passing any special resolution through Postal Ballot.

8. DISCLOSURES

(a) Related Party Transaction: -

The Company has formulated a Related Party Transaction (RPT) Policy containing criterion of deciding Materiality of Related Party Transactions and dealing with Related Party Transactions.

The RPT Policy is available at the web link: https://www.ntpc.co.in/en/investors/policy

The details of Related Party Transactions are given in form AOC-2 forming part of Board's Report.

(b) The Company has broadly complied with all the requirements of SEBI (LODR) and the Companies Act, 2013 except as mentioned above in the Report. The Company has complied with the Guidelines on Corporate Governance for Central Public Sector Enterprises issued by DPE, Ministry of Heavy Industries and Public Enterprises, Government of India.

(c) The Company had received notices for payment of fine from the NSE and BSE for non-compliance with the provisions of Regulation 17 (1) regarding appointment of Independent director and Woman Independent Director of the SEBI (LODR) in respect of Q2 and Q3 of 2018-19, Q4 of 2019-20 and Q1, Q2, Q3 & Q4 of 2020-21 and Q1, Q2, Q3 & Q4 of 2021-22. In respect of Q3 of 2021-22 fines have also been imposed under Regulation 17(2A), Regulation 18(1), Regulation 19(1), Regulation 20(2) and Regulation 21(2) for not having sufficient numbers of Independent Directors in the quorum for Board and insufficient numbers of the Independent Directors in Audit Committee, Nomination & Remuneration Committee, Stakeholders' Relationship Committee and Risk Management Committee. As powers of appointment of independent directors are vested with the Government of India and compliance was not within the powers of the Board of Directors, request was made to the Stock Exchanges for waiver of fine. BSE has waived fines imposed for the Q2 and Q3 of 2018-19 and Q2 of 2020-21.

The Company had received notices for payment of fine from the NSE and BSE for non-compliance with the provisions of Regulation 29 of the SEBI (LODR) in respect of prior intimation of Board meeting for approval for raising funds up to ₹ 15,000 Crore though private placement of Bonds. As the proposal was subject to approval of Shareholders in AGM held on 24th September, 2020, it was informed to the stock exchanges along with the notice of the AGM. Request for waiver of penalty had been made to the Stock Exchanges.

Except mentioned above, there were no penalties or strictures imposed on the Company by any statutory authorities for non-compliance on any matter related to Indian capital markets, during the last three years.

(d) The Company has complied with corporate governance requirements specified in Regulations 17 to 27 and clauses (b) to (i) of sub-regulation (2) of Regulation 46 of SEBI (LODR), except to the extent specifically mentioned in this report. The discretionary requirements as specified in Part E of Schedule II adopted by the Company are at Annexure-3 of the Report.

(e) Schedule of Compliances with Presidential Directive issued during the financial year 2021-22 and during last three years preceding the financial year 2021-22 is at Annexure -4.

(f) Credit Ratings:

Domestic Credit Instruments:

	CRISIL	ICRA	CARE	India Ratings
Long Term Loans	CRISIL AAA/ Stable	ICRA AAA/ Stable	CARE AAA/ Stable	IND AAA/ Stable
Domestic Bonds	CRISIL AAA/ Stable	ICRA AAA/ Stable	CARE AAA/ Stable	IND AAA/ Stable
Commercial Papers	CRISIL A1+	ICRA A1+	CARE A1+	IND A1+
Bank Guarantees	CRISIL A1+	ICRA A1+	CARE A1+	IND AAA/ Stable/ IND A1+
Letter of Credit	CRISIL A1+	ICRA A1+	CARE A1+	IND AAA/ Stable/ IND A1+
Cash credit/ STWCL/ WCDL/Bill Discounting	CRISIL AAA/ Stable	ICRA AAA/ Stable	CARE AAA/ Stable	IND AAA/ Stable/ IND A1+

There has not been any revision in credit rating of above mentioned domestic credit instruments during the relevant financial year.

International Credit Instruments:

	S&P	Moody's	Fitch
Company Rating/Outlook	BBB-/ Stable	Baa3/ Stable	BBB-/ Negative
Rating of USD 6 billion MTN Programme	BBB-	Baa3	BBB-

There has not been any revision in credit rating of above-mentioned international credit instruments.

(g) Disclosure under the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act 2013 are given in the Directors' Report of the Company for the FY 2021-22.

(h) Dis-qualification of Directors:

M/s A.Kaushal & Associates, Company Secretaries certified that none of the Directors on the Board of the Company have been debarred or disqualified from being appointed or continuing as Directors of the Companies by the SEBI/Ministry of Corporate Affairs/ any such authority as on 31st March, 2022. Copy of certificate is enclosed as Annexure-5.

(i) During the year 2021-22, there was no Preferential Allotment / Qualified Institutional Placement of Shares which is required to be reported under Regulation 32(7A) of the SEBI (LODR).

(j) During the year 2021-22, there was no instance where the recommendation of the Committee of the Board was not accepted by the Board, which was mandatorily required.

(k) During the year 2021-22, total fee of ₹ 5.33 Crore was paid to the Statutory Auditors by the Company. Further, the statutory auditors of the company have not carried out any work of subsidiary companies.

9. CEO/CFO CERTIFICATION

As required under Regulation 17(8) of SEBI (LODR), the certificate duly signed by Chairman & Managing Director and Director (Finance) was placed before the Board of Directors at the meeting held on 18th May 2022 and the same is annexed to the Corporate Governance Report.

10. MEANS OF COMMUNICATION

The Company communicates with its shareholders through its Annual Report, General Meetings and disclosures through Stock Exchanges & its own Website. The Company also communicates with its institutional shareholders through a combination of analysts briefing and individual discussions and also participation in investor conferences from time to time. Annual analysts and investors meet is held normally during the month of August where Board of the Company interacts with the investing community. Financial results are discussed by way of conference calls regularly after approval of financial results of each quarter.

In compliance with the provisions of Regulation 44(6) of the SEBI (LODR), the Company provides live webcast of proceedings of AGM on the website of the Company.

Information, latest updates and announcements regarding the Company can be accessed at company's website: www.ntpc.co.in including the following:-

- Quarterly/ Annual Financial Results
- Quarterly Shareholding Pattern
- Quarterly Corporate Governance Report
- Transcripts of conferences with analysts
- Corporate Disclosures made from time to time to the Stock Exchanges

The Company's official news releases, other press coverage, presentations made to institutional investors or to the analysts are also hosted on the Website.

During 2021-22, Quarterly Results have been published as per details given below:

Quarter	Date of Publication	Newspaper (s)
Q1	01/08/2021 and 02/08/2021	Financial Express (English), Hindustan Times (English), Mint (English), Business Standard (English & Hindi), The Times of India (English), Economic Times (English), Business Line (English),The Statesman (English), Mid Day (English), Jansatta (Hindi), Hindustan (Hindi), Amar Ujala (Hindi).
Q2	29/10/2021	Financial Express (English), Hindustan Times (English), Business Standard (English & Hindi), Mint (English), The Times of India (English), Economic Times (English), Business Line (English), Free Press Journal (English), The Statesman (English), The Pioneer (English), Millennium Post (English), Jansatta (Hindi), Hindustan (Hindi).
Q3	30/01/2022 & 31/01/2022	Financial Express (English), Hindustan Times (English), Mint (English), Business Standard (English & Hindi), The Times of India (English), Economic Times (English), Business Line (English),The Statesman (English), Millennium Post (English), The Pioneer (English), Free Press Journal (English), Jansatta (Hindi), Dainik Jagran (Hindi), Hindustan (Hindi).
Q4	21/05/2022	Financial Express (English), Hindustan Times (English), Mint (English), Business Standard (English & Hindi), The Times of India (English), Economic Times (English),Hindu Business Line (English), Mid Day (English), Amar Ujala (Hindi), Jansatta (Hindi), Dainik Bhaskar (Hindi), Hindustan (Hindi).

11. CODE OF CONDUCT:

The Company has in place Code of Conduct for Directors and Senior Management Personnel (Code) with a view to enhance ethical and transparent process in managing the affairs of the Company. This code is applicable to all the Board Members including Government Nominee(s) & the Independent Director(s) and the Senior Management Personnel of the Company. A copy of the Code of Conduct is available at the website of the Company at the web link: http://www.ntpc.co.in/en/investors/code-of-conduct

Declaration as required under Regulation 34 (3) Schedule V of the SEBI (LODR) Regulations, 2015

The members of the Board and Senior Management Personnel have affirmed compliance of the Code of Conduct for Board Members & Senior Management Personnel for the financial year ended on 31st March, 2022.

Sd/-

New Delhi
2nd June 2022

(Gurdeep Singh)
Chairman & Managing Director

12. CODE OF INTERNAL PROCEDURES AND CONDUCT FOR PREVENTION OF INSIDER TRADING

Pursuant to Regulation 9(1) of SEBI (Prohibition of Insider Trading) Regulations, 2015 as amended by the SEBI (Prohibition of Insider Trading) (Amendment) Regulations, 2018, the Board has laid down Internal Code of Conduct for Prevention of Insider Trading in dealing with Securities of NTPC Limited (Insider Trading Code). Copy of the Insider Trading Code is available on following web-link: https://www.ntpc.co.in/en/investors/insider-trading.

In order to strengthen the internal controls for monitoring & enforcing compliance with the Insider Trading Code, an IT enabled system has been installed, which help in mapping of designated employees, monitors compliance with the provisions of the Insider Trading Code by the designated employees, disseminate information etc.

13. WHISTLE BLOWER POLICY

The Company has a Board approved 'Whistle Blower Policy' for directors and employees to report to the management, concerns about unethical behaviour, actual or suspected fraud or violation of the company's code of conduct or ethics policy. It also provides safeguard against victimization of employees, who avail the mechanism and for direct access to the Chairman of the Audit Committee.

No personnel of the Company had been denied access to the Chairman of audit committee. The Whistle Blower Policy is available at the web link: http://www.ntpc.co.in/sites/default/files/downloads/WhistleBlowerPolicy.pdf.

14. DIRECTORS AND OFFICERS INSURANCE

As per approval accorded by the Board of Directors in its 263rd meeting, NTPC is taking Directors and Officers insurance Policy (D&O Policy) every year. Present D&O Policy is for ₹ 100 Crore and it also covers Independent Directors. The Board had delegated power to decide extent of coverage, settle terms and conditions etc. to the Chairman & Managing Director or Director (Finance).

15. SECRETARIAL AUDIT

Secretarial Audit Report, given by a Company Secretary in Practice for the FY 2021-22 is enclosed with the Directors' Report.

16. SECURITYHOLDERS' INFORMATION

i) Annual General Meeting

Date : 30th August, 2022

Time : 10.30 a.m. (IST)

Venue : In view of current COVID-19 pandemic situation, the Company is conducting its meeting through Video Conferencing / Other Audio Visual Means pursuant to the MCA Circular dated May 5, 2020 and as such there is no requirement to have a venue for the AGM. For details, please refer to the Notice of this AGM.

Financial Calendar for FY 2022-23

Particulars	Date
Accounting Period	1st April, 2022 to 31st March, 2023
Unaudited Financial Results for the first three quarters	Announcement within stipulated period under SEBI (LODR)
Fourth Quarter Results	Announcement within stipulated period under SEBI (LODR)
AGM (Next year)	August, 2023 (Tentative)

ii) Payment of Dividend & Record date

The Board of Directors of the Company has recommended payment of final Dividend of ₹ 3.00 per share (30%) on the paid-up share capital, for the financial year ended 31st March, 2022 in addition to the Interim Dividend of ₹ 4.00 per share (40%) on the paid-up share capital. The date of payment/dispatch of interim dividend was February 21, 2022.

The Company has fixed 11th August, 2022 as record date for payment of final dividend. The final dividend on equity shares, if declared at the Annual General Meeting, will be paid on 12th September, 2022 to the Members whose names appear on the Company's Register of Members on record date.

Copy of Dividend Distribution Policy is available on weblink: https://www.ntpc.co.in/en/investors/policy

iii) **Dividend History**

Year	Total paid-up capital (₹ in crore)	Total amount of dividend paid (₹ in crore) and amount per share	Date of AGM in which dividend was declared	Date of payment of Dividend (Interim and Final)
2016-17	8,245.46	3,941.33 (₹ 4.78)	08/02/2017* 20/09/2017	22/02/2017 29/09/2017
2017-18	8,245.46	4,221.68 (₹ 5.12)	31/01/2018* 20/09/2018	15/02/2018 01/10/2018
2018-19	9,894.56$	5,425.52 (₹ 6.08)	30/01/2019* 21/08/2019	14/02/2019 03/09/2019
2019-20	9,894.56	3,116.79 (₹ 3.15)	19/3/2020* 24/09/2020	31/03/2020 03/10/2020
2020-21	9,696.67**	5963.45 (₹ 6.15)	04/02/2021* 28/09/2021	26/02/2021 08/10/2021
2021-22	9,696.67	3878.67# (₹ 4.00)	29/01/2022*	21/02/2022

* Date of Board Meeting in which interim dividend was declared.

$ Paid up share capital was increased from ₹ 8245.46 Crore to ₹9894.56 Crore due to Bonus issue.

amount represents the interim dividend paid for the year 2021-22.

**paid up share capital was reduced consequent upon Buyback of shares.

iv) **Listing on Stock Exchanges:**

NTPC equity shares are listed on the following Stock Exchanges:

National Stock Exchange of India Limited (NSE) Address: Exchange Plaza, Plot No. C/1, G Block, Bandra (E), Mumbai - 400051 **Scrip Code of NTPC: NTPC EQ**	**BSE Limited** Address: Phiroze Jeejeebho y Towers, Dalal Street, Mumbai - 400001 **Scrip Code of NTPC: 532555**

Stock Code : ISIN – INE733E01010

The Annual Listing Fee for the financial year 2022-23 have been paid to NSE and BSE .

Details of Listing of Domestic Bonds:

Series of Bonds	Listed on
32, 34 to 36, 38 to 49, 53,74,76	National Stock Exchange of India Limited
73 & 75	BSE Limited
50 to 52, 54 to 72	National Stock Exchange of India Limited and BSE Limited

v) **Details of Listing of Bonds issued under the MTN Programme:**

S. No.	Series	ISIN No.	Name of Bond	Listed on Stock Exchanges
1	Euro Bond-II	XS0648477593	USD 500 million 5.625% Notes due 2021 #	SGX, India INX & NSE IFSC
2	Euro Bond-III	XS0835676353	USD 500 million 4.75% Notes due 2022	SGX, India INX & NSE IFSC
3	Euro Bond-IV	XS1143390679	USD 500 million 4.375% Notes due 2024	SGX, India INX & NSE IFSC
4	Euro Bond-V	XS1372846003	USD 500 million 4.25% Notes due 2026	SGX, India INX & NSE IFSC
5	Euro Bond-VI	XS1467374473	INR 10070 million 7.375% Notes due 2021* #	SGX, LSE, India INX & NSE IFSC
6	Euro Bond-VII	XS1551677260	EUR 500 million 2.75% Notes due 2027	SGX, FSE, India INX & NSE IFSC
7	Euro Bond-VIII	XS1604199114	INR 19080 million 7.25% Notes due 2022*	SGX, LSE, India INX & NSE IFSC
8	Euro Bond-IX	XS1792122266	USD 400 million 4.50% Notes due 2028	SGX, LSE, India INX & NSE IFSC
9	Euro Bond-X	XS1967614469	USD 450 million 3.75% Notes due 2024	SGX, India INX & NSE IFSC

* Amount outstanding after buyback/repurchase.

Redeemed during the Financial Year 2021-22

SGX	Singapore Exchange Ltd., SGX Centre Office, 2 Shenton Way, #02-02, SGX Centre 1, Singapore 068804
India INX	INDIA INTERNATIONAL EXCHANGE (IFSC) LTD 1st Floor, Unit No. 101, The Signature,Building no. 13B, Road 1C, Zone 1, GIFT SEZ, GIFT City, Gandhina-gar, Gujarat – 382355
NSE IFSC	NSE IFSC Limited, Unit No.1201, Brigade International Financial Centre, 12th floor, Block-14, Road 1C, Zone -1, GIFT SEZ, Gandhinagar, Gujarat – 382355
LSE	London Stock Exchange 10 Paternoster Square, London EC4M 7LS, United Kingdom
FSE	Deutsche Börse AG, 60485 Frankfurt/Main

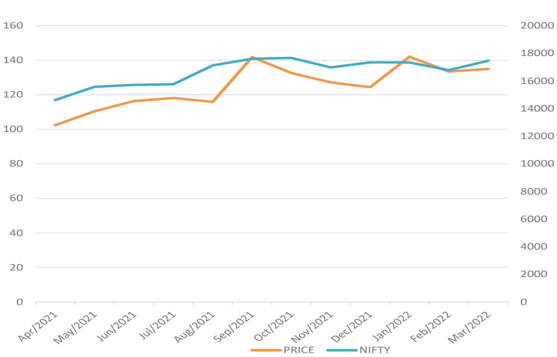
Listing fees to the above exchanges in respect of the securities was paid (where ever applicable) at the time of the listing of the securities.

vi) Market Price Data :

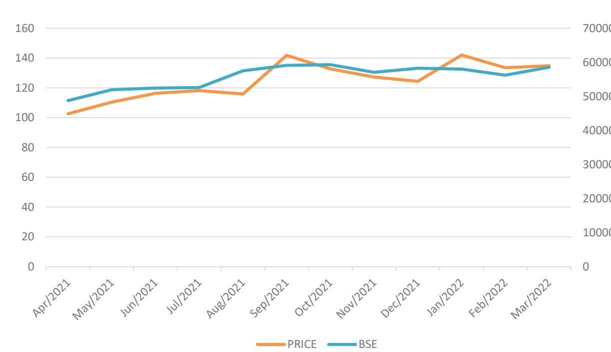
Month	NTPC on BSE				NTPC on NSE				INDEX	
	High Price (in ₹)	Low Price (in ₹)	Close Price (in ₹)	Volume (No.)	High Price (in ₹)	Low Price (in ₹)	Close Price (in ₹)	Volume (Nos.)	BSE SENSEX	NSE NIFTY 50
Apr-21	108.70	97.05	102.60	10754865	108.75	97.05	102.45	322068662	48782.36	14631.10
May-21	116.80	101	110.50	16757992	116.75	101.05	110.50	384108057	51937.44	15582.80
Jun-21	121	109.55	116.40	20702033	121	109.5	116.40	449217999	52482.71	15721.50
Jul-21	122	115.30	118.20	17900532	122	115.25	118.20	267374589	52,586.84	15763.05
Aug-21	119.45	111.95	115.95	7527006	119.50	111.95	115.95	213000640	57,552.39	17132.20
Sep-21	144.15	112.35	141.85	22673963	144.25	112.40	141.85	351704842	59,126.36	17618.15
Oct-21	152.10	128.50	132.70	32917674	152.10	128.55	132.65	410945318	59,306.93	17671.65
Nov-21	141.40	124.80	127.30	11785886	141.40	124.70	127.25	227168422	57,064.87	16983.20
Dec-21	132.85	118.00	124.40	10229806	132.95	119.10	124.40	264909689	58,253.82	17354.05
Jan-22	143.85	124.70	142.05	22903958	144	124.70	142.05	293504871	58,014.17	17339.85
Feb-22	144.30	123.70	133.50	9094493	144.15	123.65	133.50	206605031	56,247.28	16793.90
Mar-22	136.20	126.85	134.95	11240176	136.15	126.90	135	254347602	58,568.51	17464.75

vii) Performance in comparison to indices

NSE NIFTY 50 and NTPC Share Price



BSE Sensex and NTPC Share Price



viii) (a) **Registrar and Transfer Agent for Equity Shares**

Beetal Financial & Computer Services Pvt. Ltd.
99, Madangir, Near Dada Harsukh Das Mandir
New Delhi-110062.
Phone No: 011-29961281, 011-29961282
Fax: 011-29961284
Email: ntpc@beetalfiancial.com

(b) **Registrar and Transfer Agent for Tax Free Bonds (Series 50) and Bonus Debentures (Series 54) and Tax Free Bonds 2015 (Series 56)**

KFin Technologies Limited
Selenium Tower B, Plot No. 31 & 32,
Gachibowli Financial District,
Nanakramguda, Serilingampally
Hyderabad-500008
Phone No: 040-67161518; Fax: (+91 40) 2343 1551
Email: einward.ris@kfintech.com
Website: www.kfintech.com

(c) **Registrar and Transfer Agent for Bonds (Series 17, 27 to 49, 51 to 53, 55 and 57 to 76)**

Beetal Financial & Computer Services Pvt. Ltd.
99, Madangir, Near Dada Harsukh Das Mandir
New Delhi-110062.
Phone No: 011-29961281, 011-29961282
Fax: 011-29961284
Email: beetalrta@gmail.com

ix) **Share Transfer System**

In terms of Regulation 40(1) of SEBI Listing Regulations, as amended, securities can be transferred only in dematerialized form w.e.f. April 1, 2019. Members holding shares in physical form are requested to consider converting their holdings to dematerialized form. Transfers of equity shares in electronic form are effected through the depositories with no involvement of the Company.

x) **Transfer of Unclaimed Amount of Dividend to Investor Education and Protection Fund (IEPF)**

In accordance with Section 125 of the Companies Act, 2013 read with Regulation 61A of Securities and Exchange Board of India (LODR) (Fifth Amendment) Regulations, 2021, during the financial year 2021-22, an amount of ₹ 177.41 lakh pertaining to unclaimed interim dividend (2013-14), ₹ 80.29 lakh pertaining to unclaimed final dividend (2013-14) and ₹ 2.22 lakh pertaining to first unclaimed interest on Tax Free Bonds 2013 have been transferred to Investor Education and Protection Fund.

The Company has uploaded the details of shareholders/ depositors of the Company containing information like name, address, amount due to be transferred to IEPF and due date of transfer of amount to IEPF on its website. The Company has been issuing notices in the newspapers from time to time in order to invite attention of the shareholders who have not preferred their claims, to submit their claims towards the unpaid and unclaimed dividend.

xi) **Transfer of Shares to IEPF :**

In terms of Section 124(6) of the Companies Act, 2013 and IEPF Authority (Accounting, Audit, Transfer and Refund) Rules, 2016 as amended from time to time (IEPF Rules), the shares in respect of which the dividend has not been paid or claimed for a period of seven years or more, is required to be transferred to Investor Education and Protection Fund (IEPF) Authority account.

In line with the provisions Section 124(6) and rules made thereunder as well as in accordance with the circulars/ notifications issued by the MCA from time to time, for the financial year 2021-22, 61476 shares of 669 shareholders were transferred to the DEMAT Account of the IEPF Authority opened with CDSL. Details of the shareholders whose shares were transferred to the IEPF Account is available on the website at the following link: https://www.ntpc.co.in/en/Investors/miscellaneous-download. Members may check their details on the aforesaid web-link.

xii) **Claim from IEPF Account:**

Any person, whose shares, unclaimed dividend, matured deposits, matured debentures, application money due for refund, or interest thereon, sale proceeds of fractional share, redemption proceeds of preference shares etc. has been transferred to the IEPF , may claim the shares under provision to sub-section (6) of section 124 or apply for refund under clause (a) of sub-section (3) of section 125 or under proviso to sub-section (3) of section 125, as the case may be, to the Authority by making an online application in Form IEPF-5. Detailed procedure regarding claiming shares from IEPF account is available on NTPC website at the following link: https://www.ntpc.co.in/en/investors/procedure-claiming-dividend-shares-iepf-authority-0.

xiii) **Debenture Trustees for various Series**

For Series 17, 44 to 50 (TFB-2013), 53 to 55, 57 to 66	**For Series 27 to 43, 51, 52, 56 (TFB-2015) and 70 to 76**
Vistra ITCL (India) Ltd. (Formerly known as IL&FS Trust Company Limited) The IL&FS Financial Centre, Plot No. C-22, G-Block, Bandra – Kurla Complex, Bandra (East), Mumbai – 400051 Tel: (+91 22) 26533908 Fax: (+91 22) 26533297 E-mail: itclcomplianceofficer@ilfsindia.com Website: www.itclindia.com	**IDBI Trusteeship Services Limited** Asian Building, Ground Floor, 17, R. Kamani Marg, Ballard Estate, Mumbai – 400 001 Tel : +91 22 4080 7000 Fax : +91 22 6631 1776 E-mail : itsl@idbitrustee.com Website: www.idbitrustee.com **For Series 67 to 69** AXIS TRUSTEE SERVICES LTD. GDA House, Plot No. 85, Axis House, Bombay Dyeing Mills Compound, Pandurang Budhkar Marg, Worli, Mumbai- 400 025 Email: debenturetrustee@axistrustee.com Website: www.axistrustee.com

xiv) **Distribution of Shareholding**

Shares held by different categories of shareholders and according to the size of holdings as on 31st March 2022 are given below:

According to Size

a. **Distribution of shareholding according to size, % of holding as on 31st March, 2022:**

	Total			
Category	**Cases**	**%**	**Shares**	**%**
1-5000	893548	91.88	81023186	0.84
5001-10000	45920	4.72	32508921	0.34
10001-20000	19131	1.97	26714667	0.27
20001-30000	5592	0.58	13877169	0.14
30001-40000	2383	0.24	8400870	0.09
40001-50000	1471	0.15	6750496	0.07
50001-100000	2409	0.25	16655066	0.17
100001-above	2011	0.21	9510735759	98.08
Total	**972465**	**100**	**9696666134**	**100**

b. **Shareholding pattern on the basis of ownership:**

Category	**As on 31/03/2021**			**As on 31/03/2022**			**Change**
	No of shareholders	**Total Shares**	**%**	**No of shareholders**	**Total Shares**	**%**	
GOVERNMENT OF INDIA	1	4955346251	51.10	1	4955346251	51.10	0.00
INDIAN FINANCIAL INSTITUTIONS/ BANK	21	82313325	0.85	16	42361793	0.44	-0.41
MUTUAL FUNDS	35	1867142872	19.26	34	1718837470	17.73	-1.53
FOREIGN PORTFOLIO INVESTORS/ FII	467	1158205558	11.94	538	1428891190	14.74	2.80
RESIDENT INDIVIDUALS	760537	224860239	2.32	947142	205449741	2.12	-0.20

Category	As on 31/03/2021			As on 31/03/2022			Change
	No of shareholders	Total Shares	%	No of shareholders	Total Shares	%	
BODIES CORPORATES	2081	19287767	0.20	2114	16600863	0.17	-0.03
INSURANCE COMPANIES	37	1265275374	13.05	34	1219929472	12.58	-0.46
TRUSTS	57	488347	0.01	58	496644	0.01	0.00
H U F	4	120	0.00	11188	6637729	0.07	0.07
Others	16369	123746281	1.27	11340	102114981	1.04	-0.24
	779609	9696666134	100	972465	9696666134	100	0.00

xv) Major Shareholders

Details of Shareholders holding more than 1% of the paid-up capital of the Company as on 31st March, 2022 are given below:

Name of the Shareholder	No. of Shares	%	Category
Name of the Shareholder	No. of Shares	%	Category
PRESIDENT OF INDIA	4955346251	51.10	INDIAN PROMOTER
LIFE INSURANCE CORPORATION OF INDIA P & GS FUND	1004247653	10.36	INSURANCE CO.
ICICI PRUDENTIAL VALUE DISCOVERY FUND	536926248	5.54	MUTUAL FUND
HDFC TRUSTEE COMPANY LTD. A/C HDFC BALANCED ADVANTAGE FUND	418616211	4.31	MUTUAL FUND
CPSE EXCHANGE TRADED SCHEME (CPSE ETF)	311369342	3.21	MUTUAL FUND
SBI-ETF NIFTY 50	135012994	1.39	MUTUAL FUND

xvi) Dematerialisation of Shares and Liquidity

The shares of the Company are in compulsory dematerialised segment and are admitted with both the Depositories i.e. National Securities Depository Ltd. (NSDL) and Central Depository Services (India) Limited (CDSL).

In pursuance of Article 7 of the Articles of Association of the Company and as per Rule 6 of the Companies (Share Capital and Debentures) Rules, 2014, the Company has prescribed a fee of ₹ 50/- per share/ bond certificate on issue of certificates on splitting/ consolidation/ rematerialisation/ duplicate on loss of shares/ bonds.

Secretarial Audit Report for Reconciliation of the Share Capital of the Company obtained from Practising Company Secretary has been submitted to Stock Exchanges within stipulated time.

Details of shareholding in dematerialized and physical mode as on 31st March, 2022 are as under:

Holding Type	No.of Shares	Share %
Demat		
CDSL	375738108	3.875
NSDL	9320849044	96.124
Physical	78982	0.001
TOTAL	**9696666134**	**100**

xvii) Names and addresses of the Depositories:

1. National Securities Depository Ltd.
Trade World, 4th Floor
Kamala Mills Compound
Senapathi Bapat Marg,
Lower Parel, Mumbai-400 013
2. Central Depository Services (India) Limited
Phiroze Jeejeebhoy Towers
28th Floor, Dalal Street, Mumbai-400 023

xviii) Demat Suspense Account:

Details of shares/ debentures in the suspense accounts opened and maintained after Initial Public Offering, Further Public Offering of Equity Shares of NTPC and Bonus Debentures as on 31st March, 2022 is furnished below:

Details of "NTPC LIMITED – IPO – Unclaimed Shares Demat Suspense Account" (account opened and maintained after IPO):

Opening Balance (as on 01/04/2021)		Requests Disposed off during 2021-22		Closing Balance (as on 31/03/2022)	
Cases	Shares	Cases	Shares	Cases	Shares
4	1050	-	-	4	1050

Details of "NTPC LIMITED – FPO Unclaimed Shares Demat Suspense Account" (account opened and maintained after FPO):

Opening Balance (as on 01/04/2021)		Disposed off during 2021-22		Closing Balance (as on 31/03/2022)	
Cases	Shares	Cases	Shares	Cases	Shares
6	1139	-	-	6	1139

Details of "NTPC LIMITED – Bonus Debentures – Unclaimed Debentures Demat Suspense Account" (account opened and maintained after Issue of Bonus Debentures):

Opening Balance (as on 01/04/2021)		Requests received and Disposed off during 2021-22		Closing Balance (as on 31/03/2022)	
Cases	Shares	Cases	Shares	Cases	Shares
29	5474	-	-	29	5474

xix) **Outstanding GDRs/ ADRs/ Warrants or any Convertible instruments, conversion date and likely impact on equity**

No GDRs/ ADRs/Warrants or any Convertible instruments has been issued by the Company.

xx) **Commodity price risk or foreign exchange risk and hedging activities:**

The Company does not deal in commodities and hence the disclosure pursuant to SEBI Circular dated November 15, 2018 is not required to be given. For a detailed discussion on foreign exchange risk and hedging activities, please refer to Directors' Report and Management Discussion and Analysis Report.

xxi) **Loans and advances in the nature of loans to firms/ companies:**

During the financial year 2021-22, no loan or advances in the nature of loan has been given to to firms/companies in which directors are interested.

xxii) **Number of Shares held by the Directors :**

Name of Directors	No. of shares (as on 31/03/2022)
Shri Gurdeep Singh	5828
Shri Anil Kumar Gautam*	12370
Shri Dillip Kumar Patel	NIL
Shri Ramesh Babu V.	3240
Shri Chandan Kumar Mondol	NIL
Shri Ujjwal Kanti Bhattacharya	6508
Shri Ashish Upadhyaya	NIL
Shri Vivek Kumar Dewangan**	NIL
Ms. Sangitha Varier	NIL
Shri Vivek Gupta	NIL
Shri Vidhyadhar Vaishmpayan	NIL
Shri Jitendra Tanna	NIL

*Ceased on 31/05/2022 ** Ceased on 30/05/2022

xxiii) **Locations of NTPC plants**

Dadri, Badarpur & Faridabad (DBF) Region:

Thermal Power Stations

National Capital Thermal Power Station - Distt. Gautam Budh Nagar, Uttar Pradesh

Gas Power Stations

i) Faridabad Gas Power Project – Distt. Faridabad, Haryana

ii) National Capital Gas Power Project- Distt. Gautam Budh Nagar, Uttar Pradesh

Solar Power Stations

i) 5MW, Dadri Solar Power Plant, Dadri, Distt. Gautam Budh Nagar, Uttar Pradesh

ii) 5MW, Faridabad Solar Power Plant, Distt. Faridabad, Haryana

Eastern Region - I

Thermal Power Stations

i) Barh Super Thermal Power Project- Patna, Bihar

ii) Farakka Super Thermal Power Station – Distt. Murshidabad, West Bengal

iii) Kahalgaon Super Thermal Power Project- Distt. Bhagalpur, Bihar

iv) North Karanpura Super Thermal Power Project – Distt. Hazaribagh, Jharkhand

v) Barauni Thermal Power Project, Distt. Begusarai, Bihar

Eastern Region - II

Thermal Power Stations

i) Talcher Super Thermal Power Station- Distt. Angul, Odisha

ii) Talcher Thermal Power Station- Distt. Angul, Odisha

iii) Bongaigaon Thermal Power Project, Distt. Kokrajhar, Assam.

iv) Darlipali Super Thermal Power Project, Distt. Sundergarh, Jharsuguda, Odisha

Solar Power Station

10MW Talcher Kaniha Solar Power Station, Distt. Angul, Odisha

Northern Region

Thermal Power Stations

i) Feroze Gandhi Unchahar Thermal Power Station – Distt. Raebareli, Uttar Pradesh

ii) Rihand Super Thermal Power Project – Distt. Sonebhadra, Uttar Pradesh

iii) Singrauli Super Thermal Power Station- Distt. Sonebhadra, Uttar Pradesh

iv) Tanda Thermal Power Station- Distt. Ambedkar Nagar, Uttar Pradesh

v) Vindhyachal Super Thermal Power Station- Distt. Singrauli, Madhya Pradesh

Gas Power Stations

Auraiya Gas Power Project – Distt. Auraiya, Uttar Pradesh

Solar Power Station

i) 5MW, Dadri Solar Power Plant, Dadri, Distt. Gautam Budh Nagar, Uttar Pradesh

ii) 5MW, Faridabad Solar Power Plant, Distt. Faridabad, Haryana

iii) 10 MW Unchahar PV Solar Power Station, Distt. Raebareli, Uttar Pradesh

iv) 15 MW Singrauli Solar PV Power Stations, Distt. Sonebhadra, Uttar Pradesh

v) 8 MW Singrauli Small Hydro Power Stations, Distt. Sonebhadra, Uttar Pradesh

vi) 140 MW Bilhaur-I and 85 MW Bilhaur-II Solar Power Project, Dist. Kanpur, Uttar Pradesh

vii) 20 MW Auraiya Solar Power Project – Distt. Auraiya, Uttar Pradesh

viii) 20 MW Auraiya Floating Solar Power Project – Distt. Auraiya, Uttar Pradesh

ix) 160 MW Jetsar Solar Power Project- Dist. Ganganagar, Rajasthan

x) 296 MW Fatehgarh Solar Project- Dist. Jaisalmer, Rajasthan

xi) 150 MW Devikot-I & 90 MW Devikot-II Solar Project- Dist. Jaisalmer, Rajasthan

xii) 20 MW Rihand Solar Power Project – Distt. Sonebhadra, Uttar Pradesh

xiii) 250 MW Sambhu Ki Bhurj-I & 300 MW Sambhu Ki Bhurj-II Solar Project- Dist. Bikaner, Rajasthan

xiv) 300 MW Nokhra Solar Project- Dist. Bikaner, Rajasthan

xv) 735 MW Nokh Solar Project- Dist. Jaisalmer, Rajasthan

Southern Region

Thermal Power Stations

i) Ramagundam Super Thermal Power Station- Distt. Karimnagar, Telangana

ii) Simhadri Super Thermal Power Project- Distt. Vishakapatnam, Andhra Pradesh

iii) Telangana Super Thermal Power Project, Distt. Karimnagar, Telangana

iv) Kudgi Thermal Power Project, Distt. Bijapur, Karnataka

Gas Power Stations

Rajiv Gandhi Combined Cycle Power Project – Distt. Alappuzha, Kerala

Solar Power Station

i) 5 MW Solar PV Power Plant, Port Blair, A&N Islands

ii) 10 MW Ramagundam Solar Power Station, Distt. Karimnagar, Andhra Pradesh

iii) 250 MW Anantapur Solar PV Project, Distt. Anantapur, Andhra Pradesh

iv) 25 MW Simhadri Floating Solar Power Station, Distt. Vishakapatnam, Andhra Pradesh

v) 92 MW Kayamkulam Floating Solar Station, Distt. Alappuzha, Kerala

vi) 100 MW Ramagundam Floating Solar Power Station, Distt. Karimnagar, Andhra Pradesh

vii) 230 MW Ettayapuram Solar Power Station, Distt. Thoothukudi, Tamil Nadu

Western Region -I

Thermal Power Stations

i) Solapur Super Thermal Power Project – Distt. Solapur, Maharashtra

ii) Mouda Super Thermal Power Project – Distt. Nagpur, Maharashtra

Gas Power Stations

i) Jhanor Gandhar Gas Power Project- Distt. Bharuch, Gujarat

ii) Kawas Gas Power Project- Distt. Surat, Gujarat

iii) Anta Gas Power Project – Distt. Baran, Rajasthan

Solar Power Project

i) 260MW Bhadla Solar Power Project, Distt. Jodhpur, Rajasthan

ii) 20 MW Jhanor Gandhar Solar Power Project- Distt. Bharuch, Gujarat

iii) 56 MW Kawas Solar Power Project- Distt. Surat, Gujarat

iv) 90 MW Anta Solar Power Project – Distt. Baran, Rajasthan

v) 23 MW Solapur Solar Power Project – Distt. Solapur, Maharashtra

Wind Power Project:

Rojmal Wind (50 MW) Project, Gujarat

Western Region -II

Thermal Power Stations

i) Korba Super Thermal Power Station- Distt. Korba, Chhattisgarh

ii) Sipat Super Thermal Power Project-Distt. Bilaspur, Chattisgarh

iii) Gadarwara Super Thermal Power Project, Distt. Narsinghpur, Madhya Pradesh

iv) Lara Super Thermal Power Project, Distt. Raigarh, Chattisgarh

v) Khargone Super Thermal Power Project, Distt. Khargone, Madhya Pradesh

vi) Barethi Super Thermal Power, Distt. Chhatarpur, Madhya Pradesh

Solar Power Station

i) 50 MW Solar PV Power Plant, Rajgarh, Madhya Pradesh

ii) 250MW Mandsaur Solar Power Project, Distt. Mandsaur, Madhya Pradesh

HYDRO POWER PROJECTS

i) Koldam Hydro Power Project – Distt. Bilaspur, Himachal Pradesh

ii) Tapovan – Vishnugad Hydro Power Project – Distt. Chamoli, Uttarakhand

iii) Lata Tapovan Hydro Power Projects – Distt. Chamoli, Uttarakhand

iv) Rammam – III Hydro Electric Power Project Distt. Darjeeling, West Bengal.

v) Singrauli Small Hydro Power Projects, Distt. Sonebhadra, Uttar Pradesh

POWER PROJECTS UNDER SUBSIDIARY COMPANIES

Thermal Power Projects

i) Kanti Bijlee Utpadan Nigam Limited : Muzaffarpur Thermal Power Station, Muzaffarpur, Bihar

ii) Bhartiya Rail Bijlee Co. Ltd. : Nabinagar Thermal Power Project, Distt. Aurangabad, Nabinagar, Bihar (in JV with Railways)

iii) Patratu Vidyut Utpadan Nigam Limited: Patratu Thermal Power Project, Patratu, Jharkhand

iv) Nabinagar Power Generating Company Limited : Nabinagar Super Thermal Power Project – Distt. Aurangabad, Nabinagar, Bihar

v) Ratnagiri Gas & Power Pvt. Ltd. : Ratnagiri Power Project - Maharashtra

vi) THDC India Ltd, Ganga Bhawan, Pragatipuram, By-Pass Road Rishikesh-249201.

vii) North Eastern Electric Power Corporation Limited, Brookland Compound, Lower New Colony,Shillong

Solar Power Projects : Under NTPC Renewable Energy Limited

i) 320 MW Bhensada Solar Power Project, Distt. Jaisalmer, Rajasthan

ii) 150 MW Chhatargarh Solar Power Project- Distt. Bikaner, Rajasthan

iii) 200 MW Amreshwar Solar Power Project- Distt. Vadodara, Gujarat

iv) 150 MW Limdi, Mithapur, Mesanka Solar Power Project- Distt. Surendranagar, Gujarat

v) 150 MW Dayapar Wind Power Project- Distt. Kachchh, Gujarat

JOINT VENTURE POWER PROJECTS

Thermal Power Stations

a. NTPC –SAIL Power Company Ltd.

   i) Rourkela CPP-II - Distt. Sundargarh, Odisha

   ii) Durgapur CPP-II - Distt. Burdwan, West Bengal

   iii) Bhilai CPP - Bhilai (East), Chattisgarh

b. NTPC Tamil Nadu Energy Co. Ltd: Vallur Thermal Power Project – Chennai, Tamil Nadu

c. Aravali Power Co. Pvt. Ltd.: Indira Gandhi Super Thermal Power Project - Distt. Jhajjar, Haryana

d. Meja Urja Nigam Pvt. Ltd.: Meja Super Thermal Power Project – Tehsil Meja, Allahabad

Overseas Joint Venture Projects

i) Trincomalee Power Co. Ltd. : Trincomalee Power Project, Trincomalee, Srilanka

ii) Bangladesh- India Friendship Power Company (Pvt) Ltd. : Maitree Power Project at Khulna, Bangladesh

COAL MINING SITES

i) Pakri Barwadih Coal Mining Project, Hazaribagh, Jharkhand

ii) Chatti-Bariatu Coal Mining Project, Hazaribag, Jharkhand

iii) Kerandari Coal Mining Project, Hazaribagh, Jharkhand

iv) Talaipalli Coal Mining Project, Raigarh, Chattisgarh

v) Dulanga Coal Mining Project, Sundargarh, Odisha

JOINT VENTURE COAL MINES

Banhardih Coal Mining Project, Latehar, Jharkhand (in JV with JVBNL)

xxiv) **Address for correspondence:**

NTPC Bhawan, SCOPE Complex
7, Institutional Area, Lodi Road,
New Delhi – 110003

The phone numbers and e-mail reference for communication are given below:

	Telephone No.	Fax No.
Registered Office NTPC Limited NTPC Bhawan, Core-7, Institutional Area, Lodhi Road, SCOPE Complex, New Delhi -110003	011-24387333	011- 2436 1018
Company Secretary & Compliance Officer Ms. Nandini Sarkar	011-24360959	011-2436 0241
E-mail id	nsarkar@ntpc.co.in	
Chief Investor Relations Officer Mr. Aditya Dar, Executive Director (Finance)	011-2436 7072	011-2436 1724
E-mail id	adityadar@ntpc.co.in	

	Telephone No.	Fax No.
Nodal officer for IEPF Director (Finance)	011-24365552	011-24361018
E-mail id	isd@ntpc.co.in	
Dy. Nodal officer for IEPF Mr. Aditya Dar Executive Director (Finance)	011-24367072	011-24361724
E-mail id	isd@ntpc.co.in	
E-mail ID (exclusive) for redressal of investors complaints	isd@ntpc.co.in; csntpc@ntpc.co.in	

For and on behalf of the Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Dated: 29th July, 2022

Annexure-1

Skill/Competence matrix of Directors:

S. No.	Names of Directors	Designation	Technical/ Engineering	Energy & Power Sector	Finance & Banking	Economics	Human Resources Management	Regulatory Framework	Management	Environment	Academics	Research and Development
I.	Shri Gurdeep Singh	Chairman & Managing Director	✓	✓					✓			
II.	Shri Anil Kumar Gautam	Director (Finance)		✓	✓			✓				
III.	Shri Dillip Kumar Patel	Director (HR)	✓	✓			✓		✓			
IV.	Shri Ramesh Babu V.	Director (Operations)	✓	✓								
V.	Shri Chandan Kumar Mondol	Director (Commercial)	✓	✓				✓				
VI.	Shri Ujjwal Kanti Bhattarchrya	Director (Project)	✓	✓					✓	✓		
VII.	Shri Ashish Upadhyaya	Govt. Nominee Director		✓	✓	✓		✓				
VIII.	Shri Vivek Kumar Dewangan	Govt. Nominee Director	✓	✓	✓			✓				
IX.	Ms. Sangitha Varier	Independent Director			✓						✓	
X.	Shri Vivek Gupta	Independent Director						✓				
XI.	Shri Vidhyadhar Vaishmpayan	Independent Director	✓									
XII.	Shri Jitendra Tanna	Independent Director			✓							

Annexure-2

Attendance of Directors

Name of Director	Board Meeting		Audit Committee		CSR Committee		Stakeholders Relationship Committee		Risk Management Committee		Nomination & Remuneration Committee		Attended last AGM
	No. of Meetings held during his tenure/FY	No. of Meetings held during his tenure/FY	No. of Meetings held during his tenure/FY	No. of Meetings held during his tenure/FY	No. of Meetings held during his tenure/FY	No. of Meetings held during his tenure/FY	No. of Meetings held during his tenure/FY	No. of Meetings held during his tenure/FY	No. of Meetings held during his tenure/FY	No. of Meetings held during his tenure/FY	No. of Meetings held during his tenure/FY	No. of Meetings held during his tenure/FY	
Shri Gurdeep Singh Chairman & Managing Director	15	14	X	X	X	X	X	X	X	X	X	X	Yes
Shri Anil Kumar Gautam Director (Finance)	15	15	X	X	X	X	2	2	X	X	X	X	Yes
Shri Dillip Kumar Patel Director (HR)	15	14	X	X	6	6	X	X	X	X	X	X	Yes
Shri Ramesh Babu V. Director (Operations)	15	15	4	4	6	6	X	X	X	X	2	2	Yes
Shri Chandan Kumar Mondol Director (Commercial)	15	15	4	4	X	X	X	X	X	X	X	X	Yes
Shri Ujjwal Kanti Bhattacharya Director (Projects)	15	15	X	X	X	X	X	X	2	2	X	X	Yes
Shri Ashish Upadhyaya Govt. Nominee Director	15	15	8	7	2	2	1	1	X	X	X	X	Yes
Shri Vivek Kumar Dewangan Govt. Nominee Director	15	12	X	X	X	X	X	X	X	X	2	2	Yes
Dr. K.P. Pillay[1] Independent Director	4	4	2	2	X	X	1	1	X	X	2	2	-
Dr. Bhim Singh[1] Independent Director	4	4	2	2	3	3	1	1	X	X	2	2	-
Shri Vidyadhar Vaishampayan[2] Independent Director	6	6	2	2	X	X	1	1	1	1	1	1	-
Shri Vivek Gupta[2] Independent Director	6	6	2	2	1	1	1	1	X	X	1	1	-
Shri Jitendra Jayantilal Tanna[2] Independent Director	6	6	2	2	1	1	X	X	X	X	1	1	-
Smt. Sangitha Varier[3] Independent Director	5	5	2	2	1	1	X	X	X	X	1	1	-

1. Ceased to be Director on 16/07/2021
2. Appointed as Director on 30/11/2021
3. Appointed as Director on 07/12/2021

DISCRETIONARY REQUIREMENTS

Besides the mandatory requirements, as mentioned in preceding pages, the status of compliance with discretionary requirements under Regulation 27(1) of SEBI (LODR) are as under:

1. **The Board:** The Company is headed by an Executive Chairman.
2. **Shareholder Rights:** The quarterly financial results of the Company are published in leading newspapers as mentioned under heading 'Means of Communication' and also hosted on the website of the Company. These results are not separately circulated.
3. **Modified opinion(s) in audit report:** The Auditors' report is unmodified.
4. **Reporting of the Internal Auditor:** The Internal Auditor reports to the Audit Committee of the Board.

Annexure-4

Schedule of Compliances with Presidential Directives issued during the financial year 2021-22 and during last three years preceding the financial year 2021-22:

Year	Content of Presidential Directives	Compliance
2021-22	NIL	NIL
2020-21	NIL	NIL
2019-20	NIL	NIL
2018-19	Presidential Directive for wage revision	Complied

Aerial view of ongoing Simhadri Super Thermal Plant

Annex-5

CERTIFICATE OF NON-DISQUALIFICATION OF DIRECTORS

(pursuant to Regulation 34(3) and Schedule V Para C clause (10)(i) of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015)

To,
The Member of
NTPC LIMITED
NTPC Bhawan, SCOPE Complex,
7, Institutional Area, Lodhi Road,
New Delhi-110 003

We have examined the relevant registers, records, forms, returns and disclosures received from the Directors of NTPC Limited having CIN: L40101DL1975GOI007966 and having registered office at NTPC Bhawan, SCOPE Complex, 7, Institutional Area, Lodhi Road, New Delhi – 110 003 (hereinafter referred to as 'the Company'), produced before us by the Company for the purpose of issuing this Certificate, in accordance with Regulation 34(3) read with Schedule V Para-C Sub clause 10(i) of the Securities Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, for the Financial Year ending on 31st March, 2022 (hereinafter referred to as 'financial year under review').

In our opinion and to the best of our information and according to the verifications [including Directors Identification Number (DIN) status at the portal www.mca.gov.in] as considered necessary and explanations furnished to us by the Company & its officers, we hereby certify that none of the Directors on the Board of the Company, as on the closure of the financial year under review, have been debarred or disqualified from being appointed or continuing as Directors of companies by the Securities and Exchange Board of India, Ministry of Corporate Affairs or any such other Statutory Authority.

Ensuring the eligibility for the appointment/continuity of every Director on the Board is the responsibility of the management of the Company. Our responsibility is to express an opinion on these based on our verification. This certificate is neither an assurance as to the future viability of the Company nor of the efficiency or effectiveness with which the management has conducted the affairs of the Company.

For A. Kaushal & Associates
Company Secretaries

CS Amit Kaushal
Mem. No.: F6230
C. P. No.: 6663
UDIN: F006230D000614301

Place: New Delhi
Date: 13/07/2022

Chief Executive Officer (CEO) & Chief Financial Officer (CFO) Certification

We, Gurdeep Singh, Chairman & Managing Director and A.K.Gautam, Director (Finance) of NTPC Limited, certify that:

(a) We have reviewed financial statements and the cash flow statement for the year ended March 31, 2022 (stand alone and consolidated) and to the best of our knowledge and belief:

  (i) these statements do not contain any materially untrue statement or omit any material fact or contain statements that might be misleading;

  (ii) these statements together present a true and fair view of the Company's affairs and are in compliance with existing accounting standards, applicable laws and regulations.

(b) To the best of our knowledge and belief, no transactions has been entered into by the Company during the year, which is fraudulent, illegal or violative of the company's various code(s) of conduct.

(C) We are responsible for establishing and maintaining internal controls for financial reporting and we have evaluated the effectiveness of the internal control systems of the Company pertaining to financial reporting and have disclosed to the auditors and the Audit Committee, deficiencies in the design or operation of internal controls, if any, of which we are aware and the steps we have taken or propose to take to rectify these deficiencies.

(d) We have indicated to the Company's auditors and the Audit Committee of NTPC's Board of Directors:

  (i) significant changes, if any, in internal control over financial reporting during the year;

  (ii) significant changes, if any, in accounting policies during the year and the same have been disclosed in the notes to the financial statements; and

  (iii) instances of significant fraud of which we have become aware and the involvement therein, if any, of the management or an employee having a significant role in the company's internal control system over financial reporting.

Place: New Delhi
Date : May 18, 2022

(A.K. Gautam)
Director (Finance)

(Gurdeep Singh)
Chairman & Managing Director

Lush Green view of NTPC - Kawas Power Plant

Independent Auditors' Certificate on Compliance of Conditions of Corporate Governance

To

The Members of

NTPC Limited

1. This certificate is issued in accordance with the terms of our engagement letter dated 29th January 2022.

2. We have examined the compliance of conditions of Corporate Governance by NTPC Limited ('the Company') for the year ended 31st March, 2022 as stipulated in regulations 17 to 27, clause (b) to (i) of regulation 46 (2) and paragraphs C and D of Schedule V of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 ("the Listing Regulations") and as stipulated in the Guidelines on Corporate Governance for Central Public Sector Enterprises issued by Department of Public Enterprises (DPE), Government of India ("the DPE Guidelines").

Management's Responsibility for compliance with the conditions of Listing Regulations

3. The compliance with the terms and conditions contained in the corporate governance is the responsibility of the Management of the Company including the preparation and maintenance of all relevant supporting records and documents. This responsibility includes the design, implementation and maintenance of internal control and procedures to ensure the compliance with the conditions of Corporate Guideline stipulated in the Listing Regulations and DPE Guidelines.

Auditor's Responsibility

4. Our examination is limited to procedures and implementation thereof adopted by the Company for ensuring the compliance of the conditions of Corporate Governance. It is neither an audit nor an expression of opinion on the financial statements of the Company.

5. Pursuant to the requirements of the Listing Regulations and DPE Guidelines, it is our responsibility to provide a reasonable assurance whether the Company has complied with the conditions of Corporate Governance as stipulated in the Listing Regulations and DPE Guidelines for the year ended 31st March, 2022.

6. We conducted our examination in accordance with the Guidance Note on Reports or Certificates for Special Purposes (Revised 2016) (the 'Guidance Note') issued by the Institute of Chartered Accountants of India ('ICAI') . The Guidance Note requires that we comply with the ethical requirements of the Code of Ethics issued by ICAI.

7. We have complied with the relevant applicable requirements of the Standard on Quality Control (SQC) 1, Quality Control for Firms that Perform Audits and Reviews of Historical Financial Information, and Other Assurance and Related Services Engagements.

Opinion

8. In our opinion, and to the best of our information and according to explanations given to us, we certify that the Company has complied with the conditions of Corporate Governance as stipulated in the above-mentioned Listing Regulations and DPE Guidelines except for following:

   a) As stated in Point No. 2.1 of the Corporate Governance Report, the Company has not complied with the Listing Regulations, with regard to the appointment of minimum number of Independent Directors and Women Independent Director in the composition of the Board of Directors as per details given below,

      i) During the financial year, the number of Independent Directors were less than 50% of total number of Directors

      ii) During the period from 17th July 2021 to 29th November 2021, there was no Independent Director in the Company

      iii) The position of Woman Independent Director was vacant during the financial year upto 6th December 2021.

b) As stated in point No. 3.1, 3.2, 3.3 and 3.5 of the Corporate Governance Report, during the period from 17th July 2021 to 30th December 2021, the constitution of Audit Committee, Stakeholders' Relationship Committee, Nomination & Remuneration Committee and Risk Management Committee were not as per the Regulation 18, 19, 20 & 21 respectively of Listing Regulations .

c) As stated in Point No.2.7 and 3.3 of the Corporate Governance Report, regarding compliance with the Board Members and Independent Directors Evaluation Policy.

9. We state that such compliance is neither an assurance as to the future viability of the Company nor the efficiency or effectiveness with which the management has conducted the affairs of the Company.

For S.K.Mehta & Co.
Chartered Accountants
FRN 000478N

(Rohit Mehta)
Partner
M. No.091382
UDIN:22091382ANVJFK8962

For S.N.Dhawan & Co LLP
Chartered Accountants
FRN 000050N/N500045

(Mukesh Bansal)
Partner
M. No.505269
UDIN:22505269ANVKXD8882

For Varma & Varma
Chartered Accountants
FRN 004532S

(Prasanna Varma)
Partner
M. No.025854
UDIN:22025854ANVLAA8425

For Parakh & Co.
Chartered Accountants
FRN 001475C

(Thalendra Sharma)
Partner
M. No.079236
UDIN:22079236ANVJHM5595

For C.K.Prusty & Associates
Chartered Accountants
FRN 323220E

(C.K.Prusty)
Partner
M. No.057318
UDIN:22057318ANVNKC1686

For B.C.Jain & Co.
Chartered Accountants
FRN 001099C

(Ranjeet Singh)
Partner
M. No.073488
UDIN:22073488ANVLPC4605

For V.K.Jindal & Co.
Chartered Accountants
FRN 001468C

(Suresh Agarwal)
Partner
M. No.072534
UDIN:22072534ANVKUV4896

Place: New Delhi
Dated: 29 July 2022


NTPC Ramagundam Super Thermal Power Plant

ENERGY CONSERVATION, TECHNOLOGY ABSORPTION AND FOREIGN EXCHANGE EARNINGS & OUTGO {PURSUANT TO SECTION 134(3)(m) OF THE COMPANIES ACT, 2013 READ WITH RULE 8(3) OF THE COMPANIES (ACCOUNTS) RULES, 2014}

A. CONSERVATION OF ENERGY:

a) Energy conservation measures taken:

Some of the important energy conservation measures taken during the year 2021-22 in different areas by your Company are as under:

ENERGY AUDITS:

During 2021-22, under PAT scheme (4th cycle) Measurement & Verification audit of 01 stations was carried out. Six stations of your Company had got Mandatory Energy Audit conducted as per BEE regulation. All stations of your Company had conducted Auxiliary Power Consumption Energy Audits.

AUXILIARY POWER CONSUMPTION:

Some of the actions undertaken to reduce auxiliary power consumption at various stations of your Company are:

Retrofitting HT VFD in ID fans of 01 unit of 500MW, Replacement of inefficient BFP cartridges based on high SEC, Installing grid-connected roof top Solar PV systems, Energy Efficient Coating on pump internals of Cooling Water / other large water pumps, Installation of Energy Efficient ash slurry pumps, VFD's in various LT drives, Retrofitting FRP hollow blades in CT fans, Replacing existing motors with Energy Efficient motors, Tube mill liner replacement, Optimizing nos. of running BFP's, CEP's, mills and CW pumps and fans during prolonged partial loading.

LIGHTING:

Replacement of conventional lighting, wherever balance, in main plant, off sites, office buildings, area and street lighting of the station and township, common facilities and residential units of township were continued during the year by your Company.

HEAT ENERGY:

HP / IP cylinder efficiency improvement during capital overhaul, Boiler modifications to improve steam parameters & to reduce RH spray, TDBFP cartridge replacement, Condenser Jet cleaning were taken up at some stations of your Company.

b) Additional investments and proposals for reduction in consumption of energy:

Provision of ₹ 73.86 crore has been kept in BE 2022-23 for different energy conservation schemes like:

- Retrofitting VFD's in CEP's & LT drives
- Energy efficient air conditioners, LED & ceiling fans
- Grid-connected roof top Solar PV systems
- Energy efficient LT motors
- Energy efficient slurry pumps.
- Various instruments for energy audits

c) Impact of measures taken for energy conservation:

Savings achieved during 2021-22 on account of specific efforts for energy conservation by your Company:-

S.No.	Area/Activities	Energy Unit	Savings Qty.	₹ (Crore)
1	Electrical	MU	135.55	32.49
2	Heat Energy (equivalent MT of coal)	MT	26152	10.52
	Grand Total			**43.01**

Savings achieved during FY 2020-21 - ₹ 38.51 crore.

B. **TECHNOLOGY ABSORPTION:**

Efforts made towards technology absorption are contained in enclosed Form – B.

C. **FOREIGN EXCHANGE EARNINGS AND OUTGO:**

The Foreign Exchange earned in terms of actual inflow during the year and the Foreign Exchange Outgo during the year in terms of actual outflow as under:

Total Foreign Exchange Used/ Earned (2021-22)	(₹ Crore)
1. Actual foreign exchange outgo on account of	
-Procurement of capital goods, coal and spare parts	1,505.23
-Interest & Foreign currency loan/bond issue expenses	1,458.34
-Professional & consultancy fee	16.09
-Others	1.34
TOTAL	**2,981.00**
2. Actual foreign exchange earnings	NIL

FORM B

Form for disclosure of particulars with respect to Absorption of Technology

1. Specific areas in which NETRA (NTPC Energy Technology Research Alliance) have been carried out during 2021-22.

Major Projects:

Carbon capture and Utilization:

I. 10 TPD CO_2 to Methanol' Demo Plant at your Company Vindhyachal Project

II. Indigenous development of Catalyst & Reactor for conversion of CO_2 to Methanol in parallel

Hydrogen Technology:

I. 25 kW Green Hydrogen Based Micro Grid at NETRA campus

II. Development of Sea Water Electrolyze for hydrogen production

III. Development of High Temperature Steam Electrolyser

IV. Development of Metal Hydride(MH) Based Static hydrogen storage and Compression

V. Development of Lab scale Reactor for production of Hydrogen through Photo-Electro-chemical process

Water Technology:

I. 240 TPD Non-thermal Forward Osmosis based high recovery system

II. 3600 TPD Electrocoagulation system at your Company, Solapur Project

III. 4 MLD Activated Filter Media Plant at your Company, Dadri Project

IV. 180 m^3/hr Medium Pressure UV System for Water Treatment

Ash-Technology:

I. Geo-polymeric concrete Road and Paver Blocks at various stations

II. Development of Angular Shaped course Aggregates from Fly Ash

III. Development of Pond ash based Controlled Low Strength Setting Material (CLSM)

IV. Fly Ash based Light Weight Aggregate Pilot Plant Setup at your Company-Sipat plant

V. FALG technology: 100 cum/day fly ash based angular shaped coarse aggregates plant

Waste to energy:

I. 400 KWe MSW-RDF Enhanced Steam Gasification plant

II. Development of 'Torrefied Pellet Manufacturing Plant for Agri-Waste' with Indian START-UP

Other areas:

I. Development of technology for Detection & Quantification of Exfoliation of Boiler Tube using Magnetic Coercive Force (MCF) and Ultrasonic Method for assessment of weld integrity of boiler tubes

II. Development of Disposal Methodology based on Bioremediation Technique of spent Fire-Resistant Fluids (FRF)

III. In-situ measurement of internal deposit thickness in waterwall tubes based on Ultrasonic testing

IV. Development of test procedure for detection of Fatigue cracks near fin weld joint in water wall tubes from fire side using advanced Ultrasonic phased array testing.

V. WW Tube Deposit Wt. Density (DWD) Measure and Qualitative analysis of scale

VI. 2*50 Nm^3/hr. PSA based Oxygen Generation and Bottling plant

VII. Upgradation of oxygen purity from 93% to 99% in 1*50 Nm^3/hr stream of PSA Oxygen generation plant at NETRA.

Apart from various projects, NETRA also provided advanced scientific support to your Company Stations and outside power utilities in various areas such as Non-Destructive Evaluation and Imaging, Metallurgy & Failure Analysis, CFD Services for process improvement Transformer, Generator Health, Creep & fatigue analysis, Corrosion & Water Chemistry, Coal & Combustion and Environment, etc.

Various institutional building activities such as training programs, workshops on various topics such as Advanced NDE & Metallurgy etc. were conducted. NETRA journal, compendium of Metallurgy focused case studies, compendium on advance NDE methods and numerous research papers were published.

Scientific Support to your Company Stations (Continuous basis) :

NETRA also provides advanced scientific support to your Company Stations and outside power utilities mainly in the following areas:

I. Health assessment and residual life assessments of power plant components for improving the reliability and availability of boiler, steam turbine, Gas turbines components by using different advanced NDE tools and techniques

II. Remote Inspection of boiler header using in-house developed robotic system, Evaluation of Post Weld Heat Treatment Quality of Ferromagnetic Steel Weld etc. using Magnetic Coercive Force Measurement

III. Implementation of Advance NDE Techniques such as Phased Array Ultrasonic Testing (PAUT) for inspection of weld joints on Boiler Tubes, in-situ detection of hydrogen damage in water wall, in-situ detection of crack in root region of LP turbine blades, Time of Flight Diffraction (TOFD)

IV. Microstructural characterization of various alloys, stainless steels, super alloys and other advanced materials:

   a. Identification of damage mechanisms in pressure part components to reduce forced outages and thereby improve availability & reliability of components; and, suitable measures recommended to OS, QA and O&M departments

   b. Root cause analysis of boiler, turbine, generator and auxiliaries of power plant .

V. Substitution of OEM on high end & costly health assessment of GT components

VI. Development of Chemical Formulations for Cooling Water Treatment for high COC, to reduce the specific water consumption of plant

VII. Quantitative and Qualitative analysis of deposit, solvent selection and post operational chemical cleaning recommendations for boilers and Condenser

VIII. Corrosion analysis, monitoring & its control in Power plants for Fire Fighting System and CW System.

IX. Specialized analytical support for characterizing the turbine, boiler, condenser, CT and De aerator deposits, corrosion products, heavy metals in effluents using state of art equipment's such as SEM, XRD, IC, TOC, particle count analyzer, AAS & ICPMS etc.

X. Improvement in STP water quality by enhancing the performance of sewage treatment and by carrying out testing of organic matter, COD, BOD and TKN. Trace level Mercury testing's in Coal and Effluent

XI. Residual life assessment of ACF, Cation Exchange Resin, Anion Exchange Resin, MB-SAC resin, MB-SBA resin, CPU resin through analysis such as TEC, SSC, WRC, density.

XII. Particle size distribution and bead integrity of Cation Exchange, Anion Exchange, MB & CPU resin.

XIII. Condition Monitoring of:

- High voltage transformers through tools such as Dissolve gas Analysis (DGA), FDS, SFR and Interfacial Tension (IFT).
- Super heater / re-heater tubes of ageing boilers through accelerated creep testing.
- Lubricating oils of rotating components using wear debris analysis
- Ion exchange resins & activated carbon for capacity enhancement and its kinetics

XIV. Advanced coal & ash characterization of samples of station to determine ash fusibility characteristics, slagging & fouling behavior of coal, elemental composition of coal & biomass, particle size analysis of fly ash, reactivity, abrasion behavior & grade determination of coal. Compositional analysis of fly ash using EDXRF. Estimation of mercury in coal in ppm/ppb level

XV. CFD services in power plant domain and other relevant areas.

2. Benefits derived as a result of above Research & Technology Development:

NETRA activities are aligned for solving some of the major concerns of your Company and the power sector in today's scenario. In this regard, NETRA has taken up major projects for addressing concerns such as environment and climate change, reliability and efficiency improvement, new and renewable energy etc.

NETRA has taken projects for reducing carbon footprints by means of carbon capture and utilization. 10 TPD CO_2 to Methanol project is aimed at capturing CO_2 from existing thermal plant and its utilization for production of valuable product such as Methanol. Work is going on for the indigenization of catalyst and reactor for conversion of CO_2 to Methanol plant.

R&D, lab-scale and pilot-scale demonstration projects such as development of Sea water Electrolyser, High Temperature steam electrolysers, Static hydrogen storage and Compression etc have been taken up for hydrogen technology.

Continuous work is going on for the development of new products and processes for bulk Ash utilization and as a result novel technologies & products such as Geo Polymeric (GPC) Road, Geo polymeric Pavers & Tetrapod etc. have been successfully developed and implemented.

Through advance scientific services like Non-Destructive Evaluation, CFD analysis and Metallurgy & Failure Analysis, etc., NETRA is working constantly for improvement in reliability, efficiency and as well as for reduction in O&M cost by the diagnosis of faults. NETRA is also working on cutting-edge technologies such as development of robotics solutions for inspection of CW Duct & water pipeline, visual inspection of boiler headers, boiler 1st pass internal inspection. Asset Digitization & Monitoring through Drones, development of novel sensors to increase reliability, safety and to reduce inspection & monitoring time as well as manpower requirements.

NETRA activities have helped the stations in the analysis of failures and their prevention. Techniques developed by NETRA are implemented at stations wherever required. Regeneration treatments of resins, chemical cleaning/treatment and corrosion control measures supported the stations in improving the efficiency and availability of boilers and various heat exchangers/cooling towers, etc.

Majority of projects of NETRA involves development, implementation, and demonstration of new technologies, so almost all projects mentioned in above section (Work carried out by NETRA in FY 2021-22) have technological trial component in it.

3. R&D Expenditure:

₹ in Lakh

S.No	Description	Revenue	Capital
a)	NTPC	19581.86	2371.33
b)	THDC	279.86	-
c)	NEEPCO	15.20	-
	Total of your Company and your Company group Company	**22248.25**	

4.0 Technology Absorption, Adaptation and Innovation:

Particulars of some of the important technology imported during last five (5) years are as follows:

S.No.	Technology	Year	Stations
1	Cooling Tower of FRP construction	2016-19	Installed in BRBCL Nabinagar (Subsidiary Company) (4x250 MW) and under execution in CTs of Simhadri-I (2X500 MW)
2	Environmental norms compliance (SO2 emission control by FGD)	2017-22	For SO2 emission compliance FGDs are under implementation in 60,940 MW and FGD/DSI in 1,340 MW is already under operation. 2000 MW capacity Wet limestone based FGD has been awarded during 2021-22.
3	Online Coal analyzers	2018-20	Implemented in nine number coal based non pit head stations and in upcoming coal based thermal power plants.
4	AMS (Advanced Monitoring of Stockyard)	2018-19	Successfully implemented at Simhadri station as a pilot project.
5	APC (Advanced Process control)	2018-19	Technology demonstration completed at Simhadri station.

For and on behalf of the Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Dated: 30th July, 2022

NTPC Mouda Super Thermal Power Plant at Nagpur

STASTICAL INFORMATION ON RESERVATION OF SCs/STs/OBCs FOR THE YEAR 2021-22

Representation of SCs/STs/OBCs as on 1.1.2022:

Group	Employees on Roll	SCs	% age	STs	% age	OBCs	% age
A	11,586	1,699	14.66	699	6.03	2,614	22.56
B	3,011	485	16.11	259	8.60	408	13.55
C	2,881	431	14.96	242	8.40	1,051	36.48
D	297	81	27.27	31	10.44	101	34.01
Total*	**17,775**	**2,696**	**15.17**	**1231**	**6.93**	**4,174**	**23.48**

*The above data is inclusive of manpower posted at JVs and Subsidiaries and manpower of taken over projects and FTE.

Recruitment of SCs/STs/OBCs during the year 2021:

Group	Total Recruitment	SCs	% age	STs	% age	OBCs	% age
A	538	63	11.71	28	5.20	137	25.46
B	0	0	0.00	0	0.00	0	0.00
C	120	9	7.50	16	13.33	17	14.17
D	1	0	0.00	1	100.00	0	0.00
Total	**659**	**72**	**10.93**	**45**	**6.83**	**154**	**23.37**

Promotions of SCs/STs during the year 2021:

Group	Total Promotion	SCs	% age	STs	% age
A	2,174	357	16.42	134	6.16
B	874	150	17.16	65	7.44
C	651	105	16.13	68	10.45
D	3	0	0	0	0
Total	**3,702**	**612**	**16.53**	**267**	**7.21**

For and on behalf of the Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Dated: 30th July, 2022

NTPC Sipat Super Thermal Power Plant at Bilaspur

INFORMATION ON PERSONS WITH BENCHMARK DISABILITIES (PwBD)

With a view to focus on its role as a socially responsible and socially conscious organization, your Company has endeavored to take responsibility for adequate representation of physically challenged persons in its workforce. With this in view, total of 11 PwBD (Persons with Benchmark Disabilities) were recruited during the year 2021. As on 1.1.2022, 494 (2.80%) PwBD (93 with Blindness and low vision, 109 with Deaf and Hard of Hearing and 292 with Locomotor Disabilities) are on the rolls of your Company. Reservation has been provided as per rules/policy of your Company. Some of the other initiatives taken for the welfare of PwBD over the years by your Company are as under:

- In compliance to RPwD Act 2016, your Company has in place Equal Opportunity Policy.
- Additional benefit of 4(four) days in the form of Special Casual leave in a calendar year for specific requirements relating to the disability of the employee has been provided to PwBD.
- Travelling Allowance in respect of Attendant/Escort for accompanying a Employee with Disabilities on travel during Tour/ Training are allowed in your Company.
- Liaison Officer (PwBD) and Grievance Redressal Officer has been nominated at all Projects/stations/Regions of your Company.
- For individual needs of the VH employees, screen reading software and Braille shorthand machines are made available by the Projects of your Company. A website has been made DAP friendly, particularly for Low Vision Employees.
- Changes in the existing building have been/are being made to provide barrier free access to differently abled. Ramps have also been provided for unhampered movement of wheel chairs.
- At most of your Company Projects, wherever houses are located in multi-storied structures, allotments to PwBD has been made on the ground floor. Wherever required, gates/ door of the quarter has been widened.
- Your company Medial Attendance and Treatment (MAT) rules provide reimbursement towards expenses incurred by the employees towards purchase/replacement/repair/adjustment of artificial limbs/appliances for self and/or dependent family members and reimbursement towards Low Vision Aids for visually challenged employees and/or their dependents and Hearing Aid for hearing impaired employees and/or their dependents.
- Medical camps have been organized in various projects of your Company for treatment and distribution of aids like artificial limbs, tricycles, wheelchairs, calipers etc.
- Shops have been allotted in your Company Township to DAP (Differently abled Persons) so that they may earn their livelihood.
- Regular interactive meetings are being organized with PwBD.
- In order to encourage and motivate children and youth from neighborhood villages of your Company Projects/Stations for higher studies, your Company has in place 'NTPC Utkarsh'-Merit Scholarship under "NTPC Foundation" for students (including Physically Challenged) from the neighborhood of its projects / stations. The scheme benefits students from neighborhood communities pursuing X, XII, ITI, BE/B.Tech and MBBS studies.
- DIVYANG (Orthopedically Handicapped) employees have been allowed to purchase a three wheeler vehicle with a hand fitted engine against their normal entitlement (advance for scooter/ motorcycle/ moped) under your Company conveyance Advance Rules.
- Relaxation in qualifying marks: Pass marks in lateral recruitment and 10% relaxation in Executive Trainees recruitment. 10% relaxation in written test and interview.
- The minimum performance level marks for promotions (in workman categories) within the cluster is relaxed by 3 marks in case of employees belonging to SC/ ST/ Physically Challenged category.

For and on behalf of the Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Dated: 30th July, 2022

CSR initiatives at NTPC Stations

ANNUAL REPORT ON CSR ACTIVITIES

1. A brief outline of the Company's CSR policy, including overview of projects of programs proposed to be undertaken and a reference to the web – link to the CSR policy and projects or programs.

CSR has been synonymous with Company's core business of power generation. Since inception your Company has been very sensitive to the needs of the neighbouring community and persons whose livelihood has been affected due to establishment of a power plant. Your Company's spirit of caring and sharing is embedded in its mission statement. Your Company has a comprehensive Resettlement & Rehabilitation (R&R) policy covering community development (CD) activities, which has been revised and updated from time to time. CD activities in green field area are initiated as soon as project is conceived and thereafter-extensive community / peripheral area development activities are taken up along with the project development.

Your Company CSR Policy formulated in July 2004 and revised in 2010, 2016 and 2019 covers a wide range of activities including provision for implementation of a few key Programmes taken through NTPC Foundation- a charitable Trust set up by your Company to mainly serve and empower the Physically Challenged and Under Privileged Sections of the Society & women.

CSR programs undertaken by your Company include activities specified in Schedule VII of the Companies Act 2013 & Rules made thereunder for the benefit of community at large. Focus areas of your Company's CSR activities are Health, Sanitation, Safe Drinking Water and Education. However, your Company also takes up activities in the areas of Capacity Building of the youth, Women Empowerment, Social Infrastructure Development, livelihood creation through support for implementation of innovative agriculture & livestock development, support to Physically Challenged Person (PCPs), and for the activities contributing towards Environment Sustainability. Your Company CSR efforts are focused in the immediate vicinity of its stations where your Company's operations are situated, ensuring that majority CSR funds are spent on activities addressing the needs of the local community. However, considering inclusive growth & environment sustainability, some of the activities are also taken up in different parts of the country to supplement governmental efforts. During the year, about 450 villages and more than 400 schools have been benefitted by your Company's various CSR initiatives at different locations. Your Company's CSR initiatives have touched the lives of around 14 lakhs people generally residing at remote locations in various parts of the country in one or the other way.

Apart from the regular CSR activities undertaken around your Company's operations, support has also been provided by your Company for some of the major CSR initiatives undertaken all across the country:

Health, Water & Sanitation

- A financial support of ₹ 80 crore in FY 2021-22 and ₹ 250 crore in FY 2020-21 to Prime Minister's Citizen Assistance and Relief in Emergency Situations (PMCARES) Fund has been made for fighting Covid-19 and for other services & activities.
- Established Covid Care Centre (with oxygen) at Badarpur (50 beds) and PMI, Noida (100 beds) and Dadri (30 beds).
- Installed PSA type Oxygen generation plants at various locations like Distt. Hospital Raebareli, Distt. Hospital Robertsganj, Distt. Hospital Sonebhadra, CHC Chhabra, Narsingpur and Ambedkarnagar.
- Support to DPE for procurement of items for COVID-19 Vaccination Programme for the State of Bihar and Uttar Pradesh (UP).
- COVID Care facilitates established with required oxygen support at various Hospitals at Stations/ Projects of your Company.
- Construction of Burn Unit at AIIMS Patna, AIIMS Bhubaneshwar and King George Hospital, Lucknow.
- Support for 5 ambulances to Govt. of Uttarakhand and 4 ambulances to District Administration, Patna.
- Support for Ultraviolet based sanitization technology for PPE kits being developed by IIT Delhi & Chakr Innovation.
- Provided 663 Infrared Thermometers to ASHA workers and 200 KVA DG set provided to District COVID Hospital at Gopeshwar, Uttarakhand.
- Proactive relief measures such as regular sanitization of villages, distribution of PPE kits to health professionals, distribution of face masks to villagers and supply of groceries to the community.
- Your Company hospitals has provided quality primary, secondary and referral care along with diagnostic services to more than 3,00,000 patients from the community every year.

- Health related infrastructure support is being extended to various PHCs, CHCs and District Hospitals located in the vicinity of your Company Projects/Stations.
- Your Company supports the local administration by regularly carrying the works of fogging, spraying etc. in villages located in its vicinity and also distributes mosquito nets for prevention of vector borne diseases.
- Your Company makes primary care accessible, affordable, and inclusive through health camps – both general and specialized (Eye, Respiratory Diseases/ Cancer detection etc.), outreach services through mobile health clinics and by augmenting and strengthening rural health infrastructure. About 3000 surgeries are performed every year in these camps.
- Your Company is supporting the availability of adequate tertiary care in the country:
  - Support for Development of King George Hospital, Visakhapatnam.
  - Support for construction and equipment for 3rd Floor and diagnostic labs at National Cancer Institute Nagpur, Maharashtra.
  - Support to L V Prasad Institute for construction of operating room complex at MTC Campus Bhubaneshwar.
  - Setting up of Special burn unit at KGMU Lucknow, AIIMS Bhubaneshwar and AIIMS Patna.
  - Establishing Integrated Muscular Dystrophy Rehabilitation Centre "Manav Mandir" at Solan Himachal Pradesh.
  - Open gymnasium at various locations in Basti Parliamentary Constituency of Uttar Pradesh.
  - Cancer Screening Program of Bihar Govt. and Tata Memorial Cancer Hospital for four Districts of Bihar.
  - Conducting Jan Arogyam Community Healthcare Programme in Nuh District (Aspirational District) of Haryana through Bisnouli Sarvodaya Gramodyog Sewa Sansthan (BSGSS).
- Your Company ensures access to water to community through installation of hand pumps and piped drinking water etc. To ensure that people have access to potable drinking water, your Company has set up RO water plants/ Water ATMs in public locations near your Company operations. Your Company also distributes water filters/ coolers in various villages/ schools near your Company operations. Further, during extreme summers, your Company ensures availability of water through Water Booths and Water Tankers.
- Your Company has taken initiatives of rejuvenation of Ponds located in the vicinity of many of its Plants with an objective to improve ground water table.
- Your Company has extended support for installation of about 10,000 Energy Efficient Pump System in the fields of farmers residing near NTPC stations located in various districts of UP.
- Your Company supported the Government of India's Swachh Bharat Abhiyan or Swachh Bharat Mission, a nation-wide cleanliness campaign by the Government of India, by making available more than 26,000 toilets in about 16000 schools covering 650 blocks in 83 districts spread over 17 states.
- Your Company has also supported for Pilot Project for Mechanized Cleaning of 14 wards in Varanasi.
- Your Company has revived the defunct Municipal Solid Waste Processing Plant at Karsada, Varanasi. Your Company is also operating and maintaining the plant since July' 2017 onwards.
- Your Company with active involvement of its employees, local school children etc. had organises Nukkad Natak, debates, slogan competitions, essay competitions, painting competitions, walkathons, pamphlet distribution etc. in the vicinity of its various projects and stations to spread awareness about sanitation and hygiene.
- Your Company has constructed Individual Household Toilets and Public Toilets in the adjoining villages and Public Places located in the vicinity of our Projects and Stations with an objective of creating an open defecation free society.
- Your Company is supporting the developmental & beautification works of Charminar, Hyderabad under 'Swachh Iconic Places Project' of Govt. of India. The goal of the Initiative is to improve the cleanliness conditions of places that are "iconic" due to their heritage, religious, and/or cultural significance.
- Your Company has encouraged the formation of women's self-help groups to produce and distribute low-cost sanitary napkins in the villages surrounding its power plants.

Education

- Your Company has established Smart Classes and has taken many initiatives in various Government schools located in the vicinity of its Plants and Stations for improving the learning level of the school children.
- Your Company Sipat has so far sponsored education to more than 300 Baiga Tribal students for getting admission into engineering and medical colleges through Commissioner, Tribal Welfare, Chhattisgarh.
- Your Company Korba (aspirational district) is supporting the holistic education to 30 Special Backward Tribe PahadiKorwa students every year from class VI to XII.
- Your Company is supporting the construction of facilities for tribal school in Chapki, Distt. Sonebhadra (UP).
- Your Company is supporting development of school infrastructure in the existing school at Govindnagar, PaliyaPipariya, Block Bankhedi, Hoshangabad, MP.
- Your Company has set up an English Medium School through Shree Ramakrishna Ashram, M. Rampur, Kalahandi.
- Your Company has extended its support for Development, Renovation and Advancement project of GHSS Munderi, District Kannur, Kerala.
- Supporting education in rural areas by augmenting and strengthening school infrastructure including additional classrooms, science labs, libraries, kitchen sheds, providing assets like furniture, computers, separate toilets for girls and boys, water coolers, filters etc. Your Company also ensures the right to education of children from the underprivileged sections of society by providing them with scholarships, study material & uniforms etc.
- 34 Schools in your Company Townships provide subsidized education primarily to rural community children benefitting about 20,000 students of neighbourhood areas.

Skill Development and Income Generation

- Your Company has adopted 18 nos. ITIs and set up 8 new ITIs at various locations.
- Your Company is supporting "Skill India Mission" of GoI through MoU with NSDC for various employment linked skill development programs for 30000 rural youth including 8,000 youth of J&K.
- Your Company has provided various capacity building training programmes, exposure visits and provided hand holding through experts to the farmers of villages in its vicinity on various techniques of crop/animal productivity such as use of drip irrigation to produce more crop per drop, in improving milk yield through improving breed through artificial insemination, cultivation of nutrient rich and rapidly growing fodder crops etc.
- Your Company makes youth entrepreneurial, enterprising and employable by providing them with training in Electrical Repairing, Mobile Repairing, Motor Rewinding, Welding, Car Driving including obtaining LMV driving license, Computer Training, etc.

Disaster Relief

- Financial support to Uttarakhand State Disaster Management Authority (USDMA) for undertaking reconstruction and restoration of Govt. Schools and Govt. Health Centers in various districts of Uttarakhand.
- Your Company is supporting the Redevelopment of Kedarnath town, Uttarakhand and its surrounding areas devastated during natural calamity of 2013.

Women Empowerment

- Your Company has supported Udyan Care at Jaipur, Rajasthan for the higher education and rehabilitation of orphan and abandoned girls.
- Your Company has conducted various training on embroidery, dress designing, cutting, stitching, tailoring (including providing sewing machines), beautician, food preservation & processing, nursing etc. to women from various villages located in its vicinity.

Promotion of Sports

- Your Company has adopted Archery as a sport with the objective of scouting for talent in remote parts of India and nurture them through coaching camps to enhance India's presence in the sports internationally. The 3-year agreement with Archery Association of India (AAI) includes the title rights across all National Archery Championships (NACs), National Ranking Archery Tournaments (NRATs) and exclusive right to provide kits/ apparels to Indian Archery team for international participation.

❖ Your Company supported Aizawl Football Club in Aizawl, Mizoram by providing 2 buses.

Others

❖ Your Company supports the development of basic infrastructure such as roads, bridges, culverts, bus shelters, community centers, schools, health centers enabling the local community to fulfil their basic needs and to enhance the quality of their lives.

❖ Installation of LED based Solar Street Lights & Solar High Mast lights in Sant Kabir Nagar, Uttar Pradesh and in Satna, Madhya Pradesh by your Company.

❖ Your Company's support is committed for construction and redevelopment of Shri Badrinath Dham town as a spiritual smart hill town.

NTPC Foundation

With an objective to serve and empower the physically challenged and economically weaker sections of the society including women, NTPC Foundation has been set up by your Company to take up projects & programs addressing niche domains of socio-economic concerns. Major activities of the foundation include:

1. **Girl Empowerment Mission (GEM) –** A four-week residential workshop for girl children in the age group of 10 to 12 years. The workshop aims at empowerment/upliftment of girl children through various interventions to make girls self-reliant and confident in all walks of life and become a catalyst in transforming their lives, the lives of their family and bring positive changes in the community they live and the nation at large. A summer residential workshop for 4 weeks is organized for girl children in the age group of 10-12 years selected from various Govt. Schools of villages in the vicinity of your Company Projects/Stations including your Company Joint Ventures & Subsidiaries. The entire cost of the program including their boarding & lodging in a safe & secure environment of these girl children is borne by your Company. Further, free education of around 180 girl students admitted to different Township Schools of your Company. In the year 2022, the said programme is being conducted at 33 Projects / stations/ JV & Subsidiaries of your Company where around 2400 girls are participating.

2. **Directly Observed Treatment cum Designated Microscopy Centre (DOTs cum DMC)** with Mobile ambulance facilities being operated at 9 hospitals of your Company under Revised National Tuberculosis Control Programme (RNCTP) that cater to villages upto 25-30 Km from your Company stations and has benefited around about 2103 cases during the year through Screening for TB/HIV and treatment provided to patients diagnosed with TB/HIV.

3. **Disability Rehabilitation Centre (DRC)** at your Company Tanda, Rihand, Korba, Dadri, Bongaigaon and Farakka established in collaboration with National Institute of Locomotor Disabilities (NILD) erstwhile National Institute for the Orthopedically Handicapped (NIOH), under the Ministry of Social Justice and Empowerment, Government of India has benefitted about 1358 physically challenged people with approximately 3076 Surgical corrections, serving aids & appliances during the year.

4. Providing IT education to physically & visually challenged students through ICT Centre established at Devi Ahilyabai Vishwa Vidhyalaya, Indore.

5. 'NTPC Utkarsh Scholarship' A flagship program of NTPC Foundation in education which provides scholarship to encourage and motivate the students who are pursuing secondary, high school, ITIs, Diploma/Degree in Engineering & also medical science studies.

2. The composition of the CSR Committee. The Composition of the CSR Committee

As on date, the Board Level Corporate Social Responsibility & Sustainability Committee comprises

Two functional Directors	:	Shri Dillip Kumar Patel, Director (HR), Chairman of the Committee
	:	Shri. Ramesh Babu V., Director (Operations), Member
Three Independent Director	:	Smt Sangitha Varier, Independent Director, Member
	:	Shri Jitendra Tanna, Independent Director, Member
	:	Shri Vivek Gupta, Independent Director, Member

Sl. No.	Name of Director	Designation / Nature of Directorship	Number of meetings of CSR Committee held during the year	Number of meetings of CSR Committee attended during the year
1.	Dr. Bhim Singh [1]	Independent Director, Member	3	3
2.	Shri Ashish Upadhyaya [2]	Govt. Nominee Director, Member	2	2
3.	Shri Dillip Kumar Patel [3]	Director (HR) and Chairman of the Committee	6	6
4.	Shri Ramesh Babu V. [4]	Director (Operations), Member	6	6
5.	Shri Vivek Gupta [5]	Independent Director, Member	1	1
6.	Sh. Jitendra Jayantilal Tanna [6]	Independent Director, Member	1	1
7.	Smt. Sangitha Varier [7]	Independent Director, Member	1	1

1. Ceased to be Director w.e.f. 16th July 2021.
2. Appointment as Member of the Committee w.e.f. 23rd August, 2021 and ceased to be member w.e.f. 30th December 2021.
3. Appointment as Chairman of the Committee w.e.f. 23rd October, 2020.
4. Appointment as Member of the Committee w.e.f. 23rd October, 2020.
5. Appointment as Member w.e.f. 30th December, 2021.
6. Appointment as Member w.e.f. 30th December, 2021.
7. Appointment as Member w.e.f. 30th December, 2021.

The committee recommends to the Board for approval, the amount of expenditure anticipated on the CSR activities and monitors from time to time the Policy for CSR and the proposals approved by the Board.

3. **Provide the web-link where Composition of CSR committee, CSR Policy and CSR projects approved by the board are disclosed on the website of the company.**

   Web Link to the CSR Policy & Projects or programs

   http://www.ntpc.co.in/en/corporate-citizenship/corporate-social-responsibility

4. **Provide the details of impact assessment of CSR projects carried out in pursuance of sub-rule (3) of rule 8 of the Companies (Corporate Social responsibility Policy) Rules, 2014, if applicable (attach the report):** Nil

5. **Details of the amount available for set off in pursuance of sub-rule (3) of rule 7 of the Companies (Corporate Social responsibility Policy) Rules, 2014 and amount required for set off for the financial year, if any-**

Sl. No.	Financial Year	Amount available for set-off from preceding financial years (in ₹)/ crore	Amount required to be set-off for the financial year, if any (in ₹)/crore
1	2020-21	NIL	140.30
2	2021-22	140.30	74.92
	Total		**215.22**

6. **Average net profit of the company for the last three financial years as per section 135(5) of companies Act, 2013 :** ₹ 14,089.80 crore

7.

(a)	Two percent of average net profit of the company as per section 135(5)	₹ 281.80 crore
(b)	Surplus arising out of the CSR projects or programmes or activities of the previous financial years.	Nil
(c)	Amount required to be set off for the financial year, if any	Nil
(d)	Total CSR obligation for the financial year (7a+7b-7c).	₹ 281.80 crore
(a)	CSR amount spent for the financial year:	₹ 356.72 crore

8. (a) Details of CSR spent or unspent during the financial year.

Total Amount Spent for the Financial Year (in ₹)/crore	Amount Unspent (in ₹)/crore				
	Total Amount Transferred to Unspent CSR Account as per section 135 (6)		Amount transferred to any fund specified under Schedule VII as per second proviso to section 135 (5)		
	Amount	Date of Transfer	Name of the Fund	Amount	Date of Transfer
356.72	NIL	NA	NA	NA	NA

8. (b) Details of CSR amount spent against ongoing projects for the financial year:

(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)	(9)	(10)	(11)	
Sl. No.	Name of the Project	Item from the list of activities in Schedule VII to the Act.	Local area (Yes/ No)	Local area/ Location of the project		Project duration (in yrs)	Amount allocated for the project (in ₹)	Amount spent in the current financial Year (in ₹)	Amount transferred to Unspent CSR Account for the project as per Section 135(6) (in ₹)	Mode of Implementation- Direct (Yes/No)	Mode of Implementation - Through Implementing Agency	
				State	District.						Name	CSR Registration number
1	Providing skill training to 25000 youths	Ii & iii	Yes	Multiple* States/UTs	Multiple districts	6	120000000	120000000	-	No	National Skill Development Fund	CSR00005903
2	Financial support to Shree Ramakrishna Ashram, M. Rampur, Kalahandi for construction of an English Medium School and creation of assets.	ii	No	Odisha	Kalahandi	5	5950000	5950000	-	Yes	NA	NA
3	Construction & Equipment for 3rd Floor and diagnostic lab at National Cancer Institute, Nagpur	i	No	Maharashtra	Nagpur	5	108900000	108900000	-	No	Dr. Abaji Thatte Seva Aur Anusandhan	CSR00012471
4	Infrastructure facilities at Sewa Kunj Ashram	ii	Yes	Uttar Pradesh	Sonebhadra	5	14206160	14206160	-	Yes	NA	NA
5	Setting up burn Unit at AIIMS Patna	i	No	Bihar	Patna	4	49800000	49800000	-	Yes	NA	NA
6	Installation of Energy Efficient Pumps at various districts of UP	x	No	Uttar Pradesh	Multiple** districts	4	58520000	58520000	-	Yes	NA	NA
7	Revival of MSW Plant at Karsada, Varanasi	i	No	Uttar Pradesh	Varanasi	4	129618040	129618040	-	Yes	NA	NA
8	Setting up Burn Unit at KGMU Lucknow	i	No	Uttar Pradesh	Lucknow	4	20837700	20837700	-	Yes	NA	NA
9	Setting up of Burn Unit at AIIMS Bhubaneshwar	i	No	Odisha	Bhubaneshwar	4	59500000	59500000	-	Yes	NA	NA
10	Support to AAI for Archery Sports	vii	No	Multiple States/UTs	Multiple districts	4	33000000	33000000	-	Yes	NA	NA
11	Support to BBSLN for Development of school	ii	No	Madhya Pradesh	Hoshangabad	4	3972000	3972000	-	No	Bhau Saheb Bhuskute Smriti Lok Nyas Trust	CSR00005726
12	Installation of Solar Lights in Mathura	x	No	Uttar Pradesh	Mathura	3	1419900	1419900	-	Yes	NA	NA
13	Setting up of open gymnasiums at various locations in Basti	x	No	Uttar Pradesh	Basti	3	5628019	5628019	-	Yes	NA	NA
14	Providing 2 No. of buses to football club Aizawl	vii	No	Mizoram	Aizawl	3	3600000	3600000	-	No	Aizawl Football Club	CSR00016246
15	Redevelopment of Kedarnath town	xii	No	Uttarakhand	Rudraprayag	3	75000000	75000000	-	No	Shri Kedarnath Utthan Charitable Trust	CSR00009855

(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)	(9)	(10)	(11)	
Sl. No.	Name of the Project	Item from the list of activities in Schedule VII to the Act.	Local area (Yes/ No)	Local area/ Location of the project		Project duration (in yrs)	Amount allocated for the project (in ₹)	Amount spent in the current financial Year (in ₹)	Amount transferred to Unspent CSR Account for the project as per Section 135(6) (in ₹)	Mode of Implementation- Direct (Yes/No)	Mode of Implementation - Through Implementing Agency	
				State	District.						Name	CSR Registration number
16	Development, renovation and advancement project of GHSS Munderi, Kannur	x	No	Kerala	Kannur	2	7500000	7500000	-	Yes	NA	NA
17	Financial assistance towards Badrinath	x	No	Uttarakhand	Chamoli	2	16900000	16900000	-	No	Shri Kedarnath Utthan Charitable Trust	CSR00009855
	TOTAL						**714351819**	**714351819**				

* States/UTs: Bihar, Jharkhand, Chhattisgarh, Haryana, Uttar Pradesh, Delhi, Rajasthan, Telangana, Uttarakhand, West Bengal, Madhya Pradesh, Punjab, Maharashtra, Odisha, Assam, Himachal Pradesh, Karnataka, J&K and Leh & Ladakh.

** Districts: Baghpat, Varanasi, Ghazipur, Noida, Ambedkar Nagar, Raebareli, Sonebhadra, Auraiya, Kanpur Dehat, Jalaun, Sultanpur, Mirzapur, Bulendshahr, Barabanki, Sitapur, Chanduali, Mau, Lalitpur and Jhansi.

8. (c) Details of CSR amount spent against other than ongoing projects for the financial year:

(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)	
Sl. No.	Name of the Project	From the list of activities in Schedule VII to the ACT	Local area (Yes/ No)	Location of the Project		Amount spent for the project (in ₹ Crore.)	Mode of implementation -Direct (Yes/No.)	Mode of implementation - Through implementing agency	
				State	District			Name	CSR Registration number
1	Eradicating Hunger and Poverty, Health Care and Sanitation	(i)	CSR initiatives during the Financial Year 2021-22 have been taken up on PAN India basis around NTPC operations primarily in 22 states & UT mentioned below: Andhra Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Gujarat, Haryana, Himachal Pradesh, Jharkhand, J&K, Karnataka, Kerala, Ladakh, Madhya Pradesh, Maharashtra, Mizoram, Odisha, Rajasthan, Telangana, Uttar Pradesh, Uttarakhand, West Bengal			51.51	Directly and through Implementing agencies (NTPC Foundation/ Trusts/ societies/NGOs etc.		
2	Education and Skill Development	(ii)				96.90			
3	Empowerment of Women and other Economically Backward Sections	(iii)				1.36			
4	Environmental Sustainability	(iv)				31.08			
5	Art & Culture	(v)				0.53			
6	Sports	(vii)				1.04			
7	PMCARES Fund	(viii)				80.00			
8	Rural Development	(x)				14.62			
9	Disaster management, including relief, rehabilitation, and reconstruction activities	(xii)				8.24			
	Total					**285.28**			

Note: The detailed table is provided in Annexure-I

8. (d) Amount spent in Administrative Overheads : Nil

8. (e) Amount spent on Impact Assessment, if applicable : NA

8. (f) Total amount spent for the Financial Year (8b+8c+8d+8e) : ₹ 356.72 crore

8. (g) Excess amount for set off, if any : ₹215.22 crore

Sl. No.	Particular	Amount (₹ crore)
(i)	Two percent of average net profit of the company as per Section 135 (5)	281.80
(ii)	Total amount spent for the Financial Year	356.72
(iii)	Excess amount spent for the financial year (ii)-(i)	74.92
(iv)	Surplus arising out of the CSR projects or programmes or activities of the previous financial years, if any	NIL
(v)	Amount available for set off in succeeding financial years [(iii)- (iv)]	74.92

9. (a) Details of Unspent CSR amount for the preceding three financial years : NIL

9. (b) Details of CSR amount spent in the financial year for ongoing projects of the preceding financial year(s) :

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Sl. No.	Project ID	Name of the Project	Financial Year in which The Project was Commenced	Project Duration	Total amount allocated for the project (in ₹)	Amount spent on the project on the reporting Financial Year (in ₹).	Cumulative amount spent at the end of reporting Financial Year. (in ₹)	Status of the project - Completed /Ongoing.
1	CR-2015.1001.VTG.VTY.01	Providing skill training to 25000 youths	2015-16	7	300000000	120000000	255000000	Ongoing
2	CR-2017.1001.HNS.INF.19	Construction & Equipment for 3rd Floor and diagnostic lab at National Cancer Institute, Nagpur	2017-18	6	500000000	108900000	419400000	Ongoing
3	CR-2017.1005.EDN.INF.64	Infrastructure facilities at Sewa Kunj Ashram	2017-18	5	165100000	14206160	96280203	Ongoing
4	CR-2018.1001.HNS.INF.15	Setting up burn Unit at AIIMS Patna	2018-19	6	185050000	49800000	64800000	Ongoing
5	CR-2018.1001.INF.REG.28	Installation of Energy Efficient Pumps at various districts of UP	2018-19	4	400000000	58520000	268760000	Ongoing
6	CR-2018.1003.HNS.OTH.61	Revival of MSW Plant at Varansi, Karsada	2018-19	7	714223000	129618040	314587891	Ongoing
7	CR-2018.1001.HNS.INF.17	Setting up Burn Unit at KGMU Lucknow	2018-19	5	112850000	20837700	37922746	Ongoing
8	CR-2018.1001.HNS.INF.16	Setting up of Burn Unit at AIIMS Bhubaneshwar	2018-19	5	198700000	59500000	173000000	Ongoing
9	CR-2018.1001.SPT.OTH.15	Support to AAI for Archery Sports	2018-19	6	137500000	33000000	55500000	Ongoing
10	CR-2018.1001.EDN.INF.27	Support to BBSLN for Development of school	2018-19	4	9930000	3972000	8937000	Ongoing
11	CR-2019.1044.EDN.INF.11	Financial support to Shree Ramakrishna Ashram, M. Rampur, Kalahandi for construction of an English Medium School and creation of assets.	2019-20	3	10000000	5950000	5950000	Ongoing
12	CR-2019.1003.INF.REG.61	Installation of Solar Lights in Mathura	2019-20	3	7100000	1419900	7099500	Ongoing
13	CR-2019.1003.INF.OTH.65	Setting up of open gymnasiums at various locations in Basti	2019-20	3	5000000	5628019	5628019	Ongoing

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
14	CR-2019.1044.SPT.OTH.12	Providing 2 No. of buses to football club Aizawl	2019-20	3	4000000	3600000	3600000	Ongoing
15	CR-2019.1001.OTH.CAL.19	Redevelopment of Kedarnath town	2019-20	3	250000000	75000000	75000000	Ongoing
16	CR-2020.1034.INF.OTH.61	Development, renovation, and advancement project of GHSS Munderi, Kannur	2020-21	3	25000000	7500000	22500000	Ongoing

10. In case of creation or acquisition of capital asset, furnish the details relating to the asset so created or acquired through CSR spent in the financial year (asset-wise details).

(a) Date of creation or acquisition of the capital asset(s) : Nil

(b) Amount of CSR spent for creation or acquisition of capital asset : Nil

(c) Details of the entity or public authority or beneficiary under whose name such capital asset is registered, their address etc.: Not Applicable

(d) Provide details of the capital asset(s) created or acquired (including complete address and location of the capital asset). Not Applicable

11. Specify the reason(s), if the company has failed to spend the two percent of the average net profit as per section 135(5): Not Applicable

By spending ₹ 356.72 crore during the financial year, the company has surpassed the prescribed two percent amount of ₹ 281.80 crore thus achieving a CSR spent of 2.53%.

sd/- (Chief Executive Officer or Managing Director or Director) **Shri Gurdeep Singh**	sd/- (Chairman CSR Committee) **Shri D K Patel**	**Not Applicable** (Person specified under clause (d) of sub-section (1) of section 380 of the Act)

Place : New Delhi

Dated : 30th July, 2022

8. (c) Details of CSR amount spent against other than ongoing projects for the financial year

(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)	
Sl. No.	Name of the Project	Item from the list of activities in schedule VII to the Act	Local area (Yes/ No)	Location of the project.		Amount spent for the project (in ₹)	Mode of implementation - Direct (Yes/ No).	Mode of implementation - Through implementing agency.	
				State	District			Name.	CSR Registration No.
1	Access to potable water supply	i	Yes	Andhra Pradesh	Vishakhapatnam	5100000	Yes	NA	NA
2	MOBILE HEALTH CLINICS	i	Yes	Andhra Pradesh	Vishakhapatnam	3001200	Yes	NA	NA
3	Const of toilets & oth infra at community	i	Yes	Andhra Pradesh	Vishakhapatnam	2650000	No	Executive Engineer, PRI	CSR00031393
4	PROVIDING CLOTH MASKS TO PREVENT SPREAD	i	Yes	Andhra Pradesh	Vishakhapatnam	1210088	Yes	NA	NA
5	MOBILE HEALTH CLINICS	i	Yes	Andhra Pradesh	Vishakhapatnam	1165441	No	HELPAGE INDIA	CSR00000901
6	MOBILE HEALTH CLINICS	i	Yes	Andhra Pradesh	Vishakhapatnam	1165441	Yes	NA	NA
7	PROVIDING GROCERIES (DIRECTLY)	i	Yes	Andhra Pradesh	Vishakhapatnam	1046571	Yes	NA	NA
8	Eqp & aids to PCPs	i	Yes	Andhra Pradesh	Vishakhapatnam	983825	Yes	NA	NA
9	Providing safe drinking water through Pr	i	Yes	Andhra Pradesh	Vishakhapatnam	800000	Yes	NA	NA
10	SUPPORT FOR SANITIZERS, SOAPS ETC	i	Yes	Andhra Pradesh	Vishakhapatnam	719796	Yes	NA	NA
11	Conducting health camps in villages	i	Yes	Andhra Pradesh	Vishakhapatnam	611285	No	SANKAR FOUNDATION	CSR00006331
12	Construction of community Toilets with a	i	Yes	Andhra Pradesh	Vishakhapatnam	495175	Yes	NA	NA
13	3rd party audit of toilets const und SVA	i	Yes	Andhra Pradesh	Vishakhapatnam	457182	Yes	NA	NA
14	Promoting Menstrual hygine and health by	i	Yes	Andhra Pradesh	Vishakhapatnam	416638	Yes	NA	NA
15	Providing RO water / Water ATM in neighb	i	Yes	Andhra Pradesh	Vishakhapatnam	163000	Yes	NA	NA
16	Maint of public toilets	i	Yes	Andhra Pradesh	Vishakhapatnam	161586	Yes	NA	NA
17	Conducting health camps in villages	i	Yes	Andhra Pradesh	Vishakhapatnam	160000	No	HELPAGE INDIA	CSR00000901
18	Maint of public toilets	i	Yes	Andhra Pradesh	Vishakhapatnam	50000	No	THE SERVE RURAL	CSR00003721
19	PROVIDING GROCERIES (THRU ADMIN)	i	Yes	Andhra Pradesh	Vishakhapatnam	14099	Yes	NA	NA
20	Conducting health camps in villages	i	Yes	Andhra Pradesh	Vishakhapatnam	8874	Yes	NA	NA
21	Const of toilets & oth infra at communit	i	Yes	Andhra Pradesh	Vishakhapatnam	3972	Yes	NA	NA
22	Providing open gym/ gym eqp in villages	i	Yes	Andhra Pradesh	Vishakhapatnam	3197	Yes	NA	NA
23	Sanitation drives, Providing dustbins, b	i	Yes	Andhra Pradesh	Vishakhapatnam	1984	Yes	NA	NA
24	Exp Oxygen Gen Plt-Covid Cnt Bongaigaon	i	Yes	Assam	Kokrajhar	7690000	Yes	NA	NA
25	Exp Oxygen Gen Plt-Covid Cnt Nr Barh	i	Yes	Bihar	Patna	7425072	Yes	NA	NA
26	Support Cancer Screening Program Bihar	i	Yes	Bihar	Patna	6875285	Yes	NA	NA
27	FINANCIAL SUPPORT TO LOCAL ADMINISTRATIO	i	Yes	Bihar	Bhagalpur	2179653	Yes	NA	NA
28	Providing oxygen flow meter to dist Hosp	i	Yes	Bihar	Patna	2072000	Yes	NA	NA
29	Construction of Toilets	i	Yes	Bihar	Bhagalpur	1311153	Yes	NA	NA
30	Mediacal camps in villages/schools	i	Yes	Bihar	Bhagalpur	1295000	Yes	NA	NA
31	Build, deepen and rejuvenate ponds in ne	i	Yes	Bihar	Bhagalpur	1294003	Yes	NA	NA
32	Distribution of cloth Masks to commuity	i	Yes	Bihar	Bhagalpur	813220	Yes	NA	NA
33	PROVIDING GROCERIES TO DISADVANTAGED PER	i	Yes	Bihar	Bhagalpur	640120	Yes	NA	NA
34	3rd party audit of toilets const und SVA	i	Yes	Bihar	Patna	560341	Yes	NA	NA
35	Conducting health camps in nearby villag	i	Yes	Bihar	Bhagalpur	481246	Yes	NA	NA
36	Support for Stretcher Trolley, wheel Cha	i	Yes	Bihar	Patna	144397	Yes	NA	NA
37	Piped water system in villages	i	Yes	Bihar	Bhagalpur	85438	Yes	NA	NA
38	PROVIDING GROCERIES (DIRECTLY)	i	Yes	Bihar	Bhagalpur	48598	Yes	NA	NA
39	DWP(Solar dual pumps or deep bore)	i	Yes	Bihar	Bhagalpur	29015	Yes	NA	NA
40	Construction of individual toilets	i	Yes	Bihar	Bhagalpur	23739	Yes	NA	NA
41	CT Scan Machine for Govt. Dist Hospital	i	Yes	Chhattisgarh	Korba	20000000	Yes	NA	NA
42	Exp Oxygen Gen Plt-Covid Cnt Korba	i	Yes	Chhattisgarh	Korba	8037881	Yes	NA	NA
43	Construction of Public Toilet	i	Yes	Chhattisgarh	Bilaspur	8010707	Yes	NA	NA
44	Support to District Adminstration	i	Yes	Chhattisgarh	Bilaspur	4000000	Yes	NA	NA
45	provid potable drinking water to communi	i	Yes	Chhattisgarh	Bilaspur	3803311	Yes	NA	NA
46	Additional room at State Mental Hospital	i	Yes	Chhattisgarh	Bilaspur	3374800	Yes	NA	NA

(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)	
Sl. No.	Name of the Project	Item from the list of activities in schedule VII to the Act	Local area (Yes/ No)	Location of the project.		Amount spent for the project (in ₹)	Mode of implementation - Direct (Yes/ No).	Mode of implementation - Through implementing agency.	
				State	District			Name.	CSR Registration No.
47	FINANCIAL SUPPORT TO LOCAL ADMINISTRATIO	i	Yes	Chhattisgarh	Korba	2096760	Yes	NA	NA
48	Solar Powered 2 No's Water ATM along wit	i	Yes	Chhattisgarh	Bilaspur	1911600	Yes	NA	NA
49	Finan assistance for procure ambulances	i	Yes	Chhattisgarh	Bilaspur	1759712	Yes	NA	NA
50	financial assistance construct toilet/dw	i	Yes	Chhattisgarh	Bilaspur	1416000	Yes	NA	NA
51	Drinking Water Through tankers	i	Yes	Chhattisgarh	Korba	1228817	Yes	NA	NA
52	financial assistance to support district	i	Yes	Chhattisgarh	Korba	1000000	Yes	NA	NA
53	Inst of handpumps in near by villages	i	Yes	Chhattisgarh	Bilaspur	817061	Yes	NA	NA
54	SUPPORT FOR SANITIZERS, SOAPS ETC	i	Yes	Chhattisgarh	Korba	719949	Yes	NA	NA
55	construction of Drain Waste Segregation	i	Yes	Chhattisgarh	Bilaspur	600000	Yes	NA	NA
56	financ assist for setting Covid hospital	i	Yes	Chhattisgarh	Bilaspur	500000	Yes	NA	NA
57	Providing oxymeter/PPE to dist admin	i	Yes	Chhattisgarh	Korba	464116	Yes	NA	NA
58	PROVIDING GROCERIES TO DISADVANTAGED PER	i	Yes	Chhattisgarh	Korba	421800	Yes	NA	NA
59	Installation of water vending machine/AT	i	Yes	Chhattisgarh	Raipur	354000	Yes	NA	NA
60	PROVIDING CLOTH MASKS TO PREVENT SPREAD	i	Yes	Chhattisgarh	Korba	190000	Yes	NA	NA
61	Provision of Bore and hand pumps in affe	i	Yes	Chhattisgarh	Bilaspur	158106	Yes	NA	NA
62	Maintenance of Picnic Spot-Jhora	i	Yes	Chhattisgarh	Korba	109375	Yes	NA	NA
63	PROVIDING CLOTH MASKS TO PREVENT SPREAD	i	Yes	Chhattisgarh	Bilaspur	44535	Yes	NA	NA
64	Construction of Public Toilet	i	Yes	Chhattisgarh	Bilaspur	12000	Yes	NA	NA
65	EQP & Aids to PCPs	i	Yes	Chhattisgarh	Bilaspur	5682	Yes	NA	NA
66	SUPPORT FOR SANITIZERS, SOAPS ETC	i	Yes	Chhattisgarh	Bilaspur	5000	Yes	NA	NA
67	Fin sup Rogi Kalyan Samiti Bharuch Hosp	i	Yes	Gujarat	Bharuch	1000000	Yes	NA	NA
68	COMMUNITY TOILETS	i	Yes	Gujarat	Bharuch	692939	Yes	NA	NA
69	provid potable drinking water to communi	i	Yes	Gujarat	Surat	539528	Yes	NA	NA
70	3rd party audit of toilets const under S	i	Yes	Gujarat	Bharuch	462560	Yes	NA	NA
71	construction of community/individual toi	i	Yes	Gujarat	Surat	416486	Yes	NA	NA
72	Conduct health camps in nearby villages	i	Yes	Gujarat	Bharuch	173396	Yes	NA	NA
73	FIN ASST COVID TO SGCCI - KAWAS	i	Yes	Gujarat	Surat	100000	No	THE SOUTHERN GUJAR	CSR00002648
74	SUPPORT FOR ESTABLISHING COVID-19 HOSPIT	i	Yes	Gujarat	Bharuch	83737	Yes	NA	NA
75	SUPPORT FOR SANITIZERS, SOAPS ETC	i	Yes	Gujarat	Surat	83200	Yes	NA	NA
76	Awareness /Dustbins in villages	i	Yes	Gujarat	Surat	71995	Yes	NA	NA
77	SUPPORT FOR SANITIZERS, SOAPS ETC	i	Yes	Gujarat	Bharuch	25488	Yes	NA	NA
78	Sanitization Awareness Program	i	Yes	Gujarat	Bharuch	24420	Yes	NA	NA
79	PROVIDING CLOTH MASKS TO PREVENT SPREAD	i	Yes	Gujarat	Bharuch	7350	Yes	NA	NA
80	Installation of Borewells in nearby vill	i	Yes	Gujarat	Bharuch	3467	Yes	NA	NA
81	Sup to BSJSS-Jan Arogyam Pgr in Nuh Dist	i	Yes	Haryana	Faridabad	2863200	Yes	NA	NA
82	Setting up of open gym in villages	i	Yes	Haryana	Faridabad	1217860	Yes	NA	NA
83	Conducting health cmps in villages	i	Yes	Haryana	Faridabad	581191	Yes	NA	NA
84	Rejuvenation of Pond at village Tigaon	i	Yes	Haryana	Faridabad	390724	Yes	NA	NA
85	Installation of RO & supportive infrastr	i	Yes	Haryana	Faridabad	247210	Yes	NA	NA
86	PROVIDING CLOTH MASKS TO PREVENT SPREAD	i	Yes	Haryana	Faridabad	208827	Yes	NA	NA
87	Eqp & aids to PCPs	i	Yes	Haryana	Faridabad	149347	Yes	NA	NA
88	Installation of RO & other supportive in	i	Yes	Haryana	Faridabad	4999	Yes	NA	NA
89	Exp Oxygen Gen Plt-Covid Cnt Nr karanpur	i	Yes	Jharkhand	Chatra	5355000	Yes	NA	NA
90	SUPPORT FOR SANITIZERS, SOAPS ETC	i	Yes	Kerela	Allahapuza	496052	Yes	NA	NA
91	3rd party audit of toilets const und SVA	i	Yes	Kerela	Allahapuza	207690	Yes	NA	NA
92	Homeo Dispensary for locality	i	Yes	Kerela	Allahapuza	51198	Yes	NA	NA
93	strengthen govt healthcare infrastructur	i	Yes	Madhya Pradesh	Singrauli	14425581	Yes	NA	NA

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94	Installation Hand Pumps nearby villages	i	Yes	Madhya Pradesh	Singrauli	7407445	Yes	NA	NA
95	Procure mortuary to Sidhi & Buahari	i	Yes	Madhya Pradesh	Singrauli	4250000	Yes	NA	NA
96	Construction/ Renovation/ Services of Su	i	Yes	Madhya Pradesh	Singrauli	3844542	No	SULABH INTERNATION	CSR00000185
97	Support for the operation of Blood Bank	i	Yes	Madhya Pradesh	Singrauli	2400000	Yes	NA	NA
98	R&Mof Water ATMs/ RO Plants	i	Yes	Madhya Pradesh	Singrauli	2257479	Yes	NA	NA
99	Conducting health camps in villages	i	Yes	Madhya Pradesh	Singrauli	1943868	Yes	NA	NA
100	R&M of Sulabh Comm Toilets in villages	i	Yes	Madhya Pradesh	Singrauli	1777248	No	SULABH INTERNATION	CSR00000185
101	Installation and O&M of water ATMs/ RO P	i	Yes	Madhya Pradesh	Singrauli	1430000	Yes	NA	NA
102	Setting up of Apheresis Unit	i	Yes	Madhya Pradesh	Singrauli	1400000	Yes	NA	NA
103	suprt for operation of Asha Kiran School	i	Yes	Madhya Pradesh	Singrauli	642619	Yes	NA	NA
104	Beautification/capacity enhancement of p	i	Yes	Madhya Pradesh	Singrauli	551178	Yes	NA	NA
105	Creating awareness about sanitation	i	Yes	Madhya Pradesh	Singrauli	199070	Yes	NA	NA
106	Supply of pure drinking water through wa	i	Yes	Madhya Pradesh	Singrauli	126324	Yes	NA	NA
107	FINANCIAL SUPPORT TO LOCAL ADMINISTRATIO	i	Yes	Madhya Pradesh	Singrauli	89486	Yes	NA	NA
108	Prov Nurttitional items- pregnant women	i	Yes	Madhya Pradesh	Singrauli	37650	Yes	NA	NA
109	Water ATMs at two locations	i	Yes	Madhya Pradesh	Singrauli	21289	Yes	NA	NA
110	Exp Oxygen Gen Plt-Covid Cnt solapur	i	Yes	Maharashtra	Solapur	6032793	Yes	NA	NA
111	Installation of piped water system	i	Yes	Odisha	Angul	32800000	Yes	NA	NA
112	Exp Oxygen Gen Plt-Covid Cnt Kaniha	i	Yes	Odisha	Angul	7377359	Yes	NA	NA
113	Construction of Toilets under Open De	i	Yes	Odisha	Angul	6104866	Yes	NA	NA
114	Construction of Toilets under Open De	i	Yes	Odisha	Angul	3355121	No	SULABH INTERNATION	CSR00000185
115	Disrtibution of Mosquito nets	i	Yes	Odisha	Angul	3257700	Yes	NA	NA
116	Supply of water through tankers	i	Yes	Odisha	Angul	1791777	Yes	NA	NA
117	Procur 8000 RAT kits	i	Yes	Odisha	Angul	1660000	Yes	NA	NA
118	Construction of toilets in villages	i	Yes	Odisha	Angul	1416366	Yes	NA	NA
119	MOBILE HEALTH CLINICS	i	Yes	Odisha	Angul	1222964	Yes	NA	NA
120	Eqp & aids to PCPs	i	Yes	Odisha	Angul	972421	Yes	NA	NA
121	Audit of Toilet under SVA	i	Yes	Odisha	Bubaneshwar	909495	Yes	NA	NA
122	Cleaning of Anand Bazar area	i	Yes	Odisha	Angul	873510	Yes	NA	NA
123	FINANCIAL SUPPORT TO LOCAL ADMINISTRATIO	i	Yes	Odisha	Angul	709528	Yes	NA	NA
124	Supply of Dry food(Grocery) packets	i	Yes	Odisha	Angul	695672	Yes	NA	NA
125	Conducting yoga camps in villages	i	Yes	Odisha	Angul	339447	Yes	NA	NA
126	Construction of Toilets (ODF) in village	i	Yes	Odisha	Angul	222312	Yes	NA	NA
127	Org Blood Donation camp	i	Yes	Odisha	Angul	105035	Yes	NA	NA
128	procurement of blankets for distribution	i	Yes	Odisha	Angul	50000	Yes	NA	NA
129	supply of drinking water through tankers	i	Yes	Odisha	Angul	15443	Yes	NA	NA
130	PROVIDING CLOTH MASKS TO PREVENT SPREAD	i	Yes	Odisha	Angul	7200	Yes	NA	NA
131	SUPPORT FOR SANITIZERS, SOAPS ETC	i	Yes	Odisha	Angul	2225	Yes	NA	NA
132	Inst of PSA in CHC Chaabra	i	Yes	Rajasthan	Baran	6585842	Yes	NA	NA
133	FIN SPT SP HOSPITAL-NOKHRA	i	Yes	Rajasthan	Bikaner	1525000	Yes	NA	NA
134	Conducting health camps in villages	i	Yes	Rajasthan	Baran	1251626	Yes	NA	NA
135	3rd party audit of toilets const und SVA	i	Yes	Rajasthan	Baran	181569	Yes	NA	NA

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136	providing oxygen conentrators CHC Anta	i	Yes	Rajasthan	Baran	176074	Yes	NA	NA
137	SUPPORT FOR ESTABLISHING COVID-19 HOSPIT	i	Yes	Rajasthan	Baran	86843	Yes	NA	NA
138	PROVIDING CLOTH MASKS TO PREVENT COVID	i	Yes	Rajasthan	Baran	64000	Yes	NA	NA
139	distribution of ration items to poor	i	Yes	Rajasthan	Baran	44500	Yes	NA	NA
140	Blankets for distribution to communities	i	Yes	Rajasthan	Baran	34999	Yes	NA	NA
141	PROVIDING GROCERIES (DIRECTLY)	i	Yes	Rajasthan	Baran	32327	Yes	NA	NA
142	PROVIDING CLOTH MASKS TO PREVENT SPREAD	i	Yes	Rajasthan	Baran	29678	Yes	NA	NA
143	Maintenance of toilets	i	Yes	Rajasthan	Baran	19800	Yes	NA	NA
144	Exp Oxygen Gen Plt-Covid Cnt Ramagundam	i	Yes	Telengana	Peddapally	10430607	Yes	NA	NA
145	Const/ ren of health infra & pro medica	i	Yes	Telengana	Peddapally	5133036	Yes	NA	NA
146	Construction of Underground /open draina	i	Yes	Telengana	Peddapally	4808589	Yes	NA	NA
147	Medical Equip to hospital	i	Yes	Telengana	Hyderabad	787000	Yes	NA	NA
148	FINANCIAL SUPPORT TO LOCAL ADMINISTRATIO	i	Yes	Telengana	Hyderabad	481500	Yes	NA	NA
149	COMMUNITY TOILETS	i	Yes	Telengana	Peddapally	249200	Yes	NA	NA
150	Access to potable water supply	i	Yes	Telengana	Peddapally	229215	Yes	NA	NA
151	Inst of RO plants	i	Yes	Telengana	Peddapally	179316	Yes	NA	NA
152	Manuf & Dist of Sanitary napkins long wi	i	Yes	Telengana	Peddapally	128640	Yes	NA	NA
153	PROVIDING CLOTH MASKS TO PREVENT SPREAD	i	Yes	Telengana	Hyderabad	87696	Yes	NA	NA
154	SUPPORT OF DIFFERENTLY ABLED PERSONS	i	Yes	Telengana	Hyderabad	50000	Yes	NA	NA
155	MOBILE HEALTH CLINICS	i	Yes	Telengana	Peddapally	41730	Yes	NA	NA
156	Supporting to orphan children	i	Yes	Telengana	Peddapally	19220	Yes	NA	NA
157	EXP.FOR COVID HOSPITAL-YUGANTAR-BADARPUR	i	Yes	Uttar Pradesh	Gautam Buddh Nagar	66448252	Yes	NA	NA
158	101 bed COVID HOSPITAL in PMI Noida	i	Yes	Uttar Pradesh	Gautam Buddh Nagar	52093904	Yes	NA	NA
159	Equipment for COVID-19 Vaccination	i	Yes	Uttar Pradesh	Gautam Buddh Nagar	23064691	Yes	NA	NA
160	Infrastructure for CHC Dadri	i	Yes	Uttar Pradesh	Gautam Buddh Nagar	20031273	Yes	NA	NA
161	Providing Piped Drinking Water to Pancha	i	Yes	Uttar Pradesh	Raibareilly	13626397	Yes	NA	NA
162	EXP.FOR COVID HOSPITAL-YUGANTAR-BADARPUR	i	Yes	Uttar Pradesh	Gautam Buddh Nagar	6481530	No	SULABH INTERNATION	CSR00000185
163	Build, deepen and rejuvenate ponds in ne	i	Yes	Uttar Pradesh	Gautam Buddh Nagar	3685792	Yes	NA	NA
164	Water system in nearby village area	i	Yes	Uttar Pradesh	Sonebhadra	3370587	Yes	NA	NA
165	20 nos. India mark-2 Hand pump in Fatehp	i	Yes	Uttar Pradesh	Lucknow	2566592	Yes	NA	NA
166	Construction of Individual Toilets.	i	Yes	Uttar Pradesh	Raibareilly	2406294	Yes	NA	NA
167	Const/ Renovation of ponds in villages	i	Yes	Uttar Pradesh	Gautam Buddh Nagar	2327205	Yes	NA	NA
168	Providing oxygen concentrator machine	i	Yes	Uttar Pradesh	Sonebhadra	2171697	Yes	NA	NA
169	100 bed COVID HOSPITAL in PMI Noida	i	Yes	Uttar Pradesh	Gautam Buddh Nagar	2147209	No	SULABH INTERNATION	CSR00000185
170	Providing oxygen concentrator machine	i	Yes	Uttar Pradesh	Sonebhadra	2092658	Yes	NA	NA
171	Conducting health camps in villages	i	Yes	Uttar Pradesh	Ambedkar Nagar	2035516	Yes	NA	NA
172	Conduting health camps in villages	i	Yes	Uttar Pradesh	Gautam Buddh Nagar	1970961	Yes	NA	NA
173	Procure/install-oxygen genearting machin	i	Yes	Uttar Pradesh	Raibareilly	1960000	Yes	NA	NA
174	Constr of community toilets in villages	i	Yes	Uttar Pradesh	Dibiyapur	1659038	Yes	NA	NA
175	SUPPORT FOR ESTABLISHING COVID-19 HOSPIT	i	Yes	Uttar Pradesh	Sonebhadra	1630720	Yes	NA	NA
176	Distribution of Mosquito Nets & blanket	i	Yes	Uttar Pradesh	Sonebhadra	1538008	Yes	NA	NA
177	Installation of hand-pump & solar-pump s	i	Yes	Uttar Pradesh	Sonebhadra	1495532	Yes	NA	NA

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178	Support for operation of Blood Bank	i	Yes	Uttar Pradesh	Sonebhadra	1200000	Yes	NA	NA
179	Procurement & Install of DG Sets for CHC	i	Yes	Uttar Pradesh	Dibiyapur	1184720	Yes	NA	NA
180	Hand pump/ 15 Dual Solar Pump	i	Yes	Uttar Pradesh	Raibareilly	1184214	Yes	NA	NA
181	Eqp & aids to PCPs	i	Yes	Uttar Pradesh	Ambedkar Nagar	1062131	Yes	NA	NA
182	Pest Control work in rehabilitation	i	Yes	Uttar Pradesh	Sonebhadra	844362	Yes	NA	NA
183	Conducting health camps in villages	i	Yes	Uttar Pradesh	Dibiyapur	827101	Yes	NA	NA
184	Construction (Chaurikaran) of Clvert of	i	Yes	Uttar Pradesh	Sonebhadra	775847	Yes	NA	NA
185	Pest control in nearby areas	i	Yes	Uttar Pradesh	Dibiyapur	669425	Yes	NA	NA
186	Support for operation of Blood Bank	i	Yes	Uttar Pradesh	Sonebhadra	600000	Yes	NA	NA
187	DISABILITY REHABILITATION CENTERS	i	Yes	Uttar Pradesh	Gautam Buddh Nagar	578000	Yes	NA	NA
188	Installation of Hand pump	i	Yes	Uttar Pradesh	Raibareilly	576576	Yes	NA	NA
189	Drinking water supply by tanker in Parsa	i	Yes	Uttar Pradesh	Sonebhadra	554041	Yes	NA	NA
190	Renovation of pond at Arkha	i	Yes	Uttar Pradesh	Raibareilly	509180	Yes	NA	NA
191	Conducting Swachhata Awareness Campaigns	i	Yes	Uttar Pradesh	Ambedkar Nagar	502625	Yes	NA	NA
192	Providing Fruit Trees to Seva Samarpan	i	Yes	Uttar Pradesh	Sonebhadra	500000	Yes	NA	NA
193	water sypply through tanker in villages	i	Yes	Uttar Pradesh	Sonebhadra	490600	Yes	NA	NA
194	Pest Control work in villages	i	Yes	Uttar Pradesh	Sonebhadra	463370	Yes	NA	NA
195	Construction of Toilets in Panchayat in	i	Yes	Uttar Pradesh	Raibareilly	434760	Yes	NA	NA
196	R&M of 06 nos. RO plants	i	Yes	Uttar Pradesh	Sonebhadra	418685	Yes	NA	NA
197	Directly Observed Treatment	i	Yes	Uttar Pradesh	Gautam Buddh Nagar	415000	Yes	NA	NA
198	PROVIDING PPE TO District administration	i	Yes	Uttar Pradesh	Raibareilly	383500	Yes	NA	NA
199	Conducting health camps in villages	i	Yes	Uttar Pradesh	Sonebhadra	369776	Yes	NA	NA
200	Disability Rehabilitation Center	i	Yes	Uttar Pradesh	Gautam Buddh Nagar	368000	Yes	NA	NA
201	Drinking water supply by tanker in Parsa	i	Yes	Uttar Pradesh	Sonebhadra	339892	Yes	NA	NA
202	Cond Homeopathy health camps in villages	i	Yes	Uttar Pradesh	Sonebhadra	271985	Yes	NA	NA
203	Integrated water supply with overhead ta	i	Yes	Uttar Pradesh	Dibiyapur	271366	Yes	NA	NA
204	Conducting health camps in villages	i	Yes	Uttar Pradesh	Raibareilly	263542	Yes	NA	NA
205	EQP/EXP Covid Hospital Yugantar Badarpur	i	Yes	Uttar Pradesh	Gautam Buddh Nagar	206861	Yes	NA	NA
206	Repairing & Cleaning of Drains in Resett	i	Yes	Uttar Pradesh	Sonebhadra	189476	Yes	NA	NA
207	PROVIDING GROCERIES (DIRECTLY)	i	Yes	Uttar Pradesh	Raibareilly	184000	Yes	NA	NA
208	RO Plant in Govt. school	i	Yes	Uttar Pradesh	Gautam Buddh Nagar	177000	Yes	NA	NA
209	Operation & Maintenance of R O Plants	i	Yes	Uttar Pradesh	Sonebhadra	174267	Yes	NA	NA
210	Water Supply through tanker in near by v	i	Yes	Uttar Pradesh	Sonebhadra	166320	Yes	NA	NA
211	Directly Observed Treatment	i	Yes	Uttar Pradesh	Gautam Buddh Nagar	165000	Yes	NA	NA
212	PROVIDING CLOTH MASKS TO PREVENT SPREAD	i	Yes	Uttar Pradesh	Sonebhadra	150120	Yes	NA	NA
213	PROVIDING CLOTH MASKS TO PREVENT SPREAD	i	Yes	Uttar Pradesh	Dibiyapur	112013	Yes	NA	NA
214	Installation of hand pumps in PAVs and n	i	Yes	Uttar Pradesh	Dibiyapur	109033	Yes	NA	NA
215	Conducting health camps in nearby villag	i	Yes	Uttar Pradesh	Sonebhadra	103194	Yes	NA	NA
216	SUPPORT FOR SANITIZERS, SOAPS ETC	i	Yes	Uttar Pradesh	Sonebhadra	91221	Yes	NA	NA
217	Rennovation & Repair works of community	i	Yes	Uttar Pradesh	Sonebhadra	87764	Yes	NA	NA
218	Beautification of Jwalamukhi sarorar	i	Yes	Uttar Pradesh	Sonebhadra	75589	Yes	NA	NA
219	SUPPORT FOR SANITIZERS, SOAPS ETC	i	Yes	Uttar Pradesh	Raibareilly	35400	Yes	NA	NA
220	health camps	i	Yes	Uttar Pradesh	Dibiyapur	30836	Yes	NA	NA
221	Pest control in PAV Villages	i	Yes	Uttar Pradesh	Dibiyapur	24483	Yes	NA	NA
222	Installation of 80 no. Hand pump	i	Yes	Uttar Pradesh	Sonebhadra	23600	Yes	NA	NA
223	Conducting health camps in villages	i	Yes	Uttar Pradesh	Dibiyapur	15000	Yes	NA	NA
224	Activities to promote cleanliness with t	i	Yes	Uttar Pradesh	Sonebhadra	2443	Yes	NA	NA

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225	Medical Camp -Eye Camp-Surgical Camp	i	Yes	West Bengal	Murshidabad	3738544	No	HELPAGE INDIA	CSR00000901
226	HEALTH CAMPS/ HEALTH AWARENESS PROGRAMME	i	Yes	West Bengal	Murshidabad	2791215	Yes	NA	NA
227	PROVIDING GROCERIES TO DISADVANTAGED PER	i	Yes	West Bengal	Murshidabad	1038733	Yes	NA	NA
228	Eqp & aids to PCPs	i	Yes	West Bengal	Murshidabad	161735	Yes	NA	NA
229	SUPPORT FOR SANITIZERS, SOAPS ETC	i	Yes	West Bengal	Murshidabad	131985	Yes	NA	NA
230	PROVIDING CLOTH MASKS TO PREVENT COVID	i	Yes	West Bengal	Murshidabad	126281	Yes	NA	NA
231	Construction of Community Toilets in nea	i	Yes	West Bengal	Murshidabad	87458	Yes	NA	NA
232	organising COVID-19 awareness programmes	i	Yes	West Bengal	Murshidabad	48480	No	MAHADEBNAGAR RURA	CSR00005907
233	sanitation items as part of Swachhata Pa	i	Yes	West Bengal	Murshidabad	6500	Yes	NA	NA
234	Yoga sessions with local communities	i	Yes	West Bengal	Murshidabad	3700	Yes	NA	NA
235	Repair & Maintenance of toilets SVA	ii	Yes	Andhra Pradesh	Vishakhapatnam	5696386	Yes	NA	NA
236	IMPROVING LEARNING LEVELS IN SCHOOLS	ii	Yes	Andhra Pradesh	Vishakhapatnam	1918883	Yes	NA	NA
237	Support for furniture and equipment to G	ii	Yes	Andhra Pradesh	Vishakhapatnam	938825	Yes	NA	NA
238	Coaching to youths	ii	Yes	Andhra Pradesh	Vishakhapatnam	635850	Yes	NA	NA
239	Project Vidya to tribal girls	ii	Yes	Andhra Pradesh	Vishakhapatnam	577681	Yes	NA	NA
240	Yoga & self defence training to girls	ii	Yes	Andhra Pradesh	Vishakhapatnam	365500	Yes	NA	NA
241	VOCATIONAL TRAINING FOR YOUTH EMPOWERMEN	ii	Yes	Andhra Pradesh	Vishakhapatnam	89000	No	BCT KVK REVOLVING FU	CSR00009370
242	VOCATIONAL TRAINING FOR YOUTH EMPOWERMEN	ii	Yes	Andhra Pradesh	Vishakhapatnam	68270	Yes	NA	NA
243	Providing yoga and self defense training	ii	Yes	Andhra Pradesh	Vishakhapatnam	13875	Yes	NA	NA
244	Misc. works in various Govt. hostels, s	ii	Yes	Andhra Pradesh	Vishakhapatnam	3000	Yes	NA	NA
245	Const of SchoolToilets	ii	Yes	Assam	Kokrajhar	1811232	Yes	NA	NA
246	R&M of Toilets Under SVA.	ii	Yes	Bihar	Bhagalpur	41227685	Yes	NA	NA
247	Trf to CSR- GAD-School	ii	Yes	Bihar	Bhagalpur	30309020	Yes	NA	NA
248	R&M of Toilets Under SVA Katwa.	ii	Yes	Bihar	Patna	10207491	Yes	NA	NA
249	R&M of Toilet Under SVA-ER-I HQ	ii	Yes	Bihar	Patna	6977606	Yes	NA	NA
250	IMPROVING LEARNING LEVELS IN SCHOOLS	ii	Yes	Bihar	Bhagalpur	6262364	Yes	NA	NA
251	Const of Sch Toilets-NSPCL Durgapur	ii	Yes	Bihar	Patna	3713941	Yes	NA	NA
252	providing Bench & Desks to schools	ii	Yes	Bihar	Patna	2500000	Yes	NA	NA
253	Repair of Scrap School Dual Desk-bench	ii	Yes	Bihar	Bhagalpur	472150	Yes	NA	NA
254	BEE State Level Painting Competition	ii	Yes	Bihar	Patna	306617	Yes	NA	NA
255	Infra assistance to school/College	ii	Yes	Bihar	Bhagalpur	187330	Yes	NA	NA
256	Providing lab equipment, teaching aids	ii	Yes	Bihar	Bhagalpur	18832	Yes	NA	NA
257	BEE State Level Painting Competition	ii	Yes	Bihar	Patna	10000	Yes	NA	NA
258	R&M of Toilets Under SVA.	ii	Yes	Chhattisgarh	Korba	32298153	Yes	NA	NA
259	Trf to CSR- GAD-School	ii	Yes	Chhattisgarh	Korba	27436995	Yes	NA	NA
260	R&M of Toilets Under SVA.	ii	Yes	Chhattisgarh	Raigarh	19588415	Yes	NA	NA
261	R&M of Toilets Under SVA.	ii	Yes	Chhattisgarh	Raigarh	6370262	Yes	NA	NA
262	IMPROVING LEARNING LEVELS IN SCHOOLS	ii	Yes	Chhattisgarh	Bilaspur	2740013	Yes	NA	NA
263	Trf to CSR- GAD-School	ii	Yes	Chhattisgarh	Bilaspur	2006217	Yes	NA	NA
264	IMPROVING LEARNING LEVELS IN SCHOOLS	ii	Yes	Chhattisgarh	Korba	1712584	Yes	NA	NA
265	holistic educational of 60 Pahadi Korwa	ii	Yes	Chhattisgarh	Korba	1697300	Yes	NA	NA
266	Repair & Maintenance of toilets SVA	ii	Yes	Chhattisgarh	Bilaspur	1203368	Yes	NA	NA
267	Augmentation of educational infrastructu	ii	Yes	Chhattisgarh	Bilaspur	1200000	Yes	NA	NA
268	Support to students of Baiga Tribe	ii	Yes	Chhattisgarh	Bilaspur	1000000	Yes	NA	NA
269	Construction of school buildings	ii	Yes	Chhattisgarh	Bilaspur	877636	Yes	NA	NA
270	Add. Fund for Setting up of ITI Baloda	ii	Yes	Chhattisgarh	Bilaspur	705637	Yes	NA	NA
271	Vocational training to youth to make the	ii	Yes	Chhattisgarh	Korba	380000	Yes	NA	CSR00000958

(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)	
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				State	District			Name.	CSR Registration No.
272	Vocational Training including Computer c	ii	Yes	Chhattisgarh	Bilaspur	229154	Yes	NA	NA
273	Const of rooms/ toilets/ wall etc	ii	Yes	Chhattisgarh	Bilaspur	125900	Yes	NA	NA
274	Girl Empowerment Mission	ii	Yes	Chhattisgarh	Bilaspur	43200	Yes	NA	NA
275	Construction of Cycle Stand and Canteen	ii	Yes	Chhattisgarh	Bilaspur	9287	Yes	NA	NA
276	Girl Empowerment Mission	ii	Yes	Chhattisgarh	Bilaspur	6940	Yes	NA	NA
277	Trf to CSR- GAD-School	ii	Yes	Delhi	New Delhi	64292893	Yes	NA	NA
278	Trf to CSR- GAD-School	ii	Yes	Gujarat	Bharuch	3628471	Yes	NA	NA
279	Edu. infra - const of class rooms	ii	Yes	Gujarat	Bharuch	1467439	Yes	NA	NA
280	IMPROVING LEARNING LEVELS IN SCHOOLS	ii	Yes	Gujarat	Surat	1288984	Yes	NA	NA
281	Repair & Maintenance of toilets SVA	ii	Yes	Gujarat	Surat	1124987	Yes	NA	NA
282	IMPROVING LEARNING LEVELS IN SCHOOLS	ii	Yes	Gujarat	Bharuch	697492	Yes	NA	NA
283	Provid school furniture to Govt. School	ii	Yes	Gujarat	Surat	643553	Yes	NA	NA
284	providing “Happiness kits” Govt schools	ii	Yes	Gujarat	Surat	592500	No	THE AKSHAYA PATRA F	CSR00000286
285	Augmenting educational infrastructure	ii	Yes	Gujarat	Bharuch	420062	Yes	NA	NA
286	Cons. of shed in Schools in villages	ii	Yes	Gujarat	Surat	398648	Yes	NA	NA
287	Construction of Toilets in Schools	ii	Yes	Gujarat	Bharuch	221116	Yes	NA	NA
288	Prov basic edu supplies to school	ii	Yes	Gujarat	Bharuch	186510	Yes	NA	NA
289	Construction of Class Rooms and Corridor	ii	Yes	Gujarat	Bharuch	108561	Yes	NA	NA
290	Provid skill development trg to youths	ii	Yes	Gujarat	Surat	28500	Yes	NA	NA
291	Distrib of Stationery items to Sch child	ii	Yes	Gujarat	Bharuch	22379	Yes	NA	NA
292	Capacity Building/ Communication	ii	Yes	Gujarat	Bharuch	19321	Yes	NA	NA
293	Imp learning Lvls Stud- Shikshit Haryana	ii	Yes	Haryana	Faridabad	3400000	Yes	NA	NA
294	R&M of Toilets Constructed under SVA	ii	Yes	Haryana	Faridabad	1789026	Yes	NA	NA
295	VOCATIONAL TRAINING FOR YOUTH EMPOWERMEN	ii	Yes	Haryana	Faridabad	1081755	Yes	NA	NA
296	Installation of Fiber Sheet at Pranab Ka	ii	Yes	Haryana	Faridabad	375455	Yes	NA	NA
297	Construction of toilets in Govt. Schools	ii	Yes	Haryana	Faridabad	57194	Yes	NA	NA
298	Const/ reno for school Infrastructure	ii	Yes	Haryana	Faridabad	30000	Yes	NA	NA
299	Trf to CSR- GAD-School	ii	Yes	Himachal Pradesh	Bilaspur	1490682	Yes	NA	NA
300	Const of School Toilets	ii	Yes	Himachal Pradesh	Bilaspur	193329	Yes	NA	NA
301	R&M of Toilets Under SVA.	ii	Yes	Jharkhand	Hazaribagh	51546680	Yes	NA	NA
302	R&M of Toilets Under SVA.	ii	Yes	Jharkhand	Chatra	24584625	Yes	NA	NA
303	Const of School Toilets	ii	Yes	Jharkhand	Chatra	835939	Yes	NA	NA
304	Construction of rooms along with varand	ii	Yes	Jharkhand	Chatra	501270	Yes	NA	NA
305	Const of School Toilets	ii	Yes	Jharkhand	Hazaribagh	305188	Yes	NA	NA
306	Trf to CSR- GAD-School	ii	Yes	Kerela	Allahapuza	26546876	Yes	NA	NA
307	Desks/Benches for Govt. LP Schools	ii	Yes	Kerela	Allahapuza	216176	Yes	NA	NA
308	VOCATIONAL TRAINING	ii	Yes	Kerela	Allahapuza	68750	Yes	NA	NA
309	GEM Program- Recovery to NTPC Foundation	ii	Yes	Kerela	Allahapuza	7550	Yes	NA	NA
310	R&M of Toilets Under SVA.	ii	Yes	Madhya Pradesh	Khargone	29879154	Yes	NA	NA
311	R&M of Toilets Under SVA.	ii	Yes	Madhya Pradesh	Singrauli	25389659	Yes	NA	NA
312	R&M of Toilets Under SVA.	ii	Yes	Madhya Pradesh	Narsinghpur	9546750	Yes	NA	NA
313	support for project Udaan	ii	Yes	Madhya Pradesh	Singrauli	4399902	Yes	NA	NA
314	Trf to CSR- GAD-School	ii	Yes	Madhya Pradesh	Narsinghpur	3919426	Yes	NA	NA
315	Trf to CSR- GAD-School	ii	Yes	Madhya Pradesh	Khargone	3610960	Yes	NA	NA
316	Providing basic educational supplies	ii	Yes	Madhya Pradesh	Singrauli	678900	Yes	NA	NA

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317	Const of School Toilets	ii	Yes	Madhya Pradesh	Singrauli	405949	Yes	NA	NA
318	Project Udaan- quality educcation to Xth	ii	Yes	Madhya Pradesh	Singrauli	283200	No	CEDMAP RTC BILASPUR	CSR00014988
319	Supply of Desk/Writ Board to Govt school	ii	Yes	Madhya Pradesh	Singrauli	140646	Yes	NA	NA
320	Vocational training to youth to make the	ii	Yes	Madhya Pradesh	Singrauli	97195	Yes	NA	NA
321	ICT at DAVV	ii	No	Madhya Pradesh	Indore	20000	Yes	NA	NA
322	Sponshorship to rural students studying	ii	Yes	Madhya Pradesh	Singrauli	16215	Yes	NA	NA
323	BEE State Level Painting Competition	ii	Yes	Maharashtra	Mumbai	178881	Yes	NA	NA
324	BEE State Level Painting Competition	ii	Yes	Maharashtra	Nagpur	171999	Yes	NA	NA
325	Trf to CSR- GAD-School	ii	Yes	Odisha	Angul	56685950	Yes	NA	NA
326	R&M of Toilets Under SVA.	ii	Yes	Odisha	Angul	25877085	Yes	NA	NA
327	Trf to CSR- GAD-School	ii	Yes	Odisha	Angul	16540014	Yes	NA	NA
328	R&M of Toilets Under SVA.	ii	Yes	Odisha	Sundergarh	16245023	Yes	NA	NA
329	Const/ ren of school infrastrcture	ii	Yes	Odisha	Angul	6000000	No	MO SCHOOL ABHIYAN	CSR00009574
330	R&M of Toilets Under SVA.	ii	Yes	Odisha	Angul	4120227	Yes	NA	NA
331	IMPROVING LEARNING LEVELS IN SCHOOLS	ii	Yes	Odisha	Angul	3794855	Yes	NA	NA
332	Implementing RRA in schools	ii	Yes	Odisha	Angul	2700000	No	MO SCHOOL ABHIYAN	CSR00009574
333	R&M of Toilets Under SVA.	ii	Yes	Odisha	Sundergarh	2397254	Yes	NA	NA
334	Providing infra.to Schools	ii	Yes	Odisha	Angul	1685913	Yes	NA	NA
335	Prov equip(furniture/books/etc) to sch	ii	Yes	Odisha	Angul	1325368	Yes	NA	NA
336	Augmenting and strengthening school	ii	Yes	Odisha	Angul	1199519	Yes	NA	NA
337	Skill Development of youths	ii	Yes	Odisha	Angul	823058	Yes	NA	NA
338	promoting learning by doing activities i	ii	Yes	Odisha	Angul	211092	Yes	NA	NA
339	Org school cultural activities	ii	Yes	Odisha	Angul	75290	Yes	NA	NA
340	Construction of ITI in Ganjam, Bhubnes.c	ii	Yes	Odisha	Bubaneshwar	59721	Yes	NA	NA
341	Training programmes on various income ge	ii	Yes	Odisha	Angul	43500	Yes	NA	NA
342	Girl Empowerment Mission	ii	Yes	Odisha	Angul	30928	Yes	NA	NA
343	Construction of Class Rooms, Boundary wa	ii	Yes	Odisha	Angul	27345	Yes	NA	NA
344	Trf to CSR- GAD-School	ii	Yes	Rajasthan	Baran	19928300	Yes	NA	NA
345	Repair & Maintenance of toilets SVA	ii	Yes	Rajasthan	Baran	6790876	Yes	NA	NA
346	IMPROVING LEARNING LEVELS IN SCHOOLS	ii	Yes	Rajasthan	Baran	500065	Yes	NA	NA
347	Providing various assets to Govt Schools	ii	Yes	Rajasthan	Baran	284289	Yes	NA	NA
348	Provid skill development trg to youth	ii	Yes	Rajasthan	Baran	179137	Yes	NA	NA
349	Training Workshop-Evoice	ii	Yes	Rajasthan	Baran	32810	Yes	NA	NA
350	Trf to CSR- GAD-School	ii	Yes	Telengana	Peddapally	23116452	Yes	NA	NA
351	Const Additional class rooms at ZPHS(Gir	ii	Yes	Telengana	Peddapally	3286921	Yes	NA	NA
352	Educational infrastructure KGBV, Kundanp	ii	Yes	Telengana	Peddapally	2866925	Yes	NA	NA
353	Const/ ren of school infra	ii	Yes	Telengana	Peddapally	2741677	Yes	NA	NA
354	Provid skill development trg to youth	ii	Yes	Telengana	Peddapally	2036312	Yes	NA	NA
355	R&M of Toilets Under SVA.	ii	Yes	Telengana	Peddapally	1920057	Yes	NA	NA
356	Vocational training to youth to make the	ii	Yes	Telengana	Peddapally	1117507	Yes	NA	NA
357	BOOKS & STATIONERY, UNIFORM ETC TO STUDE	ii	Yes	Telengana	Hyderabad	1116180	Yes	NA	NA
358	Integrated livestock management: Improvi	ii	Yes	Telengana	Peddapally	682500	Yes	NA	NA
359	Const of rooms, toilets, wall etc	ii	Yes	Telengana	Peddapally	519000	Yes	NA	NA
360	PAINTING COMPETITION FOR STUDENTS	ii	Yes	Telengana	Hyderabad	451250	Yes	NA	NA
361	Capacity building of farmers	ii	Yes	Telengana	Peddapally	322080	Yes	NA	NA

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362	Integrated Livestock ManagemenT	ii	Yes	Telengana	Peddapally	276789	Yes	NA	NA
363	Capacity building of farmers through tra	ii	Yes	Telengana	Peddapally	162500	Yes	NA	NA
364	Girl Empowerment Mission 2020	ii	Yes	Telengana	Peddapally	145800	Yes	NA	NA
365	Digital Interactive Class Room/Smart Tab	ii	Yes	Telengana	Peddapally	52345	Yes	NA	NA
366	Training Workshop-Evoice	ii	Yes	Telengana	Peddapally	43400	Yes	NA	NA
367	Miscellenous works of KGVB School	ii	Yes	Telengana	Peddapally	24040	Yes	NA	NA
368	Merit Scholarships to SSC & Intermediate	ii	Yes	Telengana	Hyderabad	10000	Yes	NA	NA
369	EQUIPMENT/ APPLIANCES TO SCHOOLS (LIKE C	ii	Yes	Telengana	Hyderabad	9204	Yes	NA	NA
370	Trf to CSR- GAD-School	ii	Yes	Uttar Pradesh	Sonebhadra	58647288	Yes	NA	NA
371	Trf to CSR- GAD-School	ii	Yes	Uttar Pradesh	Gautam Buddh Nagar	51742614	Yes	NA	NA
372	Trf to CSR- GAD-School	ii	Yes	Uttar Pradesh	Sonebhadra	33798606	Yes	NA	NA
373	Trf to CSR- GAD-School	ii	Yes	Uttar Pradesh	Dibiyapur	27095586	Yes	NA	NA
374	Trf to CSR- GAD-School	ii	Yes	Uttar Pradesh	Raibareilly	4773235	Yes	NA	NA
375	Providing basic educational supplies to	ii	Yes	Uttar Pradesh	Raibareilly	3422954	Yes	NA	NA
376	Providing various assets to nearby schoo	ii	Yes	Uttar Pradesh	Sonebhadra	3175330	Yes	NA	NA
377	Providing Infra. in Govt. Schools	ii	Yes	Uttar Pradesh	Gautam Buddh Nagar	2171555	Yes	NA	NA
378	Support to Udayan care for 02 girls	ii	Yes	Uttar Pradesh	Gautam Buddh Nagar	2000000	Yes	NA	NA
379	Trf to CSR- GAD-School	ii	Yes	Uttar Pradesh	Ambedkar Nagar	1918209	Yes	NA	NA
380	IMPROVING LEARNING LEVELS IN SCHOOLS	ii	Yes	Uttar Pradesh	Gautam Buddh Nagar	1916545	Yes	NA	NA
381	Financial Aid to District Admin ITI Robe	ii	Yes	Uttar Pradesh	Sonebhadra	1514000	Yes	NA	NA
382	IMPROVING LEARNING LEVELS IN SCHOOLS	ii	Yes	Uttar Pradesh	Ambedkar Nagar	955003	Yes	NA	NA
383	Construction of Rooms/ Lab/ Library etc.	ii	Yes	Uttar Pradesh	Dibiyapur	909506	Yes	NA	NA
384	Provid skill development trg to youth	ii	Yes	Uttar Pradesh	Sonebhadra	826000	No	CEDMAP RTC BILASPUR	CSR00014988
385	Improvement in learning level activity	ii	Yes	Uttar Pradesh	Ambedkar Nagar	776998	No	UNISED	CSR00011913
386	Bus facility to Girl studts for high edu	ii	Yes	Uttar Pradesh	Sonebhadra	549000	Yes	NA	NA
387	Capacity building of farmers	ii	Yes	Uttar Pradesh	Gautam Buddh Nagar	509300	Yes	NA	NA
388	Construction Additional class room in vi	ii	Yes	Uttar Pradesh	Sonebhadra	506376	Yes	NA	NA
389	Raising height of boundary wall with tho	ii	Yes	Uttar Pradesh	Sonebhadra	404202	Yes	NA	NA
390	Providing various assets in govt schools	ii	Yes	Uttar Pradesh	Ambedkar Nagar	384148	Yes	NA	NA
391	Infrastructure upgradation in Govt / Gov	ii	Yes	Uttar Pradesh	Raibareilly	375267	Yes	NA	NA
392	IMPROVING LEARNING LEVELS IN SCHOOLS	ii	Yes	Uttar Pradesh	Sonebhadra	282304	Yes	NA	NA
393	Utkarsh Scholarship	ii	Yes	Uttar Pradesh	Gautam Buddh Nagar	258000	Yes	NA	NA
394	Distribution of tablets to girl children	ii	Yes	Uttar Pradesh	Sonebhadra	256000	Yes	NA	NA
395	Provid skill development trg to youths	ii	Yes	Uttar Pradesh	Ambedkar Nagar	231275	Yes	NA	NA
396	Const of SchoolToilets-Jhajjar	ii	Yes	Uttar Pradesh	Gautam Buddh Nagar	227526	Yes	NA	NA
397	Payment for books & fee to Merit student	ii	Yes	Uttar Pradesh	Raibareilly	190950	Yes	NA	NA
398	B'dry wall &classroom in village schools	ii	Yes	Uttar Pradesh	Sonebhadra	162447	Yes	NA	NA
399	Provid skill development trg to youth	ii	Yes	Uttar Pradesh	Sonebhadra	147446	Yes	NA	NA
400	Capacity building of farmers through t	ii	Yes	Uttar Pradesh	Sonebhadra	113760	Yes	NA	NA
401	BEE National Level Painting Competition	ii	Yes	Uttar Pradesh	Gautam Buddh Nagar	97351	Yes	NA	NA
402	Provdg computer to schools	ii	Yes	Uttar Pradesh	Gautam Buddh Nagar	90768	Yes	NA	NA
403	Skill Development of youths	ii	Yes	Uttar Pradesh	Gautam Buddh Nagar	76300	Yes	NA	NA
404	Capacity building of farmers	ii	Yes	Uttar Pradesh	Sonebhadra	17213	Yes	NA	NA
405	Provid skill development trg to youths	ii	Yes	Uttar Pradesh	Raibareilly	6393	Yes	NA	NA
406	Vocational training to youth to making t	ii	Yes	Uttar Pradesh	Sonebhadra	5160	Yes	NA	NA

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407	Const of rooms/kitchen etc in schools	ii	Yes	Uttar Pradesh	Sonebhadra	4800	Yes	NA	NA
408	organizing session female Gram pradhans	ii	Yes	Uttar Pradesh	Raibareilly	1886	Yes	NA	NA
409	Personality developmnt prog for students	ii	Yes	Uttar Pradesh	Sonebhadra	760	Yes	NA	NA
410	R&M of Toilets Under SVA.	ii	Yes	West Bengal	Murshidabad	50623688	Yes	NA	NA
411	Trf to CSR- GAD-School	ii	Yes	West Bengal	Murshidabad	25593715	Yes	NA	NA
412	Const of School Toilets	ii	Yes	West Bengal	Murshidabad	5262786	Yes	NA	NA
413	Skill Development of youths	ii	Yes	West Bengal	Murshidabad	415000	No	CIPET HALDIA	CSR00008481
414	Toilets for Girls & Boys at Schools	ii	Yes	West Bengal	Murshidabad	259251	Yes	NA	NA
415	Skill Development of youths	ii	Yes	West Bengal	Murshidabad	120759	No	EK GUCHHO SWAPNO	CSR00018480
416	Skill Development of youths	ii	Yes	West Bengal	Murshidabad	118551	Yes	NA	NA
417	Coaching classes for students	ii	Yes	West Bengal	Murshidabad	33984	Yes	NA	NA
418	IMPROVING LEARNING LEVELS IN SCHOOLS	ii	Yes	West Bengal	Murshidabad	14448	Yes	NA	NA
419	Providing basic edu supplies to children	ii	Yes	West Bengal	Murshidabad	4323	Yes	NA	NA
420	VOCATIONAL TRAINING FOR YOUTH EMPOWERMEN	iii	Yes	Andhra Pradesh	Vishakhapatnam	281016	Yes	NA	NA
421	VOCATIONAL TRAINING FOR YOUTH EMPOWERMEN	iii	Yes	Andhra Pradesh	Vishakhapatnam	89000	No	BCT KVK REVOLVING FU	CSR00009370
422	Skill development initiatives	iii	Yes	Bihar	Bhagalpur	569999	Yes	NA	NA
423	Add. Fund for Setting up of ITI Baloda	iii	Yes	Chhattisgarh	Bilaspur	705637	Yes	NA	NA
424	Vocational training to youth to make the	iii	Yes	Chhattisgarh	Korba	380000	Yes	NA	CSR00000958
425	Vocational Training including Computer c	iii	Yes	Chhattisgarh	Bilaspur	229154	Yes	NA	NA
426	Provid skill development trg to women	iii	Yes	Gujarat	Surat	235850	Yes	NA	NA
427	Provid skill development trg to youths	iii	Yes	Gujarat	Surat	28500	Yes	NA	NA
428	Capacity Building/ Communication	iii	Yes	Gujarat	Bharuch	19321	Yes	NA	NA
429	VOCATIONAL TRAINING FOR YOUTH EMPOWERMEN	iii	Yes	Haryana	Faridabad	1391953	Yes	NA	NA
430	Renovation of NAVPATH	iii	Yes	Haryana	Faridabad	29820	Yes	NA	NA
431	VOCATIONAL TRAINING	iii	Yes	Kerela	Allahapuza	68750	Yes	NA	NA
432	Awareness on Women Safety thr video	iii	Yes	Madhya Pradesh	Singrauli	550217	Yes	NA	NA
433	Vocational training to youth to make the	iii	Yes	Madhya Pradesh	Singrauli	97195	Yes	NA	NA
434	Skill Development of youths	iii	Yes	Odisha	Angul	823058	Yes	NA	NA
435	Construction of ITI in Ganjam, Bhubnes.c	iii	Yes	Odisha	Bubaneshwar	59721	Yes	NA	NA
436	Training programmes on various income ge	iii	Yes	Odisha	Angul	43500	Yes	NA	NA
437	Provid skill development trg to youth	iii	Yes	Rajasthan	Baran	397442	Yes	NA	NA
438	Training Workshop-Evoice	iii	Yes	Rajasthan	Baran	32810	Yes	NA	NA
439	Support to women-SHG Shiv Shakti Vikas	iii	Yes	Rajasthan	Baran	10027	Yes	NA	NA
440	Provid skill development trg to youth	iii	Yes	Telengana	Peddapally	2036312	Yes	NA	NA
441	Vocational training to youth to make the	iii	Yes	Telengana	Peddapally	1117507	Yes	NA	NA
442	Integrated livestock management: Improvi	iii	Yes	Telengana	Peddapally	682500	Yes	NA	NA
443	Capacity building of farmers	iii	Yes	Telengana	Peddapally	322080	Yes	NA	NA
444	Integrated Livestock ManagemenT	iii	Yes	Telengana	Peddapally	276789	Yes	NA	NA
445	Capacity building of farmers through tra	iii	Yes	Telengana	Peddapally	162500	Yes	NA	NA
446	Training Workshop-Evoice	iii	Yes	Telengana	Peddapally	43400	Yes	NA	NA
447	Provid skill development trg to youth	iii	Yes	Uttar Pradesh	Sonebhadra	826000	No	CEDMAP RTC BILASPUR	CSR00014988
448	Capacity building of farmers	iii	Yes	Uttar Pradesh	Gautam Buddh Nagar	509300	Yes	NA	NA
449	Vocational training to women to make the	iii	Yes	Uttar Pradesh	Gautam Buddh Nagar	424800	Yes	NA	NA
450	Provid skill development trg to youths	iii	Yes	Uttar Pradesh	Ambedkar Nagar	231275	Yes	NA	NA
451	Provid skill development trg to youth	iii	Yes	Uttar Pradesh	Sonebhadra	147446	Yes	NA	NA
452	Capacity building of farmers through t	iii	Yes	Uttar Pradesh	Sonebhadra	113760	Yes	NA	NA
453	Vocational training to youth to making t	iii	Yes	Uttar Pradesh	Sonebhadra	88500	No	CEDMAP RTC BILASPUR	CSR00014988

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454	Skill Development of youths	iii	Yes	Uttar Pradesh	Gautam Buddh Nagar	76300	Yes	NA	NA
455	Capacity building of farmers	iii	Yes	Uttar Pradesh	Sonebhadra	17213	Yes	NA	NA
456	Provid skill development trg to youths	iii	Yes	Uttar Pradesh	Raibareilly	6393	Yes	NA	NA
457	Vocational training to youth to making t	iii	Yes	Uttar Pradesh	Sonebhadra	5160	Yes	NA	NA
458	organizing session female Gram pradhans	iii	Yes	Uttar Pradesh	Raibareilly	1886	Yes	NA	NA
459	Skill Development of youths	iii	Yes	West Bengal	Murshidabad	415000	No	CIPET HALDIA	CSR00008481
460	Skill Development of youths	iii	Yes	West Bengal	Murshidabad	120759	No	EK GUCHHO SWAPNO	CSR00018480
461	Skill Development of youths	iii	Yes	West Bengal	Murshidabad	118551	Yes	NA	NA
462	Tree Plantation Outside Plant Township	iv	Yes	Andhra Pradesh	Vishakhapatnam	27009600	Yes	NA	NA
463	Sustainability Development Expenses	iv	Yes	Andhra Pradesh	Vishakhapatnam	2926000	Yes	NA	NA
464	Sustainability Development Expenses	iv	Yes	Assam	Kokrajhar	2360000	Yes	NA	NA
465	Trf to CSR- SD Expenses	iv	Yes	Bihar	Bhagalpur	5152241	Yes	NA	NA
466	Support for sustainable livestock farmin	iv	Yes	Bihar	Bhagalpur	45000	Yes	NA	NA
467	Sustainability Development Expenses	iv	Yes	Chhattisgarh	Korba	144990293	Yes	NA	NA
468	Tree Plantation Outside Plant Township	iv	Yes	Chhattisgarh	Korba	11529644	Yes	NA	NA
469	Tree Plantation Outside Plant Township	iv	Yes	Chhattisgarh	Bilaspur	6899945	Yes	NA	NA
470	Integerated Livestock Development Center	iv	Yes	Chhattisgarh	Bilaspur	791000	Yes	NA	NA
471	Tree Plantation Outside Plant Township	iv	Yes	Gujarat	Bharuch	472136	Yes	NA	NA
472	Tree Plantation Outside Plant Township	iv	Yes	Karanataka	Vijayapura	3339000	Yes	NA	NA
473	Tree Plantation Outside Plant Township	iv	Yes	Madhya Pradesh	Singrauli	7548125	Yes	NA	NA
474	Tree Plantation Outside Plant Township	iv	Yes	Madhya Pradesh	Khargone	3567156	Yes	NA	NA
475	Trf to CSR- SD Expenses	iv	Yes	Madhya Pradesh	Singrauli	731600	Yes	NA	NA
476	Tree Plantation Outside Plant Township	iv	Yes	Maharashtra	Solapur	15051534	Yes	NA	NA
477	Tree Plantation Outside Plant Township	iv	Yes	Odisha	Angul	4274069	Yes	NA	NA
478	Tree Plantation Outside Plant Township	iv	Yes	Odisha	Angul	3025535	Yes	NA	NA
479	Trf to CSR- SD Expenses	iv	Yes	Rajasthan	Baran	1780000	Yes	NA	NA
480	Tree Plantation Outside Plant Township	iv	Yes	Telengana	Telegana	18298515	Yes	NA	NA
481	Tree Plantation Outside Plant Township	iv	Yes	Uttar Pradesh	Gautam Buddh Nagar	13460300	Yes	NA	NA
482	Sustainability Development Expenses	iv	Yes	Uttar Pradesh	Gautam Buddh Nagar	11888451	Yes	NA	NA
483	Tree Plantation Outside Plant Township	iv	Yes	Uttar Pradesh	Raibareilly	7267759	Yes	NA	NA
484	Tree Plantation Outside Plant Township	iv	Yes	Uttar Pradesh	Sonebhadra	6418344	Yes	NA	NA
485	Tree Plantation Outside Plant Township	iv	Yes	Uttar Pradesh	Gautam Buddh Nagar	6138273	Yes	NA	NA
486	Trf to CSR- SD Expenses	iv	Yes	Uttar Pradesh	Sonebhadra	2625828	Yes	NA	NA
487	Trf to CSR- SD Expenses	iv	Yes	Uttar Pradesh	Ambedkar Nagar	1329276	Yes	NA	NA
488	Sustainability Development Expenses	iv	Yes	Uttar Pradesh	Sonebhadra	1301882	Yes	NA	NA
489	Trf to CSR- SD Expenses	iv	Yes	Uttar Pradesh	Gautam Buddh Nagar	229500	Yes	NA	NA
490	Veterinary Camp for Animal health	iv	Yes	Uttar Pradesh	Ambedkar Nagar	172232	Yes	NA	NA
491	Sustainability Development Expenses	iv	Yes	Uttar Pradesh	Sonebhadra	157843	Yes	NA	NA
492	conducting Cultural programmes	v	Yes	Bihar	Bhagalpur	194052	Yes	NA	NA
493	Promoting rural art and culture	v	Yes	Chhattisgarh	Bilaspur	2266041	Yes	NA	NA
494	RURAL CULTURAL MEETS	v	Yes	Odisha	Angul	113295	Yes	NA	NA
495	RURAL CULTURAL MEETS	v	Yes	Telengana	Peddapally	2624000	Yes	NA	NA
496	rural culture programs, performing arts,	v	Yes	Uttar Pradesh	Dibiyapur	20000	Yes	NA	NA
497	RURAL CULTURAL MEETS	v	Yes	West Bengal	Murshidabad	31000	Yes	NA	NA
498	RURAL SPORTS	vii	Yes	Andhra Pradesh	Vishakhapatnam	536738	Yes	NA	NA
499	RURAL SPORTS	vii	Yes	Bihar	Bhagalpur	244104	Yes	NA	NA
500	Fin Assist for National Supercross Champ	vii	Yes	Chhattisgarh	Raipur	2000000	No	C G MOTOR SPORTS AS	CSR00023110

(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)	
Sl. No.	Name of the Project	Item from the list of activities in schedule VII to the Act	Local area (Yes/ No)	Location of the project.		Amount spent for the project (in ₹)	Mode of implementation - Direct (Yes/ No).	Mode of implementation - Through implementing agency.	
				State	District			Name.	CSR Registration No.
501	Promotion of State level football trg	vii	Yes	Chhattisgarh	Bilaspur	517010	No	CHHATTISGARH FOOTB	CSR00018175
502	promotion sports culture of Eklavya sch	vii	Yes	Chhattisgarh	Korba	500000	Yes	NA	NA
503	RURAL SPORTS	vii	Yes	Chhattisgarh	Bilaspur	460500	Yes	NA	NA
504	Promotion of state level foot ball train	vii	Yes	Chhattisgarh	Bilaspur	368784	Yes	NA	NA
505	Const of play graounds	vii	Yes	Chhattisgarh	Bilaspur	318483	Yes	NA	NA
506	State Level Shalai Spt Tournament'21	vii	Yes	Chhattisgarh	Korba	244192	Yes	NA	NA
507	support for expedition of mt.kilimanjaro	vii	Yes	Chhattisgarh	Bilaspur	200000	Yes	NA	NA
508	RURAL SPORTS	vii	Yes	Chhattisgarh	Korba	11800	Yes	NA	NA
509	RURAL SPORTS	vii	Yes	Gujarat	Bharuch	174369	Yes	NA	NA
510	Support for rural and national sports	vii	Yes	Gujarat	Surat	110979	Yes	NA	NA
511	RURAL SPORTS	vii	Yes	Madhya Pradesh	Singrauli	648263	Yes	NA	NA
512	RURAL SPORTS	vii	Yes	Odisha	Angul	1625610	Yes	NA	NA
513	Support for rural and national sports	vii	Yes	Rajasthan	Baran	457576	Yes	NA	NA
514	Talent scouting/trg/inf/eqp for Rural Sp	vii	Yes	Rajasthan	Baran	6200	Yes	NA	NA
515	RURAL SPORTS	vii	Yes	Telengana	Peddapally	300000	Yes	NA	NA
516	RURAL SPORTS	vii	Yes	Uttar Pradesh	Ambedkar Nagar	601539	Yes	NA	NA
517	Amrit Krida Mahotsav-Rural Sports	vii	Yes	Uttar Pradesh	Raibareilly	559342	Yes	NA	NA
518	Payment to drishti foundation	vii	Yes	Uttar Pradesh	Ambedkar Nagar	200000	Yes	NA	NA
519	Dev of play ground in villages	vii	Yes	Uttar Pradesh	Gautam Buddh Nagar	100000	Yes	NA	NA
520	talent scouting, training, sports infras	vii	Yes	Uttar Pradesh	Gautam Buddh Nagar	3920	Yes	NA	NA
521	RURAL SPORTS	vii	Yes	West Bengal	Murshidabad	213378	Yes	NA	NA
522	SUPT. TO PM-CARE FUND FOR COVID IN 2021	viii	No	Multiple States	Multiple Districts	800000000	Yes	NA	NA
523	CONSTRUCTION/ REPAIR OF ROAD	x	Yes	Andhra Pradesh	Vishakhapatnam	4300000	No	Executive Engineer, PRI	CSR00031393
524	CONSTRUCTION/ REPAIR OF ROAD	x	Yes	Andhra Pradesh	Vishakhapatnam	2000000	Yes	NA	NA
525	NEED ASSESSMENT SURVEYS	x	Yes	Andhra Pradesh	Vishakhapatnam	958308	Yes	NA	NA
526	Const of community hall	x	Yes	Andhra Pradesh	Vishakhapatnam	850000	No	Executive Engineer, PRI	CSR00031393
527	REPAIR & MAINTENANCE OF INFRASTRUCTURE/	x	Yes	Andhra Pradesh	Vishakhapatnam	770000	Yes	NA	NA
528	Const of boundary wall & othe infra	x	Yes	Andhra Pradesh	Vishakhapatnam	250000	No	Executive Engineer, PRI	CSR00031393
529	Capacity building & Communication	x	Yes	Andhra Pradesh	Vishakhapatnam	154534	Yes	NA	NA
530	Maintenance work of assets created under	x	Yes	Bihar	Bhagalpur	8996140	Yes	NA	NA
531	Providing Street lighting using Solar li	x	Yes	Bihar	Bhagalpur	2445309	Yes	NA	NA
532	Strengthening & premix carpet	x	Yes	Bihar	Bhagalpur	1294031	Yes	NA	NA
533	Construction/ repair of Roads	x	Yes	Bihar	Bhagalpur	1165312	Yes	NA	NA
534	NEED ASSESSMENT SURVEYS	x	Yes	Bihar	Bhagalpur	1017368	Yes	NA	NA
535	Repair and Maintenance of assets	x	Yes	Bihar	Bhagalpur	852764	Yes	NA	NA
536	Distribution of Blankets to the poor	x	Yes	Bihar	Patna	779662	Yes	NA	NA
537	Const of Ghat Stairs in ponds	x	Yes	Bihar	Bhagalpur	635950	Yes	NA	NA
538	Maintenance of assets created under CSR	x	Yes	Bihar	Bhagalpur	599384	Yes	NA	NA
539	Distribution of Blankets/ Flood and Fire	x	Yes	Bihar	Bhagalpur	477507	Yes	NA	NA
540	Repair & Maintenance	x	Yes	Bihar	Bhagalpur	290531	Yes	NA	NA
541	DOCUMENTATION & COMMUNICATION	x	Yes	Bihar	Bhagalpur	114743	Yes	NA	NA
542	Surface work with bitument	x	Yes	Bihar	Bhagalpur	70780	Yes	NA	NA
543	beautification & re-development of Ramna	x	Yes	Bihar	Patna	59000	Yes	NA	NA
544	Const/reno of Community Center	x	Yes	Chhattisgarh	Bilaspur	2681594	Yes	NA	NA
545	Construction of Community Centre with Bo	x	Yes	Chhattisgarh	Bilaspur	1487160	Yes	NA	NA
546	Construction/ maintenance of road in nea	x	Yes	Chhattisgarh	Korba	880033	Yes	NA	NA

(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)	
Sl. No.	Name of the Project	Item from the list of activities in schedule VII to the Act	Local area (Yes/ No)	Location of the project.		Amount spent for the project (in ₹)	Mode of implementation - Direct (Yes/ No).	Mode of implementation - Through implementing agency.	
				State	District			Name.	CSR Registration No.
547	Construction of Community Hall at Jamnip	x	Yes	Chhattisgarh	Korba	837057	Yes	NA	NA
548	Construction of CC / Tar Road / Drain in	x	Yes	Chhattisgarh	Bilaspur	778551	Yes	NA	NA
549	Constru of rural roads	x	Yes	Chhattisgarh	Bilaspur	600000	Yes	NA	NA
550	Construction & Maintenance of road	x	Yes	Chhattisgarh	Bilaspur	590000	Yes	NA	NA
551	Deepening/beautification etc of pond	x	Yes	Chhattisgarh	Korba	499229	Yes	NA	NA
552	NEED ASSESSMENT SURVEYS	x	Yes	Chhattisgarh	Bilaspur	486308	Yes	NA	NA
553	NEED ASSESSMENT SURVEYS	x	Yes	Chhattisgarh	Korba	363440	Yes	NA	NA
554	Capacity building and communication	x	Yes	Chhattisgarh	Korba	184856	Yes	NA	NA
555	Construction of Boundary Wall at Mangal	x	Yes	Chhattisgarh	Bilaspur	167806	Yes	NA	NA
556	SPONSORING 1 PAP FOR GENERAL NURSING	x	Yes	Chhattisgarh	Bilaspur	60000	Yes	NA	NA
557	Const of Muktidham & welcome gates	x	Yes	Chhattisgarh	Bilaspur	33322	Yes	NA	NA
558	Build, deepen and rejuvenate ponds	x	Yes	Chhattisgarh	Korba	28371	Yes	NA	NA
559	Repair and maintenances of Assets Create	x	Yes	Chhattisgarh	Bilaspur	17518	Yes	NA	NA
560	High mast lights and LED light in CSR Vi	x	Yes	Gujarat	Surat	2761496	Yes	NA	NA
561	Augmenting and strengthening village inf	x	Yes	Gujarat	Bharuch	517508	Yes	NA	NA
562	Construction of Community Centre in near	x	Yes	Gujarat	Bharuch	150853	Yes	NA	NA
563	Capacity Building/ Communication	x	Yes	Gujarat	Bharuch	108434	Yes	NA	NA
564	SOCIAL IMPACT EVALUATION	x	Yes	Gujarat	Surat	46020	Yes	NA	NA
565	Construction of Cremetorium in nearby v	x	Yes	Gujarat	Bharuch	29868	Yes	NA	NA
566	Construction of Bus Stand in nearby vill	x	Yes	Gujarat	Bharuch	9485	Yes	NA	NA
567	Stakeholder consultation	x	Yes	Gujarat	Bharuch	6074	Yes	NA	NA
568	Insta of solar lights in villages	x	Yes	Haryana	Faridabad	1077209	Yes	NA	NA
569	Construction o 4 rooms along with varana	x	Yes	Jharkhand	Chatra	1077860	Yes	NA	NA
570	Other Commnunity development expenses	x	Yes	Jharkhand	Ranchi	546189	Yes	NA	NA
571	SOCIAL IMPACT EVALUATION	x	Yes	Kerela	Allahapuza	1338120	Yes	NA	NA
572	Metalling and Tarring of road in nearby	x	Yes	Kerela	Allahapuza	576795	Yes	NA	NA
573	SSL AND SHML in Satna-II	x	Yes	Madhya Pradesh	Narsinghpur	6285222	Yes	NA	NA
574	Constr of retaining wall/ bridge Semra	x	Yes	Madhya Pradesh	Singrauli	4004386	Yes	NA	NA
575	Const of roads in nearby villages	x	Yes	Madhya Pradesh	Singrauli	1051390	Yes	NA	NA
576	Asst to Oldage Homes	x	Yes	Madhya Pradesh	Singrauli	344381	Yes	NA	NA
577	Capacity Building/Communication	x	Yes	Madhya Pradesh	Singrauli	244980	Yes	NA	NA
578	Services for watch and ward of VTC NJV S	x	Yes	Madhya Pradesh	Singrauli	144277	Yes	NA	NA
579	OTHER CSR ACTIVITIES	x	Yes	Madhya Pradesh	Singrauli	122771	Yes	NA	NA
580	OTHER CSR ACTIVITIES	x	Yes	Madhya Pradesh	Singrauli	89310	No	NAVODAYA MISSION T	CSR00027926
581	Other Commnunity development expenses	x	Yes	Madhya Pradesh	Singrauli	56640	Yes	NA	NA
582	Renovation of Pond at Mauhaar	x	Yes	Madhya Pradesh	Singrauli	26819	Yes	NA	NA
583	BEE State Level Painting Competition	x	Yes	Maharashtra	Mumbai	180000	Yes	NA	NA
584	Community Development Expenses	x	Yes	Maharashtra	Nagpur	22125	Yes	NA	NA
585	Const/ repairs of roads in villages	x	Yes	Odisha	Angul	4456863	Yes	NA	NA
586	Construction & Repair of Roads in nearb	x	Yes	Odisha	Angul	4143334	Yes	NA	NA
587	Need Assessment Survey & Baseline Surve	x	Yes	Odisha	Angul	1620000	Yes	NA	NA
588	const Road safety training centre hall	x	Yes	Odisha	Angul	1417265	Yes	NA	NA
589	construction boundary wall Maa Hingula	x	Yes	Odisha	Angul	1176168	Yes	NA	NA
590	Social Infrastructure viz.,Solar lights	x	Yes	Odisha	Angul	1056349	Yes	NA	NA
591	Social Infrastructure viz.,Solar lights	x	Yes	Odisha	Angul	831515	Yes	NA	NA

(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)	
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				State	District			Name.	CSR Registration No.
592	Construction & repair of roads in nearby	x	Yes	Odisha	Angul	711334	Yes	NA	NA
593	SOCIAL IMPACT EVALUATION	x	Yes	Odisha	Angul	657360	Yes	NA	NA
594	Const of comm center in villages	x	Yes	Odisha	Angul	569562	Yes	NA	NA
595	Other Commnunity development expenses	x	Yes	Odisha	Angul	568583	Yes	NA	NA
596	Construction of meeting hall, Mandop i	x	Yes	Odisha	Angul	359744	Yes	NA	NA
597	Community Development Expenses	x	Yes	Odisha	Angul	290770	Yes	NA	NA
598	Supply of Ash Bricks for Community Infr	x	Yes	Odisha	Angul	284041	Yes	NA	NA
599	Wireless control/rest room at Rantolai	x	Yes	Odisha	Angul	265500	Yes	NA	NA
600	SOCIAL IMPACT EVALUATION	x	Yes	Odisha	Angul	219716	Yes	NA	NA
601	construction of boundary wall at Takua	x	Yes	Odisha	Angul	129804	Yes	NA	NA
602	Construction of Community Hall	x	Yes	Odisha	Angul	59930	Yes	NA	NA
603	Jungle cleaning for protection of villag	x	Yes	Odisha	Angul	47051	Yes	NA	NA
604	DOCUMENTATION & COMMUNICATION	x	Yes	Odisha	Angul	27344	Yes	NA	NA
605	NEED ASSESSMENT SURVEYS	x	Yes	Rajasthan	Baran	1426574	Yes	NA	NA
606	SOCIAL IMPACT EVALUATION SURVEY	x	Yes	Rajasthan	Baran	391280	Yes	NA	NA
607	Maintenance work of old building	x	Yes	Rajasthan	Baran	196782	Yes	NA	NA
608	Augmenting and strengthening village inf	x	Yes	Telengana	Peddapally	1919707	Yes	NA	NA
609	Bottle crushing Machines aT Rly Station	x	Yes	Telengana	Hyderabad	249940	Yes	NA	NA
610	DOCUMENTATION & COMMUNICATION	x	Yes	Telengana	Peddapally	118000	Yes	NA	NA
611	Const of bridges and culvert	x	Yes	Telengana	Peddapally	113243	Yes	NA	NA
612	Const/ ren of school infra	x	Yes	Telengana	Peddapally	30744	Yes	NA	NA
613	REPAIR & MAINTENANCE OF INFRASTRUCTURE/	x	Yes	Telengana	Peddapally	14190	Yes	NA	NA
614	300 nos. SSL in Santkabir Nagar (UP)	x	Yes	Uttar Pradesh	Lucknow	6984553	Yes	NA	NA
615	Rep/ren. Ofsup.line & xmer Chilkadand	x	Yes	Uttar Pradesh	Sonebhadra	6092983	Yes	NA	NA
616	Construction of CC Road Kota to Khadia	x	Yes	Uttar Pradesh	Sonebhadra	5688214	Yes	NA	NA
617	RCC Roads in nearby villages	x	Yes	Uttar Pradesh	Sonebhadra	3955983	Yes	NA	NA
618	Electrification work in nearby villages	x	Yes	Uttar Pradesh	Gautam Buddh Nagar	2539454	Yes	NA	NA
619	CONSTRUCTION/ REPAIR OF ROAD	x	Yes	Uttar Pradesh	Gautam Buddh Nagar	2202682	Yes	NA	NA
620	Audit of CSR activities by 3rd party	x	Yes	Uttar Pradesh	Gautam Buddh Nagar	2124000	Yes	NA	NA
621	Augmenting AND Strengthing basic infra	x	Yes	Uttar Pradesh	Raibareilly	2115756	Yes	NA	NA
622	Wiring of collector building	x	Yes	Uttar Pradesh	Gautam Buddh Nagar	1965132	Yes	NA	NA
623	Const of roads in villages	x	Yes	Uttar Pradesh	Raibareilly	1709190	Yes	NA	NA
624	Construction of RCC Road in R.C. Village	x	Yes	Uttar Pradesh	Sonebhadra	1409922	Yes	NA	NA
625	Distribution of Blankets to the needy	x	Yes	Uttar Pradesh	Gautam Buddh Nagar	831947	Yes	NA	NA
626	Installation of Solar Street Lights	x	Yes	Uttar Pradesh	Ambedkar Nagar	809676	No	UP SMALL INDUSTRIES	CSR00023463
627	Maintenance of lawn at varanasi airport	x	Yes	Uttar Pradesh	Lucknow	786478	Yes	NA	NA
628	Construction of Road works in villages.	x	Yes	Uttar Pradesh	Sonebhadra	681615	Yes	NA	NA
629	SOCIAL IMPACT EVALUATION	x	Yes	Uttar Pradesh	Ambedkar Nagar	618750	Yes	NA	NA
630	Community Development Expenses	x	Yes	Uttar Pradesh	Ambedkar Nagar	595000	Yes	NA	NA
631	NEED ASSESSMENT SURVEYS	x	Yes	Uttar Pradesh	Gautam Buddh Nagar	587782	Yes	NA	NA
632	SOCIAL IMPACT EVALUATION	x	Yes	Uttar Pradesh	Dibiyapur	566400	Yes	NA	NA
633	NEED ASSESSMENT SURVEYS	x	Yes	Uttar Pradesh	Dibiyapur	531000	Yes	NA	NA
634	COMMUNICATION TO STAKEHOLDER	x	Yes	Uttar Pradesh	Gautam Buddh Nagar	443730	Yes	NA	NA
635	Capacity Building/ Communication	x	Yes	Uttar Pradesh	Ambedkar Nagar	422492	Yes	NA	NA
636	Providing blankets, mosquito nets, etc,	x	Yes	Uttar Pradesh	Sonebhadra	393600	Yes	NA	NA
637	Maintenance of assets created under CSR	x	Yes	Uttar Pradesh	Sonebhadra	386774	Yes	NA	NA
638	CR-2021.1007.INF.REG.85	x	Yes	Uttar Pradesh	Ambedkar Nagar	360742	No	UP SMALL INDUSTRIES	CSR00023463
639	CSR Activitie E-voices Navodaya/ Mahamana	x	Yes	Uttar Pradesh	Sonebhadra	325853	Yes	NA	NA

(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)	
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				State	District			Name.	CSR Registration No.
640	SOCIAL IMPACT EVALUATION	x	Yes	Uttar Pradesh	Raibareilly	324500	Yes	NA	NA
641	Renovation and Construction of River Gha	x	Yes	Uttar Pradesh	Ambedkar Nagar	299194	Yes	NA	NA
642	Capacity Building/ Communication	x	Yes	Uttar Pradesh	Dibiyapur	273832	Yes	NA	NA
643	Capacity building & Communication	x	Yes	Uttar Pradesh	Gautam Buddh Nagar	222396	Yes	NA	NA
644	Need Assessment Survey	x	Yes	Uttar Pradesh	Ambedkar Nagar	194700	Yes	NA	NA
645	REPAIR & MAINTENANCE OF ASSETS	x	Yes	Uttar Pradesh	Sonebhadra	181304	Yes	NA	NA
646	Training Program on New changes-CSR	x	Yes	Uttar Pradesh	Gautam Buddh Nagar	180500	Yes	NA	NA
647	CSR Connect Magazine	x	Yes	Uttar Pradesh	Gautam Buddh Nagar	136161	Yes	NA	NA
648	Other Commnunity development expenses	x	Yes	Uttar Pradesh	Sonebhadra	105628	Yes	NA	NA
649	Rep./Maint. of culvert at Chilkadand	x	Yes	Uttar Pradesh	Sonebhadra	101415	Yes	NA	NA
650	Misc. Maintenance activities	x	Yes	Uttar Pradesh	Sonebhadra	82705	Yes	NA	NA
651	Construction of roads in nearby villages	x	Yes	Uttar Pradesh	Gautam Buddh Nagar	78574	Yes	NA	NA
652	DOCUMENTATION & COMMUNICATION	x	Yes	Uttar Pradesh	Raibareilly	33050	Yes	NA	NA
653	Competition on Energy Conservation Aware	x	Yes	Uttar Pradesh	Lucknow	22238	Yes	NA	NA
654	Installation of Solar Light	x	Yes	Uttar Pradesh	Ambedkar Nagar	20790	Yes	NA	NA
655	Capacity Building/ Communication	x	Yes	Uttar Pradesh	Sonebhadra	19180	Yes	NA	NA
656	CSR ACTIVITY FOR 2011-12 For NCCP-DADRI	x	Yes	Uttar Pradesh	Gautam Buddh Nagar	17085	Yes	NA	NA
657	Const of Road in villages	x	Yes	Uttar Pradesh	Sonebhadra	7129	Yes	NA	NA
658	Const of 100 Individual toilets in vill	x	Yes	Uttar Pradesh	Raibareilly	4157	Yes	NA	NA
659	Solar High Mast Light	x	Yes	West Bengal	Murshidabad	6567379	Yes	NA	NA
660	Renovation of Public Places	x	Yes	West Bengal	Murshidabad	5104381	Yes	NA	NA
661	SOCIAL IMPACT EVALUATION	x	Yes	West Bengal	Murshidabad	2445620	Yes	NA	NA
662	Distr. of Blanket, Food etc.	x	Yes	West Bengal	Murshidabad	1335000	Yes	NA	NA
663	CONSTRUCTION/ REPAIR OF ROAD	x	Yes	West Bengal	Murshidabad	1322446	Yes	NA	NA
664	NEED ASSESSMENT SURVEYS	x	Yes	West Bengal	Murshidabad	1133601	Yes	NA	NA
665	Capacity building & Communication	x	Yes	West Bengal	Murshidabad	323899	Yes	NA	NA
666	NEED ASSESSMENT SURVEYS	x	Yes	West Bengal	Murshidabad	6898	Yes	NA	NA
667	Community Development Expenses	x	Yes	West Bengal	Murshidabad	4410	Yes	NA	NA
668	Inst of solar street/ high mast lights	x	Yes	West Bengal	Murshidabad	3600	Yes	NA	NA
669	Distrib of flood relief matls. to needy	xii	Yes	Kerela	Allahapuza	79371	Yes	NA	NA
670	restoration electricity TAUKTAE" cyclone	xii	Yes	Maharashtra	Mumbai	2082440	Yes	NA	NA
671	Dist of Relief-cyclone YAAS affect famil	xii	Yes	Odisha	Bubaneshwar	279950	Yes	NA	NA
672	Financial support to USDMA Uttarakhand	xii	Yes	Uttarakhand	Multiple Districts	80000000	Yes	NA	NA
	TOTAL					**2852825329**			

Annexure-VII to Directors' Report

PROJECT-WISE ASH PRODUCED AND UTILISED

The quantity of ash produced, ash utilized and percentage of such utilization during 2021-22 from your company Stations is as under:

Sl. No.	Projects	Ash Produced Lakh MTs	Ash Utilization Lakh MTs	% Utilization
1	BARAUNI	6.01	4.77	79.38
2	BARH SUPER	21.56	34.10	158.14
3	BONGAIGAON	7.57	4.39	58.01
4	DADRI	12.85	12.87	100.13
5	GADARWARA	16.85	6.35	37.66
6	KHARGONE	14.08	8.04	57.11
7	KUDGI	13.25	7.10	53.58
8	MOUDA	34.06	37.86	111.17
9	SIMHADRI	35.77	40.19	112.35
10	SOLAPUR	11.36	8.58	75.53
11	TANDA	22.56	35.56	157.59
12	UNCHACHAR	20.85	33.19	159.19
13	DARLIPALI	30.63	17.77	58.02
14	FARAKKA	27.88	38.22	137.09
15	KAHALGAON	42.31	33.27	78.64
16	KORBA	51.67	28.65	55.46
17	LARA	32.31	18.23	56.42
18	RAMAGUNDAM	39.38	55.50	140.92
19	RIHAND	37.09	21.98	59.27
20	SINGRAULI	30.34	17.39	57.32
21	SIPAT	51.98	30.80	59.26
22	TALCHER-KANIHA	69.00	37.59	54.49
23	VINDHYACHAL	82.38	43.70	53.05
	TOTAL	**711.74**	**576.10**	**80.94**

For and on behalf of the Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Dated: 30th July, 2022

NTPC Coal Mining Projects

Form No. AOC-2

(Pursuant to clause (h) of sub-section (3) of section 134 of the Act and Rule 8(2) of the Companies (Accounts) Rules, 2014

Form for disclosure of particulars of contracts/arrangements entered into by the company with related parties referred to in sub-section (1) of section 188 of the Companies Act, 2013 including certain arm's length transactions under third proviso thereto

1. Details of contracts or arrangements or transactions not at Arm's length basis.

Sl. No.	Particulars	Details
a)	Name (s) of the related party & nature of relationship	Utility Powertech Limited (UPL) (a 50:50 Joint Venture between NTPC and Reliance Infrastructure Limited)
b)	Nature of contracts /arrangements /transaction	Your company is assigning Jobs on contract basis, for sundry works in Plants/Station/office of your company.
c)	Duration of the contracts /arrangements / transaction	Five years
d)	Salient terms of the contracts or arrangements or transaction including the value, if any	UPL inter-alia undertakes jobs such as overhauling, repair, refurbishment of various mechanical and electrical equipment of power stations.
e)	Justification for entering into such contracts or arrangements or transactions'	Your company has entered into Power station Maintenance Agreement with UPL from time to time. The rates are fixed on cost plus basis after mutual discussion and after taking into account the prevailing market conditions.
f)	Date of approval by the Board	27.3.2021
g)	Amount paid as advances, if any	NA
h)	Date on which the special resolution was passed in General meeting as required under first proviso to section 188	NA

2. Details of contracts or arrangements or transactions at Arm's length basis

There was no material contract or arrangement or transaction at arm's length basis during the period under review.

Sl. No.	Particulars	Details
a)	Name (s) of the related party & nature of relationship	NA
b)	Nature of contracts/arrangements/transaction	NA
c)	Duration of the contracts/arrangements/transaction	NA
d)	Salient terms of the contracts or arrangements or transaction including the value, if any	NA
e)	Date of approval by the Board	NA
f)	Amount paid as advances, if any	NA

For and on behalf of the Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Dated: 30th July, 2022

NTPC BUSINESS RESPONSIBILITY REPORT (2021-22)

Section A : General Information About Your Company

1. **CIN (Corporate identity number)** L40101DL1975GOI007966
2. **Name of the company** NTPC LIMITED.
3. **Registered address** NTPC Bhawan, SCOPE Complex, 7, Institutional Area, Lodhi Road, New Delhi-110003
4. **Website** www.ntpc.co.in
5. **Email id** csntpc@ntpc.co.in
6. **FY reported** 2021-22
7. **Sector that company is engaged in:** Power
8. **Product/services that the company manufacturers /provides (as in balance sheet):**
   i. Generation of Electricity
   ii. Consultancy
   iii. Coal Mining
   iv. Energy Trading
9. **Total number of location where business activity is undertaken by the company:**

Sl. No.	Location	Nos. of Project	Remarks
1	National	69	26 Thermal, 7 combined cycle gas/liquid fuel, 5 Hydro, 8 Coal site, 1 Wind, and 13 solar Power Projects. Further, it has 11 Thermal, 1 Coal site and 1 gas station, owned by joint ventures or subsidiaries of your Company.
2	International	2	i. Trincomalee Power Project, Srilanka ii. Bangladesh- India Friendship Power Company (Pvt) Ltd. : Maitree Super Thermal Power Plant, Rampal, Bangladesh

10. **Markets served by the company:** National & International

Section B : Financial details of the company

1	Paid up capital (₹ crore)	9,696.67
2	Total Turnover(Gross) (₹ crore)	1,15,021.82
3	Total profit after taxes (₹ crore)	16,111.42
4	Total spending on CSR and Sustainable Development (SD) as % of PAT	Your Company has been consistently spending more than the mandated CSR spend of 2%. During the FY 2021-22 your Company has spent an amount of ₹ 356.72 (2.21%) crore against the mandated CSR expenditure of ₹ 281.80 crore. Out of the said CSR Expenditure, your Company, in alignment with the guidelines issued by DPE on common Annual theme for CPSEs of "Health & Nutrition" for FY 2021-22, has spent an amount of ₹ 198.95 crore i.e. 70.60% which is more than the prescribed 60% on Annual Theme.
5	List of activities in which expenditure in 4 above has been incurred	Broad areas of the activities: - Eradicating Hunger and Poverty - Education & skill development - Health care & Sanitation - Rural Development - Women Empowerment and other Economically backward sections - Art, Culture and Sports - Environmental Sustainability - PMCARES Fund - Disaster management including relief rehabilitation and reconstruction activities

Section C: Other Details

Subsidiaries: The Company has the following 12 Subsidiary Companies as on 31.03.2022:

i. NTPC Electric Supply Company Limited (NESCL)

ii. NTPC Vidyut Vyapar Nigam Limited (NVVN)

iii. Kanti Bijlee Utpadan Nigam Limited (KANTI)

iv. Bhartiya Rail Bijlee Company Limited (BRBCL)

v. Patratu Vidyut Utpadan Nigam Limited (PVUNL)

vi. Nabinagar Power Generating Co. Ltd. (NPGCL)

vii. THDC India Limited (THDCL)

viii. North Eastern Electric Power Corporation Limited (NEEPCO)

ix. NTPC Mining Limited (NML)

x. NTPC EDMC Waste Solutions Private Limited (NEWS)

xi. NTPC Renewable Energy Limited (NREL)

xii. Ratnagiri Gas and Power Private Limited (RGPPL)

The Business Responsibility Initiatives of the parent company are applicable to the subsidiary companies also. However, none of the entities that the Company does business with, participate in the BR initiatives of the Company.

Section D: BR information

1. **Individual Directors responsible for implementation of the BR policy / policies**

Principle No.	Description	Policy / Policies	Director(s) Responsible
Principle 1 (P1)	Businesses should conduct and govern themselves with Ethics, Transparency and Accountability.	1. Code of Conduct* 2. Core Values 3. Fraud Prevention Policy 4. CDA Rules 5. Whistle Blower Policy 6. Internal code of conduct for prevention of insider trading 7. Code of Corporate Fair Disclosure Practices for prevention of insider trading 8. Related Party Transaction Policy 9. Policy for determination of materiality of events or information for disclosure 10. Policy on maintenance & preservation of documents 11. Policy for Determining Material Subsidiaries 12. Training Policy for Directors of NTPC	All Directors & Chief Vigilance Officer
Principle 2 (P2)	Businesses should provide goods and services that are safe and contribute to sustainability throughout their life cycle.	1. Safety Policy 2. NTPC Policy for CSR and Sustainability 3. Ash Policy 4. Sustainable Supply Chain Policy	Shri Ramesh Babu V. DIN: 08736805 Designation: Director (Operations) Shri D K Patel DIN: 08695490 Designation: Director (HR)
Principle 3 (P3)	Businesses should promote the well-being of all employees.	1. Human Resource (HR) Policies 2. Placement and Transfer Policy 3. Human Rights Policy	Shri D K Patel DIN: 08695490 Designation: Director (HR)

Principle No.	Description	Policy / Policies	Director(s) Responsible
Principle 4 (P4)	Businesses should respect the interests of, and be responsive towards all stakeholders, especially those who are disadvantaged, vulnerable and marginalized.	1. R&R Policy 2. NTPC Policy for CSR and Sustainability 3. Initial Community Development (ICD) Policy 4. Human Rights Policy	Shri D K Patel DIN: 08695490 Designation: Director (HR)
Principle 5 (P5)	Businesses should respect and promote human rights.	1. Human Rights Policy	Shri D K Patel DIN: 08695490 Designation: Director (HR)
Principle 6 (P6)	Businesses should respect, protect and make efforts to restore the environment.	1. Environment Policy 2. NTPC Policy for CSR and Sustainability 3. Biodiversity Policy 4. E-waste Policy 5. Water Policy 6. Rainwater Harvesting Policy 7. Integrated Plastic Management Policy	Shri Ramesh Babu V. DIN: 08736805 Designation: Director (Operations) Shri D K Patel DIN: 08695490 Designation: Director (HR)
Principle 7 (P7)	Businesses, when engaged in influencing public and regulatory policy, should do so in a responsible manner.	1. Code of Conduct* 2. Core Values 3. Commercial – Systems & Procedures	All Directors
Principle 8 (P8)	Businesses should support inclusive growth and equitable development.	1. R&R Policy 2. NTPC Policy for CSR and Sustainability 3. Initial Community Development (ICD) Policy	Shri D K Patel DIN: 08695490 Designation: Director (HR)
Principle 9 (P9)	Businesses should engage with and provide value to their customers and consumers in a responsible manner.	1. Commercial systems & Procedures	Shri C K Mondol DIN: 08535016 Designation: Director (Commercial)

* Code of Conduct for Board Members & Senior Management Personnel

2. Details of Director/Directors responsible for BR as a whole

a. Details of the Director/Directors responsible for implementation of the BR policy/policies:

S.No.	Particulars	Details
1.	DIN Number	00307037
2.	Name	Gurdeep Singh
3.	Designation	Chairman & Managing Director
4.	Telephone number	011-24360044
5.	E-mail ID	cmd@ntpc.co.in

b. Details of BR head: Same as above

3. Principle wise reply to each question on BR Policy / Policies:

Sl. No.	Question	P1	P2	P3	P4	P5	P6	P7	P8	P9
1.	Do you have a policy/ policies for the Principle?	Y	Y	Y	Y	Y	Y	Y	Y	N
2.	Has the policy being formulated in consultation with the relevant stakeholders?	Y	Y	Y	Y	Y	Y	Y	Y	-
3.	Does the policy conform to any national /international standards?	Y	Y	Y	Y	Y	Y	Y	Y	-

Sl. No.	Question	P1	P2	P3	P4	P5	P6	P7	P8	P9
4.	Has the policy being approved by the Board? If yes, has it been signed by MD/owner/CEO/appropriate Board Director?	Y	Y	Y	Y	Y	Y	Y	Y	-
5.	Does the company have a specified committee of the Board/ Director/ Official to oversee the implementation of the policy?	Y	Y	Y	Y	Y	Y	Y	Y	-
6.	Indicate the link for the policy to be viewed online?	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)	-
7.	Has the policy been formally communicated to all relevant internal and external stakeholders?	Y	Y	Y	Y	Y	Y	Y	Y	-
8.	Does the company have in-house structure to implement the policy/ policies?	Y	Y	Y	Y	Y	Y	Y	Y	-
9.	Does the Company have a grievance redressal mechanism related to the policy / policies to address stakeholders' grievances related to the policy / policies?	Y	Y	Y	Y	Y	Y	Y	Y	-
10.	Has the company carried out independent audit / evaluation of the working of this policy by an internal or external agency?	Y	Y	Y	Y	Y	Y	Y	Y	-

(i) Web links for the Policies :

S. No	Policies/Systems	Web link
		Finance
a.	Code of Conduct	http://www.ntpc.co.in/investors/code-of-conduct
b.	Fraud Prevention Policy	http://www.ntpctender.com/about/FraudPolicy.asp
c.	Whistle Blower Policy	https://www.ntpc.co.in/sites/default/files/downloads/WhistleBlowerPolicy2014.pdf
d.	Internal Code of Conduct for prevention of insider trading	http://www.ntpc.co.in/download/internal-code-conduct-prevention-insider-trading-dealing-securities-ntpc-limited
e.	Code of Corporate fair disclosure practices for prevention of insider trading	http://www.ntpc.co.in/download/code-corporate-fair-disclosure-practicces-prevention-insider-trading
f.	Related Party Transaction Policy	http://www.ntpc.co.in/download/related-party-transaction-policy-ntpc
g.	Policy for determination of materiality of events or information for disclosure	http://www.ntpc.co.in/sites/default/files/downloads/NTPC%20%20Policy%20For%20Determination%20of%20Materiality%20of%20events.pdf
h.	Policy on maintenance & preservation of documents	http://www.ntpc.co.in/sites/default/files/downloads/Document%20Preservation%20Policy.pdf
i.	Policy for Determining Material Subsidiaries	http://www.ntpc.co.in/download/policy-determining-material
j.	Dividend Distribution Policy	https://www.ntpc.co.in/sites/default/files/downloads/DividendDistributionPolicyofNTPCLimited.pdf
		Human Resource
k.	CDA Rules	Policy Manual available on NTPC Intranet
l.	Training Policy for Directors of NTPC	https://www.ntpc.co.in/sites/default/files/downloads/training-policy-directors-ntpc.pdf
m.	Human Rights Policy	https://www.ntpc.co.in/sites/default/files/downloads/NTPCHuman%20RightsPolicy_0.pdf
n.	Placement and Transfer Policy	Policy Manual available on NTPC Intranet
o.	R&R Policy	https://www.ntpc.co.in/sites/default/files/downloads/R%26RPolicy2017.pdf

S. No	Policies/Systems	Web link
p.	Initial Community Development Policy	http://www.ntpc.co.in/download/initialcommunity-development-policy-2009
q.	Policy for CSR & Sustainability	https://www.ntpc.co.in/sites/default/files/downloads/NTPC-Policy-for-CSR-2019.pdf
r.	Career development Policy	https://www.ntpc.co.in/en/careers/career-growth-opportunities
	Operations	
s.	Safety Policy	https://www.ntpc.co.in/sites/default/files/downloads/SafetyPolicy2016.pdf
t.	Environment Policy	https://www.ntpc.co.in/sites/default/files/downloads/EnvironmentPolicy2017.pdf
u.	Water Policy	https://www.ntpc.co.in/sites/default/files/downloads/WaterPolicy2017.pdf
v.	Ash Policy	https://www.ntpc.co.in/sites/default/files/downloads/AshPolicy2015.pdf
w.	E-waste Policy	https://www.ntpc.co.in/sites/default/files/downloads/e-wastePolicy2014.pdf
x.	Integrated Plastic Management Policy	https://www.ntpc.co.in/sites/default/files/downloads/Integrated-Plastic-Managment-Policy-2019.pdf
	Technical	
y.	Biodiversity Policy	https://www.ntpc.co.in/sites/default/files/downloads/BiodiversityPolicy2018.pdf
z.	Rain Water Harvesting Policy	https://www.ntpc.co.in/sites/default/files/downloads/NTPC%20Rain%20Water%20Harvesting%20Policy%202018.pdf
	Commercial	
za.	Commercial Systems & Procedures	https://www.ntpc.co.in/sites/default/files/downloads/procurementandworkspolicy.pdf
zb.	Sustainable Supply Chain Policy	https://www.ntpc.co.in/sites/default/files/downloads/Sustainale-Supply-Chain-Policy.pdf

4. **If answer against any principle is 'No', please explain why:**

Principle 9: All the sub-principles identified under principle -9 are duly followed by your Company through its commercial systems and procedures. However, your Company feels that a separate Policy on Principle -9 is not required because:

- Your Company supplies power to the Bulk Customers (State Electricity Distribution companies) majority of which are owned by the respective State Govt.
- The CERC, while finalizing Tariff and other Regulations engages all Stakeholders and takes views of them. CERC Tariff Regulations and relevant orders are being displayed on CERC Website: www.cercind.gov.in.
- Your Company & our bulk customers i.e. Discoms work under regulated Environment. Your Company strives for supplying cheapest power deploying all resources optimally in best possible ways resulting in well-being of customers & society.
- Your Company being a Government company is also subject to the various checks and balances mechanism such as audits etc.
- CERC while determining the tariff of your Company's stations does prudence check on the costs of your Company.
- Your Company never restricts the freedom of choice and free competition in any manner while supplying bulk Power.
- Needs of the customers is taken into account and accordingly PPA are signed and Allocation of Power is made by Ministry of Power (MoP) as per existing guidelines & Policy. Unallocated quota of power is allocated by MoP as per demand and requirement of different States hence customers are always kept first.
- Central Electricity Regulatory Commission governs power supply rules and regulations, performance and all other commercial parameters related to power generation. Your Company always excels in satisfying customers by adhering to these norms and disclosing all relevant information.

- Issues, if any, regarding operational issues etc. are being discussed and resolved in common forums such as Regional Power Committees.
- Your Company has developed a Customer Satisfaction Index (CSI), which is administered through a questionnaire and based on the feedbacks received, actions are taken.

Your Company regularly engages with the customers and provides value to them in a responsible manner.

5. Governance related to BR

1.	Indicate the frequency with which the Board of Directors, Committee of the Board or CEO to assess the BR performance of the Company.	Within 3-6 months
2.	Does the Company publish a BR or a Sustainability Report? What is the hyperlink for viewing this report? How frequently it is published?	The company publishes both Business Responsibility Report (as a part of annual report) and Sustainability Report annually and can be accessed from the below link. https://www.ntpc.co.in/en/sustainability/compliances-and-reports

Section E: Principle –wise performance

Principle 1: Businesses should conduct and govern themselves with Ethics, Transparency and Accountability

1. Does the policy relating to ethics, bribery and corruption cover only the company? Does it extend to the Group/ Joint Ventures/ Suppliers/ Contractors/ NGOs / Others?

   i. Code of Conduct for Board Members & Senior Management Personnel covers all the Directors and Senior Management Personnel of the Company.

   ii. Fraud Prevention Policy applies to any fraud, or suspected fraud involving employees of your Company as well as representatives of vendors, suppliers, contractors, consultants, service providers or any outside agency(ies) doing any type of business with your Company.

   iii. However, in line with your Company, RGPPL and NTECL, JVs of your Company have also adopted Fraud Prevention Policy and CDA rules.

   iv. CDA Rules are applicable to all employees of your Company and employees posted in JVs/Subsidiaries.

   v. Insider Trading Code is applicable to designated employee of the company.

   vi. Related Party Transaction Policy is framed to ensure the proper approval and reporting of transactions between the Company and its Related Parties.

   vii. The objective of Whistle Blower Policy is to build and strengthen a culture of transparency and trust in the organization and to provide employees with a framework / procedure for responsible and secure reporting of improper activities (whistle blowing) within the company and to protect employees wishing to raise a concern about improper activity/ serious irregularities within the Company.

   viii. The Policy for determination of materiality of events or information for disclosure was framed in terms of Regulation 30 (1) of Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 (SEBI (LODR).

   ix. The Policy on maintenance & preservation of documents was framed in pursuance to Regulation 9 of the SEBI (LODR).

   x. The Policy for Determining Material Subsidiaries was framed in accordance with the requirement stated under the Listing Agreement.

   xi. The Training Policy aims at providing Orientation & Training programs to be offered to the Board of Directors of your Company.

To ensure transparency, objectivity and quality of decision making in various operations, the Company has a Vigilance Department headed by Chief Vigilance Officer. The Vigilance set up in the Company consists of Vigilance Executives in Corporate Centre as well as in sites. In sites, the Vigilance Executives report to the Project Head in administrative matters and they report to the Chief Vigilance Officer in functional matters.

Corporate Vigilance Department consists of four Cells as under:

- Vigilance Investigation and Processing Cell
- Departmental Proceedings Cell
- Technical Examination Cell
- MIS Cell

These cells deal with various facets of vigilance mechanism. The vigilance works have been assigned region-wise to Vigilance officers at Corporate Centre (Regional Vigilance Executives) for speedier disposal. Senior officials of Vigilance Department comprising GM (Vigilance), Regional Vigilance Executives and Head of DPC/MIS Cell meet regularly to discuss common issues to ensure uniform working in all Regions. This facilitates transparency, efficiency and effectiveness of Vigilance functionaries by making use of collective knowledge, experience and wisdom of Vigilance Executives as well as breaking of compartmentalization and abridging of strengths & weaknesses.

Fraud Prevention Policy has been implemented in your Company and suspected fraud cases, referred by the Nodal Officers to Vigilance Department are investigated immediately to avoid/ stop fraudulent behaviours as defined in "Fraud Prevention Policy". Whistle Blower Policy has also been in place at your Company as per SEBI guideline to strengthen a culture of transparency and trust in the organization, providing employees with a framework/ procedure for responsible and secure reporting of improper activities (whistle blowing) within the company and to protect employees wishing to raise a concern about improper activity/serious irregularities within the Company. A complaint handling policy is also in place which is designed to provide guidance on the manner in which your Company receives and handles complaints against its employees, suppliers / contractors etc. Integrity Pact has been implemented in your Company since 2009. Presently tenders having estimated value of ₹10 Crore (excluding taxes and duties) and above are covered under the Integrity Pact.

2. **How many stakeholder complaints have been received in the past financial year and what percentage was satisfactorily resolved by the management? If so, provide details thereof, in about 50 words or so.**

During the year 2021-22 total 63 Vigilance complaints were investigated, out of which 52 complaints have been finalized and remaining 11 are under various stages of investigation as on 31.3.2022. Appropriate disciplinary action has also been initiated against the involved employees along with system improvements, wherever found necessary. 414 Preventive Vigilance Checks (Surprise, Routine, CTE Type & Scrutiny of Files) were conducted during the period and recovery of ₹ 99,76,784 was effected against various discrepancies detected during investigation. During the last year a total of 89 Preventive Vigilance Workshops were conducted at various projects/ places of the Company.

Principle 2: Businesses should provide goods and services that are safe and contribute to sustainability throughout their life cycle

1. **List up to 3 of your products or services whose design has incorporated social or environmental concerns, risks and/or opportunities**

   i. **Generation of Electricity**: Your Company has been conventionally producing Electricity through Coal and Gas. Many design upgradations such as supercritical and ultra-supercritical based new capacity additions and process innovation such as High Concentration slurry disposal (HCSD), Real time monitoring of Pollutants and Zero Liquid discharge has been done to reduce the environment footprint. With the focus on curbing release of SOx and other undesirable emission into the environment, your Company is undergoing of commissioning of Flue Gas Desulphurisation (FGD) system at various stations. Your Company has also increased its solar, wind and hydro based capacities which has negligible emissions.

   ii. **Coal Mining:** Your Company was allocated six coal blocks, namely, Pakri-Barwadih, Chatti-Bariatu & Chatti-Bariatu (South), Kerandari, Dulanga, Talaipalli and Badam by Ministry of Coal. Banhardih coal block was allocated to Patratu Vidyut Utpadan Nigam Ltd. (PVUNL), a JV company incorporated between your Company & Government of Jharkhand.

   The estimated geological reserves of the allocated blocks are ~5 billion tonnes with an estimated mining capacity of 71 million tonnes per annum. With these coal blocks, your Company aspires to become one of the largest captive coal mining companies in the country.

   Your Company achieved highest ever coal production of 14.02 MMT from Pakri Barwadih, Dulanga and Talaipalli in FY 2021-22, with 27.45 % of growth from FY 2020-21. Also, the highest ever coal dispatch of 14.86 MMT for FY 2021-22, has also seen growth of 35.64% from FY 2020-21. So far, the operational mines have delivered more than 46 Million MT of coal to more than 22 thermal plants of your Company. The coal, from captive coal mines, is much sought after in your Company power stations because of its consistent quality, size and absence of any shale/boulder etc.

Your Company Coal Mining has achieved more than 100% and highest ever Capex utilization of ₹ 1315 crore in FY 2021-22 which is for the first time in Coal Mining. Highest ever profit of ₹ 111 crore was also recorded for FY 2021-22.

Environmental coal mining highlights for year 2021-22

- As a part of green initiative, nursery has been developed in Dulanga mines for a total sapling capacity of 15,000. As on date 6000 saplings have been nurtured. Since inception plantation of 32,400 nos. plants has been carried out.
- Rainwater harvesting has been adopted at two locations i.e. Vocational Training Centre and Coal Laboratory at Dulanga Coal Mining Project which shall conserve approx. 1,000 M^3 of rainwater per year.
- As a part of environmental restoration / protection initiative at Pakri Barwadih Coal Mining Project, 82,569 plants have been planted for FY 2021-22 leading to a total of 2,25,250 plants since inception. Bio-methanation Plant of 100 kg waste/day has been installed under waste to energy initiatives. The biogas produced is being used in the main canteen at Sikri Township.
- Pakri Barwadih Coal Mining Project have installed roof top rainwater harvesting system at office buildings at Langatu site office under water conservation measures. Also, eight nos. of Check dams in the Pakwa and Khora Nala have been constructed for augmenting the ground water of the area.
- Talaipalli Coal Mining Project has planted 21,250 tree saplings. 11 nos. of ground water recharge structures have been constructed at Nayarampur village to recharge ground water to the tune of 73,07,401 M^3 of rainwater per year.

iii. **Green H2/ Alternate Fuel/ Chemical manufacturing:** As part of our business diversification plan, your Company has ventured into alternate fuels and chemicals based on green hydrogen technologies. This would be through integration of existing thermal assets and new investment in clean technologies such as Carbon capture and utilization (CCU), hydrogen production etc. Also green hydrogen technologies like mobility, energy storage etc are also being taken up. Towards that, your Company has planned to take various pilots projects few of which are listed below:

1. Green Hydrogen Mobility
   a. Hydrogen Filling Station at Leh and Delhi for 5 Buses each
   b. Operational 10 Nos. Fuel cell electric buses (FCEV) Buses
2. Green Methanol (10 TPD) at Ramagundam, Telengana
3. Energy storage 50 kW Microgrid at Simhadri (Andhra Pradesh)
4. PNG hydrogen blending at Kawas

2. For each such product, provide the following details in respect of resource use (energy, water, raw material etc.) per unit of product(optional):

a. Reduction during sourcing/production/distribution achieved since the previous year throughout the value chain.

b. Reduction during usage by consumers (energy, water) has been achieved since the previous year.

Raw Material (Energy) Consumption per year:

Energy Source	2019-20		2020-21		2021-22*	
	Quantity	PUC	Quantity	PUC	Quantity	PUC
Coal	169.38 MMT	0.63 kg/kWh	174.96 MMT	0.67 kg/kWh	195.25 MMT	0.67 kg/kWh
Natural Gas	3.16 MMSCMD	0.233 scm/kWh	3.49 MMSCMD	0.224 scm/kWh	1.30 MMSCMD	0.247 scm/kWh
LDO	79,646.20 KL	0.51 ml/kWh (LDO & HFO combined)	84,075 KL	0.49 ml/kWh (LDO & HFO combined)	113991 KL	0.56 ml/kWh (LDO & HFO combined)
HFO	48,895 KL		45,077 KL		48836 KL	
Naphtha	97.9 MT		18,280 MT		8923 MT	
HSD	86.566 KL		284.685 KL		18177.60 KL	

Water Withdrawal per year (in MCM): (** Water calculated on closed loop systems in your Company only)

S. No.	Type of water	Quantity Consumed **		
		2019-20	2020-21	2021-22
1	Total Water withdrawal	559.5	590.89	662.67
2	Per unit withdrawal	3.15 lt/kWh	3.03 lt/kWh	2.96 lt/kWh

Energy saving per year:

Total Energy saved by the initiatives taken in your Company power plants for energy conservation / efficiency improvement	2019-20	2020-21	2021-22
	1622.5 TJ	1643.3 TJ	1693.5 TJ

3. Does the company have procedures in place for sustainable sourcing (including transportation)? If yes, what percentage of your inputs was sourced sustainably? Also, provide details thereof,

Coal, Gas, Biomass and water are our key raw materials. We continuously strive to reduce our specific consumption of raw materials in line with our philosophy of sustainable production and consumption. Optimization of raw material consumption translates into value for our shareholders, as well as for our communities. This enable us to also reduce the tariff of electricity making it affordable for all and also reduce the burden on local resources by minimizing extraction and waste generation.

The Following procedures are in place for the sustainable sourcing of coal by your Company for its different power station:

Long Term Fuel Supply Agreements

- In line with the Model Coal Supply Agreements agreed between the Company and Coal India Ltd. (CIL) in 2009, 2012 and under Shakti Policy, Long-term Fuel Supply Agreements (FSAs) are in place with the subsidiary coal companies of CIL for an Annual Contracted Quantity (ACQ) of 167.85 Million Metric Tonnes (MMT), as on 31.3.2022 for the existing thermal stations. In addition, FSAs are in place with Singareni Colliery Company Ltd. (SCCL) for Ramagundam and Solapur Unit-2 for an ACQ of 13.74 MMT. FSAs are generally valid for a period of 20 years with a provision of review after every 5 years.
- In FY 2021-22, your Company has signed Long Term FSA for 2.54 MMT per annum with SCCL for Solapur Unit-2 (660 MW) pursuant to its coal linkage transfer from distantly located Mahanadi Coal fields Limited (MCL) sources, thereby reducing cost of generation from the plant. Further, as per decision of SLC(LT) to enhance ACQ of eligible plants upto 100% of normative quantity (i.e., quantity for 85% PLF), your Company has signed supplementary/amendment agreements with coal companies for various plants viz., Rihand-III Unit-6, Vindhyachal-IV Unit-11&12, Mouda-II Unit-3&4, Unchahar-IV Unit-6, Gadarwara Unit-1&2 for total additional quantity of 1.75 MMT per annum.
- Due to suspension of coal mining activities at NEC (CIL) and pursuant to the Govt. policy of linkage rationalization, coal linkage of Farakka-I&II Unit-1 to 5 with NEC has been transferred and FSA is signed with ECL, whereas for Bongaigaon Unit-1&2, the FSA with NEC has been transferred and signed with CCL (1.171 MMT) and ECL (0.15 MMT).

Fresh long-term coal linkages under para B(i) of SHAKTI policy

- In FY 2021-22, based on your Company request, SLC (LT) dated: 22.12.2021 recommended coal linkage for Khargone Unit-1 (660 MW) from CIL. Subsequently, CIL has allocated linkage for annual quantity of 3.336 MMT from MCL. Issuance of Letter of Assurance from MCL and signing of FSA is expected in FY 2022-23.
- Pursuant to termination of existing Letter of Assurances (LOA) of Barh-I (Unit 2 & 3) and North Karanpura (Unit 1 to 3) as per the terms of para A(i) of SHAKTI policy, Standing Linkage Committee (Long-term), SLC(LT) in its meeting held on 29.3.2022 has recommended for grant of fresh coal linkages for the plants from CIL under para B(i) of SHAKTI policy.

Coal under Bridge Linkage and other short-term Memorandum of Understanding (MoU)

- Bridge linkages of Barh-II, Tanda-II, Lara, Darlipali, Kudgi and Barauni-II: In terms of the Govt. policy of Bridge Linkage, your Company's plants viz. Barh-II, Tanda-II, Lara, Darlipali, Kudgi and Barauni-II were allocated Bridge Linkages to bridge the gap between coal from linked captive mine and requirement of the plant. The bridge linkages were granted by SLC(LT), MoC for Tanda-II, Lara and Darlipali each upto 2022; Barh-II upto 2023 and Barauni-II upto 1.9.2022. Based on above and coal quantification by CCO as per tapering based on approved mining plan of respective linked mines, MoUs with allocated coal companies are valid upto March'2022.

In view of expiry of Bridge Linkages, your Company has taken up before Ministry of Power / Ministry of Coal for further extension of Bridge Linkages considering present production plan of the linked captive mines. Further, Ministry of Power has recommended to Ministry of Coal for grant of extensions of the Bridge Linkages. The matter was discussed in the SLC(LT) meeting held on 29.3.2022. However, it was deliberated to consider the matter in next SLC(LT) after examination of your Company proposal by Nominated Authority, Ministry of Coal.

In relation to Kudgi, against your Company request for grant of long-term coal linkage, SLC(LT) in the meeting held on 29.3.2022 has recommended for extension of Bridge Linkage by another 01 year (w.e.f. April'2022) or till surrendering of the linked mine, Bhalumuda is completed.

- Tapering linkage of Telangana Ph-I (2X800 MW): Pursuant to transfer of tapering linkage of Telangana Ph-I (granted against linked captive mine, Mandakini-B) from WCL cost-plus to SCCL, your Company in the FY 2021-22 has signed MoU for 6.846 MMT per annum with SCCL, with validity upto March'2023.
- MoU with SCCL: A bilateral MoU was signed with SCCL for FY 2021-22 for a quantity of 8.00 MMT on best effort basis for supply of coal to Kudgi plant under Bridge Linkage and other your Company stations (except Ramagundam) as per requirement.
- MoU with NLC India Ltd.: Pursuant to Govt. notification of Mines and Minerals (Development and Regulation) (Amend) Act, 2021 and Mine Concession (Amend) Rules, 2021, permitting commercial sale of captive mine coal up to a percent of the annual production after meeting the end use requirement, your Company has entered into a bilateral MoU with NLC India Ltd. for supply of coal from its Talabira II & III mine to your Company plants during period Oct-Dec'2021. Further, your Company and NLC India Ltd. have to entered into bilateral MoU for supply of Talabira coal for 3 years for annual quantity of 3 MMT on best effort basis.

Agreements for supply of imported Coal

- As per the directions of MoP & CEA, in order to mitigate the shortage of domestic coal by blending with Imported coal, package quantity of running contracts was enhanced by 1.45 MMT during 2021-22.
- As per directions of MoP, your Company is procuring 16 MMT of Imported coal in 03 tranches of 7.0 MMT, 5.0 MMT and 4.0 MMT. Contracts have already been awarded for procurement of 6.75 MMT while procurement of 6.25 MMT is under process. For JVs, contracts have been awarded for 1.8 MMT while 0.67 MMT is under process.

Domestic Coal and Imported Coal

During 2021-22, your Company Received 224.14 MMT of Coal as against 191.26 MMT in 2020-21. Out of 224.14 MMT of Coal, 198.54 MMT was from Annual contracted quantity of Coal, 8.43 MMT Through Bridge Linkage/SCCL Bilateral MoU, 14.70 MMT from Captive Mines and 2.47 MMT from Import Coal.

Biomass Co-Firing Utilization of Agro residue for power generation & reduce pollution:

As part of its commitment towards clean environment, your Company has taken a new initiative to utilise agro residue for power generation. This is intended to cut down carbon emissions and also to discourage crop residue burning by farmers after harvesting by adding economic value to the crop residue and providing extra income to farmers and employment in rural sector. Biomass co-firing is a unique method to utilize coal based power plant infrastructure to produce renewable energy by simply replacing some of the coal with biomass based fuel. Being carbon neutral fuel, biomass co-firing is a technology recognized by UNFCCC as a measure of reducing greenhouse gas emission.

After successfully demonstrating biomass co-firing at your Company Dadri plant, your Company has started commercial scale biomass co-firing at other your Company stations also. Your Company has forayed into large scale procurement of biomass for Co-firing by issuing a Long Term (LT) tender on 12.1.2022 for procurement of ~9.2 MMT biomass for 04 projects of your Company over the period of seven years. It is expected to place the award under the long term tender before the next harvesting season in October-November.

Besides LT tender, Your Company has awarded contracts for procurement of 4.56 LMT of biomass pellet under short term contracts (9 months). Supply has already started at 7 your Company stations under short term contracts and also under orders placed for 280 TPD for four years (approx. 4 lakh tonnes) at Dadri plant. The Company has already fired ~77,450 metric tonnes of biomass pellets at its various plants by 20 July'22.

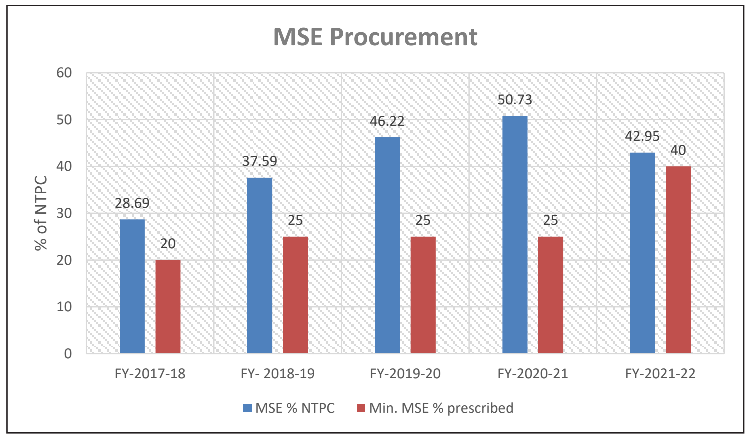
Significant achievements of 2021-22

- Total Domestic Coal Receipt (COD Stations) in FY 2021-22 was 221.67 MMT.

- 23.06 MMT of coal diverted to critical stations during FY 21-22 under policy of flexible utilization of domestic coal to address AFC under recovery and generation loss.
- Weighment of 100% incoming rakes achieved.
- Transit loss for supply through Rail in FY 21-22 - 0.4%.
- Timely tie up of RLNG resulted in 'Nil' DC loss at Gas stations due to lack of fuel availability. Annual Fixed cost under recovery of Gas stations is NIL for FY 21-22.
- Long term RLNG consumed in year 2021-22 was 218.6 MMSCM.

4. Has the company taken any steps to procure goods and services from local & small producers, including communities surrounding their place of work? If yes, what steps have been taken to improve their capacity and capability of local and small vendors?

The Company adopts fair, equitable and transparent tendering procedures. To encourage Indian bidders and suppliers, provisions regarding price preference and deemed export benefits are stipulated in the bidding documents as per the extant policy of Government of India. Company has taken various initiatives to encourage participation in tender for local & small manufacturer including SMEs. Your Company Limited is a fully compliant CPSU on MSME SAMBANDH portal.



As per Public Procurement Policy for MSEs Amendment Order dated 9th November 2018, Every Central Ministry /Department / PSUs shall set an annual target for 25% procurement from MSE Sector. Out of the total annual procurement from Micro and Small Enterprises, 3 per cent from within the 25 per cent target shall be earmarked for procurement from Micro and Small Enterprises owned by women. As per DC (MSME) letter dated 31st August 2021, the target for your Company is revised to 40% minimum procurement from MSE vendors against the exemptions.

Some highlights are as below:

- Your Company exceeded the target of 40% procurement from MSEs in FY 2021-22 as per Public Procurement Policy (PPP) 2012.
- The MSE vendor count configured in SAP is 7,627 till March 2022 end.
- Your Company has dedicated portal for MSE vendors for collating vendor database for items reserved exclusively for procurements from MSEs. The portal mitigates the long pending requirement of your Company Units for a validated vendor base for reserved items.
- Your Company is on-board to all 3 Trade Receivable electronic Discounting System (TReDS) i.e. M1Xchange, INVOICEMART and RXIL. Trade Receivables worth ₹ 0.61 crore Discounted/paid through TReDS till March'2022 end.

5. Does the company have a mechanism to recycle products and waste? If yes what is the percentage of recycling of products and waste (separately as <5%, 5-10%, >10%). Also, provide details thereof, in about 50 words or so.

Our Product viz. Electricity gets completely consumed and hence there is no scope of its recycling. Guidelines have been issued in line with National Environment Policy for disposal of hazardous wastes from your Company power stations. The hazardous wastes generated at our power stations such as used transformer oil, used lubricants, lead acid batteries etc. are sold only to government approved recyclers or given back to the sellers for recycling under buy back arrangements, which takes care of 100% recycling of such wastes.

Sustainable ash utilization is one of the thrust areas of your Company's activities and the Company strives to maximize the ash utilization at all your Company's power plants. Your Company has introduced Ash Policy, which is a vision document dealing with the ash utilization issue in an integral way from generation to end product. This policy aims at maximizing utilization of ash for productive usage along with fulfilling social and environmental obligations, as a green initiative in protecting the nature and giving a better environment to future generations.

During FY-2021-22, approximately 83.19 million tons of ash was generated by your Company Group stations and 81.67% i.e. 67.94 million tons of ash had been gainfully utilized in various areas such as issue to industries for cement, concrete, asbestos products, bricks/ blocks making, road embankment construction, ash dyke raising, mine filling, land development works etc. Ten stations have achieved 100% ash utilization.

Principle 3: Businesses should promote the wellbeing of all employees

1. **Number of Employees:**

Type of employee	Employee category	Male	Female
Permanent employee	Board of Directors and KMP	6	0
	Top/ Senior management	34	1
	Middle management	3672	181
	Lower/Junior management	7049	589
Total permanent Employee		**10761**	**771**
Permanent workers	Non-Executive	5509	450
Other than permanent employee	(Other than permanent such as interns, trainees / apprentices, part time employees/Fix term employee, etc)	801	107

2. **Number of Employees hired on Temporary / Contractual / Casual basis:**

   Your Company hires employees on FTEs. Its included in above table in the "Other than permanent employee"

3. **Number of permanent Women Employees :** 1221

4. **Number of permanent Employees with Disabilities :** 492

5. **Do you have an employee association that is recognized by management:**

   Your Company is a multi-unit organization. Association(s) comprising of executives of your Company need not be recognized in the absence of any statutory mandate. Workmen of various your Company Units have formed unions. The same are accorded recognition by your Company as per applicable law / practice.

6. **What percentage of your permanent employees is members of this recognized employee association?**

   About 70% of the permanent employees in workmen category are members of the recognized union of workmen.

7. **Please indicate the Number of complaints relating to child labour, forced labour, involuntary labour, sexual harassment in the last financial year and pending, as on the end of the financial year.**

No.	Category	No. of previous year pending complaints	No. of complaints filed during the	2021-22
1	Child labour / forced labour / involuntary labour	NIL	NIL	NIL
2	Sexual harassment	0	2	0
3	Discriminatory employment	NIL	NIL	NIL

8. **What percentage of your under mentioned employees were given safety & skill up-gradation training in the last year? (Excluding joint venture companies)**

   Safety Training

Stations	Type	No. of Prog.	No. of persons trained in safety
Your Company	Employees	383	7644
	Workers	5041	172726

Skill Upgradation Training

Categorisation	Employee Categories	% of employees who attended skill development trainings
Permanent employee	Board of Directors and KMP	0%
	Top/ Senior management	71%
	Middle management	88%
	Lower/Junior management	79%
Permanent workers	Workmen (Non-Executive)	82%
Other than permanent employee	(Other than permanent such as interns, trainees / apprentices, part time employees/Fix term employee, etc)	39%

Principle 4: Businesses should respect the interests of, and be responsive towards all stakeholders, especially those who are disadvantaged, vulnerable and marginalized.

1. **Has the company mapped its internal and external stakeholders?** Yes

2. **Out of the above, has the company identified the disadvantaged, vulnerable & marginalized stakeholders**

   The Company has a well structure R&R and CSR Policy to take care of the disadvantaged, vulnerable and marginalized people in and around the plants.

   Vulnerable category of persons has been detailed in your Company's CSR and R&R Policies. These include old-aged, women, PCPs, SC/ST/OBC etc. They are identified through Socio Economic Survey (SES), Need Assessment Survey (NAS) and other consultations with the stakeholders etc. at the time of formulation of CSR/ R&R Plans.

3. **Are there any special initiatives taken by the company to engage with the disadvantaged, vulnerable and marginalized stakeholders? If so, provide details thereof, in about 50 words or so.**

   Yes,

   Your Company has always been sensitive to the needs of disadvantaged, vulnerable and marginalized stakeholders. As part of R&R, in addition to the entitlements and packages as envisaged for PAP's, your Company makes special efforts for the welfare measures for this section of the society in the neighborhood community of your Company locations. The measures include special vocational training programmes for making them self-employable, priority in engagement for suitable jobs, pension under Widow Pension Scheme, old age pension scheme etc as per provisions outlined in extant policies or as decided in Village Development Advisory Committee VDAC/ R&R plan. Furthering these efforts under CSR, your Company regularly undertakes Skill up gradation programs for improving employability of youth/ women in the neighborhood of its operations, some of which also fall in the Aspirational Districts identified by 'NITI Aayog'. Your Company has also taken up the activities for women empowerment, construction of SC/ST multipurpose halls & hostels, relief through distribution of various articles & support to orphanages & old age homes in the vicinity of its stations. Some of the initiatives to address the needs of differently abled include Information and Communication Technology (ICT) Centres and Disability Rehabilitation Centres by NTPC Foundation and inclusive education, distribution of equipments like tricycles, wheelchairs, hearing aids, vocational training, scholarship etc.

Principle 5: Businesses should respect and promote human rights

1. **Does the policy of the company on human rights cover only the company or extend to the Group / Joint Ventures / Suppliers / Contractors / NGOs / Others?**

   The Human Rights policy of your Company is applicable to all its employees posted in various stations, projects, offices, JVs and Subsidiaries. Human Rights provisions are also built in our bidding documents for supply cum erection and civil packages invited on competitive bidding basis covering our suppliers and contractors.

2. **How many stakeholder complaints have been received in the past financial year and what percent was satisfactorily resolved by the management?**

   No complaint on human rights, such as child labour, forced labour, involuntary labour, sexual harassment, discrimination, rights of the disabled etc. was pending as on 31.3 2022. (Refer principle 3)

Principle 6: Business should respect, protect, and make efforts to restore the environment

1. **Does the policy relate to Principle 6 cover only the company or extends to the Group / Joint Ventures / Suppliers / Contractors / NGOs /Others?**

   All the policies of your Company as mentioned under principle 6 and their implementation thereof covers all NTPC business units as well as its JVs and subsidiaries. However, the Suppliers / Contractors / Other stakeholders are free to adopt the same voluntarily.

2. **Does the company have strategies/ initiatives to address global environmental issues such as climate change, global warming, etc? If yes, please give hyperlink for webpage etc.**

   Yes,

   Your Company is one of the premier PSU under MoP and has been doing its bit in tackling the issue of global warming & climate change. Your Company, as a responsible global citizen, has taken various steps i.e readjustment of NTPC's fuel / power generation mix by adopting more renewables, introduction of clean coal technologies etc. in line with various GoI missions under National Action Plan on Climate Change (NAPCC).

   Your Company low carbon initiatives can be categorized into following broad categories:

   i. Re-adjustment of NTPC's fuel/ power generation mix

   ii. Introduction of Thermodynamically Efficient Technologies

   iii. Renovation & Modernization of old power stations

   iv. Induction of advanced clean coal technologies for power generation

   v. Establishment of NETRA for addressing climate change concerns

3. **Does the company identify and assess potential environmental risks?**

   Your Company has an established system to identify & assess the potential environmental risk at stations by MRM (Management Review Meeting) at Station, Region, Corporate Centre by RMC (Risk management committee) and Management Committee Meeting (MCM). RMC consist member of Director's level, and review meeting is organised on quarterly basis to discuss, elaborate and mitigate the issues, which may cause potential environmental risks. Further an apex meeting (Management committee) is chaired by CMD for solving the critical issues and ensure compliance without deviation. Your Company risks are mainly 100% ash utilisation, implementation of new norms within time bound manner and Court cases related to Environment in NGT and higher courts. All Environmental related risks are regularly identified, assessed, deliberated at appropriate level and action plans are prepared and implemented in time to mitigate such risks, if any.

4. **Does the company have any project related to Clean Development Mechanism? If so, provide details thereof, in about 50 words or so. Also, if yes, whether any environmental compliance report is filed?**

   Your Company is pioneer in undertaking climate change issues proactively. The company has taken several initiatives in CDM Projects in Power Sector.

   Five of its renewable energy projects viz. 5 MW Solar PV Power Project at Dadri, 5 MW Solar PV Power Project at Port Blair (A&N), 5 MW Solar PV Power Project at Faridabad and 8 MW small hydro power project at Singrauli and 50 MW Solar PV Plant at Rajgarh (MP) have already been registered with United Nations Frame Work Convention on Climate Change (UNFCCC) CDM Executive Board.

   15 MW Solar PV Power project at Singrauli, 10 MW Solar PV project at Talcher and 10 MW Solar PV Power Project at Unchahar is registered in UNFCCC CDM Programme of Activities (PoA).

   Registration work is under progress for 200 MW capacity of 250 MW Anantpur solar Power project under GCC Program (voluntary mechanism promoted by the Gulf Organization for Research and Development which has been introduced recently) and 1,502,416 ACCs are expected to generated after verification exercise for first 05 years.

   Further, Registration work of 22 nos. (3202 MW) RE project(s) is proposed to be taken up under GCC (Global Carbon Council) program.

   6173 nos of Certified Emission Reductions (CERs) for 5 MW Solar PV Power Project at Port Blair (A&N) has been issued by UNFCCC CDM Executive Board. Another 5842 nos. of CERs have also been issued by UNFCCC CDM Executive Board for 5 MW Solar PV Power Project at Dadri and 21011 nos. of Certified Emission Reductions (CERs) has been issued for 5 MW Solar PV

Power Project at Faridabad. Further, 80278 nos. of CERs are expected shortly, after completion of verification exercise of 50 MW Rajgarh Solar project.

Further, Registration of 50 MW Solar PV power project at Anantpur, 260 MW Solar PV power project at Bhadla, 250 MW Solar PV power project at Mandsaur and 50 MW Wind power project at Rojmal has been done in Verified Carbon Standard (VCS) program. A total of 1085005 and 2089638 Voluntary Emission Reduction (VERs) has been issued for these projects after completion of 1st and 2nd Verification exercise. Further, 1176114 VERs are expected shortly after completion of 3rd verification exercise for these projects.

Prior consideration forms have been sent to UNFCCC and MOEF for our upcoming following Solar Projects : 140 MW and 85 MW at Bilhaur, 20 MW at Auraiya,100 MW floating solar at Ramagundam, 25 MW floating solar at Simhadri, 70 MW & 22 MW floating solar at Kayamkulam, 160 MW at Jetsar, 20 MW floating solar at Auraiya, 20 MW at Rihand, 1692 MW CPSU Scheme (Trench-I & Tranche-II projects), 90 MW at Anta and 23 MW at Solapur.

Further, Prior consideration forms have also been sent for NREL solar projects (Wholly owned subsidiary of NTPC Limited): 150 MW at Chhatagarh, 320 MW at Bhensara, 150MW at Limdi, 200MW at Waghodia, 150MW wind energy project at Dayapar, 90 MW at Anta, 23 MW at Solapur and 735 (3x245MW) Nokh.

5. Has the company undertaken any other initiatives on – clean technology, energy efficiency, renewable energy, etc? Y/N. If yes, please give hyperlink for web page or write up.

Yes, the company has taken up several initiatives for clean technology, energy efficiency and renewable energy. Details are as follows:

R&D Activities:

Your Company, fully recognize R&D as the cornerstone of technological advancement. Therefore, R&D has been incorporated in the long-term vision and strategy for the benefit of the company and society. Your Company has been assigning more than 2% of PBT consistently for R&D related activities.

NETRA collaborates with leading institutes, technology players and service providers both at national and international level. A Research Advisory Council (RAC) comprising of eminent scientists and experts from India and abroad has been constituted to steer NETRA for high end research. In-house Scientific Advisory Council (SAC) has also been constituted to provide directions for improving plant performance & reducing cost of generation.

The focus areas of NETRA are - Efficiency Improvement & Cost Reduction; New & Renewable Energy; Climate Change & Environmental protection which includes water conservation, Ash utilization, Carbon capture and utilization & Waste Management. NETRA also provides Advanced Scientific Services to its stations and other utilities in the area Non-Destructive Examination (NDE), Metallurgy & Failure analysis, Oil/water chemistry, Environment, Electrical, Computational Fluid Dynamics(CFD), etc. for efficient and reliable performances. NETRA laboratories are ISO 17025 accredited and NETRA NDT laboratory is also recognized as Remnant Life Assessment Organization under the Boiler Board Regulations, 1950.

NETRA has taken up major projects for addressing concerns such as environment and climate change, reliability and efficiency improvement, new and renewable energy etc.

NETRA has taken projects for reducing carbon footprints by means of carbon capture and utilization. 10 TPD CO_2 to Methanol project is aimed at capturing CO2 from existing thermal plant and its utilization for production of valuable product such as Methanol. Work is going on for the indigenization of catalyst and reactor for conversion of CO_2 to Methanol plant.

R&D, lab-scale and pilot-scale demonstration projects such as development of Sea water Electrolyser, High Temperature steam electrolysers, Static hydrogen storage and Compression etc have been taken up for hydrogen technology.

NETRA is working on development of innovative water technologies such as Non Thermal Forward Osmosis, Electro-Dialysis Reversal, Desalination etc for the processing of STP and Sea water.

Urban waste is a major problem in India. MSF-RDF gasification plant shall enable MSW and Agri-waste utilization and can help in managing waste better.

Continuous work is going on for the development of new products and processes for bulk Ash utilization and as a result novel technologies & products such as Geo Polymeric (GPC) Road, Geo polymeric Pavers & Tetrapod etc have been successfully developed and implemented.

Through advance scientific services like Non-Destructive Evaluation, CFD analysis and Metallurgy & Failure Analysis, etc., NETRA is working constantly for improvement in reliability, efficiency and as well as for reduction in O&M cost by the diagnosis of faults. NETRA is also working on cutting-edge technologies such as development of robotics solutions for inspection of CW Duct & water pipeline, visual inspection of boiler headers, boiler 1st pass internal inspection. Asset Digitization & Monitoring through Drones, development of novel sensors to increase reliability, safety and to reduce inspection & monitoring time as well as manpower requirements.

NETRA activities have helped the stations in the analysis of failures and their prevention. Techniques developed by NETRA are implemented at stations wherever required. Regeneration treatments of resins, chemical cleaning/treatment and corrosion control measures supported the stations in improving the efficiency and availability of boilers and various heat exchangers/ cooling towers, etc.

Total R&D expenditure during FY 2021-22 is ₹ 222.48 crore.

Renewable Energy:

Your Company is taking various steps to make its energy portfolio greener by adding significant capacities of Renewable Energy(RE) Sources. By 2032, the company plans to have a minimum of 60 GW capacity through RE sources constituting nearly 45% of its overall power generation capacity.

Description	NTPC Group EPC Mode's Own Projects (10142 MW)			Outsourced Projects (6743 MW)
	NTPC	NTPC REL	THDC & NEEPCO	NTPC
Commissioned	1660	--	192	4783
Under Execution	2470	970	--	790
Under Tendering	300	3295	--	1170
Capacity won	--	1255	--	--
Total	**4430**	**5520**	**192**	**6743**

6. **Are the Emissions / Waste generated by the company within the permissible limits given by CPCB/SPCB for the financial year being reported?**

   Your Company is committed for compliance emission, effluent parameters and waste management and upgradation of technology is in regular practice as per directions received from regulatory agencies. All emission and effluent parameters are being monitored through online system by regulatory agency. These parameters are being maintained well within the permissible limits during the FY 2021-22.

7. **Number of show cause/ legal notices received from CPCB/ SPCB which are pending (i.e. not resolved to satisfaction) as on end of Financial Year.**

   There is no pendency of any case of show cause /notices & complaints received from CPCB/SPCB at the end of the financial year 2021-22.

Principle 7: Businesses, when engaged in influencing public and regulatory policy, should do so in a responsible manner

1. **Is your Company a member of any trade and chamber or association? If Yes, Name only those major ones that your business deals with.**

   Yes.

   The detail of major corporate membership with which Company had a business dealing are as under:

   SCOPE, FICCI, CII, TERI, WEC, CBIP, IERE, POWER SECTOR SKILL COUNCIL, EPRI, ICSI, POWER HR FORUM, ICC, IFC etc.

2. **Have you advocated / lobbied through above associations for the advancement or improvement of public good? if yes specify the broad areas (drop box: Governance and Administration, Economic Reforms, Inclusive Development Policies, Energy security, Water, Food Security, Sustainable Business Principles, Others).**

   Your Company is a member of World Energy Council. Chairman and Managing Director of your Company is also an ex-officio Member Secretary WEC India and its international counterpart WEC work towards sustainable use and supply of energy. Their work enables promoting policies which balance Energy Security, Energy Equity (Energy access/inclusive growth) and Environmental Sustainability.

Principle 8: Businesses should support inclusive growth and equitable development

1. **Does the company have specified programmes / initiatives / projects in pursuit of the policy related to Principle 8? If yes details thereof.**

   Yes

   To achieve the aim of inclusive growth and equitable development, the Company has a comprehensive Resettlement & Rehabilitation (R&R) policy covering community development (CD) activities, which has been revised and updated from time to time. CD activities in green field area are initiated as soon as project is conceived and thereafter extensive community / peripheral development activities are taken up along with the project development. Separate CSR & Community Development Policy, formulated in July 2004 and Sustainability Policy formulated in Nov 2012 have been combined in 2015 and revised in 2016 as "NTPC Policy for CSR & Sustainability" in line with Companies Act, 2013 and DPE Guidelines for CSR. It covers a wide range of activities for inclusive growth including implementation of key programmes through NTPC Foundation. Focus areas of NTPC CSR & Sustainability activities are Health, Sanitation, Drinking Water, Education, Capacity Building, Women Empowerment, Social Infrastructure Development, support to Physically Challenged Person (PCPs) and activities contributing towards Environment Sustainability.

2. **Are the programmes/projects undertaken through in-house team/own foundation/external NGO/government structures/ any other organization?**

   Programmes are undertaken by well-defined in - house team through specialized agencies, NGO's, government agencies/ bodies etc. Some of the activities are carried by NTPC Foundation.

3. **Have you done any impact assessment of your initiative?**

   Yes

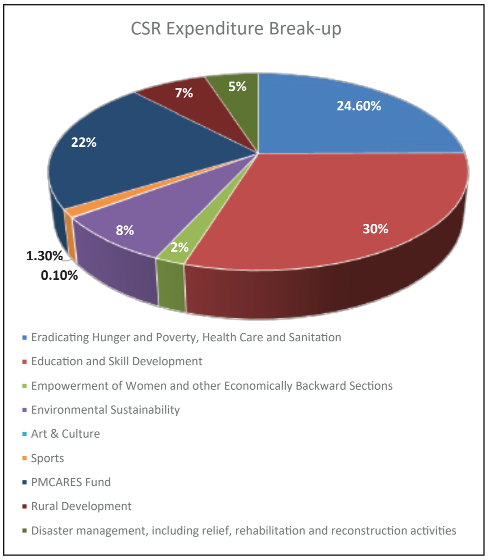
   Effectiveness of CSR & Sustainability programmes are assessed through both internal & external impact evaluations. Internal audits are regularly carried out to verify effectiveness of implementation. Social Impact Evaluation (SIE) is done through credible external agencies for gauging the impact of CSR & Sustainability initiatives. Findings of SIE form the basis for initiating improvement actions and formulating future schemes/plans. Every two-years, your Company conducts a third-party Social Impact assessment for all its major CSR activities at various operating stations. During the Year 2021-22, your Company has taken up Impact Evaluation at 12 locations where periodicity was due. your Company is flexible & open approach in this regard coupled with community participation and with local administration & village Panchayats leads to successful adoption and acceptability of initiatives by community.

4. **What is your Company's direct contribution to community development projects- Amount in INR and the details of the projects undertaken?**

   Yes

   Company has specified programmes for inclusive growth & equitable development not only at station level but also at National level. Details of the programmes and spending are listed below:

   Total spending on CSR – During the FY 2021-22 your Company has spent an amount of ₹ 356.72 crore against the mandated CSR expenditure of ₹ 281.80 crore. Out of the said CSR Expenditure, your Company, in alignment with the guidelines issued by DPE on common Annual theme for CPSEs of "Health & Nutrition" for FY 2021-22, has spent an amount of ₹ 198.95 Crore i.e. 70.60% which is more than the prescribed 60% on Annual Theme.



   I Education

   - Girl Empowerment Mission (GEM) – A four-week residential workshop for girl children in the age group of 10 to 12 years. The entire cost of the program including their boarding & lodging in a safe & secure environment of these girl children is borne by your Company. Further, free education of around 180 girl students admitted to different your Company Township Schools. These students were selected at Four-weeks residential workshop under Girl Empowerment Mission (GEM) flagship programme of your Company held during summer vacation of 2019 at 23 your Company projects/ stations wherein more than 1800 girls participated.
   - In the year 2022, the said programme is being conducted at 33 your Company Projects / stations/ JV & Subsidiaries where around 2400 girls are participating.

- Utkarsh Scholarship Scheme for students:
  - who have passed Xth and XIIth Standard from Govt./ Govt. aided Schools in target villages of your Company Projects/ Stations including schools in your Company townships.
  - Pursuing full time studies in Govt. ITIs in district(s) where your Company Project/ Station are located and ITIs adopted/ set up by your Company.
  - Pursuing full time BE/ B. Tech in IITs, NITs and Govt. Engineering Colleges.
  - Pursuing full time MBBS in Govt. Medical colleges.
- Your Company has established Smart Classes and has taken many initiatives in various Government schools located in the vicinity of its Plants and Stations for improving the learning level of the school children.
- Your Company Sipat project has so far sponsored education to more than 300 Baiga Tribal students for getting admission into engineering and medical colleges through Commissioner, Tribal Welfare, Chhattisgarh.
- Your Company Korba project (aspirational district) is supporting the holistic education to 30 Special Backward Tribe PahadiKorwa students every year from class VI to XII.
- Your Company is supporting the construction of facilities for tribal school in Chapki, Distt. Sonebhadra (UP).
- Your Company is supporting development of school infrastructure in the existing school at Govindnagar, PaliyaPipariya, Block Bankhedi, Hoshangabad, MP.
- Your Company has set up Library (Pustakalaya Project) in 10 Primary Schools of Arunachal Pradesh and Infrastructure augmentation by providing benches/desks in 50 Govt. Schools at Supaul, Bihar.
- Your Company has set up an English Medium School through Shree Ramakrishna Ashram, M. Rampur, Kalahandi.
- Your Company has extended its support for Development, Renovation, and Advancement project of GHSS Munderi, District Kannur, Kerala.
- Your Company has extended its support in providing class-room desks in Govt./ Aided schools in Dharwad Parliamentary area, Dharwad, Karnataka.
- Supporting education in rural areas by augmenting and strengthening school infrastructure including additional classrooms, science labs, libraries, kitchen sheds, providing assets like furniture, computers, separate toilets for girls and boys, water coolers, filters etc. Your Company also ensures the right to education of children from the underprivileged sections of society by providing them with scholarships, study material & uniforms etc.
- 34 Schools in your Company Townships provide subsidized education primarily to rural community children benefitting about 20,000 students of neighbourhood areas.

II Health

COVID – 19 Relief Measures:

- A financial support of ₹250 Crore in FY 2020-21 and ₹80 Crore in FY 2021-22 to Prime Minister's Citizen Assistance and Relief in Emergency Situations Fund (PMCARES) has been made for Covid-19 and other Services/ Activities.
- Established Covid Care Centre (with oxygen) at Badarpur (50 beds) and PMI, Noida (100 beds) and Dadri (30 beds).
- Installed PSA type Oxygen generation plants at various locations like Distt. Hospital Raebareli, Distt. Hospital Robertsganj, Distt. Hospital Sonebhadra, CHC Chhabra, Narsingpur and Ambedkarnagar.
- Support to DPE for procurement of items for COVID-19 Vaccination Programme for the State of Bihar and Uttar Pradesh (UP).
- COVID Care facilitates established with required oxygen support at various your Company Hospitals at Stations/ Projects.
- Construction of Burn Unit at AIIMS Patna, AIIMS Bhubaneshwar and King George Hospital, Lucknow.
- Construction of Medical College & Hospital (400 beds with prov. of upgradation to 500 beds) at District Sundergarh, Odisha under Community Development Plan.
- Support for 5 ambulances to Govt. of Uttarakhand and 4 ambulances to District Administration, Patna.

- Support for Ultraviolet based sanitization technology for PPE kits being developed by IIT Delhi & Chakr Innovation.
- Provided 663 Infrared Thermometers to ASHA workers and 200 KVA DG set provided to District COVID Hospital at Gopeshwar, Uttarakhand.
- Eight (08) Ventilators installed at Hazaribagh Govt. Hospital.
- Support to Collector Khargone for 15 COVID ICU beds at District Hospital Khargone & 250 Oxygen Bed Set-ups in 5 Blocks of Khargone.
- Support to District Administration, Chatra for PPE Kits, Sanitizers and Surgical Masks.
- Provided 25 nos. Oxygen Concentrators to district hospital Barmer.
- Proactive relief measures such as regular sanitization of villages, distribution of PPE kits to health professionals, distribution of face masks to villagers, and supply of groceries to the community.

Promotive, Preventive, & Curative Healthcare:

- Your Company hospitals has provided quality primary, secondary and referral care along with diagnostic services to more than 3,00,000 patients from the community every year.
- Health related infrastructure support is being extended to various PHCs, CHCs and District Hospitals located in the vicinity of your Company Projects/Stations.
- Your Company supports the local administration by regularly carrying the works of fogging, spraying etc. in villages located in its vicinity and also distributes mosquito nets for prevention of vector borne diseases.
- Your Company makes primary care accessible, affordable and inclusive through health camps – both general and specialized (Eye, Respiratory Diseases/ Cancer detection etc.), outreach services through mobile health clinics and by augmenting and strengthening rural health infrastructure. About 3000 surgeries are performed every year in these camps.
- Your Company is supporting the availability of adequate tertiary care in the country:
  - Support for Development of King George Hospital, Visakhapatnam.
  - Support for construction and equipment for 3rd Floor and diagnostic labs at National Cancer Institute Nagpur, Maharashtra.
  - Support to L V Prasad Institute for construction of operating room complex at MTC Campus Bhubaneshwar.
  - Setting up of Special burn unit at KGMU Lucknow, AIIMS Bhubaneshwar and AIIMS Patna.
  - Establishing Integrated Muscular Dystrophy Rehabilitation Centre "Manav Mandir" at Solan, Himachal Pradesh.
  - Open gymnasium at various locations in Basti Parliamentary Constituency of Uttar Pradesh.
  - Cancer Screening Program of Bihar Govt. and Tata Memorial Cancer Hospital for four Districts of Bihar.
  - Conducting Jan Arogyam Community Healthcare Programme in Nuh District (Aspirational District) of Haryana through Bisnouli Sarvodaya Gramodyog Sewa Sansthan (BSGSS).
  - Support for Electro Chemotherapy Device & Electrodes for use at All India Institute of Medical Sciences, New Delhi.
  - Support to Capital Hospital, Bhubaneshwar, Odisha for Medical Equipment for Eye department Support for construction of Eye Hospital at Dadri, Gautam Buddha Nagar, UP.
  - Support committed for setting up Tele-Recording Room at AIIMS, New Delhi.
- Your Company is operating Directly Observed Treatment cum Designated Microscopy Centre (DOTs cum DMC) at 11 locations of your Company. The program supports the Government of India's National Tuberculosis Elimination Program (NTEP) to prevent, control and eventually eliminate tuberculosis.

Sanitation and Hygiene

- Your Company supported the Government of India's Swachh Bharat Abhiyan or Swachh Bharat Mission, a nation-wide cleanliness campaign by the Government of India, by making available more than 26,000 toilets in about 16000 schools covering 650 blocks in 83 districts spread over 17 states.

- Your Company has also supported for Pilot Project for Mechanized Cleaning of 14 wards in Varanasi.
- Your Company has revived the defunct Municipal Solid Waste Processing Plant at Karsada, Varanasi. Your Company is also operating and maintaining the plant since July' 2017 onwards.
- Your Company with active involvement of its employees, local school children etc. had organises Nukkad Natak, debates, slogan competitions, essay competitions, painting competitions, walkathons, pamphlet distribution etc. in the vicinity of its various projects and stations to spread awareness about sanitation and hygiene.
- Your Company has constructed Individual Household Toilets and Public Toilets in the adjoining villages and Public Places located in the vicinity of our Projects and Stations with an objective of creating an open defecation free society.
- Your Company is supporting the developmental & beautification works of Charminar, Hyderabad, under 'Swachh Iconic Places Project' of Govt. of India. The goal of the Initiative is to improve the cleanliness conditions of places that are "iconic" due to their heritage, religious and/or cultural significance.
- Your Company has encouraged the formation of women's self-help groups to produce and distribute low-cost sanitary napkins in the villages surrounding its power plants.
- Your Company has committed to support the setting up electric crematorium in Noida.

Water

- Your Company ensures access to water to community through installation of hand pumps and piped drinking water etc. To ensure that people have access to potable drinking water, your Company has set up RO water plants/ Water ATMs in public locations near your Company operations. Your Company also distributes water filters/ coolers in various villages/ schools near your Company operations. Further, during extreme summers, your Company ensures availability of water through Water Booths and Water Tankers.
- Your Company has taken initiatives of rejuvenation of Ponds located in the vicinity of many of its Plants with an objective to improve ground water table.
- Your Company has Installed 06 nos. e-Pios (RO systems) at various hospitals in Balasore, Odisha.
- Your Company has extended support for installation of about 10,000 Energy Efficient Pump System in the fields of farmers residing near your Company stations located in 05 districts of UP.

Your Company's CSR activities in other areas

Skill Development and Income Generation

- Your Company has adopted 18 nos. ITIs and set up 8 new ITIs at various locations.
- Your Company is supporting "Skill India Mission" of GoI through MoU with NSDC for various employment linked skill development programs for 30000 rural youth including 8,000 youth of J&K.
- Your Company has provided various capacity building training programmes, exposure visits and provided hand holding through experts to the farmers of villages in its vicinity on various techniques of crop/animal productivity such as use of drip irrigation to produce more crop per drop, in improving milk yield through improving breed through artificial insemination, cultivation of nutrient rich and rapidly growing fodder crops etc.
- Your Company makes youth entrepreneurial, enterprising and employable by providing them with training in Electrical Repairing, Mobile Repairing, Motor Rewinding, Welding, Car Driving including obtaining LMV driving license, Computer Training, etc.

Women Empowerment

- Your Company has established 50 Sanitary Napkin Mini Manufacturing Units (MMU) in the state of Odisha under "Stree Swabhiman", an initiative for providing affordable and accessible sanitary products close to the homes of adolescent women and girls in rural areas.
- Your Company has supported Udyan Care at Jaipur, Rajasthan for the higher education and rehabilitation of orphan and abandoned girls.
- Your Company has conducted various training on embroidery, dress designing, cutting, stitching, tailoring (including providing sewing machines), beautician, food preservation & processing, nursing etc. to women from various villages located in its vicinity.

Support for Physically Challenged Persons

- In collaboration with National Institute for Locomotor Disabilities, your Company has set up Disability Rehabilitation Centers (DRCs) at Bongaigaon, Farakka, Dadri, Korba, Tanda and Rihand for mainstreaming of physically challenged persons (Divyangjan) by providing them with aids and appliances and restorative surgery.
- Information and Communication Technology (ICT) centers established at Delhi University, Guwahati University and Devi Ahilya Vishwavidyalaya, Indore equipped with latest adaptive and assistive technologies so that persons with disabilities can perform equally well in the classroom and workplace.
- Your Company distributes equipment and appliances and takes up activities like inclusive education & vocational training benefitting PCPs all across locations of your Company.

Sports

- Your Company has adopted Archery as a sport with the objective of scouting for talent in remote parts of India and nurture them through coaching camps to enhance India's presence in the sports internationally. The 3-year agreement with Archery Association of India (AAI) includes the title rights across all National Archery Championships (NACs), National Ranking Archery Tournaments (NRATs) and exclusive right to provide kits/ apparels to Indian Archery team for international participation.
- Your Company supported Aizawl Football Club in Aizawl, Mizoram by providing 02 buses.
- Your Company's support is committed for creating additional facilities such as swimming pool in "Multipurpose Sports Complex" under construction at Dharwad, Karnataka.

Rural Infrastructure Development

- Your Company supports the development of basic infrastructure such as roads, bridges, culverts, bus shelters, community centers, schools, health centers enabling the local community to fulfil their basic needs and to enhance the quality of their lives.
- Installation of LED based Solar Street Lights & Solar High Mast lights in Sant Kabir Nagar, Uttar Pradesh and in Satna, Madhya Pradesh.
- Your Company supported the development of Brahma Jahari Forest in Chaumuha in Mathura district, UP.
- Your Company's support is committed for construction and redevelopment of Shri Badrinath Dham town as a spiritual smart hill town.

Preservation of Heritage

- Your Company has supported Archeological Survey of India (ASI) and National Culture Fund (NCF) for preservation and conservation of 3 monuments: Group of Monuments, Mandu (MP), Excavated site at Vikramshila (Bihar) and Archaeological site, Lalitgiri/ Dhauli (Odisha).
- Support to Society for Development of Rural Literature under your Company CSR for Purvasha Folk and Tribal Art Museum, near Chilika Lake, Odisha for protection and promotion of heritage of dying art forms of Odisha.

Relief during Natural Calamity

- Financial support to Uttarakhand State Disaster Management Authority (USDMA) for undertaking reconstruction and restoration of Govt. Schools and Govt. Health Centers in various districts of Uttarakhand.
- Your Company is supporting the Redevelopment of Kedarnath town, Uttarakhand and its surrounding areas devastated during natural calamity of 2013.

5. **Have you taken steps to ensure that this community development initiative is successfully adopted by the community? Please explain in 50 words or so.**

Community Development initiatives in your Company are taken in a planned way. The community is engaged in all steps of activities from planning to completion.

Bottom up approach is adopted for taking up these activities. CSR activities/ CD plans are identified after consultations with relevant stakeholders like community, village panchayats, local/ district administration & Village Development Advisory Committee based on Need Assessment Surveys.

Stakeholders participate at each stage of the activity and also execution of some of the activities is supervised by the local authorities. People's involvement is also ensured during implementation and monitoring.

Your Company's flexible & open approach in this regard coupled with community participation along with local administration & village Panchayats leads to successful adoption & acceptability of initiatives by community. Assets are handed over to local authorities and gram panchayats for maintenance.

Social Impact Evaluation (SIE) study/ survey are conducted through external agencies on completion of developmental initiatives. Social audit is done from time to time to evaluate whether all activities have been completed satisfactorily that gives recommendation for necessary modification/ corrective measures, if any, for the future projects.

Principle 9: Businesses should engage with and provide value to their customers and consumers in a responsible manner

1. **Customer complaints / consumer cases are pending as on the end of financial year:**

   There are no complaints as such from customers. However, as part of the tariff determination process under the overall regulatory system, different cases have been filed by your Company against CERC/ Customers or filed at the Appellate Tribunal/ Courts by different Beneficiaries against your Company/ CERC. The total number of such cases presently pending in APTEL and other courts is 100 as on 1.4.2022.

2. **Does the company display product information on the product label, over and above what is mandated as per local laws?**

   Not Applicable

3. **Is there any case filed by any stakeholder against the company regarding unfair trade practices, irresponsible advertising and / or anti-competitive behaviour during the last five years and pending as on end of financial year? If so, provide details thereof, in about 50 words or so.**

   Nil

4 **Did your Company carry out any consumer survey/ consumer satisfaction trends?**

Yes.

As part of the Customer Relationship Management programme, your Company conducts a Customer Satisfaction Survey to assess the satisfaction level of the customers, captured through an Index and to get feedback from the customers.

Customer satisfaction surveys conducted in the past five years and targets for next 5 years are tabulated below:

Particulars	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
% of satisfied customers	95.2	96.1	95.5	97	96.56	100	100	100	100	100
Coverage %	100	100	100	100	100	100	100	100	100	100

For and on behalf of the Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Dated: 30th July, 2022

Some of the Awards & Accolades received by your Company during FY 2021-22


Excellence in Corporate Social Responsibility" at Prestigious CII-ITC Sustainability Awards 2021 for NTPC

NTPC has been conferred "Excellence in Corporate Social Responsibility" in the prestigious CII-ITC Sustainability Awards 2021, consecutive 2nd time in a row. This is the highest award conferred by CII-ITC. This award recognises companies that have positively impacted both business and society by taking a strategic approach to CSR through collaborative programmes with government and civil society.

Shri Dilip Kumar Patel, Director (HR) received this coveted Award on 31st January 2022 in an online ceremony for NTPC. The Chief Guest of the occasion was Shri Rao Inderjeet Singh, Union Minister of State (Independent Charge) Ministry of Statistics & Program Implementation, Ministry of Planning & Union Minister of State, Ministry of Corporate Affairs. Addressing the august presence, Director (HR) shared NTPC's commitment towards Sustainable CSR Practices with its value proposition towards society and its empowerment.

SECRETARIAL AUDIT REPORT
FOR THE FINANCIAL YEAR ENDED 31st MARCH, 2022

[Pursuant to section 204(1) of the Companies Act, 2013 and Rule No. 9 of the Companies (Appointment and Remuneration of Managerial Personnel) Rules, 2014]

To

The Members,

NTPC LIMITED
NTPC Bhawan, SCOPE Complex 7,
Institutional Area, Lodhi Road,
New Delhi -110003

We have conducted the Secretarial Audit of the compliance of applicable statutory provisions and the adherence to good corporate practices by NTPC Limited (hereinafter called "the Company") having its Registered Office at NTPC Bhawan, SCOPE Complex 7, Institutional Area, Lodhi Road, New Delhi-110003. Secretarial Audit was conducted in a manner that provided us a reasonable basis for evaluating the corporate conducts/statutory compliances and expressing our opinion thereon.

Based on our verification of the Company's books, papers, minute books, forms and returns filed and other records maintained by the company and also the information provided by the Company, its officers, agents and authorized representatives during the conduct of secretarial audit, the explanations and clarifications given to us and the representations made by the Management, we hereby report that in our opinion, the Company has, during the audit covering the financial year ended on 31st March 2022, generally complied with the statutory provisions listed hereunder and also that the Company has proper Board processes and compliance mechanism in place to the extent, in the manner and subject to the reporting made hereinafter:

We have examined the books, papers, minute books, forms and returns filed and other records made available to us and maintained by the Company for the financial year ended on 31st March 2022, according to the provisions of:

(i) The Companies Act, 2013 (the Act) and the rules made thereunder;

(ii) The Securities Contracts (Regulation) Act, 1956 ('SCRA') and the rules made thereunder;

(iii) The Depositories Act, 1996 and the Regulations and Byelaws framed thereunder;

(iv) Foreign Exchange Management Act, 1999 and the rules and regulations made thereunder to the extent of Foreign Direct Investment, Overseas Direct Investment and External Commercial Borrowings;

(v) The following Regulations and Guidelines prescribed under the Securities and Exchange Board of India Act, 1992 ('SEBI Act'): -

   (a) The Securities and Exchange Board of India (Substantial Acquisition of Shares and Takeovers) Regulations, 2011;

   (b) The Securities and Exchange Board of India (Prohibition of Insider Trading) Regulations, 2015;

   (c) The Securities and Exchange Board of India (Issue of Capital and Disclosure Requirements) Regulations, 2018; [Not applicable during the Review Period]

   (d) Securities and Exchange Board of India (Share Based Employee Benefits) Regulations, 2014 and Securities and Exchange Board of India (Share Based Employee Benefits and Sweat Equity) Regulations, 2021; [Not applicable during the Review Period]

   (e) The Securities and Exchange Board of India (Issue and Listing of Debt Securities) Regulations, 2008 Securities and Exchange Board of India (Issue and Listing of Non-Convertible Securities) Regulations, 2021;

   (f) The Securities and Exchange Board of India (Registrars to an Issue and Share Transfer Agents) Regulations, 1993 regarding the Companies Act and dealing with client to the extent of Securities issued;

   (g) The Securities and Exchange Board of India (Delisting of Equity Shares) Regulations, 2009; [Not applicable during the Audit Period]

   (h) The Securities and Exchange Board of India (Buyback of Securities) Regulations, 2018; [Not applicable during the Audit Period]

(vi) Certain other laws which are specifically applicable to the Company based on their Sector/business are mentioned herein below:

(a) Electricity Act, 2003

(b) Explosives Act, 1884

(c) Mines Act, 1952

(d) Mines and Mineral (Regulation and Development) Act, 1957

We have also examined compliance with the applicable clauses/Regulations of the following:

(i) Secretarial Standards issued by The Institute of Company Secretaries of India.

(ii) The Securities and Exchange Board of India (Listing Obligations & Disclosures Requirements) Regulations, 2015 ("Listing Regulations").

(iii) DPE Guidelines on Corporate Governance for Central Public Sector Enterprises issued by Department of Public Enterprise.

During the period under review the Company has complied with the provisions of the Act, Rules, Regulations, Guidelines, Standards, etc. except the following observations:

1. The Company was not in compliance with the provisions of Section 149 of the Act read with Regulation 17 of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 regarding the requirements of having at least half of the Board of Directors as the Independent Directors. Further half of the Board of the Company was not "non-executive" for a certain period.

2. The Company was not in compliance with the Regulation 17(10) of the SEBI (LODR) Regulations, 2015 related to the evaluation of the Independent Directors of the Company by the entire Board of Directors of the Company.

3. The Company has not complied with the proviso to Regulation 19(4) read with Schedule II Part D, of the SEBI (LODR), Regulations, 2015 related to formulation of policy/criteria for the Board of Directors.

4. The Company has not complied with the provisions of Regulation 25(6) of the SEBI (LODR) Regulations, 2015 related to filing the vacancy of the Independent Directors within the Specified Period.

We further report that:

In the absence of requisite number of Independent Directors, the Company has not complied with the requirement pertaining to the composition and Constitution of the Board and Committees thereof to be constituted as per the DPE Guidelines and SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015. The changes in the composition of the Board of Directors that took place during the period under review were carried out in compliance with the provisions of the Act.

The Company has generally complied with the Secretarial Standards issued by the Institute of Company Secretaries of India.

Generally, adequate notice is given to all Directors to schedule the Board Meetings, agenda and detailed notes on agenda were sent at least seven days in advance and a system exists for seeking and obtaining further information and clarifications on the agenda items before the meeting and for meaningful participation at the meeting.

All the decisions made in the Board/Committee meeting(s) were carried out with unanimous consent of all the Directors/Members present during the meeting and dissent, if any, have been duly incorporated in the Minutes.

We further report that:

There are adequate systems and processes in the company commensurate with the size and operations of the company to monitor and ensure compliance with applicable laws, rules, regulations and guidelines.

We further report that during the audit period, the following specific events/actions took place in the Company having a major bearing on the Company's Affairs in pursuance of the above referred laws, rules, regulations, guidelines, standards, etc.:

1. The Company has issued 6.87% NTPC Series-74 Non-Convertible Redeemable Taxable Debentures on Private Placement basis, aggregating to ₹ 3,996 Crore, pursuant to which allotment of 39,960 Non-Convertible Redeemable Taxable Debentures having Face value of ₹ 10,00,000 each is made on 20.4.2021.

2. The Company has issued 6.69% NTPC Series-75 Non-Convertible Redeemable Taxable Debentures on Private Placement basis, aggregating to ₹ 3000 crore, pursuant to which allotment of 30,000 Non-convertible Redeemable taxable Debentures having Face value of ₹ 10,00,000 each is made on 13.9.2021.

3. The Company has issued 6.74% NTPC Series-76 Non -Convertible Redeemable Taxable Debentures on Private Placement basis, aggregating to ₹ 1175 crore, pursuant to which allotment of 11,750 Non-Convertible Redeemable Taxable Debentures having Face value of ₹ 10,00,000 each is made on 20.12.2021.

4. Pursuant to the provisions of Section 180(1)(c) the Company has increased its borrowing powers from ₹ 2,00,000 crore to ₹ 2,25,000 crore.

For J. K. Gupta & Associates

JITESH GUPTA
FCS No. 3978
C P No.: 2448
Peer Review No. 902/2020

Place: Delhi
Date: 7.7.2022
UDIN: F003978D000580191

This report is to be read with our letter of even date which is annexed herewith and marked as **"Annexure A"** and forms an integral part of this report.

NTPC, the Official Supporting partner of Indian Archery Team

To
The Members,
NTPC LIMITED
NTPC Bhawan, SCOPE Complex, 7,
Institutional Area, Lodhi Road
New Delhi-110003

Our report of even date is to be read along with this letter.

1. Maintenance of secretarial record is the responsibility of the management of the company. Our responsibility is to express an opinion on these secretarial records based on our audit.

2. We have followed the audit practices and processes as were appropriate to obtain reasonable assurance about the correctness of the contents of the Secretarial records. The verification was done on test basis to ensure that correct facts are reflected in secretarial records. We believe that the processes and practices, we followed provide a reasonable basis for our opinion.

3. We have relied on the Statutory Auditors' Report for the period under review; hence we have not verified the correctness and appropriateness of financial records and Books of Accounts of the company. The qualifications/Observations mentioned in their Audit report also forming part of this report.

4. Wherever required, we have obtained the Management representation about the compliance of laws, rules and regulations and happening of events etc.

5. The compliance of the provisions of Corporate and other applicable laws, rules, regulations, standards is the responsibility of management. Our examination was limited to the verification of procedures on test basis.

6. The Secretarial Audit report is neither an assurance as to the future viability of the company nor of the efficacy or effectiveness with which the management has conducted the affairs of the company.

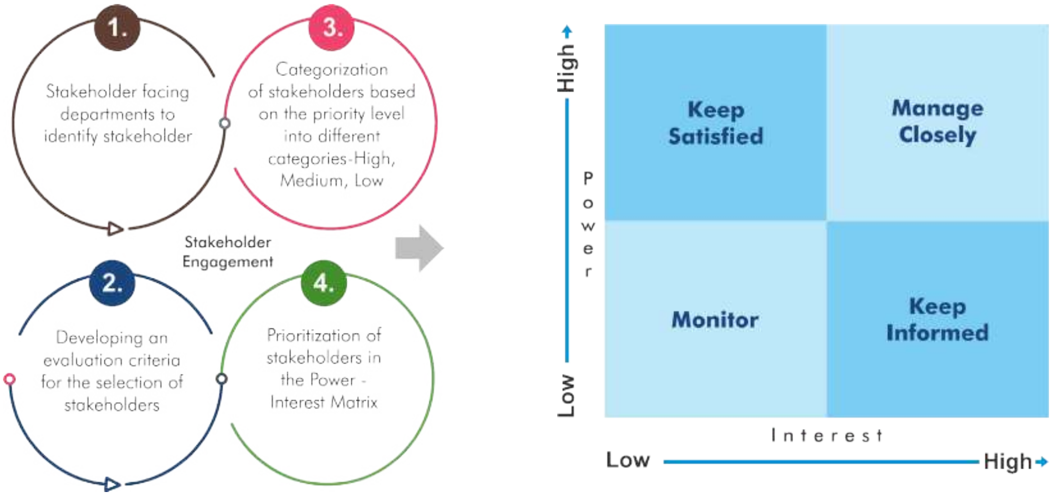
For J. K. Gupta & Associates

JITESH GUPTA
FCS No. 3978
C P No.: 2448
Peer Review No. 902/2020

Place: Delhi
Date: 7.7.2022
UDIN: F003978D000580191

NTPC Kayamkulam Solar Floating Power Plant

Stakeholder Engagement and Materiality Assessment



Identification, Categorisation and Prioritization of Stakeholders

Creating value for all our stakeholders is at the core of our value chain. We align our operations and business processes to cater to the expectations of our stakeholders, and design our strategy to respond to the priorities of our people – including employees, communities, contractors, customers and vendors. It is our endeavour to engage with them in a continuous, consultative, and constructive manner to be able to seek insights for designing our sustainable business strategy.

1. Stakeholder Engagement

Stakeholder engagement at NTPC is an ongoing journey where the company interacts with its various stakeholders at different management levels through multiple interaction platforms. In about 47 years of existence, NTPC has built a constructive relationship with its stakeholders with mutual trust, transparency, ethics and accountability. Our continual dialogue process with stakeholders and their feedbacks on issues concerning the company's operations has enabled much of our growth and achievements.

NTPC has instituted a well-integrated and structured stakeholder management mechanism across different verticals, functions and establishments. Stepwise guideline has been adopted for identifying the important stakeholders, analysing their perspectives and interests, and further mapping and prioritizing them. The details can be accessed from NTPC website. (https://www.ntpc.co.in/en/stakeholder-management)

The structured mechanism of engagement enable us to understand and address stakeholder expectations and collaborates with them to create shared value. We capture the stakeholder issues and feed forward the input to inform our decision making as well as to devise our business strategy through materiality analysis. Critical and frequent stakeholder issues have been included in materiality analysis as tabulated. Our response and actions taken on same has been described in materiality chapter.

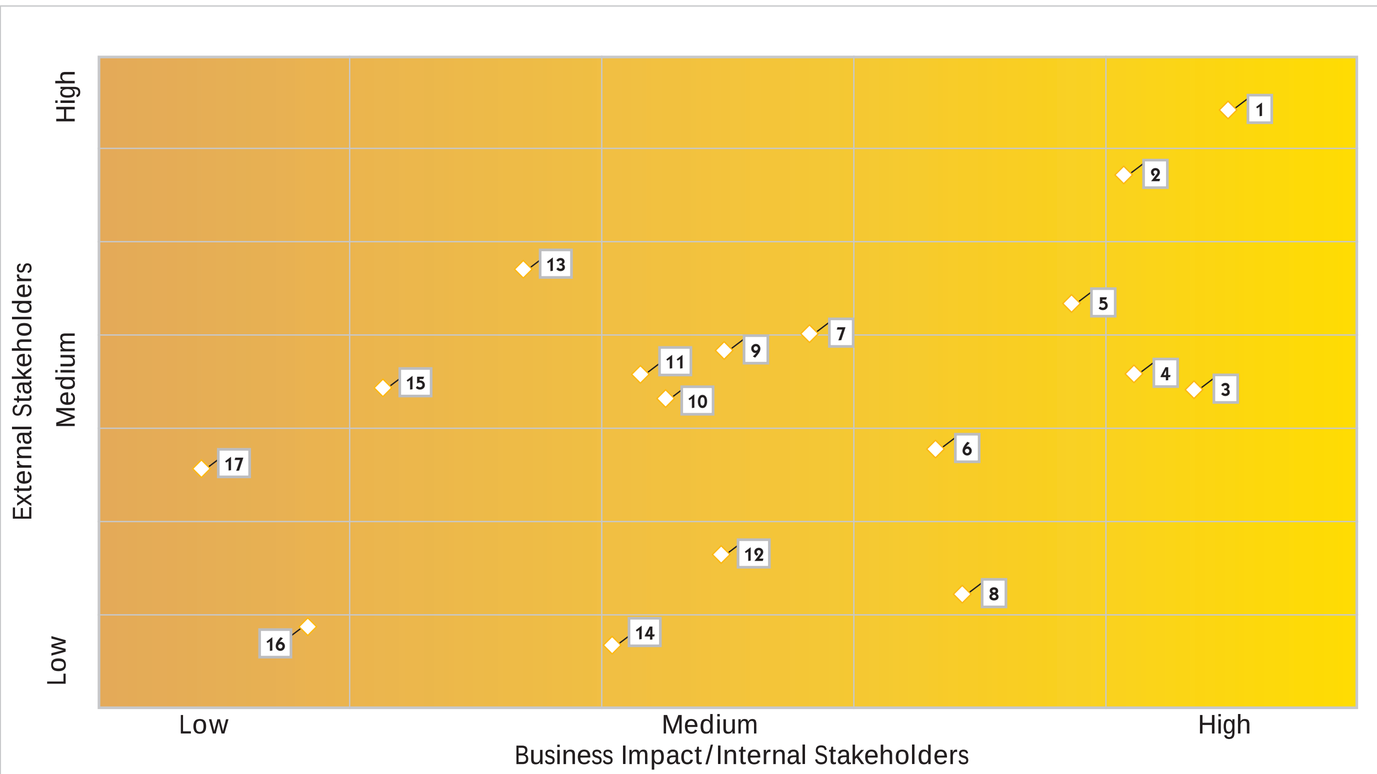
NTPC's Management in conversation with young employees

Stakeholder Group	Modes of Engagement	Frequency of Engagement	Key Concerns	Materiality Topics Linkage
Government of India	• Secretary level review • Meeting with MoP, MoEFCC, MoC, DPE, Parliamentary committees, CEA, NITI AAYOG etc.	• Quarterly • Need based	• 24x7 affordable power to all • Maximizing infrastructure utilization • Social development • Climate Change & Environment conservation • Promote Govt. schemes (viz. Make in India, Skill India, Swachh Bharat Mission, etc.)	All
Regulators	• Public hearing • Statutory audits & inspection, Meeting for clearances, Consents and compliances	• Need based • As per statutory provisions	• Optimum electricity tariff • Compliance with changing business environment	
Communities & NGO	• Public hearings • Village Development Advisory Committee (VDAC) • Public information centers • Project-based stakeholder meets	• Need based • Annually	• Infrastructure development • Quality of life • Employment opportunities • Land acquisition and R&R issues • Increased community involvement	4, 6,7,8, 9, 12
Investors & Lenders	• Analyst and investors meeting • Annual general meeting • Review meets with bankers (Domestic and Foreign)	• Quarterly • Annual • Regular	• Improving RoI • Climate change & Business sustainability • Risk and governance compliance • Increased disclosure on Environment, Social and Governance (ESG) aspects	4,10, 11
Employees	• Participative forums • Communication meetings • Employee surveys • Intranet and website • Trainings and workshops • Internal magazines	• Defined frequency of concerned Fora • Need based	• Professional growth • Work life balance • Health, safety and security • Timely resolution of grievances • Transparent appraisal and promotion cycle	1,2, 7, 10, 11, 14, 15
Customers	• Regional customer meets • Regional power committees (RPCs) • Commercial meetings/interactions • Technical coordination committee • Operation coordination committee • Business partner meet • Customer support services	• Quarterly • Monthly • Yearly • Need Based	• Resolving commercial issues • Resolving technical issues	3, 4, 5, 10,
Suppliers	• Pre-bid conference • Suppliers meet, Vendor enlisting • NTPC website	• Before tendering • Need based	• Transparent dealings • Timely payments • Fair opportunities • Sustainable Supply Chain	2, 10, 11, 13
Media	• Press releases • Press conferences	• Need based • Event based	• Information sharing • Increased transparency	All
Indian Citizens	• Right to information (RTI) Act queries • NTPC website	• Continuous	• Community development • Environmental issues • Progressive organization	All

2. Materiality Assessment

Materiality assessment is a foundational and integral aspect of our Integrated Report, enabling us to gather insights on the relative importance of specific Environmental, Social and Economic issues and their impact on value creation. We conduct this exercise on regular time intervals (gap of 3-4 years) owing to significant change in business processes, external environment, geographical expansion, global trends etc. A structured methodology has been adopted for materiality assessment with engagement with both internal and external stakeholders. The details about methodology and engagements undertaken can be accessed from NTPC's website. (https://www.ntpc.co.in/en/materiality-analysis)

We undertook a fresh materiality assessment methodology in FY 2021-22 in accordance with the IIRC Framework and GRI Standards through a credible third party i.e. M/s PwC. This exercise was helpful in prioritising inputs from relevant stakeholders, as mentioned in earlier (Stakeholder) section, through continuous interactions, into NTPC's decision making process. Our material topics also provide further insights into the challenges, risks and opportunities our company might face as described in the risk chapter of this report. The effective management of material issues is critical to our business sustainability as it direct our strategic planning and management priorities towards achieving the ultimate goal of long-term sustainable value creation for our stakeholders.



Material topics			
1	Occupational health and safety	10	Governance practices
2	Business ethics and integrity	11	Economic value creation
3	Energy management	12	Waste management
4	Climate change	13	Supply chain management
5	Digital transformation	14	New businesses and investments
6	Water & effluents management	15	Employee development and talent retention
7	Labour practices	16	Biodiversity and natural resource management
8	Air emissions	17	Innovation and R&D
9	Community engagement		

2.1 Our approach to materiality topics

Sr. No.	Material Topics	Key Actions	SDG Linkage	Capital Linkages
1.	Occupational Health And Safety	• Safety is inculcated in the core values of NTPC; SAP Integrated NTPC Safety Framework developed • Target of zero incidents by establishment of robust safety culture and policy • Up-gradation of operating procedures to make the work environment safer • Addressal of potential safety hazards owing to diversification into new technologies and business areas • NTPC Unchahar Safety Academy has been established to provide hands-on training on specific safety and emergency requirement • Mandatory Periodic Occupational health check-ups for all employees and contract labourers • Record Keeping of medical history of employees and their family through online centralized HMS framework “Jeevan Rekha”		
2.	Business Ethics And Integrity	• Ethics being part of core values, all business processes are aligned to principles of ethics and integrity • Policies of code of conduct, whistle-blower, complaint handling and banning of business dealings in place • 100% compliance with laws and regulations ensuring a transparent and corruption-free work environment • Display Boards at all offices exhorting any visitor not to succumb to pressure and report any case of corrupt practices directly to Chief Vigilance Officer		
3.	Energy Management	• Stress on efficient utilization of resources and use of technological advancements for improving energy efficiency • Dedicated groups (CenPEEP & CEETEM) created to improve the Energy Efficiency Management • Efficiency Management System (EEMS) consisting of periodic assessments, field tests, performance gap analysis deviations and updation of action plans at all stations.		
4.	Climate Change	• Enhanced geographical and technology diversification, inherently reduces our risks to any location-specific natural catastrophe • Power plants and associated infrastructures are designed to withstand cyclones, heatwaves and increase in ambient temperatures • Decommissioning of old thermal plants and a revised target of 60 GW of RE capacity by 2032 • Our current zero-carbon based energy capacity is more than 8% and with our further massive RE addition, we anticipate reducing our specific CO2 emissions substantially over a few years.		

Sr. No.	Material Topics	Key Actions	SDG Linkage	Capital Linkages
5.	Digital Transformation	• Launched notable digital platforms for business approvals and Suppliers/Labours bill payments • CPM & BI tool for data monitoring and reporting		
6.	Water & Effluents Management	• Optimisation of water consumption through advanced technologies and process reengineering • NTPC became signatory of CEO water mandate • Implementation of "Water Policy" and "Rain Water Harvesting Policy" • Implementation of "Zero Liquid Discharge (ZLD)" at all stations • Ensuring good quality fresh water availability in and around plant locations through community investments and capacity building • Installation of Air Cooled Condensers having potential to save 75% of water • Cycles of Concentration (CoC) is being increased at all stations for reducing fresh water intake		
7.	Labour Practices	• Uphold the best Global and Indian labour standards pertaining to wage determination, allocation of tasks, shifts & working hours, provision of training, incentive & reward schemes and occupational health & safety standards • Dedicated Human Rights Policy in place to promote and safeguard all kind of organizational rights • Operating bipartite collective bargaining forum (NTPC Bipartite Council) since 1982 • Implemented CLIMS for online labour payments, skill training and building health Information profile		
8.	Air Emissions	• Installation of FGD/DSI system for SOx control completed at 1.34 GW, Work is in progress for 60+ GW • Combustion modifications for De-NOx completed for ~13 GW and is in progress for 8.2 GW capacity • Retrofitting of ESP done at 12+ GW capacity to curb particulate emissions at all stations • Continuous Emission Monitoring System (CEMS) of all stacks • Ambient air quality monitoring through an online Ambient Air Quality Monitoring System (AAQMS)		
9	Community Engagement	• Dedicated CSR policy in line with Companies Act, 2013 and Department of Public Enterprises (DPE) Guidelines for CSR • Key community based programmes through NTPC Foundation • Our focus areas include Health, Sanitation, Water and Education • One of the top CSR spending conglomerate in country through expenditure of ₹ 419 Cr. in FY 2021-22		

Sr. No.	Material Topics	Key Actions	SDG Linkage	Capital Linkages
10.	**Governance Practices** I	• Committees of Audit, Nomination and Remuneration, Stakeholders Relationship , CSR and Risk Management • Govt. nominee directors on our board, ensuring stricter monitoring and transparency in our governance system • Financial accounts are audited thrice including one by CAG with NIL comments • NTPC's pay policies are governed by DPE, a department of different ministry • Graded Excellent for Corp. Governance by DPE Rankings FY 2019-20	8 DECENT WORK AND ECONOMIC GROWTH	
11.	**Economic Value Creation** I	• NTPC group's economic performance during the FY 2021-22 has resulted in a direct economic value generated of 1,34,616.30 Cr.	8 DECENT WORK AND ECONOMIC GROWTH	
12.	**Waste Management** I E	• Waste (Hazardous & Non-hazardous) generated are properly handled and disposed with approved agencies • Specific guidelines and systems instituted for handling domestic waste and bio-medical waste • The scrap and recyclable waste is managed through auction on MSTC e-platform • Other solid waste is managed according to our waste policy & applicable govt. regulations	11 SUSTAINABLE CITIES AND COMMUNITIES 12 RESPONSIBLE CONSUMPTION AND PRODUCTION 13 CLIMATE ACTION	
13.	**Supply Chain Management** E	• Implementation of sustainable supply chain policy • Capacity building programmes for suppliers on Environment Social and Economic fronts to create shared value • Capturing ESG data of suppliers on voluntarily basis	8 DECENT WORK AND ECONOMIC GROWTH 11 SUSTAINABLE CITIES AND COMMUNITIES	
14.	**New Businesses and Investments** I	• Transforming to a integrated energy player from a power generator only • Diversified into Renewables, Green Hydrogen, Green chemicals, EV Ecosystem, Power trading etc.	8 DECENT WORK AND ECONOMIC GROWTH	
15.	**Employee Development And Talent Retention** I	• Continuously re-engineering HR systems to strengthen the relationship between business growth and systematic employee development • Continuous engagement activities and training programs • Systematic job rotation and career development scheme to aid Employees in their horizontal and vertical growth	3 GOOD HEALTH AND WELL-BEING 8 DECENT WORK AND ECONOMIC GROWTH	
16.	**Biodiversity And Natural Resource Management** E	• Implementation of Dedicated Biodiversity Policy • 37+ Million saplings have been planted • Currently implementing 16 Wildlife and habitat restoration projects	14 LIFE BELOW WATER 13 CLIMATE ACTION 15 LIFE ON LAND	

Sr. No.	Material Topics	Key Actions	SDG Linkage	Capital Linkages
17.	Innovation And R&D	• Delivering sustainable technology solutions through applied research and providing advanced scientific services through dedicated R&D centre (NETRA) • Independently developing patented technology • Reduction of greenhouse gas emissions by taking up the initiative to blend up to 10% of biomass-based fuels with coal at coal-based stations. • R&D projects to increase the reuse of waste water in our plants.	13 CLIMATE ACTION	

Capitals

Financial | Manufacturing | Intellectual

Human | Natural | Social

Boundary

Internal

External

3. Risk Management at NTPC

NTPC has been assessing its risks and opportunities to ensure sustained business operations aligned with the organization's long-term objectives. To effectively manage the risks associated with the business, NTPC has institutionalized Enterprise Risk Management (ERM) system with well-established framework and processes.

In line with SEBI(LODR), a Director level Sub-committee of the Board, called Risk Management Committee (RMC) has been constituted to oversee the Enterprise Risk Management in NTPC. RMC comprises of Director (Projects) as Chairman, while Director (Operations), Independent Director and Chief Risk Officer (CRO) are the other members. RMC has been entrusted with the responsibility to identify and assess risks, which are then prioritised, and action plans are formulated for mitigation in a time bound manner.

Key Roles and responsibilities of the Risk Management Committee

- To formulate a detailed risk management policy which includes, a framework for identification of internal and external risks specifically faced by the listed entity, in particular including financial, operational, sectoral, information, cyber security risks or any other risk as may be determined by the Committee.
- To periodically review the risk management policy, considering the changing industry dynamics and evolving complexity.
- Assess, classify and prioritize identified risks. Review risk portfolio and risk mitigation plans. Review proposed changes to the risk register, determine Key Risk Indicators for various risks.
- To keep the Board of Directors informed about the nature and content of its discussions, recommendations, and actions to be taken.

NTPC Solar Andaman

Risks	NTPC's Initiatives
Operational Risks: - Risks related to processes, systems or events having potential to disrupt business operations.	
Regulatory and compliance risks	
Revised GoI environmental norms for thermal power plants require substantial investment in power plants to contain SPM, SOx, NOx emissions. Stricter water consumption limits and 100% ash utilisation by thermal plants are other risk areas.	NTPC is spearheading the adoption of Flue Gas Desulphurisation at a massive scale for Sox control and combustion modification for de- NOx. ESPs have been modified for SPM control. Dry Ash Evacuation System (DAES) & High Concentration Slurry Discharge (HCSD) technology are used to minimize use of water in Ash handling. Further, new avenues for ash utilisation such as roads and building construction, mine filling and long term off taking agreements have continuously explored.
Safety or Hazard Risk	
With a large workforce involved in both operating stations as well as projects under construction, safety of people and property remains a potential risk.	To embed safety in all systems and processes, Safety policy has been revised and **"SAP integrated Safety Framework"** has been implemented across the organization to mitigate risks and eliminate hazards.
Fuel Security	
It has become an area of concern owing to reduction in coal supplies and gradual increase in our fleet size.	NTPC is ensuring fuel security through long-term coal supply agreements. Production has started from three of the captive mines i.e. Pakri-Barwadih, Dulanga & Talaipalli. Production from these mines is being ramped up to enhance fuel security. Other Mines are in various stages of development. Further, NTPC is also importing coal as per requirement and in alignment with guidelines issued by Government.
Legal Risk	
With changing legal and regulatory landscape in the country many legal issues are emerging with the growth in the business. As dispute take longer time to settle, there is a risk of contracts not being closed in a time bound manner.	Various committees have been formed at sites, Regions and Corporate level for speedy settlement of pending and new contractual cases. A Dedicated Arbitration cell has also been created to work in close coordination with best legal advisors and industry partnership to clear cases on priority. Capability enhancement programs for employees to minimize the disputes leading to arbitration have been initiated. Emphasis is being given for closing of contracts after completion of work on time.
Information and Cyber Security Risks	
Risks to Power Supply System resulting from Cyber intrusion attempts and Cyber-attacks have potential to render the grid operation in-secure.	Cyber security is given utmost importance to ensure data security. Periodic audits of the network are conducted through CERTIN certified agencies to identify vulnerabilities and they are plugged immediately. Interaction with IB on cyber security related matters is done and their recommendations are complied with.
Commercial Risks: - Risk to bill realization, PPA denial, despatch risk and Market Driven Energy pricing	
Realization Risks	
Poor financial health of the DISCOMS affecting the bill realization and cashflows remains a risk.	NTPC has in place a robust payment security mechanism in the form of Letters of Credit (LC) backed by the Tri-Partite Agreement (TPA). In addition to the LCs, payment is secured by the Tri-Partite Agreements (TPAs) signed amongst the State Governments, Government of India (GoI) and Reserve Bank of India (RBI).
PPA denial and despatch risk	
After the completion of the tenure of the PPA for a few of the stations, some beneficiaries are tempted to deny further extension of the PPA as cheaper power is available in the market. For newly commissioned stations there exist a risk to Power despatch from these stations.	To provide cheaper power to the beneficiaries, NTPC has been attempting steps like swapping of coal sources, blending of coal-based power with that available at a lower price from other sources Further, reallocation of power, where beneficiaries have requested for surrendering PPAs, are being taken up with the Government. Till such reallocation power is being sold through power markets.

Risks	NTPC's Initiatives
Market driven energy pricing	
NTPC has an enhanced geographical and technology diversification. NTPC operate across more than 77 locations in India and abroad, inherently reducing our risks to any individual location specific natural catastrophe. As part of our preparedness against such situations, our power plants and infrastructure is designed to withstand cyclones, cooling systems to withstand the increase in water temperatures brought forth by climate change. To de-risk our business from transition risk, we are making substantial progress towards decarbonised energy transition through increase penetration of renewables in our portfolio. We have installed 5 GW of non-fossil based generation capacity till date and strive to achieve 60 GW of same by 2032.	NTPC contributes more that 24% of India's power requirement with about 17% of installed capacity. In terms of variable cost, NTPC has been consistently maintaining competitive edge over its peers. Additionally, NTPC has been leveraging market mechanism like Security Constrained Economic Despatch (SCED) and preparing for Market Based Economic Despatch (MBED).
Long-term risks: Risk related to long term goals of the company.	
Climate Change: Physical and Transition risk	
Climate change is posing both physical and transition risks to all business entities including NTPC. The risks associated with the increase in sea levels, water stress situations, increased heat waves, erratic rainfall and frequent natural disasters may impact the business. Rising climate change concerns and threats may bring future policy and regulatory risks in terms of carbon tax and cess.	NTPC has an enhanced geographical and technology diversification. NTPC operates across more than 77 locations in India and abroad, inherently reducing risks to any individual location specific natural catastrophe. As part of NTPC's preparedness against such situations, our power plants and infrastructure are designed to withstand cyclones, cooling systems to withstand the increase in water temperatures brought forth by climate change. To de-risk its business from transition risk, NTPC is making substantial progress towards decarbonization of energy through increasing penetration of renewables in its portfolio.
Water Security	
As a proactive measure to avoid any risk due to water scarcity in future, NTPC has adopted a policy of Reduce, Reuse and Recycle (3Rs) for the water being consumed in its station and projects.	The proactive measures for water conservation include process improvements and technology adoption in all possible manners. Some of the key measures being adopted at power generating stations are: Optimisation of cycles of concentration (COC) and implementation of ZLD to reduce freshwater consumption, Adoption of Air-Cooled Condenser (ACC) based cooling in water stressed locations etc. Dry Ash Evacuation System (DAES) & High Concentration Slurry Discharge (HCSD) technology are also used to minimize use of water in Ash handling.

Opportunities	NTPC's Initiatives
Climate Change & Energy Transition	
Increased focus on energy transition associated with climate change has opened many avenues for energy sector players. Influx of more variable renewable energy in the grid would require greater support of flexible operation of coal stations, energy storage and ancillary services.	In alignment with climate change objective of GoI, NTPC has made an aggressive growth plan in RE space, with an envisaged target of achieving 60 GW by 2032.

<table>
<tr><th>Opportunities</th><th>NTPC's Initiatives</th></tr>
<tr><td></td><td>NTPC is developing internal mechanisms to deal with flexibilization enabling its coal plants to operate at technical minimum load. Further, NTPC is pursuing integration of coal-based projects with RE and Battery storage for round the clock (RTC) supply. NTPC stations are also providing ancillary services for grid security and grid balancing.

Pilot projects to produce Green Chemicals like green Methanol and Green Amonia through Green Hydrogen and Carbon Capturing and utilization (CCU) have been undertaken.</td></tr>
<tr><td colspan="2">Digitalisation</td></tr>
<tr><td>The dynamic business landscape is being driven through Digitalisation. In this highly competitive era, digitalisation is enabling faster decision making, reducing costs through automation and rendering long term competitive advantage.</td><td>NTPC is taking all measures for faster adoption of digitalisation across functions and company verticals.

<u>Key digitalisation initiatives by NTPC</u>
• PRADIP for paperless business processes, and suppliers bill payment.
• CLIMS for online labour payments.
• Water Dashboard which provides real-time snapshot of water consumption across NTPC plants.
• 'RE Assets Monitoring System', a centralised system for real-time monitoring of all RE generating Assets (Solar & Wind) of NTPC.
• Project being undertaken for adoption of Robotic Process Automation (RPA), Artificial Intelligence (AI) and Machines Learning (ML) in business processes.</td></tr>
<tr><td colspan="2">Increased Geo-strategic presence</td></tr>
<tr><td>Electricity demand is rising in neighbouring countries and in few parts of world having low energy consumption per capita. Lots of opportunities in terms of project construction, consultancy etc. are coming on NTPC's way.</td><td>NTPC, by virtue of its experience in project management and O&M, has ventured into overseas opportunities such as.
• Joint venture with Bangladesh Power Development Board (BPDB) for developing of 2X660MW plant at Rampal Bangladesh.
• Trincomalee Power Company Ltd. (TPCL), a 50:50 joint venture with CEB Sri-Lanka. TPCL shall develop 50MW solar power project at Sampur.
• NTPC Vidyut Vyapar Nigam Limited (NVVN) has signed Agreement with Nepal Electricity Authority (NEA) for sale/ purchase of electricity. NVVN is also supplying power to Bangladesh.

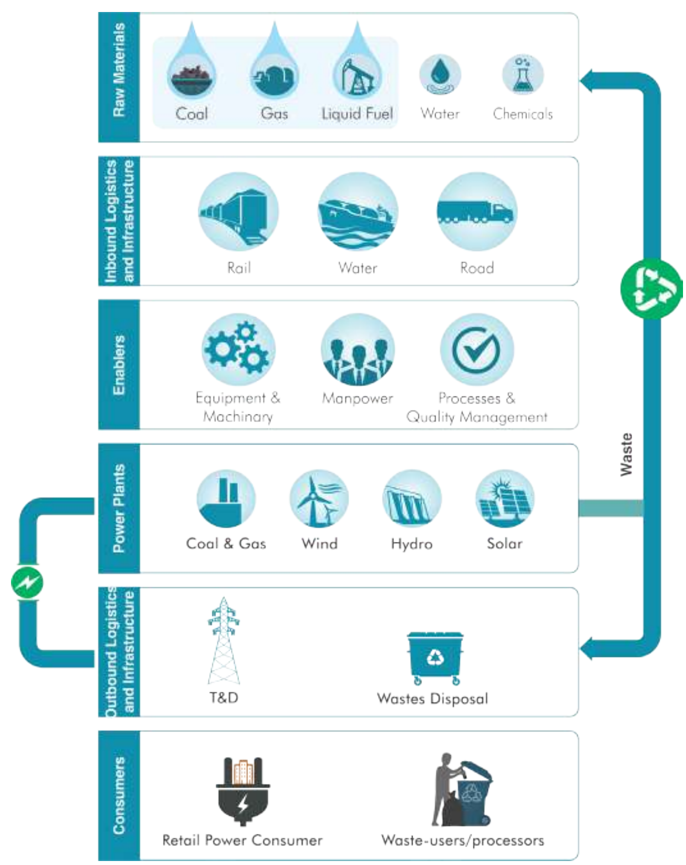
Further, NTPC plans to anchor more than 10 GW of solar parks in ISA member countries in Africa, South and central America as PMC. NTPC is also exploring business opportunities for development of power projects and other related services in Myanmar, Nepal, Mauritius, Mozambique and Malawi.</td></tr>
</table>

NTPC Solar (Floating) Kayamkulam

Our Value Chain

Our business model consists of procuring physical assets, raw materials and services for our production processes and subsequent evacuation of power through our intermediate consumer to the end-user. The wastes generated from our processes are either recycled into useful materials, used as raw material for another industry or are disposed/ processed as per regulations. We are in the process of forward and backward integration of our core business of power generation through coal mines for captive use, and acquisition of companies involved in power generation business. No disruptive changes took place in our supply chain during the reporting year. Incremental changes in our overall business processes are reported in the relevant sections. We are continuously evolving our business model to broaden value creation for our various stakeholders. Integrated planning and execution is at the core of this evolution from business model to a 'value creation' model. We base our 'value creation' model on six 'capitals' which serve as a stock for our inputs.

For each of the inputs withdrawn, we add elements of value for our stakeholders through our business processes & functions in tandem with the external environment and our mission, vision and core values. This is enabled through strategy formulation, risk identification, resource allocation and periodic performance monitoring.



a. FINANCIAL CAPITAL

This capital refers to the pool of funds available for use by us for asset creation, production processes, and conducting our related operations. This also covers funds generated through operations. Financial Capital covers KPIs like Turnover, Revenue, Profit After Tax amongst others.

b. MANUFACTURING CAPITAL

This capital is an aggregation of all our physical assets including our power generation stations, coal mines, equipments & machineries, raw materials and logistical infrastructure.

c. NATURAL CAPITAL

This refers to our interactions with the nature and environmental resources during our operations including management of water, energy and wastes; and the impact of our operations on water, air, soil and biodiversity.

d. HUMAN CAPITAL

This capital refers to our human resources and their compensation, benefits, capabilities, diversity, career progression, safety and well- being.

e. SOCIAL CAPITAL

This covers our efforts towards establishing, nurturing and maintaining our relationship with our stakeholders such as vendors & suppliers, customers and communities etc.

f. INTELLECTUAL CAPITAL

This capital represents our intangible knowledge base manifested through our R&D efforts (including our processes, patents, trademarks, copyrights etc), consultancy services, our learning centers and our process innovation efforts.

2. Our Value Creation Model

Our contribution towards the nation is being pursued in response to continuing economic growth in India combined with increasing decarbonisation efforts, speedier diffusion of digitization and decentralization. NTPC's integrated framework is designed to steer action in pursuit of its core values, vision and mission in the face of changing external and internal operating environment. For this, NTPC has adopted the six capitals approach proposed as part of the International Integrated Reporting Council's <IR> Framework. This integrated framework is designed to determine and pursue action by each function and business to contribute to our transformation and value creation and thereby represent our commitment towards a sustainable future. NTPC conducts continuous monitoring and analysis of its external environment to identify threats and opportunities that may pose any risk to the organization, its strategy and its business model. There are several steps being taken to mitigate or manage key risks or to create value from key opportunities, including the identification of the associated strategic objectives, strategies, policies, targets and KPI. Based on the regular review of our business activities and outcome with a focus on the organization's outlook we strategize our approach in terms of MOU with government, internal management agenda to mitigate or manage our risks and maximize our opportunities.

NTPC Rojmal (Wind)

Value Creation Model

Capitals	Inputs	Activities
	Components of value creation	Value adding elements
Financial	• Debt of ₹ 2,09,555.26 Crore • Capital Expenditure (NTPC Group) ₹ 34490.55 Crore	• 12 Subsidiaries & 16 Joint Ventures • Business lines - Consultancy Services, Power Trading, Mining, RE and EV
Manufacturing	• 32 coal-based, 11 gas-based, 21 solar, 9 Hydro, 2 small hydro, 3 wind based power plants • 3 captive coal mines • 68,962 MW of installed capacity	• Power generation • R&M of existing generation assets • Acquisition of assets having good potential • Forward/backward integration in energy value chain • Taking efforts to increase geo-strategic reach
Intellectual	• Spent ₹ 222.48 Crore towards NETRA (more than 2% PBT) • 34 R&D personnel at NETRA • 10 NABL & ISO 17025 accredited Labs • Apex learning and development (L&D) centre, PMI • Dedicated consultancy wing • Digitalization strategy	• MoUs with international institutions • R&D in Advanced Scientific Services, Availability & Reliability, Efficiency Improvement, Renewables, Climate Change, Ash Utilization, etc. • Training Programs of technology, business acumen and leadership • Consultancy and turnkey project contracts for Engineering, Project Management, R&M, O&M and due diligence of stressed assets • Projects launched to increase digitalization across functions and improved data security
Human	• 20,771 Permanent employees • 1,06,662 Contractual employees • ₹ 6,310.09 Cr. spent on Employee Benefits • 6 Regional Learning Institutes & PMI dedicated to train power professionals • ₹ 21 Cr. spent on Training & development • 1.36 Million man-hours of safety training	• Training Need Analysis, Employee engagement & Training, Performance appraisals, rewards and recognition • Collaboration with world class universities • Focus on employee satisfaction, physical and mental well being • Hazard Identification and Risk Analysis • Strategic Leadership Development Program
Natural	• 227 MMT of coal consumption • 40.4 Kilo MT of Biomass consumption • 9,973.67 lakh kl of freshwater consumption • ISO 14001 certification in 33 stations	• Energy Efficiency Management System • R&D on Water optimisation, Ash Utilization, emission control • Collaboration with state governments, Forest Department for green cover and biodiversity conservation • Implementation of FGD for SOx, combustion modification for NOx, ESP modifications for SPM Control
Social	• 17372 no. of suppliers across different SBUs • 12 vendor development programmes for MSEs • 51 Discoms / beneficiaries purchasing bulk power • ₹ 419 Crore spent on CSR • ₹ 2,021 Cr. of cum. spent on community development for R&R	• Mitigating supply chain risks through Sustainable Supply Chain integration • Indigenous focus : Preferential procurement mechanism for local suppliers • Extensive Customer engagement and feedback mechanism • CSR focus: Education, Water, Health & sanitation • Community Need Assessment & Social Impact Evaluation • Resettlement & Rehabilitation (R&R): Community Development initiatives

*Standalone basis

Capitals	Outputs	Outcomes
	Key impacts	**Impact on stakeholders**
Financial	• ₹ 1,34,994.31 Crore revenue • ₹ 16,960.29 Crore PAT • ₹ 130,857 of Market Capitalisation • 14.74% of Foreign shareholding in the business • Net worth of ₹ 1,34,656.61 Crore • ₹ 17.20 of earnings per share	• Sustainable cash flows and Strong earning per share • Excellent MOU rating by Government of India • Best industry credit ratings e.g. CRISIL AAA/ Stable, ICRA AAA/ Stable, IND AAA/Stable and CARE AAA/ Stable • Cash contribution of ₹ 7039 Cr. to Government of India's exchequer through dividend and income tax
Manufacturing	• 360 Billion Units of Power Generation • 14 MMT of coal production from the captive mines • 70.74% PLF at coal stations* • 4032 MW of commercial capacity addition • 144 EV charging stations across India,	• De-linking business risks with Diversified generation Portfolio • Enhanced fuel security at reduced cost • 8% + of non-fossil generation capacity • Strong technical capability able to operate thermal stations as balancing load to support grid • Development of around 6.25 GW of global solar projects
Intellectual	• 28 patents granted, 37 patents under process • 10 copyrights granted, 3 under process • e-library of 25,000 e-books, 1,000,000 articles, reports and journals • ₹ 629.74 Crore worth business order bagged by Consultancy	• Increased availability and improved efficiency of generating units • Improved Water Conservation and better ash utilisation by R&D efforts • State-of-the-art physical and digital infrastructure to impart learning • Increasing share of revenue from consultancy and foreign presence • Increased digitalization saving tons of paper, faster decision making, improved efficiency, transparency and security
Human	• 0.32 of Man-MW ratio • 16.53 of MU generation per employee • 0.04% of Involuntary attrition rate • 41 hrs of Learning opportunities per employee per year • Reduction in safety hazards and incidents	• Improved productivity of employees • Improved employee retention and lowest attrition rate • Direct and indirect employment generated • Most Preferred Workplaces of 2022 by Team Marksmen • Healthier and safer working environment
Natural	• 81.67% Ash utilised • 2.76 l/kwh of specific water consumption • 1693.5 TJ of energy saved • 37 million trees/sapling planted since inception • 69.26 Lakh KL of rain water harvested	• Ensuring resource efficiency and circular economy • Less emission through energy efficiency • ZLD at 16 stations • Improved fresh water availability through water usage optimization and sustainable measures • Mitigating climate change impacts • Reduction in specific quantity of majority of air emissions including mercury and ODS
Social	• ₹ 5,957.65 Cr. worth of goods and services from indigenous suppliers • 43% of procurement from MSEs • 9.7 customer satisfaction index • 2 Million lives touched	• Strong & Sustainable Supply Chain • Effective Stakeholder engagement • Increased number of satisfied customers • More than 100% realization of current bills • Enhanced inclusive growth and sustainable livelihoods through increased community engagement • Reduction in socio-economic vulnerability of communities

FINANCIAL CAPITAL

Major Highlights of FY 21-22

- ₹ 1,34,994.31 Cr. of revenues (consolidated) generated
- ₹ 22,149.38 Cr. worth of Economic value retained
- ₹ 419 crore of community investments including donations
- 13% revenue from Zero-carbon emission-based business

Material Topic(s)
[11] [14] [17]

NGRBC Principles
[1] [8]

"Continuing with our growth momentum, we have been allocating significant proportion of our financial resources to Capex and also maintaining the diversity of deployment. Our focus on high capital productivity is unwavering and for that efficient operation and maintenance through intense deployment of digitalization, has been an important element of our strategy"

Related Sustainability Topics

- Profitability
- Sustaining Market Share
- Climate Change
- Economic value generated

Risks Mapping:

- Revenue generation from carbon free sources
- Delay in execution of projects
- New business avenues
- Shift from regulatory to market driven business models

Relevant GRI/EUSS indicators:

- 201-1
- 201-2
- 201-3
- 201-4
- 201-5
- 201-6
- 201-7

Reference to other frameworks:

- IPIECA: SE11, SE12, SE13, E2, E1
- UNGC Principle: 10
- TCFD
- WBCSD

NTPC is committed to the highest standards of corporate governance along with increasing growth and performance excellence. NTPC's strong financial footing and the robust corporate image is attributed to the strong ethical and fair corporate governance system and policies in place. We are dedicated to maximising asset utilisation, capital allocation efficiency, and churning prosperity in the form of prompt payments to our capital providers and suppliers in order to maintain a sound balance sheet. To increase value for our investors, stockholders, and workers as well as to rationalise expenses overall, we continue to search for chances to further expand our presence. We work hard to increase the revenue we generate through non-fossil fuel related ventures.

FY 2021-22 has been yet another year of achievements for us recording with a net profit (PAT) of ₹ 16,960.29 Crore and ₹ 16,111.42 Crore on consolidated and standalone basis respectively. A robust payment security mechanism led to realization of more than 101.36% of the billed amount crossing rupees 1.16 Lakh Crore crore during the year which is the highest ever realisation from customers.

NTPC has a strong financial systems in place. We believes in prudent management of our financial resources and strives to reduce the cost of capital. Our weighted average cost of borrowing has reduced to 5.94% in current year from 6.24% of the previous year. NTPC enjoys highest credit - rating assigned by CRISIL, ICRA and CARE. The foreign rating by Fitch, S&P and Moody's are at par with sovereign ratings. We are exploring domestic as well as international borrowing Options. In line with our business diversification Philosophy, we are investing both in backward and forward integration across energy value chain. we are envisaging to provide complete e-mobility solutions. Our Consultancy Wing is executing assignments for various clients and has received orders of ₹629.74 Crore.

While ensuring strong financial growth we are also committed to inclusive growth. An amount of ₹ 356.72 Crore (on standalone basis) was spent towards CSR initiatives, achieving a CSR spend of 3%, more than the prescribed 2% limit. For group CSR projects (consolidated basis) expenditure of ₹ 419 Cr. was incurred. Along with enriching the lives of people under CSR, we also undertakes many activities for ensuring environment sustainability. Major activities carried out includes massive plantation of trees and its maintenance, installation of rooftop Solar PV around power stations on public utilities buildings and on schools, vermicomposting/ Bio-Methanation plant/ Paper re-cycling machines.

Sustainability at NTPC is driven by two motives – Firstly, to make fundamental changes in the way we operate our businesses to transform ourselves as the most sustainable power producer and secondly to become more transparent in timely disclosure of our social, environmental and economic performances. To achieve these objectives, we have identified Decarbonization, Water & Biodiversity, Circular Economy, Health & Safety, Sustainable Supply chain and Business Ethics & strong finance as high priority strategic areas and strategizing on them to ensure our business sustainability. We are developing short-term and long-term measurable goals and objectives pertaining to these areas which is also aligned to our Corporate Plan 2032.

Direct Economic Value Generated and Distribution

NTPC group's operational performance during the FY 2021-22 has resulted in a direct economic value generated of ₹ 1,34,616.30 Cr.

S/N	Particulars	FY'20	FY'21	FY'22
A	**Direct Economic Value Generated**	(₹ Cr)	(₹ Cr)	(₹ Cr)
1	Revenue*	1,11,888.50	1,15,482.64	1,34,616.30
	Sum Total (A)	**1,11,888.50**	**1,15,482.64**	**1,34,616.30**
B	**Direct Economic Value Distributed**			
2	Operating cost	71,203.04	70,099.12	85,084.37
3	Employee wages and benefit	5,830.48	5,953.93	6,310.09
4	Payment to providers of capital	11,250.22	15,002.56	16,422.91

NTPC REL Signing Green Term Loan Agreement with The Central Bank of India

S/N	Particulars	FY'20	FY'21	FY'22
5	Payment to government	7,324.02	1,601.73	4,233.10
6	Community investment	349.12	473.56	416.45
7	**Sum Total (B)**	**95,956.88**	**93,130.90**	**1,12,466.92**
A-B	Economic Value Retained	15,931.64	22,351.74	22,149.38

*Except provisions and certain items

Policy and practices adopted for Suppliers and Local Sourcing

Under the Procurement and Works Policy of NTPC, transparent tendering procedures are adopted for all procurements. In order to encourage Indian suppliers, provisions regarding price preference and deemed export benefits (Customs & Excise Duty benefits) are stipulated in the bidding documents as per the extant policy of Government of India. The mandatory provision in respect of labour, welfare, safety, etc. are being incorporated in the bidding documents for supply cum erection packages, invited on international competitive bidding and domestic competitive bidding basis.

There are economic opportunities for the local suppliers arising out of the need for goods and services by NTPC projects. Many indirect benefits are available to project affected families as additional facilities, over and above the stipulated entitlements as per government policies.

The company has reported total income of ₹ 134994.31 crores during FY 2021-22 as compared to ₹ 115546.83 crores during the FY'2020-21. The company's board also recommended a final dividend of ₹ 3/- per share for the financial year 2021-22. This is in addition to Interim dividend of ₹ 4/-. The Total Dividend for the FY 2021-22 is ₹ 7/- per share

Financial Assistance from Government

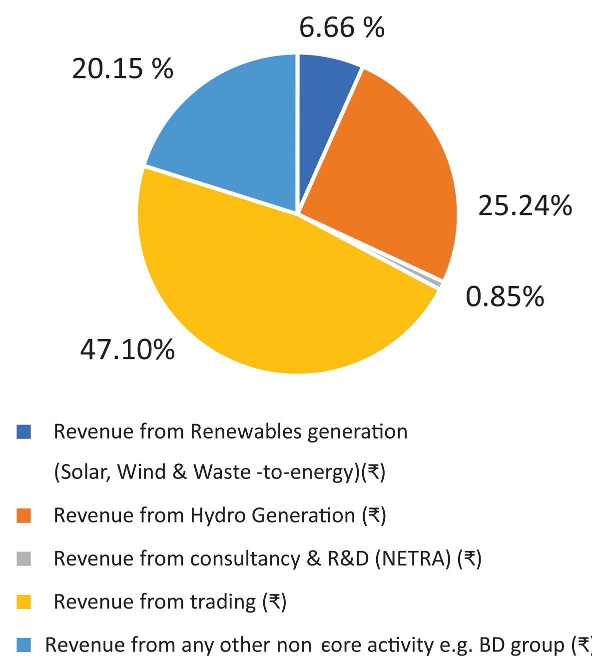
NTPC is running on self-sustained bases and is giving regular dividend to the Government of India on its equity. No capital has been invested by the Government of India in NTPC since the year 1999-2000. The Company did not receive any direct government benefit by way of subsidies, grants or royalties.

Financial implications due to climate change

Climate change concerns has been the key driver for the new stringent norms and the aggressive push for renewables. As an environmentally responsible company, NTPC has not only initiated actions to mitigate climate change risks but also have taken a lead in converting these into opportunities.

In FY 2021-22, the NTPC group generated 13% of revenue from non- fossil based business. The break-up among various sources has been shown below:

Non-Fossil Revenue Break up (₹ 17,282.81 Cr)



Signing of grant agreement for demonstration project in LDC SIDS Countries

MANUFACTURING CAPITAL

Major Highlights of FY 2021-22

- Consistently maintained 12% higher PLF compared to the National average
- 11% y-o-y increase in Non-Fossil Generation
- 4032 MW, added to commercial capacity
- 40 Kilo tonnes of biomass pellets co-fired at NTPC plants

Material Topic(s)
[3] [4] [17]

> ‘Our commitment towards performance excellence drives efforts towards our triple objectives of producing electricity with Low Cost, Low Emission and Highest Safety. Our efforts for innovation in reducing costs, enhancing operational flexibility and in addressing changing customer needs are driven by our organizational priorities.’

NTPC Kudgi

Related Sustainability Topics

- Operational Efficiency and Plant Reliability
- Business Diversification & New technologies
- Bio-mass Use
- Ash Management

Risks Mapping:

- Acquisition of land for new projects
- Sustaining efficient plant operation
- Natural / Manmade disasters
- Fuel Security

Relevant GRI Indicators:

- 102-4
- 102-5
- 203-1
- EU1
- EU2
- EU3
- EU4
- EU10
- EU11
- EU12
- EU18
- EU29
- EU30
- G4-DMA

Reference to Other Frameworks:

- IPIECA: EII

Power Generation

Power generation is our core business activity, and we look to expand our manufacturing assets with a view to creating sustained value for our shareholders. We have shown all-round performance and strengthened our fundamentals further during the reporting period. Along with our JVs and subsidiaries, we have, at present, 77 power stations located in various states of India.

In FY 2021-22, NTPC has recorded the commercial capacity addition of 4032 MW. This includes following units:

Project/ Unit	Capacity (MW)	COD*
1. NTPC		
(A) Coal based Power Projects		
Tanda-II, U2	660	01.07.2021
Darlipali, U2	800	01.09.2021
Barh-1, U1	660	12.11.2201
Barauni-II, U2	250	01.11.2021
Total (A)	**2370**	
(B) Renewable Projects		
Bilhaur Solar (85MW)	15	08.04.2021
Simhadri Floating Solar PV (25 MW)	10	30.06.2021
	15	21.08.2021
Jetsar Solar PV (160 MW)	80	22.10.2021
	80	25.03.2022
Ramagundam Floating Solar PV (100 MW)	17.5	28.10.2021
	20	22.12.2021
	42.5	24.03.2022
Fatehgarh Solar PV (296 MW)	49.92	30.12.2021
	74.88	05.02.2022
	74.88	05.03.2022
Kayamkulam Floating Solar PV (92 MW)	22	31.03.2022
Total (B)	**500.98**	
Total (A+B)-I	**2872**	
2. Under JVs & Subsidiaries		
(A) Coal Based Power Projects		
NPGCL, U2	660	23.07.2021
BRBCL, U4	250	01.12.2021
Rourkela, NSPCL	250	29.03.2022
Total-II	**1160**	
Total Capacity declared commercial during 2021-22 (I)+(II)	**4032**	

NTPC Solar at Ramagundam

With this, our installed capacity (including subsidiaries and Joint Ventures) touched **68,962 MW as on 31st March 2022**, which is around 17% of the total installed capacity of India.

Trend of Installed Capacity and Generation

	FY'20		FY'21		FY'22	
Type	Capacity (MW)	Gross Gen (BU)	Capacity (MW)	Gross Gen (BU)	Capacity (MW)	Gross Gen (BU)
Coal	51,104	2,76.019	54,224	289.59	5,6874	337.27
Gas/Liquid	6,511	9.237	6,511	11.257	6,511	8.60
Hydro	3,425	3.45	3,725	11.37	3,725	12.09
Renewable Energy	1,070	1.49	1,350	1.86	1,852	2.55
Total	**62,110**	**290.19**	**65,810**	**314.07**	**68,962**	**360.52**

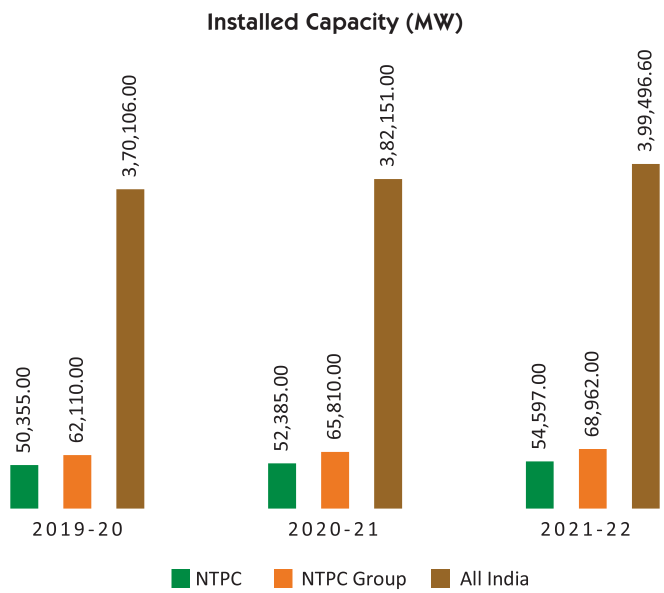
*For updated details on capacity and generation , please refer NTPC's website www.ntpc.co.in

The gross generation of NTPC Group for FY 2021-22 was 360.52 Billion units as against 314.07 Billion units during the previous year.

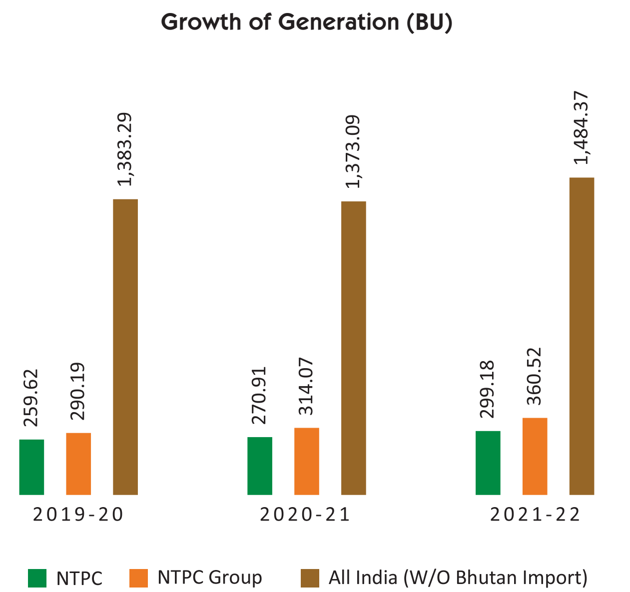
On Standalone basis, the gross generation of NTPC group for FY 2021-22 was 299.18 Billion units as against 270.91 Billion units in the previous year. In FY 2021-22, NTPC Coal stations with an availability factor of 88.76% achieved a Plant Load Factor of 70.74.% as against National Average of 58.76%

Our total electricity generated including group companies was around 24% of the total electricity generated in the country during FY 2021-22.

Growth in installed capacity vs India (3 years)



Growth in generation (BU) vs India (3 years)



Renewable Energy

Renewable energy is one of our central focus areas. With 1.8 GW of renewable installed capacity, NTPC have ventured into large-scale deployment of RE assets and is looking forward to add 60 GW of renewable power capacity by 2032. We have incorporated a new company "NTPC Renewable Energy Limited" (NTPC REL) to bring focus and speed in timely implementation of projects.

Our current total renewable portfolio is 10+ GW. During the reporting year, our renewable electricity generation (including solar, hydro, wind & small hydropower) was 14.64 BU, which is an increase of 11% over previous year. Along with its own projects, NTPC has been facilitating solar projects in Developer Mode and acts as an intermediary procurer where it procures power from the

Developers and sells to DISCOMs with a trading margin. Break-up of NTPC solar projects as on date under various stages have been provided below:

Description	NTPC Group EPC Mode's Own Projects (10142 MW)			Developer Mode (6743 MW)
	NTPC	NTPC REL	THDC & NEEPCO	NTPC
Commissioned	1660	--	192	4783
Under Execution	2470	970	--	790
Under Tendering	300	3295	--	1170
Capacity won		1255		
Total	**4430**	**5520**	**192**	**6743**

To be in step with ambitious targets, we are attempting all avenues for renewable capacity addition to look beyond conventional large-scale solar and wind parks.

We have signed a Memorandum of Understanding (MoU) with Oil and Natural Gas Corporation Limited (ONGC) to set up a Joint Venture Company for setting up of offshore wind and other Renewable Energy Projects in India and overseas. We have formed another JV with NIIF for accelerating our efforts for the acquisition of RE assets. NTPC REL signed a LOI with Govt. of Rajasthan on 08.02.2022 for 10 GW RE Parks/ Projects (Rajasthan) and JVA with DVC for setting of Park & Project on 29.03.2022.

UMREPP

NTPC is planning Ultra Mega Renewable Energy Power Parks (UMREPP) across India, namely Rajasthan (10 GW), Gujarat (4.8 GW), Maharashtra (2.6 GW), Madhya Pradesh (0.6 GW), Andhra Pradesh (4 GW) and DVC (2 GW), sum totalling 24 GW.

We are utilizing roofs of power plant buildings for solar power generation and integrating into the existing plant infrastructure. We are also going ahead with floating solar at reservoirs of its projects which is a step towards saving of land and water conservation by reducing water surface evaporation. Till date 128 MW of such solar projects have been developed. India's largest 3 floating solar projects are commissioned this year i.e. Kayamkulam (Kerala) 22MW, Simhadri (Andhra Pradesh) 25MW, Ramagundam (Telangana) 80MW.

we have associated with International Solar Alliance as its corporate partner. By partnering with ISA, we are supporting foreign nations for development of around 6.25 GW solar projects with following break-ups:

Nation	Capacity
Niger	50 MW
Malawi	100 MW
Nicaragua	100 MW
Togo	285 MW
Zambia	400 MW
Ethiopia	410 MW

MoU with Government of Rajasthan for the Development of 10 GW UMREPP

Nation	Capacity
Mali	500 MW
Paraguay	500 MW
Cuba	900 MW
Venezuela	2000 MW
DR Congo	1000 MW

In coming years, we intend to help for the implementation of around 10 GW Solar portfolio under the aegis of ISA. We are also working on providing community centred solarisation solutions to 47 SIDS and LDC member countries of ISA. These solutions, which are environment friendly and sustainable, are also helping countries meet various SDG goals. Some worth mentioning solutions being developed are Solar pumps for Irrigation and potable water, solar powered cold storages and Primary Health Centres.

Besides this NVVN, a subsidiary of the NTPC group is under various stages of implementation of Solar ground mounted/ roof-top projects along with charging infrastructure development at various airports and public buildings.

National Solar Mission Phase-I

The Government of India designated our Company as the Nodal Agency for Phase I of National Solar Mission (NSM) with a mandate for purchase of power from the solar power projects connected to grid at 33 KV and above and for sale of such power, bundled with the power sourced from NTPC coal power stations to Distribution Utilities under Phase I of NSM. As on 31 March 2022 the total commissioned capacity under the Phase I of NSM is 733 MW.

During the financial year 2021-22, total of 5,103 MUs of bundled solar power (including 987 MUs of Solar Power) have been supplied to Discoms/ Utilities of the states of Rajasthan, Punjab, Maharashtra, Andhra Pradesh, Uttar Pradesh, Tamil Nadu, Karnataka, Assam, West Bengal, Odisha, Telangana, Chhattisgarh and to Damodar Valley Corporation.

STATION & REGION WISE NTPC Group GROSS CAPACITY & GENERATION 2021-22

STATE / UT	Station	Source	Installed Gross Capacity (MW)	Gross Generation (MU)
NR				
Uttar Pradesh	Singrauli	Coal	2,000	14,454
	Rihand	Coal	3,000	22,406
	Unchahar	Coal	1,550	8,243
	Tanda	Coal	1,760	8,616
	Dadri	Coal	1,820	5,724
	Auraiya	Gas	663	361
	Dadri	Gas	830	787
	Dadri	Solar	5	6
	Singrauli	Solar	15	20
	Unchahar	Solar	10	12
	Auraiya	Solar	20	32
	Bilhaur	Solar	225	465
	Singrauli small Hydro	Hydro	8	22
	THDC Dhukwan (Subs)	Hydro	24	58
	MUNL- Meja(JV)	Coal	1,320	7,573
TOTAL			**13,250**	**68,780**
Uttarakhand	THDC Tehri (Subs)	Hydro	1,000	3,098
	THDC Koteshwar (Subs)	Hydro	400	1,191
TOTAL			**1,400**	**4,289**
Delhi	Badarpur	Coal		
Himachal Pradesh	Koldam	Hydro	800	3,120
Haryana	Faridabad	Gas	432	120
	Faridabad	Solar	5	7
	APCPL-Jhajjar (JV)	Coal	1,500	7,051
TOTAL			**1,937**	**7,178**
Rajasthan	Anta	Gas	419	106
	Bhadla	Solar	260	442
	Jetsar	Solar	160	63
	Fatehgarh	Solar	200	67
TOTAL			**1,039**	**678**
NR TOTAL			**18,426**	**84,046**
Maharashtra	Mouda	Coal	2,320	12,208
	Solapur	Coal	1,320	5,081
	RGPPL (Subs)	Gas	1,967	3,144
TOTAL			**5,607**	**20,433**
Gujarat	Kawas	Gas	656	256
	Gandhar	Gas	657	396
	Rojmal	Wind	50	104
	Devbhumi (Subs)	Wind	63	157
	Patan (Subs)	Wind	50	77
TOTAL			**1,476**	**989**
Chhattisgarh	Korba	Coal	2,600	21,245
	Sipat	Coal	2,980	21,221
	Lara	Coal	1,600	11,366
	BHILAI CPP II (Captive)(JV)	Coal	74	531
	BHILAI CPP III (JV)	Coal	500	3,518
TOTAL			**7,754**	**57,880**

STATE / UT	Station	Source	Installed Gross Capacity (MW)	Gross Generation (MU)
Madhya Pradesh	Vindhyachal	Coal	4,760	35,730
	Gadarwara	Coal	1,600	7,966
	Khargone	Coal	1,320	6,344
	Rajgarh	Solar	50	74
	Mandsaur	Solar	250	383
TOTAL			**7,980**	**50,497**
WR TOTAL			**22,817**	**1,29,800**
West Bengal	Farakka	Coal	2,100	12,422
	Durgapur(Captive) (JV)	Coal	120	990
TOTAL			**2,220**	**13,412**
Bihar	Kahalgaon	Coal	2,340	16,027
	Barh	Coal	1,980	9,153
	Barauni	Coal	720	2,411
	Kanti(Subsidiary)	Coal	390	2,850
	BRBCL (Subsidiary)	Coal	1,000	5,700
	NPGCL (Subsidiary)	Coal	1,980	8,264
TOTAL			**8,410**	**44,404**
Odisha	Talcher Kaniha	Coal	3,000	22,123
	Talcher Thermal	Coal		
	Darlipali	Coal	1,600	9,208
	Talcher	Solar	10	14
	Rourkela (Captive) (JV)	Coal	120	982
	Rourkela (Captive) (JV)	Coal	250	27
TOTAL			**4,980**	**32,354**
A & N Islands	Andaman & Nicobar	Solar	5	5
Jharkhand	Patratu (Subsidiary)	Coal		
ER TOTAL			**15,615**	**90,176**
Assam	Bongaigaon	Coal	750	4,201
	Assam GBP (Subs)	Gas	291	1,787
	Kopili (Subs)	Hydro	200	0
	Kopili Stage-II (Subs)	Hydro	25	11
	Khandong (Subs)	Hydro	50	275
TOTAL			**1,316**	**6,275**

STATE / UT	Station	Source	Installed Gross Capacity (MW)	Gross Generation (MU)
Tripura	NEEPCO Agartala (Subs)	Gas	135	924
	Tripura GBP (Subs)	Gas	101	718
	TGBPP (Subs)	Solar	5	6
TOTAL			**241**	**1,648**
Arunachal pradesh	Ranganadi HEP (Subs)	Hydro	405	1,154
	Pare HEP (Subs)	Hydro	110	431
	Kameng HEP (Subs)	Hydro	600	2,576
TOTAL			**1,115**	**4,161**
Nagaland	Doyang HEP (Subs)	Hydro	75	101
Mizoram	Turial HEP (Subs)	Hydro	60	137
NER TOTAL			**2,807**	**12,322**
Telangana	Ramagundam	Coal	2,600	17,450
	Ramagundam	Solar	10	13
	Ramagundam(F)	Solar	80	21
TOTAL			**2,690**	**17,484**
Andhra Pradesh	Simhadri	Coal	2,000	11,570
	Ananthapuram	Solar	250	378
	Simhadri (F)	Solar	25	30
TOTAL			**2,275**	**11,978**
Kerala	Kayamkulam	Naphtha	360	0
	Kasargod (Subs)	solar	50	89
	Kayamkulam (F)	solar	22	0
Total			**432**	**89**
Karnataka	Kudgi	Coal	2,400	6,709
Tamil Nadu	NTECL-Vallur (JV)	Coal	1,500	7,913
SR TOTAL			**9,297**	**44,174**
NTPC Group Total Gross Generation			**68,962**	**3,60,517**

Other Generation Sources

NTPC has played key role in meeting the power demand of Andaman and Nicobar Islands. Power is being supplied from 5 MW and 10 MW DG Power Plants which were commissioned on 29 April 2018 and 17 October 2018 respectively, in Andaman Nicobar Islands.

Our Company is going to implement 50 MW LNG Power Project at Hope Town in South Andaman District.

Upcoming Projects

As on 31.03.2022, various projects of NTPC having an aggregate capacity of 15,675 MW, including 7,494 MW being executed by Joint Venture and Subsidiary companies are under implementation at 35 location in India and abroad. Total capacity under construction comprises of 10,230 MW of coal, 2,255 MW of Hydro and 3,440 MW of Renewable Projects.

We are working towards broadening of our generation mix base to ensure long-term competitiveness, mitigation of fuel risks and promotion of sustainable power development.

We supply electricity from our stations located across India to various bulk customers located throughout the country. Our customers are mainly State Electricity Utilities like State Electricity Boards, State Electricity Distribution Companies, SEB Holding Companies, State Power Departments - who account for around 90% of our electricity sales. Besides this NTPC also sells electricity to private distribution companies in Delhi and some bulk consumers like Railways.

Coal Mining

NTPC was allocated six coal blocks, namely, Pakri-Barwadih, Chatti-Bariatu & Chatti-Bariatu (South), Kerandari, Dulanga, Talaipalli and Badam by Ministry of Coal. Banhardih coal block was allocated to M/s Patratu Vidyut Utpadan Nigam Ltd. (PVUNL), a JV company incorporated between NTPC & Government of Jharkhand.

The estimated geological reserves of the allocated blocks are ~5 billion tonnes with an estimated mining capacity of 71 million tonnes per annum. With these coal blocks, NTPC aspires to become one of the largest captive coal mining companies in the country.

NTPC achieved highest ever coal production of 14.02 MMT from Pakri Barwadih, Dulanga and Talaipalli in FY 2021-22, with 27.45% of growth from FY 2020-21. Also, the highest ever coal despatch of 14.86 MMT for FY 2021-22, has also seen growth of 35.64% from FY 2020-21. So far, the operational mines have delivered more than 46 Million MT of coal to more than 22 thermal plants of NTPC. The coal from captive coal mines, is much sought after in NTPC power stations because of its consistent quality, size and absence of any shale/boulder etc.

NTPC Coal Mining has achieved more than 100% and highest ever Capex utilization of ₹ 1315 Cr in FY 2021-22 which is for the first time in Coal Mining. Highest ever profit of ₹111 Cr was also recorded for FY 2021-22.

Projects	Coal Production (Million Tonne)		
	FY 19-20	FY 20-21	FY 21-22
Pakri Barwadih	9.42	7.07	8.32
Dulanga	1.54	3.12	5.29
Talaipalli	0.19	0.81	0.41
Total	**11.15**	**11.00**	**14.02**

Waste Management & Waste to Energy

Waste to Compost

NTPC has successfully revamped the “waste to compost” plant at Kadsada, Varanasi and managing operation & Maintenance (O&M) of this 600 Tons per Day (TPD) capacity plant. The plant generates about 60-80 TPD of compost. Sanitary land fill facility and leachate treatment facility have also been created at Varanasi to ensure scientific disposal of waste.

Waste to Energy

NTPC through its subsidiary NVVN have plans to develop Waste to Energy Plants, supporting the Government of India effort in improving the people’s health & welfare. These are envisaged to be developed in association with Municipal Corporations across India.

We have commissioned a 24 TPD thermal gasification based demonstration scale Waste to Energy (WtE) plant at Varanasi. The plant generated approximately 200 kW of electric power.

NVVN has signed MOU with Municipal corporations of Varanasi, Bhopal and Hubli-Dharwad for Municipal Solid Waste to charcoal plant as per details below:

Waste to Energy Plant, Varanasi

Projects	Capacity	Location
Varanasi WTE	600 TPD	Varanasi
Bhopal WTE	400 TPD	Bhopal
Hubli Dharwad WTE	200 TPD	Hubli Dharwad

Energy Trading

Cross Border Trade of Electricity

Government of India (GoI) has designated our company as the role of Nodal Agency for cross border trading of power with Bangladesh, Bhutan and Nepal.

As per the PPA for supply of 250 MW power for 25 years from NTPC stations, signed with Bangladesh Power Development Board (BPDB), our Company has supplied 1,837 MUs energy during the financial year 2021-22. Further, our Company has extended the agreement from 16.03.2021 to 16.03.2026 with BPDB for supply of 160+20% MW power. Our company has signed back-to-back Power Sale Agreement (PSA) with Tripura State Electricity Corporation Limited (TSECL) for supply of 160+20% MW power under radial mode. During the financial year 2021-22, 961 MUs of energy has been supplied to Bangladesh from TSECL.

In addition to above, our company has signed PPA in September 2018 with BPDB for supplying 300 MW Round the Clock (RTC) power from Damodar Valley Corporation to Bangladesh. During the financial year 2021-22, 2531 MU of energy has been supplied to Bangladesh under this arrangement.

Total 710 MW power is being supplied by the Company to Bangladesh which is around 61.21% of total export of power to Bangladesh.

Our company has signed PPA with Nepal Electricity Authority (NEA) on 05th October 2021, for supply of upto 150 MW power from July 2021 to June 2022 through 400/200 kV Muzaffarpur-Dhalkebar A/C line under radial mode from Indian market. During the financial year 2021-22, 471 MUs of energy has been supplied to Nepal.

Our Company has commenced the Cross Border Electricity Trade (CBET) in power exchange platform by supplying power to Nepal Electricity Authority through day ahead market platform of Power Exchange. This is a first of its kind initiative that would help our company to further expand its cross-border portfolio. During this financial year NEA through our Company has started export of electricity to India through its power exchange market. Total 32 MUs of energy was sold by Hydro Stations of Nepal in Day Ahead Market of Power Exchange during the year 2021-22.

Ministry of Power, Government of India vide OM dated 26 November 2019, has nominated our Company as Settlement Nodal Agency (SNA) for settlement of Grid operation related charges with neighbouring countries, namely, Bangladesh, Bhutan, Nepal and Myanmar. Accordingly, NVVN has signed SNA agreement with Nepal Electricity Authority and SNA agreement with Bangladesh Power Development Board shall be signed shortly.

Our Company has received LOI from Bangladesh Power Development Board (BPDB) on 31.01.2020 for supply of 500 MW power from GMR Upper Karnali Hydro Power Project, Nepal to Bangladesh.

Domestic Power Trading

NTPC has excelled in many fields including expanding customer base, selling captive power, selling power of Independent Power Producers (IPPs), entering into power banking arrangement, trading of power and REC on the platform of power exchange(s) etc. The customer base of the Company has increased to more than 100 customers including state Government utilities, private power utilities, IPPs and captive power generators in all five regions of India.

Also, we have purchased 5% stake of Power Exchange of India (PXIL) by purchase of shares from NSE Investment, a co-promoter shareholder of PXIL, on 31 January 2022. We are one of the top power traders in India and the acquisition of an equity stake in PXIL would enable a strategic opportunity for us to achieve and maintain a good position in the power trading market.

In addition to the above, NTPC has started trading in Real Time Market (RTM) from 01.06.2020. Automated Program interface has been developed in house by the company and 2237 MU of energy has been traded in RTM platform of Power Exchange during this Financial Year.

E-Mobility and Ancillary Services

We envisage enhancing our current presence in the ancillary services. We have already ventured into the e-mobility space and have taken up various initiatives in line with national priorities, including - creation of charging infrastructure ecosystem (fast charging stations, battery-swapping infrastructure etc., at several locations in major cities and across highways; and implement e-bus projects (State Governments, State Transport Undertakings and City administrators).

Towards this end, the Company has established 144 public and EV charging stations across India. Apart from this we have installed 80+ EV chargers for internal use at various NTPC locations. Other salient highlights for FY'22 are as follows:

1) 40 Nos. e-Buses have been supplied to Department of Transport, Andaman and Nicobar Island and associated charging infrastructure have been installed.
2) NTPC has supplied 90 Nos. e-Buses along with associated charging infrastructure to Bangalore Metropolitan Transport Corporation (BMTC).
3) As part of our green hydrogen initiative we are working on providing and operating Fuel Cell Electric Buses at Leh and Delhi.

*https://www.financialexpress.com/industry/charged-up-central-public-sector-enterprises-private-firms-quicken-ev-infra-plans/2363858/

Signing of Memorandum of Understanding with NFLS for RE and Green Chemicals

4) We have plans to set-up 267 Nos. Charging Stations (about 1800 Nos. Chargers) in 08 cities under FAME-II scheme of Government of India. These charging stations which will act as public charging infrastructure and promote development of EV market.

We also have plans to provide e-Buses and e-cars to various projects of NTPC this will help in reducing GHG emission, air and noise pollution and dependence on fossil fuels. Further, these electric vehicles can also deliver significant societal benefits, such as avoided healthcare expenses resulting from cleaner air. We are planning to make a foray into battery storage, supported by research & development and collaboration with OEM/OES, research institutes, etc.

Alternate Fuel/Chemical Manufacturing

As part of our business diversification plan, NTPC has ventured into alternate fuels and chemicals based on green hydrogen technologies that includes chemicals like methanol and ammonia etc. Also green hydrogen technologies like mobility, energy storage etc are also being taken up. This would be through integration of existing thermal assets and new investment in clean technologies such as CCU, hydrogen production etc. Towards that, NTPC has planned to take various pilots projects few of which are listed below:

NTPC is undertaking 4 pilot projects on green hydrogen in the areas of mobility, energy storage, gas blending and green chemicals. Total investment stands at $ 27 million today. NTPC shall scale-up in these areas and have commercial scale projects requiring GW scale electrolysers by 2030.

1. **H2 mobility:** NTPC Renewable Energy has also inked a pact with the Union territory of Ladakh for a green hydrogen mobility project. It is part of larger goal of carbon neutral Ladakh. It will be a Kickstarter for green H2 mobility for entire country. Once successful this lead to reduction of oil import bill of country.
   - **LEH :** 1.70 MW Solar Plant, Green Hydrogen Fuelling Station (80 kg/day), 5 nos. of FCEBs (for intracity)
   - **Delhi:** H2 Filling station planned at NTPC Badarpur area (260 kg/day), 5 nos. of FCEBs (for intercity)
2. **H2 blending:** This will also lead to reduction of oil import bill of country.
   - **Gujarat Gas:** for PNG (200 Households) at Kawas Residential Facility. Gas Agreement signed with Gujarat Gas. Contract awarded on 2nd June 2022.
3. **CO_2 TO METHANOL R&D DEMONSTRATION PLANT AT VINDHYACHAL**
   - **Carbon Capture:** Work in progress (completion by December 22). Electrolyser (5 MW): Awarded in July 2021. Methanol Reactor: To be awarded soon.
4. **H_2 energy storage system:** NTPC has awarded project of 'Standalone Fuel-Cell based Micro-grid with hydrogen production using electrolyser' at NTPC Simhadri (Andhra Pradesh). This will replace Diesel Generators replacement at remote locations as it would avoid fuel logistics issues. It would create a self sufficient energy storage system.
   - Standalone Microgrid (240 KW Electrolyser/50 kW), Contract Awarded in Dec 21, Completion by October 2022.

Also, we have floated tender for 1000 MW Electrolyser Tech Provider Selection for green hydrogen projects. It is based on following technologies:

- 400 MW PEM technology.
- 600 MW other technology (SOEC, ALK, AEM, etc.)

NIT Issued in May 2022.

The technology partner would be exclusively for NTPC. It would provide us technology at lower cost , readily available and no procedural delay.

NTPC is expecting hydrogen to play a key part in the energy transition plan towards cleaner energy. NTPC has formed a dedicated hydrogen energy group under it's renewable energy vertical for taking up different projects in the hydrogen domain. NTPC envisions to be the leading supplier of green hydrogen in the country by concentrating on sustainability (only green hydrogen) & cost competitiveness.

Ash Management

Ash is another resource material which NTPC coal stations produces along with electricity. We are generating revenues through the sale of fly ash and promoting its further utilization through industry partnerships and R&D. NTPC has introduced Ash Policy, which is a vision document dealing with the ash utilization issue in an integral way from generation to end product. This policy aims at maximizing utilization of ash for productive usage along with fulfilling social and environmental obligations, as a green initiative in protecting the nature and giving a better environment to future generations.

During FY-2021-22, approximately 83.19 million tonnes of ash was generated by NTPC Group stations and 81.67% i.e. 67.94 million tonnes of ash had been gainfully utilized in various areas such as issue to industries for cement, concrete, asbestos products, bricks/ blocks making, road embankment construction, ash dyke raising, mine filling, land development works etc. Ten stations have achieved 100% ash utilization.

Fly Ash produced at Coal based Thermal Power Plant, is a resource material for Cement industry and building products

Our Ash Management Strategy

Innovation
- Grand Ash Challenge
- Research & Development projects

Governance
- Ash policy Amendment
- Short term and Long term tie-ups

Implementation
- Fly ash bricks manufactured in-house
- Ash Dyke Audits completed at all Stations

Real-time monitoring
- "Ash Track" app
- On-line web portal being developed

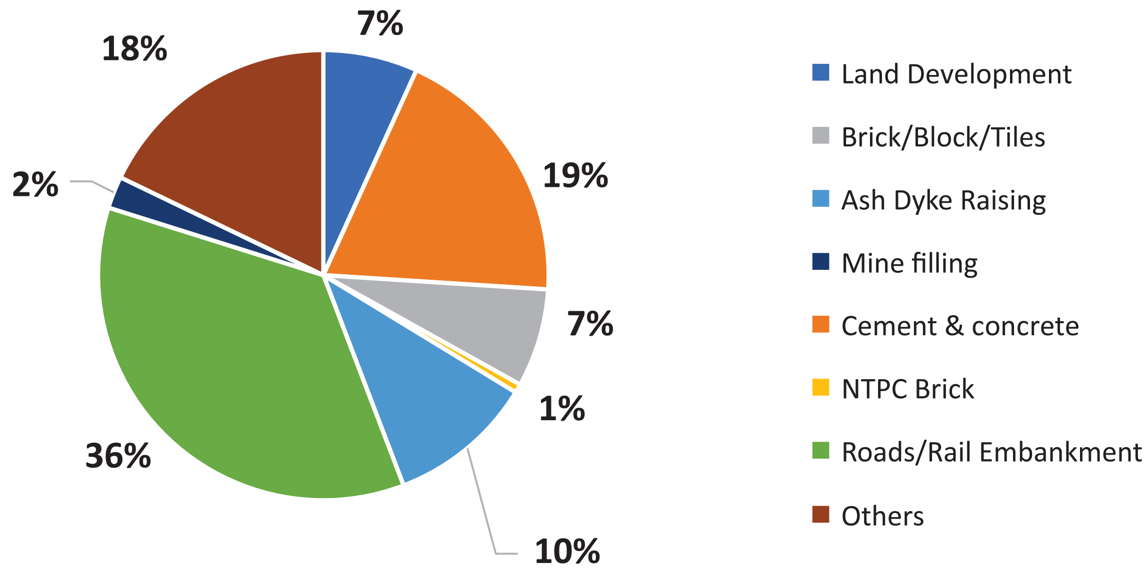
Logistics
- Fly ash depot at potential consumption centers
- Bulk transportation of fly ash through Railways BTAP rakes

Stakeholder Engagement
- Ash User Meets
- Dispute Settlement Committee at Stations

Geopolymer Tiles Ramagundam

NACA Building at Simhadri

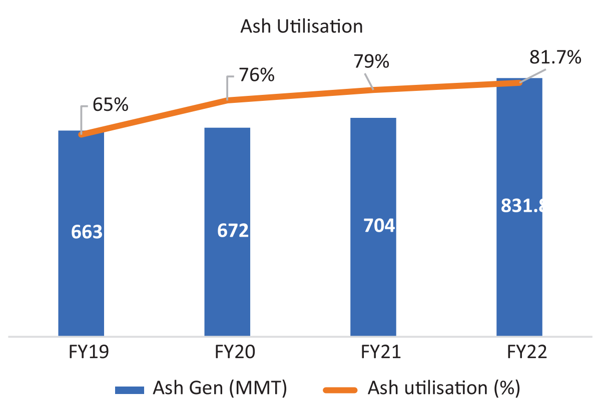
Break-up of Ash Utilisation



manufacturing units. It is also being used as one of construction material in Road and Fly over embankment construction and thus helping to save earth and degradation of good agricultural land.

Ash utilization

Ash utilization is low at some stations either due to limited ash utilization industries in the near-by areas, or, overabundance of fly-ash in the area due to multiple thermal power stations in the vicinity, or, due to non-compliance of notification by users (building construction industries, mining & brick manufacturers). To resolve the issues due to supply and demand gap, we are in the process of developing fly-ash depots at high consumption centres.



Fuel Procurement

Coal, Gas, Biomass and water are our key raw materials. We continuously strive to reduce our specific consumption of raw materials in line with our philosophy of sustainable production and consumption.

Optimization of raw material consumption translates into value for our shareholders, as well as for our communities. This enable us to also reduce the tariff of electricity making it affordable for all and also reduce the burden on local resources by minimizing extraction and waste generation.

Coal Sourcing

NTPC has both long term and short term coal supply agreements with domestic companies as well as foreign suppliers. Long-term Coal Supply Agreements (CSAs) are in place with the subsidiary coal companies of Coal India Ltd. (CIL) for an Annual Contracted Quantity (ACQ) of 167.85 Million Metric Tonnes (MMT) as on 31.03.2022 for the existing thermal stations. In addition, FSAs are in place with Singareni Colliery Company Ltd. (SCCL) for Ramagundam and Solapur Unit-2 for an ACQ of 13.74 MMT. FSAs are valid for a period of 20 years with a provision of review after every 5 years.

Break up of Coal Sourcing (FY 2021-22)

	Domestic	Imported
NTPC (MMT)	193.98	2.39
JVs & Subs. (MMT)	28.97	0.071
Total (MMT)	222.95	2.461

Gas Consumption

NTPC has long-term Gas Supply Agreements (GSAs) with GAIL for supply of Administered Price Mechanism (APM) gas and Non-APM gas, valid till 06.07.2026. However, because of diversion of allocated gas to CGD (City Gas Distribution) sector as per MoP&NG guidelines, Domestic gas (APM & Non-APM) supplies to power plants in the Gas grid including NTPC stations

Female Employees at work, NTPC Pakri Barwadih

have become Nil w.e.f. 16.06.2021. NTPC also has a long-term agreement with GAIL for supply of 1.1 MMSCMD RLNG on firm basis, valid upto December 2023. To meet the shortfall in supply of long-term domestic gas/RLNG, NTPC procures Spot RLNG on limited tender basis from domestic suppliers and on 'Single Offer' basis from Public Sector gas marketing companies.

	FY 2021-22
NTPC (MMSCM)	475
JVs & Subs. (MMSCM)	1554.625
Total (MMSCM)	**2029.625**

Bio-Mass Co-firing

NTPC has become the first energy player in the country to commercialise biomass co-firing with up to 10 per cent of agro-residue-based biofuel, co-firing along with coal. This is intended to cut down carbon emissions and also to discourage crop residue burning by farmers after harvesting by adding economic value to the crop residue and providing extra income to farmers and employment in rural sector. Biomass co-firing is a unique method to utilize coal based power plant infrastructure to produce renewable energy by simply replacing some of the coal with biomass based fuel. Being carbon neutral fuel, biomass co-firing is a technology recognized by UNFCCC as a measure of reducing greenhouse gas emission.

Break up of Biomass Sourcing (FY 22)

	FY 2021-22
NTPC (000' T)	38.690
JVs & Subs. (000' T)	0.263
Total (000' T)	38.953

After successfully demonstrating biomass co-firing at Dadri plant, NTPC has started commercial scale biomass co-firing at other NTPC stations also.

In total NTPC has awarded 12.35 lac MT of Biomass pellets for 20 NTPC stations and as of now total receipt of Biomass pellets at 13 NTPC stations is 71,242 MT.

Tender details of long term and short term contracts for NTPC stations are mentioned below:

Short Term Contracts

- Short term contract for 14,400 MT awarded for Dadri and supply completed.
- POs have been issued for 14 Stations i.e., Unchahar, Mouda,

Biomass Pellets at NTPC Dadri

Solapur, Simhadri, Kudgi, Vindhyachal, Barh, Farakka, Lara, Sipat, Singrauli, Tanda, Khargone and Gadarwara for supply of ~4.56 LMT of Biomass pellets.

- LoA placed for 3.56 LMT under short term Six months contract.

Long Term Contracts

- Long-term contract (04 years) for 4,08,800 MT for Dadri has been awarded. Supply started from February'21.
- NIT for long term procurement of biomass pellets for all 23 stations is being processed. NIT for first sublot for 3610 TPD for 9.2 MMT((Dadri, Unchahar, Tanda, APCPL-Jhajjar) was published on 12.01.2022. Technical Bid opened on 25.02.2022. Bids received from 52 Vendor, Price bid for Dadri opened on 13.04.2022, order placement for Dadri is under process.

The company is using these pellets, made out of stubble and husk, in its almost all coal-fired power plants across the country. The purpose behind usage of agro-based pellets is twofold - one it turns off stubble burning in farms and brings down pollution and two, it reduces coal usage in power production.

NATURAL CAPITAL

Major Highlights of FY 2021-22

- 9% (Y-O-Y) reduction in specific SO_2 emission
- 2.76 l/kWh of specific water consumption
- 69.26 Lakh KL of Rain Water Harvested
- 10.47 Lakh trees planted

"For NTPC, environmental sustainability is not just a performance matrix, but is intrinsically inter-woven into its long-term growth strategy. In line with our value of sustainable production and consumption of natural resources, we are continuously upgrading our systems to set new global benchmarks in environmental compliance, practices and stewardship."

Material Topic(s)
[3] [4] [6] [8] [12] [16]

Target SDG(s)
[6] [7] [9] [11] [12] [13] [14] [15]

NGRBC Principle
[2] [6] [9]

NTPC Smart Township, Khargone

Related Sustainability Topics

- Compliance Management
- Climate Change
- Water Management
- Air emissions
- De-carbonization of generation mix
- Biodiversity
- Effluent management
- Waste management

Risks mapping:

- Compliance of emission, ash utilization and other regulatory norms
- Climate Change impacts
- Water footprint reduction
- Biodiversity Impacts
- Ash Utilisation

Relevant GRI Indicators

- 301-1
- 301-2
- 301-3
- 302-1
- 302-2
- 302-3
- 302-4
- 302-5
- 303-1
- 303-2
- 303-3
- 303-4
- 303-5
- 304-1
- 304-2
- 304-3
- 304-4
- 305-1
- 305-2
- 305-3
- 305-4
- 305-5
- 305-6
- 305-7
- 306-1
- 306-2
- 306-3
- 306-4
- 306-5
- 307-1

Reference to other frameworks

- EU5
- EU13
- IPIECA: E1 , E2
- TCFD

At NTPC, we practice a precautionary approach to address all environmental risks. We have undertaken EIA studies based on which Environmental Management Plans for all stations are prepared and implemented. Our environmental policy focusses on optimum utilization of natural resources, minimization of waste by reduce, reuse & recycle, adoption of latest technologies and augmentation of older units for higher efficiency. We are in a continuous process of environment performance improvement with the techno-economically feasible engineering solutions to ensure compliance. Accordingly, we are regularly upgrading our technologies and operational practices for maintaining the environmental parameters as per the norms of regulatory agencies. Out of total stations 33 are ISO:14001 certified. Rest newly commercialized plants are in the process of getting ISO certification. We have also established an environmental grievance mechanism for recording all grievances.

CEO WATER MANDATE

NTPC has become signatory of CEO Water Mandate to further its water Stewardship Programmes

Water & Effluent Management

For electricity production, water is a prime resource, and we use water in a judicious and sustainable manner. The water consumption is being monitored continuously through online water metering systems. Water consumption of the stations is continually optimized by practicing 3R principle (Reduce, Recycle & Reuse), which is the core of our Water Policy.

In almost all of our Thermal Power Plants, water is used in a closed cycle cooling system with cooling towers, so that there is no pollution of water bodies. In all other processes, very little water loss is incurred except in the cooling water system where significant amount is lost as evaporation, drift and blow down. We are increasing Cycles of Concentration (COC) to efficiently use water and reduce amount of blow down. The high TDS blow down water is reused in other processes. We are in the process of implementing ZLD (Zero Liquid Discharge) at all of our stations. Till date 16 of our generating stations have implemented ZLD. The implementation at rest of stations is in advanced stage and current discharge is in conformity with stipulated norms and conditions. Hence, there is no significant impact on the water bodies and related habitats by the organization's discharges of water (treated effluents) and runoff.

Increasing reuse and recycling of effluents has also led to a decrease in fresh water withdrawal requirements over the years. However, increasing penetration of renewables into the grid is slowly forcing the thermal units to operate at very low PLF, leading to increase of per unit water consumption. Further, implementation of wet FGD system at all stations is going to make the water consumption reduction process challenging.

Water Withdrawal

For operation of our plants, water is drawn by our stations from various sources of water bodies such as rivers, reservoirs, canals. Sea water is used by our coastal plants.

Water Withdrawal by Source Data

KPI	Unit	FY 2021-22	
		Non Water Stress Area	Water stressed area
Withdrawal from scarce source:		0	0
Surface water (Rivers,lakes, reservoir, Wetland)			
- freshwater (≤ 1,000 mg/l Total Dissolved Solids)	Lakh KL	19,095	33,652
- other water (> 1,000 mg/l Total Dissolved Solids)	Lakh KL	0	0
Ground water			
- freshwater (≤ 1,000 mg/l Total Dissolved Solids)	Lakh KL	0	0
- other water (> 1,000 mg/l Total Dissolved Solids)	Lakh KL	0	0
Water from thirdparty			
- freshwater (≤ 1,000 mg/l Total Dissolved Solids)	Lakh KL	0	1.50
- other water (> 1,000 mg/l Total Dissolved Solids)	Lakh KL	0	0
Withdrawal from non scarce source:		0	0
Sea water	Lakh KL	0	0
- fresh water (≤ 1,000 mg/l Total Dissolved Solids) (used as is and dissalated)	Lakh KL	0	0
- other water (> 1,000 mg/l Total Dissolved Solids)	Lakh KL	1465	111
Total Fresh Water Withdrawal	Lakh KL	19095	33654

Water Discharge

Except few plants, all our stations are designed in the closed cycle system and therefore, the plant effluent discharges into water bodies are very minimal. This ensures there is no adverse impact on the related biodiversity and eco-system. In case of non- ZLD plants, where treated effluents discharged into the natural watercourse, these are in conformity with the regulatory standards.

Water Discharge Data

KPI	Unit	FY 2021-22
Water discharge by destination		
Total Surface water (wetlands, lakes, rivers)	Lakh KL	42872.47
Groundwater	Lakh KL	0
Third party water	Lakh KL	0
Seawater	Lakh KL	850.93
Water discharge by type		
Discharge of water used for once through cooling system	Lakh KL	42774.46
Other surface water discharge	Lakh KL	98.01

Water Consumption

Our fresh water consumption is basically the difference of fresh water withdrawal and water discharged after treatment and made as pure as stipulated by norms.

Water Consumptions Data

KPI	Unit	FY 2021-22
Surface water (Rivers, lakes, reservoir, Wetland) total	Lakh KL	9972.17
Ground water total	Lakh KL	0.00
Water from third party	Lakh KL	1.50
Sea water	Lakh KL	725.06

Total Fresh Water Consumption	Lakh KL	9973.67
Specific Fresh Water Consumption	l/ kWh	2.76

Air cooled condenser, NTPC North Karanpura

Our Water Conservation Strategy

Reduce

Through various water efficiency measures we have been able to reduce our specific water consumption in recent times.

We are implementing rainwater harvesting systems as part of our dedicated Rainwater Harvesting policy in all our plants to bring down the withdrawal level of fresh water from various sources. At all locations, rooftop rainwater harvesting is being deployed to either recharge groundwater or surface storage and use or combination of both. We are collecting and utilizing rainwater at our plants for plant operation in reporting year.

Reuse

Additionally, we have put in place an Ash water recirculation system (AWRS) to reuse the decanted ash slurry water & toe drain water from ash pond for meeting the requirement of ash handling and service water.

Further, we are in the process of implementing the Zero Liquid Discharge (ZLD) at all our stations. Through ZLD, cascaded use of water for suitable use as per the quality is being adopted.

Recycling

The effluent generated from various sources in the plant are collected in central monitoring basin after treatment in Liquid Waste Treatment Plant (LWTP). The collected effluent conforming to stipulated standards is re-used for various purposes in operation of plants such as ash handling, service water, etc.

Treated effluent over and above re-use, if any (Non-ZLD Plants), is discharged outside after ensuring with the discharge standards.

Sewage treatment Plants have been provided for treatment and reuse of sewage effluent from plant as well as townships. The effluent quality is monitored regularly and treated effluent is used further in horticulture and other purposes in the NTPC premises. In the reporting year, 97% of waste water generated were reused and recycled in various other purposes thus reducing the need for fresh water consumption.

Surface water storage pond at NTPC Korba Township

Water Requirement Reduction as per NTPC's 3R

KPI	Unit	FY 2021-22
Rain Water Use	Lakh KL	**69.26**
Surface water storage	Lakh KL	59.63
Ground water Recharge	Lakh KL	9.63
Waste Water Reuse & Recycling		
Waste Water Generated	Lakh KL	**3,441.38**
Waste Water Reused (No Treatment)	Lakh KL	2,592.43
Waste Water Treated	Lakh KL	**857.11**
Primary treatment	Lakh KL	34.45
Secondary treatment	Lakh KL	820.14
Tertiary treatment	Lakh KL	2.52
Waste Water Recycled	Lakh KL	**760.59**
Primary treatment	Lakh KL	22.85
Secondary treatment	Lakh KL	735.59
Tertiary treatment	Lakh KL	2.15
Waste Water (Treated) Discharged	Lakh KL	98.01
Percentage of recycled and reused water	%	97%

Waste Management

We are also committed to environmentally friendly, socially responsible and techno-commercially viable handling and disposal of all waste generated in our premises. Our integrated approach for waste management comprises of collection, segregation, transportation, processing, recycling, and disposal of various types of wastes. While the focus is towards optimal utilization of resources requiring only minimum quantities to be disposed of, wherever disposal is required, all rules and regulatory requirements are complied with. The utilization and disposal of hazardous and non-hazardous wastes generated by power plants are governed by regulations and NTPC Waste management Guideline.

Hazardous Waste

Hazardous wastes such as used lubricating and transformer oil, spent resins etc. are generated at our operating facilities. These are disposed through authorized agencies in accordance with the Hazardous and other Wastes (Management and Transboundary Movement) Amendment Rules, 2016 and subsequent amendments for transportation of Hazardous wastes. Non-Recyclable waste are sent to Treatment, Storage & Disposal Facility (TSDF) for proper treatment & disposal as per the HWM Rules 2016.

Hazardous Waste

Type of Waste	Unit	Waste generated	Waste diverted from Disposal						Waste diverted to disposal						
			Onsite			Offsite (Third Party)			Onsite			Offsite (Third Party)			
			Re-used	Recycle	Other Recovery options	Re-used	Recycle	Other Recovery options	Incineration	Landfilling	Other disposal options	Incineration (with energy recovery)	Incineration (without energy recovery)	Landfilling	Other disposal options
PCB	MT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spent resin	MT	71.96	0	0	0	0	0	0	0	0	0	0	0	42	0
Used lube oil	MT	1648.27	0	0	0	0	1383.54	0	0	0	0	0	0	0	0
Containers of hazardous waste	MT	370.94	0.30	8.15			244.44	0	0	0	0	0	0	0	0
Insulation Waste	MT	881.97	0	0	0	0	0	0	0	0	0	0	0	322.37	0
FO Sludge	MT	164	0	0	0	0	6	0	0	0	0	0	0	1.33	0

We have already phased-out Polychlorinated Biphenyl (PCBs) from our operations. We do not engage in import or export of any hazardous waste or materials under the Basel Convention. There is no radioactive waste generated and disposed from our power plants.

Waste type	Disposal Methods
Used Lube oil	Sold to registered recyclers
Used Transformer oil	
Containers of hazard wastes	
Spent resin	CPCB/SPCB authorised treatment, storage and disposal facilities or through nearby co-processors.
Used Batteries	Sold to manufacturers under buy back policy
Bio-Medical Waste	Through authorised agencies approved by SPCB.
E-Waste	Through registered & approved recyclers/dismantlers of CPCB/SPCB

Non- Hazardous Waste

Type of Waste	Unit	Waste generated	Waste diverted from Disposal						Waste diverted to disposal						
			Onsite			Offsite (Third Party)			Onsite			Offsite (Third Party)			
			Reused	Recycle	Other Recovery options	Reused	Recycle	Other Recovery options	Inciner-ation	Landfill-ing	Other disposal options	Incin-eration (with energy recovery)	Incin-eration (without energy recovery)	Landfill-ing	Other disposal options
Ferrous	MT	42,903.67	0	0	0	0	38,603.22	0	0	0	0	0	0	0	0
Non Ferrous	MT	7,690.77	0	0	0	0	8,347.41	0	0	0	0	0	0	0	0
Municipal Solid Waste (Biodegradable) (MT)	MT	5,633.64	0	3,108.82	0	0	360.12	0	0	1,148.61	0	0	0	624.17	0
Municipal Solid Waste (Non-Biodegradable) (MT)	MT	4,365.74	0	277.35	0	263.57	344.03	98.55	0	1,989.61	86.80	26.11	38.61	1,126.60	0
Plastic Waste	MT	264.26	0	1.56	0	0	119.21	0	0	0	2.30	77.17	0	0	0

Other Waste

Type of Waste	Unit	Waste generat-ed	Waste diverted from Disposal						Waste diverted to disposal						
			Onsite			Offsite (Third Party)			Onsite			Offsite (Third Party)			
			Reused	Recycle	Other Recovery options	Reused	Recycle	Other Recovery options	Inciner-ation	Landfill-ing	Other disposal options	Incinera-tion (with energy recovery)	Incin-eration (without energy recovery)	Landfill-ing	Other disposal options
BMW	MT	23.80	0	0	0	0	1.08	0	0.97	0.05	0	0.34	16.80	4.21	0.07
E-waste	MT	139.83	0	1.22	0	1.00	108.23	0	0	0	0	0	0	0	0
Batteries	MT	440.95	0	0.30	0	167.41	7.70	82.18	0.20	0	0	0	0	0	0
Construction and Demolition Waste	MT	2,665.74	1,384.74	0	0	250	0	0	0	630	0	0	0	0	0
Radioactive Waste	kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Vermicomposting Pit at RGPPL, Ratnagiri

Our efforts towards waste minimization have led to a reduction of over 75% in generation of Municipal wastes during FY21 as compared to the previous year at standalone basis. We have banned single-use plastic at our locations.

Waste type	Disposal Methods
Misc Ferrous Scrap	Disposed through E-Auction
Non-Ferrous Scrap	
Municipal Waste	Bio-Degradable waste is converted into manure through composting /vermi-composting Bio-gas/Bio- Methanation process. Non-Biodegradable waste is disposed at identified landfills. Plastic waste is disposed through local traders /collectors.

Resource Efficiency and Material Management

Material Consumed

NTPC follows a comprehensive approach for improving resource efficiency with due focus on the regular evaluation of resource consumption intensity. There has been emphasis on its further improvement through measurement, monitoring and implementation of conservation plans.

The basic input materials in power generation are fuel (coal/ gas as primary fuel and oil as secondary fuel) which are as such totally consumed in boiler and hence there is no scope for recyclability of input materials for thermal power generation. Similarly, the chemicals during water treatment are totally consumed and not recycled.

Several steps for improvement in cycle efficiency have been taken resulting in increase in efficiency and significant improvement in fuel saving (Coal and Oil) per unit of energy generated. As far as coal is concerned, adoption of higher size units (higher steam parameters) for power generation and replacement of coal with Biomass is leading to improvement of design/operational efficiency which in turn is reducing the specific coal consumption. NTPC has already fired ~40386 metric tonnes of biomass pellets at its various plants by March'22 in FY' 2021-22 vs 24600 MT used in FY'2020-21.

The trends for improvement in performance parameters of specific coal consumption and specific oil consumption are shown in table below:

Type	Units	FY 2019-20	FY 2020-21	FY 2021-22
Coal	MMT	187.53	195.39	226.55
	Kcal/Kg	3,495.00	3,487.57	3,487.06
Natural Gas	MMSCM	1,957.86	2,602.45	2,030.91
	Kcal/SCM	9,500.00	9,329.26	9,320.97
Naptha	MT	97.90	18,279.54	8,923.49
	Kcal/Kg	11,368.00	11,278.11	11,352.90
LDO	KL	1,10,322.84	1,03,297.55	1,39,853.77
	Kcal/KL	9,521.00	9,588.00	9,384.69
HFO	KL	50,726.27	47,561.55	49,821.36
	Kcal/KL	9,891.00	9,893.18	9,761.40
HSD	KL	86.57	284.69	18,177.57
	Kcal/KL	9,024.00	8,754.50	9,053.50

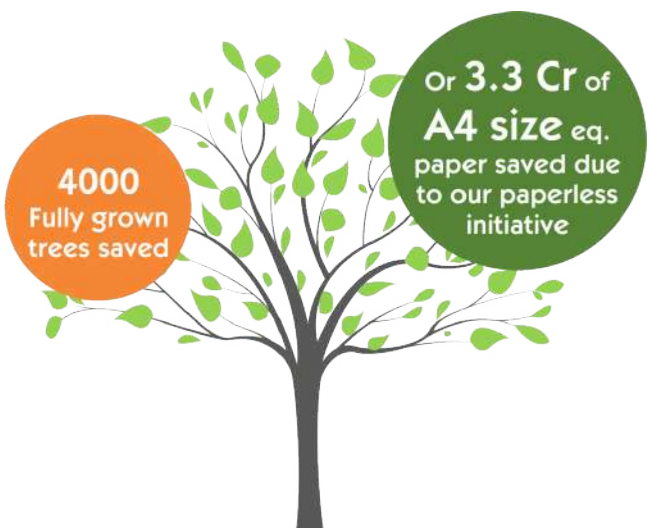
Type	Units	FY 2019-20	FY 2020-21	FY 2021-22
Sp. Coal Consumption	Kg/kWh	0.683	0.675	0.672
Sp. Gas Consumption	SCM/ kWh	0.212	0.231	0.247
Sp. Oil Consumption	ml/ kWh	0.611	0.521	0.560

Apart from coal, Biomass and water, there are other associated input material, which forms a major part of our operations. At NTPC, we take continuous measures for effective and efficient use of our input materials. The snapshot of these input materials for NTPC group has been presented below.

Input Material	Chlorine	Ammonia	Alum	HCL	H2SO4	Lube Oil	Transformer Oil
Consumption (MT)	5188	14445	15936	25283	29829	1228	399
Sp. Consumption (g/ Kwh)	0.014	0.040	0.044	0.070	0.083	0.003	0.001

Paperless office

Successful implementation of "Project PRADIP" for digitization of documents and paperless processes has not only helped us in saving tons of paper but also resulted in faster decision making, transparency and improved efficiency. As part of extending the benefits of digitalization, a comprehensive vendor portal has been launched for submission of e invoices and its tracking status.



Energy & Efficiency Management

For us, energy conservation is not only intended to reduce our costs, but it is also a part of our sustainable consumption strategy with a view to conserve national energy reserves. In this regard particularly, adoption of higher size units has led to efficiency improvement, leading to a reduction in per unit coal consumption. We are supplementing these efforts with cofiring of agro-residues, implementation of Energy and Efficiency Management System, reduction in Auxiliary Power Consumption to further reduce our overall energy consumption.

Energy intensity

The Net Energy Intensity of the Group, which provides a measure of its operational efficiency and reducing share of fossil based generation, amounted to 10.08 MJ/kWh in FY 2021-22. The table below shows the trend of total primary energy consumption (as listed in above section) and energy intensity at NTPC group level.

Use of Bio-mass for Electricity Generation at NTPC Dadri

Type	Units	FY 2019-20	FY 2020-21	FY 2021-22
Total primary energy consumption	TJ	2820455.01	2953663.88	3385762.61
Net Energy Intensity	MJ/ kWh	10.52	10.11	10.08

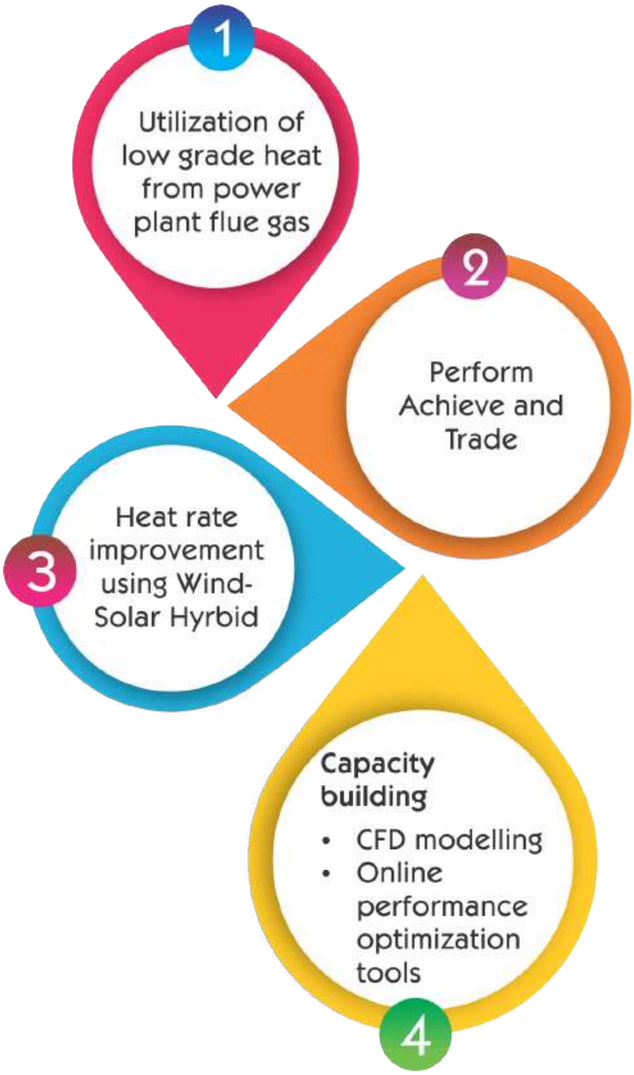
The decrease in Energy Intensity reflects the increase in efficiency, and change in the production mix in the year, which shows, with a decrease in thermal generation, an increase in production activity from renewable sources. We have been taking a lot of initiatives to conserve energy through energy and operational efficiency measures. APC of coal plants has decreased compared to previous years due to efficient operations due to the country's high power demand.

Auxiliary Power Consumption

Generating Sources	Units	FY 2019-20	FY 2020-21	FY 2021-22
Coal Stations	MU	19355.20	20090.00	22797.14
	%	7.55%	6.94%	6.78%
Gas Stations	MU	281.15	375.96	285.71
	%	3.04%	3.34%	3.32%
Hydro	MU	20.5	66.5	76.54
	%	0.59%	0.58%	0.63%

Our Energy Efficiency Initiatives

Name of Indicator	Unit	FY 2019-20	FY 2020-21	FY 2021-22
Electrical Energy	MU	130.1	132.95	135.55
Heat Energy (Eq. MT of coal)	MT	21222	22995	26152
Heat Energy (Eq. MCM of Gas)	MCM	0.246	0.087	0
Total Energy Saved	TJ	1622.5	1643.3	1693.5



NTPC Koldam (Hydro)

NTPC Ramagundam Floating Solar

Thermal Energy

- HP and IP cylinder refurbishment / replacement for efficiency improvement during capital overhaul
- Boiler modifications to improve steam parameters & efficiency
- TDBFP cartridge replacements
- Cooling Tower water distribution & nozzle modification
- Condenser high pressure jet cleaning

Energy Audit

- Measurement & Verification audits under PAT scheme (4th cycle) of 01 station
- Mandatory energy audits in 6 stations as per BEE regulations
- Auxiliary Power Consumption Energy Audits at all stations

Lighting & AC's

- Replacement of balance conventional lighting (FTL's, HPSVs, CR's Halogen) by LEDs in plant and township areas.
- Replacement of old AC and ceiling fans with energy efficient ACs and fans respectively

Auxiliary Power Consumption

- Retrofitting HT VFD in ID Fan of one unit of 500MW
- Installing grid-connected roof top / CW channel top Solar PV systems
- Replacement of inefficient BFP cartridge based on high SEC
- Energy Efficient Coating on pump internal of Cooing Water/ Other large water pumps.
- Replacing metallic shaft for cooling tower fans by Carbon fibre shaft.
- Installation of VFD's in various LT drives
- Replacing existing motors with Energy Efficient motors.
- Optimizing nos. of running mills, CW pumps and fans during prolonged partial loading on the units.
- Installation of occupancy sensors and timers for lighting.
- Replacement of old compressors by new energy efficient compressors.

Performance on PAT

(Perform, Achieve and Trade)

PAT (Perform, Achieve, and Trade) is one of the National Mission on Enhanced Energy Efficiency (NMEEE) schemes. It is a market-based mechanism to enhance the cost-effectiveness of energy efficiency improvements in energy-intensive large industries through certification of energy savings achieved by improvement in Net Heat Rate. Achieved improvement in NHR can be traded in terms of Energy Savings Certificates (ESCerts). Under PAT cycle-I, NTPC stations had exceeded Net Heat Rate improvement targets and earned a net 170653 ESCerts. Currently, NTPC has a stock of 161759 EScerts (balance from PAT cycle-I) that will be used for PAT cycle-II. PAT cycles II & III have been completed in March 2019 & 2020, respectively, and notification of EScerts earned is awaited.

All Coal and Gas stations of NTPC are Designated Consumers under the Government of India's Performance, Achieve, and Trade (PAT) Scheme. Our stations, except a few, have achieved their PAT targets, and after the PAT cycle I&II NTPC, as a company, has a net surplus of 119809 ESCerts.

To meet given PAT targets, our stations are executing various schemes and adopting best O&M practices to improve our Net Heat Rate. Prominent activities are listed under the "Energy Conservation" head.

For us, EC is not only a means of reducing costs but also a part of a sustainable consumption strategy to conserve national energy reserves. In this regard, adopting higher size units has improved efficiency, leading to reduced per unit coal consumption. We are supplementing these efforts with co-firing of agro-residues and implementing Energy and Efficiency Management System. The decrease in Energy Intensity reflects the increase in efficiency, and change in the production mix in the year, which shows, with a decrease in thermal generation, an increase in production activity from renewable sources. We have been taking a lot of initiatives to conserve energy through energy and operational efficiency measures. APC of coal plants has decreased compared to previous years due to efficient operations due to the country's high power demand.

Air (Non-GHG) Emissions Management

We have made consistent efforts to reduce our air emissions through state-of-the-art technologies and monitoring systems. As per the new notifications of the Ministry of Environment, Forests and Climate Change (MoEFCC) and NTPC's Brighter Plan targets for reducing the limits for specific water consumption and stack emissions from thermal power plants for SOx, NOx, PM and mercury emissions, NTPC is leading the power sector in country by implementing the requisite measures.

We have installed the Continuous Emission Monitoring System. (CEMS) in all running units to monitor emissions of Particulate Matter (PM), Sulfur Dioxide (SO2), and Nitrogen Oxides (NOx) in flue gases. The emissions are monitored on a real-time basis. These results are directly linked with the servers of regulatory agencies, namely CPCB/SPCB. Additionally, we regularly conduct off-line monitoring of our stacks. Ambient air quality monitoring is also monitored through an online Ambient Air Quality Monitoring System (AAQMS).

For controlling PM emissions majority of NTPC stations are equipped with more than 99.8% efficient ESPs. Further, ESP augmentation through Renovation & Modernisation (R&M) has been taken up wherever necessary.

To control the SOx emission, NTPC has installed the Lime based wet FGD (Flue Gas Desulphurisation) system in stage-V (500 MW) of Vindhyachal station. Dry sorbent injection (DSI) based FGD has been commissioned and operational for SOx emission control in units (840 MW) of Dadri (Stage-I).

FGD systems are under the advanced stage of erection at Dadri (Stage-II) and Jhajjar plants. With these, the commissioning of FGD in NTPC Units with a capacity of 60+ GW is in various stages of progress. Award for FGD in balance NTPC units with a capacity of 880 MW is being done.

For controlling the NOx, various De-NOx techniques are being implemented at NTPC stations based on the prescribed regulatory limits and our goals as per Brighter Plan 2032. Combustion Modification in 35 units of around 16 GW, including units located in NCR, i.e., 2 units of Dadri, 3 units of Jhajjar, have already been completed. Further, an award is already placed for Combustion modification for 34 units of around 14GW. Work is in progress for five units (2.1 GW) and balanced 10 units (3.4 GW) would also be done at the earliest.

We are monitoring Mercury emissions from our plants. At many stations, mercury emissions are below the minimum detectable limit (MDL). In all such cases, for FY 2021-22, 50% of MDL is considered while calculating mercury load. We are also upgrading our technologies and systems to ensure a reduction in the consumption of Ozone Depleting Substances (ODS).

We have already phased out the use of PCBs from all our operations.

Name of Indicator	FY 2019-20	FY 2020-21	FY 2021-22
SOx (MT)	12,79,366.20	15,52,253.67	16,21,348.84
Specific SOx (gm/Kwh)	4.41	4.94	4.50
NOx (MT)	6,12,983.06	6,02,831.58	6,40,419.16
Specific NOx (gm/Kwh)	2.11	1.93	1.78
Particular Matter PM (MT)	89,246.82	88,431.33	91,115.35
Specific PM (gm/Kwh)	0.31	0.28	0.25
Mercury (MT)	10.18	4.66	7.23
Specific Mercury (gm/Kwh)	0.04	0.00	0.00
ODS (CFC-11 equivalent (kg))	1,194.00	23,499.86	403.00

FGD Installation at NTPC, Telangana

Collaboration with NITI Aayog for Development of Net Zero GHG Roadmap

GHG Emission & Climate Change Mitigation

As India's leading power generator, we consider it our ethical responsibility to contribute to the country's efforts towards GHG emission reduction and climate change mitigation. We are committed to reduce the Greenhouse Gas (GHG) emission intensity of our power generation. Our decarbonization strategy is four-pronged.

Our climate change strategy

Fuel Diversification

As on 31.03.2022, NTPC group has 1657 MW, 163 MW and 3757 MW of Solar, Wind and Hydro capacity respectively, total amounting to 5.577 GW. Our current non-fossil portfolio is ~17 GW including commissioned, under construction and under tendering capacities. By 2032, NTPC will have 60 GW of cumulative renewable capacity.

Technology Upgradation & Efficiency Improvement

We have adopted comparatively cleaner and energy-efficient technologies that reduce GHG emissions per unit of electricity generated. We are continuously moving from sub-critical to supercritical and onto ultra-supercritical technology. NTPC is among early adopters of supercritical and ultrasupercritical boilers in India, which save ~2% of fuel per unit of power generated resulting in 8% reduction of emission intensity with respect to conventional subcritical power plants. It also increase efficiency by around 8%. As on 31.03.2022, NTPC had already commissioned 28 units based on super critical and ultra super critical technologies with a total capacity of 19,740 MW.

Also, we did energy saving of around 1693.5 TJ in FY'22. In the Perform, Achieve and Trade (PAT) scheme of GoI, NTPC has exceeded the targets and have earned 170653 EScerts.

Research & Development

CO_2 is the largest gaseous pollutant in several major industry viz fossil fuel power plants, cement, sugar, textile etc. We are working on to capture CO_2 from waste flue gases & convert it to hydrocarbon viz Methanol. This will ensure that we generate a clean fuel as well sequester carbon from the environment further adding great economic value. We are working on the following two projects:

a) Project-1: Design & Setup of 10 TPD CO_2 to Methanol Plant at NTPC Vindhyachal.

b) Project-2: Development of Indigenous Catalyst & Reactor for Methanol Synthesis

We are also utilizing agro-residue for power generation, which will help us further reduce equivalent amount of fossil based CO_2 emissions.

Carbon Sink Development

Our afforestation efforts not only add to India's green cover and oxygen bank but also perform the role of 'sinks' for the polluting emissions from the stations etc. We have set a target to plant at least 1 million saplings every year starting from 2016. Till date, we have planted more than 37 million trees.

Avoided Emissions

	FY 2019-20	FY 2020-21	FY 2021-22
Avoided emissions (Million Ton)	4.10	10.45	11.57

GHG Emissions- Scope 1

Direct greenhouse gas emissions (Scope 1)	Unit	FY 2019-20	FY 2020-21	FY 2021-22
CO_2 emissions from the electricity production and heat	mil t_{eq}	252.44	263.90	304.14
Emissions from coal electricity gen.	mil t_{eq}	248.58	258.82	300.10
Emissions from gas electricity gen.	mil t_{eq}	3.86	5.08	3.98
Other CO_2eq emissions due to electricity production and other activities	mil t_{eq}	0.00	0.00	0.06
of which: emission from losses of SF6 from energy production	ton	0.00	0.00	2.40
of which: emission from losses of HFCs from energy distribution	ton	0.00	0.00	7.60
Total direct emissions (Scope 1)	mil t_{eq}	252.44	263.90	304.14
Specific emissions				
Specific CO_2 emissions from electricity production only	g/kWh	870.00	840.00	843.46
Specific CO_2eq emissions from Scope 1	gCO_{2eq}/ kWh	870.00	840.00	843.64

As India's leading power sector organization, we recognize our responsibility towards using clean fuels and technologies to provide low-carbon power at affordable prices and remain committed to supporting India's Nationally Determined Contribution to climate change.

As compared to previous years, Group's GHG intensity has slightly increased due to increased generation from thermal sources due to increased electricity demand in the country.

GHG Emissions – Scope 2

	FY 2019-20	FY 2020-21*	FY 2021-22
SCOPE 2 Emission (Ton CO_2)	15,845.30	15221.86	16400.34

Our Scope 2 GHG emissions happen due to electricity consumption at offices, training centers and research centers outside plant premises including PMI, Netra, Corporate Office, Engineering Office etc.

GHG emissions – Scope 3

Our scope 3 GHG emission for reporting year has been 11,01,885.05 MT. The breakup of emission are as follows:

SCPOPE 3	FY 2019-20	FY 2020-21	FY 2021-22
Type (Ton CO_2)			
Employee Commuting	62.00	40.36	39.46
Business Travels	28,000.00	26,918.79	2,103.62
Fuel Transportation	9,52,691.13	5,34,176.43	10,99,741.98
Total	**9,80,753.13**	**5,61,135.58**	**11,01,885.05**

We have developed a strategic and long-term approach to reduce our environmental impact. Our strategy is based on a view to convert climate challenges into opportunities.

Biodiversity Conservation

At NTPC, we believe that we cannot achieve sustainable growth until we take care of our nature and other species. Our goal of building the economy could only be achieved by respecting the ecology. Thus, we put in our most sincere efforts to try to give back to nature more than we take. Envisioning a clear and comprehensive goal to preserve our nature, we have developed a dedicated NTPC Biodiversity Policy in 2018, which got revised in year 2022. The policy clearly states our vision and guidelines for conservation, restoration and enhancement of biodiversity. Also, NTPC is a proud member of Indian Business and Biodiversity initiative.

NTPC does not construct and maintain transmission and distribution corridors. For power project areas, these aspects are covered in Environmental Impact Assessment Studies, undertaken according to Terms of Reference prescribed by MOEF&CC. If any specifically important ecosystem exists within the study area, additional studies are undertaken and their recommendations are adopted.

*Corrected for FY2020-21

Our Biodiversity Strategy

Mapping	of biodiversity interface, including assessment of its risks & opportunities
Implementation	of biodiversity conservation and management plant
Enrichment	of greenbelt for Biodiversity
Engagement	including advocacy, capacity-building and dialogue with local communities, academies, NGOs and international fora
Decision-Making	on the basis of applicable biodiversity aspects in the environment management systems
Target	setting of biodiversity management
Monitoring	and reporting on progress towards targets
Accountability	by designating a bio-diversity champion within the organization

In case of involvement of forest land, statutory permission for diversion of forest land for non-forest activities is obtained from MOEF&CC in accordance with Forest (Conservation) Act, 1980; which includes enhancement of forests with the amounts deposited for Compensatory Afforestation and Net Present Value of forest land involved.

Similarly, in case of involvement of coastal marine areas, clearance under Coastal Regulation Zone Notification is obtained and the provisions therein are implemented.

We also have a flagship Biodiversity programme towards conservation of Olive Ridley Turtles. The coast of Andhra Pradesh is known for the nesting and foraging of Olive Ridley Turtles – which is a Vulnerable Category species on IUCN's Redlist. Thus efforts are underway by the Andhra Pradesh Forest Department since 2010 to minimize the impact of human interventions on the critical habitat. We are now a proud partner in the efforts of the forest department to conserve the habitat of Olive Ridley Turtles by way of a five-year agreement between our Simhadri Station and the forest department for conservation efforts in 9 coastal districts of Andhra Pradesh covering 732 km of coastal area. Under this initiative, we have spent ₹ 4.6 Crore in a phased manner till date. As a result of our efforts, resulted in increasing trend in the hatchlings released in the sea-water.

One three-fold conservation plan

Conservation of Olive Ridley Turtles

- Identification of nesting beaches
- Development of hatcheries along nesting beaches and ensuring security during hatching
- Capacity building of communities to strengthen the conservation efforts

We understand the importance of our operations for the society and nation's economy, but we are also cognizant enough to ensure that none of our station location and operation have a significant and irreversible negative impact on protected areas and wildlife sanctuaries.

None of the project sites for thermal power plants established by NTPC were located within 10 km. or respective eco-sensitive zones of the protected areas or the areas of high biodiversity outside the protected areas. We have various ongoing biodiversity conservation projects as per below table.

Species	IUCN Red List	Location
Wildlife		
Sloth bear (Melursusursinus)	Vulnerable	Raigarh
Black Buck (Antilope cervicapra)	Near Threatened	Meja
Gangetic Dolphin (Platanista gangetica)	Endangered	Kahalgaon
Cheer Pheasant (Catereus wallichii)	Threatened	Koldam
Elephant (Elephas maximus)	Endangered	North Karanpura
Great Indian Bustard (Ardeotis nigriceps)	Critically endangered	Solapur
Olive Ridley Turtle (Lepidochelys olivacea)	Vulnerable	Simhadri
Snow Trout Fishes (Schizothorax richardsonii)	Threatened	Vishnugad Pipalkoti
Plant		
Logerstroemia minuticarpa	Rare	Pare, Arunachal Pradesh

Habitats		Location
Ecopark	Urban Environment	Dadri
Ecopark	Urban Environment	Badarpur
Biodiversity conservation	Terrestrial & Riverine ecosystem	Khargone
Biodiversity conservation	Terrestrial ecosystems	Talaipalli
Marsh lands and Bird Sanctuary	Wet zones	Unchahar

Apart from above, we have established various Botanical Gardens around our stations/ projects namely at Kamenng, Kopili, Koti, Tehri etc.

However, in case of following thermal power projects wildlife sanctuaries were declared after the project was accorded Environmental Clearance (EC) or constructed:

- In case of Kahalgaon Super Thermal Power Station, District Bhagalpur (Bihar), the stretch of Ganga river adjacent to the project site was declared as a Dolphin Sanctuary by State Government after the project was accorded Environmental Clearance by MoEF&CC and the construction of the project was nearing completion. However, the project and all its components are located outside the sanctuary as well as eco-sensitive zone of the sanctuary, except for the water intake structure.
- In case of Feroze Gandhi Unchahar Thermal Power Station, District Rae Bareli (Uttar Pradesh), Samaspur Bird Sanctuary was established by State Government in 1987 much after the project construction was started by UP State Electricity Board in 1981. NTPC took over the project in 1992. However, the project and all its components are located outside the sanctuary as well as eco-sensitive zone of the sanctuary.
- In case of Bongaigaon Thermal Power Station, District-Kokrajhar (Assam), Chakrasila Wildlife Sanctuary was notified by State Government in 1994 much after the erstwhile Bongaigaon Thermal Power Station (4x60 MW) was conceived in 1970s by Assam State Electricity Board (ASEB) and commissioned during 1981-86. NTPC established 3x250 MW within the same premises after a decision in PMO in 2005. The project and all its component were located outside the sanctuary. However, the State Govt. declared the eco-sensitive zone of the sanctuary in 2021 and some components of the project are falling within the eco-sensitive zone after 2021.

Our vision of having a healthy ecology around begins from inside of our plants. Not only do we put in our best efforts to avoid disturbance to ecology of the surrounding area by minimizing discharge/disposal of waste/effluents, but we also give a special thrust to afforestation and green belt development at all our projects covering vast tracts of land in and around projects. At some of the projects (like Rihand and National Capital Power Project), we have converted barren stretches of land into lush green environments.

Asian Waterbird at Dadri

Cheer Pheasant at Koldam

SUSTAINABILITY REPORTING

Greenery developed around NTPC Kawas

Habitats protected or restored

Asian Waterbird at Dadri

NTPC with help of UNDP India has conducted the first ever Asian Waterbird Census (AWC) at the NTPC Dadri complex in collaboration with Wetlands International South Asia (WISA) and Global Tiger Forum (GTF) on 15-16 January 2021. A total of 45 species were recorded from the NTPC Dadri wetlands (including Wetland 1 and Wetland 2). Out of these, 42 species are classified as 'wetland dependent' as per the Asian Waterbird Census data sheets.

The results of the Census/Assessment point out to the presence of many species, that too in good numbers. The wetland complex at NTPC Dadri was indeed a stopover site for migratory avifauna, where they gather in relatively large numbers to feed on their way to other larger wetlands throughout the Indian subcontinent. The wetland represents a high species richness when compared with the total area/size of the waterbodies and therefore is also of high conservation significance.

Cheer Pheasant at Koldam

At our Koldam Hyroelectric Power Plant (HEPP), where habitat of Cheer Pheasant (Catreus wallichii), which is included in IUCN Red List species (under vulnerable category) existed in some area of Majathal Wild Life Sanctuary, which falls under submergence area of Koldam HEPP. In order to restore the area of Majthal Wildlife Sanctuary involved in Koldam Project, NTPC has identified jointly with wildlife Wing of GoHP 500 ha of land in and around Majthal Wildlife Sanctuary for Cheer Pheasant habitat, acquired the land and handed over to State Government to get it notified as a sanctuary. In addition, another 10 km^2 wildlife habitat has been identified in consultation with State Forest Department of HP to get it notified as a Sanctuary. Various schemes such as compensatory afforestation, CAT plan, RIM plantation, development of fisheries etc. towards environmental and bio-diversity conservation are already being implemented through the concerned authorities. We have also made financial contributions towards the various schemes being implemented by the state government at Koldam HEPP to restore/ enhance the wildlife habitats.

Further, we have taken various voluntary initiatives towards conservation of aquatic and terrestrial wildlife around our operations. Our Simhadri Station in Andhra Pradesh is supporting the Central Marine Fisheries Research Institute (CMFRI) to deploy artificial reefs near the coast. These reefs simulate coral beds, and function as a comfortable habitat for fish and diverse marine organisms. The first deployment of artificial reefs in Andhra Pradesh was successfully done off the Muthalampalem coast.

Conservation Activities under CAT

Biodiversity of offset habitats

As none of the thermal project sites established by NTPC are located within protected areas, no offset habitats were created and the comparison is not applicable. In case of hydro power project at Kol Dam, offset habitat has been created with the help of State Forest Department. The comparative study is yet to be undertaken.

Badarpur Biodiversity Park

We have taken up the development of Mega Eco Park at Badarpur spread over 884 acres, one of the largest man-made parks in not only India but will be bigger than New York Central Park spread over 842 acres. Eco Park is being developed over already closed Badarpur station's Ash dyke.

Afforestation

NTPC since its inception has been carrying out massive plantation to mitigate the effects of greenhouse gases. NTPC's afforestation efforts not only add to India's green cover and oxygen bank but also perform the role of 'sinks' for the polluting emissions from the stations etc.

NTPC has developed nurseries in plants and townships to develop seed and seedlings, plants for in-house plantation and horticulture activities. Plantation activities in NTPC is done through State Forest Departments through MOUs. The MOUs specify the plantation year, maintenance years of the plantation, fund flow details and survival percentages of the plantation. NTPC has made Guidelines of Afforestation based on which the afforestation is done in NTPC projects.

The plantation activities undertaken by NTPC can be classified into five broad categories.

1. Development of green belt around the plant: The green belt helps in reducing pollution by trapping particulate due to plant operations, reduce the noise level originating from running machines in the plant, acts as a carbon sink thereby reducing the temperature in the surrounding and improves the oxygen content of the atmosphere. Till date all the running stations of NTPC have green belts and for new stations green belts are being developed.
2. Plantation by individual stations: In order to create additional carbon sinks in line with India's NDC-2030 NTPC has decided to plant 10 million trees from 2016 to 2026 with 1 million trees per year across India through different NTPC stations.
3. Distribution of fruit bearing trees to farmers and township residents by NTPC projects: NTPC distributes small saplings of fruit bearing trees, flower trees and vegetable bearing plants to the local farmers and township residents. The aim is to encourage plantation by township residents and farmers in their individual land holdings. These trees are supplied free of cost to the farmers and the residents. NTPC also encourages plantation of trees by its employees and their dependants during several occasions like World Environment day, birthday, marriage anniversary, superannuation day, etc. Till date NTPC has done the plantation of more than 37+ million since inception.

Environment Training

We regularly conduct capacity building programs on Environment for our various stakeholders including employees, contract workforce, communities etc . The topic includes Waste management, water conservation, biodiversity protection etc. Total no. of trainings conducted in FY'22 has been tabulated below:

Indicator	Units	FY 2020-21	FY 2021-22
Employees	Nos	3053	3002
Contractual Workers	Nos	3912	2927
Family of Employees	Nos	3075	2657

All NTPC stations have environmental cells and 33 NTPC stations are certified for ISO:14001. The Environment Management Systems are regularly inspected/audited internally as well as externally by Regulatory agencies such as SPCBs & CPCB, NGO and ISO certification agencies.

Our group companies NEEPCO & THDC undertook expenditure worth more than ₹ 60 lacs in FY'2021-22 for various Biodiversity initiatives.

The contact persons for lodging grievance are displayed at the main entrance of the plant. The grievances are also maintained in the grievance book. Total 03 nos. grievances were received in reporting year. No significant fines and non-monetary sanctions were imposed during the FY 2021-22.

NTPC is legally bound to comply the environmental laws and regulations formulated by the statutory agencies. Hence, the company is in a continuous process of 100% compliance with the techno-economically feasible engineering solutions to ensure compliances of any directives issued by regulators in a time bound manner.

Due to stringent environment norms, day-by-day company requires renovation & modernization (R&M) of pollution control technologies /devices of our old running units. Accordingly, NTPC is able to comply all the directives of legal authorities with the R&M activities.

Case Study: Narmada Landscape Restoration Project

NTPC in collaboration with US-AID is supporting a unique Biodiversity Project titled "Narmada Landscape Restoration Project" along River Narmada between Maheshwar and Omkareshwar dams. With an investment of about ₹ 25 Crores, this project will be benefitting the local population, Indore City,and Madhya Pradesh at large as the project is aimed to enhance green cover, improve water retention, the crop diversity including to promote organic farming and marketing. The project is being taken up involving Global Green Growth Institute (GGGI) Headquartered at Seol and Indian Institute of Forest Management Bhopal. This project is also one of its kind in India and implementation is likely to become a role model for replication across the country.

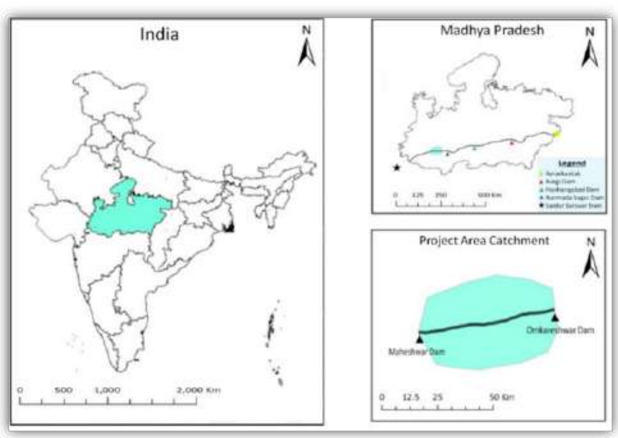
Narmada Landscape Restoration Project funded by NTPC Ltd. and USAID aims to establish the first of its kind Payment for Ecosystem Services (PES) model in India that will incentivize the agriculture and forest community to improve and maintain water resources in River Narmada in Khargone district of Madhya Pradesh. PES has been globally recognized

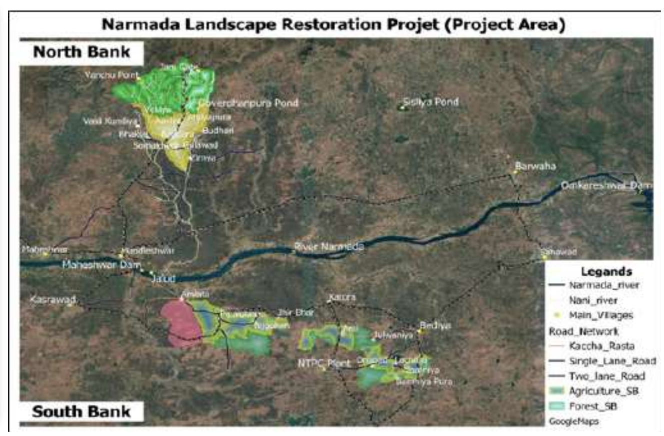
One of the earliest, best-known cases illustrating the "Payments for Ecosystem Services" principle is New York City, which, in the early 1990s, began paying for land management in the Catskills watershed to ensure safe drinking water for the city, avoiding the cost of building an expensive water treatment plant.

In case of NLRP, the city is Indore which picks up water for its municipal supply from River Narmada in Jalud. Landscape in the river catchment includes agriculture and forest and NLRP is deeply engaged with the community to introduce and build capacity on sustainable landscape practices through government support, collective/institutional building, and demonstration. In the process, the project will impact 10,000 hectares of landscape in the area around NTPC Khargone Thermal Power Plant.

The project in its 18 months has made remarkable progress in selecting key intervention locations and monitoring points for improvement in water quality and quantity.

I. **Monitoring equipment** like Hot Air Oven, Rain-gauge, Electronic Balance, H-Flume, Soil Auger, Enamel gauge, Automatic water stage level recorder, PAN Evaporimeter, Soil Moisture Meter, Infiltrometer, and Water sampler have been installed both in the field and Maheshwar Project office to periodically collect data on water and soil parameters.





II. **Development of landscape treatment plan** for the 10,000 ha at Microwatershed scale is under progress. Interaction and engagement with Panchayat and PRI Members in South bank and North bank of the project area has been completed. Environment building towards NRM work through focused group discussion and transact walk are under progress. Team is using digital mapping tools such as GIS software (QGIS), Remote Sensing data, GIS based mobile application like (Qfield) to capture the information in digital formats.

NLRP Team Is Discussing With Local Community During Transect Walk

II. **Stop dam renovation works** in South Bank of project area has been started at village Aarsi. This work is under the excellent progress and team is hopping to complete it as soon as possible before arriving the monsoon. Apart from this, the construction of two gabion structures has been started in the South bank area of the project. These structures are the part of Drainage line treatment and run off control structures. The progress of the construction work is as according to plan.

Ongoing Stop Dam Renovation Work at Village Arsi Under NLRP

Ongoing Stop Dam Renovation Work at Village Arsi under NLRP

III. NLRP is demonstrating organic farming activities to promote sustainable alternatives for Fertilizers and Pesticides that will positively impact the water resources in River Narmada. Trainings and demonstrations in the field on Vermi-compost, NADEP Compost and Sanjeewak to be used as suitable alternative for fertilizers while use of pheromone traps and t-guards to reduce the dependency on pesticides is underway.

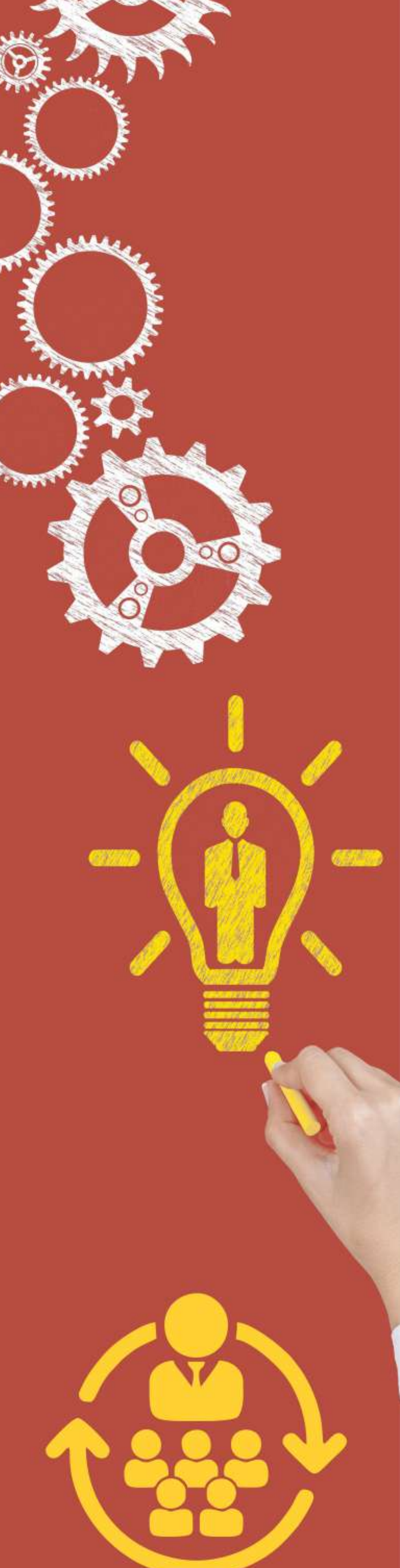
Many farmers like Ramsingh Kharte and Gabbarsingh Chouhan themselves said that the productivity of our soil has decreased drastically and only inputs like Vermi-compost and FYM can restore it. They were trying to apply this in their fields, but lack of availability and knowledge restricted them to adopt such practice.

> Mrs. Raiku Bai (a female farmer) w/o Ramesh Dodhve said, “I always tried to reduce the cost of cultivation through sustainable and natural ways but due to lack of knowledge and proper guidance, I couldn’t succeed. After getting guidance from the project team, I know well about how to prepare Sanjeewak and use that infield.”

> One of a demo farmer Mr. Bhuresingh Rathode said “Maine sirf 2 ekad ke chane ke khet me Pheromone trap or T-Guard lagaya tha, jisse waha mujhe apne dusre kheto ki tulna me na ke barabar dawai, kito ke liye dalni padhi. Isse meri cost bhut hadtak kam ho gai”

IV. **Exposure visits for farmers** from villages around NTPC Khargone Thermal Power Plant was organized to encourage adoption of sustainable agriculture practices, integrated farming, non-pesticide management and livestock management. Farmers from three different villages, namely – Dhabad, Nalwat, and Arsi-Mirjapur tehsil - Sanawad were identified and selected based on the farmer meetings and individual interactions.

V. **Environment Day Outreach Programs** were a huge success in 2021 and 2022. Virtual posts were circulated from 31st May to 5th June on NLRP media platforms. A two-fold initiative was undertaken where an online quiz on the PES mechanism was hosted from 3rd to 5th June and an offline interactive event was hosted at the Government College of Mandleshwar. The students were asked to participate in different activities related to PES and Environmental consciousness. These were good activities to spread the concept of the PES & NLRP amongst targeted youths.



HUMAN CAPITAL

Major Highlights of FY 2021-22

- 0.32 Man-MW Ratio achieved
- 41 hrs/ emp of Learning opportunities
- 1.3 Million man-hours of Safety Training
- ₹ 6310.09 Cr. spent on Employee Benefits
- “Most Preferred Workplaces of 2022” by Team Marksmen
- ₹ 21 Cr. spent on Training & Development

“At NTPC, we believe that our success is connected with our people. Employees are the driving force behind our sustained stellar performance over all these years of market ascendancy. As a commitment towards our core values, employees’ participation in our management has been made effective based on mutual respect, trust and a feeling of being a progressive partner in growth and success.”

Material Topic(s)
[1] [2] [7] [10] [15]

NGRBC Principles
[3] & [5]

Employees at work, NTPC Rihand

Related Sustainability Topics

- Labour practices
- Compliance management
- Employee development and engagement
- Diversity inclusion
- Health and Safety

Risks Mapping:

- Attracting and retaining skilled and experienced employees
- Succession planning

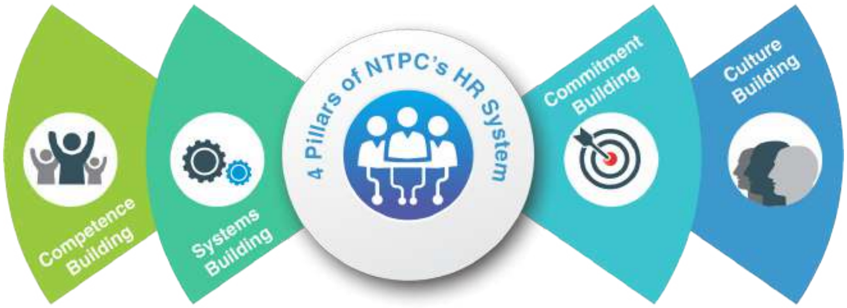
Relevant GRI Indicators:

- 102-8
- G4-DMA
- GRI-EU15
- GRI-EU17
- GRI-EU18
- GRI 102-8
- GRI 102-(18 to 34)
- GRI 102-(35 to 39)
- GRI 202-1
- GRI 202-2
- GRI 401-1
- GRI 401-2
- GRI 401-3
- GRI 402-1
- GRI 403-1
- GRI 403-2
- GRI 403-3
- GRI 403-4
- GRI 404-1
- GRI 404-2
- GRI 404-3
- GRI 405-1
- GRI 405-2
- GRI 406-1
- GRI 408-1
- GRI 409-1
- GRI 410-1
- GRI 411-1
- GRI 412-1
- GRI 412-2
- GRI 412-3

Reference to Other Frameworks:

- IPIECA: HS1, HS2, HS3, HS5, SE8, SE10, SE15, SE16, SE17, SE18
- UNGC: 1, 2, 3, 4, 5, 6

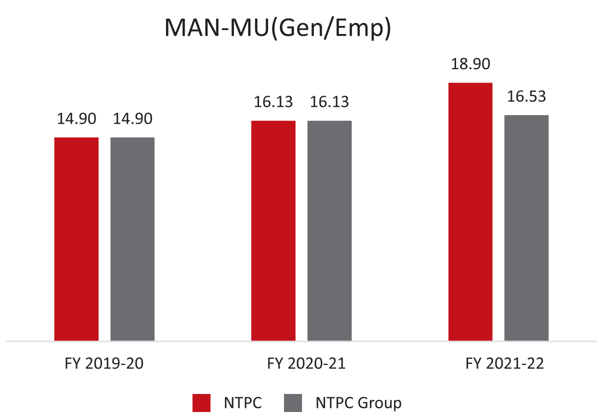
We take pride on our extremely talented team of committed professionals that has contributed their best to bring the Company to its present heights. NTPC have been able to induct, develop and retain the best talent and have ensured a very low attrition rate as compared to others in the sector. The HR vision of NTPC is “To enable its people to be a family of committed world class professionals, making NTPC a learning organisation.” Our HR Systems is based on four pillars.

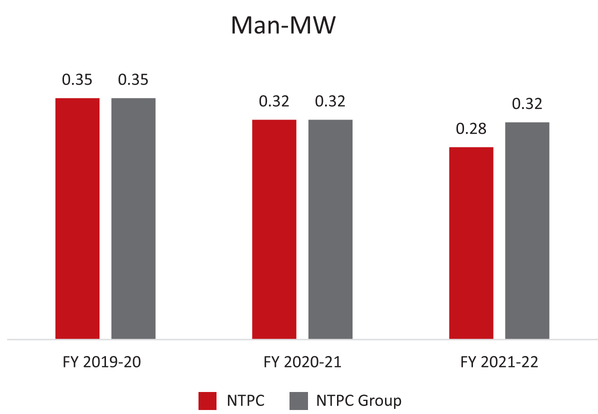


Over the years our strong values, commitment and focused systems have led us to receive various HR Awards by reputed institutions and consistently enabled us to feature among the “Great Places to Work For”. Centre of excellence related to HR practices has been established at Simhadri and Unchahar stations.

About Workforce

Our highly qualified and motivated pool of employee are our core assets. Their effective management with high personnel engagement and employee productivity serves as competitive advantage to us contributing to the organisational growth. The commitment of our employees is reflected in terms of financial parameters such as sales per employee, value added per employee etc. We measure the productivity of our employees and man power planning and optimisation through Man-MW ratio, which is the ratio employee strength and installed capacity and Man-MU ratio which is the ratio employee strength and energy generated.





NTPC Workforce at Rammam

We believe in workforce that represents a fusion of both experienced and young employees. From young professionals to proficient employees, members of different generations are aiding us further to grow and expand our business. There is representation of almost every state of India in NTPC's employee pool. The details on the breakup of current workforce by age group, gender and region across NTPC is provided below:

Snapshot of Our Group Employee Base

		Age Group						Total	
		<30		30-50		>50		Male	Female
	Employee Categories	Male	Female	Male	Female	Male	Female		
Permanent employee	Board of Directors and KMP	0	0	0	0	6	0	6	0
	Top/ Senior management	0	0	0	0	43	1	43	1
	Middle management	0	0	1,989	100	2,058	103	4,047	203
	Lower/Junior management	1,055	86	4,721	481	2,300	123	8,076	690
	Total Permanent Employees	1,055	86	6,710	581	4,412	227	12,177	894
Permanent workers	Workmen	797	64	2,355	249	3,809	426	6,961	739
	Total NTPC Group Employees	**1,852**	**150**	**9,065**	**830**	**8,221**	**653**	**19,138**	**1,633**
Other than permanent employee	(Fix term employee, on Deputation, interns, trainees / apprentices)	842	129	67	1	2	0	911	130
Other than permanent workers	Contractual Workers							1,06,662	

Participation/Inclusion/Representation of all categories of society in our workforce

		Categories			
		Specially Abled Employees		OBC/SC/ST Employees	
	Employee Categories	Male	Female	Male	Female
Permanent employee	Board of Directors and KMP	0	0	0	0
	Top/ Senior management	0	0	4	0
	Middle management	28	1	1,281	59
	Lower/Junior management	145	15	3,840	295
	Total Permanent Employees	173	16	5,125	354
Permanent workers	Workmen	314	50	3,518	379
	Total NTPC Group Employees	**487**	**66**	**8,643**	**733**
Other than permanent employee	Fixed Term Employees	4	40	494	49

Employee Hired during FY 2021-22

		Age Group						Total	
		<30		30-50		>50		Male	Female
	Employee Categories	Male	Female	Male	Female	Male	Female		
Permanent employee	Board of Directors and Key Managerial Personnel	0	0	0	0	0	0	0	0
	Top/ Senior management	0	0	0	0	0	0	0	0
	Middle management	0	0	0	0	0	0	0	0
	Lower/Junior management	579	68	66	11	0	0	645	79
Permanent workers	Workmen	93	4	26	0	0	0	119	4
Other than permanent employee	Fixed Term Employees	40	22	32	1	1	0	73	23

Employee Separated during FY 2021-22

		Age Group						Total	
		<30		30-50		>50		Male	Female
	Employee Categories	Male	Female	Male	Female	Male	Female		
Permanent employee	Board of Directors and Key Managerial Personnel	0	0	0	0	0	0	0	0
	Top/ Senior management	0	0	0	0	22	0	22	0
	Middle management	0	0	24	2	401	7	425	9
	Lower/Junior management	83	9	62	10	349	21	494	40
Permanent workers	Workmen	6	0	17	0	643	27	666	27
Other than permanent employee	Fixed Term Employees	12	5	4	0	0	0	16	5

Our turnover rate is very low and most employees chose a lifetime career with us. The details of turnover including retirement case has been provided below.

Turnover Rate (%)				
Indicator	**Sub- Indicator**	**FY 2021-22**		
		Male	**Female**	**Total**
Total employee turnover rate (%)	Permanent Employees	7.73%	5.48%	7.57%
	Permanent Workers	10%	4%	9%
Voluntary employee turnover rate (%)	Permanent Employees	6.87%	4.81%	6.73%
	Permanent Workers	8%	3%	7%
Involuntary employee turnover rate (%)	Permanent Employees	0.04%	0.00%	0.04%
	Permanent Workers	0%	0%	0%

To incentivize our workforce for their contribution in the organizational growth, we have developed a dynamic PMS to assess the performance of our employees and reward them annually. As a part of performance management system, all executives receive performance feedback during mid-year review and final appraisal. The procedure for Promotion of executives to positions in next higher gradesis on the basis of merit, efficiency, grade service and suitability.

Remuneration

The remuneration policies for all the executives are governed by the DPE, GoI Guidelines. NTPC complies with the Minimum Wages Act. The lowest wage of contract workers in NTPC is as per state and Central Government statutory norms. The ratio of the annual total compensation for the organization's highest-paid individual to the median annual total compensation for all employees (excluding the highest-paid individual) is around 3.5.

	Employee Categories	Unit	Ratio of basic salary of women to men	Ratio of total remuneration of women to men
Permanent employee	Top/ Senior management	No.	1	1
	Middle management	No.	1	1
	Lower/Junior management	No.	1	1
Permanent workers	Workmen	No.	1	1
Other than permanent employee	Fixed Term Employees	No.	1	1

The minimum wage payment to the contractor workers bank account is also ensured by NTPC through proper verification of documents like payment sheets, PF deposit receipt etc. The remuneration policies for the highest governance body, executives and supervisors are in line with DPE guidelines.

The management approach on compensation and benefits is guided by beyond the government guidelines issued from time to time and complies statutory conditions.

Equal Opportunity, Diversity and Inclusion

At NTPC, we believe in employee diversity and have a strong and dedicated workforce having diverse talents, perspectives and backgrounds. We recognise and respect the different cultures, national origins, races, religions and sexual orientations in the world, and among our people and do not discriminate any individual based on their religion, gender, caste or disabilities. Besides equal employment, the workforce is also entitled to the same benefits, training and skill enhancement programs. Men and women are treated at par in all respects.

Employee Benefits

At NTPC, for our full time employees we extend an entire gamut of benefits from paid childcare leave, comprehensive medical care, education, housing, social security to post-retirement medical benefits are extended to employees to meet any exigency that may arise in a person's life. The provision of sabbatical periods of maximum 5 years with assured return to employment have also been introduced.

Major Employee Benefits

1. Medical Treatment
2. Facilities of Higher Studies
3. Contribution Scheme for Post-Retirement Medical Facilities
4. Separation / Insurance Benefits
5. Loans and Advances

Paternity leaves are applicable for both the gender. However, as per regulation, some additional benefits such as maternity leave, and special childcare leave of 2 years are provided to women employees.

In FY 2021-22, 644 male and 130 female candidates took parental leave. The return to work rate and retention rate both were 100%.

In reporting year, ₹ 6,310.09 Cr were incurred on our employee benefits.

Benefit Plan Obligations

A defined benefit plan is a post-employment benefit plan other than a defined contribution plan. We pay fixed contribution to the provident fund at predetermined rates to a separate trust, which invests the funds in permitted securities. The contributions to the fund for the year are recognized as expense and are charged to the profit or loss. Our obligation is to make such fixed contributions and to ensure a minimum rate of return to the members as specified by the Government of India.

The gratuity is funded by the Company and is managed by separate trust. Pension scheme at one of the taken over projects is also funded by NTPC and is managed by separate trust. The Company has PRMS scheme, under which retired employee and the spouse are provided medical facilities in the Company hospitals/empanelled hospitals.

As per the DPE guidelines, the company contributes upto 30% of Basic Pay plus DA as superannuation benefits towards Provident Fund (PF), Gratuity, Post-Retirement Medical Benefits and Pension of the employees. The employees contribute 12% of Basic Pay plus DA towards Provident Fund (PF) as per the EPF Act, 1% of Basic Pay plus DA towards the Pension Scheme of the company and PRMS Membership Fee Amount as per the PRMS Scheme of the company.

Employee - Management Relationship

At NTPC, respect for human rights, individual dignity and professional conduct is crucial for our operations. NTPC is committed to operate in a manner consistent with the United Nations (UN) Universal Declaration of Human Rights, the 10 UN Global Compact (UNGC) principles and the applicable International Labour Organisation (ILO) Core Conventions on Labour Standards. We conducts our business in an ethical manner where its workforce is appreciated and valued.

We respect the rights of our employees to freedom of association in accordance with applicable laws. All NTPC employees in the workman (non- executive) category have freedom to associate themselves with various unions to facilitate collective bargaining agreement.

The minimum notice period for significant operational changes like location transfer or termination/resignation from service varies between one to three months.

We also ensure safety of our employees at the workplace and strive to maintain a safe and secure culture for our women workforce. To this end, we have formed the Internal Complaints Committees at our operational locations where complaints against sexual harassment can be registered. Every three years, the constitution of these committees is changed and new members are nominated. This is supported by the Anti-Sexual Harassment Policy (Prevention, Prohibition & Redressal of Sexual Harassment of Women at Workplace) covering All female employees (regular, contractual, temporary, trainees) which ensures a free and fair enquiry process. During FY 2021-22, Two cases of sexual harassment were reported, which were resolved and no other cases are pending as on date.

Also, more than 100 workshops and awareness programmes against sexual harrasement were conducted.

For addressing the grievances of employees, NTPC has a time bound Grievance Redressal Mechanism for all employees at each project. The employee grievances are also captured through different forums like participative forums, communication meetings, employee organizational climate survey etc.

NTPC adheres to statutory and regulatory requirements related to payment of wages and benefits. We ensure that there is no violation of the rights of employees and provides statutory benefits like Provident Fund and medical facilities.

Human Rights Training

All employees and contractors are sensitised on Human Right related topics through structured training programmes.

	Employee Categories	2021-22	
		% covered	Man-hours
Permanent employee	Board of Directors and KMP	0.00%	0
	Top/ Senior management	4.76%	36
	Middle management	11.37%	5,934
	Lower/Junior management	11.88%	10,218
Permanent workers	Workmen	8.11%	4,872
	Total Permanent Employees	**100%**	**21,060**
Other than permanent employee	Fixed Term Employees	4%	246

Percentage coverage by training and awareness programmes on any of the NGRBC Nine Principles during the financial year (BRSR requirement)		
S. No.	Segment	Total number of training and awareness programmes held
1	Board of Directors and KMPs	0
2	Employees other than BoD and KMPs	5,790
3	Workers	77

Besides issues related to Human Rights for external stakeholders specially with respect to Project Affected Families (PAF), adequate transparency is maintained with a focused approach on consultation and participation. Special provisions for vulnerable communities also find a mention in the relevant policies. In addition to individual benefits, a comprehensive community development has been undertaken. Institutional mechanisms are also in place for Grievance redressal. Human rights are adequately addressed and possibility of any violation is minimal. Human rights clauses are included in all significant investment agreements and contracts.

NTPC regularly conduct monitoring of compliance with regulations as well as internal policies. During the reporting year, no complaints on Human Right related issues like child labour, forced labour at workplace were reported.

Security Practices

At NTPC, ensuring security for the workforce is our prime concern. We understand our responsibility for establishing and maintaining a secured working environment for all our installations, workforce, data and operations. This is being taken care of by deploying CISF at all units of NTPC as per norms of Ministry of Home Affairs. Similarly, ex-servicemen security agencies are deployed in the non-core areas in our sites like project townships, HQs, Offices etc. duly sponsored by the Directorate General of Resettlement, under Ministry of Defence, as per norms set by the DPE. GoI imparts training and refresher courses to these personnel in security systems and human rights aspects before their formal induction to the service.

Concrete steps are being taken for upgrading surveillance systems at all projects/stations by installing state-of-the-art security systems.

At NTPC, we have introduced CLIMS (Contract Labour Information Management System), a biometric labour attendance system for contract labours. Besides improving security, this has helped in monitoring and execution of labour payments and benefits.

People before PLF

People before PLF (Plant Load Factor)' is the guiding philosophy behind the entire gamut of HR policies at NTPC. We value our employee and believe that the quality of benefits for our employees is one of the motivation factor in improving employee retention and enhancing their productivity.

At NTPC, regular feedback is taken from employees by conducting annual employee satisfaction surveys through external agencies. The satisfaction index for FY 2021-22 was 79%. The purpose is to seek employee feedback on various systems such as satisfaction w.r.t safety and security, grievance-handling mechanism, organization commitment, monetary benefits, job satisfaction, welfare facilities, recognition and

appreciation among others. Through surveys, employee contribute towards improvement of various systems within organization by providing their valuable feedback.

With this perspective, we have introduced the work-from-home policy for our employees on pilot basis to increase employee motivation, convenience to work and better management of work/life balance.

Talent Management

At NTPC, we believe in holistic development of not just our product but also of our employees to give them an edge over others for their personal and professional growth. Given the global trend of increase in technology and innovation, it has been always been important to us to nurture our employees for the world class competence. We have been able to sustain emerging leadership through comprehensive learning and development programs. Our quest to keep the organization in tune with the emerging business is reflected in our new tag line for learning **"Learning at speed of business"**. During FY 2021-22, ₹ 20.78 Cr were incurred as Training & development Expenditure on standalone basis.

Our commitment towards a dedicated and comprehensive learning approach is driven through:

Senior Management training

Classroom training at NTPC PMI

- NTPC Power Management Institute (PMI), Apex L & D Centre at the corporate level
- 6 Regional Learning Institutes
- Employee Development Centers at each operating station

The effective chain of PMI, RLI and EDC's provide an effective learning grid to the employees.

We also promote international training and development opportunities for our employees. We have partnered with several eminent international institutions like Harvard Business School, Wharton Business School etc. on various subjects matters.

Our collaborations for holistic development:

- ISHA Foundation
- Art of Living
- Swami Sukhbodhan
- Brahma Kumaris

The objective of this initiative is to create an environment where employees and their families are motivated to deliver excellence not just as a professional but also in their personal lives.

Employee Training

	Employee Categories	No. of employee trained		Man hours	
		Male	Female	Male	Female
Permanent employee	Board of Directors and KMP	7	2	84	60
	Top/ Senior management	30	0	978	0
	Middle management	3,632	174	1,99,254	9,678
	Lower/Junior management	6,891	590	4,46,964	28,554
Permanent workers	Workmen	4,954	398	1,10,088	9,342
	Total NTPC Employees	**15,514**	**1,164**	**7,57,368**	**47,634**
Other than permanent employee	Other than Permanent Employees	397	114	64,410	27,000

Learning is one of our Core-Values. Recognizing the need for capability building for current and future roles, NTPC has set up a comprehensive training infrastructure comprising Power Management Institute (PMI) at the apex level, 7 Regional Learning Institutes (RLIs), a Safety Academy, the Employee Development Centers (EDCs) at the stations and Simulator training facilities.

L&D is actively engaged in making our people future ready in terms of technology, business acumen and leadership so as to unleash their full potential towards achieving the desired business outcomes in today's VUCA world. The initiatives/ programs are derived from business needs and designed to achieve the Company's strategic objectives and create value for stakeholders.

PMI has the state-of-the-art physical and digital infrastructure to impart learning in world class ambience. Its classrooms are equipped with modern facilities including smart boards, video conferencing and session-recording which supports

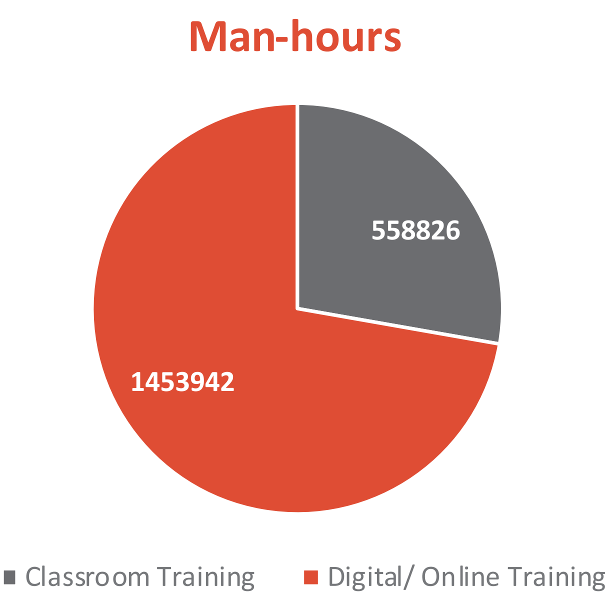
contemporary pedagogy. Delivery modes include classroom, simulators, online (web based and Video-Conferencing), Virtual Reality and eLearning with increasing emphasis on technology driven platforms. In fact in the wake of Covid-19, almost all programs were being delivered virtually on MS Teams / other such platforms.

Newly recruited Executive Trainees (ETs) undergo the Company's flagship ET training program of 1 year which involves on-the-job and simulator training besides technical, managerial and soft-skills modules. 2 ET batches were regularized during the year. Training of 4 batches including 1 all girls batch is currently underway. Planned Interventions (Foundation Course, Enhancing Managerial Competence (EMC) and Advance Management program (AMP)) of 10 days linked to career growth are provided at three identified stages of careers of executives along with job-rotation and transfer to ensure experiential learning. During the year 596 executives were exposed to the planned interventions. Total 2055 training programs were conducted during FY 21-22, resulting in a total of approximately 140416 learning man-days.

NTPC takes pride in being a people friendly organization and strives to ensure safe work places. Besides safety training for employees and contract workers, the company is imparting safety related certificate courses across the organization.

Further, NTPC has promoted NTPC Education and Research Society (NEARS) under the aegis of which NTPC School of Business (NSB) runs two AICTE approved programs namely, Post Graduate Diploma in Management (Executive) and Post Graduate Diploma in Management' (Energy Management) with academic support from IIM, Ahmedabad. The courses are designed to focus on energy management for sustainable development of the Indian economy.

Training Modes



Due to the pandemic in reporting year, maximum training were done through digital platforms.

Training on different aspect

Training topic/area	Male		Female	
	No. of partici-pants	Total hours of training	No. of partici-pants	Total hours of training
Code of Conduct (Bribery and corruption, PoSH)	679	6,589.6	85	828
Environment	492	6,162	57	618
Skill-upgradation	1,312	15,106.6	99	1,292.6
Supply Chain (C&M)	7	60.9	0	0

Programs for Skill Development

NTPC provides skill development trainings to its employees on regular basis. Programs for upgrading employee skills allow us to plan skills acquisition that equips our employees to meet strategic targets in a changing work environment. More skilled employees enhance our human capital and contribute to employee satisfaction, which correlates strongly with improved performance. For those facing retirement, confidence and quality of work relations is improved by the knowledge that they are supported in their transition from work to retirement.

Program for upgrading employee skills and transition assistance program

FY 2021-22		
Program name	No. of employee trained	Man hours
skills Management and lifelong learning	1,227	16,536
Advance Management Program	170	11,154
Enhancing Managerial competence	566	43,440
Foundation Course in General Management	326	22,854
Health Care and Ergonomics	2,487	20,100
Healthy Mind in a Healthy Body	344	3,438

Employee Categories	% of employees who attended skill development trainings	Average hours of training
Board of Directors and KMP	9%	12.00
Top/ Senior management	57%	34.56
Middle management	82%	1,248.96
Lower/Junior management	74%	3,358.93
Workmen	75%	888.78
Employees	35%	259

New Initiatives in FY'2021-22

1. Technical and safety modules (mandatory and non-mandatory) and Local management instructions (LMIs) customized as per work area and peculiarities of technology at location of posting have been assigned to 6215 O&M executives on the GpiLearn platform. They are required to complete at least the mandatory modules followed by assessments within a specified time-frame. This ensures bridging of functional competency gaps and acquisition of the required proficiency.
2. Procurement of Virtual Reality (VR) equipment, development of 50 VR modules (300 minutes) for training on Safety, Isolation and normalization of critical power plant equipments and train the trainer programs to facilitate training on VR.
3. Targeted Competency Development Programs on identified managerial competencies for those coming out as needing development on those competencies based on CPV assessment undertaken. 363 executives were covered during the year.
4. During the year 290 O&M executives underwent Samarth (job-rotation facilitation) training on the various standardized O&M modules. Similarly, 46 executives transferred to C&M and 51 executives transferred to RE underwent Samarth (C&M) and Samarth (RE) training, respectively. Samarth (Commercial) module was finalized.
5. 24*7 online Employee Assistance Program launched for all employees and family members. Includes unlimited phone/video/chat/e-counselling, assessments, recommendations, risk tagging, articles, videos, podcasts on Stress management, Coping mechanisms, Relationships, Parenting, Sleep, Diet & Nutrition, Grief, Anxiety and Restlessness, etc.
6. Training on Operation Training Simulators through remote besides off-line simulator training.
7. Considering the future of work, new age digital courses like AI, IoT, Block-Chain etc. was made available through the NASSCOM-MeITY Future Skills platform.
8. Special program for selected executives through IIT Bombay on Energy Storage (2 batches), Solar Thermal Systems (1 batch) and Carbon Capture (1 batch).
9. Preparatory course for BOE certification examination in three batches. First class Mining Operator preparatory course for 20 executives.

In the L&D domain, NTPC has received the globally acknowledged ATD Best Award for 2017, 2018, 2019, 2020 and 2022, Brandon Hall HCM Excellence Awards 2019, 2020 & 2021, the nationally acclaimed ISTD award for Innovative Training Practices for 2016-17, 2017-18, 2018-19 and 2019-20 and the BML Munjal Award in the Sustained Excellence category for 2018 (runner) and 2019 (winner).

Health & Safety

We at NTPC are committed to provide a safe, healthy and hygienic work environment to all our employees and contractor workers. Organizational safety is a part of our core values and we precisely inculcate safety awareness among our workforce. Striving for zero-incidence at our workplace, we have a put in place a set of procedures and safety rules which is applicable to all plants and other locations which has to be mandatorily followed. 32 NTPC operating stations are ISO 45001 certified and 14 stations having OHSAS 18001 will migrate to ISO 45001 in due course. Also, baseline Audit for international level NOSA accreditation in Safety and Environment have been done at four NTPC stations. NTPC Solapur station has received 4 star NOSA safety award.

Our robust occupational health and safety management system covers all of our operating stations and projects and 100% of the total workforce. Every year, internal safety audits by Safety Officers and external safety audits by reputed organizations are carried out as per statutory requirement for each Project/ Station.

NTPC safety Policy

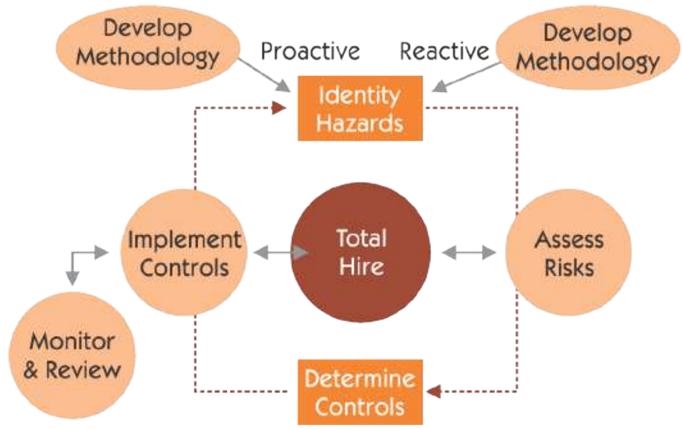
NTPC has made a policy commitment to comply with applicable legal and other safety and occupational health requirements that relate to its activities. This element provides guidance on achieving and maintaining compliance to all legal, regulatory or other voluntary requirements for NTPC as a company or, the Project may need to or want to subscribe to.

Both Safety framework and Safety Manual are our major and comprehensive health and safety guide. These documents are collection of information, instructions, policies, participative fora, safety checklist, statutory documents and procedures intended to ensure the safe operation of any tools, machinery, chemicals, , as well as safe conduct in the workplace.

Hazard Identification, risk assessment and incident investigation

All projects apply the process of safety risk management and deploy the controls that are necessary to reduce the risks of incidents. Both proactive and reactive processes are deployed in safety risk management. Proactive processes are put into practice for hazard identification and safety risk management.

Reactive Process for hazard identification and safety risk management includes both formal and informal incident investigation results and using Incident Recall. The interlinked Safety Risk Management comprising of hazard identification, risks assessments, incidents analysis and incident recall is depicted below:



In accordance with our safety principles, we have developed a comprehensive and centralized Hazard Identification, Risk Assessment and Control (HIRAC) document for our Coal, Gas, and Hydro stations. Station-specific HIRAC documents are prepared to identify site-specific risks and control procedures. Strategy for safety implementation is made in the form of Operation Guidance Notes (OGNs), Local Management Instructions (LMIs), Job Safety Analysis (JSAs) and Disaster Management Plan (DMP).

An effort has been made to identify hazards associated with the activities related to the power generation. To make a comprehensive hazard identification, input was taken from historical accident and incident data from different (Coal, gas and Hydro) stations. To enrich this exercise further data of other power utilities were also referred. The hierarchy of controls of hazards followed in preparing this document is elimination of hazard, substitution of hazard, engineering controls, administrative controls and PPEs in respective order. These documents serve as overall input to the stations while preparing station specific HIRAC document. Also, this is useful for capacity building of line executive or new entrants.

Incident Investigation:

Our aim is to reach the target of zero injuries and incidents across all our operating stations. We have a formal process for investigation of all accidents to examine each case in detail and in depth to find out the causes of accidents, the extent of losses caused, the circumstances / individuals responsible and to obtain considered recommendations for prevention of recurrences in similar or related nature of accidents. Incident investigation is done as per chapter 1a 'Guidelines for Constitution of Enquiry Committees & Conduct of Enquiries' of as per NTPC Safety Manual 2015.

NTPC Safety Framework:

NTPC safety framework system has been rolled out across company. This Framework is a guidance document to the various functions and roles. It contains a set of expectations that ensure that all efforts are aligned with the overall Policy and objectives of NTPC. The expectations are expressed broadly in the form of components – Safety Policy, Safety Risk Management, Safety Assurance and Safety Promotion. This Framework also covers functional implementation expectations: what the different functions & roles must do to implement a robust system and provides essential guidance and how it will be accomplished. To facilitate such guidance, where required, components are divided into smaller Elements and Processes.

Overview of the NTPC Framework

Safety Framework flows from Safety Policy

Fire Safety Training by CISF fire wing

SUSTAINABILITY REPORTING

Component 1. Safety Policy and Objectives

The Chairman & Managing Director is responsible to issue and review the Safety Policy periodically with the objective to clearly state the Management's and the Company's policy on occupational health & safety. The Policy thus laid out, serves as the foundation for the NTPC Safety Framework, its Components and Elements. The Business unit, functional and individual employee goals and objectives are typically aligned to those of the overall organization.

Component 2. Safety Risk Management

The objective is to ensure that a formal system of hazard identification is in place so that the activity or, situation posing the risk may be avoided, accepted, reduced, shared, or transferred, depending on the facts and circumstances.

Component 3. Safety Assurance

The objective is to ensure that all projects comply with safety policy, rules, procedures, legal requirements in achieving safety targets and objectives, ensure continual improvement and effectiveness of implementation of the safety framework; through regular inspections, audits and reviews, in order to provide assurance that procedures are followed, and appropriate controls are in place. Safety Assurance also includes Contractors and Contract Control to ensure Safety Policy objectives are achieved effectively.

Component 4. Safety Promotion

The objective is to promote Safety as a core value with practices that facilitate & support a sound safety culture. Elements of such promotion include communication, training & promotional activities.

Development of Safety Culture: Training and Information

We promote collaborative and participative approach by fostering employee participation, consultation, and communication on health and safety aspects. To be able to effectively carry forward and institutionalize such participatory approach across all levels and functions, training programs for our employees and contract workers are conducted on a regular basis.

Participative Fora:

1. **Safety Task force for O&M:**

   Safety Task Force is constituted on rotation on weekly basis for O & M area at each station. They are given specific terms of reference along with powers to stop work in case any unsafe item is detected.

2. **Safety Committees:**

   Worker's participation in safety management as per section 41 of factories act is done along with management representative. The safety committee meeting being held on quarterly basis to discuss the safety and health issues of station and measures to mitigate these issues.

Safety Training

All the agency workers are given safety induction training during their initial employment. In addition, 23 job specific training modules are also prepared, and the agency workers are given the training as per their job requirement. Every year efforts are made to ensure that all our workforce undergo these safety trainings. The training programs covers topics such as electrical safety, material handling, working at height, road safety, and chemical handling, etc. These topics relate to the key work-related hazards and risks for our business, apart from topics pertaining to general operations and best practices on occupational health and safety.

To imbibe emergency response procedures into our routine systems, we have successfully established NTPC Safety Academy at Unchahar, where our employees and stakeholders are provided hands-on training on safety and emergencies. A safety committee at each of our operating stations has been constituted as per the Factories Act.

BUILDING BLOCKS ON NTPC SAFETY CULTURE

FOCUS ON LEAD INDICATORS
- Trainings
- Pep Talks
- Capturing Deviations
- Reporting Near Misses
- Daily Random PTW Checking

REINFORCING OWNERSHIP
- KOM: SURAKSHA MITRA
- HOD & HOP enhanced involvement
- Routine & Surprise site visit by HODs/ROs
- Swearing-In Ceremony
- Zone Leader- Role clarity

STRENGTHENING OF PROCESSES & SYSTEMS
- SURAKSHA App
- SAP Integrated Safety Framework
- Action Plan Compliance System
- PTW system strengthening
- HOP Review as per standard Format
- PMS- Safety KPAs

CAPABILITY DEVELOPMENT
- Employee Training
- Auditor development programme
- SURAKSHAVALI
- Job specific training module (Contractor's Workers)

AUDITS, VISITS & PROMOTIONS
- Internal Audits effectiveness & compliance
- External Safety audit centrally, through reputed agencies
- Surprise Site Visits
- Monthly Theme based Safety Celebrations
- Short films/audio clips

Safety Training Topics	
Post Accident Management & Legal Implications	OHSAS / IS 18001 Risk Assessment and Safety Audit
Safety in Construction and erection including electrical safety, scaffolding and working at heights.	Safety in storage, handling and use of Chlorine and other hazardous chemicals
Fire Safety	Disaster Management plan & Emergency Response Functions
Hazards identification in Power Station	First Aid
Working at height and falling objects	Safety in Elevators, lifts, hoists etc.
Transportation and Road Safety	Confined Space Entry Procedure
Electrical Safety	Work Permit Procedure

Workers taking safety pledge

Safety Trainings

Type	No. of Prog.			Man hours			No. of persons trained			Avg man hour per employee		
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2019-20	FY 2020-21	FY 2021-22	FY 2019-20	FY 2020-21	FY 2021-22	FY 2019-20	FY 2020-21	FY 2021-22
NTPC Employees	1439	683	1603	119495.6	101595	68769	17822	12190	11789	6.70	8.33	5.83
Contractor Workers	5865	7153	9701	919529.2	1195080	1297459.25	110685.4	173971	214097	8.31	6.87	6.06
Total	**7304**	**7836**	**11304**	**1039024.8**	**1296675**	**1366228.25**	**128507.4**	**186161**	**225886**	**8.09**	**6.97**	**6.05**

Contractor Safety Programs

Safety is integrated in tender processes and the performance of companies is monitored both on a preliminary level, by means of the qualification system, and during contract execution through a large number of control processes and tools such as the Supplier/contractor Safety Performance evaluation criteria. Our Supplier/contractor Safety Performance evaluation contains following controls:

- Contractor safety assessment
- Contractor risk control
- Worker role competence
- NTPC's CLIMS (Contract Labor Information Management System) system are the criterion for entering or gate pass system at site.
- The contractor shall ensure that all personnel working at site having a photo Identity card before they are engaged for any work and properly mentioned details like validity, Category/designation and work area etc. This ID card should be issued only after ensuring their screening test, medical fitness and safety induction training. If any agency worker found to be involved in unsafe act, they are counselled to follow proper safety behaviour. With 03 nos of repeated unsafe acts, the worker is debarred from duty.
- To strengthen the existing Safety Rules for O&M/ Construction and Erection works and to create a safe environment during execution of works at various projects of NTPC, various safety rules have been incorporated in Bidding Documents. These Safety Rules lay down the safety requirements for safe execution of project activities, responsibilities of the Contractor, and all concerned involved in Construction and Erection. The Contractor, including his sub-contractors, while executing the Works, shall strictly comply with these Safety rules and statutory requirements (including amendments thereof), as applicable, in respect of safety of personnel, equipment and materials at site area under execution of the Contractor.
- The provisions pertaining to Penalty/Reward for Safety are specified in bidding document. Any violation of the contractual conditions in question will produce specific penalties up to termination of the contract and/or suspension of qualification.
- Drinking of Alcoholic beverages is strictly prohibited. Employees under the influence of any intoxicants, even to the slightest degree, shall not be permitted to remain at work. Each contractor should maintain 'breath analyzer' to determine the intoxicated workers at site.

  In order to strengthen the existing Safety Rules for O&M/ Construction and Erection works and to create a safe environment during execution of works at various projects of NTPC, the following safety rules have been incorporated in Bidding Documents.

- Concerned site and the Contractor shall establish Site regulations setting out the rules to be observed in the execution of the Contract at the Site and shall comply therewith. The Contractor shall prepare and submit to the Employer, with a copy to the Project Manager, proposed Site regulations for the Employer's approval, which approval shall not be unreasonably withheld. Such Site regulations shall include, but shall not be limited to, rules in respect of security, safety of the Facilities including gate control, sanitation, medical care, and fire prevention.
- NTPC has formulated Safety Rules for Construction & Erection of Power Plants and is available in public domain. These Safety Rules lay down the safety requirements for safe execution of project activities, responsibilities of the Contractor, and all concerned involved in Construction and Erection. The Contractor, including his sub-contractors, while executing the Works, shall strictly comply with these Safety rules and statutory requirements (including amendments thereof), as applicable, in respect of safety of personnel, equipment and materials at site area under execution of the Contractor.
- The provisions pertaining to Penalty/Reward for Safety are specified in bidding document. A BOQ item namely 'Amount linked to Safety Aspects/ compliance to Safety Rules' are specified in the Price Schedules wherein Contractor will be required to quote an amount subject to minimum percentage (as specified in the Bidding documents) of Service portion of Contract (i.e. Civil plus Installation/ Erection plus Structural Works). The aforesaid minimum percentage shall be specified by the Package Coordinator (C&M executive handling the Contract Package) based on the estimated value (without taxes and duties) of package as under:

Packages having estimated value (excluding taxes & duties)	Minimum percentage to be specified for Safety Aspects/ Compliance to Safety Rules
Supply cum Erection / Supply cum Erection cum Civil Packages	
More than ₹ 3000 Crore	1%
More than ₹ 1000 Crore but less than or equal to ₹ 3000 Cr	1.5%
More than ₹ 500 Crore but less than or equal to ₹ 1000 Crore	2%
More than ₹ 100 Crore but less than or equal to ₹ 500 Crore	2.5%
Less than or equal to ₹ 100 Crore	5%
Civil Packages / Services Contracts	
More than ₹ 100 Crore	1%
Less than or equal to ₹ 100 Crore	2%

Any violation of the contractual conditions in question will produce specific penalties up to termination of the contract and/or suspension of qualification. Dedicated guideline has been hosted at NTPC's tender website http://www.ntpctender.com.

Training for Contractor's workers: -

Training programme for contractor's employees are being conducted at all sites on regular basis covering all relevant topics on Occupational Health and Safety. Recently corporate safety has developed standard safety induction training module for uniform implementation across NTPC. Safety induction training is must before issuing gate pass for plant entry. 23 Job specific training modules have been identified and being developed. Corporate safety is developing trainers on these modules from each project, so that further job specific training can be arranged at projects with a uniformity across NTPC. Safety pep-talk and toolbox talks are provided to workers before start of the job by supervisor / engineer so that workers are made aware about the hazards involved in the job.

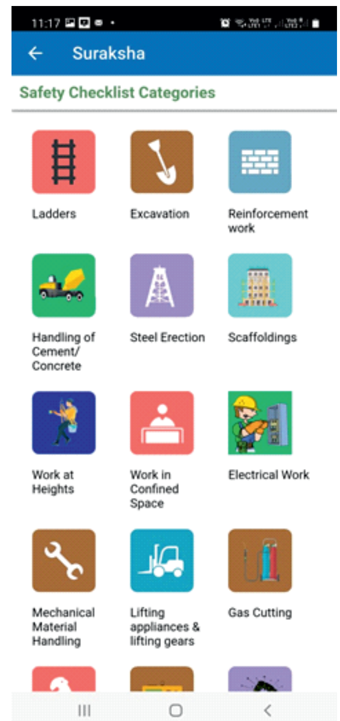
Work Related Injuries

All work related injuries are reported as per the established system of accident reporting in the NTPC Safety manual. All incidents resulting into injury are investigated as per the established procedure in NTPC Safety manual. The gist of fatal accidents and reportable accidents are uploaded at Safety intranet. Details of the accident after investigation is shared through meetings (virtually/ physically) with all projects so that cause and recommendations can be communicated for timely action.

All work related injuries are also shared with senior persons in each project through mobile application for immediate corrective action if required.

NTPC Safety App: Suraksha

Corporate safety in consultation with Corporate IT has launched mobile app "Suraksha" which has a facility of reporting of work related injuries and incidents. Data of the app is fetched in SAP in real time basis. Capturing of latest data helps analysis of work related injuries and in taking corrective action to prevent their recurrence in NTPC. Till date more than 11000 employees have downloaded and using this app.



Health

Our NTPC hospitals provide round the clock service to our employees and their dependents across locations. We also have empaneled 250+ specialty and super specialty hospitals across approx. 25 cities/towns for providing specialist treatment to our employees. Ambulances equipped with Advanced Life Support systems are available at power plants to cater to medical emergencies. 100% preventive medical checkup is mandatory for all employees. Also, various lectures & camps are organized through specialists on medical & lifestyle regularly for greater awareness. The organization works for holistic welfare across physical, mental, and spiritual/purposeful wellbeing through conduction of several programs like Snehal, Kshitiz, Sparsh, etc.

In this, we heal our people spiritually, Mentally and physically by organizing various programs involving yoga and meditation, therapies, and counseling. We organize different awareness programs to teach them work-life balance to generate healthy habits, ergonomics, etc. and we also ensure the involvement of our employees in such activities.

Occupational Health Services

Adequate medical facilities have been established at site as required under statutory provision like First aid centre, Ambulance room, qualified medical doctor etc. Annual health check-up of employees and their spouse is being conducted annually. To minimize the risks, regular monitoring of the workplace for hazards like dust/coal dust, gas or vapor, illumination, noise- level is carried out and trend analysis is done. We also regularly hold awareness sessions for our employees and contract workers on industrial hazards, occupational diseases, lifestyle modifications etc.

Workers Related Ill Health

No incident of work-related ill health or occupational disease case were recorded during the reporting year. Further, no legal cases or potential risks related to health and safety including diseases and judgments affecting members of the public were recorded.

Work place monitoring for work related ill health hazards like Dust/Coal dust , Gas or vapour, noise level etc. is done and record is maintained. Actions to mitigate these hazards are taken accordingly.

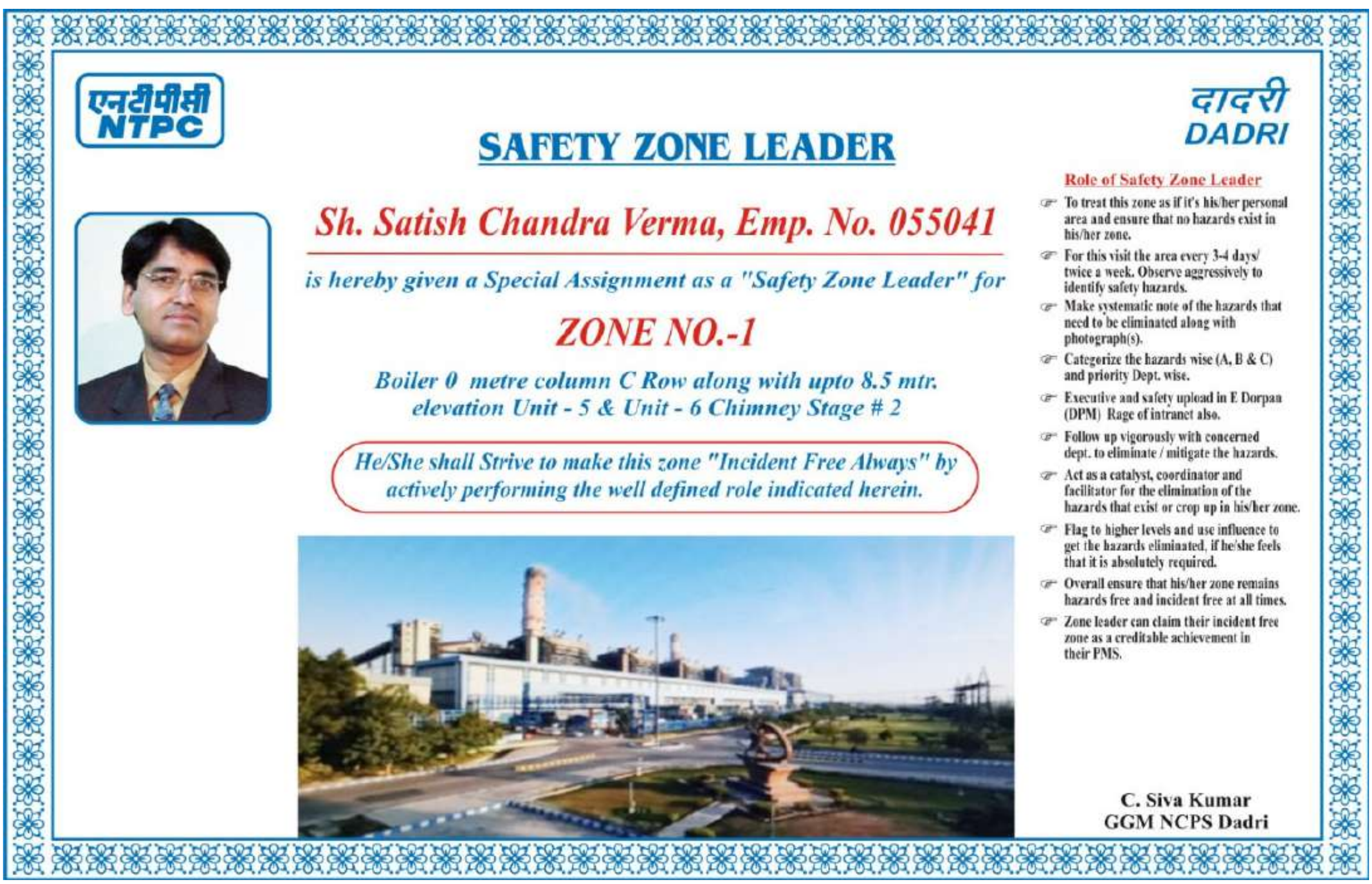
Emergencies Management

In line with our long-term goals, we have established effective engineering controls at all our stations to indicate and monitor emergency situations at our sites. Detailed emergency plans have been developed at all stations as per statutory provisions.

Responsibilities are assigned to all concerned to handle emergency situations. We conduct regular mock-drills at our stations to check the healthiness of the System and procedures. Observations/suggestions, pursuant to such drills are complied with. We regularly conduct awareness programs on disaster management plan through in-house and external expert faculties.

Safety Indicators

There is a robust incident reporting system across NTPC which is closely monitored in terms of Lead and Lag indicators. Since activities representing Lead indicators are proactive in nature, NTPC gives due importance in promoting such activities. They help in identifying potential hazard in terms of unsafe



Safety Role Assignment

condition, unsafe act and further eliminating them. This gives the right input and direction to us in improving safety culture towards progressing to incident free workplace.

Lead Indicators	Lag Indicators
Deviations	Fatal
SOV+CFTV+ZLSV	Fire Incidents
Near Miss	First-Aid
Training	Non-Reportable
Pep Talk	Reportable
Reward & Recognition	

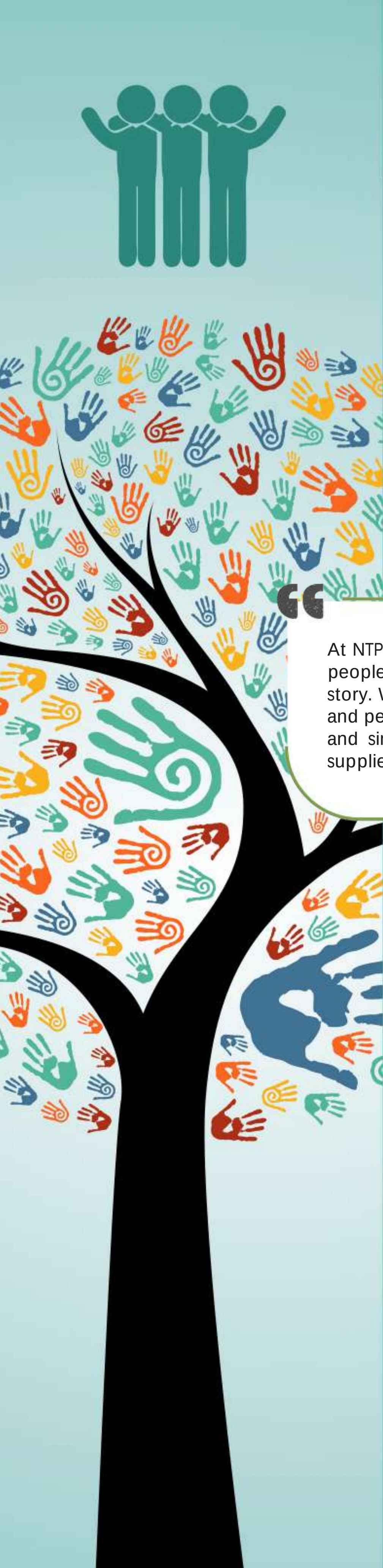
Type	No. of Persons employed			Man hours			Reportable Incidents						Total Man Days Lost		
							Fatal			Non-Fatal					
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2019-20	FY 2020-21	FY 2021-22	FY 2019-20	FY 2020-21	FY 2021-22	FY 2019-20	FY 2020-21	FY 2021-22	FY 2019-20	FY 2020-21	FY 2021-22
NTPC Employees	19,139	18,552	18,817	4,80,83,520	4,67,13,616	4,74,23,470	5	1	1	0	4	3	30,000	6,120	6,147
Contractor Workers	92,420	96,996	1,06,662	23,16,90,239	24,19,37,544	26,49,12,380	18	6	4	67	21	18	1,09,421	37,335	36,962
Total	**1,11,559**	**1,15,548**	**1,25,479**	**27,97,73,759**	**28,86,51,160**	**31,23,35,850**	**23**	**7**	**5**	**67**	**25**	**21**	**1,39,421**	**43,455**	**43,109**

Frequency Rate (FR)			Incident Rate (IR)			Recordable Injury Rate		
FY 2019-20	FY 2020-21	FY 2021-22	FY 2019-20	FY 2020-21	FY 2021-22	FY 2019-20	FY 2020-21	FY 2021-22
0.10	0.107	0.084	0.26	0.270	0.213	1.29	0.90	0.15
0.37	0.112	0.083	0.92	0.278	0.206	0.37	0.11	0.22
0.32	0.111	0.083	0.81	0.277	0.207	0.53	0.24	0.20

* Rates calculated on 1,000,000 hours worked

No. of High Consequences Injuries			Rate of High Consequences Injuries		
FY 2019-20	FY 2020-21	FY 2021-22	FY 2019-20	FY 2020-21	FY 2021-22
0	0	0	0.00	0.00	0.00
0	0	1	0.00	0.00	0.00
0	0	1	0.00	0.00	0.00

No. of Deviations			No. of Near Misses		
FY 2019-20	FY 2020-21	FY 2021-22	FY 2019-20	FY 2020-21	FY 2021-22
1,02,833	90,301	68,429	729	1,397	2,117



SOCIAL CAPITAL

Major Highlights of FY 2021-22

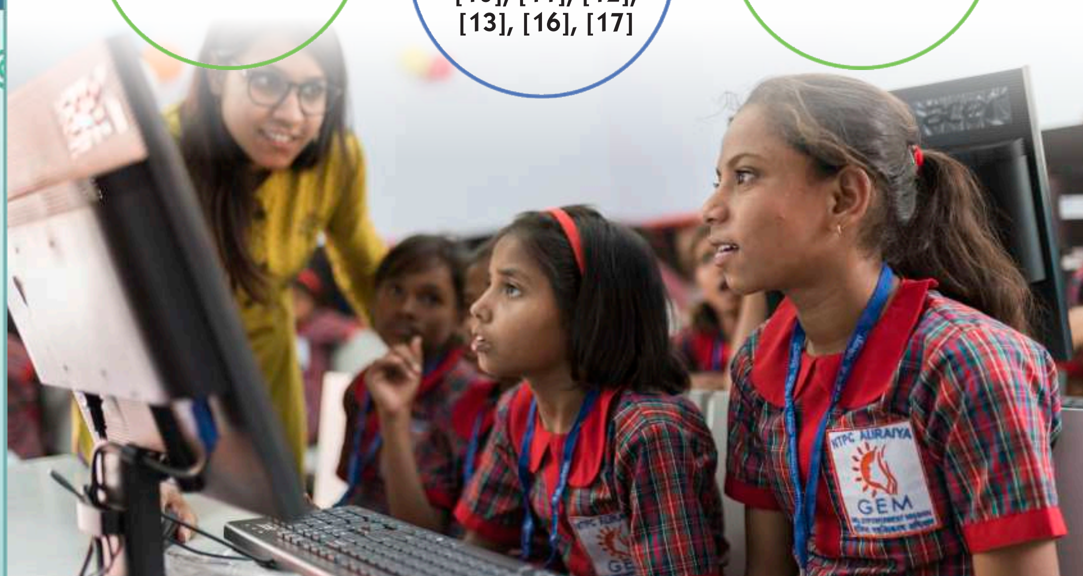
- 40% + procurement from MSEs
- 98% indigenous purchase in value.
- 96.6% Customer Satisfaction Score
- 101% realization of current bills
- ₹ 419 Cr spent towards group CSR activities
- 20 Lakh lives touched through CSR works

"At NTPC, we put our partnerships ahead of profits. We consider people and not production as the cornerstone of our growth story. We work to ensure our progression remains people-driven and people-centric. We strive for equitable, inclusive, sustainable, and simultaneous growth for our communities, customers and suppliers."

Material Topic(s)
[9] [13] [11]

Target SDG(s)
[3], [5], [8], [10], [11], [12], [13], [16], [17]

NGRBC Principles
[2] [4] [7] [8]



Social Capital

Related Sustainability Topics

- Ethics and Integrity
- Customer satisfaction and loyalty
- Indigenous people's rights
- Sustainable supply chain
- Disaster management
- Land acquisition
- Community engagement

Risks mapping:

- Regulatory & legal
- Safety, security of people and property
- Natural/ manmade disaster
- Sustaining realisation

Relevant GRI Indicators:

- 102-9
- 102-13
- 102-21
- 102-40,41,42, 43,44
- 203-2
- 204-1
- 205-1
- 205-2
- 205-3
- 206-1
- 308-1
- 308-2
- 407-1
- 413-1
- 413-2
- 414-1
- 414-2
- 415-1
- 416-1
- 416-2
- 417-2
- 417-3
- 418-1
- 419-1
- G4-DMA
- EU22
- EU25

Reference to Other Frameworks:

- IPIECA: HS4, SE1, SE2, SE3, SE4, SE5, SE6, SE7, SE9, SE13, SE14
- NVG Principle: 2,4,7,8
- WBCSD

At NTPC, we aim to create shared value and maximize it for all stakeholders – Shareholders, Employees, Customers, Suppliers, Regulators and the Community. Our Core Values and transparent Corporate Governance practices help us in our endeavor to meet the expectations of our stakeholders.

Our Finance, HR, Commercial, CSR, R&R, and C&M functions are at the forefront of our interactions with most stakeholders. As a responsible Corporate citizen, we incessantly endeavour towards creating synergistic and symbiotic value across our value chain to enhance our Social, Environmental and Economic performance.

Our Customers

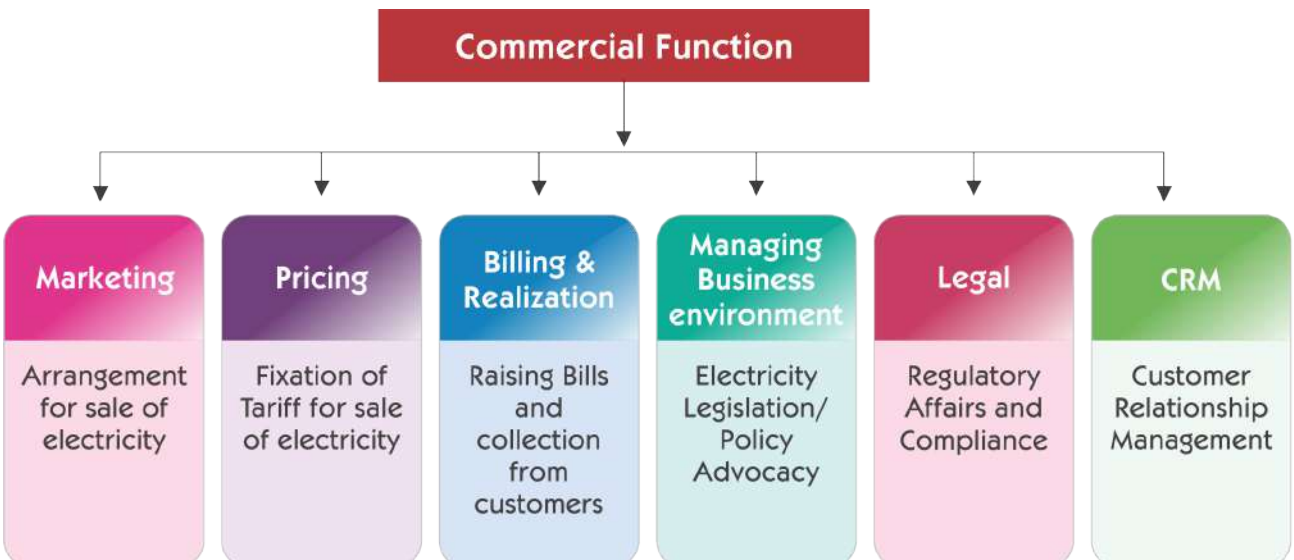
Customer Engagement

Customer-centricity is one of the keystones of our business value chain. We value our relationship with the customers and recognize Customer Focus as one of our core values. We have an elaborate system of Customer Relationship Management (CRM), through which we reach out to our customers to collect their valuable feedback/ experiences/ expectations using regular structured interactions including support services and trainings. Our Commercial Department, through a multi-tier structure, is the interfacing department with our customers.

Following are the key features of the NTPC Customer Relationship Management System:

i. **Customer Support Services:** Under Customer Relationship Management System, NTPC offers support services to its customers in the Technical and Managerial areas as per the specific requirements of its customers. Customer Support Activities in the form of Workshops/Seminars are being organized for the customers in different functional areas like O&M, Efficiency, HR, IT, Finance, etc. The objective is to share NTPC's expertise and best practices with its customers.

ii. **Training to Customers at NTPC's Training Facility:** Customer official's participation in various Technical and Managerial



Training Programs, being organized at our Power Management Institute, Noida for knowledge updation, is provided on free of cost basis.

iii. **Interactive Forums:** As part of the CRM initiatives, NTPC has implemented following forums for regular interaction with customers and discuss the general and specific customer-related issues, including issues related to Sectoral development, Sustainability, Efficiency, Environmental protection etc.:

- **Annual Regional Stakeholder and Customers Meets** are organized at regular intervals to provide a platform for interaction with the top-level officials of our beneficiaries.
- **Regional Power Committee / Commercial Committee/ Operation Coordination Committee Meetings:** NTPC makes it a point to regularly participate in all Regional Power Committee Meetings, which have representation of all customers of the region.

*Refer to pages 207-208 Report for specific details on stakeholder engagement.

Senior NTPC management at Customer meet of Eastern Region, Puri

- **Business Partner Meets** organized for specific Customer to facilitate interaction at working level and provide opportunity to discuss specific issues.
- **Meeting of Regional Executive Directors** with Head of customer organizations.
- **Day-to-day interaction with SEB Managers** (NTPC Officials posted at SEB headquarters) for understanding and resolving the issues.
- **Specific issues-based interaction with customers and stake holders on major policy initiatives or sectoral reforms.**

These meetings provide us a good platform for more interaction and sharing of experiences for mutual benefits. Based on the feedback received from customers, NTPC provides various support services to them, identifies potential areas of collaboration, and share each other's best practices.

We have also put in place a Customer Satisfaction Index (CSI) survey system to gather customers' feedback through a survey and respond to their requirements. As per the CSI survey conducted in FY 2021-22, 96.6% of our customers are satisfied and there are no complaints from customers. However, as part of the Tariff determination process under the overall Regulatory System, different cases have been filed by NTPC against CERC/Customers or filed at the Appellate Tribunal/ Courts by different beneficiaries against NTPC/CERC. Total number of pending complaints against NTPC by SEBs in APTEL or court is 100 as of date. We are working diligently to meet the expectations of all customers and aiming to improve the score further.

NTPC makes it a point to participate in all Regional Power Committee Meetings, Technical Coordination Committee meetings, Commercial Committee meetings, and Operation Coordination Committee Meetings, regularly organized by respective Regional Power Committees, which has representation of all customers of the region. These meetings provide a forum for feedback regarding current requirements of the customers. Customers attend these meetings along with concerned functional executives of NTPC from such areas like Commercial, Operations, etc. and issues pertaining to the respective areas are discussed and resolved to the mutual satisfaction of customers and NTPC.

Some key issues discussed during the interactions/meetings are

- Merit Order Operations
- Flexibility of Generations
- Implementation/Compliance of New Environmental norms.

Issues raised by the stakeholders are being addressed and considered in finalizing the issues. NTPC also continuously engages with the Regulators, and other Government agencies at the Central and State levels at relevant occasions to protect its interests and resolution of issues. To help our customers, we have developed a portal for monitoring the Merit Order violations and daily reports launched in the digital mode, which is available through Mobile also.

Customer Data Privacy

NTPC maintains data pertaining to billing energy to Discoms/ Customers to which energy is supplied available from Monthly Regional Energy Accounts issued by RPC (available on the website of RPC), tariff details of NTPC stations as determined by CERC and communication addresses of Discom Officials, which are already available on the websites of the Discoms and are in public domain. So there is no issue relating to the privacy of data. Moreover, the energy bills are generated through ERP-SAP software by NTPC and delivered to the authorized person of Discom as per the Power Purchase PPA.

No complaints have been received concerning breaches of customer privacy, neither have any leaks, thefts, or losses of customer data has been identified during FY 2021-22.

Health and safety impacts of our product

NTPC sells electricity to Discoms at busbars of its generating stations, which is then transmitted through the grid owned by Power grid (CTU/STU) and finally supplied by the Discoms to end consumers through its distribution network. As a responsible power producer, we offer technical and managerial support services to our clients to the best of our capabilities, as required, even though we are not directly involved in the businesses of transmission and distribution. We offer various customer support activities in different areas, including health and safety aspects to the customers in the form of workshops and seminars.

We take due care in displaying safety instructions in the local languages. Our sole product cannot be labelled as electricity due to its intrinsic nature. However, NTPC has been complying with the Grid Code and Grid standards - national and international - wherever applicable.

No incidence of non-compliance with regulations and voluntary codes concerning the health and safety impacts of our product and services during their lifecycles was reported.

Marketing Strategy

Our marketing strategy is largely managed by our commercial function for Power Generation business and by Consultancy and Business Development wing for other avenues. Commercial department analyses the demand and supply situation in the region and markets power from new proposed Projects.

We approach all State Power distribution utilities of the region, for getting requisition of power from the new proposed Station, based on which viability of the project is studied further. Based on the consent received, Power Purchase Agreements are signed with the State Power Utilities. Allocation of power from the new Generating Station to the respective willing customers (state utilities) is done by the Ministry of Power, Government of India.

Witnessing the rising demand for clean and sustainable energy, we have been investing and redirecting our strategy to provide renewable energy to interested customers. We are significantly reducing the dependency on coal and gas through renewable power infusion.

However, due to the recent thrust on renewable energy generation in the country, there is a probability of a reduction in scheduled generation from coal/gas plants due to renewable power infusion as a result of the addition of renewable capacity, Renewable Power Obligation and subdued demand of electricity. Our commercial function makes the un-requisitioned surplus power thereof available to interested consumers through Power Exchange or bilateral agreement. We have created an online portal with direct connectivity to customers/ beneficiaries and RLDC for ease of transactions.

During FY 2021-22, no non-compliance concerning marketing communications was reported.

Our Suppliers

NTPC's business model consists of procuring physical assets, raw materials and services for our production processes and subsequent evacuation of power through our intermediate customer to the end-user. We are committed to augmenting the supply chain sustainability and reducing negative externalities of business operations. We seek to institute triple bottom line approach in our value chain and encourage our supply chain partners to follow the best environmental, social and governance (ESG) practices in their business operations.

No. of suppliers (Total company wide)

Supplier Category	No.
Domestic	13,455
Foreign	3,917
Total	17,372

Apart from above, our other JV and Subsidiary companies have vendor base of 1269.

Vendor enlistment statistics

We have a process of onboarding for all the vendors through pre-qualification, which ensures vendor credentials and capability to execute assignments; adherence to health, safety, and environment norms; and compliance with statutory requirements, including human rights. We measure the performance of the vendors and provide regular and transparent feedback for their improvement and development. The enlistment of vendors is done for a period of three years and the list of vendors is updated periodically to reflect the market scenario with regard to the presence of vendors for material and services.

Vendors Enlistment Status

Groups	Total Applications Received	Total Vendors Enlisted
Material Enlistment Groups (MEG)	655	585
Contract Enlistment Groups (CEG)	430	2,485
Total	1,085	3,070

We believe in maintaining transparency in our procurement process. We have a dedicated Shared Services Centre (SSC)

NTPC Management at C&M Meet

for procurement that provides a uniform platform for collating goods and services requirements of all plants and coordination with the suppliers/contractors, resulting in benefits of economies of scales, more favourable conditions, and long term commitments. The platform provides better control and compliance with various policies and guidelines. Currently, there is 1 shared service centres catering to the procurements of over 40 of our sites.

As a result of the SSC, we are able to screen all our vendors continuously for any negative impacts on the environment, society or any potential human rights violations. Assessments are carried out through physical inspections as well. Only those suppliers that clear our screening process are pursued any procurement opportunity. We maintain a policy of not engaging with/terminating business relationships with the suppliers who cannot clear our screening process.

Human Rights provisions are built into our bidding documents for supply cum erection and civil packages invited on competitive bidding basis covering our suppliers and contractors. All our supply chain partners are committed to ensuring that no instances of child labour or any form of forced or compulsory labour take place at any of our vendors' site locations. We have a defined set of policies and frameworks to ensure that no human rights of local indigenous communities are violated throughout our supply chain.

We practice a fair, equitable, and transparent tendering procedure. We are also actively soliciting feedback from our vendors to continuously improve our vendor management systems for improved vendor relationships.

Following actions have been taken to adjust payment policies and procedures

1. NTPC has launched a vendor payment portal for all the suppliers/contractors for bill tracking for the supply of goods and services rendered.
2. NTPC has now on-boarded all the three TReDS platforms approved by the Reserve Bank of India. TReDS aims to provide liquidity to the MSME seller by the financiers present on the TReDS platform at very attractive interest rates, without a recourse, much before the due date of payment.
3. In line with the Government of India's Digital India initiative, guidelines have been issued regarding the implementation of 100% digital invoice submission in NTPC.

Indigenous Focus

To encourage Indian bidders and suppliers, provisions regarding price preference and deemed export benefits are stipulated in the bidding documents as per the extant policy of the Government of India. Our procurement process promotes indigenous goods by giving preference based on domestic content in the procured goods. We have consistently maintained the value of our indigenous purchase at more than 96% of the total purchase from FY18 onwards.

NTPC is giving purchase preference to local suppliers/ procurement from local suppliers in line with provisions of 'Public Procurement (Preference to Make in India).

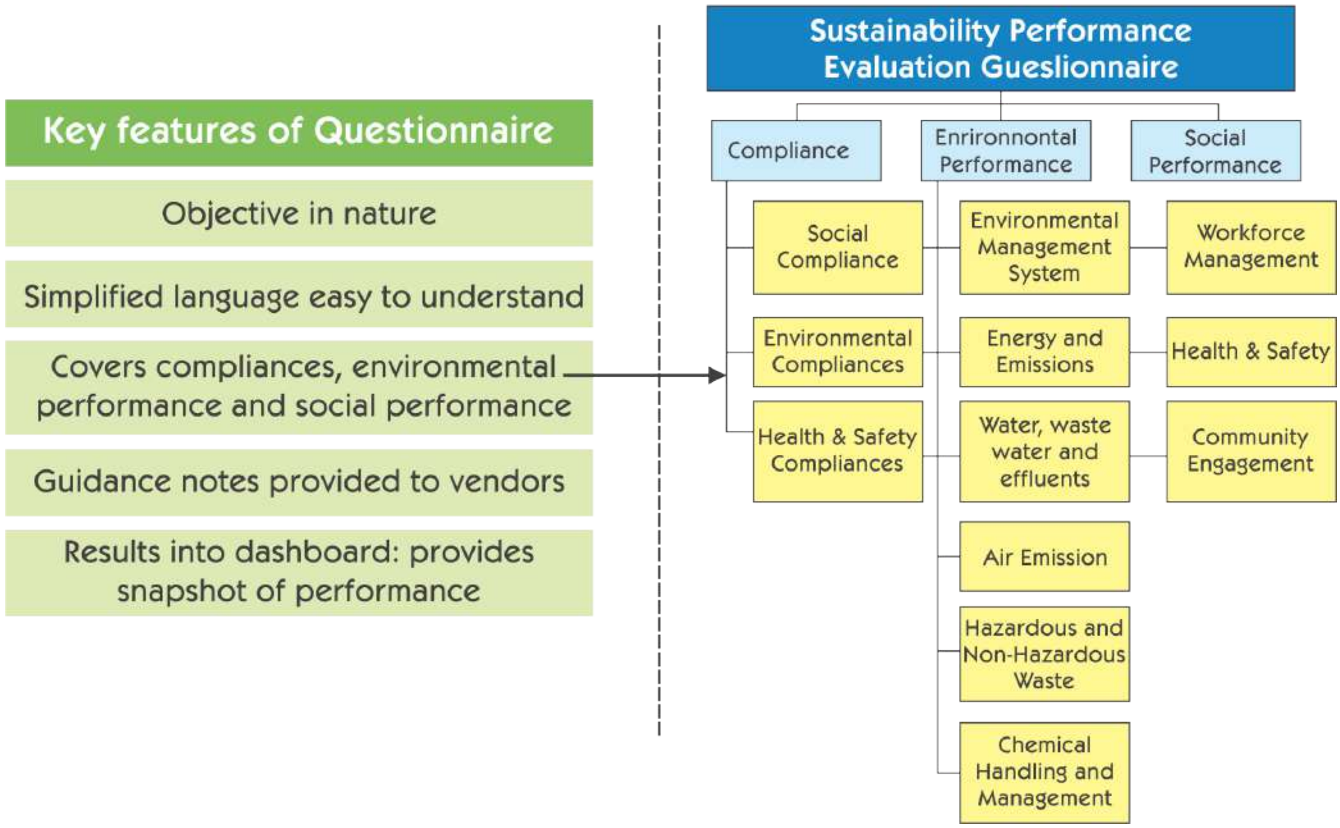
Indigenous and Imported Purchase proportion:

FY	Indigenous (₹ Cr.)	Imported (₹ Cr.)
2020-21	34,378	434
2021-22	5,957.65	103.22

All operations based in India have been considered local and domestic vendors operating out of India as local vendors.

We also give preference to Project Affected Persons (PAPs) for award of petty contracts etc., for supplying goods and services.

SUSTAINABILITY REPORTING



We comply with the 'Public Procurement (Preference to Make in India), Order 2017'.

Sustainable Supply Chain

We are implementing Sustainable Supply Chain Management System through instituting Suppliers' Sustainability Performance assessment and Sustainable Supply Chain guidelines at NTPC with the structured well-defined objective of assessing and mitigating supply chain risks.

For the assessment of suppliers w.r.t to various sustainability parameters, a 'Sustainability Performance Evaluation framework' (questionnaire) was developed in consultation with a third party. In the reporting year, Sustainability/ESG assessments of 31 critical suppliers in terms of volume of business, Criticality of Material Supplied, Diversity of Sectors, etc., were done. Key features and parameters of the Sustainability Performance Evaluation framework has been described as above.

As per our assessment, we found that our small category suppliers need maximum improvement in their social, environmental and compliance performance. Following this assessment, we organised one capacity building workshop covering more than 39 +suppliers on Sustainable Supply Chain.

Salient Features of NTPC SSCM

1) Ensuring highest level of compliance to all applicable statutory and legal requirements across the supply chain and procurement practices;
2) Strengthening and maintaining robust health and safety management system in own and supplier managed operations;
3) Embedding transparent, ethical and fair procurement practices and providing equitable opportunity to our vendors;
4) Engaging positively with our suppliers to promote cost effective, resource efficient and environmentally and socially responsible business operations;
5) Fostering partnerships and collaborations with value chain partners to enhance quality and efficiency;
6) Nurturing and reinforcing a conducive work environment; adopting highest standards of human rights and labour practices;
7) Promoting diversity, inclusiveness and equality in workplace across supply chain;

MSME Statistics

We continue to promote procurement from MSEs, and our Public Procurement Policy defines an annual target for procurement from MSEs. To encourage participation in the tender for local & small manufacturers, including SMEs. The benefits include EMD exemption, tender document fee exemption, purchase preference of 15%, and reservation of 385 items.

Procurement from MSEs

Sl. No.	Period	Total Procurement (Crores)	MSE% NTPC	SC/ST% NTPC	Wom-en%
1	FY-2019-20	3608.21	46.22	0.42	0.18
2	FY-2020-21	6975.38	50.73	0.22	0.39
3	FY-2021-22	6498.56	42.95	0.32	0.63

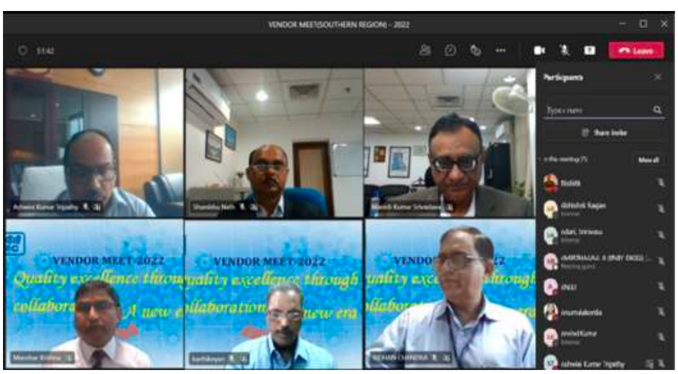
*excluding OEM procurements

Over the years, we have witnessed a steady increase in our MSE procurement, and as of date, there is no vendor complaint pending action at our end. The MSE vendor count is 7,627 till the end of the reporting year.

Vendor Development Programs (VDPs) for MSEs, including Special vendor development Programs for Women and ST/SC MSE vendors are conducted every year. In FY 2021-22, NTPC Units organized 12 MSE Vendor Development Programs (VDPs), including 2 Special VDPs for SC/ST MSEs. NTPC also participated in various VDPs for MSEs organized by other CPSUs, Ministry (MSME), NSIC, FICCI, DICCI etc.

In addition to above, Pre-bid meetings and Pre NIT meetings with the prospective bidders are also held in case of procurements exceeding certain specified value or are critical in nature. These meetings provides the prospective bidders a forum to raise queries in respect of bidding documents. Necessary clarifications are issued by NTPC to all the prospective bidders.

NTPC is committed towards providing necessary governance support and allocating required resources for organization wide implementation of Supply Chain Sustainability Policy.



Online Vendor Development Program for Southern Region

Our Regulators & Compliance

Regulator Engagement

Being a centralized institution, our policy framework is developed by the Government of India. We are governed and regulated by the Central Electricity Regulatory Commission (CERC). CERC also determines the electricity tariffs for our stations. We discuss issues, opportunities, and policies for the simultaneous growth of our organization as well as the national economy through periodic regulators meets.

We are committed to comply with all regulatory compliances. In FY 2021-22 we have had no cases of fines, penalties and warning against us for non-compliance with government regulations.

Our management bodies ensure that our power distribution partners and clients follow and stand at par with our commitment toward sustainability.

Socio-Economic Compliance

No non-compliance with laws and/or regulations in the social and economic area were identified during FY 2021-22. There were no legal actions for anti-competitive behaviour, anti-trust, and monopoly practices in the reporting year.

Public Policy

We do not support, in cash or in-kind, any political party or their members and related institutions.

Our Communities

At NTPC, our operations also extend in the direction of creating societal value. Our spirit of caring and sharing is embedded in our vision and mission statement. As an organisation, NTPC owes its success to the people of India and strives to work for their sustainable development.

Our core organizational belief of changing lives and adding value to our communities is manifested through constant engagements with our communities across our geographic locations. Corporate Social Responsibility (CSR) has been synonymous with our core business. Our Resettlement & Rehabilitation (R&R) policy covers Community Development (CD) activities – which are initiated as soon as a project is conceived and thereafter, extensive community/peripheral development activities are taken up along with the project development.

Corporate Social Responsibility (CSR)

Our policy for CSR is in line with the Companies Act 2013 and DPE Guidelines for CSR. It covers a wide range of activities, including the implementation of key programmes through the NTPC Foundation.

CSR programs undertaken by Company include activities specified in Schedule VII of the Companies Act 2013 & rules made there under and any other activity for the benefit of community at large. Focus areas of NTPC's CSR activities are Health, Sanitation, Safe Drinking Water and Education. However, the company also takes up activities in the areas of Capacity Building of the youth, Women Empowerment, Social Infrastructure livelihood creation and support through innovative agriculture & livestock development, support to Physically Challenged Person (PCPs), and activities contributing towards Environment Sustainability. NTPC CSR has a three-tier structure – Corporate, Region, and Station Level. Corporate CSR is headed by Executive Director (CSR) reporting to Director (HR). Regions and Stations have CSR nodal officers reporting to Heads of HR of respective Region/ Station who in turn report to respective Business Unit Heads (in Stations) and Regional Executive Directors (in Regions). NTPC's CSR activities are undertaken either directly by the company or through an Implementing Agency(ies) viz a company established under section 8 of the Act, or a registered public trust or a registered society, registered under sections 12A and 80 G of the Income Tax Act, 1961 has an established track record of at least three years in undertaking similar CSR activities.

Preference for CSR activities is being given to local areas around Company's operations, ensuring that the majority CSR funds are spent for activities in local areas. However, considering Inclusive Growth & Environment Sustainability and to supplement Government effort, activities are also taken up anywhere in the country. CSR initiatives during the Financial Year 2021-22 have been taken up on a PAN India basis around NTPC operations primarily in 22 states & UT, including Andhra Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Gujarat, Haryana, Himachal Pradesh, Jharkhand, J&K, Karnataka, Kerala, Ladakh, Madhya Pradesh, Maharashtra, Mizoram, Odisha, Rajasthan, Telangana, Uttar Pradesh, Uttarakhand, West Bengal.

We design and shortlist our CSR portfolio based on a participative, bottom-up and consultative process which includes consultations with various stakeholders – including Panchayat officials, District Administration, Civil Society, Community members - including Women representatives and representatives of Backward Communities, Public representatives (elected/ nominated), Village Development Advisory Committee (VDAC) etc. We also conduct Need Assessment Surveys (NAS) every five years through reputed external agencies in consultation with local communities and institutions to design customized community development solutions through our CSR activities.

Periodic monitoring of annual CSR activities is done to ensure timely completion of activities and to achieve deliverables. Regular reviews are organized at the unit level, wherein bottlenecks are identified, and remedial measures are taken. Periodic MIS on status and issues of CSR activities are put up to the appropriate level for necessary intervention wherever required. The region also reviews the progress of CSR works and facilitates support to stations. Company-wide review of the progress of CSR activities and their Budget utilization is done at the Corporate level for smooth implementation and timely completion of the projects.

The effectiveness of the CSR & Sustainable Development programme is assessed through both internal & external evaluations. NTPC conducts a third-party Social Impact assessment every two years for all its major CSR activities at various operating stations. During the Year 2020-21, NTPC has taken up Impact Evaluation at 12 locations. These studies, which take Human Development Indicators as a reference for measuring the impact, have statistically demonstrated that the company's CSR interventions are improving people's lives. We have also established a formal local community grievance process.

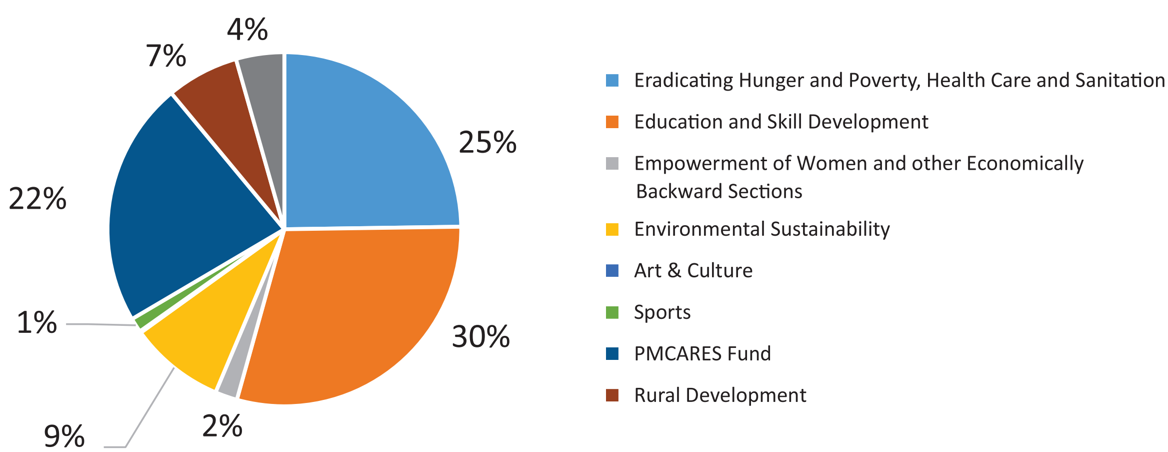
We have a Board-level Corporate Social Responsibility and Sustainability Committee – to oversee the CSR activities. In FY2021-22, we exceeded our minimal prescribed expenditure on CSR works and spent around ₹ 356.72 Cr. towards CSR initiatives. Out of the said CSR Expenditure, NTPC, in alignment with the guidelines issued by DPE on the common Annual theme for CPSEs of "Health & Nutrition" for FY 2021-22, has spent an amount of ₹ 198.95 Crore, i.e., 70.60%, which is more than the prescribed 60% on Annual Theme.

This was in line with the priorities defined by the government. For detailed break-up of CSR Expenditure in various Thematic Areas, please refer to the below chart.

Expenditure in Thematic Areas of our CSR

One of our most prominent initiatives is our Flagship Program Girl Empowerment Mission (GEM) targeted towards empowerment of the girl child wherein interventions were taken to make the girls self-reliant and confident in all walks of life. The said programme is being conducted at 33 NTPC Projects/stations/JV & Subsidiaries where around 2400 girls are participating.

CSR Expenditure Break up



SUSTAINABILITY REPORTING

NTPC foundation

NTPC has also set up a Charitable Trust, "NTPC Foundation" to take up projects & programs addressing niche domains of socioeconomic concerns. The foundation is engaged in serving & empowering physically challenged and economically weaker sections of society. Its flagship programme, i.e., 'NTPC Utkarsh' provides merit Scholarships to encourage and motivate students pursuing Secondary, High School, Engineering & Medical science studies. Other activities taken up in FY'2021-22 are:

- Directly Observed Treatment cum Designated Microscopy Centre (DOTs cum DMC) with Mobile ambulance facilities being operated at 11 NTPC hospitals under Revised National Tuberculosis Control Programme (RNCTP) that cater to villages upto 25-30Km from NTPC stations and has benefited around 2103 cases during the year through Screening for TB/HIV and treatment provided to patients diagnosed with TB/HIV.
- Disability Rehabilitation Centre (DRC) at NTPC Tanda, Rihand, Korba, Dadri, Bongaigaon, and Farakka established in collaboration with the National Institute of Locomotor Disabilities (NILD) erstwhile National Institute for the Orthopedically Handicapped (NIOH), under the Ministry of Social Justice and Empowerment, Government of India has benefitted about 1358 physically challenged people with approximately 3076 Surgical corrections, serving aids and appliances during the year.
- Providing IT education to physically and visually challenged students through ICT Centre established at Devi Ahilyabai Vishwa Vidhyalaya, Indore.

Significant Indirect Economic Impacts

NTPC's efforts have contributed toward poverty alleviation and increase of per capita income in neighbourhood communities/ villages of NTPC projects. The Economic Development Index is much higher in these areas than district and state-level development. Most of the NTPC operations are located in very remote areas. Initially, these areas had very insignificant economic development. NTPC's intervention has improved the various facets of lives of the neighbouring communities, including village infrastructure, Education, Healthcare, Drinking water facilities, Roads, etc. All the facilities and assets provided/ created by NTPC are available to the local

community irrespective of their caste, creed, and income group. NTPC takes up special interventions for those in the low-income category. Scholarships and support for vocational training are provided for education and skill upgradation. Healthcare facilities are provided by organizing free medical camps. Village infrastructure is also strengthened.

Mechanism to Minimize and Address Grievances During The Implementation of CSR Activities.

A consultative mechanism is constituted for participation of Stakeholders during the formulation and implementation of CSR activities in the periphery of the Project site in a defined geographic area. Participation of Panchayat, local community and local authorities are encouraged during planning, implementation and monitoring of CSR and Sustainability projects and their feedback is taken regarding acceptance, support and recognition of CSR initiatives. The key issues are addressed during consultations, periodic meetings, and implementation of the phase of CSR Projects wherein community feedback is received and addressed. The 3-tier institutional setup at Unit Level, Region Level and Corporate level is also available for facilitation of the process. This setup is further strengthened by hiring Sociologists and other professionals, as per need and requirement of respective Projects from time to time.

NTPC addresses grievance of Project Affected Villages/Persons as per Policy provisions at the Station/Unit level. The Grievances received at Corporate Centre through MoP/Individuals/RTI etc. are responded appropriately by concerned Groups at NTPC.

The mechanism followed to minimize and address grievances during the implementation of CSR activities as under:

Monitoring

- Ensures timely completion of activities to achieve deliverables.
- Regular reviews are done at the Unit Level, wherein bottlenecks are identified, and remedial measures are taken.
- Periodic MIS on status and issues of CSR and Sustainability activities is put up to an appropriate level and intervention is sought wherever required. Regional level reviews facilitate Senior Management support.
- Review of company-wide CSR and Sustainability activities and Budget utilization is done at the Corporate level.

Evaluation

- Effectiveness of CSR and Sustainability Programme is assessed through both internal and external evaluations.
- Internal Audits are carried out to verify effectiveness of implementation.
- Social Impact Evaluation is done through credible External Agencies for gauging of the impact of CSR and Sustainability initiatives
- Findings of the SIE, form the basis for initiating corrective actions and formulating future schemes/ plans.

Reporting

- Our CSR and Sustainability activities are disseminated to the stakeholders through Company's Annual Report, Sustainability/ Business Responsibility Reports.
- Communication on the progress of the Global Compact by uploading on UNGC Website etc.
- These reports are uploaded on our website and are available to the public.

Our CSR repertoire for FY 2021-22 is presented on the table alongside.

Our CSR Repertoire, FY 2021-22

Education

- Utkarsh Scholarship Scheme for students:
    - Who have passed Xth and XIIth Standard from Govt./ Govt. aided Schools in target villages of NTPC Projects/ Stations, including schools in NTPC townships,
    - Pursuing full-time studies in Govt. ITIs in the district(s) where NTPC Project/ Station is located, and ITIs are adopted/ set up by NTPC.
    - Pursuing full-time BE/ B. Tech in IITs, NITs, and Govt. Engineering Colleges.
    - Pursuing full-time MBBS in Govt. Medical colleges.
- NTPC has established Smart Classes and has taken many initiatives in various Government schools located in the vicinity of its Plants and Stations for improving the learning level of the school children.
- NTPC Sipat has so far sponsored education for more than 300 Baiga Tribal students for getting admission into Engineering and Medical colleges through Commissioner, Tribal Welfare, Chhattisgarh.
- NTPC Korba (aspirational district) is supporting the holistic education to 30 Special Backward Tribe Pahari Korwa students every year from class VI to XII.
- NTPC is supporting construction of facilities for tribal school in Chapaki, Distt. Sonebhadra (UP).
- NTPC is supporting development of school infrastructure in the existing school at Govindnagar, Paliya Pipariya, Block Bankhedi, Hoshangabad, MP.
- NTPC has set up a Library (Pustakalaya Project) in 10 Primary Schools of Arunachal Pradesh and Infrastructure

augmentation by providing benches/desks in 50 Govt. Schools at Supaul, Bihar.

- NTPC has set up an English Medium School through Shree Ramakrishna Ashram, M. Rampur, Kalahandi.
- NTPC has extended its support for Development, Renovation and Advancement project of GHSS Munderi, District Kannur, Kerala.
- NTPC has extended its support in providing classroom desks in Govt./ Aided schools in Dharwad Parliamentary area, Dharwad, Karnataka.
- Supporting education in rural areas by augmenting and strengthening school infrastructure, including additional classrooms, science labs, libraries, kitchen sheds, providing assets like furniture, computers, separate toilets for girls and boys, water coolers, filters, etc. NTPC also ensures the right to education of children from the underprivileged sections of society by providing them with scholarships, study material, & uniforms, etc.
- 34 Schools in NTPC Townships provide subsidized education primarily to rural community children benefitting about 20,000 students in neighborhood areas.

Health

COVID – 19 Relief Measures:

- A financial support of ₹250 Crore in FY 2020-21 and ₹80 Crore in FY 2021-22 to Prime Minister's Citizen Assistance and Relief in Emergency Situations Fund (PMCARES) has been made for Covid-19 and other Services/ Activities.
- Established Covid Care Centre (with oxygen) at Badarpur (50 beds) and PMI, Noida (100 beds) and Dadri (30 beds)
- Installed PSA type Oxygen generation plants at various locations like Distt. Hospital Raebareli, Distt. Hospital Robertsganj, Distt. Hospital Sonebhadra, CHC Chhabra, Narsingpur and Ambedkarnagar.
- Support to DPE for procurement of items for COVID-19 Vaccination Programme for the State of Bihar and Uttar Pradesh (UP).
- COVID Care facilitates established with required oxygen support at various NTPC Hospitals at Stations/ Projects.
- Construction of Burn Unit at AIIMS Patna, AIIMS Bhubaneswar and King George Hospital, Lucknow.
- Construction of Medical College & Hospital (400 beds with provision of upgradation to 500 beds) at District Sundergarh, Odisha under Community Development Plan.
- Support for 5 ambulances to Govt. of Uttarakhand and 4 ambulances to District Administration, Patna.
- Support for Ultraviolet based sanitization technology for PPE kits being developed by IIT Delhi & Chakr Innovation
- Provided 663 Infrared Thermometers to ASHA workers and 200 KVA DG set provided to District COVID Hospital at Gopeshwar, Uttarakhand
- Eight (08) Ventilators installed at Hazaribagh Govt. Hospital.
- Support to Collector Khargone for 15 COVID ICU beds at District Hospital Khargone & 250 Oxygen Bed Set-ups in 5 Blocks of Khargone.
- Support to District Administration, Chatra for PPE Kits, Sanitizers and Surgical Masks.
- Provided 25 nos. Oxygen Concentrators to district hospital Barmer.
- Proactive relief measures such as regular sanitization of villages, distribution of PPE kits to health professionals, distribution of face masks to villagers, and supply of groceries to the community.

Promotive, Preventive, & Curative Healthcare:

- NTPC hospitals have provided quality Primary, Secondary, and Referral Care along with Diagnostic services to more than 3,00,000 patients from the community every year.
- Health-related infrastructure support is being extended to various PHCs, CHCs, and District Hospitals located in the vicinity of NTPC Projects/Stations.
- NTPC supports the local administration by regularly carrying the works of fogging, spraying, etc. in villages located in its vicinity and also distributes mosquito nets for the prevention of vector-borne diseases.

- NTPC makes primary care accessible, affordable, and inclusive through health camps – both general and specialized (Eye, Respiratory Diseases/ Cancer Detection etc.), outreach services through mobile health clinics, and augmenting and strengthening rural health infrastructure. About 3000 surgeries are performed every year in these camps.
- NTPC is supporting the availability of adequate tertiary care in the country:
  - o Support for the Development of King George Hospital, Visakhapatnam.
  - o Support for construction and equipment for 3rd Floor and diagnostic labs at National Cancer Institute Nagpur, Maharashtra
  - o Support to L V Prasad Institute for Construction of operating room complex at MTC Campus Bhubaneshwar.
  - o Setting up of Special burn unit at KGMU Lucknow, AIIMS Bhubaneshwar, and AIIMS Patna.
  - o Establishing Integrated Muscular Dystrophy Rehabilitation Centre "Manav Mandir" at Solan Himachal Pradesh.
  - o Open gymnasium at various locations in Basti Parliamentary Constituency of Uttar Pradesh.
  - o Cancer Screening Program of Bihar Govt. and Tata Memorial Cancer Hospital for four Districts of Bihar
  - o Conducting Jan Arogyam Community Healthcare Programme in Nuh District (Aspirational District) of Haryana through Bisnouli Sarvodaya Gramodyog Sewa Sansthan (BSGSS).
  - o Support for Electro Chemotherapy Device & Electrodes for use at All India Institute of Medical Sciences, New Delhi.
  - o Support to Capital Hospital, Bhubaneshwar, Odisha for Medical Equipment for Eye Department Support for construction of Eye Hospital at Dadri, Gautam Buddha Nagar, UP.
  - o Support committed to setting up Tele-Recording Room at AIIMS, New Delhi
- NTPC is operating Directly Observed Treatment cum Designated Microscopy Centre (DOTs cum DMC) at 11 NTPC locations. The program supports the Government of India's National Tuberculosis Elimination Program (NTEP) to prevent, control, and eventually eliminate tuberculosis.

Sanitation and Hygiene

- NTPC supported the Government of India's Swachh Bharat Abhiyan or Swachh Bharat Mission, by making available more than 26,000 toilets in about 16000 schools covering 650 blocks in 83 districts spread over 17 states.
- NTPC has also supported for Pilot Project for Mechanized Cleaning of 14 wards in Varanasi.
- NTPC has revived the defunct Municipal Solid Waste Processing Plant at Karsada, Varanasi. NTPC is also operating and maintaining the plant from July 2017 onwards.
- NTPC, with the active involvement of its employees, local school children etc. had organized Nukkad Natak, debates, slogan competitions, essay competitions, painting competitions, walkathons, pamphlet distribution, etc. in the vicinity of its various projects and stations to spread awareness about sanitation and hygiene.
- NTPC has constructed Individual Household Toilets and Public Toilets in the adjoining villages and Public Places located in the vicinity of our Projects and Stations with an the objective of creating an open defecation-free society.
- NTPC is supporting the developmental & beautification works of Charminar, Hyderabad, under 'Swachh Iconic Places Project' of Govt. of India. The goal of the Initiative is to improve the cleanliness conditions of places that are "iconic" due to their heritage, religious, and/or cultural significance.
- NTPC has encouraged the formation of women's self-help groups to produce and distribute low-cost sanitary napkins in the villages surrounding its power plants.
- NTPC has committed to supporting the setting up of electric crematorium in Noida.

Water

- NTPC ensures access to water in the community through the installation of hand pumps and piped drinking water etc. To ensure that people have access to potable drinking water, NTPC has set up RO water plants/ Water ATMs in public locations near NTPC operations. NTPC also distributes water filters/ coolers in various villages/ schools near NTPC operations. Further, during extreme summers, NTPC ensures the availability of water through Water Booths and Water Tankers.

- NTPC has taken initiatives of rejuvenation Ponds located in the vicinity of many of its Plants with an objective to improve ground water table.
- NTPC has Installed 06 nos. e-Pios (RO systems) at various hospitals in Balasore, Odisha.
- NTPC has extended support for the installation of about 10,000 Energy Efficient Pump System in the fields of farmers residing near NTPC stations located in 05 districts of UP.

NTPC's CSR activities in other areas

Skill Development and Income Generation

- NTPC has adopted 18 nos. ITIs and set up 8 new ITIs at various locations.
- NTPC is supporting the "Skill India Mission" of GoI through MoU with NSDC for various employment-linked skill development programs for 30000 rural youth, including 8,000 youth of J&K.
- NTPC has provided various capacity-building training programmes , exposure visits, and provided hand holding through experts to the farmers of villages in its vicinity on multiple techniques of crop/animal productivity, such as use of drip irrigation to produce more crops per drop, in improving milk yield through improving the breed through artificial insemination, cultivation of nutrient-rich and rapidly growing fodder crops etc.
- NTPC makes youth entrepreneurial, enterprising, and employable by providing them with training in Electrical Repairing, Mobile Repairing, Motor Rewinding, Welding, Car Driving including obtaining LMV Driving License, Computer Training, etc.

Women Empowerment

- NTPC has established 50 Sanitary Napkin Mini Manufacturing Units (MMU) in the state of Odisha under "Stree Swabhiman", an initiative for providing affordable and accessible sanitary products close to the homes of adolescent women and girls in rural areas.
- NTPC has supported Udyan Care at Jaipur, Rajasthan, for the higher education and rehabilitation of orphans and abandoned girls.
- NTPC has conducted various trainings on Embroidery, Dress Designing, Cutting, Stitching, Tailoring (including providing Sewing Machines), Beautician, Food Preservation & Processing, Nursing, etc. to women from various villages located in its vicinity.

Support for Physically Challenged Persons

- In collaboration with National Institute for Locomotor Disabilities, NTPC has set up Disability Rehabilitation Centers (DRCs) at Bongaigaon, Farakka, Dadri, Korba, Tanda, and Rihand for mainstreaming Physically Challenged persons (Divyangjan) by providing them with aids and appliances and restorative surgery.
- Information and Communication Technology (ICT) centers established at Delhi University, Guwahati University, and Devi Ahilya Vishwavidyalaya, Indore, equipped with the latest adaptive and assistive technologies so that persons with disabilities can perform equally well in the classroom and workplace.
- NTPC distributes equipment and appliances and takes up activities like inclusive education & vocational training benefitting PCPs all across NTPC locations.

Sports

- NTPC has adopted Archery as a sport with the objective of scouting for talent in remote parts of India and nurture them through coaching camps to enhance India's presence in sports internationally. The 3-year agreement with Archery Association of India (AAI) includes the title rights across all National Archery Championships (NACs), National Ranking Archery Tournaments (NRATs) and exclusive right to provide kits/apparel to Indian Archery team for international participation.

- NTPC supported Aizawl Football Club in Aizawl, Mizoram by providing 02 buses.
- NTPC's support is committed to creating additional facilities such as the swimming pool in "Multipurpose Sports Complex" under construction at Dharwad, Karnataka.

Rural Infrastructure Development

- NTPC supports the development of basic infrastructure such as Roads, Bridges, Culverts, Bus Shelters, Community Centers, Schools, and Health Centers enabling the local community to fulfill their basic needs and to enhance the quality of their lives.
- Installation of LED-based Solar Street Lights & Solar High Mast lights in Sant Kabir Nagar, Uttar Pradesh, and in Satna, Madhya Pradesh
- NTPC supported the development of Brahma Jahari Forest in Chaumuha in Mathura district, UP.
- NTPC's support is committed to construction and redevelopment of Shri Badrinath Dham town as a spiritual smart hill town.

Preservation of Heritage

- NTPC has supported the Archeological Survey of India (ASI) and National Culture Fund (NCF) for preservation and conservation of 3 monuments: Group of Monuments, Mandu (MP), Excavated site at Vikramshila (Bihar), and The archaeological site, Lalitgiri/ Dhauli (Odisha).
- Support to Society for Development of Rural Literature under NTPC CSR for Purvasha Folk and Tribal Art Museum, near Chilika Lake, Odisha, for protection and promotion of heritage of dying art forms of Odisha.

Relief during Natural Calamity

- Financial support to Uttarakhand State Disaster Management Authority (USDMA) for undertaking reconstruction and restoration of Govt. Schools and Govt. Health Centers in various districts of Uttarakhand.
- NTPC is supporting the Redevelopment of Kedarnath town, Uttarakhand and its surrounding areas were devastated during natural calamity of 2013.

Environmental Sustainability

- Rejuvenation of village ponds & Creation of Rain Water Harvesting infrastructures
- 1.4 Million Trees Planted

Resettlement & Rehabilitation (R&R)

We strive to avoid disagreements with our communities and address social issues at the exploratory stage of the project itself. As a part of our decision-making process, we have developed an R&R policy. Our Resettlement & Rehabilitation (R&R) the policy covers community development (CD) activities which are initiated as soon as a project is conceived. The CD activities are also initiated under ICD (Initial Community Development) Policy. We are sensitive toward the needs and aspirations of the Project affected Persons (PAPs) and 89 Resettlement Colony of Darlipali has always tried for the best possible R&R package. We have established Public Information Centres/ R&R Offices to disseminate useful information sought by the villagers. Other useful information is also communicated through notices, pamphlets, letters, etc. In the last 8 years upto FY 2021-22, more than Rs. 2021 Cr worth of expenditure was incurred towards Community Development (CD) work under R&R. Land compensation, and R&R grants disbursement was in active mode mainly in Darlipali and Lara SuperThermal Power Projects and Pakri- Barwadih, Kerandari, Dulanga and Talaipalli Coal mining projects in FY 2021-22.

Salient Features of our R&R efforts

Minimize R&R Issues

Minimize R&R issues proactively at the time of projects exploration itself & other adequate relocation.

Redesigning layout to avoid acquisition of homesteads to the extent possible as also minimizing the acquisition of agricultural land, optimization of plant layout, and reduction in land requirement, etc. However, in case the physical displacement is absolutely necessary, we remain committed to their adequate relocation and minimization of the transition period & consequent impacts.

Grievance Redressal System

We have a Grievance Redressal System for the grievance of PAPs at our projects. We have also set up dedicated R&R groups which operate at Projects, Regional Headquarters, and the Corporate Centre. Further grievances are also received through RTI, which are answered in a time-bound manner. As a result of our efforts, no significant actual and potential negative impacts on local communities were identified/ reported, and no grievances about impacts on society were filed during the reporting period. Further no incidents of violations involving the rights of indigenous peoples.

For more details on R&R system, policies, and frameworks, NTPC website can be accessed.

R&R Policy 2017

Our new R&R Policy guides our actions. The Policy is in line with 'The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation, and Resettlement Act, 2013', and mandates minimum R&R entitlements and compensation to be fulfilled. The Act provides for mandatorily studying the impacts of proposed land acquisition and subsequently formulating a Social Impact Mitigation Plan so as to assess if the Project serves the public purpose before initial notification for land acquisition by Appropriate Authority.

Packages for Projects Affected Persons

We have always tried for the best possible R&R Package for Project Affected Families (PAFs). All PAFs, as per categorization, eligibility and policy provisions are compensated for the loss of their assets and livelihood to help them regain at least their previous standard of living.

Initial Community Development (ICD) Policy

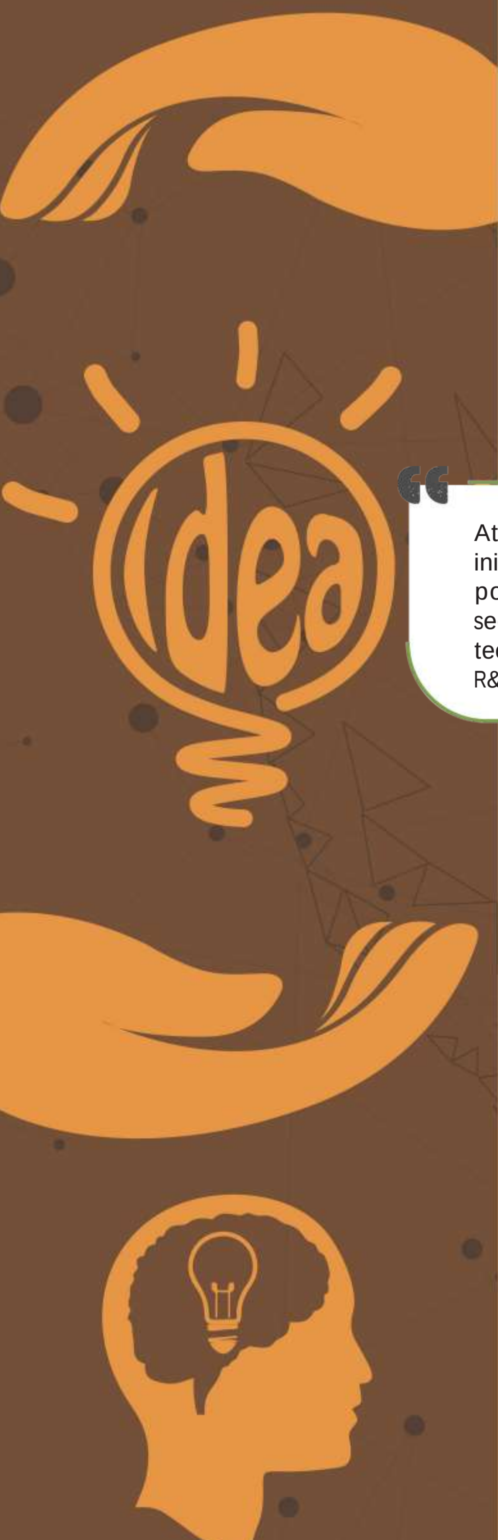
We initiate actions in line with our 'Initial Community Development (ICD) Policy, soon after land and water commitments are received from the respective State Governments for setting up a project. We also conduct Social Impact Evaluation (SIE) through professional agencies based on which R&R Plans implementation is assessed.

Comprehensive Community Development Plan

We formulate a comprehensive Community Development Plan in consultation with the relevant stakeholders and the District the administration that encompasses key development activities, welfare etc., in the periphery of the project site. To facilitate effective participation, consultation, and transparency with the stakeholders, we have set up Public Information Centres (PICs) and Village Development Advisory Committees (VDACs), or other similar participative mechanisms. We have a Stakeholder Engagement Policy for continuous interaction with the neighboring communities.

Resettlement Colony of Darlipali

Intellectual Capital



Major Highlights of FY 2021-22

- 27% (y-o-y) increase in patents granted to by NTPC
- 6.2 GW of Solar Consultancy work through International Business
- ₹ 199.34 Cr revenue from consultancy services
- 20% (y-o-y) increase in R&D expenditure

Material Topics
[5] [14] [17]

Target SDG(s)
[7] [8] [9] [12]

UNGC Principle
[9]

"At NTPC, our research and development (R&D) initiatives are in sync with our overall business portfolio. As a leading player in the world energy sector, we recognize the need of adapting to emerging technologies and upgrading the technologies through R&D."

24 TPD Electro-Dialysis Reversal (EDR) Plant, NETRA

Related Sustainability Topics

- Quality Management
- Diversifications into other business avenues
- New technologies and digitization

Risks mapping:

- Develop technological solutions for efficient and low carbon intensive operation
- Breach of information security and Patent Infringements
- Transition risk of climate change for non-diversification

Relevant GRI Indicators:

- GRI 201-1
- G4 DMA

Reference to Other Frameworks:

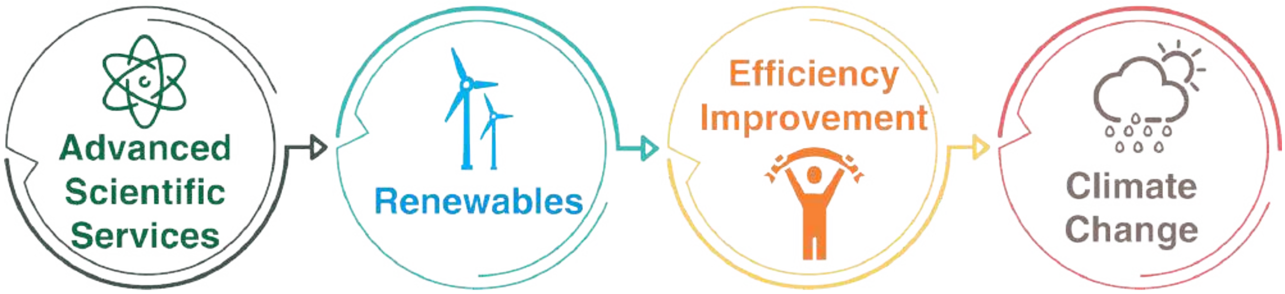
- UNGC: 9

Research and Development

NTPC, fully recognize R&D as the cornerstone of technological advancement. Therefore, R&D has been incorporated in the long-term vision and strategy for the benefit of the company and society. NTPC has been assigning more than 2% of PBT consistently for R&D related activities.

NTPC has always taken upon itself to incorporate innovative technologies to enhance the safety, reliability, and efficiency of power plants through a prudent mix of development, adoption, and adaption of frontier technologies. we are constantly making efforts to address the major concerns of the power sector - as well as exploring and tapping the potential opportunities available. Towards this direction, we established NTPC Energy Technology Research Alliance (NETRA) in 2009 as state-of-the-art center for research, technology development and scientific services. NETRA collaborates with leading institutes, technology players and service providers both at national and international level. A Research Advisory Council (RAC) comprising of eminent scientists and experts from India and abroad has been constituted to steer NETRA for high end research. In-house Scientific Advisory Council (SAC) has also been constituted to provide directions for improving plant performance & reducing cost of generation.

NETRA laboratories are ISO 17025 accredited and provide high end scientific services to all NTPC stations as well as many other utilities. NETRA NDT laboratory is also recognized as Remnant Life Assessment Organization under the Boiler Board Regulations, 1950. Total number of full time employees posted at NETRA as on date is 34.



Focus Areas

NTPC NETRA at Greater Noida

R&D Expenditure

S.No	Description	Expenditure in (₹ in Cr.)	
		2020-21	2021-22
a)	Capital	24.44	23.71
b)	Revenue	161.34	198.77
c)	Total	185.78	222.48

Knowledge Network

A. Collaborations

1. Academia

IIT-Delhi, IIT –Bombay, IIT Madras, IIT –Kanpur, IIT – Kharagpur, IIT Dhanbad ,IISc-Bangalore, TERI, RGIPT-Amethi

2. Research Institutions

NETL-USA, Curtin University-Australia; Newcastle University-Australia, VGB-Germany, DLR / ISE-Germany, NML, CSIR lab's such as IIP- Dehradun, CMERI- Durgapur, CGCRI- Kolkata, CBRI-Roorkee

3. Industry Association

ONGC, IOCL, BHEL, IGCAR

B. Intellectual Property Rights

Patents: 28 patent granted, 37 patents under process

Copyrights: 10 copyrights granted, 03 under process

Various institutional building activities such as training programs, workshops on various topics such as Advanced NDE & Metallurgy etc. were conducted. NETRA journal, compendium of Metallurgy focused case studies, compendium on advance NDE methods and numerous research papers were published.

Specific projects under implementation during FY'22:

A. Technology Projects

Carbon capture and Utilization Technology

1. 10 TPD 'CO2 to Methanol' Demo Plant at NTPC-Vindhyachal
2. Indigenous development of Catalyst & Reactor for conversion of CO2 to Methanol in parallel

Hydrogen Technology

1. 25 kW Green Hydrogen Based Micro Grid at NETRA campus
2. Development of Sea Water Electrolyze for hydrogen production
3. Development of High Temperature Steam Electrolyser
4. Development of Metal Hydride(MH) Based Static hydrogen storage and Compression

20 TPD Carbon Capture Plant, Vindhyachal

Water Technology

1. 240 TPD Non Thermal Forward Osmosis based high recovery system
2. 3600 TPD Electrocoagulation system at NTPC Solapur
3. 4 MLD Activated Filter Media Plant at NTPC Dadri

Ash-Technology

1. Geo-polymeric concrete Road and Paver Blocks at various stations
2. Development of Angular Shaped Course Aggregates from Fly Ash
3. Development of Pond ash based Controlled Low Strength Setting Material (CLSM)
4. Fly Ash based Light Weight Aggregate Pilot Plant Setup at NTPC-Sipat

Waste to Energy

1. 400 KWe MSW-RDF Enhanced Steam Gasification plant

53 Kw Concentrated Photovoltaics Module setup, NETRA

Other areas:

1. 4MW Ground Mounted Solar Photo Voltaic System with Battery Storage
2. WW Tube Deposit Wt. Density (DWD) Measure & and Qualitative analysis of scale
3. Development of technology for Detection & Quantification of Exfoliation of Boiler Tube using Magnetic Coercive Force (MCF) and Ultrasonic Method
4. Development of AI based solution for inspection of boiler 1st pass

B. Scientific Services

NETRA also provides advanced scientific support to NTPC Stations and outside power utilities mainly in the following areas:

I. Health assessment and residual life assessments of power plant components for improving the reliability and availability of boiler, steam turbine, Gas turbines components by using different advanced NDE tools and techniques

II. Remote Inspection of boiler header using in-house developed robotic system, Evaluation of Post Weld Heat Treatment Quality of Ferromagnetic Steel Weld etc. using Magnetic Coercive Force Measurement

III. Implementation of Advance NDE Techniques such as Phased Array Ultrasonic Testing (PAUT) for inspection of weld joints on Boiler Tubes, in-situ detection of hydrogen damage in water wall, in-situ detection of crack in root region of LP turbine blades, Time of Flight Diffraction (TOFD)

IV. Microstructural characterization of various alloys, stainless steels, super alloys and other advanced materials:

- Identification of damage mechanisms in pressure part components to reduce forced outages and thereby improve availability & reliability of components; and, suitable measures recommended to OS, QA and O&M departments
- Root cause analysis of boiler, turbine, generator and auxiliaries of power plant

V. Substitution of OEM on high end & costly health assessment of GT components

VI. Development of Chemical Formulations for Cooling Water Treatment for high COC, to reduce the specific water consumption of plant

VII. Quantitative and Qualitative analysis of deposit, solvent selection and post operational chemical cleaning recommendations for boilers and Condenser

VIII. Corrosion analysis, monitoring & its control in Power plants for Fire Fighting System and CW System.

IX. Specialized analytical support for characterizing the turbine, boiler, condenser, CT and De aerator deposits, corrosion products, heavy metals in effluents using state of art equipment's such as SEM, XRD, IC, TOC, particle count analyzer, AAS & ICPMS etc

X. Improvement in STP water quality by enhancing the performance of sewage treatment and by carrying out testing of organic matter, COD, BOD and TKN. Trace level Mercury testing's in Coal and Effluent

XI. Residual life assessment of ACF, Cation Exchange Resin, Anion Exchange Resin, MB-SAC resin, MB-SBA resin, CPU resin through analysis such as TEC, SSC, WRC, density.

XII. Particle size distribution and bead integrity of Cation Exchange, Anion Exchange, MB & CPU resin

XIII. Condition Monitoring of:

- High voltage transformers through tools such as Dissolve gas Analysis (DGA), FDS, SFR and Interfacial Tension (IFT).
- Super heater / re-heater tubes of ageing boilers through accelerated creep testing.
- Lubricating oils of rotating components using wear debris analysis
- Ion exchange resins & activated carbon for capacity enhancement and its kinetics

XIV. Advanced coal & ash characterization of samples of station to determine ash fusibility characteristics, slagging & fouling behavior of coal, elemental composition of coal & biomass, particle size analysis of fly ash, reactivity, abrasion behavior & grade determination of coal. Compositional analysis of fly ash using EDXRF. Estimation of mercury in coal in ppm/ppb level

XV. CFD services in power plant domain and other relevant areas

Benefits

NETRA has taken up major projects for addressing concerns such as environment and climate change, reliability and efficiency improvement, new and renewable energy etc.

NETRA has taken projects for reducing carbon footprints by means of carbon capture and utilization. 10 TPD CO2 to Methanol project is aimed at capturing CO2 from existing thermal plant and its utilization for production of valuable product such as Methanol. Work is going on for the indigenization of catalyst and reactor for conversion of CO2 to Methanol plant.

R&D, lab-scale and pilot-scale demonstration projects such as development of Sea water Electrolyser, High Temperature steam electrolysers, Static hydrogen storage and Compression etc have been taken up for hydrogen technology.

NETRA is working on development of innovative water technologies such Non Thermal Forward Osmosis, Electro-

Dialysis Reversal, Desalination etc for the processing of STP and Sea water.

Urban waste is a major problem in India. MSF-RDF gasification plant shall enable MSW and Agri-waste utilization and can help in managing waste better.

Continuous work is going on for the development of new products and processes for bulk Ash utilization and as a result novel technologies & products such as Geo Polymeric (GPC) Road, Geo polymeric Pavers & Tetrapod etc have been successfully developed and implemented.

Through advance scientific services like Non-Destructive Evaluation, CFD analysis and Metallurgy & Failure Analysis, etc., NETRA is working constantly for improvement in reliability, efficiency and as well as for reduction in O&M cost by the diagnosis of faults. NETRA is also working on cutting-edge technologies such as development of robotics solutions for inspection of CW Duct & water pipeline, visual inspection of boiler headers, boiler 1st pass internal inspection. Asset Digitization & Monitoring through Drones, development of novel sensors to increase reliability, safety and to reduce inspection & monitoring time as well as manpower requirements.

NETRA activities have helped the stations in the analysis of failures and their prevention. Techniques developed by NETRA are implemented at stations wherever required. Regeneration treatments of resins, chemical cleaning/treatment and corrosion control measures supported the stations in improving the efficiency and availability of boilers and various heat exchangers/cooling towers, etc.

Majority of projects of NETRA involves development, implementation and demonstration of new technologies, so almost all projects mentioned in above section (Work carried out by NETRA in FY 2021-22) have technological trial component in it.

Number of new products/ technologies developed

24 TPD Electro-Dialysis Reversal (EDR) Plant, NETRA

Some of products/technologies developed in the last FY:

1. 53 Kw Concentrated Photovoltaics Modulesetup under Indo German R&D Cooperation
2. 24 TPD Electro-Dialysis Reversal (EDR) System for treatment of STP water
3. 30 KWp DC Microgrid setup.
4. Geo polymeric Paver blocks
5. Piezoelectric based sensor for ash level measurement
6. Capacitive based low ppm sensor for moisture measurement in transformer oil

30 KWP DC Microgrid, NETRA

Our Learning & Development Centre

NTPC runs a state-of-the-art Power Management Institute (PMI), an apex learning and development (L&D) centre, at NOIDA. The L&D centre of NTPC, is actively engaged in making our people future ready in terms of technology, business acumen and leadership. PMI also delivers programmes to Power Sector companies in the Gulf Counties at their locations and participants from South Asia, Gulf and African countries come to PMI for attending programmes.

PMI has the state-of-the-art physical and digital infrastructure to impart learning in world class ambience. The classrooms are equipped with modern facilities including smart boards, video conferencing and session-recording which supports contemporary pedagogy. PMI has covered 4,000 executives in management learning through HMM and 1000 in the power plant technical skills domain by licenses from General Physics (GPiLearn).

Various in-house e-platforms has been launched to provide access to diverse e-Learning resources to complement the learning to meet the unique learning needs across demographic spectrum of generations engaged at work place. An e-library of 25,000 e-books, 1,000,000 articles, reports and journals supports employees' knowledge up-gradation.

NTPC PMI, Apex L&D Institute

The L&D interventions are designed after a multidimensional 'Training Need Analysis' (TNA) for enhancing technical, functional, strategic and leadership skills with focus on business objectives of the Company.

At NTPC, we are aware of pivotal role of effective leadership and to ensure continuity in leadership pipeline, 379 middle level executives were given rigorous inputs under 2 weeks strategic leadership development program (10X). The program is designed to equip the participants with ten strategic competencies to enable them to take leadership roles and strategic positions in the days to come.

We have aspiration of global growth and are conscious of the fact that the emerging business complexities would need global mindset and competence to lead across.

Further, NTPC promotes NTPC Education and Research society (NEARS) under which NTPC School of Business (NSB) provided two AICTE approved programmes namely, "Post Graduate Diploma in Management' (Executive) and 'Post Graduate Diploma in Management' (Energy Management) with academic support from IIM, Ahmedabad. The courses are designed to focus on energy management consolidates to deliver knowledge centered and value added academic and research enrichment services for sustainable development of Indian economy.

Our Consultancy Services:

NTPC Consultancy wing supports Indian Power Industry with its vast experience & expertise and offers Consultancy services "From Concept to Commissioning and beyond…." for large power stations in the areas of Engineering, O&M, Project Management, Contracts & Procurement, Renovation & Modernization, Quality & Inspection, Training & Development, Human Resource, IT, Solar & renewable power projects, compliance to Environmental norms for power stations etc.

Consultancy services are being provided in India and abroad viz. Gulf countries, Bangladesh, Myanmar, Mali, Togo, Malawi, Mauritius, Ethiopia, Cuba, Paraguay, Niger & other ISA Member countries. Around 138 consultancy assignments are presently under execution. Some of the Major ongoing assignments are as follows:

- Project Management Consultancy (PMC) for thermal power projects to THDC & SJVN.
- Post Award services to various thermal power projects of UPRVUNL
- Consultancy services for O&M Support of thermal power project to UPRVUNL
- Preparation of DPR and Providing Pre-Award Services for thermal power project to SCCL.
- Post award consultancy services for installation of FGD for thermal power project to SCCL.
- Computerization Project on turnkey basis for Ministry of Jal Shakti, Government of India
- Consultancy services for procurement of imported coal to NTPC JVs

- Consultancy services for replacing existing C&I System with new DDCMIS for thermal power projects to MPPGCL.
- Preparation of PFSR of the 4 Nos. hydro pump storage projects for TANGEDCO.
- Several Consultancy Assignments pertaining to compliance of new environment norms through implementation of Flue Gas Desulphurization (FGD), Combustion modification and ESP R&M etc.
- Consultancy services for several solar projects from 50 MW to 900 MW for various national clients and international clients.

NTPC-Consultancy clientele includes Central & State Government organizations, private companies, Joint Venture companies of NTPC, international clients and member countries of International Solar Alliance (ISA).

Highlights of Financial Year 2021-22

- Consultancy wing has received an all-time highest order value of ₹ 629.74 Crores during this FY (including international orders).
- Consultancy Wing has added new business portfolios in new energy generation & storage areas.
- We have participated in 47 competitive biddings opportunities including domestic & international clients, highest ever number in a FY. We have won consultancy assignments in domestic as well as international market.
- Consultancy Wing has received ISO 9001:2015 certification on 15.06.2021.
- NTPC Consultancy is working as Project Management consultant (PMC) for implementation of solarization projects in 47 Least Developed Countries (LDC) and Small Island Developing States (SIDS) member countries of ISA.

NTPC- Consultancy is further exploring business opportunities in emerging areas such as providing consultancy services in the area of PMC for implementation of new environmental norms e.g FGD, ZLD, DNOx & ESP R&M, development of Solar & Renewable power projects, O&M and performance improvement of Thermal Power Plants, Owner's Engineering services for brownfield power projects, IT services e.g. ERP implementation, PRADIP, Dreams 2.0, PI systems, CLIMS etc.

Business Development

To maximize our geostrategic reach, we are actively looking at business opportunities overseas. Our recent joint venture with Central Electricity Board of Sri Lanka for the development of 50 MW (extendable to 100 MW) Solar PV project in Sri Lanka and opening of an International branch offices in Togo, Kenya and Dubai are some of the notable steps in the same direction. We already have a joint venture with Bangladesh Power Development Board (BPDB), called Bangladesh India Friendship Power Company Limited (BIFPCL).

Floating Solar NTPC Kayamkulam

NTPC is associated with International Solar Alliance as its corporate partner and plans to anchor 10,000 MW of solar parks in ISA member countries. Under the aegis of ISA, NTPC has already been providing the project management consultancy services for the development of 6245 megawatt (MW) solar parks in various African and Latin American countries like Togo, Mali, Malawi, Cuba, Niger, Ethiopia, Paraguay, Nicaragua, Zambia, Congo, and Venezuela. Besides, we are also actively looking at other countries of Middle-East, South-East Aisa and the African continent for business opportunities.

We are also working on providing community centred solarisation solutions to various SIDS and LDC member countries of ISA. These solutions, which are environment friendly and sustainable, will help countries meet various SDG goals. Some worth mentioning solutions being developed are solar powered cold storages, roof top solarization of Primary Health Centres and other buildings and Solar pumps for Irrigation and potable water.

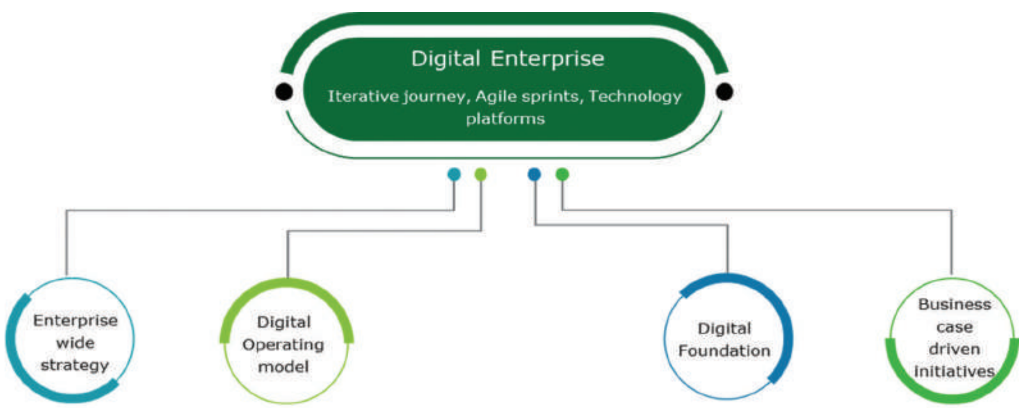
We are actively looking for suitable opportunities for acquisition of stressed power projects subject to techno-commercial viability. NTPC has submitted Resolution Plan for possible acquisition of Jhabua Power Limited (under NCLT) having 600 MW Coal based thermal power plant in the Seoni district of Madhya Pradesh. In the Resolution Plan for KSK Mahanadi and Lanco Amarkantak, NTPC shall be the technical partner providing necessary O&M advisory services for the operating station and shall acquire minority stake (11~15%) in the Targets.

Digitalisation at NTPC

Power Sector in India and around the world is undergoing a transformational change due to new emerging technologies, digital shift and new business models impacting the power value chain comprising of generation, distribution and consumption of power. NTPC recognizes the fact that digitalization and AI is pivotal to its business model for strengthening its current system and provide new revenue and value-producing opportunities given the uncertainties and dynamisms in power sector.

NTPC has developed its IT strategy focused on four strategic theme in line with its Corporate strategy. The IT strategy document is the culmination of an in-depth process that involved research on IT and power sector trends, and discussions about technology needs with various stakeholders, associates and end users. This has been done to align NTPC IT with the emerging IT trends amid increasing influence of digitalization in power sector. With the new digital initiatives underway, NTPC will be a fully digitalized organization for its core and non-core functions and will also act as a role model for others in the industry.

Cost effectively, diversify strategically, venture into new areas closely aligned with current trend in Energy Sector and enhance people capabilities to be more competitive. The aim of Digital Transformation Strategy is to seamlessly support these business objectives. In next five years' time, IT aims to convert NTPC into a world class Power Utility fully backed by Technology in each and every segment of its business. The



Digital Transformation Strategy shall ensure Technology to play the Business Driver Role. The present business processes and upcoming new business processes shall be critically analyzed, modified, automated and digitized to bring tangible gains using the New Technology. The Strategy shall not only enhance the Decision Making Process but also ensure Data Driven Decision making. The Digital Transformation Strategy proposes following Steps in the journey of Digital Transformation.

- Enterprise wide strategy – To align with NTPC Vision and Mission.
- Digital Operating Model – To bring together Technology, People and Business.
- Digital Foundation – Core Technology Layers to drive the Digital Transformation.
- Business Case Driven Initiatives – To transform existing business processes using New Technology.

Key themes emerging from digital transformation strategy are as follows:

1. NTPC needs to look at the 'BIG Picture' of business, which requires creation of holistic plan and creation of waves of implementation for digital initiatives based on business case
2. Innovations should be driven by business needs arising out from strategic priorities, not technology
3. Functional collaboration is important - Business, Technology, Commercial and HR functions should collaborate with each other as well as with external alliance partners

4. Taking a 'Platform approach' for implementation of initiatives is critical. It starts with organization-wide tech reference architecture and a robust data model and management platform
5. Change and culture transformation programs are key to success for a large-scale digital transformation program, especially in a large organization like NTPC.

Digital Strategy document also outlines high level plan to manage business ecosystem, governance, manpower, funding requirement, revenue generation, IT issues and risks. The mitigation strategy for IT risks such as ERP Outage, Threat of Sabotage, Major Security incidents, Natural Disaster and Security Monitoring Software, has been clearly defined. The Disaster Recovery (DR) site in a different seismic zone, 24x7 Security Operation Centre (SOC), Privileged User Management (PUM), latest antivirus on client machines, Active Directory (AD) services for secured login and patch management are some of the steps outlined in the strategy document for risk mitigation. The risk mitigation strategy must ensure 100% security and availability of IT resources to business.

Information security /cybersecurity strategy and policies approved by the management have been implemented at all locations. Cyber Security Initiatives. The major security infrastructure hardware/appliance has been refreshed in 2021 and round the clock monitoring of Cyber security. IT Service Management tool for change request management and incident reporting has been implemented at Cyber Security Operation Centre. Security audit of IT and OT infrastructure across NTPC sites has been scheduled to be carried out by a Cert-In empanelled auditor every 06 month. During October'2021, NTPC LTD. had undertaken various activities at its Corporate office, RHQs and plant locations to educate and make everyone aware about the Cyber Security aspects of Work as well as Personal life. Cyber Security Awareness Webinars on various Topics were conducted by CC-IT for NTPC employees. The programs were delivered by distinguished IITM faculty. Display of Messages regarding Cyber hygiene, etiquettes and Do's and Don'ts was arranged through means such as Display screens at prominent locations such as in lobbies, halls; standees, notice boards etc. Further, Infographic messages to raise awareness on Cyber security were displayed on desktops everyday throughout the month. The first wednesday of every month is now being celebrated as Cyber Jagrookta Diwas (CJD) to generate sustained awareness among public on " Cyber hygiene". Also, the webinars are being conducted for employees by DSCI (Data Security Council of India), a premier industry body on cyber security and data protection in India.

A well documented BCP (Business continuity Plan) is in place to ensure business continuity of organisation. Data Centre (DC) is operational at NOIDA and Disaster Recovery Centre (DRC) is operational at Hyderabad. NTPC's data centers at Noida and Hyderabad are ISO 27001 certified for security compliance. Async data replication is being carried out between the both Data Centers with a permissible RPO of 15 Mins. DR, Hyderabad is 100% replica of DC, Noida with full redundancy. Switch over / switch back of SAP operations from DC to DRC carried out periodically as a preparedness to ensure business continuity in case of contingency. Once in a year the drill of switch over / switch back drill is carried out. The company has not experienced breaches of information security or other cybersecurity incidents over the past three years.

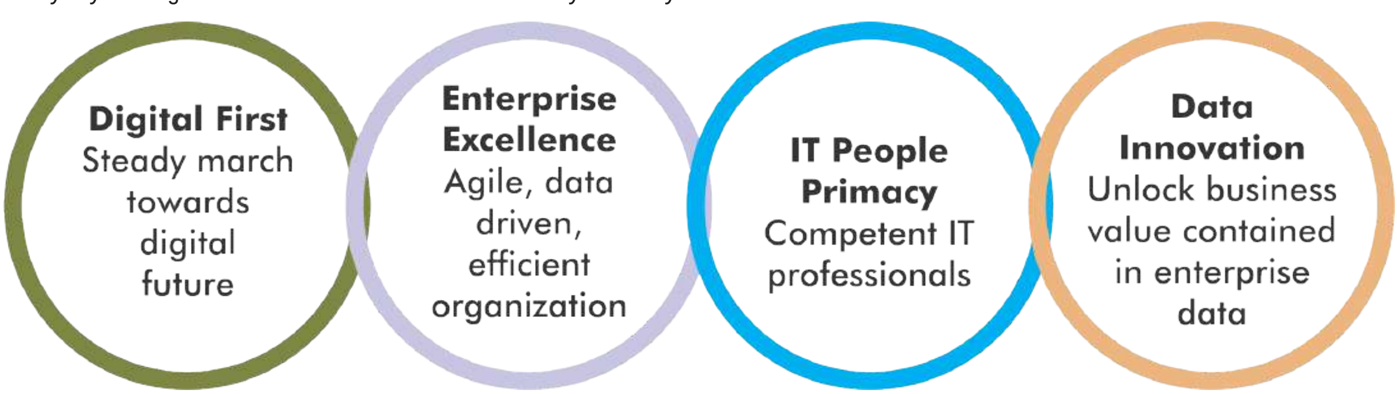
Our IT Strategy aims to achieve 100% Paperless Office, Data Analytics for decision making, induction of new technology such as IIOT, AI, Machine learning etc. over next 2 years.

An organization wide focus is to build foundation layers to enable Digital Transformation. As a good practice, globally, leading organizations take an integrated approach, where availability of foundation blocks is ensured before implementation of prioritized initiatives. Currently, NTPC operates two large organization wide platform – ERP (SAP) and ECM (PRADIP).

Expenditure on IT/Digitalization

	FY 2021-22
Capital Budget Expenditure	₹ 72 Cr

In addition Corporate IT also had ₹ 90 cr revenue budget for IT communication related services. Our IT Strategy aims to achieve 100% Paperless Office, Data Analytics for decision making, induction of new technology such as IOT, AI, Machine learning etc. over next 2 years.



Strategic Themes

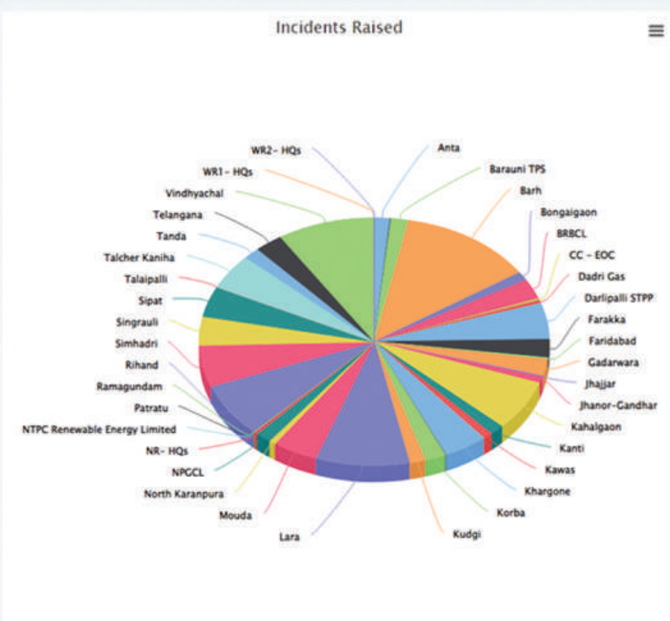
Case Study: Implementation of Safety Framework- A Digital Initiatives

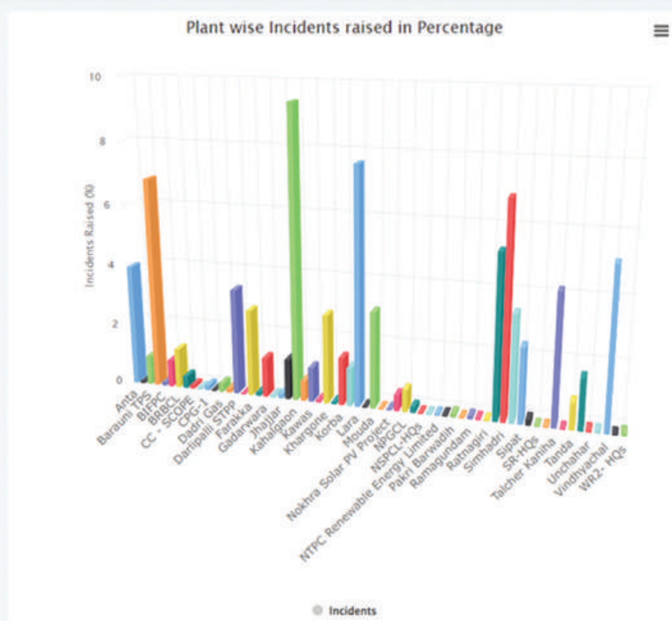
NTPC gives paramount commitment to Safety, Health and Environment (SHE) in all its activities. This commitment is reinforced by choosing "Safety" as one of the core values. Company firmly believes that "All accidents are preventable" and promotes safe working environment striving for "ZERO INCIDENTS" at work. Safe work results in 1. High Productivity 2. Positive work environment 3. Improved bottom lines 4. Better satisfaction to stake holders.

NTPC IT team has taken initiatives and implemented the Safety framework. The Safety Framework is an evidence-based system as it is linked with SAP system under notification type SFW. The different type of tasks assigned to the different levels in the form of Consolidated Performance Measures, and development of dashboards for REDs, Head of Projects, Head of Departments/Section/Area Engineer, Corporate Safety, Corporate Operation Services, Site Safety Coordinator etc.

NTPC Safety Mobile App Suraksha is also launched. This app can be downloaded from Google play store and App store. The app provides the details of safety check list, safety related documents and videos, safety notifications and standard trainings and communications. Further, Safety Policy Awareness, Management commitment and Safety accountabilities, Emergency response planning – Region, Emergency Management Plan, Safety Objectives, Safety Risk Management are also part of the safety framework.

The details of the plant wise incidents raised are captured. History is maintained in system and gist of the incident , observations and recommendations are captured.





Total Incidents Raised (Since 1 Jan.,2022) : 22693

This safety framework has emerged as catalyst in improving safety conditions in plants. The incidents are captured and analysed. This will surely make NTPC as safe place to work for.

TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD)

TCFD was established by the Financial Stability Board with the aim of improving the reporting of climate-related risks and opportunities. We have recognised the TCFD recommendations with a commitment to enhance its climate-related disclosures, and improve the management and reporting of climate-related risks.

Strategy

1. Analysis and description of climate change impacts on NTPC's all business segments covering strategic advantages and competitive strengths has been done.
2. Structured materiality assessment process conducted in accordance with the GRI Standards in consultation with third party,

For more details please refer:

Materiality assessment chapter at Page no. 210

Financial capital at Page no. 225

Governance

NTPC's has instituted governance systems and structures including the oversight of responsibilities with respect to climate change risks at multiple levels ranging from operations to Board of Directors:

1. **Oversight & Committees:**
   a. Board of Directors
   b. Board level CSR & Sustainability Committee
   c. Corporate level Sustainability Steering Committee
2. **Dedicated Departments:**
   a. Sustainability Department
   b. CenPEEP - Centre for Power Efficiency & Environmental Protection

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

Risk Management

Climate change and its associated physical and transitional risks has been considered as strategic risks. The same has been included in company's overall risk management framework.

For more details please refer:

Risk Management Chapter at Page no. 216

Metrics & Targets

1. NTPC has been reporting annually its absolute and specific carbon emissions through Annual and Sustainability Reports.
2. NTPC plants have been allocated energy efficiency targets under the Perform, Achieve and Trade schemes. We have initiated the 'Comprehensive Performance Optimisation Programme' thereby successfully balancing the dual objectives of reducing carbon-di-oxide emissions that contribute to climate change and facilitating higher efficiency of power generation.
3. NTPC is committed to diversify its fuel capacity mix to have 60 GW of renewable capacity by 2032.
4. **For more details please refer:**

Manufacturing Capital Chapter from Page no. 229-231

Natural Capital Chapter from Page no. 251-252

World Economic Forum-Stakeholder Capitalism Matrix

WORLD ECONOMIC FORUM — Sustainability Report 2021-22

Pillar	Theme	Core Metric	KPI Key Performance Indicators	2022	2021	Variation	Ref Chapter/Paragraphs
Principles of Governance	Governing Purpose	Setting Purpose					Management Discussion and analysis
	Quality of Governing Body	Governance body composition	Women on Board of Directors (no)	1	0		Report on corporate governance
	Stakeholder Engagement	Material Issues Impacting Stakeholders					Stakeholder Engagement and materiality analysis
	Ethical behavior	Anti-Corruption	Employees who received training about anti-corruption policies and procedures	764	982		Employees Training
			Ascertained violations related to conflict of interest/corruption (no)	52	64		Vigilance
		Protected Ethics advice and reporting mechanisms	Reports received related to violation of the code of ethics	0	0		
	Risk and Opportunity Oversight	Integrating risks and opportunity into Business process					Risk Management

WORLD ECONOMIC FORUM — Sustainability Report 2021-22

Pillar	Theme	Core Metric	KPI Key Performance Indicators	2022	2021	Variation	Ref Chapter/Paragraphs
Planet	Climate Change	Greenhouse Gas Emissions	Direct Green House Gas emissions- Scope 1 (mil T_{eq})	304	263.9		GHG Emissions
			Indirect Green House Gas emission- Scope 2- Purchased electricity from the Grid (Location Based) (T_{eq})	16400.34	15221.86		GHG Emissions
			Indirect Green House Gas emission- Scope 2- Purchased electricity from the Grid (Market Based) (mil T_{eq})				GHG Emissions
			Indirect Green House Gas Emission - Scope 3 (mil T_{eq})	1101885.05	561,135.58		GHG Emissions
		TCFD Implementation					TCFD
	Nature Loss	Land Use and Ecological Sensitivity	Hectares Restored	17.71	17.71		Biodiversity conservation
	Fresh Water Availability	Water Consumption and withdrawal in water Stress area	Water Withdrawal (m^3)	5274.81			Water
			Water withdrawal in "water Stressed area" (%)	64%			Water
			Total Water Consumption (Mil m^3)	997.367	910.2		Water
			Water consumption in water stressed area (%)	47%			Water

WORLD ECONOMIC FORUM

Sustainability Report 2021-22

Pillar	Theme	Core Metric	KPI Key Performance Indicators	2022	2021	Variation	Ref Chapter/Paragraphs
People	Dignity and equality	Diversity and Inclusion	Women incidence on total employee (%)	7.86	8.2		Equal opportunity, Diversity and Inclusion
		Pay equality	Equal Remuneration ratio (%)	100	100		Remuneration
		Wage level	CEO pay Ratio (%)				Corporate governance
		Risk of incidents of Child, forced or compulsary labor	Evaluation along the supply chain of child labor defense and compulsory or force work prohibition				Human Rights
	Health and wellbeing	Health and Safety	Fatal accidents -	5	7		Safety
			Fatalities frequency rate-				Safety
			"life changing Injury"	1			Safety
	Skills for the future	Training Provided	Life changing Injury frequency rate	0.003			Safety
			Average hours of training per employee (hr/emp)	41	17		Program for Skill Development
			Employees Training costs (Crores INR)	21	18		Talent Management

WORLD ECONOMIC FORUM

Sustainability Report 2021-22

Pillar	Theme	Core Metric	KPI Key Performance Indicators	2022	2021	Variation	Ref Chapter/Paragraphs
Prosperity	Employment and wealth Generation	Absolute number and rate of employment	People Hired no.	943			Employees Hired & Seperated
			Hiring Rate (%)	4.5			
			Termination no.	1704			
			Turnover (%)	8.20			
		Economic Contribution					Economic Value Generated and distributed
		Financial Investment contribution	Total Investment (Cr INR)	34490.55	33982.00		Consolidated Annual Report
			Purchase of own shares	0	2%		
			Dividends paid	6933.12	7106.93		
	Innovation in better products and services	Total R&D Expenses	Investment in research and development (Cr INR)	222.48	185.78		Research and Development
	Community and social vitality	Total tax paid	Total tax paid (Cr INR)	3654.27	4061.92		Consolidated Annual Report

Assurance Statement

Independent Assurance Statement to NTPC Limited on selected non – financial disclosures reported in its Sustainability Report for Financial Year 21-22

To,

The Management of NTPC Limited,

NTPC Bhawan, Scope Complex 7,

Institutional Area, Lodhi Road,

New Delhi – 110003, India.

Introduction

We ('KPMG Assurance and Consulting Services LLP', or 'KPMG') have been engaged by NTPC Limited ('NTPC' or 'the Company') for the purpose of providing an independent reasonable assurance on selected non-financial disclosures presented in the Integrated Report ('the Report') for the reporting period from 1st April 2021 to 31st March 2022. Our responsibility was to provide reasonable assurance on selected non-financial disclosures in the Report as described in the scope, boundary, and limitations.

Reporting Criteria

NTPC has developed its report based on the applicable accounting standards and has incorporated the principles of the International Integrated Reporting Framework published by the International Integrated Reporting Council (IIRC), into the Integrated Report. The non-financial reporting criteria has been derived by the management of NTPC from the GRI Standards of the Global Reporting Initiative

Assurance standards used

We conducted our assurance in accordance with

- Reasonable Assurance requirements of International Federation of Accountants' (IFAC) International Standard on Assurance Engagement (ISAE) 3000 (Revised) Assurance Engagements Other than Audits or Reviews of Historical Financial Information.
    - Under this standard, we have reviewed the information presented in this Report against the characteristics of relevance, completeness, reliability, neutrality, and understandability.
    - Reasonable assurance is a high level of assurance but, it is not a guarantee that it will always detect a material misstatement when it exists.

Boundary Scope, and Limitations

- The scope of assurance covers the general disclosures and specific disclosures of NTPC as mentioned in the table below, for the period 01 April 2021 to 31 March 2022.
- The boundary of assurance covers the non-financial performance of all NTPC stations and following NTPC-Joint Venture and subsidiary companies in India:

Joint Venture Companies incorporated in India	Subsidiary Companies
1. NTPC-SAIL Power Company Ltd. (NSPCL)	6. Kanti Bijlee Utpadan Nigam Ltd. (KBUNL) 6. Bhartiya Rail Bijlee Company Ltd. (BRBCL)
2. NTPC Tamil Nadu Energy Company Ltd. (NTECL)	7. Patratu Vidyut Utpadan Nigam Ltd. (PVUNL)
3. Ratnagiri Gas & Power Private Ltd. (RGPPL)	8. Nabinagar Power Generating Company Ltd. (NPGCL)
4. Aravali Power Company Private Ltd. (APCPL)	9. THDC India Ltd.
5. Meja Urja Nigam Private Ltd. (MUNPL)	10. North Eastern Electric Power Corporation Ltd. (NEEPCO)

The Disclosures subject to assurance based on GRI Standards are as follows:

Universal Standards

- General Disclosures
    - o Stakeholder Engagement (102-40 to 102-44)

Topic Specific Standards

- Environment
    - o Materials (301-1)

- o Energy (302-1, 302-3)
- o Water and effluents (303-3 to 303-5)
- o Emissions (305-1, 305-4, 305-6, 305-7)
- o Effluents and Waste (306-3 to 306-5)
- Social
  - o Employment (401-1, 401-2, 401-3)
  - o Occupational Health and Safety (403-1 to 403-10)
  - o Training and Education (404-1 to 404-3)
  - o Diversity and Equal Opportunity (405-1 to 405-2)
  - o Non- Discrimination (406-1)
  - o Freedom of Association and Collective Bargaining (407-1)
  - o Child Labour (408-1)
  - o Forced or Compulsory Labour (409-1)
  - o Security Practices (410-1)
  - o Rights of Indigenous People (411-1)
  - o Local Communities (413-1 to 413-2)

The assurance scope excludes the following:

- Data related to Company's financial performance.
- Data and information outside the defined reporting period.
- The Company's statements that describe expression of opinion, belief, aspiration, expectation, aim to future intention provided by the Company and assertions related to Intellectual Property Rights and other competitive issues.
- Data review outside the operational sites as mentioned in the boundary above.
- Strategy, regulatory compliance, and other related linkages expressed in the Report.

The above non-financial disclosures may have inherent limitations owing to the nature of disclosures as well as the methodologies used for measuring, calculating and/or estimating these disclosures. The accuracy of measurement methods, changes in criteria for measurement and individual judgment may impact the comparability of data.

Assurance Procedure

Our assurance processes involve performing procedures to obtain evidence about the reliability of specified disclosures. The nature, timing and extent of procedures selected depend on our judgement, including the assessment of the risks of material misstatement of the selected sustainability disclosures whether due to fraud or error. In making those risk assessments, we have considered internal controls relevant to the preparation of the Report in order to design assurance procedures that are appropriate in the circumstances.

Our assurance procedure also included:

- Assessment of the Company's reporting procedures regarding their consistency with the respect to reporting criteria.
- Evaluating the appropriateness of various assumptions, estimations, and materiality thresholds used by the Company for data analysis
- Evaluating the appropriateness of the quantification methods used to arrive at the sustainability disclosures presented in the Report.
- Review of systems and procedures used for quantification, collation, and analysis of sustainability disclosures included in the Report.
- Discussions with the personnel at the corporate and business unit level responsible for the data and information presented in the Report.
- Assessment of data reliability and accuracy.
- Data review and validation for the following sites was performed through physical site visits:
  - o Vindhyachal, Madhya Pradesh
  - o Koldam, Himachal Pradesh
  - o Ratnagiri, Maharashtra

Appropriate documentary evidences were reviewed to support our conclusions on the information and data verified. Where such documentary evidence could not be collected due to the sensitive nature of the information, our team reviewed the same with the relevant authority at select sites and at the corporate office.

Conclusions

We have reviewed the selected disclosures in the Integrated Report of NTPC Limited for the FY 2021- 22. Based on our review and procedures performed and in line with the boundary, scope and limitations as described above, we conclude that:

- Selected non-financial disclosures which have been subjected to reasonable assurance procedures as defined under scope of assurance, are fairly stated, in all material aspects, and are in alignment with the reporting requirements of the GRI Standards.
- Data representation and calculation related errors were detected but the same were resolved during the assurance process.

We have provided our observations to the Company in a separate management letter. These, do not, however, affect our conclusions regarding the Report.

Independence

The assurance was conducted by a multidisciplinary team including professionals with suitable skills and experience in auditing environmental, social, and economic information in line with the requirements of ISAE 3000 (Revised) standard. Our work was performed in compliance with the requirements of the IFAC Code of Ethics for Professional Accountants, which requires, among other requirements, that the members of the assurance team (practitioners) be independent of the assurance client, in relation to the scope of this assurance engagement, including not being involved in writing the Report. The Code also includes detailed requirements for practitioners regarding integrity, objectivity, professional competence and due care, confidentiality and professional behaviour. KPMG has systems and processes in place to monitor compliance with the Code and to prevent conflicts regarding independence. The firm applies International Standard of Quality Control (ISQC1), and the practitioner complies with the applicable independence and other ethical requirements of the IESBA code.

Responsibilities

NTPC is responsible for developing the Report contents. NTPC is also responsible for identification of material sustainability topics, establishing and maintaining appropriate performance management and internal control systems and derivation of performance data reported. This statement is made solely to the Management of NTPC in accordance with the terms of our engagement and as per scope of assurance. Our work has been undertaken so that we might state to NTPC those matters for which we have been engaged to state in this statement and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than NTPC for our work, for this report, or for the conclusions expressed in this independent assurance statement. The assurance engagement is based on the assumption that the data and information provided to us is complete and true. We expressly disclaim any liability or co-responsibility for any decision a person or entity would make based on this assurance statement. Our report is released to NTPC on the basis that it shall not be copied, referred to or disclosed, in whole or in part, without our prior written consent. By reading this assurance statement, stakeholders acknowledge and agree to the limitations and disclaimers mentioned above.

Apurba Mitra
Associate Partner
KPMG Assurance and Consulting Services LLP
2 August 2022

Annexure-1: Policies and systems

No.	Policies/ System	Web Link
Director (Finance)		
1.	Code of Conduct	https://www.ntpc.co.in/investors/code-of-conduct
2.	Fraud Prevention Policy	http://www.ntpctender.com/about/FraudPolicy.asp
3.	Whistle Blower Policy	https://www.ntpc.co.in/sites/default/files/downloads/ WhistleBlowerPolicy.pdf
4.	Internal Code of Conduct for prevention of insider trading	https://www.ntpc.co.in/download/internal-code-conduct-prevention-insider-trading-dealing-securities-ntpc-limited
5.	Code of Corporate Fair Disclosure Practices for prevention of insider trading	https://www.ntpc.co.in/download/code-corporate-fair -disclosure-practicces-prevention-insider-trading
6.	Related Party Transaction Policy	https://www.ntpc.co.in/download/related-party -transaction-policy-ntpc
7.	Policy for determination of materiality of events or information for disclosure	https://www.ntpc.co.in/sites/default/files/downloads/ NTPCPolicyForDeterminationofMaterialityofevents.pdf
8.	Policy on maintenance & preservation of documents	https://www.ntpc.co.in/sites/default/files/Document PreservationPolicy.pdf
9.	Policy for determining Material Subsidiaries	https://www.ntpc.co.in/download/policy-determining -material
10	Dividend Distribution Policy	https://www.ntpc.co.in/sites/default/files/downloads/ DividentDistributionPolicyofNTPCLimited.pdf
Director (HR)		
11.	CDA Rules	https://www.ntpc.co.in/sites/default/files/downloads/CDA-Rules.pdf
12.	Training Policy for Directors of NTPC	https://www.ntpc.co.in/download/training-policy-director-ntpc
13.	Human Right Policy	https://www.ntpc.co.in/sites/default/files/downloads/NTPCHuman%20 RightsPolicy_0.pdf
14.	Equal Opportunity Policy	https://www.ntpc.co.in/sites/default/files/downloads/Equal_Opportunity_Policy. pdf
15.	R&R Policy	https://www.ntpc.co.in/en/corporate-citizenship/r-and-r-policies
16.	Initial Community Development Policy	https://www.ntpc.co.in/edownload/initial-communitydevelopment policy-2009
17.	Policy for CSR and Sustainability	https://www.ntpc.co.in/download/ntpc-policy-csr-sustainability
18.	Career Development Policy	https://www.ntpc.co.in/en/careers/career-growth-opportunities
Director (Operations)		
19.	Safety Policy	https://www.ntpc.co.in/en/sustainability/health-and-safety
20.	Environment Policy	https://www.ntpc.co.in/en/environment/environment-policy-andmanagement
21.	Water Policy	https://www.ntpc.co.in/sustainability.report-policies/7312/ntpc-water-policy-2017
22.	Ash Policy 2015	https://www.ntpc.co.in/sites/default/files/downloads/AshPolicy2015.pdf
Director (Projects)		
23.	Biodiversity Policy	https://www.ntpc.co.in/sites/downloads/biodiversitypolicy2018.pdf
24.	Rain Water Harvesting Policy	https://www.ntpc.co.in/sites/default/files/downloads/ NTPCRainWaterHarvestingPolicy2018-pdf
Director (Comml.)		
25.	Commercial systems & Procedures	https://www.ntpc.co.in/sites/default/files/downloads/ procurementandworkpolicy.pdf

Annexure-2: Corporate Membership with National & International Organisations

Aspects	Organisation Name
Safety	1. British Safety Council
	2. Institute of Fire Engineers
	3. National Safety Council
	4. National Safety Council, USA
Industry Association	5. Confederation of India Industry (CII)
	6. Delhi Productivity Council (DPC)
	7. Federation of Indian Chambers of Commerce & Industry (FICCI)
	8. Foundation of Restoration of National Values
	9. Institute of Company Secretary of India (ICSI)
	10. Institute of Internal Auditors
Human Resource	11. Power HR Forum
	12. Power Sector Skill Council
	13. The Foreign Correspondent's Club of South Asia
	14. Strategic Human Resource Management (SHRM), USA
Infrastructure	15.India Infrastructure Forum
	16. South Asia Forum for Infrastructure Regulation (SAFIR)
Society & Environment	17. United Nation Global Compact (UNGC)
	18. TERI Council for Business Sustainability (CBS)
	19. India Business and Biodiversity Initiatives (IBBI)
Energy	20. Central Board of Irrigation & Power (CBIP)
	21. Electric Power Research Institute (EPRI), USA
	22. Energy Transit on Commission India (ETC), India
	23. Indian Federation of Green Energy
	24. International Conference on Large High Voltage Electric System (CIGRE)
	25. The Energy and Resources Institute (TERI)
	26. World Energy Council (WEC)
	27. Central Mechanical Engineering Research Institute (CSIR)
	28. Council of Power Utilities
	29. Excellence Enhancement Centre, EEC
	30. National Accreditation Board for T&C Laboratories
	31. The American Society for Non destructive Testing
Mining	32. The Mining, Geological & Metallurgical Institute of India

STANDALONE BALANCE SHEET AS AT 31 MARCH 2022

₹ Crore

Particulars	Note No.	As at 31 March 2022	As at 31 March 2021
ASSETS			
Non-current assets			
Property, plant and equipment	2	**1,79,580.37**	1,63,892.12
Capital work-in-progress	3	**68,598.66**	75,343.60
Intangible assets	4	**485.41**	556.74
Intangible assets under development	5	**98.47**	94.90
Financial assets			
Investments in subsidiary and joint venture companies	6	**29,778.59**	28,028.57
Other investments	7	**102.48**	97.08
Loans	8	**1,288.40**	1,498.12
Other financial assets	9	**1,017.98**	1,188.84
Other non-current assets	10	**12,083.22**	13,790.02
Total non-current assets		**2,93,033.58**	2,84,489.99
Current assets			
Inventories	11	**9,487.21**	9,178.94
Financial assets			
Investments	12	**-**	499.99
Trade receivables	13	**22,293.32**	22,976.26
Cash and cash equivalents	14	**17.04**	90.05
Bank balances other than cash and cash equivalents	15	**2,438.55**	2,248.41
Loans	16	**477.70**	416.82
Other financial assets	17	**5,291.13**	3,604.87
Other current assets	18	**8,869.30**	8,527.87
Total current assets		**48,874.25**	47,543.21
Regulatory deferral account debit balances	19	**12,588.97**	11,143.72
TOTAL ASSETS		**3,54,496.80**	3,43,176.92
EQUITY AND LIABILITIES			
Equity			
Equity share capital	20	**9,696.67**	9,696.67
Other equity	21	**1,18,354.40**	1,09,288.82
Total equity		**1,28,051.07**	1,18,985.49
Liabilities			
Non-current liabilities			
Financial liabilities			
Borrowings	22	**1,47,374.75**	1,50,509.00
Lease liabilities	23	**815.07**	720.62
Trade payables	24		
Total outstanding dues of micro and small enterprises		**13.45**	13.78
Total outstanding dues of creditors other than micro and small enterprises		**71.17**	66.23
Other financial liabilities	25	**805.47**	1,390.67
Provisions	26	**1,446.02**	1,174.21
Deferred tax liabilities (net)	27	**10,006.29**	9,160.99
Other non-current liabilities	28	**1,081.61**	1,111.81
Total non-current liabilities		**1,61,613.83**	1,64,147.31

STANDALONE BALANCE SHEET AS AT 31 MARCH 2022

₹ Crore

Particulars	Note No.	As at 31 March 2022	As at 31 March 2021
Current liabilities			
Financial liabilities			
Borrowings	29	**23,272.33**	23,107.19
Lease liabilities	30	**168.01**	151.80
Trade payables	31		
Total outstanding dues of micro and small enterprises		**440.82**	378.31
Total outstanding dues of creditors other than micro and small enterprises		**8,885.49**	6,804.16
Other financial liabilities	32	**21,834.93**	19,610.02
Other current liabilities	33	**1,027.00**	1,070.14
Provisions	34	**7,095.76**	6,928.09
Current tax liabilities (net)	35	**134.17**	-
Total current liabilities		**62,858.51**	58,049.71
Deferred revenue	36	**1,973.39**	1,994.41
TOTAL EQUITY AND LIABILITIES		**3,54,496.80**	3,43,176.92

Significant accounting policies 1

The accompanying notes 1 to 74 form an integral part of these financial statements.

For and on behalf of the Board of Directors

(Nandini Sarkar)
Company Secretary

(A.K. Gautam)
Director (Finance)
DIN: 08293632

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

This is the Balance Sheet referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382

For S.N. Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(Mukesh Bansal)
Partner
M No. 505269

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R. Prasanna Varma)
Partner
M No. 025854

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No. 079236

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K. Prusty)
Partner
M No. 057318

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M No. 073488

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M No. 072534

Place : New Delhi
Dated : 20 May 2022

Digitally signed by signatories

STANDALONE STATEMENT OF PROFIT AND LOSS FOR THE YEAR ENDED 31 MARCH 2022

₹ Crore

Particulars	Note No.	For the year ended 31 March 2022	For the year ended 31 March 2021
Income			
Revenue from operations	37	**1,16,137.33**	99,206.72
Other income	38	**3,905.10**	4,345.99
Total income		**1,20,042.43**	1,03,552.71
Expenses			
Fuel cost	39	**64,163.68**	52,849.64
Electricity purchased for trading		**3,450.22**	3,031.25
Employee benefits expense	40	**5,289.51**	4,942.19
Finance costs	41	**7,350.91**	7,459.03
Depreciation and amortization expenses	42	**11,234.14**	10,411.80
Other expenses	43	**9,388.22**	9,580.28
Total expenses		**1,00,876.68**	88,274.19
Profit before exceptional items, tax and regulatory deferral account balances		**19,165.75**	15,278.52
Exceptional items	46	**-**	1,363.00
Profit before tax and regulatory deferral account balances		**19,165.75**	13,915.52
Tax expense	52		
Current tax			
Current year		**3,377.36**	2,597.35
Earlier years		**(0.86)**	(1,874.12)
Deferred tax		**989.89**	1,202.16
Total tax expense		**4,366.39**	1,925.39
Profit before regulatory deferral account balances		**14,799.36**	11,990.13
Net movement in regulatory deferral account balances (net of tax)	67	**1,312.06**	1,779.39
Profit for the year		**16,111.42**	13,769.52
Other comprehensive income			
Items that will not be reclassified to profit or loss			
Net actuarial gains/(losses) on defined benefit plans		**(112.72)**	(139.33)
Net gains/(losses) on fair value of equity instruments		**5.40**	46.80
		(107.32)	(92.53)
Income tax on items that will not be reclassified to profit or loss	52		
Net actuarial gains/(losses) on defined benefit plans		**19.69**	24.34
Other comprehensive income for the year, net of tax		**(87.63)**	(68.19)
Total comprehensive income for the year		**16,023.79**	13,701.33

STANDALONE STATEMENT OF PROFIT AND LOSS FOR THE YEAR ENDED 31 MARCH 2022

₹ Crore

Particulars	Note No.	For the year ended 31 March 2022	For the year ended 31 March 2021
Earnings per equity share (Par value ₹ 10/- each)	58		
Basic & Diluted (₹) (including net movement in regulatory deferral account balances)		**16.62**	13.99
Basic & Diluted (₹) (excluding net movement in regulatory deferral account balances)		**15.26**	12.18

Significant accounting policies 1

The accompanying notes 1 to 74 form an integral part of these financial statements.

For and on behalf of the Board of Directors

(Nandini Sarkar) Company Secretary	(A.K. Gautam) Director (Finance) DIN: 08293632	(Gurdeep Singh) Chairman & Managing Director DIN: 00307037

This is the Statement of Profit and Loss referred to in our report of even date

For S.K. Mehta & Co. Chartered Accountants Firm Reg. No.000478N	For S.N. Dhawan & Co LLP Chartered Accountants Firm Reg. No. 000050N/N500045	For Varma & Varma Chartered Accountants Firm Reg. No. 004532S
(Rohit Mehta) Partner M No. 091382	(Mukesh Bansal) Partner M No. 505269	(P.R. Prasanna Varma) Partner M No. 025854

For Parakh & Co. Chartered Accountants Firm Reg. No. 001475C	For C.K. Prusty & Associates Chartered Accountants Firm Reg. No. 323220E	For B.C. Jain & Co. Chartered Accountants Firm Reg. No. 001099C	For V.K. Jindal & Co Chartered Accountants Firm Reg. No. 001468C
(Thalendra Sharma) Partner M No. 079236	(C.K. Prusty) Partner M No. 057318	(Ranjeet Singh) Partner M No. 073488	(Suresh Agarwal) Partner M No. 072534

Place : New Delhi
Dated : 20 May 2022

Digitally signed by signatories

STANDALONE STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 31 MARCH 2022

(A) Equity share capital

For the year ended 31 March 2022 ₹ Crore

Particulars	**Amount**
Balance as at 1 April 2021	**9,696.67**
Changes in equity share capital due to prior period errors	-
Restated balance as at 1 April 2021	**9,696.67**
Changes in equity share capital during the year	-
Balance as at 31 March 2022	**9,696.67**

For the year ended 31 March 2021 ₹ Crore

Particulars	Amount
Balance as at 1 April 2020	9,894.56
Changes in equity share capital due to prior period errors	-
Restated balance as at 1 April 2020	9,894.56
Changes in equity share capital due to buyback of shares during the year (Refer Note-20)	(197.89)
Balance as at 31 March 2021	9,696.67

(B) Other equity

For the year ended 31 March 2022 ₹ Crore

Particulars	**Reserves & surplus**							**Equity instruments through OCI**	**Total**
	Capital reserve	**Securities premium**	**Capital redemption reserve**	**Bonds/ Debentures redemption reserve**	**Fly ash utilisation reserve fund**	**General reserve**	**Retained earnings**		
Balance as at 1 April 2021	50.08	-	197.89	6,240.43	598.08	96,147.17	5,973.87	81.30	**1,09,288.82**
Profit for the year	-	-	-	-	-	-	16,111.42	-	**16,111.42**
Other comprehensive income	-	-	-	-	-	-	(93.03)	5.40	**(87.63)**
Total comprehensive income	-	-	-	-	-	-	16,018.39	5.40	**16,023.79**
Transfer to retained earnings	-	-	-	(597.25)	-	-	597.25	-	-
Adjustments from retained earnings	-	-	-	-	-	-	-	-	-
Accretion / (utilisation) in fly ash utilisation fund (net) (Note 21)	-	-	-	-	(25.09)	-	-	-	**(25.09)**
Transfer from retained earnings	-	-	-	-	-	-	-	-	-
Final dividend paid for FY 2020-21 (Note 21)	-	-	-	-	-	-	(3,054.45)	-	**(3,054.45)**
Interim dividend paid for FY 2021-22 (Note 21)	-	-	-	-	-	-	(3,878.67)	-	**(3,878.67)**
Balance as at 31 March 2022	**50.08**	-	**197.89**	**5,643.18**	**572.99**	**96,147.17**	**15,656.39**	**86.70**	**1,18,354.40**

For the year ended 31 March 2021

₹ **Crore**

Particulars	Reserves & surplus							Equity instruments through OCI	Total
	Capital reserve	Securities premium	Capital redemption reserve	Bonds/ Debentures redemption reserve	Fly ash utilisation reserve fund	General reserve	Retained earnings		
Balance as at 1 April 2020	50.08	2,228.46	-	7,011.43	588.48	90,182.53	3,664.48	(50.58)	1,03,674.88
Profit for the year	-	-	-	-	-	-	13,769.52	-	13,769.52
Other comprehensive income	-	-	-	-	-	-	(114.99)	46.80	(68.19)
Total comprehensive income	-	-	-	-	-	-	13,654.53	46.80	13,701.33
Transfer to retained earnings	-	-	-	(771.00)	-	-	771.00	-	-
Adjustments from retained earnings	-	-	-	-	-	-	(85.08)	85.08	-
Accretion / (utilisation) in fly ash utilisation fund (net) (Note 21)	-	-	-	-	9.60	-	-	-	9.60
Transfer from retained earnings	-					6,500.00	(6,500.00)	-	-
Utilised for buyback of equity shares (Note 21)	-	(2,228.46)				(337.47)	-	-	(2,565.93)
Transfer to capital redemption reserve (Note 21)	-		197.89			(197.89)	-	-	-
Final dividend paid for FY 2019-20 (Note 21)	-	-	-	-	-	-	(2,622.06)	-	(2,622.06)
Interim dividend paid for FY 2020-21 (Note 21)	-	-	-	-	-	-	(2,909.00)	-	(2,909.00)
Balance as at 31 March 2021	50.08	-	197.89	6,240.43	598.08	96,147.17	5,973.87	81.30	1,09,288.82

Note: Other comprehensive income adjusted in retained earnings amounting to ₹ **93.03 crore** (31 March 2021: ₹114.99 crore) represents remeasurement of defined benefit plans.

For and on behalf of the Board of Directors

(Nandini Sarkar)
Company Secretary

(A.K. Gautam)
Director (Finance)
DIN: 08293632

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

This is the Statement of Changes in Equity referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382

For S.N. Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(Mukesh Bansal)
Partner
M No. 505269

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R. Prasanna Varma)
Partner
M No. 025854

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No. 079236

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K. Prusty)
Partner
M No. 057318

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M No. 073488

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M No. 072534

Place : New Delhi
Dated : 20 May 2022

Digitally signed by signatories

STANDALONE STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 MARCH 2022

₹ Crore

Particulars		For the year ended 31 March 2022	For the year ended 31 March 2021
A. CASH FLOW FROM OPERATING ACTIVITIES			
Profit before exceptional items, tax and regulatory deferral account balances		**19,165.75**	15,278.52
Add: Net movement in regulatory deferral account balances (net of tax)		**1,312.06**	1,779.39
Add: Tax on net movement in regulatory deferral account balances		**277.77**	376.72
Profit before tax including movement in regulatory deferral account balances		**20,755.58**	17,434.63
Adjustment for:			
Depreciation and amortisation expense	**11,234.14**		10,411.80
Provisions	**326.29**		985.92
Impairment on investments	**16.30**		(71.27)
Special rebate to beneficiaries - exceptional item	**-**		(1,363.00)
On account of government grants	**(27.41)**		568.49
Deferred foreign currency fluctuation asset	**408.83**		514.87
Deferred income from foreign currency fluctuation	**222.14**		(416.71)
Regulatory deferral account debit balances	**(1,589.83)**		(2,156.11)
Fly ash utilisation reserve fund	**(25.09)**		9.60
Finance costs	**7,282.84**		7,402.24
Unwinding of discount on vendor liabilities	**68.07**		56.79
Interest income/Late payment Surcharge/Income on investments	**(920.91)**		(2,412.94)
Dividend income	**(2,143.34)**		(1,283.19)
Provisions written back	**(301.16)**		(132.04)
Loss on disposal of non-current investments	**-**		139.75
Profit on de-recognition of property, plant and equipment	**(6.21)**		(3.34)
Loss on de-recognition of property, plant and equipment	**106.12**		133.47
		14,650.78	12,384.33
Operating profit before working capital changes		**35,406.36**	29,818.96
Adjustment for:			
Trade receivables	**686.55**		(265.69)
Inventories	**524.70**		2,213.39
Trade payables, provisions, other financial liabilities and other liabilities	**3,091.91**		(1,386.25)
Loans, other financial assets and other assets	**(2,674.68)**		(586.55)
		1,628.48	(25.10)
Cash generated from operations		**37,034.84**	29,793.86
Income taxes (paid) / refunded		**(1,646.65)**	(2,736.08)
Net cash from/(used in) operating activities - A		**35,388.19**	27,057.78
B. CASH FLOW FROM INVESTING ACTIVITIES			
Purchase of property, plant and equipment & intangible assets	**(17,792.86)**		(18,307.09)
Proceeds from property, plant and equipment & intangible assets	**92.74**		26.18
Proceeds / Investment in mutual funds	**499.99**		(499.99)
Investment in subsidiaries and joint venture companies	**(1,670.32)**		(1,645.16)
Loans and advances to subsidiaries	**162.47**		(866.19)

STANDALONE STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 MARCH 2022

₹ Crore

Particulars		For the year ended 31 March 2022		For the year ended 31 March 2021
	Interest income/Late payment Surcharge/Income on investments received	923.39		3,366.11
	Dividend received	2,143.34		1,283.19
	Income tax paid on income from investing activities	(528.36)		(634.33)
	Bank balances other than cash and cash equivalents	(196.23)		(64.35)
	Net cash from/(used in) investing activities - B		**(16,365.84)**	(17,341.63)
C.	**CASH FLOW FROM FINANCING ACTIVITIES**			
	Proceeds from non-current borrowings	15,034.80		30,431.12
	Repayment of non-current borrowings	(11,345.37)		(20,364.45)
	Proceeds from current borrowings (net)	(6,228.48)		(1,189.62)
	Payment of lease obligations	(35.60)		(42.57)
	Interest paid	(9,587.59)		(10,186.07)
	Buy back of Equity Share Capital	-		(2,763.82)
	Dividend paid	(6,933.12)		(5,531.06)
	Net cash from/(used in) financing activities - C		**(19,095.36)**	(9,646.47)
	Net increase/(decrease) in cash and cash equivalents (A+B+C)		**(73.01)**	69.68
	Cash and cash equivalents at the beginning of the year (see Note 1 and 2 below)		**90.05**	20.37
	Cash and cash equivalents at the end of the year (see Note 1 and 2 below)		**17.04**	90.05

Notes:

1. Cash and cash equivalents consist of cheques, drafts, stamps in hand, balances with banks and deposits with original maturity of upto three months.
2. Reconciliation of cash and cash equivalents:

	For the year ended 31 March 2022	For the year ended 31 March 2021
Cash and cash equivalents as per Note 14	**17.04**	90.05

3. Refer Note 64 for details of undrawn borrowing facilities that may be available for future operating activities and to settle capital commitments.
4. Refer Note 74 w.r.t. amount spent on CSR activities.
5. Reconciliation between the opening and closing balances in the balance sheet for liabilities arising from financing activities:

For the year ended 31 March 2022

₹ Crore

Particulars	**Non-current borrowings***	**Finance lease obligations**	**Current borrowings**
Opening balance as at 1 April 2021	1,62,734.01	872.42	12,859.74
Cash flows during the year	(5,898.16)	(35.60)	(6,228.48)
Non-cash changes due to:			
- Acquisitions under finance lease	-	146.26	-
- Interest on borrowings	9,975.36	-	-
- Variation in exchange rates	(427.35)	-	-
- Transaction costs on borrowings	(2.71)	-	-
Closing balance as at 31 March 2022	**1,66,381.15**	**983.08**	**6,631.26**

STANDALONE STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 MARCH 2022

For the year ended 31 March 2021

₹ Crore

Particulars	Non-current borrowings*	Finance lease obligations	Current borrowings
Opening balance as at 1 April 2020	1,53,832.64	829.67	14,049.36
Cash flows during the year	(119.40)	(42.57)	(1,189.62)
Non-cash changes due to:			
- Acquisitions under finance lease	-	85.32	-
- Interest on borrowings	10,194.94	-	-
- Variation in exchange rates	(1,115.71)	-	-
- Transaction costs on borrowings	(58.46)	-	-
Closing balance as at 31 March 2021	1,62,734.01	872.42	12,859.74

* Includes current maturities of non-current borrowings and interest accrued thereon, refer Note 29 and Note 32.

For and on behalf of the Board of Directors

(Nandini Sarkar)
Company Secretary

(A.K. Gautam)
Director (Finance)
DIN: 08293632

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

This is the Standalone statement of cash flows referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382

For S.N. Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(Mukesh Bansal)
Partner
M No. 505269

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R. Prasanna Varma)
Partner
M No. 025854

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
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M No. 079236

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K. Prusty)
Partner
M No. 057318

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M No. 073488

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M No. 072534

Place : New Delhi
Dated : 20 May 2022

Digitally signed by signatories

Note 1. Company Information and Significant Accounting Policies

A. Reporting entity

NTPC Limited (the "Company") is a Company domiciled in India and limited by shares (CIN: L40101DL1975GOI007966). The shares of the Company are listed and traded on the National Stock Exchange of India Limited (NSE) and BSE Limited in India. The address of the Company's registered office is NTPC Bhawan, SCOPE Complex, 7 Institutional Area, Lodhi Road, New Delhi - 110003. The Company is primarily involved in the generation and sale of bulk power to State Power Utilities. Other business of the Company includes providing consultancy, project management & supervision, energy trading, oil & gas exploration and coal mining.

B. Basis of preparation

1. Statement of Compliance

These standalone financial statements are prepared on going concern basis following accrual system of accounting and comply with the Indian Accounting Standards (Ind AS) prescribed under Section 133 of the Companies Act, 2013 read with the Companies (Indian Accounting Standards) Rules, 2015 as amended, and other relevant provisions of the Companies Act, 2013 and the provisions of the Electricity Act, 2003 to the extent applicable.

These financial statements were approved for issue by the Board of Directors in its meeting held on 20 May 2022.

2. Basis of measurement

The financial statements have been prepared on the historical cost basis except for:

- Certain financial assets and liabilities (including derivative instruments) that are measured at fair value (refer serial no. 27 of accounting policy regarding financial instruments); and
- Plan assets in the case of employees defined benefit plans that are measured at fair value.

The methods used to measure fair values are discussed in notes to the financial statements.

Historical cost is the amount of cash or cash equivalents paid or the fair value of the consideration given to acquire assets at the time of their acquisition or the amount of proceeds received in exchange for the obligation, or at the amounts of cash or cash equivalents expected to be paid to satisfy the liability in the normal course of business. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

3. Functional and presentation currency

These financial statements are presented in Indian Rupees (₹) which is the Company's functional currency. All financial information presented in (₹) has been rounded to the nearest crore (up to two decimals), except when indicated otherwise.

4. Current and non-current classification

The Company presents assets and liabilities in the balance sheet based on current/non-current classification.

An asset is classified as current when it is:

- Expected to be realized or intended to be sold or consumed in normal operating cycle;
- Held primarily for the purpose of trading;
- Expected to be realized within twelve months after the reporting period; or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is classified as current when:

- It is expected to be settled in normal operating cycle;
- It is held primarily for the purpose of trading;
- It is due to be settled within twelve months after the reporting period; or
- There is no unconditional right to defer settlement of the liability for at least twelve months after the reporting period.

All other liabilities are classified as non-current.

Deferred tax assets/liabilities are classified as non-current.

Assets and liabilities are classified between current and non-current considering 12 months period as normal operating cycle.

C. Significant accounting policies

A summary of the significant accounting policies applied in the preparation of the financial statements are as given below. These accounting policies have been applied consistently to all periods presented in the financial statements.

The Company has elected to utilize the option under Ind AS 101-'First time adoption of Indian Accounting Standards' by not applying the provisions of Ind AS 16-'Property, plant and equipment'& Ind AS 38- 'Intangible assets' retrospectively and continue to use the previous GAAP carrying amount as a deemed cost under Ind AS at the date of transition to Ind AS i.e. 1 April 2015. Therefore, the carrying amount of property, plant and equipment and intangible assets as per the previous GAAP as at 1 April 2015, i.e. the Company's date of transition to Ind AS, were maintained on transition to Ind AS.

1. Property, plant and equipment

1.1. Initial recognition and measurement

An item of property, plant and equipment is recognized as an asset if and only if it is probable that future economic benefits associated with the item will flow to the Company and the cost of the item can be measured reliably.

Items of property, plant and equipment are initially recognized at cost. Cost comprises purchase price including import duties and non-refundable purchase taxes after deducting trade discounts and rebates, any cost directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and the present value of initial estimate of cost of dismantling, removal and restoration.

Subsequent measurement is done at cost less accumulated depreciation/amortization and accumulated impairment losses.

When parts of an item of property, plant and equipment that are significant in value and have different useful lives as compared to the main asset, they are recognized separately.

Deposits, payments/liabilities made provisionally towards compensation, rehabilitation and other expenses relatable to land in possession are treated as cost of land.

In the case of assets put to use, where final settlement of bills with contractors is yet to be effected, capitalization is done on provisional basis subject to necessary adjustment in the year of final settlement.

Assets and systems common to more than one generating unit are capitalized on the basis of engineering estimates/assessments.

Items of spare parts, stand-by equipment and servicing equipment which meet the definition of property, plant and equipment are capitalized. Other spare parts are carried as inventory and recognized in the statement of profit and loss on consumption.

The acquisition or construction of some items of property, plant and equipment although not directly increasing the future economic benefits of any particular existing item of property, plant and equipment, may be necessary for the Company to obtain future economic benefits from its other assets. Such items are recognized as property, plant and equipment.

1.2. Subsequent costs

Subsequent expenditure is recognized in the carrying amount of the asset when it is probable that future economic benefits deriving from the cost incurred will flow to the enterprise and the cost of the item can be measured reliably.

Expenditure on major inspection and overhauls of generating unit is capitalized, when it meets the asset recognition criteria. Any remaining carrying amount of the cost of the previous inspection and overhaul is derecognized.

The cost of replacing major part of an item of property, plant and equipment is recognized in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Company and its cost can be measured reliably. The carrying amount of the replaced part is derecognized regardless of whether the replaced part has been depreciated separately. If it is not practicable to determine the carrying amount of the replaced part, the Company uses the cost of the replacement as an indication of what the cost of replaced part was at the time it was acquired or constructed. The costs of the day-to-day servicing of property, plant and equipment are recognized in the statement of profit and loss as and when incurred.

1.3. Decommissioning costs

The present value of the expected cost for the decommissioning of the asset after its use is included in the cost of the respective asset if the recognition criteria for a provision are met.

1.4. De-recognition

Property, plant and equipment is derecognized when no future economic benefits are expected from their use or upon their disposal. Gains and losses on de-recognition of an item of property, plant and equipment are determined as the difference between sale proceeds from disposal, if any, and the carrying amount of property, plant and equipment and are recognized in the statement of profit and loss.

In circumstance, where an item of property, plant and equipment is abandoned, the net carrying cost relating to the property, plant and equipment is written off in the same period.

1.5. Depreciation/amortization

Depreciation is recognized in statement of profit and loss on a straight-line basis over the estimated useful life of each part of an item of property, plant and equipment.

Depreciation on the assets of the generation of electricity business, integrated coal mining and on the assets of Corporate & other offices of the Company, covered under Part B of Schedule II of the Companies Act, 2013, is charged on straight-line method following the rates and methodology notified by the Central Electricity Regulatory Commission (CERC) Tariff Regulations.

Depreciation on the assets of the oil & gas exploration, power plants not governed by CERC Tariff Regulations and consultancy business is charged on straight-line method following the useful life specified in Schedule II of the Companies Act, 2013 except for the assets referred below.

Depreciation on the following assets is provided on their estimated useful lives, which are different from the useful lives as prescribed under Schedule II to the Companies Act, 2013, ascertained on the basis of technical evaluation/ assessment:

a)	Kutcha roads	2 years
b)	Enabling works	
	- residential buildings	15 years
	- internal electrification of residential buildings	10 years
	- non-residential buildings including their internal electrification, water supply, sewerage & drainage works, railway sidings, aerodromes, helipads and airstrips.	5 years
c)	Personal computers & laptops including peripherals.	3 years
d)	Photocopiers, fax machines, water coolers and refrigerators.	5 years
e)	Temporary erections including wooden structures.	1 year
f)	Telephone exchange.	15 years

g)	Wireless systems, VSAT equipment, display devices viz. projectors, screens, CCTV, audio video conferencing systems and other communication equipment.	6 years
h)	Energy saving electrical appliances and fittings.	2-7 years
i)	Solar/wind power plants which are not governed by CERC Tariff Regulations.	25 years
j)	Hospital equipment	5-10 years
k)	Furniture and Fixture	5-15 years

Major overhaul and inspection costs which have been capitalized are depreciated over the period until the next scheduled outage or actual major inspection/overhaul, whichever is earlier.

Capital spares are depreciated considering the useful life ranging between 2 to 40 years based on technical assessment.

Right-of-use land and buildings relating to generation of electricity business governed by CERC Tariff Regulations are fully amortized over the lease period or life of the related plant whichever is lower following the rates and methodology notified by the CERC Tariff Regulations.

Right-of-use land and buildings relating to generation of electricity business which are not governed by CERC tariff Regulations are fully amortized over the lease period or life of the related plant whichever is lower.

Right-of-use land and buildings relating to corporate, and other offices are fully amortized over lease period or twenty-five years whichever is lower following the rates and methodology notified by the CERC Tariff Regulations.

Land acquired under Coal Bearing Areas (Acquisition & Development) Act, 1957 and Other right-of-use land acquired for mining business are amortized over the right of use period or balance life of the project whichever is lower.

In respect of integrated coal mines, the mines closure, site restoration and decommissioning obligations are amortized on straight line method over the balance life of the mine on commercial declaration.

Depreciation on additions to/deductions from property, plant and equipment during the year is charged on pro-rata basis from/up to the month in which the asset is available for use/sale, disposal or earmarked for disposal.

Where the cost of depreciable assets has undergone a change during the year due to increase/decrease in long-term liabilities (recognized up to 31 March 2016) on account of exchange fluctuation and price adjustment change in duties or similar factors, the unamortized balance of such asset is charged off prospectively over the remaining useful life determined following the applicable accounting policies relating to depreciation/amortization.

Where it is probable that future economic benefits deriving from the expenditure incurred will flow to the Company and the cost of the item can be measured reliably, subsequent expenditure on a property, plant and equipment along-with its unamortized depreciable amount is charged off prospectively over the revised useful life determined by technical assessment.

The residual values, useful lives and method of depreciation of assets other than the assets of generation of electricity business and integrated coal mines governed by CERC Tariff Regulations, are reviewed at each financial year end and adjusted prospectively, wherever required.

Depreciation of an asset ceases at the earlier of the date that the asset is classified as held for sale (or included in a disposal group that is classified as held for sale) in accordance with Ind AS 105 and the date that the asset is derecognised.

Refer policy no. C.19 in respect of depreciation/amortization of right-of-use assets other than land and buildings.

2. Capital work-in-progress

Cost incurred for property, plant and equipment that are not ready for their intended use as on the reporting date, is classified under capital work- in-progress.

The cost of self-constructed assets includes the cost of materials & direct labour, any other costs directly attributable to bringing the assets to the location and condition necessary for it to be capable of operating in the manner intended by management and the borrowing costs attributable to the acquisition or construction of qualifying asset.

Expenses directly attributable to construction of property, plant and equipment incurred till they are ready for their intended use are identified and allocated on a systematic basis on the cost of related assets.

Deposit works/cost plus contracts are accounted for on the basis of statements of account received from the contractors.

Unsettled liabilities for price variation/exchange rate variation in case of contracts are accounted for on estimated basis as per terms of the contracts.

3. Intangible assets and intangible assets under development

3.1. Initial recognition and measurement

An intangible asset is recognized if and only if it is probable that the expected future economic benefits that are attributable to the asset will flow to the Company and the cost of the asset can be measured reliably.

Intangible assets that are acquired by the Company, which have finite useful lives, are recognized at cost. Subsequent measurement is done at cost less accumulated amortization and accumulated impairment losses. Cost comprises purchase price including import duties, non -refundable taxes after deducting trade discounts and rebates and any directly attributable expenses of preparing the asset for its intended use.

Expenditure on development activities is capitalized only if the expenditure can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable and the Company intends to & has sufficient resources to complete development and to use or sell the asset.

Expenditure incurred which are eligible for capitalizations under intangible assets are carried as intangible assets under development till they are ready for their intended use.

3.2. Subsequent costs

Subsequent expenditure is recognized as an increase in the carrying amount of the asset when it is probable that future economic benefits deriving from the cost incurred will flow to the enterprise and the cost of the item can be measured reliably.

3.3. De-recognition

An intangible asset is derecognized when no future economic benefits are expected from their use or upon their disposal. Gain or loss on de-recognition of an intangible asset is determined as the difference between the net disposal proceeds, if any, and the carrying amount of intangible assets and are recognized in the statement of profit and loss.

3.4. Amortization

Cost of software recognized as intangible asset, is amortized on straight-line method over a period of legal right to use or 3 years, whichever is less. Other intangible assets are amortized on straight-line method over the period of legal right to use or life of the related plant, whichever is less.

The amortization period and the amortization method of intangible assets with a finite useful life is reviewed at each financial year end and adjusted prospectively, wherever required.

4. Regulatory deferral account balances

Expense/income recognized in the statement of profit and loss to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized as 'Regulatory deferral account balances'.

Regulatory deferral account balances are adjusted in the year in which the same become recoverable from or payable to the beneficiaries.

Regulatory deferral account balances are evaluated at each balance sheet date to ensure that the underlying activities meet the recognition criteria and it is probable that future economic benefits associated with such balances will flow to the entity. If these criteria are not met, the regulatory deferral account balances are derecognized.

5. Exploration for and evaluation of mineral resources

5.1. Oil and gas exploration activities

All exploration costs incurred in drilling and equipping exploratory and appraisal wells, cost of drilling exploratory type stratigraphic test wells are initially capitalized as 'Exploratory wells-in-progress' under 'Intangible assets under development' till the time these are either transferred to oil and gas assets when a well is ready for commercial production or expensed as exploration cost (including allocated depreciation) as and when determined to be dry or of no further use, as the case may be.

Costs of exploratory wells are not carried over unless it could be reasonably demonstrated that there are indications of sufficient quantity of reserves and sufficient progress is being made in assessing the reserves and the economic & operating viability of the project. All such carried over costs are subject to review for impairment.

Cost of surveys and prospecting activities conducted in the search of oil and gas are expensed in the year in which these are incurred.

5.2. Coal mining exploration activities

Exploration and evaluation assets comprise capitalized costs which is generally the expenditure incurred associated with finding the mineral by carrying out topographical, geological, geochemical and geophysical studies, exploratory drilling, trenching, sampling, expenditure for activities in relation to evaluation of technical feasibility and commercial viability, acquisition of rights to explore etc.

Exploration and evaluation expenditure incurred after obtaining the mining right or the legal right to explore are capitalized as exploration and evaluation assets under 'Intangible assets under development' and stated at cost less impairment if any. Exploration and evaluation assets are assessed for impairment indicators at least annually.

Once the proved reserves are determined and development of mine/project is sanctioned, Exploration and evaluation assets are transferred to 'Development of Coal Mines' under 'Capital Work in Progress'. However, if proved reserves are not determined, exploration and evaluation asset is derecognized.

Exploration and evaluation expenditure incurred prior to obtaining the mining right or the legal right to explore are expensed as and when incurred.

6. Development expenditure on coal mines

When proved reserves are determined and development of mines/project is sanctioned, exploration and evaluation assets are transferred to 'Development of coal mines' under 'Capital work-in-progress'.

Subsequent expenditure is capitalized only where it either enhances the economic benefits of the development/producing asset or replaces part of the existing development/producing asset. Any remaining costs associated with the part replaced are expensed.

The development expenditure capitalized is net of value of coal extracted during development phase.

Date of commercial operation of integrated coal mines shall be determined on the occurring of earliest of following milestones as provided in CERC tariff regulations:

1) The first date of the year succeeding the year in which 25 % of the peak rated capacity as per the mining plan is achieved; or

2) The first date of the year succeeding the year in which the value of production exceeds the total expenditure in that year; or

3) The date of two years from the date of commencement of production;

On the date of commercial operation, the assets under capital work-in-progress are classified as a component of property, plant and equipment under 'Mining property'.

Gains and losses on de-recognition of assets referred above, are determined as the difference between the net disposal proceeds, if any, and the carrying amount of respective assets and are recognized in the statement of profit and loss.

6.1. Stripping activity expense/adjustment

Expenditure incurred on removal of mine waste materials (overburden) necessary to extract the coal reserves is referred to as stripping cost. The Company has to incur such expenses over the life of the mine as technically estimated.

Cost of stripping is charged on technically evaluated average stripping ratio at each mine with due adjustment for stripping activity asset and ratio-variance account after the mines are brought to revenue.

Net of the balances of stripping activity asset and ratio variance at the Balance Sheet date is shown as 'Stripping activity adjustment' under the head 'Non-current assets/Non-current provisions' as the case may be, and adjusted as provided in the CERC Tariff Regulations

6.2. Mines closure, site restoration and decommissioning obligations

The Company's obligations for land reclamation and decommissioning of structure consist of spending at mines in accordance with the guidelines from Ministry of Coal, Government of India. The Company estimates its obligations for mine closure, site restoration and decommissioning based on the detailed calculation and technical assessment of the amount and timing of future cash spending for the required work and provided for as per approved mine closure plan. The estimate of expenses is escalated for inflation and then discounted at a pre-tax discount rate that reflects current market assessment of the time value of money and risk, such that the amount of provision reflects the present value of expenditure required to settle the obligation. The Company recognizes a corresponding asset under property, plant and equipment as a separate item for the cost associated with such obligation. Upon commercial declaration of mines, the mine closure, site restoration and decommissioning obligations are amortized on straight line method over the balance life of the mine.

The value of the obligation is progressively increased over time as the effect of discounting unwinds and the same is recognized as finance costs.

Further, a specific escrow account is maintained for this purpose as per approved mine closure plan. The progressive mine closure expenses incurred on year to year basis, forming part of the total mine closure obligation, are initially recognized as receivable from escrow account and thereafter adjusted with the obligation in the year in which the amount is withdrawn from escrow account after concurrence of the certifying agency.

7. Joint operations

The Company has joint arrangements with others for operations in the nature of joint operations. The Company recognizes, on a line-by-line basis its share of the assets, liabilities and expenses of these joint operations as per the arrangement which are accounted based on the respective accounting policies of the Company.

8. Borrowing costs

Borrowing costs consist of (a) interest expense calculated using the effective interest method as described in Ind AS 109 – 'Financial Instruments' (b) interest expense on lease liabilities recognized in accordance with Ind AS 116– 'Leases' and (c) exchange differences arising from foreign currency borrowings to the extent that they are regarded as an adjustment to interest costs.

Borrowing costs that are directly attributable to the acquisition, construction/exploration/ development or erection of qualifying assets are capitalized as part of cost of such asset until such time the assets are substantially ready for their intended use. Qualifying assets are assets which necessarily take substantial period of time to get ready for their intended use or sale.

When the Company borrows funds specifically for the purpose of obtaining a qualifying asset, the borrowing costs incurred are capitalized. When Company borrows funds generally and uses them for the purpose of obtaining a qualifying asset, the capitalization of the borrowing costs is computed based on the weighted average cost of all borrowings that are outstanding during the period and used for the acquisition, construction/exploration or erection of the qualifying asset. However, borrowing costs applicable to borrowings made specifically for the purpose of obtaining a qualifying asset, are excluded from this calculation, until substantially all the activities necessary to prepare that asset for its intended use or sale are complete.

Income earned on temporary investment made out of the borrowings pending utilization for expenditure on the qualifying assets is deducted from the borrowing costs eligible for capitalization.

Capitalization of borrowing costs ceases when substantially all the activities necessary to prepare the qualifying assets for their intended use are complete.

Other borrowing costs are recognized as an expense in the year in which they are incurred.

9. Inventories

Inventories are valued at the lower of cost and net realizable value. Cost includes cost of purchase, cost of conversion and other costs incurred in bringing the inventories to their present location and condition. Cost is determined on weighted average basis. Costs of purchased inventory are determined after deducting rebates, trade discounts and other similar items . Net realizable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and the estimated costs necessary to make the sale.

The diminution in the value of obsolete, unserviceable, surplus and non-moving items of stores and spares is ascertained on review and provided for.

Steel scrap is valued at estimated realizable value.

10. Cash and cash equivalents

Cash and cash equivalents in the balance sheet comprise cash at banks, cash on hand and short-term deposits with an original maturity of three months or less, that are readily convertible to known amount of cash and which are subject to an insignificant risk of changes in value.

11. Government grants

Government grants are recognized when there is reasonable assurance that they will be received and the Company will comply with the conditions associated with the grant. Grants that compensate the Company for the cost of depreciable asset are recognized as income in statement of profit and loss on a systematic basis over the period and in the proportion in which depreciation is charged. Grants that compensate the Company for expenses incurred are recognized over the period in which the related costs are incurred and the same is deducted from the related expenses.

12. Fly ash utilization reserve fund

Proceeds from sale of ash/ash products along-with income on investment of surplus fund are transferred to 'Fly ash utilization reserve fund' in terms of provisions of gazette notification dated 3 November 2009 issued by Ministry of Environment and Forests, Government of India. The fund is utilized towards expenditure on development of infrastructure/ facilities, promotion & facilitation activities for use of fly ash.

13. Provisions, contingent liabilities and contingent assets

A provision is recognized if, as a result of a past event, the Company has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. If the effect of the time value of money is material, provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognized as a finance cost.

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation at reporting date, taking into account the risks and uncertainties surrounding the obligation.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, the receivable is recognized as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably. The expense relating to a provision is presented in the statement of profit and loss net of reimbursement, if any.

Contingent liabilities are possible obligations that arise from past events and whose existence will only be confirmed by the occurrence or non-occurrence of one or more future events not wholly within the control of the Company. Where it is not probable that an outflow of economic benefits will be required, or the amount cannot be estimated reliably, the obligation is disclosed as a contingent liability, unless the probability of outflow of economic benefits is remote. Contingent liabilities are disclosed on the basis of judgment of the management/independent experts. These are reviewed at each balance sheet date and are adjusted to reflect the current management estimate.

Contingent assets are possible assets that arise from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Company. Contingent assets are disclosed in the financial statements when inflow of economic benefits is probable on the basis of judgment of management. These are assessed continually to ensure that developments are appropriately reflected in the financial statements.

14. Foreign currency transactions and translation

Transactions in foreign currencies are initially recorded at the functional currency spot exchange rates at the date the transaction first qualifies for recognition.

Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date. Exchange differences arising on settlement or translation of monetary items are recognized in the statement of profit and loss in the year in which it arises with the exception that exchange differences on long term monetary items related to acquisition of property, plant and equipment recognized up to 31 March 2016 are adjusted to the carrying cost of property, plant and equipment.

Non-monetary items denominated in foreign currency which are measured in terms of historical cost are recorded using the exchange rate at the date of the transaction. In case of advance consideration received or paid in a foreign currency, the date of transaction for the purpose of determining the exchange rate to use on initial recognition of the related asset, expense or income (or part of it), is when the Company initially recognizes the non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration.

15. Revenue

Company's revenues arise from sale and trading of energy, consultancy, project management & supervision services, income on assets under lease, supply of coal from integrated coal mines and other income. Revenue from other income comprises interest from banks, employees, contractors etc., dividend from investments in joint venture & subsidiary companies, dividend from mutual fund investments, surcharge received from beneficiaries for delayed payments, sale of scrap, other miscellaneous income, etc.

15.1. Revenue from sale of energy

The majority of the Company's operations in India are regulated under the Electricity Act, 2003. Accordingly, the CERC determines the tariff for the Company's power plants based on the norms prescribed in the tariff regulations as applicable from time to time. Tariff is based on the capital cost incurred for a specific power plant and primarily comprises two components: capacity charge i.e. a fixed charge that includes depreciation, return on equity, interest on working capital, operating & maintenance expenses, interest on loan and energy charge i.e. a variable charge primarily based on fuel costs. Tariff for Company's integrated coal mines are also determined by CERC based on the norms prescribed in the CERC Tariff Regulations.

Revenue is measured based on the consideration that is specified in a contract with a customer or is expected to be received in exchange for the products or services and excludes amounts collected on behalf of third parties. The Company recognizes revenue when (or as) the performance obligation is satisfied, which typically occurs when (or as) control over the products or services is transferred to a customer.

Revenue from sale of energy is accounted for based on tariff rates approved by the CERC (except items indicated as provisional) as modified by the orders of Appellate Tribunal for Electricity to the extent applicable. In case of power stations where the tariff rates are yet to be approved/items indicated provisional by the CERC in their orders, provisional rates are adopted considering the applicable CERC Tariff Regulations. Revenue from sale of energy is recognized once the electricity has been delivered to the beneficiary and is measured through a regular review of usage meters. Beneficiaries are billed on a periodic and regular basis. As at each reporting date, revenue from sale of energy includes an accrual for sales delivered to beneficiaries but not yet billed i.e. contract assets/ unbilled revenue.

The incentives/disincentives are accounted for based on the norms notified/approved by the CERC as per principles enunciated in Ind AS 115 – 'Revenue from contracts with customers'. In cases of power stations where the same have not been notified/approved, incentives/disincentives are accounted for on provisional basis.

Part of revenue from energy sale where CERC tariff Regulations are not applicable is recognized based on the rates, terms & conditions mutually agreed with the beneficiaries and trading of power through power exchanges.

Exchange differences arising from settlement/translation of monetary items denominated in foreign currency to the extent recoverable from or payable to the beneficiaries in subsequent periods as per the CERC Tariff Regulations are accounted as 'Regulatory deferred account balances' and such balances are adjusted in the year in which the same becomes recoverable/payable to the beneficiaries.

Exchange differences on account of translation of foreign currency borrowings recognized up to 31 March 2016, to the extent recoverable from or payable to the beneficiaries in subsequent periods as per the CERC Tariff Regulations are accounted as 'Deferred foreign currency fluctuation asset' with corresponding credit to 'Deferred income from foreign currency fluctuation'. Deferred income from foreign currency fluctuation account is amortized in the proportion in which depreciation is charged on such exchange differences and same is adjusted against depreciation expense. Fair value changes in respect of forward exchange contracts for derivatives recoverable from/payable to the beneficiaries as per the CERC Tariff Regulations, are recognized in sales.

Revenue from sale of energy through trading is recognized based on the rates, terms & conditions mutually agreed with the beneficiaries as per the guidelines issued by Ministry of New and Renewable Energy, Government of India.

Rebates allowed to beneficiaries as early payment incentives are deducted from the amount of revenue.

15.2. Revenue from services

Revenue from consultancy, project management and supervision services rendered is measured based on the consideration that is specified in a contract with a customer or is expected to be received in exchange for the services, which is determined on output method and excludes amounts collected on behalf of third parties. The Company recognizes revenue when the performance obligation is satisfied, which typically occurs when control over the services is transferred to a customer.

Reimbursement of expenses is recognized as other income, as per the terms of the service contracts.

Contract modifications are accounted for when additions, deletions or changes are approved either to the contract scope or contract price. The accounting for modifications of contracts involves assessing whether the services added to an existing contract are distinct and whether the pricing is at the standalone selling price. Services added that are not distinct are accounted for on a cumulative catch up basis, while those that are distinct are accounted for prospectively, either as a separate contract, if the additional services are priced at the standalone selling price, or as a termination of the existing contract and creation of a new contract if not priced at the standalone selling price.

15.3. Other income

Interest income is recognized, when no significant uncertainty as to measurability or collectability exist, on a time proportion basis taking into account the amount outstanding and the applicable interest rate, using the effective interest rate method (EIR). For debt instruments measured either at amortized cost or at fair value through other comprehensive income (OCI), interest income is recorded using the EIR.For credit impaired financial assets the EIR is applied to the net carrying amount of the financial asset (after deduction of the loss allowance). EIR is the rate that exactly discounts the estimated future cash payments or receipts over the expected life of the financial instrument or a shorter period, where appropriate, to the gross carrying amount of the financial asset or to the amortized cost of a financial liability. When calculating the EIR, the Company estimates the expected cash flows by considering all the contractual terms of the financial instrument (for example, prepayment, extension, call and similar options) but does not consider the expected credit losses. Interest income is included in other income in the statement of profit and loss.

For purchased or originated credit-impaired (POCI) financial assets interest income is recognized by calculating the credit-adjusted EIR and applying that rate to the amortized cost of the asset. The credit-adjusted EIR is the interest rate that, at original recognition, discounts the estimated future cash flows (including credit losses) to the amortized cost of the POCI assets.

Scrap other than steel scrap is accounted for as and when sold.

Insurance claims for loss of profit are accounted for in the year of acceptance. Other insurance claims are accounted for based on certainty of realization.

Revenue from rentals and operating leases is recognized on an accrual basis in accordance with the substance of the relevant agreement.

The interest/surcharge on late payment/overdue trade receivables for sale of energy is recognized when no significant uncertainty as to measurability or collectability exists.

Interest/surcharge recoverable on advances to contractors and suppliers as well as warranty claims wherever there is uncertainty of realization/acceptance are not treated as accrued and are therefore, accounted for on receipt/ acceptance.

Dividend income is recognized in profit or loss only when the right to receive is established, it is probable that the economic benefits associated with the dividend will flow to the Company, and the amount of the dividend can be measured reliably.

16. Employee benefits

16.1. Defined contribution plans

A defined contribution plan is a post-employment benefit plan under which an entity pays fixed contributions to separate entities and will have no legal or constructive obligation to pay further amounts. Obligations for contributions to defined contribution plans are recognized as an employee benefits expense in statement of profit and loss in the period during which services are rendered by employees. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in future payments is available. Contributions to a defined contribution plan that are due after more than 12 months after the end of the period in which the employees render the service are discounted to their present value.

The Company has a defined contribution pension scheme which is administered through a separate trust. The obligation of the Company is to contribute to the trust to the extent of amount not exceeding 30% of basic pay and dearness allowance less employer's contribution towards provident fund, gratuity, post-retirement medical facility (PRMF) or any other retirement benefits. The Company's contribution towards pension is made to National Pension System Trust (NPS) for the employees opted for the scheme. The contributions to the defined contribution pension scheme of the Company/NPS for the year are recognized as an expense and charged to the statement of profit and loss.

16.2. Defined benefit plans

A defined benefit plan is a post-employment benefit plan other than a defined contribution plan. The Company's liability towards gratuity, pension scheme at two of the stations in respect of taken over employees from the erstwhile state government power utility, post-retirement medical facility (PRMF), baggage allowance for settlement at home town after retirement, farewell gift on retirement and provident fund scheme to the extent of interest liability on provident fund contribution are in the nature of defined benefit plans.

The Company pays fixed contribution to the provident fund at predetermined rates to a separate trust, which invests the funds in permitted securities. The contributions to the fund for the year are recognized as expense and are charged to the statement of profit and loss. The obligation of the Company is to make such fixed contributions and to ensure a minimum rate of return to the members as specified by the Government of India. Shortfall in the fund assets, if any, is made good by the company and charged to the statement of profit and loss.

The gratuity is funded by the Company and is managed by separate trust. The Company has PRMF, under which retired employee and the spouse are provided medical facilities in the Company hospitals/empaneled hospitals. They can also avail treatment as out-patient subject to a ceiling fixed by the Company.

The Company's net obligation in respect of defined benefit plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value. The fair value of any plan assets is deducted. The discount rate is based on the prevailing market yields of Indian government securities as at the reporting date that have maturity dates approximating the terms of the Company's obligations and that are denominated in the same currency in which the benefits are expected to be paid.

The actuarial calculation is performed annually by a qualified actuary using the projected unit credit method. When the calculation results in a benefit to the Company, the recognized asset is limited to the present value of economic benefits available in the form of any future refunds from the plan or reductions in future contributions to the plan. An economic benefit is available to the Company if it is realizable during the life of the plan, or on settlement of the plan liabilities. Remeasurement comprising of actuarial gain and losses, return on plan assets (excluding the amount included in net interest on the net defined liability) & effect of asset ceiling (excluding the amount included in net interest on the net defined liability) and the same are recognized in the Other Comprehensive Income (OCI) in the period in which they arise.

Past service costs are recognized in statement of profit and loss on the earlier of the date of the plan amendment or curtailment, and the date that the Company recognizes related restructuring costs. If a plan amendment, curtailment or settlement occurs, the current service cost and the net interest for the period after the re-measurement are determined using the assumptions used for the re-measurement.

16.3. Other long-term employee benefits

Benefits under the Company's leave encashment, long-service award and economic rehabilitation scheme constitute other long term employee benefits.

The Company's net obligation in respect of these long-term employee benefits is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value and the fair value of any related assets is deducted. The discount rate is based on the prevailing market yields of Indian government securities as at the reporting date that have maturity dates approximating the terms of the Company's obligations and that are denominated in the same currency in which the benefits are expected to be paid.

The actuarial calculation is performed annually by a qualified actuary using the projected unit credit method. Remeasurement comprising actuarial gain and losses, return on plan assets (excluding the amount included in net interest on the net defined liability) & effect of asset ceiling (excluding the amount included in net interest on the net defined liability) and the same are recognized in statement of profit and loss account in the period in which they arise.

The obligations are presented as current liabilities in the balance sheet if the entity does not have an unconditional right to defer settlement for at least twelve months after the reporting period, regardless of when the actual settlement is expected to occur.

16.4. Short-term benefits

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided.

A liability is recognized for the amount expected to be paid under performance related pay if the Company has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

17. Other expenses

Expenses on ex-gratia payments under voluntary retirement scheme, training & recruitment and voluntary community development are charged to statement of profit and loss in the year incurred.

Expenditure on research is charged to revenue as and when incurred. Expenditure on development is charged to revenue as and when incurred unless it meets the recognition criteria for intangible asset as per Ind AS 38- 'Intangible assets'.

Preliminary expenses on account of new projects incurred prior to approval of feasibility report/techno economic clearance are charged to statement of profit and loss.

Net pre-commissioning income/expenditure is adjusted directly in the cost of related assets and systems.

Transit and handling losses of coal as per Company's norms are included in cost of coal.

18. Income tax

Income tax expense comprises current and deferred tax. Current tax expense is recognized in statement of profit and loss except to the extent that it relates to items recognized directly in OCI or equity, in which case it is recognized in OCI or equity, respectively.

Current tax is the expected tax payable on the taxable income for the year computed as per the provisions of Income Tax Act, 1961, using tax rates enacted or substantively enacted by the end of the reporting period, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognized using the balance sheet method, on temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the tax bases of assets and liabilities. Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they materialize, based on the laws that have been enacted or substantively enacted by the reporting date. Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax assets against the current tax liabilities, and they relate to income taxes levied by the same tax authority.

Deferred tax is recognized in statement of profit and loss except to the extent that it relates to items recognized directly in OCI or equity, in which case it is recognized in OCI or equity, respectively.

A deferred tax asset is recognized for all deductible temporary differences to the extent that it is probable that future taxable profits will be available against which the deductible temporary difference can be utilized. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the sufficient taxable profits will be available in future to allow all or part of deferred tax assets to be utilized.

Additional income taxes that arise from the distribution of dividends are recognized at the same time that the liability to pay the related dividend is recognized. The income tax consequences of dividends are recognized in profit or loss, other comprehensive income or equity according to where the Company originally recognized those past transactions or events.

Deferred tax assets include Minimum Alternative Tax (MAT) paid in accordance with the tax laws in India, which is likely to give future economic benefits in the form of availability of set off against future income tax liability. MAT credit is recognized as deferred tax asset in the balance sheet when the asset can be measured reliably and it is probable that the future taxable profit will be available against which MAT credit can be utilized.

When there is uncertainty regarding income tax treatments, the Company assesses whether a tax authority is likely to accept an uncertain tax treatment. If it concludes that the tax authority is unlikely to accept an uncertain tax treatment, the effect of the uncertainty on taxable income, tax bases and unused tax losses and unused tax credits is recognized. The effect of the uncertainty is recognized using the method that, in each case, best reflects the outcome of the uncertainty: the most likely outcome or the expected value. For each case, the Company evaluates whether to consider each uncertain tax treatment separately, or in conjunction with another or several other uncertain tax treatments, based on the approach that best prefixes the resolution of uncertainty.

19. Leases

19.1. As lessee

The Company assesses whether a contract contains a lease, at inception of a contract. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, the Company assesses whether: (1) the contact involves the use of an identified asset (2) the Company has substantially all of the economic benefits from use of the asset through the period of the lease and (3) the Company has the right to direct the use of the asset.

The Company recognizes a right-of-use asset and a corresponding lease liability for all lease arrangements in which it is a lessee, except for leases with a term of twelve months or less (short-term leases) and leases for low value underlying assets. For these short-term and leases for low value underlying assets, the Company recognizes the lease payments as an operating expense on a straight-line basis over the term of the lease.

Certain lease arrangements include the options to extend or terminate the lease before the end of the lease term. Right-of use assets and lease liabilities include these options when it is reasonably certain that the option to extend the lease will be exercised/option to terminate the lease will not be exercised.

The right-of-use assets (other than land and buildings) are initially recognized at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or prior to the commencement date of the lease plus any initial direct costs less any lease incentives. They are subsequently measured at cost less accumulated depreciation/amortization and impairment losses and adjusted for any reassessment of lease liabilities.

Right-of-use assets are depreciated/amortized from the commencement date to the end of the useful life of the underlying asset, if the lease transfers ownership of the underlying asset by the end of lease term or if the cost of right-of-use assets reflects that the purchase option will be exercised. Otherwise, Right-of-use assets are depreciated/amortized from the commencement date on a straight-line basis over the shorter of the lease term and useful life of the underlying asset.

Right-of-use assets are evaluated for recoverability whenever events or changes in circumstances indicate that their carrying amounts may not be recoverable. For the purpose of impairment testing, the recoverable amount (i.e. the higher of the fair value less costs of disposal and the value-in-use) is determined on an individual asset basis unless the asset does not generate cash flows that are largely independent of those from other assets. In such cases, the recoverable amount is determined for the Cash Generating Unit (CGU) to which the asset belongs.

The lease liability is initially measured at amortized cost at the present value of the future lease payments. In calculating the present value, lease payments are discounted using the interest rate implicit in the lease or, if not readily determinable, using the incremental borrowing rate. Lease liabilities are re-measured with a corresponding adjustment to the related right-of-use asset if the Company changes its assessment whether it will exercise an extension or a termination option.

19.2. As lessor

At the inception of an arrangement, the Company determines whether such an arrangement is or contains a lease. A specific asset is subject of a lease if fulfillment of the arrangement is dependent on the use of that specified asset. An arrangement conveys the right to use the asset if the arrangement conveys to the customer the right to control the use of the underlying asset. Arrangements that do not take the legal form of a lease but convey rights to customers/ suppliers to use an asset in return for a payment or a series of payments are identified as either finance leases or operating leases.

Accounting for finance leases

Where the Company determines a long term Power Purchase Agreement (PPA) to be or to contain a lease and where the off taker has the principal risk and rewards of ownership of the power plant through its contractual arrangements with the Company, the arrangement is considered a finance lease. Capacity payments are apportioned between capital repayments relating to the provision of the plant, finance income and service income. The finance income element of the capacity payment is recognized as revenue, using a rate of return specific to the plant to give a constant periodic rate of return on the net investment in each period. The service income element of the capacity payment is the difference between the total capacity payment and the amount recognized as finance income and capital repayments and recognized as revenue as it is earned.

The amounts due from lessees under finance leases are recorded in the balance sheet as financial assets, classified as 'Finance lease receivables', at the amount equal to the net investment in the lease.

Accounting for operating leases

Where the Company determines a long term PPA to be or to contain a lease and where the Company retains the principal risks and rewards of ownership of the power plant, the arrangement is considered an operating lease.

For operating leases, the power plant is capitalized as property, plant and equipment and depreciated over its economic life. Rental income from operating leases is recognized on a straight line basis over the term of the arrangement.

20. Impairment of non-financial assets

The carrying amounts of the Company's non-financial assets are reviewed at each reporting date to determine whether there is any indication of impairment considering the provisions of Ind AS 36 - 'Impairment of Assets'. If any such indication exists, then the asset's recoverable amount is estimated.

The recoverable amount of an asset or cash-generating unit is the higher of its fair value less costs of disposal and its value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For the purpose of impairment testing, assets that cannot be tested individually are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or groups of assets (the 'cash-generating unit', or "CGU").

An impairment loss is recognized if the carrying amount of an asset or its CGU exceeds its estimated recoverable amount. Impairment losses are recognized in the statement of profit and loss. Impairment losses recognized in respect of CGUs are reduced from the carrying amounts of the assets of the CGU.

Impairment losses recognized in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of accumulated depreciation or amortization, if no impairment loss had been recognized.

21. Operating segments

In accordance with Ind AS 108-'Operating segments', the operating segments used to present segment information are identified on the basis of internal reports used by the Company's management to allocate resources to the segments and assess their performance. The Board of Directors is collectively the Company's 'Chief Operating Decision Maker' or 'CODM' within the meaning of Ind AS 108. The indicators used for internal reporting purposes may evolve in connection with performance assessment measures put in place.

Segment results that are reported to the CODM include items directly attributable to a segment as well as those that can be allocated on a reasonable basis. Unallocated items comprise mainly corporate expenses, finance costs, income tax expenses and corporate income that are not directly attributable to segments.

Revenue directly attributable to the segments is considered as segment revenue. Expenses directly attributable to the segments and common expenses allocated on a reasonable basis are considered as segment expenses.

Segment capital expenditure is the total cost incurred during the period to acquire property, plant and equipment, Capital Wok in Progress, intangible assets other than goodwill and intangible assets under development.

Segment assets comprise property, plant and equipment, intangible assets, capital work in progress, intangible assets under development, advances for capital expenditures, trade and other receivables, inventories and other assets that can be directly or reasonably allocated to segments. For the purpose of segment reporting, property, plant and equipment have been allocated to segments based on the extent of usage of assets for operations attributable to the respective segments. Unallocated assets comprise investments, income tax assets, corporate assets and other assets that cannot reasonably be allocated to segments.

Segment liabilities include all operating liabilities in respect of a segment and consist principally of trade payable, payable for capital expenditure and other payables, provision for employee benefits and other provisions. Unallocated liabilities comprise equity, income tax liabilities, loans and borrowings and other liabilities and provisions that cannot reasonably be allocated to segments.

22. Business Combinations

Business combinations are accounted for using the acquisition accounting method as at the date of the acquisition, which is the date at which control is transferred to the Company. The consideration transferred in the acquisition and the identifiable assets acquired and liabilities assumed are recognized at fair values on their acquisition date. Goodwill is initially measured at cost, being the excess of the consideration transferred over the net identifiable assets acquired and liabilities assumed. Where the fair value of net identifiable assets acquired and liabilities assumed exceed the consideration transferred, after reassessing the fair values of the net assets and contingent liabilities, the excess is recognized as capital reserve. Acquisition related costs are expensed as incurred.

23. Dividends

Dividends and interim dividends payable to the Company's shareholders are recognized as changes in equity in the period in which they are approved by the shareholders and the Board of Directors respectively.

24. Material prior period errors

Material prior period errors are corrected retrospectively by restating the comparative amounts for the prior periods presented in which the error occurred. If the error occurred before the earliest period presented, the opening balances of assets, liabilities and equity for the earliest period presented, are restated.

25. Earnings per share

Basic earnings per equity share is computed by dividing the net profit or loss attributable to equity shareholders of the Company by the weighted average number of equity shares outstanding during the financial year.

Diluted earnings per equity share is computed by dividing the net profit or loss attributable to equity shareholders of the Company by the weighted average number of equity shares considered for deriving basic earnings per equity share and also the weighted average number of equity shares that could have been issued upon conversion of all dilutive potential equity shares.

The number of equity shares and potentially dilutive equity shares are adjusted retrospectively for all periods presented for any bonus shares issued during the financial year.

Basic and diluted earnings per equity share are also computed using the earnings amounts excluding the movements in regulatory deferral account balances.

26. Statement of cash flows

Statement of cash flows is prepared in accordance with the indirect method prescribed in Ind AS 7-'Statement of cash flows'.

27. Financial instruments

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity. The Company recognizes a financial asset or a financial liability only when it becomes party to the contractual provisions of the instrument.

27.1. Financial assets

Initial recognition and measurement

All financial assets are recognized at fair value on initial recognition, except for trade receivables which are initially measured at transaction price. Transaction costs that are directly attributable to the acquisition of financial assets, which are not valued at fair value through profit or loss, are added to the fair value on initial recognition.

Subsequent measurement

Debt instruments at amortized cost

A 'debt instrument' is measured at the amortized cost if both the following conditions are met:

(a) The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and

(b) Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

After initial measurement, such financial assets are subsequently measured at amortized cost using the effective interest rate (EIR) method. Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance income in the statement of profit and loss. The losses arising from impairment are recognized in the statement of profit and loss. This category generally applies to trade and other receivables.

Debt instrument at FVTOCI (Fair value through OCI)

A 'debt instrument' is classified as at the FVTOCI if both of the following criteria are met:

(a) The objective of the business model is achieved both by collecting contractual cash flows and selling the financial assets, and

(b) The asset's contractual cash flows represent SPPI

Debt instruments included within the FVTOCI category are measured initially as well as at each reporting date at fair value. Fair value movements are recognized in the OCI. However, the Company recognizes interest income, impairment losses & reversals and foreign exchange gain or loss in the statement of profit and loss. On de-recognition of the asset, cumulative gain or loss previously recognized in OCI is reclassified from the equity to the statement of profit and loss. Interest earned whilst holding FVTOCI debt instrument is reported as interest income using the EIR method.

Debt instrument at FVTPL (Fair value through profit or loss)

FVTPL is a residual category for debt instruments. Any debt instrument, which does not meet the criteria for categorization as at amortized cost or as FVTOCI, is classified as at FVTPL.

In addition, the Company may elect to classify a debt instrument, which otherwise meets amortized cost or FVTOCI criteria, as at FVTPL. However, such election is allowed only if doing so reduces or eliminates a measurement or recognition inconsistency (referred to as 'accounting mismatch'). Debt instruments included within the FVTPL category are measured at fair value with all changes recognized in the statement of profit and loss. Interest income on such investments is presented under 'Other income'.

Investment in Equity instruments

All equity investments in entities other than subsidiaries and joint venture companies are measured at fair value. Equity instruments which are held for trading are classified as at FVTPL. For all other equity instruments, the Company decides to classify the same either as at FVTOCI or FVTPL. The Company makes such election on an instrument by instrument basis. The classification is made on initial recognition and is irrevocable.

If the Company decides to classify an equity instrument as at FVTOCI, then all fair value changes on the instrument, excluding dividends, are recognized in the OCI. There is no recycling of the amounts from OCI to statement of profit and loss, even on sale/ disposal of investments. However, the Company may transfer the cumulative gain or loss within equity on sale / disposal of the investments.

Equity instruments included within the FVTPL category are measured at fair value with all changes recognized in the statement of profit and loss. Dividend on such investments is presented under 'Other income'.

Equity investments in subsidiaries and joint ventures companies are accounted at cost less impairment, if any.

The Company reviews the carrying value of investments at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the recoverable amount of the investment is estimated. If the recoverable amount is less than the carrying amount, the impairment loss is recognized in the statement of profit and loss.

De-recognition

A financial asset (or, where applicable, a part of a financial asset or part of a Group of similar financial assets) is primarily de-recognized (i.e. removed from the Company's balance sheet) when:

- The rights to receive cash flows from the asset have expired, or
- The Company has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Company has transferred substantially all the risks and rewards of the asset, or (b) the Company has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

The difference between the carrying amount and the amount of consideration received/receivable is recognized in the statement of profit and loss except for equity instruments classified as at FVTOCI, where such differences are recorded in OCI.

Impairment of financial assets

In accordance with Ind AS 109-'Financial instruments', the Company applies expected credit loss (ECL) model for measurement and recognition of impairment loss on the following financial assets and credit risk exposure:

(a) Financial assets that are debt instruments, and are measured at amortized cost e.g., loans, debt securities, deposits and bank balance.

(b) Financial assets that are debt instruments and are measured as at FVTOCI.

(c) Lease receivables under Ind AS 116.

(d) Trade receivables, unbilled revenue and contract assets under Ind AS 115.

(e) Loan commitments which are not measured as at FVTPL.

(f) Financial guarantee contracts which are not measured as at FVTPL.

For trade receivables and contract assets/unbilled revenue, the Company applies the simplified approach required by Ind AS 109 Financial Instruments, which requires lifetime expected losses to be recognized from initial recognition.

For recognition of impairment loss on other financial assets and risk exposure (other than purchased or originated credit impaired financial assets), the Company determines that whether there has been a significant increase in the credit risk since initial recognition. If credit risk has not increased significantly, 12-month ECL is used to provide for impairment loss. However, if credit risk has increased significantly, lifetime ECL is used. If, in a subsequent period, credit quality of the instrument improves such that there is no longer a significant increase in credit risk since initial recognition, then the entity reverts to recognizing impairment loss allowance based on 12month ECL.

For purchased or originated credit impaired financial assets, a loss allowance is recognized for the cumulative changes in lifetime expected credited losses since initial recognition.

27.2. Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss and financial liabilities at amortized cost, as appropriate. All financial liabilities are recognized initially at fair value and, in the case of liabilities subsequently measured at amortized cost net of directly attributable transaction cost. The Company's financial liabilities include trade and other payables, borrowings including bank overdrafts, financial guarantee contracts and derivative financial instruments.

Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at amortized cost

After initial measurement, such financial liabilities are subsequently measured at amortized cost using the EIR method. Gains and losses are recognized in statement of profit and loss when the liabilities are derecognized as well as through the EIR amortization process Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance costs in the statement of profit and loss. This category generally applies to borrowings, trade payables and other contractual liabilities.

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Company that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109. Separated embedded derivatives are also classified as held for trading unless they are designated as effective hedging instruments.

Gains or losses on liabilities held for trading are recognized in the statement of profit and loss.

Financial liabilities designated upon initial recognition at fair value through profit or loss are designated at the initial date of recognition, and only if the criteria in Ind AS 109 are satisfied. For liabilities designated as FVTPL, fair value gains/losses attributable to changes in own credit risk is recognized in OCI. These gains/losses are not subsequently transferred to profit and loss. However, the Company may transfer the cumulative gain or loss within equity on disposal. All other changes in fair value of such liability are recognized in the statement of profit and loss. The Company has not designated any financial liability as at fair value through profit and loss.

De-recognition

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the de-recognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognized in the statement of profit and loss.

Interest rate benchmark reform

When the basis for determining the contractual cash flows of a financial asset or financial liability measured at amortised cost is changed as a result of interest rate benchmark reform, the Company updated the effective interest rate of the financial asset or financial liability to reflect the change that is required by the reform. A change in the basis for determining the contractual cash flows is required by interest rate benchmark reform if the following conditions are met:

– the change is necessary as a direct consequence of the reform; and

– the new basis for determining the contractual cash flows is economically equivalent to the previous basis – i.e. the basis immediately before the change.

When changes were made to a financial asset or financial liability in addition to changes to the basis for determining the contractual cash flows required by interest rate benchmark reform, the Company first updates the effective interest rate of the financial asset or financial liability to reflect the change that is required by interest rate benchmark reform and does not recognise a modification gain or loss in the profit & loss statement. After that, the Company applies the policies on accounting for modifications to the additional changes.

27.3. Financial guarantee contracts

Financial guarantee contracts issued by the Company are those contracts that require a payment to be made to reimburse the holder for a loss it incurs because the specified debtor fails to make a payment when due in accordance with the terms of a debt instrument. Financial guarantee contracts are recognized initially as a liability at fair value, adjusted for transaction costs that are directly attributable to the issuance of the guarantee. Subsequently, the liability is measured at the higher of the amount of loss allowance determined as per impairment requirements of Ind AS 109 - 'Financial Instruments' and the amount recognized less the cumulative amount of income recognized in accordance with the principles of Ind AS 115 'Revenue from Contracts with Customers'.

27.4. Derivative financial instruments

Initial recognition and subsequent measurement

The Company uses derivative financial instruments, such as forward currency contracts and interest rate swaps to hedge its foreign currency risks and interest rate risks of foreign currency loans. Such derivative financial instruments are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently re-measured at fair value. Derivatives are carried as financial assets when the fair value is positive and as financial liabilities when the fair value is negative. Any gains or losses arising from changes in the fair value of derivatives are taken to statement of profit and loss.

27.5. Offsetting of financial assets and financial liabilities

Financial assets and financial liabilities are offset and the net amount is presented in the balance sheet if there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, to realize the assets and settle the liabilities simultaneously.

28. Non -Current Assets Held for Sale

The Company classifies non-current assets and disposal groups as held for sale if their carrying amounts will be recovered principally through a sale rather than through continuing use and a sale is considered highly probable.

Management must be committed to the sale, which should be expected to qualify for recognition as a completed sale within one year from the date of classification as held for sale, and actions required to complete the plan of sale should indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn.

Non-Current Assets held for sale and disposal groups are measured at the lower of their carrying amount and the fair value less cost of disposal.

Non-current assets classified as held for sale are not depreciated or amortized.

D. Use of estimates and management judgements

The preparation of financial statements requires management to make judgments, estimates and assumptions that may impact the application of accounting policies and the reported value of assets, liabilities, revenue expenses and related disclosures concerning the items involved as well as contingent assets and liabilities at the balance sheet date. The estimates and management's judgments are based on previous experience & other factors considered reasonable and prudent in the circumstances. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

In order to enhance understanding of the financial statements, information about significant areas of estimation, uncertainty and critical judgments in applying accounting policies that have the most significant effect on the amounts recognized in the financial statements is as under:

1. Formulation of accounting policies

The accounting policies are formulated in a manner that results in financial statements containing relevant and reliable information about the transactions, other events and conditions to which they apply. Those policies need not be applied when the effect of applying them is immaterial.

2. Useful life of property, plant and equipment and intangible assets

The estimated useful life of property, plant and equipment and intangible assets is based on a number of factors including the effects of obsolescence, demand, competition and other economic factors (such as the stability of the industry and known technological advances) and the level of maintenance expenditures required to obtain the expected future cash flows from the asset.

Useful life of the assets of the generation of electricity business and integrated coal mines (where tariff is regulated) is determined by the CERC Tariff Regulations in accordance with Schedule II of the Companies Act, 2013.

3. **Recoverable amount of property, plant and equipment and intangible assets**

The recoverable amount of property, plant and equipment and intangible assets is based on estimates and assumptions regarding in particular the expected market outlook and future cash flows associated with the power plants. Any changes in these assumptions may have a material impact on the measurement of the recoverable amount and could result in impairment.

4. **Defined benefit plans and long-term employee benefits**

Employee benefit obligations are measured on the basis of actuarial assumptions which include mortality and withdrawal rates as well as assumptions concerning future developments in discount rates, the rate of salary increases and the inflation rate. The Company considers that the assumptions used to measure its obligations are appropriate and documented. However, any changes in these assumptions may have a material impact on the resulting calculations.

5. **Revenues**

The Company records revenue from sale of energy based on tariff rates approved by the CERC as modified by the orders of Appellate Tribunal for Electricity, as per principles enunciated under Ind AS 115. However, in cases where tariff rates are yet to be approved, provisional rates are adopted considering the applicable CERC Tariff Regulations.

6. **Leases not in legal form of lease**

Significant judgment is required to apply lease accounting rules as per Ind AS 116 in determining whether an arrangement contains a lease. In assessing arrangements entered into by the Company, management has exercised judgment to evaluate the right to use the underlying asset, substance of the transactions including legally enforceable agreements and other significant terms and conditions of the arrangements to conclude whether the arrangement meets the criteria as per Ind AS 116.

7. **Assets held for sale**

Significant judgment is required to apply the accounting of non-current assets held for sale under Ind AS 105 - 'Non-current assets held for sale and discontinued operations'. In assessing the applicability, management has exercised judgment to evaluate the availability of the asset for immediate sale, management's commitment for the sale and probability of sale within one year to conclude if their carrying amount will be recovered principally through a sale transaction rather than through continuing use.

8. **Regulatory deferral account balances**

Recognition of regulatory deferral account balances involves significant judgments including about future tariff regulations since these are based on estimation of the amounts expected to be recoverable/payable through tariff in future.

9. **Provisions and contingencies**

The assessments undertaken in recognizing provisions and contingencies have been made in accordance with Ind AS 37-'Provisions, contingent liabilities and contingent assets'. The evaluation of the likelihood of the contingent events require best judgment by management regarding the probability of exposure to potential loss. Should circumstances change following unforeseeable developments, this likelihood could alter.

10. **Impairment test of investments in Subsidiaries and Joint Venture Companies**

The recoverable amount of investment in subsidiaries and joint venture companies is based on estimates and assumptions regarding in particular the future cash flows associated with the operations of the investee Company. Any changes in these assumptions may have a material impact on the measurement of the recoverable amount and could result in impairment.

11. **Income taxes**

Significant estimates are involved in determining the provision for current and deferred tax, including amount expected to be paid/recovered for uncertain tax positions.

2. Non-current assets - Property, plant and equipment

As at 31 March 2022

₹ Crore

Particulars	Gross block: As at 1 April 2021	Gross block: Additions	Gross block: Deductions/ adjustments	Gross block: As at 31 March 2022	Depreciation and amortization: As at 1 April 2021	Depreciation and amortization: For the year	Depreciation and amortization: Deductions/ adjustments	Depreciation and amortization: Upto 31 March 2022	Net block: As at 31 March 2022
Land									
(including development expenses)									
Freehold	6,430.42	81.51	-	**6,511.93**	-	-	-	**-**	**6,511.93**
Right of use	2,934.60	508.87	(729.76)	**2,713.71**	520.98	93.00	(125.71)	**488.27**	**2,225.44**
Under submergence (refer footnote (f) below)	751.92	54.96	-	**806.88**	160.94	28.37	-	**189.31**	**617.57**
Right of use - Coal Bearing Area Land	3,666.94	355.10	-	**4,022.04**	229.92	100.17	-	**330.09**	**3,691.95**
Roads, bridges, culverts and helipads	1,643.23	141.25	(6.03)	**1,778.45**	269.87	65.42	(0.88)	**334.41**	**1,444.04**
Building									
Freehold									
Main plant	7,604.05	694.55	(5.77)	**8,292.83**	1,253.61	300.37	-	**1,553.98**	**6,738.85**
Others	5,362.38	725.31	(13.58)	**6,074.11**	922.88	254.78	(2.28)	**1,175.38**	**4,898.73**
Right of use	36.60	5.63	(2.96)	**39.27**	17.40	5.80	(2.89)	**20.31**	**18.96**
Temporary erections	26.42	6.16	-	**32.58**	26.34	6.03	-	**32.37**	**0.21**
Water supply, drainage and sewerage system	833.26	94.91	-	**928.17**	187.56	43.51	-	**231.07**	**697.10**
Hydraulic works, barrages, dams, tunnels and power channel	4,353.88	101.04	9.01	**4,463.93**	1,297.17	233.02	-	**1,530.19**	**2,933.74**
MGR track and signalling system	3,373.05	357.52	0.30	**3,730.87**	526.85	212.62	-	**739.47**	**2,991.40**
Railway siding	3,294.91	124.88	24.31	**3,444.10**	519.58	180.78	(0.02)	**700.34**	**2,743.76**
Earth dam reservoir	528.78	9.65	-	**538.43**	111.75	30.81	-	**142.56**	**395.87**
Plant and equipment									
Owned	1,65,364.59	24,752.15	(1,026.17)	**1,89,090.57**	40,309.50	10,383.69	(1,061.04)	**49,632.15**	**1,39,458.42**
Right of use	85.77	-	0.01	**85.78**	28.37	4.76	-	**33.13**	**52.65**
Mining Properties	1,011.57	274.40	-	**1,285.97**	78.32	55.16	-	**133.48**	**1,152.49**
Site restoration cost	253.46	-	-	**253.46**	8.99	6.81	-	**15.80**	**237.66**
Furniture and fixtures	740.68	88.31	(7.81)	**821.18**	219.64	67.15	(5.62)	**281.17**	**540.01**
Vehicles including speedboats / helicopter									
Owned	14.06	0.46	(0.06)	**14.46**	6.04	1.13	(0.04)	**7.13**	**7.33**
Right of use	26.03	1.12	(0.57)	**26.58**	13.10	9.39	(0.26)	**22.23**	**4.35**
Office equipment	368.92	57.81	(9.93)	**416.80**	159.75	51.04	(7.92)	**202.87**	**213.93**
EDP, WP machines and satcom equipment	459.18	60.00	(22.81)	**496.37**	314.16	78.05	(22.37)	**369.84**	**126.53**
Construction equipment	233.86	8.61	(1.24)	**241.23**	81.16	19.40	(0.90)	**99.66**	**141.57**
Electrical installations	1,791.73	89.36	(2.82)	**1,878.27**	289.41	108.77	(1.61)	**396.57**	**1,481.70**
Communication equipment	111.44	9.91	0.06	**121.41**	56.63	10.02	(0.07)	**66.58**	**54.83**
Hospital equipment	42.97	19.54	(0.18)	**62.33**	10.48	15.22	(0.10)	**25.60**	**36.73**
Laboratory and workshop equipment	212.67	6.57	(0.04)	**219.20**	44.85	11.73	-	**56.58**	**162.62**
Assets for ash utilisation	57.47	0.37	-	**57.84**	-	-	-	**-**	**57.84**
Less: Adjusted from fly ash utilisation reserve fund	57.47	0.37	-	**57.84**	-	-	-	**-**	**57.84**
Total	**2,11,557.37**	**28,629.58**	**(1,796.04)**	**2,38,390.91**	**47,665.25**	**12,377.00**	**(1,231.71)**	**58,810.54**	**1,79,580.37**

As at 31 March 2021 ₹ Crore

Particulars	Gross block				Depreciation and amortization				Net block
	As at 1 April 2020	Additions	Deductions/ adjustments	As at 31 March 2021	As at 1 April 2020	For the year	Deductions/ adjustments	Upto 31 March 2021	As at 31 March 2021
Land									
(including development expenses)									
Freehold	6,201.09	246.79	(17.46)	6,430.42	-	-	-	-	6,430.42
Right of use	2,788.74	153.14	(7.28)	2,934.60	403.94	113.61	3.43	520.98	2,413.62
Under submergence (refer footnote (f) below)	737.45	14.47	-	751.92	134.04	26.90	-	160.94	590.98
Right of use - Coal Bearing Area Land	3,214.33	452.61	-	3,666.94	151.48	78.44	-	229.92	3,437.02
Roads, bridges, culverts and helipads	1,524.33	119.03	(0.13)	1,643.23	202.70	67.17	-	269.87	1,373.36
Building									
Freehold									
Main plant	7,334.37	277.07	(7.39)	7,604.05	968.53	285.08	-	1,253.61	6,350.44
Others	4,961.43	403.93	(2.98)	5,362.38	699.11	224.24	(0.47)	922.88	4,439.50
Right of use	29.62	7.62	(0.64)	36.60	11.95	6.07	(0.62)	17.40	19.20
Temporary erection	24.92	1.50	-	26.42	22.82	3.52	-	26.34	0.08
Water supply, drainage and sewerage system	772.81	60.51	(0.06)	833.26	147.80	39.76	-	187.56	645.70
Hydraulic works, barrages, dams, tunnels and power channel	4,357.14	5.92	(9.18)	4,353.88	1,065.56	231.65	(0.04)	1,297.17	3,056.71
MGR track and signalling system	2,158.16	1,216.31	(1.42)	3,373.05	349.30	177.55	-	526.85	2,846.20
Railway siding	3,190.92	103.99	-	3,294.91	344.98	174.60	-	519.58	2,775.33
Earth dam reservoir	460.02	68.76	-	528.78	82.18	29.57	-	111.75	417.03
Plant and equipment									
Owned	1,50,544.55	15,517.56	(697.52)	1,65,364.59	31,073.36	9,588.95	(352.81)	40,309.50	1,25,055.09
Right of use	85.77	-	-	85.77	23.62	4.75	-	28.37	57.40
Mining Properties	707.03	304.54	-	1,011.57	35.35	42.97	-	78.32	933.25
Site restoration cost	182.43	71.03	-	253.46	3.72	5.27	-	8.99	244.47
Furniture and fixtures	690.54	55.97	(5.83)	740.68	162.07	59.95	(2.38)	219.64	521.04
Vehicles including speedboats / helicopter									
Owned	12.84	1.74	(0.52)	14.06	5.06	1.14	(0.16)	6.04	8.02
Right of use	25.73	1.06	(0.76)	26.03	4.38	9.27	(0.55)	13.10	12.93
Office equipment	318.21	59.31	(8.60)	368.92	123.48	40.39	(4.12)	159.75	209.17
EDP, WP machines and satcom equipment	397.79	90.86	(29.47)	459.18	265.34	75.21	(26.39)	314.16	145.02
Construction equipment	220.33	11.99	1.54	233.86	62.07	19.09	-	81.16	152.70
Electrical installations	1,624.76	397.83	(230.86)	1,791.73	192.14	102.50	(5.23)	289.41	1,502.32
Communication equipment	101.71	10.51	(0.78)	111.44	48.02	9.05	(0.44)	56.63	54.81
Hospital equipment	34.88	8.37	(0.28)	42.97	8.35	2.21	(0.08)	10.48	32.49
Laboratory and workshop equipment	196.12	16.68	(0.13)	212.67	33.65	11.25	(0.05)	44.85	167.82
Assets for ash utilisation	45.52	11.95	-	57.47	-	-	-	-	57.47
Less: Adjusted from fly ash utilisation reserve fund	45.52	11.95	-	57.47	-	-	-	-	57.47
Total	1,92,898.02	19,679.10	(1,019.75)	2,11,557.37	36,625.00	11,430.16	(389.91)	47,665.25	1,63,892.12

a) The conveyancing of the title to **10,288.43 acres** of freehold land of value ₹ **1,587.39 crore** (31 March 2021: 10,190.47 acres of value ₹ 1,562.01 crore), buildings and structures of value ₹ **4.97 crore** (31 March 2021: ₹ 4.97 crore) and also execution of lease agreements for **9,349 acres** of right of use land of value ₹ **606.89 crore** (31 March 2021: 9,710 acres of value ₹ 1,340.79 crore) in favour of the Company are awaiting completion of legal formalities.

b) Land includes **284.35 acres** of freehold land of value ₹ **0.52 crore** (31 March 2021: 284.35 acres of value ₹ 0.52 crore), and **1,939.55 acres** of right of use land of value ₹ **3.81 crore** (31 March 2021: 1,939.55 acres of value ₹ 3.81 crore), the value thereof including periodical lease rent accruing thereon is subject to revision on final settlement with the State Government Authorities with demand of late payment charges, if any.

c) Land right of use does not include value of **Nil** (31 March 2021: 33 acres) of land in possession of the Company. This will be accounted for on settlement of the price thereof by the State Government Authorities.

d) Land includes **1,275.84 acres** of freehold land of value ₹ **44.92 crore** (31 March 2021: 1,281.32 acres of value ₹ 118.32 crore) and **377.11 acres** of right of use land of value ₹ **3.10 crore** (31 March 2021: 395 acres of value ₹ 3.10 crore) not in possession of the Company. The Company is taking appropriate steps for repossession of the same.

e) Land-freehold includes an amount of ₹ **263.92 crore** (31 March 2021: ₹ 263.92 crore) deposited with various authorities in respect of land in possession which is subject to adjustment on final determination of price.

f) Gross block of land under submergence represents ₹ **628.05 crore** (31 March 2021: ₹ 573.09 crore) of freehold land and ₹ **178.83 crore** (31 March 2021: ₹ 178.83 crore) of right of use land. The land has been amortized considering the rate of depreciation provided by the CERC in the tariff regulations and the fact that it will not have any economic value due to deposit of silt and other foreign materials.

g) Possession of land measuring **98 acres** (31 March 2021: 98 acres) consisting of **79 acres** of freehold land (31 March 2021: 79 acres) and **19 acres** of right of use land (31 March 2021: 19 acres) of value ₹ **0.21 crore** (31 March 2021: ₹ 0.21 crore) was transferred to Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd. (erstwhile UPSEB) for a consideration of ₹ 0.21 crore. Pending approval for transfer of the said land, the area and value of this land has been included in the total land of the Company. The consideration received from erstwhile UPSEB is disclosed under Note 32 - Current liabilities - Other financial liabilities.

h) Adjustment to Land-right of use includes an amount of ₹ 776.05 crore, being the cost de-recognised consequent to order of APIIC for cancellation of 1200 acres of land allotted to the Company in the state of Andra Pradesh. Further, the depreciation/ amortisation provided till the end of previous financial year amounting to ₹ 131.92 crore has also been written back. The order provides allotment of alternate land in lieu of the same, subject to attached conditions. Consequently, the amount derecognized net of related liabilities, has been included under Capital advances (Note 10).

i) Operations of one of the thermal power stations of the Company (460 MW) was discontinued w.e.f. the end of 31 March 2021. Carrying value of the PPE of the station included above as at 31 March 2022 is ₹ **227.93 crore** (31 March 2021: ₹ 213.64 crore). The Company is in the process of implementing construction of new 1320 MW (2 X 660 MW) thermal power plant on the existing location of the power plant. It is expected that many of the items of PPE are expected to be used in the proposed new power plant while few are under transfer to other units of the Company. Notwithstanding the above, the net realisable value of the assets of the station has been assessed which is more than its carrying value.

j) Refer Note 69 regarding property, plant and equipment under leases.

k) Spare parts of ₹ 5 lakh and above, stand-by equipment and servicing equipment which meet the definition of property, plant and equipment are capitalized.

l) Property, plant and equipment costing ₹ 5,000/- or less, are depreciated fully in the year of acquisition.

m) Refer Note 22 for information on property, plant and equipment pledged as security by the Company.

n) Refer Note 72 (C) (a) for disclosure of contractual commitments for the acquisition of property, plant and equipment.

o) Deduction/adjustments from gross block and depreciation and amortization for the year includes:

₹ Crore

Particulars	Gross block		Depreciation and amortization	
	For the year ended		For the year ended	
	31 March 2022	31 March 2021	**31 March 2022**	31 March 2021
Disposal of assets	**(31.60)**	(38.90)	**(29.79)**	(29.44)
Retirement of assets	**(2,045.82)**	(510.59)	**(1,200.25)**	(363.74)
Cost adjustments due to exchange differences	**237.01**	(462.85)	**-**	-
Assets capitalised with retrospective effect/ Write back of excess capitalisation	**(0.01)**	0.51	**-**	-
Others	**44.38**	(7.92)	**(1.67)**	3.27
Total	**(1,796.04)**	(1,019.75)	**(1,231.71)**	(389.91)

During the year, cost adjustments in respect of assets capitalised in the earlier years which was hither to disclosed under adjustment column, have been included in the addition column of the respective asset class in the Note. Corresponding adjustments in the previous year information have also been made.

p) Exchange differences capitalized in Capital work-in-progress (CWIP) are allocated to various heads of CWIP in the year of capitalisation. Exchange differences in respect of assets already capitalised are disclosed in the 'Deductions/Adjustments' column of Property, plant and equipment. Asset-wise details of exchange differences and borrowing costs included in the cost of major heads of CWIP and property, plant and equipment through 'Addition' or 'Deductions/Adjustments' column are given below:

₹ Crore

Particulars	**For the year ended 31 March 2022**		For the year ended 31 March 2021	
	Exchange differences included in PPE/ CWIP	**Borrowing costs included in PPE/ CWIP**	Exchange differences included in PPE/ CWIP	Borrowing costs included in PPE/ CWIP
Building - Freehold				
Main plant	**(5.76)**	**38.63**	(8.89)	62.64
Others	**(0.60)**	**48.26**	(1.86)	61.17
Hydraulic works, barrages, dams, tunnels and power channel	**9.00**	**219.55**	(8.88)	186.97
MGR track and signalling system	**0.31**	**392.70**	(2.36)	38.59
Railway siding	**24.75**	**71.20**	-	2.60
Plant and equipment	**259.32**	**1,718.93**	(472.68)	2,153.24
Others including pending allocation	**38.18**	**251.62**	(77.71)	275.08
Total	**325.20**	**2,740.89**	(572.38)	2,780.29

q) Gross carrying amount of the fully depreciated/amortised property, plant and equipment that are still in use:

₹ Crore

Particulars	**As at 31 March 2022**	As at 31 March 2021
Land-Right of use	**11.42**	11.40
Roads, bridges ,culverts and helipads	**43.57**	33.77
Main plant building	**175.94**	117.91
Other building	**269.11**	168.48
Water supply, drainage and sewerage system	**49.29**	39.59
MGR track and signalling system	**101.55**	50.94
Plant and equipment - Owned	**4,374.84**	3,548.90
Furniture and fixtures	**101.35**	32.35
Office equipment	**84.90**	58.71
EDP, WP machines and satcom equipment	**234.93**	162.02
Communication equipment	**46.23**	30.52
Others	**150.29**	126.49
Total	**5,643.42**	4,381.08

Others include temporary erections, railway sidings, earth dam reservoirs, construction equipment and electrical installations etc.

r) **Property, plant and equipment subject to operating lease**

The Power Purchase Agreements (PPA) signed in respect of two of the thermal power stations were operative initially for a period of five years with the respective beneficiaries which are extended, renewed or replaced as the parties mutually agree. The Company has continued to classify these arrangement with its customers as lease based on the practical expedient provided in Ind AS 116. The net carrying value of such leased assets included above are as under:

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Land- Free hold	**51.75**	75.10
Land- Right of use	**-**	0.54
Roads, bridges, culverts and helipads	**9.40**	12.08
Main plant building-Freehold	**9.51**	13.93
Other building-Freehold	**23.53**	38.99
Water supply, drainage and sewerage system	**5.46**	10.44
Plant and equipment - Owned	**217.51**	404.53
Railway siding	**0.76**	2.40
Electrical installation	**3.14**	4.83
Others	**5.04**	13.40
Total	**326.10**	576.24

The operations of one of the stations was suspended w.e.f. the end of 31 March 2021 and hence not included above for the year ended 31 March 2022.

3. Non-current assets - Capital work-in-progress

As at 31 March 2022

₹ Crore

Particulars	As at 1 April 2021	Additions	Deductions/ adjustments	Capitalized	As at 31 March 2022
Development of land	374.06	166.14	(250.54)	29.48	**260.18**
Roads, bridges, culverts and helipads	518.16	143.42	(259.78)	60.42	**341.38**
Piling and foundation	746.53	-	(341.56)	-	**404.97**
Buildings					
Freehold					
Main plant	1,425.39	226.34	(180.92)	605.38	**865.43**
Others	1,560.69	570.42	(401.37)	449.04	**1,280.70**
Temporary erections	24.31	10.11	(6.48)	6.16	**21.78**
Water supply, drainage and sewerage system	105.01	72.60	(19.70)	55.62	**102.29**
Hydraulic works, barrages, dams, tunnels and power channel	4,320.70	422.03	(1.95)	-	**4,740.78**
MGR track and signalling system	86.07	177.66	(163.37)	32.83	**67.53**
Railway siding	1,737.52	448.42	(321.96)	9.52	**1,854.46**
Earth dam reservoir	371.16	113.88	(5.51)	-	**479.53**
Plant and equipment - owned	57,054.96	17,398.02	(429.34)	21,710.46	**52,313.18**
Furniture and fixtures	46.01	8.76	(14.50)	31.82	**8.45**
Vehicles	0.17	0.06	(0.17)	-	**0.06**
Office equipment	21.70	18.39	(7.62)	1.38	**31.09**
EDP/WP machines and satcom equipment	2.43	4.90	(1.81)	3.68	**1.84**
Construction equipment	0.06	0.08	-	0.06	**0.08**
Electrical installations	410.56	129.15	(21.74)	62.67	**455.30**
Communication equipment	20.56	23.23	(0.71)	6.95	**36.13**
Hospital equipment	0.43	0.20	(0.02)	0.41	**0.20**
Laboratory and workshop equipment	2.20	0.97	(0.11)	1.08	**1.98**
Development of coal mines	1,266.82	347.15	39.24	268.59	**1,384.62**
	70,095.50	20,281.93	(2,389.92)	23,335.55	**64,651.96**

As at 31 March 2022

₹ Crore

Particulars	As at 1 April 2021	Additions	Deductions/ adjustments	Capitalized	As at 31 March 2022
Expenditure pending allocation					
Survey, investigation, consultancy and supervision charges	84.74	5.17	(9.96)	-	**79.95**
Difference in exchange on foreign currency loans	1,194.94	75.34	(555.19)	-	**715.09**
Pre-commissioning expenses (net)	280.34	449.22	(662.57)	-	**66.99**
Expenditure during construction period (net)*	492.41	3,192.20	(145.91)	-	**3,538.70**
Other expenditure directly attributable to project construction	873.94	52.60	-	-	**926.54**
Less: Allocated to related works	-	-	2,969.22	-	**2,969.22**
	2,926.37	3,774.53	(4,342.85)	-	**2,358.05**
Sub-total	73,021.87	24,056.46	(6,732.77)	23,335.55	**67,010.01**
Less: Provision for unserviceable works	625.32	9.52	(134.81)	-	**500.03**
Construction stores (net of provisions)	2,947.05	855.11	(1,713.48)	-	**2,088.68**
Total	**75,343.60**	**24,902.05**	**(8,311.44)**	**23,335.55**	**68,598.66**

As at 31 March 2021

₹ Crore

Particulars	As at 1 April 2020	Additions	Deductions/ adjustments	Capitalized	As at 31 March 2021
Development of land	491.84	208.90	(326.68)	-	374.06
Roads, bridges, culverts and helipads	477.79	135.96	(38.96)	56.63	518.16
Piling and foundation	712.60	33.93	-	-	746.53
Buildings					
Freehold					
Main plant	1,563.21	343.82	(281.51)	200.13	1,425.39
Others	1,657.53	677.64	(411.86)	362.62	1,560.69
Temporary erections	21.08	7.34	(4.11)	-	24.31
Water supply, drainage and sewerage system	92.39	34.84	12.82	35.04	105.01
Hydraulic works, barrages, dams, tunnels and power channel	3,894.99	434.53	(8.82)	-	4,320.70
MGR track and signalling system	806.02	403.13	(2.07)	1,121.01	86.07
Railway siding	1,445.24	530.91	(238.63)	-	1,737.52
Earth dam reservoir	309.76	67.89	54.28	60.77	371.16
Plant and equipment - owned	54,949.68	15,380.38	(142.78)	13,132.32	57,054.96
Furniture and fixtures	39.03	15.59	9.07	17.68	46.01
Vehicles	-	0.17	-	-	0.17
Office equipment	4.64	28.76	1.96	13.66	21.70
EDP/WP machines and satcom equipment	6.42	5.56	(0.50)	9.05	2.43
Construction equipment	0.13	0.09	(0.04)	0.12	0.06
Electrical installations	456.29	156.07	183.53	385.33	410.56
Communication equipment	2.17	21.11	(0.49)	2.23	20.56
Hospital equipment	0.11	0.43	-	0.11	0.43
Laboratory and workshop equipment	5.16	0.54	(0.01)	3.49	2.20
Development of coal mines	1,441.15	344.94	(295.46)	223.81	1,266.82
	68,377.23	18,832.53	(1,490.26)	15,624.00	70,095.50

As at 31 March 2021

₹ Crore

Particulars	As at 1 April 2020	Additions	Deductions/ adjustments	Capitalized	As at 31 March 2021
Expenditure pending allocation					
Survey, investigation, consultancy and supervision charges	82.27	3.55	(1.08)	-	84.74
Difference in exchange on foreign currency loans	1,401.54	0.94	(207.54)	-	1,194.94
Pre-commissioning expenses (net)	191.11	460.63	(371.40)	-	280.34
Expenditure during construction period (net)*	418.44	3,504.52	(11.84)	-	3,911.12
Other expenditure directly attributable to project construction	1,077.90	27.76	(231.72)	-	873.94
Less: Allocated to related works	-	-	3,418.71	-	3,418.71
	3,171.26	3,997.40	(4,242.29)	-	2,926.37
Sub-total	71,548.49	22,829.93	(5,732.55)	15,624.00	73,021.87
Less: Provision for unserviceable works	533.76	91.56	-	-	625.32
Construction stores (net of provisions)	2,052.03	1,335.90	(440.88)	-	2,947.05
Total	73,066.76	24,074.27	(6,173.43)	15,624.00	75,343.60

* Brought from expenditure during construction period (net) - Note 44

a) Construction stores includes material lying with contractors for construction works and are net of provision for shortages pending investigation amounting to ₹ **27.67 crore** (31 March 2021: ₹ 27.77 crore).

b) Pre-commissioning expenses for the year amount to ₹ **513.30 crore** (31 March 2021: ₹ 549.94 crore) and after adjustment of pre-commissioning sales of ₹ **64.08 crore** (31 March 2021: ₹ 89.31 crore) resulted in net pre-commissioning expenditure of ₹ **449.22 crore** (31 March 2021: ₹ 460.63 crore).

c) Additions to the development of coal mines include expenditure during construction period (net) of ₹ **411.99 crore** (31 March 2021: ₹ 623.70 crore) - [Ref. Note 45] and after netting off the receipts from coal extracted during the development phase amounting to ₹ **64.84 crore** (31 March 2021: ₹ 278.76 crore).

d) Details of exchange differences and borrowing costs capitalised are disclosed in Note 2 (p).

e) Amount capitalised under development of coal mines is included in assets capitalised under 'Mining properties' and 'Site restoration cost' under Property, plant and equipment.

4. Non-current assets - Intangible assets

As at 31 March 2022

₹ Crore

Particulars		**Gross block**				**Amortization**				**Net block**
		As at 1 April 2021	**Additions**	**Deductions/ adjustments**	**As at 31 March 2022**	**As at 1 April 2021**	**For the year**	**Deductions/ adjustments**	**Upto 31 March 2022**	**As at 31 March 2022**
Software		114.83	4.82	(1.71)	**117.94**	80.43	19.51	(1.71)	**98.23**	**19.71**
Right to use	- Land	212.67	6.04	(47.21)	**171.50**	33.87	8.94	(7.14)	**35.67**	**135.83**
	- Others	419.59	8.28		**427.87**	76.05	21.95		**98.00**	**329.87**
Total		**747.09**	**19.14**	**(48.92)**	**717.31**	**190.35**	**50.40**	**(8.85)**	**231.90**	**485.41**

As at 31 March 2021

₹ Crore

Particulars		Gross block				Amortization				Net block
		As at 1 April 2020	Additions	Deductions/ adjustments	As at 31 March 2021	As at 1 April 2020	For the year	Deductions/ adjustments	Upto 31 March 2021	As at 31 March 2021
Software		87.68	27.15	-	114.83	58.88	21.54	0.01	80.43	34.40
Right to use	- Land	204.72	0.67	7.28	212.67	24.52	8.89	0.46	33.87	178.80
	- Others	384.87	34.72	-	419.59	55.59	20.46	-	76.05	343.54
Total		677.27	62.54	7.28	747.09	138.99	50.89	0.47	190.35	556.74

a) The right to use of land and others are amortized over the period of legal right to use or life of the related plant, whichever is less.

b) Cost of acquisition of the right for drawl of water amounting to ₹ **427.87 crore** (31 March 2021: ₹ 419.59 crore) is included under intangible assets – Right to use - Others.

c) Deductions/adjustments from gross block and amortization for the year includes:

₹ Crore

Particulars	Gross block		Amortization	
	For the year ended		For the year ended	
	31 March 2022	31 March 2021	**31 March 2022**	31 March 2021
Retirements and other adjustments	**(48.92)**	7.28	**(8.85)**	0.47
Total	**(48.92)**	7.28	**(8.85)**	0.47

During the year, cost adjustments in respect of assets capitalised with retrospective effect which was hither to disclosed under adjustment column, have been included in the addition column of the respective asset class in the Note. Corresponding adjustments in the previous year information have also been made.

d) Gross carrying amount of the fully amortised intangible assets that are still in use:

₹ Crore

Particulars	As at **31 March 2022**	As at 31 March 2021
Software	**74.61**	39.74
Right to use - land	**0.14**	0.14
Total	**74.75**	39.88

e) Refer Note 72 (C) (a) for disclosure of contractual commitments for the acquisition of intangible assets.

5. Non-current assets - Intangible assets under development

As at 31 March 2022

₹ Crore

Particulars	**As at 1 April 2021**	**Additions**	**Deductions/ adjustments**	**Capitalized**	**As at 31 March 2022**
Exploration and evaluation assets - coal mines	139.61	2.44	-	-	**142.05**
Exploratory wells-in-progress	7.64	-	-	-	**7.64**
Software	0.08	1.35	-	0.22	**1.21**
	147.33	3.79	-	0.22	**150.90**
Less: Provision for unserviceable works	52.43	-	-	-	**52.43**
Total	**94.90**	**3.79**	-	**0.22**	**98.47**

As at 31 March 2021

₹ Crore

Particulars	As at 1 April 2020	Additions	Deductions/ adjustments	Capitalized	As at 31 March 2021
Exploration and evaluation assets - coal mines	292.46	22.65	(175.50)	-	139.61
Exploratory wells-in-progress	7.64	-	-	-	7.64
Software	0.06	0.08	(0.01)	0.05	0.08
	300.16	22.73	(175.51)	0.05	147.33
Less: Provision for unserviceable works	7.64	44.79	-	-	52.43
Total	292.52	(22.06)	(175.51)	0.05	94.90

a) Refer Note 62 d) w.r.t. exploration and evaluation of assets-coal mines.

6. Non-current financial assets - Investments in subsidiary and joint venture companies

₹ Crore

Particulars	Number of shares Current year/ (previous year)	Face value per share in ₹ Current year/ (previous year)		**As at 31 March 2022**	As at 31 March 2021
Equity instruments - Unquoted (fully paid up - unless otherwise stated, at cost)					
Subsidiary companies					
NTPC Electric Supply Company Ltd.	80,910 (80,910)	10 (10)		**0.08**	0.08
NTPC Vidyut Vyapar Nigam Ltd.	3,00,00,000 (3,00,00,000)	10 (10)		**30.00**	30.00
Kanti Bijlee Utpadan Nigam Ltd.	1,67,06,73,705 (1,61,06,73,705)	10 (10)		**1,670.67**	1,610.67
Bhartiya Rail Bijlee Company Ltd.	1,77,41,21,538 (1,77,41,21,538)	10 (10)		**1,774.12**	1,774.12
Patratu Vidyut Utpadan Nigam Ltd.	123,76,24,000 (88,76,24,000)	10 (10)		**1,237.62**	887.62
Nabinagar Power Generating Company Ltd.	4,96,10,31,750 (4,65,10,31,750)	10 (10)		**4,961.03**	4,651.03
NTPC Mining Ltd.	50,000 (50,000)	10 (10)		**0.05**	0.05
NTPC EDMC Waste Solutions Private Ltd.	1,48,000 (1,48,000)	10 (10)		**0.15**	0.15
NTPC Renewable Energy Ltd.	73,11,74,035 (29,50,50,000)	10 (10)		**731.17**	295.05
Ratnagiri Gas & Power Private Ltd.	2,83,00,76,305 (2,83,00,76,305)	10 (10)	**834.55**		834.55
Less: Provision for impairment			**834.55**		834.55
				-	-
THDC India Limited	2,73,09,412 (2,73,09,412)	1,000 (1,000)		**7,500.00**	7,500.00
North Eastern Electric Power Corporation Limited	3,60,98,10,400 (3,60,98,10,400)	10 (10)		**4,000.00**	4,000.00
				21,904.89	20,748.77
Joint venture companies					
Utility Powertech Ltd. (includes 10,00,000 bonus shares)	20,00,000 (20,00,000)	10 (10)		**1.00**	1.00
NTPC-GE Power Services Private Ltd.	30,00,000 (30,00,000)	10 (10)		**3.00**	3.00
NTPC-SAIL Power Company Ltd.	49,02,50,050 (49,02,50,050)	10 (10)		**490.25**	490.25
NTPC Tamil Nadu Energy Company Ltd.	1,43,63,96,112 (1,43,63,96,112)	10 (10)		**1,436.40**	1,436.40
Aravali Power Company Private Ltd.	1,43,30,08,200 (1,43,30,08,200)	10 (10)		**1,433.01**	1,433.01
NTPC BHEL Power Projects Private Ltd.	5,00,00,000 (5,00,00,000)	10 (10)	**50.00**		50.00
Less: Provision for impairment			**50.00**		50.00

₹ Crore

Particulars	Number of shares Current year/ (previous year)	Face value per share in ₹ Current year/ (previous year)		As at 31 March 2022	As at 31 March 2021
				-	-
Meja Urja Nigam Private Ltd.	1,74,99,99,800 (1,72,42,39,800)	10 (10)		**1,750.00**	1,724.24
Transformers and Electricals Kerala Ltd.	1,91,63,438 (1,91,63,438)	10 (10)		**31.34**	31.34
National High Power Test Laboratory Private Ltd.	3,04,00,000 (3,04,00,000)	10 (10)	**30.40**		30.40
Less: Provision for impairment			**16.16**		-
				14.24	30.40
Energy Efficiency Services Ltd.	46,36,10,000 (46,36,10,000)	10 (10)		**463.61**	463.61
CIL NTPC Urja Private Ltd.	76,900 (76,900)	10 (10)		**0.08**	0.08
Anushakti Vidhyut Nigam Ltd.	49,000 (49,000)	10 (10)		**0.05**	0.05
Hindustan Urvarak and Rasayan Ltd.	1,62,94,15,000 (1,13,17,65,000)	10 (10)		**1,629.42**	1,131.76
Trincomalee Power Company Ltd. (* Srilankan rupees)	32,86,061 (32,86,061)	100* (100)*	**15.20**		15.20
Less: Provision for impairment			**14.28**		14.14
				0.92	1.06
Bangladesh-India Friendship Power Company Private Ltd. (** Bangladeshi Taka)	7,42,50,000 (6,42,50,000)	100** (100)**		**620.38**	533.60
				7,873.70	7,279.80
Total				**29,778.59**	28,028.57
Aggregate amount of unquoted investments (net of provision for impairment)				**29,778.59**	28,028.57
Aggregate amount of impairment in the value of investments				**914.99**	898.69

a) Investments have been valued as per accounting policy no. C.27.1 (Note 1).

b) The Board of Directors of the Company in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from NTPC BHEL Power Projects Private Ltd. (NTPC-BHEL), a joint venture of the Company. As NTPC-BHEL was formed by a directive from the GOI, approval of exit from GOI is awaited. Pending withdrawal, provision for impairment loss on the entire investment in NTPC-BHEL of ₹ **50.00 crore** (upto 31 March 2021: ₹ 50.00 crore) has been made based on the un-audited accounts of NTPC-BHEL as at 31 March 2022.

c) The Board of Directors of the Company in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from Transformers and Electricals Kerala Ltd. (TELK), a joint venture of the Company. GOI has accorded its approval for exit of NTPC from the joint venture. The decision of the Board of Directors of NTPC Limited and approval of GOI has been conveyed to the Government of Kerala (GoK) (JV Partner) & TELK. The GoK has requested NTPC to review the decision. NTPC again took up the matter with GoK who has now in principally agreed for the exit of NTPC. Further discussions on modalities for exit are underway.

d) The Board of Directors of the Company in its 479th Board meeting held on 9 November 2019 had accorded approval of Scheme of Amalgamation of Nabinagar Power Generating Co. Limited and Kanti Bijlee Utpadan Nigam Limited (wholly owned subsidiaries of the Company) with the Company under provisions of Section 230-232 of the Companies Act, 2013. The Company has filed application to the Ministry of Corporate Affairs on 5 February, 2021 for approval of Scheme of Amalgamation. The scheme has been approved by the shareholders and Unsecured Creditors of the Company in their respective meetings held on 18 April 2022 as per the Order of the Ministry of Corporate Affairs. Approval of the Scheme by the Ministry of Corporate Affairs is awaited.

e) The Board of Directors of the Company in its meeting held on 26 March 2022 accorded in principle approval offering equity stake of the Company in Hindustan Urvarak and Rasayan Ltd., a joint venture of the Company, to Indian Oil Corporation Limited as outright sale. The matter is being taken up for further necessary action.

f) Restrictions for the disposal of investments held by the Company and commitments towards certain subsidiary & joint venture companies are disclosed in Note 72 (C) (b) and (c).

7. Non-current financial assets - Other investments

₹ Crore

Particulars	Number of shares Current year/ (previous year)	Face value per share in ₹ Current year/ (previous year)	As at 31 March 2022	As at 31 March 2021
Equity instruments (fully paid up - unless otherwise stated)				
Quoted (designated at fair value through other comprehensive income)				
PTC India Ltd.	1,20,00,000 (1,20,00,000)	10 (10)	**98.70**	93.30
			98.70	93.30
Unquoted (measured at fair value through profit or loss)				
International Coal Ventures Private Ltd.	14,00,000 (14,00,000)	10 (10)	**1.40**	1.40
BF-NTPC Energy Systems Ltd.	68,48,681 (68,48,681)	10 (10)	**2.38**	2.38
			3.78	3.78
Co-operative societies			**#**	#
Total			**102.48**	97.08
Aggregate amount of quoted investments at cost			**12.00**	12.00
Aggregate market value of the quoted investments			**98.70**	93.30
Aggregate amount of unquoted investments at cost			**3.78**	3.78

#Equity shares of ₹ **30,200**/- (31 March 2021: ₹ 30,200/-) held in various employee co-operative societies.

a) Investments have been valued as per accounting policy no. C.27.1 (Note 1).

b) The Board of Directors of NTPC Limited in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from PTC India Ltd. (PTC). As the Company was formed by a directive from the GOI, approval of the GOI was required for exit by NTPC. Ministry of Power has accorded permission for NTPC to exit from PTC on 22 February 2022. NTPC is in discussion with other promoters to finalize the modalities of exit from PTC.

c) The Board of Directors of NTPC Limited in its meeting held on 27 January 2012 accorded in principle approval for withdrawal from International Coal Ventures Private Ltd. (ICVPL). As the Company was formed by a directive from the GOI, approval of the Ministry of Steel, GOI is awaited for exit by NTPC Limited. The Company has approached Steel Authority of India Ltd., to expedite the exit related activities. The Company has also approached Ministry of Power for taking up with Ministry of Steel. Ministry of Power has advised NTPC to take fresh approval of Board for exiting from ICVPL and the same is in process.

Pending withdrawal, the Company had lost the joint control over the entity and accordingly, has classified the investment in ICVPL as 'Investment in unquoted equity instruments'.

d) The Board of Directors of NTPC Limited in its meeting held on 19 June 2014 accorded in principle approval for withdrawal from BF-NTPC Energy Systems Ltd. (BF-NTPC), a joint venture of the Company. As BF-NTPC was formed by a directive from the GOI, approval of the GOI was sought for exit by the Company. Ministry of Power, GoI conveyed its approval for winding up of BF-NTPC on 8 January 2018. Consequently, liquidator was appointed in the extra-ordinary general meeting of BF-NTPC held on 9 October 2018. The winding up is under process. Pursuant to winding up proceedings, the Company had lost the joint control over the entity and accordingly, has classified the investment in BF NTPC as 'Investment in unquoted equity instruments'. The difference between the cost of investment and the fair value has been provided for in the earlier years.

e) The Company is of the view that provisions of Ind AS 24 'Related Party Disclosures' and Ind AS 111 'Joint Arrangements' are not applicable to the investments made in PTC India Ltd., International Coal Ventures Private Ltd. and BF-NTPC Energy systems Ltd., and the same has been accounted for as per the provisions of Ind AS 109 'Financial Instruments'.

f) No strategic investments in equity instruments measured at FVTOCI were disposed during the financial year 2021-22, and there were no transfers of any cumulative gain or loss within equity relating to these investments.

g) **Movement in quoted investments**

Opening balance	**93.30**	46.50
Add / less: Mark to Market gain / loss through FVTOCI	**5.40**	46.80
Closing balance	**98.70**	93.30

8. Non-current financial assets - Loans

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Loans (Considered good, unless otherwise stated)		
Related parties		
Secured	**765.52**	818.63
Unsecured	**17.23**	183.41
Employees (including accrued interest)		
Secured	**295.27**	285.18
Unsecured	**188.88**	188.51
Others		
Unsecured	**21.50**	22.39
Total	**1,288.40**	1,498.12
a) Due from directors and officers of the Company		
Directors	**0.07**	0.08
Officers	-	-
b) Loans to related parties include:		
Key management personnel	**0.07**	0.08
Kanti Bijli Utpadan Nigam Ltd. (Subsidiary company)	-	164.33
National High Power Test Laboratory Private Ltd. (Joint venture company)	**16.56**	18.40
Ratnagiri Gas & Power Private Ltd. (Subsidiary company)	**765.52**	818.63
NTPC Education and Research Society	**0.60**	0.60

c) Loan to Ratnagiri Gas & Power Company Private Ltd. is secured by first ranking pari passu charge/ mortgage on the assets (moveable and immoveable, tangible and intangible and current assets) of the Subsidiary, both present and future.

d) Loans - Others represent loan of ₹ **21.50 crore** (31 March 2021: ₹ 22.39 crore) given to Andhra Pradesh Industrial Infrastructure Corporation Ltd. (APIIC) which is covered by a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

e) Loans to the employees are secured against the mortgage of the house properties and hypothecation of vehicles for which such loans have been given in line with the policies of the Company.

9. Non-current assets - Other financial assets

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Share application money pending allotment in		
Subsidiary companies		
Kanti Bijlee Utpadan Nigam Limited	-	60.00
Nabinagar Power Generating Company Ltd.	-	36.00
	-	96.00
Claims recoverable	**696.19**	702.27
Finance lease receivables (Refer Note 69)	**281.93**	366.88
Mine closure deposit	**39.86**	23.69
Total	**1,017.98**	1,188.84

a) Claims recoverable represents ₹ **696.19 crore** (31 March 2021: ₹ 700.30 crore) towards the cost incurred upto 31 March 2022 in respect of one of the hydro power projects, the construction of which has been discontinued on the advice of the Ministry of Power (MOP), GOI which includes ₹ **456.85 crore** (31 March 2021: ₹ 449.88 crore) in respect of arbitration awards challenged by the Company before Hon'ble High Court of Delhi. In the event the Hon'ble High Court grants relief to the Company, the amount would be adjusted against Current liabilities - Provisions - Provision for arbitration awards (Note 34). Management expects that the total cost incurred, anticipated expenditure on the safety and stabilisation measures, other recurring site expenses and interest costs as well as claims of contractors/vendors for various packages for this project will be compensated in full by the GOI. Hence, no provision is considered necessary.

b) The Company had ascertained that the Power Purchase Agreement (PPA) entered into for Stage-I of a power station with the beneficiary falls under the definition of finance lease. Accordingly, the written down value of the specified assets was derecognized from PPE and accounted as Finance Lease Receivable (FLR) on transition to Ind AS. The Company has continued to classify this arrangement with its customer as lease based on the practical expedient provided in Ind AS 116. Accordingly, recovery of capacity charges towards depreciation, interest on loan capital & return on equity (pre-tax) components from the beneficiary are continued to be adjusted against FLR. The interest component of the FLR and amount received on account of revision of tariff of previous periods in respect of the above three elements are continued to be recognised as 'Interest income on Assets under finance lease' under 'Revenue from operations' (Note 37).

c) As per the guidelines from Ministry of Coal, Government of India for preparation of Mine Closure Plan, Escrow Accounts have been opened for each captive mine and the balances held in these escrow accounts are presented as 'Mine closure deposit'. Up to 80% of the total deposited amount including interest accrued in the escrow account shall be released after every five years in line with the periodic examination of the closure plan as per the Guidelines. Interest earned on the escrow account is added to mine closure deposit account.

10. Other non-current assets

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Capital advances		
(Considered good unless otherwise stated)		
Secured	**13.99**	17.75
Unsecured		
Covered by bank guarantees	**1,739.54**	1,899.37
Others	**3,770.66**	3,418.91
Considered doubtful	**44.97**	44.67
Less: Allowance for bad and doubtful advances	**44.97**	44.67
	5,524.19	5,336.03

₹ Crore

Particulars		As at 31 March 2022	As at 31 March 2021
Advances other than capital advances			
(Considered good unless otherwise stated)			
Security deposits		**305.35**	362.04
Advances to contractors and suppliers			
Unsecured	**2,014.03**		2,137.08
Considered doubtful	**112.57**		112.57
Less: Allowance for bad and doubtful advances	**112.57**		112.57
		2,014.03	2,137.08
Advance tax and tax deducted at source	**11,028.14**		15,104.60
Less: Provision for tax	**8,395.02**		11,168.56
		2,633.12	3,936.04
Deferred foreign currency fluctuation asset		**1,480.72**	1,889.55
Deferred payroll expenditure		**109.14**	121.76
Adjustable from Escrow Account towards mine closure expenses		**16.67**	7.52
Total		**12,083.22**	13,790.02

a) In line with accounting policy no. 15 (Note 1), deferred foreign currency fluctuation asset has been accounted and ₹ **630.97 crore** (31 March 2021: ₹ 98.16 crore) being the exchange fluctuations on account of foreign currency loans have been adjusted in 'Energy sales' under 'Revenue from operations' (Note 37).

b) Capital advances include amounts given as advance against works to the following private companies (related parties) in which one or more directors of the Company are directors:

NTPC-GE Power Services Private Ltd.	**0.06**	0.07
NTPC BHEL Power Projects Private Ltd.	**283.35**	216.64

c) Capital advances include ₹ **224.29 crore** (31 March 2021: ₹ 224.29 crore), paid to a contractor pending settlement of certain claims which are under litigation. The amount will be adjusted with the cost of related work or recovered from the party, depending upon the outcome of the legal proceedings.

d) Advances to contractors and suppliers include payments to Railways amounting to ₹ **1,862.94 crore** (31 March 2021: ₹ 1,963.25 crore) under customer funding model as per policy on 'Participative model for rail-connectivity and capacity augmentation projects' issued by the Ministry of Railways, GOI. As per this policy, an agreement has been signed between the Company and the Ministry of Railways, GOI on 6 June 2016. As per the agreement, railway projects agreed between the Company and Railways will be constructed, maintained and operated by Railways and ownership of the line and its operations and maintenance will always remain with them. Railways will pay upto 7% of the amount invested through freight rebate on freight volumes every year till the funds provided by the Company are fully recovered along-with interest (equal to the prevailing rate ofdividend payable by Railways at the time of signing of respective agreements), subject to the rebate not exceeding the freight amount in the accounting year, after commercial operation date (COD) of the railway projects. The advance is adjusted at projects which have achieved COD based on confirmation from Railways towards freight rebate in consonance with the agreement terms and the interest portion is recognised in Note-38-'Other income'.

e) Secured capital advances are secured against the hypothecation of the construction equipment/material supplied by the contractors/suppliers.

f) Loans given to employees are measured at amortized cost. The deferred payroll expenditure represents the benefits on account of interest rate on loans being lower than the market rate of interest. The same is amortized on a straight-line basis over the remaining period of the loan.

11. Current assets - Inventories

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Coal	**2,819.54**	3,539.68
Fuel oil	**702.30**	413.30
Naphtha	**56.74**	66.30
Stores and spares	**4,946.65**	4,335.60
Chemicals and consumables	**187.62**	165.78
Loose tools	**12.96**	12.94
Steel scrap	**17.27**	18.29
Others	**952.57**	817.00
	9,695.65	9,368.89
Less: Provision for shortages	**57.86**	46.70
Provision for obsolete/unserviceable items/ diminution in value of surplus inventory	**150.58**	143.25
Total	**9,487.21**	9,178.94
Inventories include material-in-transit		
Coal	**316.03**	342.00
Stores and spares	**20.38**	37.47
Chemicals and consumables	**2.74**	3.24
Loose tools	**0.04**	0.03
Others	**2.92**	0.98

a) Inventory items have been valued as per accounting policy no. C.9 (Note 1).

b) Inventories - Others includes steel, cement, ash bricks etc.

c) Refer Note 50 (a) for information on inventories consumed and recognised as expense during the year.

d) Refer Note 50 (b) for information on inventories pledged as security by the Company.

e) Paragraph 32 of Ind AS 2 'Inventories' provides that materials and other supplies held for use in the production of inventories are not written down below cost if the finished products in which they will be incorporated are expected to be sold at or above cost. The Company is operating in the regulatory environment and as per CERC Tariff Regulations, cost of fuel and other inventory items are recovered as per extant tariff regulations. Accordingly, the realizable value of the inventories is not lower than the cost.

12. Current financial assets - Investments

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Unquoted		
Investment in mutual funds (measured at fair value through profit or loss)		
Baroda Liquid Fund - Plan B-Growth	**-**	499.99
Total	**-**	499.99

a) Investments have been valued as per accounting policy no. C.27 (Note 1)

13. Current financial assets - Trade receivables

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Trade receivables		
Unsecured, considered good	**22,293.32**	22,976.26
Credit impaired	**0.20**	0.20
	22,293.52	22,976.46
Less: Allowance for credit impaired trade receivables	**0.20**	0.20
Total	**22,293.32**	22,976.26

a) Based on arrangements between Company, banks and beneficiaries, the bills of the beneficiaries have been discounted. Accordingly, trade receivables have been disclosed net of bills discounted amounting to ₹ **6,892.03 crore** (31 March 2021: ₹ 16,295.05 crore). Also refer Note 72 A(c).

b) Amounts receivable from related parties are disclosed in Note 56.

c) Trade receivables include unbilled revenue for the month of March amounting to ₹ **9,482.38 Crore** (31 March 2021: ₹ 9,291.35 crore) billed, net of advance, to the beneficiaries after 31 March.

d) Trade Receivables ageing schedule

As at 31 March 2022 ₹ Crore

Particulars	Unbilled	Not Due	Outstanding for following periods from due date of payment					Total
			Less than 6 months	6 months -1 year	1-2 years	2-3 years	More than 3 years	
(i) Undisputed Trade receivables – considered good	9,482.38	7,279.13	1,437.68	1,083.62	1,962.38	164.45	139.63	**21,549.27**
(ii) Undisputed Trade Receivables – which have significant increase in credit risk	-	-	-	-	-	-	-	-
(iii) Undisputed Trade Receivables – credit impaired	-	-	-	-	-	-	0.20	**0.20**
(iv) Disputed Trade Receivables– considered good	-	26.76	18.27	283.64	210.64	119.39	85.35	**744.05**
(v) Disputed Trade Receivables – which have significant increase in credit risk	-	-	-	-	-	-	-	-
(vi) Disputed Trade Receivables – credit impaired	-	-	-	-			-	-
Sub-total	**9,482.38**	**7,305.89**	**1,455.95**	**1,367.26**	**2,173.02**	**283.84**	**225.18**	**22,293.52**
Less: Allowance for credit impaired trade receivables	-	-	-	-	-	-	0.20	**0.20**
Total	**9,482.38**	**7,305.89**	**1,455.95**	**1,367.26**	**2,173.02**	**283.84**	**224.98**	**22,293.32**

As at 31 March 2021 ₹ Crore

Particulars	Unbilled	Not Due	Outstanding for following periods from due date of payment					Total
			Less than 6 months	6 months -1 year	1-2 years	2-3 years	More than 3 years	
(i) Undisputed Trade receivables – considered good	9,291.35	6,610.27	3,516.70	1,635.09	837.90	109.58	85.32	22,086.21
(ii) Undisputed Trade Receivables – which have significant increase in credit risk	-	-	-	-	-	-	-	-
(iii) Undisputed Trade Receivables – credit impaired	-	-	-	-	-	-	0.20	0.20
(iv) Disputed Trade Receivables– considered good	-	31.45	270.38	362.26	133.84	79.40	12.72	890.05
(v) Disputed Trade Receivables – which have significant increase in credit risk	-	-	-	-	-	-	-	-
(vi) Disputed Trade Receivables – credit impaired	-	-	-	-	-	-	-	-
Sub-total	9,291.35	6,641.72	3,787.08	1,997.35	971.74	188.98	98.24	22,976.46
Less: Allowance for credit impaired trade receivables	-	-	-	-	-	-	0.20	0.20
Total	9,291.35	6,641.72	3,787.08	1,997.35	971.74	188.98	98.04	22,976.26

14. Current financial assets - Cash and cash equivalents

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Balances with banks in current accounts	17.00	89.86
Cheques and drafts on hand	-	0.14
Others (stamps on hand)	0.04	0.05
Total	17.04	90.05

15. Current financial assets - Bank balances other than cash and cash equivalents

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Deposits with original maturity of more than three months and maturing within one year (including interest accrued)	1,234.80	993.99
Earmarked balances with banks #	1,203.75	1,254.42
Total	2,438.55	2,248.41
# Earmarked balances with banks towards:		
Redemption of bonds due for repayment within one year	-	-
Fly ash utilization reserve fund*	572.99	598.08
DDUGJY Scheme of the GOI**	536.49	598.01

		₹ Crore
Particulars	**As at 31 March 2022**	As at 31 March 2021
Unpaid dividend account balance	**17.99**	19.84
Amount deposited as per court orders	**37.28**	5.00
Unpaid interest/refund account balance - Bonds	**6.81**	6.15
Payment Security Fund - MNRE	**27.30**	27.30
Unpaid interest on public deposit	**0.03**	0.03
Amount received under PM-Kusum Scheme	**4.86**	-
Security with government authorities	**-**	0.01
Total	**1,203.75**	1,254.42

* Refer Note 21 (e) regarding fly ash utilization reserve fund.

** Out of advance for DDUGJY Scheme of the GOI. Refer Note 32(b) and 33(a).

a) In line with the guidelines issued by Ministry of New and Renewable Energy (MNRE), GOI under National Solar Mission-II, a Payment Security Fund/Working Capital Fund will be set up/created by the MNRE. Upon creation of the said fund, amounts accrued from encashment of bank guarantee, penalties/liquidated damages on developers deducted by the Company from the Solar Power Developers (SPDs) as per the guidelines of MNRE shall be transferred to this fund. The said fund is yet to be created by MNRE. Pending creation of the fund, amount deducted by the Company on account of liquidated damages/penalties from the SPDs is earmarked for the said fund and is not available for use by the Company.

16. Current financial assets - Loans

		₹ Crore
Particulars	**As at 31 March 2022**	As at 31 March 2021
Loans (including interest accrued)		
(Considered good unless otherwise stated)		
Related parties		
Secured	**53.10**	53.10
Unsecured	**167.63**	115.77
Employees		
Secured	**75.43**	74.50
Unsecured	**180.65**	172.56
Others		
Unsecured	**0.89**	0.89
Total	**477.70**	416.82
a) Due from Directors and Officers of the Company		
Directors	**0.08**	0.07
Officers	**-**	-
b) Loans to related parties include:		
Key management personnel	**0.08**	0.07
Ratnagiri Gas & Power Private Ltd. (Subsidiary company) [Refer Note 8 c)]	**53.10**	53.10
Kanti Bijlee Utpadan Nigam Ltd. (Subsidiary company)	**164.33**	114.33
National High Power Test Laboratory Private Ltd. (Joint venture company)	**3.22**	1.37

c) Other loans represent loans of ₹ **0.89 crore** (31 March 2021: ₹ 0.89 crore) given to APIIC which is covered by a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

d) Loans to the employees are secured against the mortgage of the house properties and hypothecation of vehicles for which such loans have been given in line with the policies of the Company.

17. Current assets - Other financial assets

₹ Crore

Particulars		As at 31 March 2022	As at 31 March 2021
Advances			
(Considered good unless otherwise stated)			
Related parties			
Unsecured		**262.51**	392.82
Employees			
Unsecured	**18.76**		11.46
Considered doubtful	**0.01**		0.01
Less: Allowance for bad and doubtful advances	**0.01**		0.01
		18.76	11.46
Others			
Unsecured	**0.14**		3.64
Considered doubtful	**0.02**		0.02
Less: Allowance for bad and doubtful advances	**0.02**		0.02
		0.14	3.64
		281.41	407.92
Claims recoverable			
Unsecured, considered good	**183.23**		45.38
Considered doubtful	**346.78**		343.62
Less: Allowance for doubtful claims	**346.78**		343.62
		183.23	45.38
Contract assets		**4,649.50**	2,987.87
Finance lease receivables		**73.56**	70.89
Mine closure deposit		**42.56**	39.59
Others		**60.87**	53.22
Total		**5,291.13**	3,604.87

a) Contract Assets represent Company's right to consideration in exchange for goods and services that the Company has transferred / provided to customers when that right is conditioned on matters, other than passage of time, like receipt of income tax assessment orders, trueing up orders from CERC,etc. and are net of credits to be passed to customers.

b) Advances to related parties include:

Key Managerial Personnel	-	-
Subsidiary companies	**161.34**	152.38
Joint venture companies	**40.30**	39.29
Post employment benefits Trusts	**60.87**	201.15

c) Advances include amounts due from the following private companies in which one or more directors of the Company are directors:

NTPC-GE Power Services Private Ltd.	**2.24**	1.76
Aravali Power Company Private Ltd.	**0.62**	1.22
NTPC BHEL Power Projects Private Ltd.	**0.73**	-
Meja Urja Nigam Private Ltd.	**14.43**	13.78

d) Other financial assets - Others include amount recoverable from contractors and other parties towards hire charges, rent/electricity etc.

18. Current assets - Other current assets

			₹ Crore
Particulars		**As at 31 March 2022**	As at 31 March 2021
Security deposits (unsecured)		**1,988.92**	1,773.91
Advances			
(Considered good unless otherwise stated)			
Related parties			
Unsecured		**0.29**	4.55
Employees			
Unsecured		**3.40**	0.86
Contractors and suppliers			
Unsecured	**2,810.35**		2,915.17
Considered doubtful	**3.41**		3.45
Less: Allowance for bad and doubtful advances	**3.41**		3.45
		2,810.35	2,915.17
Others			
Unsecured		**43.25**	60.97
		2,857.29	2,981.55
Interest accrued on			
Advance to contractors		**38.36**	29.55
Claims recoverable			
Unsecured, considered good	**3,892.66**		3,602.31
Considered doubtful	**125.84**		125.80
Less: Allowance for doubtful claims	**125.84**		125.80
		3,892.66	3,602.31
Assets held for disposal		**18.09**	16.19
Deferred payroll expenditure		**21.67**	23.41
Adjustable from Escrow Account for mine closure expenses		**37.71**	30.08
Others		**14.60**	70.87
Total		**8,869.30**	8,527.87

a) Security deposits (unsecured) include ₹ **22.47 crore** (31 March 2021: ₹ 21.89 crore) towards sales tax deposited with sales/commercial tax authorities, ₹ **1,138.11 crore** (31 March 2021: ₹ 902.14 crore) deposited with Courts, ₹ **225.00 crore** (31 March 2021: ₹ 209.56 crore) deposited with LIC for making annuity payments to the land oustees and ₹ **500.00 crore** (31 March 2021: ₹ 500.00 crore) deposited against bank guarantee with one of the party as per the direction of the Hon'ble Supreme Court of India, refer Note 60 (iii).

b) Advances - Others include prepaid expenses amounting to ₹ **42.40 crore** (31 March 2021: ₹ 59.89 crore).

c) Advances - Related parties include amounts due from the following private companies in which one or more directors of the Company are directors:

NTPC-GE Power Services Private Ltd.	**0.01**	0.01
NTPC BHEL Power Projects Private Ltd.	**-**	3.91

d) Loans given to employees are measured at amortized cost. The deferred payroll expenditure represents the benefits on account of interest rate on loans being lower than the market rate of interest. The same is amortized on a straight-line basis over the remaining period of the loan.

e) Claims recoverable includes claims amounting to ₹ **1,874.72 crore** (31 March 2021: ₹ 1,747.94 crore) made against coal companies in accordance with the fuel supply agreements mainly towards grade slippages. Claims recoverable also includes claims against Railways amounting to ₹ **1,918.62 crore** (31 March 2021: ₹ 1,752.74 crore) mainly towards diversion of coal rakes. These are regularly reviewed and reconciled with the Coal Companies and Indian Railways periodically.

19. Regulatory deferral account debit balances

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
On account of		
Exchange differences	**109.36**	874.92
Employee benefits expense	**272.80**	759.40
Deferred tax	**8,992.68**	7,567.94
Ash transportation cost	**3,214.13**	1,830.65
Arbitration cases	-	110.81
Total	**12,588.97**	11,143.72

a) Regulatory deferral account balances have been accounted in line with Accounting policy no. C.4 (Note 1). Refer Note 67 for detailed disclosures.

b) CERC Tariff Regulations, 2019 provide for recovery of deferred tax liability (DTL) as at 31 March 2009 from the beneficiaries. Accordingly, DTL as at 31 March 2009 is recoverable on materialisation from the beneficiaries. Regulations, 2014 and Regulations, 2019 provide for grossing-up the rate of return on equity based on effective tax rate for the financial year based on the actual tax paid during the year on the generation income. Accordingly, deferred tax liability for the period from 1 April 2014 will be reversed in future years when the related DTL forms part of current tax. Keeping in view the above, the Company has recognized such deferred tax as regulatory deferral account debit balances, since the amounts are recoverable in future years.

20. Equity share capital

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Equity share capital		
Authorized		
10,00,00,00,000 shares of par value ₹10/- each (10,00,00,00,000 shares of par value ₹10/- each as at 31 March 2021)	**10,000.00**	10,000.00
Issued, subscribed and fully paid up		
9,69,66,66,134 shares of par value ₹ 10/- each (9,69,66,66,134 shares of par value ₹10/- each as at 31 March 2021)	**9,696.67**	9,696.67

a) Reconciliation of the shares outstanding at the beginning and at the end of the year:

Particulars	Number of shares	
	31 March 2022	31 March 2021
At the beginning of the year	**9,69,66,66,134**	9,89,45,57,280
Less: Buyback of shares during the year	-	19,78,91,146
Outstanding at the end of the year	**9,69,66,66,134**	9,69,66,66,134

b) Terms and rights attached to equity shares:

The Company has only one class of equity shares having a par value ₹10/- per share. The holders of the equity shares are entitled to receive dividends as declared from time to time and are entitled to voting rights proportionate to their share holding at the meetings of shareholders.

c) **Dividends:**

₹ Crore

Particulars	Paid during the year ended	
	31 March 2022	31 March 2021
(i) Dividends paid and recognised during the year		
Final dividend for the year ended 31 March 2021 of ₹ **3.15** (31 March 2020: ₹ 2.65) per equity share	**3,054.45**	2,622.06
Interim dividend for the year ended 31 March 2022 of ₹ **4.00** (31 March 2021: ₹ 3.00) per equity share	**3,878.67**	2,909.00

(ii) Dividends not recognised at the end of the reporting period	**31 March 2022**	31 March 2021
In addition to the above dividends, since year end the directors have recommended the payment of a final dividend of ₹ **3.00** (31 March 2021: ₹ 3.15) per equity share. This proposed dividend is subject to the approval of shareholders in the ensuing Annual General Meeting.	**2,909.00**	3,054.45

d) **Details of shareholders holding more than 5% shares in the Company:**

Particulars	**As at 31 March 2022**		As at 31 March 2021	
	No. of shares	**%age holding**	No. of shares	%age holding
- President of India	**4,95,53,46,251**	**51.10**	4,95,53,46,251	51.10
- Life Insurance Corporation of India (including shares held in various Funds/Schemes)	**1,00,42,47,653**	**10.36**	1,06,24,20,836	10.96
- ICICI Prudential Mutual Fund	**53,69,26,248**	**5.54**	64,75,68,645	6.68

e) **For the period of preceeding five years as on the Balance sheet date:**

(i) Shares bought back:

The Company has bought back 19,78,91,146 equity shares of the Company for an aggregate amount of ₹ 2,275.75 crore being 2% of the total paid up equity share capital at ₹ 115.00 per equity share , during the financial year 2020-21. Accordingly, the paid up equity share capital was reduced in the previous year by ₹ 197.89 crore and other equity was reduced by ₹ 2,565.93 crore (including tax on buy back of shares of ₹ 484.06 crore and other buyback expenses of ₹ 4.01 crore (net of tax)). Further, earnings per share was adjusted on account of buy back of shares.

(ii) Shares allotted as fully paid up by way of bonus shares:

The Company had issued 164,90,92,880 equity shares of ₹ 10/- each as fully paid bonus shares in the financial year 2018-19 in the ratio of one equity share of ₹ 10/- each for every five equity shares held.

f) **Details of shareholding of promoters:**

Shares held by promoters as at 31 March 2022				
Sl. No.	**Promoter name**	**No. of shares**	**%age of total shares**	**%age changes during the year**
1	President of India	**4,95,53,46,251**	**51.10**	-

Shares held by promoters as at 31 March 2021				
Sl. No.	Promoter name	No. of shares	%age of total shares	%age changes during the year
1	President of India	4,95,53,46,251	51.10	0.08%

21. Other equity

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Capital reserve	**50.08**	50.08
Securities premium	**-**	-
Capital redemption reserve	**197.89**	197.89
Bonds/debentures redemption reserve	**5,643.18**	6,240.43
Fly ash utilization reserve fund	**572.99**	598.08
General reserve	**96,147.17**	96,147.17
Retained earnings	**15,656.39**	5,973.87
Reserve for equity instruments through OCI	**86.70**	81.30
Total	**1,18,354.40**	1,09,288.82

(a) Capital reserve

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Opening balance and closing balance	**50.08**	50.08

Capital reserve represents amount received by the Company during 2001-02 as consideration under settlement for withdrawal from an erstwhile JV project. There is no movement in the capital reserve balance during the year. This amount will be utilised as per the provisions of the Companies Act, 2013.

(b) Securities premium

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Opening balance	**-**	2,228.46
Less: Utilised for buyback of equity shares	**-**	2,228.46
Closing balance	**-**	-

Securities premium is used to record the premium on issue of shares/securities. The amount was utilised for buyback of equity shares in the previous year in accordance with the provisions of the Companies Act, 2013.

(c) Capital redemption reserve

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Opening balance	**197.89**	-
Add: Transfer from General Reserve	**-**	197.89
Closing balance	**197.89**	197.89

Capital redemption reserve is created when company purchases its own shares out of free reserves or securities premium, as required by Companies Act, 2013. A sum equal to the nominal value of the shares so purchased is transferred to capital redemption reserve. This reserve will be utilised in accordance with the provisions of the Companies Act, 2013. Also refer Note 20 (e)(i).

(d) **Bonds/Debentures redemption reserve**

₹ Crore

Particulars	**For the year ended 31 March 2022**	For the year ended 31 March 2021
Opening balance	**6,240.43**	7,011.43
Less: Transfer to retained earnings	**597.25**	771.00
Closing balance	**5,643.18**	6,240.43

Ministry of Corporate Affairs notified Companies (Share Capital and Debentures) Amendment Rules, 2019 on 16 August 2019. As per the amendment, Debenture Redemption Reserve (DRR) is not required to be created in case of Companies whose securities are listed. Accordingly, the Company has not created any further Bonds/Debenture Redemption Reserve from the financial year 2019-20 onwards. Further, the outstanding balance of Bonds / Debenture Redemption Reserve created up to 31 March 2019 shall be written back as and when the respective bonds / debentures are redeemed.

(e) **Fly ash utilization reserve fund**

₹ Crore

Particulars	**For the year ended 31 March 2022**	For the year ended 31 March 2021
Opening balance	**598.08**	588.48
Add: Transferred during the year:		
Revenue from operations	**225.52**	173.08
Other income	**19.15**	20.63
Less: Utilised during the year:		
Capital expenditure	**0.37**	11.95
Other expenses including tax expense	**269.39**	172.16
Closing balance	**572.99**	598.08

Pursuant to Gazette Notification dated 3 November 2009, issued by the Ministry of Environment and Forest (MOEF), Government of India (GOI), the amount collected from sale of fly ash and fly ash based products should be kept in a separate account head and shall be utilized only for the development of infrastructure or facility, promotion & facilitation activities for use of fly ash until 100 percent fly ash utilization level is achieved.

The fund balance has been kept in 'Bank balances other than cash & cash equivalents' (Note 15). Also refer Note 19 & 67 for ash transportation cost.

(f) **General reserve**

₹ Crore

Particulars	**For the year ended 31 March 2022**	For the year ended 31 March 2021
Opening balance	**96,147.17**	90,182.53
Add : Transfer from retained earnings	-	6,500.00
Less : Utilised for buyback of equity shares	-	337.47
Less : Transferred to capital redemption reserve	-	197.89
Closing balance	**96,147.17**	96,147.17

General reserve is used from time to time to transfer profits from retained earnings for appropriation purposes. The same will be utilised as per the provisions of the Companies Act, 2013. During the previous year, an amount of ₹ 337.47 crore was utilised for buyback of equity shares in accordance with the provisions of the Companies Act, 2013 and an amount equivalent to face value of shares bought back amounting to ₹ 197.89 crore was transferred to capital redemption reserve.

(g) **Retained earnings**

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Opening balance	**5,973.87**	3,664.48
Add: Profit for the year as per statement of profit and loss	**16,111.42**	13,769.52
Transfer from bonds/debentures redemption reserve	**597.25**	771.00
Less: Transfer to general reserve	**-**	6,500.00
Adjustment with reserve for equity instruments through OCI	**-**	85.08
Final dividend paid (2020-21)	**3,054.45**	2,622.06
Interim dividend paid (2021-22)	**3,878.67**	2,909.00
	15,749.42	6,088.86
Items of other comprehensive income recognized directly in retained earnings:		
- Net actuarial gains/(losses) on defined benefit plans (net of tax)	**(93.03)**	(114.99)
Closing balance	**15,656.39**	5,973.87

Retained Earnings are the profits of the Company earned till date net of appropriations. The same will be utilised for the purposes as per the provisions of the Companies Act, 2013.

(h) **Reserve for equity instruments through OCI**

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Opening balance	**81.30**	(50.58)
Add: Fair value gains/(losses) on equity instruments for the year	**5.40**	46.80
Add: Adjustment from retained earnings	**-**	85.08
Closing balance	**86.70**	81.30

The Company has elected to recognize changes in the fair value of certain investments in equity instruments in other comprehensive income. These changes are accumulated in reserve for equity instruments through OCI within equity. The Company transfers amounts from this reserve to retained earnings when the relevant equity instruments are derecognized. The adjustment during the previous year is on account of reconciliation of cost of the equity instruments and its fair value.

22. Non-current financial liabilities -Borrowings

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Bonds/debentures		
Secured		
7.37% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2035 (Fifty Sixth Issue - Public Issue - Series 3A)[IX]	**188.97**	188.97
7.62% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2035 (Fifty Sixth Issue - Public Issue - Series 3B)[IX]	**171.74**	171.73
8.61% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 March 2034 (Fifty First Issue C - Private Placement) [III]	**322.11**	322.11

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2033 (Fiftieth Issue - Public Issue - Series 3A)[VI]	**319.87**	319.87
8.91% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2033 (Fiftieth Issue - Public Issue - Series 3B)[VI]	**410.32**	410.32
7.37% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 14 December 2031 (Sixty Sixth Issue - Private Placement)[II]	**4,010.40**	4,010.39
7.49% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 7 November 2031 (Sixty Fourth Issue - Private Placement)[IV]	**720.49**	720.62
7.28% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2030 (Fifty Sixth Issue - Public Issue - Series 2A)[IX]	**133.49**	133.48
7.53% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2030 (Fifty Sixth Issue - Public Issue - Series 2B)[IX]	**49.93**	49.92
7.32% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 17 July 2029 (Sixty Ninth Issue - Private Placement)[IV]	**4,522.29**	4,522.27
8.63% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 March 2029 (Fifty First Issue B - Private Placement) [III]	**105.70**	105.70
8.30% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 January 2029 (Sixty Seventh Issue - Private Placement) [V]	**4,068.94**	4,068.92
8.48% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2028 (Fiftieth Issue - Public Issue - Series 2A)[VI]	**256.10**	256.10
8.73% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2028 (Fiftieth Issue - Public Issue - Series 2B)[VI]	**93.71**	93.71
7.47% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 16 September 2026 (Sixty Third Issue - Private Placement)[IV]	**696.88**	696.85
7.58% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 23 August 2026 (Sixty Second Issue - Private Placement)[IV]	**836.58**	836.39
8.05% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 5 May 2026 (Sixtieth Issue - Private Placement)[IV]	**1,072.87**	1,072.85
8.19% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 December 2025 (Fifty Seventh Issue - Private Placement)[IV]	**511.89**	511.86
7.11% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2025 (Fifty Sixth Issue - Public Issue - Series 1A)[IX]	**112.05**	112.03
7.36% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2025 (Fifty Sixth Issue - Public Issue - Series 1B)[IX]	**68.25**	68.23

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
7.15% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 10,00,000/- each redeemable at par in full on 21 August 2025 (Fifty Fifth Issue - Private Placement)[VII]	**313.10**	313.10
9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 22 September 2024 (Fifty Third Issue - Private Placement)[VII]	**1,047.99**	1,047.99
9.34% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 24 March 2024 (Fifty Second Issue - Private Placement)[III]	**751.54**	751.54
8.19% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 10,00,000/- each redeemable at par in full on 4 March 2024 (Fifty First Issue A - Private Placement)[III]	**75.47**	75.47
8.41% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2023 (Fiftieth Issue - Public Issue - Series 1A)[VI]	**499.95**	499.95
8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2023 (Fiftieth Issue - Public Issue - Series 1B)[VI]	**213.89**	213.89
9.25% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 04 May 2023 and ending on 04 May 2027 (Forty Fourth Issue - Private Placement)[VI]	**542.07**	542.07
8.48% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 1 May 2023 (Seventeenth Issue - Private Placement)[I]	**50.01**	50.01
8.80% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 April 2023 (Forty Ninth Issue - Private Placement)[VI]	**217.50**	217.46
8.49% Secured non-cumulative non-convertible redeemable taxable fully paid-up bonus debentures of ₹ 12.50 each redeemable at par in three annual installments of ₹ 2.50, ₹ 5.00 and ₹ 5.00 at the end of 8th year, 9th year and 10th year on 25 March 2023, 25 March 2024 and 25 March 2025 respectively (Fifty Fourth Issue -Bonus Debentures)[VIII]	**10,323.61**	10,323.61
8.73% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 7 March 2023 (Forty Eighth Issue - Private Placement)[VI]	**301.79**	301.86
9.00% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 25 January 2023 and ending on 25 January 2027 (Forty Second Issue - Private Placement)[III]	**508.14**	508.14
8.84% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 October 2022 (Forty Seventh Issue - Private Placement)[VI]	**406.91**	407.00
7.93% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 3 May 2022 (Sixty Eighth Issue - Private Placement)[IV]	**3,277.62**	3,277.53
6.72% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 24 November 2021 (Sixty Fifth Issue - Private Placement)[IV]	**-**	716.46

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
8.10% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 30,00,000/- each redeemable at par in three equal separately transferable redeemable principal parts (STRPP) at the end of 5th year, 10th year & 15th year on 27 May 2021, 27 May 2026 and 27 May 2031 respectively (Sixty first issue - Private Placement)[IX]	**763.98**	1,145.99
11.25% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in five equal annual installments commencing from 6 November 2019 and ending on 6 November 2023 (Twenty Seventh Issue - Private Placement)[III]	**147.29**	220.87
9.3473% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 20 July 2018 and ending on 20 July 2032 (Forty Sixth Issue - Private Placement)[VI]	**58.70**	64.07
9.4376% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 16 May 2018 and ending on 16 May 2032 (Forty Fifth Issue - Private Placement)[VI]	**58.78**	64.11
9.2573% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 2 March 2018 and ending on 2 March 2032 (Forty Third Issue - Private Placement)[III]	**53.34**	58.70
9.6713% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 23 December 2017 and ending on 23 December 2031 (Forty First Issue - Private Placement)[III]	**53.52**	58.86
9.558% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 29 July 2017 and ending on 29 July 2031 (Fortieth Issue - Private Placement)[III]	**53.44**	58.82
9.3896% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 9 June 2017 and ending on 9 June 2031 (Thirty Ninth Issue - Private Placement)[III]	**74.74**	82.25
9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 22 March 2017 and ending on 22 March 2031 (Thirty Eighth Issue - Private Placement)[III]	**47.97**	53.33
8.8086% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 15 December 2016 and ending on 15 December 2030 (Thirty Sixth Issue - Private Placement)[III]	**47.86**	53.20

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
8.785% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 15 September 2016 and ending on 15 September 2030 (Thirty Fifth Issue - Private Placement)[III]	**76.56**	85.10
8.71% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 10 June 2016 and ending on 10 June 2030 (Thirty Fourth Issue - Private Placement)[III]	**95.65**	106.32
8.8493% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 25 March 2016 and ending on 25 March 2030 (Thirty Second Issue - Private Placement)[III]	**59.57**	67.05
	38,793.57	40,037.07
Bonds/debentures		
Unsecured		
6.29% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 11 April 2031 (Seventy First Issue - Private Placement)	**1,042.00**	1,041.99
6.43% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 27 January 2031 (Seventy Third Issue - Private Placement)	**2,528.07**	2,528.05
5.45% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 October 2025 (Seventy Second Issue - Private Placement)	**4,100.18**	4,100.15
6.55% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 17 April 2023 (Seventy Issue - Private Placement)	**4,648.74**	4,648.65
6.87% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 21 April 2036 (Seventy Fourth Issue - Private Placement)	**4,256.03**	-
6.69% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 13 September 2031 (Seventy Fifth Issue - Private Placement)	**3,109.82**	-
6.74% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 14 April 2032 (Seventy Sixth Issue - Private Placement)	**1,197.01**	-
	59,675.42	52,355.91
Foreign currency notes		
Unsecured		
4.500 % Fixed rate notes due for repayment on 19 March 2028	**3,042.30**	2,948.68
2.750 % Fixed rate notes due for repayment on 1 February 2027	**4,294.61**	4,367.53
4.250 % Fixed rate notes due for repayment on 26 February 2026	**3,820.37**	3,703.35
4.375 % Fixed rate notes due for repayment on 26 November 2024	**3,874.48**	3,759.25
3.750 % Fixed rate notes due for repayment on 3 April 2024	**3,431.34**	3,327.46
4.750 % Fixed rate notes due for repayment on 3 October 2022	**3,816.50**	3,703.00

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
7.250 % Fixed global INR denominated bonds due for repayment on 3 May 2022	**2,033.92**	2,032.42
7.375 % Fixed green global INR denominated bonds due for repayment on 10 August 2021	**-**	1,054.12
5.625 % Fixed rate notes due for repayment on 14 July 2021	**-**	3,747.55
	24,313.52	28,643.36
Term loans		
From Banks		
Unsecured		
Foreign currency loans	**13,277.71**	12,198.00
Rupee term loans	**64,340.13**	64,937.57
From Others		
Unsecured		
Foreign currency loans (guaranteed by GOI)	**1,321.12**	1,613.45
Other foreign currency loans	**3,402.52**	2,901.11
Rupee term loans	**50.73**	84.61
	1,66,381.15	1,62,734.01
Less: Current maturities of		
Bonds-secured	**6,044.87**	1,194.50
Foreign currency notes - Unsecured	**5,724.50**	4,710.00
Foreign currency loans from banks - unsecured	**301.01**	756.63
Rupee term loans from banks - unsecured	**3,962.80**	2,962.46
Foreign currency loans from others - unsecured (guaranteed by GOI)	**184.11**	197.30
Other foreign currency loans from others - unsecured	**390.44**	393.22
Rupee term loans from others - unsecured	**33.34**	33.34
Interest accrued but not due on secured borrowings	**1,104.36**	1,153.72
Interest accrued but not due on unsecured borrowings	**1,260.97**	823.84
Total	**1,47,374.75**	1,50,509.00

a) **Details of terms of repayment and rate of interest**

i) Unsecured foreign currency loans (guaranteed by GOI) - Others carry fixed rate of interest ranging from 1.80% p.a. to 2.30% p.a. and are repayable in 9 to 18 semi annual installments.

ii) Unsecured foreign currency loans – Banks include loans of ₹ **84.14 crore** (31 March 2021: ₹108.20 crore) which carry fixed rate of interest of 1.88% and loans of ₹ **13,193.57 crore** (31 March 2021: ₹ 12,089.80 crore) which carry floating rate of interest linked to 6M USD LIBOR/6M EURIBOR/3M TONA/6M TONA* . These loans are repayable in 1 to 25 semi annual/annual installments as of 31 March 2022, commencing after moratorium period if any, as per the terms of the respective loan agreements.

iii) Unsecured foreign currency loans – Others include loans of ₹ **1,862.96 crore** (31 March 2021: ₹2,261.33 crore) which carry fixed rate of interest ranging from 1.88% p.a. to 4.13% p.a and loans of ₹ **1,539.56 crore** (31 March 2021: ₹ 639.78 crore) which carry floating rate of interest linked to 3M TONA/6M TONA*. These loans are repayable in 03 to 25 semi annual instalments as of 31 March 2022, commencing after moratorium period if any, as per the terms of the respective loan agreements.

*6M JPY LIBOR has been changed to 3M TONA/6M TONA w.e.f 1 January 2022 due to discontinuance in publication of LIBOR after 31 December 2021 of various currencies by Financial Conduct Authority of United Kingdom.

iv) Unsecured rupee term loans from banks and others carry interest rate ranging from 5.65% p.a. to 6.84% p.a. with monthly/half-yearly rests. These loans are repayable in half-yearly/yearly instalments as per the terms of the respective loan agreements. The repayment period extends from a period of 9 to 15 years after a moratorium period of 3 to 6 years.

b) There has been no default in repayment of any of the loans or interest thereon as at the end of the year.

c) The company has used the borrowings from banks and financial institutions for the purposes for which they were taken.

Details of securities

I Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage, by way of first charge, by deposit of title deeds of the immovable properties pertaining to National Capital Power Station.

II Secured by Equitable mortgage of the immovable properties pertaining to Vindhyachal Super Thermal Power Station on first charge basis.

III Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage of the immovable properties, on first pari-passu charge basis, pertaining to Sipat Super Thermal Power Project by extension of charge already created.

IV Secured by Equitable mortgage, on pari-passu charge basis, of the immovable properties pertaining to Barh Super Thermal Power Project.

V Secured by Equitable mortgage, on pari-passu charge basis, of the immovable properties pertaining to Vindhyachal Super Thermal Power Station.

VI Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage of the immovable properties, on first pari-passu charge basis, pertaining to National Capital Power Station by extension of charge already created.

VII Secured by English mortgage of the immovable properties pertaining to Solapur Super Thermal Power Project on first charge basis.

VIII Secured by Equitable mortgage of the immovable properties pertaining to Barh Super Thermal Power Project on first charge basis.

IX Secured by English mortgage, on pari-passu charge basis, of the immovable properties pertaining to Solapur Super Thermal Power Project.

X Security cover mentioned at Sl. No. I to IX is above 100% of the debt securities outstanding.

23. Non-current financial liabilities - Lease liabilities

₹ Crore

Particulars		As at 31 March 2022	As at 31 March 2021
Lease liabilities	983.08		872.42
Less: current maturities of lease liabilities	168.01	815.07	151.80
Total		**815.07**	720.62

a) The lease liabilities are repayable in instalments as per the terms of the respective lease agreements generally over a period of more than 1 year and upto 99 years.

24. Non-current financial liabilities - Trade payables

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Trade payable for goods and services		
Total outstanding dues of		
- micro and small enterprises	**13.45**	13.78
- creditors other than micro and small enterprises	**71.17**	66.23
Total	**84.62**	80.01

a) Disclosures as required under Companies Act, 2013 / Micro, Small and Medium Enterprises Development Act, 2006 (MSMED) are provided in Note 70.

b) Amounts payable to related parties are disclosed in Note 56.

c) The above balances are due for payment after 12 months from the balance sheet date.

25. Non-current liabilities - Other financial liabilities

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Payable for capital expenditure		
- micro and small enterprises	**16.89**	13.49
- other than micro and small enterprises	**785.60**	1,375.42
Deposits from contractors and others	**1.64**	1.64
Others	**1.34**	0.12
Total	**805.47**	1390.67

a) Disclosures as required under Companies Act, 2013 / MSMED Act, 2006 are provided in Note 70.

b) Amounts payable to related parties are disclosed in Note 56.

26. Non-current liabilities - Provisions

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Provision for		
Employee benefits	**829.80**	826.25
Mine Closure	**304.24**	285.35
Stripping Activity Adjustments	**311.98**	62.61
Total	**1,446.02**	1,174.21

Disclosures as per Ind AS 19 'Employee benefits' are provided in Note 53.

27. Non-current liabilities - Deferred tax liabilities (net)

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Deferred tax liability		
Difference in book depreciation and tax depreciation	**27,917.46**	23,474.90
Less: Deferred tax assets		
Provisions	**877.04**	826.15
Statutory dues	**291.32**	330.50
Leave encashment	**472.44**	438.62
MAT credit entitlement	**16,263.41**	12,705.04
Others	**6.96**	13.60
Total	**10,006.29**	9,160.99

a) Deferred tax assets and deferred tax liabilities have been offset as they relate to the same governing laws.

b) The Company has been recognising MAT credit entitlement available to the Company as the same is likely to give future economic benefits in the form of availability of set off against future income tax liability.

c) Disclosures as per Ind AS 12 - 'Income Taxes' are provided in Note 52.

d) Others mainly include deferred tax assets on account of payments related to voluntary retirement schemes.

Movement in deferred tax balances

As at 31 March 2022 — ₹ Crore

Particulars	**As at 1 April 2021**	**Recognised in statement of profit and loss**	**Recognised in OCI**	**Others**	**As at 31 March 2022**
Deferred tax liability					
Difference in book depreciation and tax depreciation	23,474.90	4,587.19	-	(144.63)	**27,917.46**
Less: Deferred tax assets					
Provisions	826.15	50.93	-	(0.04)	**877.04**
Statutory dues	330.50	(39.18)	-	-	**291.32**
Leave encashment	438.62	33.82	-	-	**472.44**
MAT credit entitlement	12,705.04	3,558.37	-	-	**16,263.41**
Others	13.60	(6.64)	-	-	**6.96**
Net deferred tax (assets)/liabilities	**9,160.99**	**989.89**	**-**	**(144.59)**	**10,006.29**

As at 31 March 2021 — ₹ Crore

Particulars	As at 1 April 2020	Recognised in statement of profit and loss	Recognised in OCI	Others	As at 31 March 2021
Deferred tax liability					
Difference in book depreciation and tax depreciation	19,505.52	4,105.87	-	(136.49)	23,474.90
Less: Deferred tax assets					
Provisions	1,022.88	(195.39)	-	(1.34)	826.15
Statutory dues	325.21	5.29	-	-	330.50
Leave encashment	403.55	35.07	-	-	438.62
MAT credit entitlement	9,639.70	3,065.34		-	12,705.04
Others	20.20	(6.60)	-	-	13.60
Net deferred tax (assets)/liabilities	8,093.98	1,202.16	-	(135.15)	9,160.99

28. Other non-current liabilities

₹ Crore

Particulars	**As at 31 March 2022**	As at 31 March 2021
Government grants	**1,081.61**	1,111.81

a) Government grants include grant received in advance amounting to ₹ **522.31 crore** (31 March 2021: ₹ 592.20 crore) for which attached conditions are to be fulfilled / works to be completed relating to various solar power plants. This amount will be recognized as revenue corresponding to the depreciation charge in future years on completion of related projects.

b) Balance Government grants represent unamortised portion of grant received. This includes ₹ **534.94 crore** (31 March 2021: ₹ 493.43 crore) received from Solar Energy Corporation of India under MNRE Scheme for setting up Solar PV power projects. This amount will be recognized as revenue corresponding to the depreciation charge in future years. Refer Note 33 w.r.t. current portion of Government grants.

29. Current financial liabilities - Borrowings

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Current borrowings		
Unsecured		
Commercial paper	**6,631.26**	12,859.74
	6,631.26	12,859.74
Current maturities of non-current borrowings		
Bonds - Secured	**6,044.87**	1,194.50
Foreign currency notes - Unsecured	**5,724.50**	4,710.00
From Banks		
Unsecured		
Foreign currency loans	**301.01**	756.63
Rupee term loans	**3,962.80**	2,962.46
From Others		
Unsecured		
Foreign currency loans (guaranteed by GOI)	**184.11**	197.30
Other foreign currency loans	**390.44**	393.22
Rupee term loans	**33.34**	33.34
	16,641.07	10,247.45
Total	**23,272.33**	23,107.19

a) Borrowings under Commercial paper are net of unamortised discount as at 31 March 2022 amounting to ₹ **43.74 crore** (31 March 2021: ₹ 140.26 crore)

b) Details in respect of rate of interest and terms of repayment of current maturities of secured and unsecured non-current borrowings indicated above are disclosed in Note 22.

c) There has been no default in repayment of any of the loans or interest thereon as at the end of the year.

30. Current financial liabilities - Lease liabilities

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Current maturities of lease liabilities	**168.01**	151.80

a) Refer Note 23 for details in respect of non-current lease liabilities.

31. Current financial liabilities - Trade payables

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Trade payables for goods and services		
Total outstanding dues of		
- micro and small enterprises	**440.82**	378.31
- creditors other than micro and small enterprises	**8,885.49**	6,804.16
Total	**9,326.31**	7,182.47

a) Disclosures as required under Companies Act, 2013 / MSMED Act, 2006 are provided in Note 70.

b) Amounts payable to related parties are disclosed in Note 56.

(c) **Trade payables ageing schedule**

As at 31 March 2022 **₹ Crore**

Particulars	**Unbilled Dues**	**Not Due**	**Outstanding for following periods from due date of payment**				**Total**
			Less than 1 year	**1-2 years**	**2-3 years**	**More than 3 years**	
(i) MSME	155.37	220.82	64.22	-	0.25	0.16	**440.82**
(ii) Others	1,821.11	1,035.52	3,253.62	413.97	771.87	1,589.19	**8,885.28**
(iii) Disputed dues – MSME	-	-	-	-	-	-	**-**
(iv) Disputed dues – Others	-	-	-	-	0.14	0.07	**0.21**
Total	**1,976.48**	**1,256.34**	**3,317.84**	**413.97**	**772.26**	**1,589.42**	**9,326.31**

As at 31 March 2021 ₹ Crore

Particulars	Unbilled Dues	Not Due	Outstanding for following periods from due date of payment				Total
			Less than 1 year	1-2 years	2-3 years	More than 3 years	
(i) MSME	127.66	190.43	55.29	2.79	0.67	1.47	378.31
(ii) Others	848.29	635.75	2,725.86	999.37	484.73	1,109.95	6,803.95
(iii) Disputed dues – MSME	-	-	-	-	-	-	-
(iv) Disputed dues – Others	-	-	-	0.14	-	0.07	0.21
Total	975.95	826.18	2,781.15	1,002.30	485.40	1,111.49	7,182.47

(a) The amounts payable to MSME vendors beyond the statutory period represents security deposit, retention money and other payments which are to be paid after such period as per respective contract conditions and bills which are pending for completion of documentation by the vendors.

32. Current liabilities - Other financial liabilities

₹ Crore

Particulars	**As at 31 March 2022**	As at 31 March 2021
Interest accrued but not due on secured borrowings	**1,104.36**	1,153.72
Interest accrued but not due on unsecured borrowings	**1,260.97**	823.84
Unpaid dividends	**17.99**	19.84
Unpaid matured deposits and interest accrued thereon	**0.19**	0.19
Unpaid matured bonds and interest accrued thereon	**7.20**	6.54
Unpaid bond refund money-Tax free bonds	**0.19**	0.19
Book overdraft	**18.59**	0.48
Payable to customers	**1,057.79**	853.91
Payable for capital expenditure		
- micro and small enterprises	**229.87**	212.05
- other than micro and small enterprises	**15,805.73**	14,536.42
Other payables		
Deposits from contractors and others	**219.67**	173.42
Payable to employees	**1,035.12**	664.18
Payable to solar Payment Security Fund	**27.30**	27.30
Others	**1,049.96**	1,137.94
Total	**21,834.93**	19,610.02

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a) Unpaid dividends, matured deposits, bonds and interest include the amounts which have either not been claimed by the investors/holders of the equity shares/bonds/fixed deposits or are on hold pending legal formalities etc. Out of the above, the amount required to be transferred to Investor Education and Protection Fund has been transferred.

b) 'Other payables - Others' mainly includes ₹ **250.39 crore** (31 March 2021: ₹ 286.16 crore) towards the implementation of Deen Dayal Upadhyay Gram Jyoti Yojana (DDUGJY) Scheme of the GOI being carried out by the Company. The funds for the implementation of these schemes are provided by the agencies nominated by the GOI in this regard. Further, 'Other payables - Others' also include ₹ **380.48 crore** (31 March 2021: ₹ 380.48 crore) payable to the Department of Water Resource, Government of Odisha and ₹ **251.53 crore** (31 March 2021: ₹ 251.53 crore) in respect of an amount payable under a contract which is under dispute and balance towards amount payable to hospitals, etc.

c) The Company had obtained exemption from the Ministry of Corporate Affairs (MCA), GOI in respect of applicability of Section 58A from the erstwhile Companies Act, 1956 in respect of deposits held from the dependants of employees who die or suffer permanent total disability under the 'Employees Rehabilitation Scheme' (said amount is included in "Other payables - Others"). Consequent upon enactment of the Companies Act, 2013, the Company has written to the MCA for clarification on continuation of above exemption granted earlier, which is still awaited. Based on an expert opinion, the amount accepted under the Scheme is not considered as a deposit under the Companies Act, 2013.

d) Disclosures as required under the Companies Act, 2013 / MSMED Act, 2006 are provided in Note 70.

e) Amounts payable to related parties are disclosed in Note 56.

33. Current liabilities - Other current liabilities

₹ Crore

Particulars	**As at 31 March 2022**	As at 31 March 2021
Advances from customers and others	**436.00**	536.29
Government grants	**29.71**	26.92
Other payables		
Statutory dues	**561.29**	506.93
Total	**1,027.00**	1,070.14

a) Advance received for the DDUGJY (including interest thereon) of ₹ **309.13 crore** (31 March 2021: ₹ 377.31 crore) is included in 'Advance from customers and others'. Refer Note 32 (b). Tax deducted at source on the interest is included in 'Advance tax and tax deducted at source' - Note 10.

b) Also refer Note 28 w.r.t. accounting of Government grants.

34. Current liabilities - Provisions

₹ Crore

Particulars	**As at 31 March 2022**	As at 31 March 2021
Provision for		
Employee benefits	**1,528.23**	1,423.30
Obligations incidental to land acquisition	**2,683.39**	3,027.84
Tariff adjustments	**482.28**	360.28
Arbitration awards	**2,256.40**	2,003.01
Others	**145.46**	113.66
Total	**7,095.76**	6,928.09

a) Disclosures required by Ind AS 19 'Employee Benefits' are provided in Note 53.

b) Disclosures required by Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets' are provided in Note 60.

c) Provision for others mainly comprise ₹ **111.96 crore** (31 March 2021: ₹ 103.88 crore) towards cost of unfinished minimum work programme demanded by the Ministry of Petroleum and Natural Gas (MoP&NG) including interest thereon in relation to Block AA-ONN-2003/2 (Refer Note 62) and ₹ **7.25 crore** (31 March 2021: ₹ 2.62 crore) towards provision for shortage in property, plant and equipment on physical verification pending investigation and ₹ **17.86 crore** (31 March 2021: ₹ Nil) towards expected loss on investments of Provident Fund Trust.

35. Current liabilities - Current tax liabilities (net)

₹ Crore

Particulars		As at 31 March 2022	As at 31 March 2021
Current tax	3,630.21		-
Less: Advance tax paid	3,496.04	134.17	-
Total		**134.17**	-

36. Deferred revenue

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
On account of		
Income from foreign currency fluctuation	**1,973.39**	1,994.41

a) Foreign exchange rate variation (FERV) on foreign currency loans and interest thereon is recoverable from/payable to the customers in line with the Tariff Regulations. Keeping in view the opinion of the EAC of ICAI, the Company is recognizing deferred foreign currency fluctuation asset by corresponding credit to deferred income from foreign currency fluctuation in respect of the FERV on foreign currency loans adjusted in the cost of property, plant and equipment, which is recoverable from the customers in future years as provided in accounting policy no. C.15 (Note 1). This amount will be recognized as revenue corresponding to the depreciation charge in future years. The amount does not constitute a liability to be discharged in future periods and hence, it has been disclosed separately from equity and liabilities.

37. Revenue from operations

₹ Crore

Particulars		For the year ended 31 March 2022	For the year ended 31 March 2021
Energy sales (including electricity duty)		**1,11,276.92**	95,423.48
Sale of energy through trading		**3,549.65**	3,112.51
Consultancy, project management and supervision fee		**175.66**	247.37
Lease rentals on assets on operating lease		**19.59**	156.18
Sale of Captive coal to Subsidiary company		-	100.09
		1,15,021.82	99,039.63
Sale of fly ash/ash products	225.52		173.08
Less: Transferred to fly ash utilization reserve fund	225.52		173.08
		-	-
Other operating revenues			
Interest from beneficiaries		**857.02**	27.82
Energy internally consumed		**63.51**	60.97
Interest income on assets under finance lease		**45.07**	51.54
Recognized from Government grants		**27.41**	26.71
Provision written back-others		**122.50**	-
Income from E-mobility business		-	0.05
		1,115.51	167.09
Total		**1,16,137.33**	99,206.72

a) (i) CERC notified the The Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 vide Order dated 7 March 2019 (Regulations, 2019) for determination of tariff for the tariff period 2019-2024. During the year, CERC has issued provisional tariff orders in respect of nine stations for the tariff period 2019-24. Pending issue of provisional tariff orders in respect of balance stations, capacity charges are billed to beneficiaries in accordance with the tariff approved and applicable as on 31 March 2019, as provided in Regulations, 2019. In case of new stations, which got commercialised from 1 April 2019 and stations where tariff approved and applicable as on 31 March 2019 is pending from CERC, billing is done based on capacity charges as filed with CERC in tariff petition. Accordingly, capacity charges provisionally billed for the year ended 31 March 2022 is ₹ **43,624.68 crore** (31 March 2021: ₹ 41,394.94 crore). Energy and other charges are billed as per the operational norms specified in the Regulations 2019. Accordingly, energy charged billed for the year ended 31 March 2022 is ₹ **63,734.93 crore** (31 March 2021: ₹ 51,877.08 crore).

(ii) Capacity charges for the year ended 31 March 2022 have been provisionally recognized considering the provisions of CERC Tariff Regulations amounting to ₹ **43,404.30 crore** (31 March 2021: ₹ 41,986.12 crore). Energy and Other charges for the year ended 31 March 2022 have been recognized at ₹ **64,043.74 crore** (31 March 2021: ₹ 51,652.25 crore) as per the operational norms specified in the Regulations 2019.

b) Capacity charges for the year ended 31 March 2022 include ₹ **1,317.57 crore** (31 March 2021: ₹ 107.71 crore) pertaining to earlier years on account of impact of CERC orders and other adjustments. Energy and other charges for the year ended 31 March 2022 include ₹ **620.48 crore** (31 March 2021: ₹ 1,046.94 crore) pertaining to earlier years on account of revision of energy charges due to grade slippages and other adjustments.

c) Sales for the year ended 31 March 2022 include ₹ **87.60 crore** (31 March 2021: ₹ 81.88 crore) on account of deferred tax materialized which is recoverable from beneficiaries as per Regulations, 2019.

d) During the previous year ended 31 March 2021, excess tax provision of ₹ 1,889.05 crore was reversed consequent to adjustment of tax provision created in accordance with Vivad se Vishwas Scheme (VsVs Scheme) notified through 'The Direct Tax Vivad Se Vishwas Act, 2020'. Correspondingly, sales amounting to ₹ 1,101.47 crore was reversed on account of income tax recoverable from / (refundable to) the beneficiaries as per Regulations, 2004.

e) Energy sales include electricity duty amounting to ₹ **1,352.73 crore** (31 March 2021: ₹ 1,212.88 crore).

f) Revenue from operations for the year ended 31 March 2022 include ₹ **3,551.54 crore** (31 March 2021: ₹ 3,115.55 crore) on account of sale of energy through trading (gross).

g) Other operating revenue includes ₹ **63.51 crore** (31 March 2021: ₹ 60.97 crore) towards energy internally consumed, valued at variable cost of generation and the corresponding amount is included in power charges in Note 43.

h) CERC Regulations provides that where after the truing-up, the tariff recovered is less/more than the tariff approved by the Commission, the generating Company shall recover from /pay to the beneficiaries the under/over recovered amount along-with simple interest. Based on the above, the interest recoverable from the beneficiaries amounting to ₹ **857.02 crore** (31 March 2021: ₹ 27.82 crore) has been accounted as 'Interest from beneficiaries'. Further, the amount payable to the beneficiaries has been accounted as 'Interest to beneficiaries' in Note 43.

i) Provision written back-others represents write back of provision of water charges in one of the projects which is no longer required.

j) The Power Purchase Agreements (PPA) signed in respect of two power stations (one thermal and one gas) were operative initially for a period of five years with the respective beneficiaries which may be extended, renewed or replaced as the parties mutually agree. The Company has continued to classify these arrangement with its customers as lease based on the practical expedient provided in Appendix C of Ind AS 116. Accordingly, recovery of capacity charges towards depreciation, interest on loan capital & return on equity (pre-tax) components from the beneficiaries are considered as lease rentals on the assets which are on operating lease. The operations of one of the stations was suspended on 31 March 2021 and hence there are no revenues from the station during the year.

k) The Company had ascertained that the PPA entered into for Stage-I of a power station with the beneficiary falls under the definition of finance lease. Accordingly, the written down value of the specified assets was derecognized from PPE and accounted as Finance Lease Receivable (FLR) on transition date to Ind AS. The Company has continued to classify this arrangement with its customer as lease based on the practical expedient provided in Appendix C of Ind AS 116. Accordingly, recovery of capacity charges towards depreciation (including AAD), interest on loan capital & return on equity (pre-tax) components from the beneficiary are continued to be adjusted against FLR. The interest component of the FLR and amount received on account of revision of tariff of previous periods in respect of the above three elements are continued to be recognised as 'Interest income on Assets under finance lease'.

l) CERC vide notification dated 19 February 2021, notified the Second amendment to Tariff Regulations 2019, which inter alia includes mechanism for determination of transfer price of coal from integrated coal mines to generating stations and are effective for the period 2019-24. Coal extracted from Company's captive mines and supplied to generating stations have been accounted considering these Regulations. The supply of coal from the such mines under operation to a subsidiary company are disclosed as 'Sale of captive coal to subsidiary company'.

38. Other income

₹ Crore

Particulars		For the year ended 31 March 2022	For the year ended 31 March 2021
Interest from			
Financial assets at amortized cost			
Loan to subsidiary companies		**105.65**	49.64
Loan to employees		**65.00**	64.04
Deposits with banks		**50.22**	47.54
Deposits with banks out of fly ash utilization reserve fund	**19.15**		20.63
Less : Transferred to fly ash utilization reserve fund	**19.15**		20.63
		-	-
Deposits with banks - DDUGJY funds	**13.83**		28.41
Less : Transferred to DDUGJY advance from customers	**13.83**		28.41
		-	-
Advance to contractors and suppliers		**118.05**	110.03
Income tax refunds		**146.34**	24.33
Others		**20.98**	15.08
Dividend from			
Non-current investments in			
Subsidiary companies		**1,022.65**	772.53
Joint venture companies		**1,111.69**	501.66
Equity instruments designated at fair value through OCI		**9.00**	9.00
Other non-operating income			
Late payment surcharge from beneficiaries		**754.23**	2,315.74
Hire charges for equipment		**5.89**	2.19
Sale of scrap		**161.68**	149.67
Gain on sale of current investments measured at fair value through profit or loss		**10.81**	0.02
Gain on Option Contract		**15.43**	-
Miscellaneous income		**175.35**	191.53
Profit on de-recognition of property, plant and equipment		**6.21**	3.34
Provisions written back			
Impairment of investments in joint venture companies		**-**	103.47
Doubtful loans, advances and claims		**0.05**	0.11
Shortage in inventories		**18.29**	11.81
Obsolescence in inventories		**13.54**	7.23
Arbitration cases		**10.04**	7.60
Unserviceable capital works		**134.81**	-
Others		**1.93**	1.82
		3,957.84	4,388.38

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Less: Transferred to expenditure during construction period (net) - Note 44	**51.85**	40.42
Transferred to expenditure during development of coal mines (net) - Note 45	**0.89**	1.97
Total	**3,905.10**	4,345.99

a) Interest from others' includes interest on advance to APIIC for drawl of water and deposits with LIC towards annuity to the land oustees.

b) Miscellaneous income includes income from township recoveries and receipts towards insurance claims.

c) Provision written back-Unserviceable CWIP includes ₹ **134.11 crore** (31 March 2021: ₹ Nil) pertaining to cancellation of allotment of land during the year and consequential write back of of depreciation/amortisation and other expenses capitalised in the earlier years. Also refer Note 2(h).

d) 'Provisions written back - Others' include provision for shortage in construction stores and shortage in property, plant and equipment.

39. Fuel cost

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Coal	**61,400.64**	50,664.83
Gas	**1,682.71**	1,552.56
Naptha	**63.41**	68.44
Oil	**982.36**	544.24
Biomass pellets	**34.56**	19.57
Total	**64,163.68**	52,849.64

40. Employee benefits expense

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Salaries and wages	**4,832.17**	4,601.07
Contribution to provident and other funds	**729.21**	701.09
Staff welfare expenses	**656.68**	539.12
	6,218.06	5,841.28
Less: Allocated to fuel inventory	**288.58**	260.64
Transferred to expenditure during construction period (net)- Note 44	**463.05**	458.17
Transferred to expenditure during development of coal mines (net) - Note 45	**56.16**	60.51
Reimbursements for employees on deputation	**120.76**	119.77
Total	**5,289.51**	4,942.19

a) Disclosures as per Ind AS 19 - 'Employee Benefits' in respect of provision made towards various employee benefits are provided in Note 53.

41. Finance costs

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Finance costs on financial liabilities measured at amortized cost		
Bonds	**4,204.36**	3,695.10
Foreign currency term loans	**261.95**	272.74
Rupee term loans	**4,071.60**	4,433.80
Foreign currency bonds/notes	**1,191.96**	1,507.54
Cash credit	**0.32**	45.58
Unwinding of discount on vendor liabilities	**119.15**	102.84
Commercial papers	**281.82**	556.95
	10,131.16	10,614.55
Interest on non financial items	**4.89**	5.24
Exchange differences regarded as an adjustment to borrowing costs	**(74.88)**	(412.63)
Other borrowing costs		
Guarantee fee	**19.33**	22.79
Others	**11.30**	9.37
	30.63	32.16
Sub-total	**10,091.80**	10,239.32
Less: Transferred to expenditure during construction period (net) - Note 44	**2,525.29**	2,511.77
Transferred to expenditure during development of coal mines (net) - Note 45	**215.60**	268.52
Total	**7,350.91**	7,459.03

a) 'Other borrowing costs - Others' include bond issue and service expenses, commitment charges, exposure premium and insurance premium & other expenses on foreign currency loans / bonds/ notes.

b) Interest on non financial items above includes interest on shortfall in payment of advance income-tax amounting ₹ **2.49 crore** (31 March 2021: ₹ 0.81 crore)

c) Refer Note 69 w.r.t. Interest expense relating to lease obligations.

42. Depreciation and amortization expense

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
On property, plant and equipment - Note 2	**12,377.00**	11,430.16
On intangible assets - Note 4	**50.40**	50.89
	12,427.40	11,481.05
Less:		
Allocated to fuel inventory	**851.34**	691.82
Transferred to expenditure during construction period (net) - Note 44	**66.21**	83.82
Transferred to expenditure during development of coal mines (net) - Note 45	**32.55**	32.43
Adjustment with deferred revenue from deferred foreign currency fluctuation	**243.16**	261.18
Total	**11,234.14**	10,411.80

a) Refer Note 69 w.r.t. Depreciation expense of right of use assets.

43. Other expenses

₹ Crore

Particulars		For the year ended 31 March 2022	For the year ended 31 March 2021
Power charges	190.63		383.24
Less: Recovered from contractors and employees	46.98		40.38
		143.65	342.86
Water charges		688.02	674.58
Cost of captive coal produced		1,876.41	1,412.21
Stores consumed		143.45	90.90
Rent		5.16	5.58
Repairs and maintenance			
Buildings	305.23		295.87
Plant and equipment	3,173.73		3,037.47
Others	381.60		355.46
		3,860.56	3,688.80
Load dispatch centre charges		37.21	28.07
Insurance		235.17	226.11
Interest to beneficiaries		48.91	0.07
Rates and taxes		146.60	131.02
Water cess and environment protection cess		0.47	1.53
Training and recruitment expenses	27.27		21.39
Less: Receipts	0.39		0.62
		26.88	20.77
Communication expenses		72.08	71.32
Travelling expenses		210.98	178.78
Tender expenses	2.37		18.15
Less: Receipt from sale of tenders	1.06		3.62
		1.31	14.53
Remuneration to auditors		5.33	5.77
Advertisement and publicity		23.39	7.43
Electricity duty		1,279.88	1,147.18
Security expenses		1,029.79	1,019.76
Entertainment expenses		61.39	59.11
Expenses for guest house	64.99		56.23
Less: Recoveries	3.68		0.73
		61.31	55.50
Education expenses		63.70	66.62
Donation/Grants		12.54	11.60
Ash utilization and marketing expenses		1,717.47	1,171.73
Directors sitting fee		0.30	0.57
Professional charges and consultancy fee		93.54	83.60
Legal expenses		71.00	41.42

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
EDP hire and other charges	**62.75**	44.77
Printing and stationery	**4.55**	4.74
Oil and gas exploration expenses	**0.07**	0.09
Hiring of vehicles	**97.60**	87.01
Net loss/(gain) in foreign currency transactions and translations	**(615.70)**	(154.97)
Cost of hedging	**-**	0.34
Horticulture expenses	**62.32**	59.12
Hire charges of helicopter/aircraft	**8.27**	8.40
Hire charges of construction equipment	**5.75**	8.29
Transport vehicle running expenses	**7.44**	5.17
Demurrage charges	**0.03**	-
Loss on de-recognition of property, plant and equipment	**106.12**	133.47
Loss on disposal of investments	**-**	139.75
Miscellaneous expenses	**187.25**	151.18
	11,842.95	11,044.78
Less: Allocated to fuel inventory	**2,533.51**	1,825.72
Transferred to expenditure during construction period (net) - Note 44	**188.02**	486.65
Transferred to expenditure during development of coal mines (net) - Note 45	**108.40**	263.71
Transferred to derivative MTM loss/(gain) recoverable/(payable) from/to beneficiaries	**-**	-
Transferred to fly ash utilization reserve fund	**274.62**	167.58
Transferred to corporate social responsibility expenses	**49.49**	54.36
	8,688.91	8,246.76
Corporate Social Responsibility (CSR) expenses (Refer Note 74)	**356.72**	418.87
Provisions for		
Tariff adjustments	**122.00**	169.60
Impairment of investments	**16.30**	32.20
Obsolescence in inventories	**20.87**	4.39
Shortages in inventories	**29.33**	34.19
Unserviceable capital works	**9.52**	136.35
Unfinished minimum work programme for oil and gas exploration	**8.08**	2.83
Arbitration cases	**105.25**	181.92
Shortages in construction stores	**1.54**	4.47
Doubtful loans, advances and claims	**3.72**	344.58
Others	**25.98**	4.12
	342.59	914.65
Total	**9,388.22**	9,580.28

a) During the development stage of mine, transfer price of coal extracted from Company's captive mine has been determined considering the CERC Regulations. The same has been netted from the cost of captive coal and carried to 'Development of coal mines' (Note 3) through 'Transferred to expenditure during development of coal mines' (Note 45).

b) Details of remuneration to auditors:

As auditor		
Audit fee	**2.35**	2.29
Tax audit fee	**0.82**	0.80
Limited review	**1.41**	1.37
In other capacity		
Other services (certification fee)	**0.63**	1.10
Reimbursement of expenses	**0.12**	0.21
Total	**5.33**	5.77

Remuneration to auditors includes ₹ **0.32 crore** (31 March 2021: ₹ 0.81 crore) relating to earlier year.

c) CERC Regulations provides that where after the truing-up, the tariff recovered is more than the tariff approved by the Commission, the generating Company shall pay to the beneficiaries the over recovered amount along-with simple interest. Accordingly, the interest payable to the beneficiaries amounting to ₹ **48.91 crore** (31 March 2021: ₹ 0.07 crore) has been accounted and disclosed as 'Interest to beneficiaries'.

d) Miscellaneous expenses include expenditure on books & periodicals, workshops, operating expenses of DG sets, brokerage and commission, bank charges, furnishing expenses, etc.

e) Provisions - Others include provision for doubtful debts, shortages in property, plant and equipment and other losses.

44. Expenditure during construction period (net) *

₹ Crore

Particulars		For the year ended 31 March 2022	For the year ended 31 March 2021
A. Employee benefits expense			
Salaries and wages		**378.94**	373.08
Contribution to provident and other funds		**46.57**	51.75
Staff welfare expenses		**37.54**	33.34
Total (A)		**463.05**	458.17
B. Finance costs			
Finance costs on financial liabilities measured at amortized cost			
Bonds		**1,011.71**	963.13
Foreign currency term loans		**52.86**	54.66
Rupee term loans		**1,131.75**	1,256.46
Foreign currency bonds/notes		**245.43**	354.35
Unwinding of discount on vendor liabilities		**42.10**	37.80
Exchange differences regarded as an adjustment to borrowing costs		**15.61**	(172.63)
Other borrowing costs		**25.83**	18.00
Total (B)		**2,525.29**	2,511.77
C. Depreciation and amortization expense		**66.21**	83.82
D. Other expenses			
Power charges	**(8.66)**		257.46
Less: Recovered from contractors and employees	**6.12**		8.60
		(14.78)	248.86
Water charges		**4.73**	10.81
Rent		**0.56**	0.91

₹ Crore

Particulars		For the year ended 31 March 2022	For the year ended 31 March 2021
Repairs and maintenance			
Buildings	1.43		1.52
Plant and equipment	0.11		0.07
Others	34.36		19.60
		35.90	21.19
Insurance		-	0.42
Rates and taxes		11.90	13.36
Communication expenses		5.29	6.16
Travelling expenses		18.82	19.26
Tender expenses		0.35	16.15
Advertisement and publicity		0.28	0.08
Security expenses		75.36	82.44
Entertainment expenses		3.41	2.63
Expenses for guest house		3.92	4.21
Professional charges and consultancy fee		11.54	5.32
Legal expenses		12.82	3.83
EDP hire and other charges		0.65	0.93
Printing and stationery		0.24	0.28
Miscellaneous expenses		17.03	49.81
Total (D)		**188.02**	486.65
E. Less: Other income			
Interest from advances to contractors and suppliers		31.42	23.89
Interest others		16.83	12.03
Hire charges for equipment		0.06	0.31
Sale of scrap		0.32	-
Miscellaneous income		3.22	4.19
Total (E)		**51.85**	40.42
F. Net actuarial losses on defined benefit plans		**1.48**	4.53
Grand total (A+B+C+D-E+F) **		**3,192.20**	3,504.52

* Other than for expenditure during development of coal mines- (Note 45)

** Carried to capital work-in-progress - (Note 3)

45. Expenditure during development of coal mines (net)

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
A. Employee benefits expense		
Salaries and wages	46.16	48.37
Contribution to provident and other funds	5.32	5.28
Staff welfare expenses	4.68	6.86
Total (A)	**56.16**	60.51

₹ Crore

Particulars		For the year ended 31 March 2022	For the year ended 31 March 2021
B. Finance costs			
Finance costs on financial liabilities measured at amortized cost			
Bonds		**87.70**	86.57
Foreign currency term loans		**0.71**	-
Rupee term loans		**117.64**	173.65
Unwinding of discount on vendor liabilities		**8.98**	8.25
Other borrowing costs		**0.57**	0.05
Total (B)		**215.60**	268.52
C. Depreciation and amortization expense		**32.55**	32.43
D. Other expenses			
Power charges		**1.59**	1.03
Water charges		**0.06**	-
Rent		**0.56**	0.72
Repairs and maintenance			
Buildings	**0.04**		0.16
Others	**1.76**		3.66
		1.80	3.82
Cost of captive coal produced		**64.04**	218.17
Insurance		**-**	0.01
Rates and taxes		**0.86**	1.38
Communication expenses		**0.91**	0.95
Travelling expenses		**2.34**	2.28
Advertisement and publicity		**0.14**	0.04
Security expenses		**17.07**	15.65
Entertainment expenses		**0.45**	0.65
Expenses for guest house		**1.34**	0.12
Professional charges and consultancy fee		**8.34**	7.54
Legal expenses		**2.56**	1.11
EDP hire and other charges		**0.08**	0.16
Printing and stationery		**0.11**	0.19
Miscellaneous expenses		**6.15**	9.89
Total (D)		**108.40**	263.71
E. Less: Other income			
Interest from advances to contractors and suppliers		**0.71**	1.43
Miscellaneous income		**0.18**	0.54
Total (E)		**0.89**	1.97
F. Net actuarial losses on defined benefit plans		**0.17**	0.50
Grand total (A+B+C+D-E+F) *		**411.99**	623.70

* Carried to capital work-in-progress - (Note 3)

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46. Exceptional items

		₹ Crore
Particulars	**As at 31 March 2022**	As at 31 March 2021
Special rebate to beneficiaries-Covid-19	-	1,363.00

a) In line with the directions of MOP issued in accordance with the announcement of GOI under the Atmanirbhar Bharat Special Economic and Comprehensive package, a rebate on the capacity charges during the lockdown period in view of Covid 19 pandemic, was accounted during the previous year 2020-21 and disclosed as exceptional item.

47. a) The Company has a system of obtaining periodic confirmation of balances from banks and other parties. There are no unconfirmed balances in respect of bank accounts and borrowings from banks & financial institutions. With regard to receivables for energy sales, the Company sends demand intimations to the beneficiaries with details of amount paid and balance outstanding which can be said to be automatically confirmed on receipt of subsequent payment from such beneficiaries. In addition, reconciliation with beneficiaries and other customers is generally done on quarterly basis. So far as trade/other payables and loans and advances are concerned, the balance confirmation letters/emails with the negative assertion as referred in the Standard on Auditing (SA) 505 (Revised) 'External Confirmations', were sent to the parties. Some of such balances are subject to confirmation/reconciliation. Adjustments, if any will be accounted for on confirmation/reconciliation of the same, which in the opinion of the management will not have a material impact.

b) In the opinion of the management, the value of assets, other than property, plant and equipment and non-current investments, on realisation in the ordinary course of business, will not be less than the value at which these are stated in the Balance Sheet.

c) The levy of transit fee/entry tax on supplies of fuel to some of the power stations has been paid under protest as the matters are sub-judice at various courts. In case the Company gets refund/demand from fuel suppliers/tax authorities on settlement of these cases, the same will be passed on to respective beneficiaries.

48. a) The environmental clearance (EC) granted by the Ministry of Environment and Forest, Government of India (MoEF), based on the recommendations of Expert Appraisal Committee (EAC), for one of the Company's project consisting of three units of 800 MW each, whose carrying cost as at 31 March 2022 is ₹ **14,874.47 crore** (31 March 2021: ₹ 15,115.02 crore), was challenged before the National Green Tribunal (NGT) vide appeal no.12/2012. The NGT disposed off the appeal vide Order dated March 13, 2014, inter alia, directing that the order of clearance be remanded to the MoEF to pass an order granting or declining clearance to the project proponent afresh in accordance with the law and the judgement of the NGT and also directed that the EC shall be kept in abeyance and the Company shall maintain status quo in relation to the project during the period of review by the Committee or till fresh order is passed by the MoEF, whichever is earlier.

The Company filed an appeal challenging the NGT order before the Hon'ble Supreme Court of India which stayed the order of the NGT and the matter is sub-judice and pending for listing in the Court. The Company has been complying with various conditions stipulated in the EC and reporting to the appropriate environment authorities periodically. The EAC has been accepting the amendments sought by the Company in the EC.

During the year the Company has obtained a legal opinion based on which the Company does not envisage any threat to the continuance to the project. All the units of the project have been declared commercial in the earlier years and are fully operational since September 2018.

b) The Company is executing a thermal power project consisting of two units of 800 MW each in the State of Telangana whose carrying cost of the project as at 31 March 2022 is ₹ **10,233.66 crore** (31 March 2021: ₹ 9,376.31 crore). The project construction commenced in the year 2016 after obtaining the requisite approval and Environment Clearance (EC) from MOEF&CC (Ministry of Environment, Forest and Climate Change). On 27 May 2021, the National Green Tribunal (NGT) has passed an order instructing MOEF&CC to keep the EC granted for the project in abeyance for a period of seven months or till the period the re-appraisal is done and additional conditions imposed by the MOEF&CC, whichever is earlier. NGT has further directed the MOEF&CC to conduct additional studies pertaining to Environment Impact Assessment of the project, to be carried out through the Company, for further assessment by its Expert Appraisal Committee (EAC) and get recommendations of the EAC for imposing additional conditions by the MOEF&CC, if any, on the Company for allowing the units to operate.

The Company filed an appeal before Hon'ble Supreme Court of India against the directions of NGT. The Hon'ble Supreme Court of India has passed the order on 20 July 2021 and directed that while the EC is in abeyance, various construction activities at site may be continued till the commissioning of the project and the various studies as directed by NGT are to be conducted simultaneously. The Company has carried out the additional studies as directed by NGT and the reports are under finalization and submission to appropriate authorities. During the year the Company has obtained a legal opinion based on which the Company does not envisage any threat to the continuance to the project. Both the units of the project are in advanced stage of construction and the commissioning is envisaged in the year 2022-23.

c) The Company is executing a hydro power project in the state of Uttarakhand, where all the clearances were accorded. A case was filed in Hon'ble Supreme Court of India after the natural disaster in Uttarakhand in June 2013 to review whether the various existing and ongoing hydro projects have contributed to environmental degradation. Hon'ble Supreme Court of India on 7 May 2014, ordered that no further construction shall be undertaken in the projects under consideration until further orders, which included the said hydro project of the Company. In the proceedings, Hon'ble Supreme Court is examining to allow few projects which have all clearances which includes the project of the Company where the work has been stopped. Aggregate cost incurred on the project up to 31 March 2022 is ₹ **163.57 crore** (31 March 2021: ₹ 163.86 crore). Management is confident that the approval for proceeding with the project shall be granted, hence no adjustment is considered necessary in respect of the carrying value of the project.

49 Disclosure as per Ind AS 1 'Presentation of financial statements'

a) Changes in significant accounting policies:

During the year, following changes to the accounting policies have been made:

i) Depreciation on Hospital equipment and Furniture and fixtures has been revised based on review of their useful lives. Consequently, significant accounting policies C.1.5 has been modified. Impact on profit due to the above change is insignificant.

ii) Certain other changes have also been made in the policies nos. C.5.2, C.6.2, C.15.1, C.15.3, C.16.1, C.16.2, C.19.1, C.20, C.27.2, and C.28 for improved disclosures. There is no impact on the financial statements due to these changes.

b) Reclassifications and comparative figures

The Company has made certain reclassifications to the comparative period's financial statements mainly due to amendment made to Schedule III to the Companies Act,2013 and to enhance comparability with the current year's financial statements.

As a result, certain line items have been reclassified in the balance sheet the details of which are as under:

Items of balance sheet before and after reclassification as at 31 March 2021 ₹ Crore

Sl. No.	Particulars	Amount before reclassification	Reclassification	Amount after reclassification
1	Trade receivables (Note-13)	13,701.72	9,274.54	22,976.26
	Other financial assets-Current (Note-17)	12,921.88	(9,317.01)	3,604.87
2	Borrowings-Non current (Note-22)	1,51,229.62	(720.62)	1,50,509.00
	Lease liabilities-Non current (Note-23)	-	720.62	720.62
	Provisions - Non current (Note-26)	826.25	347.96	1,174.21
	Borrowings-current (Note-29)	12,859.74	10,247.45	23,107.19
	Lease liabilities-current (Note-30)	-	151.80	151.80
	Other financial liabilities - Current (Note-32)	30,051.74	(10,441.72)	19,610.02
	Provisions - current (Note-34)	7,276.05	(347.96)	6,928.09

Note:- There are no changes in the cash flows from operating, investing and financing activities on account of the above.

50 Disclosure as per Ind AS 2 'Inventories'

a) Amount of inventories consumed and recognized as expense during the year is as under:

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Fuel cost (Note-39)	**64,163.68**	52,849.64
Others (included in Note 43 - Other expenses)	**1,331.22**	1,377.49
Total*	**65,494.90**	54,227.13

*Includes imported materials consumed during the year ended 31 March 2022 amounting to ₹ **3,092.82 crore** (31 March 2021: ₹ 776.78 crore).

(b) Carrying amount of inventories pledged as security for borrowings as at 31 March 2022 is ₹ **Nil** (31 March 2021: ₹ Nil).

51. Disclosure as per Ind AS 8 - 'Accounting Policies, Changes in Accounting Estimates and Errors'

Recent accounting pronouncements

Standards / amendments issued but not yet effective:

The Ministry of Corporate Affairs ,vide notification dated 23 March 2022, has notified Companies (Indian Accounting Standards) Amendment Rules, 2022 which amends certain accounting standards which are effective 1 April 2022. Below is a summary of such amendments which are applicable.

1. Ind AS 16 Property, Plant and Equipment

   Proceeds before intended use of property, plant, and equipment.

   The amendment clarifies that an entity shall deduct from the cost of an item of property, plant, and equipment any proceeds received from selling items produced while the entity is preparing the asset for its intended use (for example, the proceeds from selling samples produced when testing a machine to see if it is functioning properly).

2. Ind AS 37 Provisions, Contingent Liabilities and Contingent Assets

   Onerous Contracts – Cost of fulfilling a contract.

   The amendment explains that the cost of fulfilling a contract comprises: the incremental costs of fulfilling that contract and an allocation of other costs that relate directly to fulfilling contracts.

3. Ind AS 103 Business combinations

   References to the conceptual framework.

   The amendment adds a new exception in Ind AS 103 for liabilities and contingent liabilities.

4. Ind AS 109 Financial Instruments

   Fees included in the 10% test for derecognition of financial liabilities.

   The amendment clarifies which fees an entity includes when it applies the '10%' test in assessing whether to derecognise a financial liability. An entity includes only fees paid or received between the entity (the borrower) and the lender, including fees paid or received by either the entity or the lender on the other's behalf.

5. Ind AS 101 First time adoption

   Subsidiary as a first-time adopter.

   Simplifies the application of Ind AS 101 by a subsidiary that becomes a first-time adopter after its parent in relation to the measurement of cumulative translation differences.

The Company has evaluated the requirements of the above amendments and the effect on the financial statements is not material.

52. Income taxes related disclosures

(I) Disclosure as per Ind AS 12 'Income taxes'

(a) Income tax expense

i) Income tax recognised in the statement of profit and loss

₹ Crore

Particulars	For the year ended	
	31 March 2022	31 March 2021
Current tax expense		
Current year	**3,377.36**	2,597.35
Taxes for earlier years	**(0.86)**	(1,874.12)
Pertaining to regulatory deferral account balances (A)	**277.77**	376.72
Total current tax expense (B)	**3,654.27**	1,099.95
Deferred tax expense		
Origination and reversal of temporary differences	**4,548.26**	4,267.50
Less: MAT credit entitlement	**3,558.37**	3,065.34
Total deferred tax expense (C)	**989.89**	1,202.16
Income tax expense (D=B+C-A)	**4,366.39**	1,925.39
Pertaining to regulatory deferral account balances	**277.77**	376.72
Total tax expense including tax on movement in regulatory deferral account balances	**4,644.16**	2,302.11

ii) Income tax recognised in other comprehensive income

₹ Crore

Particulars	For the year ended					
	31 March 2022			31 March 2021		
	Before tax	Tax expense/ (benefit)	Net of tax	Before tax	Tax expense/ (benefit)	Net of tax
- Net actuarial losses on defined benefit plans	**(112.72)**	**(19.69)**	**(93.03)**	(139.33)	(24.34)	(114.99)
- Net gains/(losses) on fair value of equity instruments	**5.40**	**-**	**5.40**	46.80	-	46.80
	(107.32)	**(19.69)**	**(87.63)**	(92.53)	(24.34)	(68.19)

iii) Reconciliation of tax expense and the accounting profit multiplied by India's domestic tax rate

₹ Crore

Particulars	For the year ended	
	31 March 2022	31 March 2021
Profit before tax including movement in regulatory deferral account balances	**20,755.58**	16,071.63
Tax using the Company's domestic tax rate of 34.944% (31 March 2021 - 34.944%)	**7,252.83**	5,616.07
Tax effect of:		
Non-deductible tax expenses	**28.71**	166.02
Deferred tax expenses	**989.89**	1,202.16
Previous year tax liability	**(0.86)**	(1,874.12)
Minimum alternate tax adjustments	**(3,626.41)**	(2,808.02)
Total tax expense recognized in the statement of profit and loss	**4,644.16**	2,302.11

(b) Tax losses carried forward

₹ Crore

Particulars	31 March 2022	Expiry date	31 March 2021	Expiry date
Long-term capital loss for which no deferred tax asset has been recognised due to uncertainty involved	**2,105.19**	**31-03-2029**	2,105.19	31-03-2029

53. Disclosure as per Ind AS 19 'Employee benefits'

(i) Defined contribution plans:

Pension

The defined contribution pension scheme of the Company for its employees which is effective from 1 January 2007, is administered through a separate trust. The obligation of the Company is to contribute to the trust to the extent of amount not exceeding 30% of basic pay and dearness allowance less employer's contribution towards provident fund, gratuity, post retirement medical facility (PRMF) or any other retirement benefits. The Company's contribution towards pension is made to National Pension System Trust (NPS) for the employees opted for the scheme. An amount of ₹ **250.00 crore** (31 March 2021: ₹ 223.99 crore) for the year is recognized as expense towards contributions to the defined contribution pension scheme of the Company/NPS for the year and charged to the statement of profit and loss.

(ii) Defined benefit plans:

A. Provident fund

The Company pays fixed contribution to provident fund at predetermined rates to a separate trust, which invests the funds in permitted securities. The Company has an obligation to ensure minimum rate of return to the members as specified by GOI. Accordingly, the Company has obtained report of the actuary, based on which overall interest earnings and cumulative surplus is more than the statutory interest payment requirement for all the periods presented. Further, contribution to employees pension scheme is paid to the appropriate authorities.

Based on the actuarial valuation obtained in this respect, the following table sets out the status of the provident fund plan as at balance sheet date:

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Net defined benefit (asset)/liability - Current	**(58.39)**	(94.41)

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset) liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2022	31 March 2021	31 March 2022	31 March 2021	31 March 2022	31 March 2021
Opening balance	**10,566.97**	9,704.06	**10,661.38**	9,779.11	**(94.41)**	(75.05)
Current service cost recognised in statement of profit and loss	**316.94**	340.74		-	**316.94**	340.74
Interest cost/(income)	**868.88**	812.84	**(868.88)**	(812.84)	**-**	-
Total	**1,185.82**	1,153.58	**(868.88)**	(812.84)	**316.94**	340.74
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	**-**	-	**-**	-	**-**	-
Financial assumptions	**(1.21)**	-	**-**	-	**(1.21)**	-

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset) liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2022	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021
Experience adjustment	**1.78**	0.69	-	-	**1.78**	0.69
Return on plan assets excluding interest income	-	-	**35.44**	(20.05)	**35.44**	(20.05)
Total	**0.57**	0.69	**35.44**	(20.05)	**36.01**	(19.36)
Other						
Contribution by participants	**690.56**	1,074.27	**690.56**	1,074.27	-	-
Contribution by employer	-	-	**316.93**	340.74	**(316.93)**	(340.74)
Benefits paid	**1,309.15**	1,365.63	**1,309.15**	1,365.63	-	-
Closing balance	**11,134.77**	10,566.97	**11,193.16**	10,661.38	**(58.39)**	(94.41)

Pursuant to paragraph 57 of Ind AS 19, accounting by an entity for defined benefit plans, inter-alia, involves determining the amount of the net defined benefit liability (asset) which shall be adjusted for any effect of limiting a net defined benefit asset to the asset ceiling prescribed in paragraph 64. As per Para 64 of Ind AS 19, in case of surplus in a defined benefit plan, an entity shall measure the net defined benefit asset at the lower of actual surplus or the value of the assets ceiling determined using the discount rate. The asset ceiling is the present value of any economic benefits available in the form of refunds from the plan or reductions in future contributions to the plan. Further, paragraph 65 provides that a net defined benefit asset may arise where a defined benefit plan has been overfunded or where actuarial gains have arisen.

As per the provisions of the Employees' Provident Funds and Miscellaneous Provisions Act, 1952, the Company has no right to the benefits either in the form of refund from the plan or lower future contribution to the plan towards the net surplus of ₹ **58.39 crore** (31 March 2021: ₹ 94.41 crore) determined through actuarial valuation. Accordingly, Company has not recognised the surplus as an asset, and the remeasurement loss /gains in 'Other Comprehensive Income', as these pertain to the Provident Fund Trust and not to the Company.

As per the provisions of Employee's Provident Funds Scheme 1952, the employer shall be liable to make good the loss to the Trust in the event of any loss as a result of any fraud, defalcation, wrong investment decisions etc. to the Trust. Keeping in view the above, a provision of ₹ **17.86 crore** (31 March 2021 ₹ Nil) has been recognized in the Statement of Profit and Loss during the year, towards such loss to the trust.

B. Gratuity and pension

a) The Company has a defined benefit gratuity plan. Every employee who has rendered continuous service of five years or more is entitled to gratuity at 15 days salary (15/26 X last drawn basic salary plus dearness allowance) for each completed year of service subject to a maximum of ₹ 0.20 crore on superannuation, resignation, termination, disablement or on death, considering the provisions of the Payment of Gratuity Act, 1972, as amended. The gratuity scheme is funded by the Company and is managed by separate trust. The liability for gratuity scheme is recognised on the basis of actuarial valuation.

b) The Company has pension schemes at two of its stations in respect of employees taken over from erstwhile state government power utilities. These pension schemes are unfunded. The liability for the pension schemes is recognised on the basis of actuarial valuation.

Based on the actuarial valuation obtained in this respect, the following table sets out the status of the gratuity and pension plan and the amounts recognised in the Company's financial statements as at balance sheet date:

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Net defined benefit (asset)/liability :		
Gratuity (funded)	**77.59**	112.82
Pension (non-funded)	**560.57**	569.36
Total	**638.16**	682.18
Break-up		
Non-current	**526.02**	535.43
Current	**112.14**	146.75

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset) liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2022	31 March 2021	31 March 2022	31 March 2021	31 March 2022	31 March 2021
Opening balance	**2,632.40**	2,632.26	**1,950.22**	1,876.06	**682.18**	756.20
Included in profit or loss for the year:						
Current service cost	**102.04**	101.31	-	-	**102.04**	101.31
Past service cost	-	-	-	-	-	-
Interest cost (income)	**177.68**	177.67	**(139.24)**	(137.73)	**38.44**	39.94
Total amount recognised in profit or loss for the year	**279.72**	278.98	**(139.24)**	(137.73)	**140.48**	141.25
Included in other comprehensive income:						
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	-	-	-	-	-	-
Financial assumptions	**(48.66)**	-	-	-	**(48.66)**	-
Experience adjustment	**40.84**	19.06	-	-	**40.84**	19.06
Return on plan assets excluding interest income	-	-	**(26.28)**	(34.57)	**(26.28)**	(34.57)
Total amount recognised in other comprehensive income	**(7.82)**	19.06	**(26.28)**	(34.57)	**(34.10)**	(15.51)
Out of the above an amount of (-) ₹ **1.33 crore** (31 March 2021: ₹ 0.83 crore) has been transferred to expenditure during construction period / development of coal mines.						
Other						
Contribution by employer	-	-	**112.82**	164.37	**(112.82)**	(164.37)
Benefits paid	**295.51**	297.90	**257.93**	262.51	**37.58**	35.39
Closing balance	**2,608.79**	2,632.40	**1,970.63**	1,950.22	**638.16**	682.18

Out of the above net liability, an amount of ₹ **77.59 crore** (31 March 2021: ₹ 112.82 crore) has been adjusted with the amount recoverable from the trust.

C. **Post-Retirement Medical Facility (PRMF)**

The Company has Post-Retirement Medical Facility (PRMF), under which the retired employees and their spouses are provided medical facilities in the Company hospitals/empanelled hospitals. They can also avail treatment as out-patient subject to a ceiling fixed by the Company. The liability for the same is recognised annually on the basis of actuarial valuation. A trust has been constituted for its employees superannuated on or after 1 January 2007, for the sole purpose of providing post retirement medical facility to them.

Based on the actuarial valuation obtained in this respect, the following table sets out the status of the PRMF and the amounts recognised in the Company's financial statements as at balance sheet date:

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Net defined benefit (asset)/liability - Current (funded)	**178.55**	170.04

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset) liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2022	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021
Opening balance	**2,189.36**	1,960.62	**2,019.32**	1,707.60	**170.04**	253.02
Included in profit or loss:						
Current service cost	**42.44**	39.62	-	-	**42.44**	39.62
Past service cost	-	-	-	-	-	-
Interest cost (income)	**147.78**	132.34	**(147.78)**	(132.34)	-	-
Total amount recognised in profit or loss	**190.22**	171.96	**(147.78)**	(132.34)	**42.44**	39.62
Included in other comprehensive income:						
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	-	-	-	-	-	-
Financial assumptions	**(45.74)**	-	-	-	**(45.74)**	-
Experience adjustment	**226.06**	171.78	-	-	**226.06**	171.78
Return on plan assets excluding interest income	-	-	**(24.89)**	(13.93)	**(24.89)**	(13.93)
Total amount recognised in other comprehensive income	**180.32**	171.78	**(24.89)**	(13.93)	**155.43**	157.85
Out of the above an amount of ₹ **3.00 crore** (31 March 2021: ₹ 4.19 crore) has been transferred to expenditure during construction period / development of coal mines.						
Other						
Contribution by participants	-	-	**19.32**	27.43	**(19.32)**	(27.43)
Contribution by employer	-	-	**170.04**	253.02	**(170.04)**	(253.02)
Benefits paid	**144.03**	115.00	**144.03**	115.00	-	-
Closing balance	**2,415.87**	2,189.36	**2,237.32**	2,019.32	**178.55**	170.04

Out of the above net liability, an amount of ₹ **42.26 crore** (31 March 2021: ₹ 170.04 crore) has been adjusted with the amount recoverable from the trust.

D. Other retirement benefit plans

Other retirement benefit plans include baggage allowance for settlement at home town for employees and dependents and farewell gift to the superannuating employees. The scheme above is unfunded and liability for the same is recognised on the basis of actuarial valuation.

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Net defined benefit (asset)/liability (non-funded) :	**206.53**	200.73
Non-current	**178.96**	176.24
Current	**27.57**	24.49

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation	
	As at 31 March 2022	As at 31 March 2021
Opening balance	**200.73**	190.12
Included in profit or loss:		
Current service cost	**10.47**	10.08
Past service cost	**-**	-
Interest cost (income)	**13.54**	12.83
Total amount recognised in profit or loss	**24.01**	22.91
Included in other comprehensive income:		
Remeasurement loss (gain):		
Actuarial loss (gain) arising from:		
Demographic assumptions	**-**	-
Financial assumptions	**(3.69)**	-
Experience adjustment	**(3.27)**	(2.01)
Return on plan assets excluding interest income	**-**	-
Total amount recognised in other comprehensive income	**(6.96)**	(2.01)
Other		
Contributions paid by the employer	**-**	-
Benefits paid	**11.25**	10.29
Closing balance	**206.53**	200.73

E. Plan assets

Plan assets comprise the following:

₹ Crore

Particulars	As at 31 March 2022			As at 31 March 2021		
	Quoted	Unquoted	Total	Quoted	Unquoted	Total
State government securities	**6,101.32**	**-**	**6,101.32**	5,247.23	-	5,247.23
Central government securities	**1,714.00**	**-**	**1,714.00**	1,798.42	-	1,798.42
Corporate bonds and term deposits	**4,094.87**	**86.84**	**4,181.71**	4,410.03	80.91	4,490.94
Money market instruments/liquid mutual fund//REITs/InvITs	**-**	**75.64**	**75.64**	-	0.45	0.45
Equity and equity linked investments	**149.40**	**-**	**149.40**	94.31	-	94.31
Investments with insurance companies	**-**	**3,254.86**	**3,254.86**	-	3,091.53	3,091.53
Total (excluding accrued interest)	**12,059.59**	**3,417.34**	**15,476.93**	11,549.99	3,172.89	14,722.88

As at 31 March 2022, an amount of ₹ **140.00 crore** (31 March 2021: ₹ 210.00 crore) is included in the value of plan assets in respect of the reporting enterprise's own financial instruments (Corporate bonds).

Actual return on plan assets is ₹ **1,171.63 crore** (31 March 2021: ₹ 1,151.46 crore).

F. Defined benefit obligations

i. Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date:

Particulars	**As at 31 March 2022**	As at 31 March 2021
Discount rate	**7.00%**	6.75%
Expected return on plan assets		
Gratuity	**7.00%**	6.75%
Pension	**7.00%**	6.75%
PRMF	**7.00%**	6.75%
Annual increase in costs	**6.50%**	6.50%
Salary escalation rate	**6.50%**	6.50%

The estimates of future salary increases considered in actuarial valuation, take account of inflation, seniority, promotion and other relevant factors, such as supply and demand in the employment market. Further, the expected return on plan assets is determined considering several applicable factors mainly the composition of plan assets held, assessed risk of asset management and historical returns from plan assets.

ii. Sensitivity analysis

Reasonably possible changes at the reporting date to one of the relevant actuarial assumptions, holding other assumptions constant, would have affected the defined benefit obligation by the amounts shown below.

₹ Crore

Particulars	**As at 31 March 2022**		As at 31 March 2021	
	Increase	**Decrease**	Increase	Decrease
Discount rate (0.5% movement)	**(182.34)**	**190.97**	(169.87)	178.76
Annual increase in costs (0.5% movement)	**88.24**	**(86.23)**	78.57	(76.36)
Salary escalation rate (0.5% movement)	**99.96**	**(95.54)**	98.22	(93.17)

Although the analysis does not take account of the full distribution of cash flows expected under the plan, it does provide an approximation of the sensitivity of the assumptions shown.

The sensitivity analysis above have been determined based on a method that extrapolates the impact on defined benefit obligation as a result of reasonable changes in key assumptions occurring at the end of the reporting period. This analysis may not be representative of the actual change in the defined benefit obligations as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

G. Risk exposure

Through its defined benefit plans, the Company is exposed to a number of risks, the most significant of which are detailed below:

a) Asset volatility

The plan liabilities are calculated using a discount rate set with reference to government bond yields; if plan assets underperform this yield, this will create a deficit. Most of the plan asset investments are in fixed income securities with high grades and in government securities. These are subject to interest rate risk and the fund manages interest rate risk with derivatives to minimise risk to an acceptable level. A portion of the funds are invested in equity securities and in alternative investments which have low correlation with equity securities. The Company has a risk management strategy where the aggregate amount of risk exposure on a portfolio level is maintained at a fixed range. Any deviations from the range are corrected by rebalancing the portfolio. The Company intends to maintain the above investment mix in the continuing years.

b) **Changes in discount rate**

A decrease in discount rate will increase plan liabilities, although this will be partially offset by an increase in the value of the plans' assets holdings.

c) **Inflation risks**

In the pension plans, the pension payments are not linked to inflation, so this is a less material risk.

d) **Life expectancy**

The pension plan obligations are to provide benefits for the life of the member, so increases in life expectancy will result in an increase in the plans' liabilities. This is particularly significant where inflationary increases result in higher sensitivity to changes in life expectancy.

The Company ensures that the investment positions are managed within an asset-liability matching (ALM) framework that has been developed to achieve long-term investments that are in line with the obligations under the employee benefit plans. Within this framework, the Company's ALM objective is to match assets to the pension obligations by investing in long-term fixed interest securities with maturities that match the benefit payments as they fall due and in the appropriate currency.

The Company actively monitors how the duration and the expected yield of the investments are matching the expected cash outflows arising from the employee benefit obligations. The Company has not changed the processes used to manage its risks from previous periods. The Company uses derivatives to manage some of its risk. Investments are well diversified, such that the failure of any single investment would not have a material impact on the overall level of assets.

A large portion of assets consist of government and corporate bonds. The plan asset mix is in compliance with the requirements of the respective local regulations.

H. Expected maturity analysis of the defined benefit plans in future years

₹ Crore

Particulars	Less than 1 year	Between 1-2 years	Between 2-5 years	Over 5 years	Total
31 March 2022					
Gratuity and pension	300.42	277.65	609.09	1,421.64	**2,608.80**
Post-retirement medical facility (PRMF)	144.88	179.03	639.89	1,452.07	**2,415.87**
Provident fund	1,947.57	989.17	2,058.92	6,139.11	**11,134.77**
Other post-employment benefit plans	27.57	24.23	52.18	102.54	**206.52**
Total	**2,420.44**	**1,470.08**	**3,360.08**	**9,115.36**	**16,365.96**
31 March 2021					
Gratuity and pension	291.28	287.19	657.69	1,396.24	2,632.40
Post-retirement medical facility (PRMF)	135.72	167.71	599.41	1,286.52	2,189.36
Provident fund	1,349.89	1,200.19	2,754.62	5,262.27	10,566.97
Other post-employment benefit plans	24.49	23.98	55.78	96.48	200.73
Total	1,801.38	1,679.07	4,067.50	8,041.51	15,589.46

Expected contributions to post-employment benefit plans for the year ending 31 March 2023 are ₹ **507.65 crore.**

The weighted average duration of the defined benefit plan obligation at the end of the reporting period is **15.76 year**s (31 March 2021: 15.37 years).

(iii) Other long term employee benefit plans

A. Leave

The Company provides for earned leave benefit (including compensated absences) and half-pay leave to the employees of the Company which accrue annually at 30 days and 20 days respectively. Earned leave (EL) is en-cashable while in service. Half-pay leaves (HPL) are en-cashable only on separation beyond the age of 50 years up to the maximum of 300 days. However, total number of leave (i.e. EL & HPL combined) that can be encashed on superannuation shall be restricted to 300 days and no commutation of half-pay leave shall be permissible. The scheme is unfunded and liability for the same is recognised on the basis of actuarial valuation. During the year, provision amounting to ₹ **96.93 crore** has been made on the basis of actuarial valuation at the year end and debited to statement of profit and loss (31 March 2021: ₹ 100.19 crore)

B. Other employee benefits

Provision for long service award and family economic rehabilitation scheme amounting to ₹ **14.51 crore** (31 March 2021: ₹ 2.30 crore) for the year have been made on the basis of actuarial valuation at the year end and debited to the statement of profit and loss.

54 Disclosure as per Ind AS 21 'The Effects of Changes in Foreign Exchange Rates'

The amount of exchange differences (net) debited to the statement of profit and loss, net of movement in regulatory deferral account balances, is ₹ **23.55 crore** (31 March 2021: debited to Statement of profit and loss (-) ₹ 12.54 crore).

55 Disclosure as per Ind AS 23 'Borrowing Costs'

Borrowing costs capitalised during the year is ₹ **2,740.89 crore** (31 March 2021: ₹ 2,780.29 crore).

56 Disclosure as per Ind AS 24 'Related Party Disclosures'

a) List of related parties:

i) Subsidiary companies:

1. Bhartiya Rail Bijlee Company Ltd.
2. Kanti Bijlee Utpadan Nigam Ltd.
3. NTPC Vidyut Vyapar Nigam Ltd.
4. NTPC Electric Supply Company Ltd.
5. Patratu Vidyut Utpadan Nigam Ltd.
6. Nabinagar Power Generating Company Ltd.
7. NTPC Mining Ltd.
8. THDC India Ltd. (THDCIL)
9. North Eastern Electric Power Corporation Ltd. (NEEPCO)
10. NTPC EDMC Waste Solutions Private Ltd. (w.e.f. 1 June 2020)
11. NTPC Renewable Energy Ltd. (w.e.f. 7 October 2020)
12. Ratnagiri Gas & Power Private Ltd. (Joint venture company upto 30 December 2020)

Subsidiary company of THDCIL

1. TUSCO Limited

ii) Joint ventures companies:

1. Utility Powertech Ltd.
2. NTPC-GE Power Services Private Ltd.
3. NTPC-SAIL Power Company Ltd.
4. NTPC Tamil Nadu Energy Company Ltd.
5. Aravali Power Company Private Ltd.
6. NTPC BHEL Power Projects Private Ltd.
7. Meja Urja Nigam Private Ltd.
8. Transformers and Electricals Kerala Ltd.

9. National High Power Test Laboratory Private Ltd.
10. Energy Efficiency Services Ltd.
11. CIL NTPC Urja Private Ltd.
12. Anushakti Vidhyut Nigam Ltd.
13. Hindustan Urvarak & Rasayan Ltd.
14. Konkan LNG Ltd. (upto 23 February 2021)
15. Trincomalee Power Company Ltd.
16. Bangladesh-India Friendship Power Company Private Ltd.

Joint venture company of NEEPCO

1. KSK Dibbin Hydro Power Private Ltd

iii) **Key Management Personnel (KMP):**

Whole Time Directors		
Mr. Gurdeep Singh	Chairman and Managing Director	
Mr. A.K.Gautam	Director (Finance)	
Mr. Dillip Kumar Patel	Director (HR)	W.e.f. 1 April 2020
Mr. Ramesh Babu V	Director (Operations)	W.e.f. 1 May 2020
Mr. Chandan Kumar Mondol	Director (Commercial)	W.e.f. 1 August 2020
Mr. Ujjwal Kanti Bhattacharya	Director (Projects)	W.e.f 28 August 2020
Mr. A.K.Gupta	Director (Commercial)	Upto 31 July 2020
Mr. Prakash Tiwari	Director (Operations)	Upto 30 April 2020
Independent Directors		
Mr. Jitendra Jayantilal Tanna	Non-executive Director	W.e.f. 30 November 2021
Mr. Vivek Gupta	Non-executive Director	W.e.f. 30 November 2021
Mr. Vidyadhar Vaishampayan	Non-executive Director	W.e.f. 30 November 2021
Ms. Sangitha Varier	Non-executive Director	W.e.f. 7 December 2021
Mr. M.P.Singh	Non-executive Director	Upto 7 September 2020
Mr. Pradeep Kumar Deb	Non-executive Director	Upto 7 September 2020
Mr. Shashi Shekhar	Non-executive Director	Upto 7 September 2020
Mr. Subhash Joshi	Non-executive Director	Upto 7 September 2020
Mr. Vinod Kumar	Non-executive Director	Upto 7 September 2020
Dr. K.P.K.Pillay	Non-executive Director	Upto 16 July 2021
Dr. Bhim Singh	Non-executive Director	Upto 16 July 2021
Government Nominee Directors		
Mr. Vivek Kumar Dewangan	Non-executive Director	
Mr. Ashish Upadhyaya	Non-executive Director	
Company Secretary		
Ms. Nandini Sarkar	Company Secretary	

iv) **Post employment benefit plans:**

1. NTPC Limited Employees Provident Fund
2. NTPC Employees Gratuity Fund
3. NTPC Post Retirement Employees Medical Benefit Fund
4. NTPC Limited Defined Contribution Pension Trust

v) **Entities under the control of the same government:**

The Company is a Central Public Sector Undertaking (CPSU) controlled by Central Government by holding majority of shares (Note 20). Pursuant to Paragraph 25 and 26 of Ind AS 24, entities over which the same government has control or joint control of, or significant influence, then the reporting entity and other entities shall be regarded as related parties. Transactions with these parties are carried out at market terms at arm length basis. The Company has applied the exemption available for government related entities and have made limited disclosures in the financial statements. Such entities with which the Company has significant transactions include but not limited to Coal India Ltd., Singareni Coalfields Ltd., GAIL (India) Ltd., BHEL Ltd., SAIL Ltd., Indian Oil Corporation Ltd., Bharat Petroleum Corporation Ltd and PGCIL.

vi) **Others:**

1. NTPC Education and Research Society

2. NTPC Foundation

b) **Transactions with the related parties are as follows:**

₹ Crore

Particulars	Subsidiary Companies		Joint venture Companies	
	For the year ended		For the year ended	
	31 March 2022	31 March 2021	**31 March 2022**	31 March 2021
i) Sales/purchase of goods and services				
- Contracts for works/services for services received by the Company	**7.70**	5.45	**1,549.97**	1,613.80
- Contracts for works/services for services provided by the Company	**69.89**	93.97	**24.22**	37.11
- Sale/purchase of goods	**1,973.73**	1,896.41	**21.08**	22.75
ii) Sales/purchase of assets	**1.37**	-	**17.55**	2.52
iii) Deputation of employees	**60.92**	57.93	**53.42**	57.42
iv) Dividend received	**1,022.65**	772.53	**1,111.69**	501.66
v) Equity contributions made	**1,060.12**	1,024.72	**610.19**	620.45
vi) Loans granted	**0.70**	1,038.45	**-**	-
vii) Interest on loan	**105.65**	49.64	**0.19**	1.86
viii) Guarantees received	**-**	-	**45.87**	4.80
ix) Financial guarantees issued	**-**	247.60	**-**	-

Note: Refer Note 72 C(b) and (c) for other commitments with subsidiary and joint venture companies

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Transactions with post employment benefit plans		
- Contributions made during the year	**823.27**	820.89
Compensation to Key management personnel		
- Short term employee benefits	**5.65**	5.75
- Post employment benefits	**0.13**	0.11
- Other long term benefits	**0.31**	0.28
- Termination benefits	**-**	0.81
- Sitting fee	**0.30**	0.57
Total compensation to key management personnel	**6.39**	7.52

Transactions with the related parties under the control of the same government:

₹ Crore

Sl. No.	Name of the Company	Nature of transaction by the Company	For the year ended 31 March 2022	For the year ended 31 March 2021
1	Bharat Coking Coal Ltd.	Purchase of coal	2,147.96	423.46
2	Central Coalfields Ltd.		2,834.52	2,849.76
3	Eastern Coalfields Ltd.		6,091.05	6,548.35
4	Mahanadi Coalfields Ltd.		5,639.25	3,967.78
5	Northern Coalfields Ltd.		11,013.42	10,758.98
6	South Eastern Coalfields Ltd.		5,616.98	5,371.79
7	Western Coalfields Ltd.		2,657.34	985.01
8	Coal India Ltd.		0.02	33.33
9	Singareni Collieries Company Ltd.		5,528.04	4,801.46
10	Bharat Heavy Electricals Ltd.	Purchase of equipment and erection services	972.60	1,040.03
		Purchase of spares	708.34	625.78
		Receipt of maintenance services	888.39	829.67
11	GAIL (India) Ltd.	Purchase of natural gas	1,555.11	1,349.23
12	Indian Oil Corporation Ltd.	Purchase of fuel / oil products	1,341.44	689.77
13	Bharat Petroleum Corporation Ltd.	Purchase of fuel / oil products	305.06	203.65
14	Hindustan Petroleum Corporation Ltd.	Purchase of fuel / oil products	379.44	192.82
15	Steel Authority of India Ltd.	Purchase of steel and iron products	286.47	262.54
16	IRCON International Limited	Receipt of maintenance services	129.36	47.07
17	RITES Ltd	Receipt of maintenance services	395.68	434.03
18	PGCIL	Purchase of equipment and providing services	41.87	228.63
19	Other entities	Purchase of equipment and erection services	9.94	17.31
		Purchase of spares	41.89	32.14
		Receipt of maintenance services	65.65	80.62
		Consultancy and other services provided by the Company	101.23	91.66

₹ Crore

Transactions with others listed at (a)(vi) above	For the year ended 31 March 2022	For the year ended 31 March 2021
- Contracts for works/services for services received by the Company	20.34	5.52

c) **Outstanding balances with related parties are as follows:**

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Amount recoverable towards loans from		
- Subsidiary companies	982.96	1,150.39
- Joint venture companies	19.78	19.78
- Key management personnel	0.15	0.15
- Others	0.60	0.60

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Amount recoverable other than loans from		
- Subsidiary companies	**466.59**	518.78
- Joint venture companies	**113.57**	55.30
- Post employment benefit plans	**60.87**	205.23
- Others	**0.49**	0.57
Amount payable to		
- Joint venture companies	**254.32**	289.64
- Post employment benefit plans	**52.23**	0.01

d) **Individually significant transactions**

₹ Crore

Particulars	Nature of relationship	For the year ended 31 March 2022	For the year ended 31 March 2021
Contracts for works/services for services received by the Company			
Utility Powertech Ltd.	Joint Venture Company	**1,518.68**	1,359.62
NTPC BHEL Power Projects Private Ltd.	Joint Venture Company	**11.59**	87.29
NTPC-GE Power Services Private Ltd.	Joint Venture Company	**16.53**	140.21
Contracts for works/services for services provided by the Company			
Patratu Vidyut Utpadan Nigam Ltd.	Subsidiary Company	**24.37**	37.60
NTPC Vidyut Vyapar Nigam Ltd.	Subsidiary Company	**7.69**	6.51
Nabinagar Power Generating Company Ltd.	Subsidiary Company	**6.78**	8.77
THDC India Ltd.	Subsidiary Company	**27.04**	28.47
Bhartiya Rail Bijlee Company Ltd.	Subsidiary Company	**2.74**	6.55
NTPC Renewable Energy Ltd.	Subsidiary Company	**-**	5.55
NTPC SAIL Power Company Ltd	Joint Venture Company	**3.00**	7.54
Meja Urja Nigam Private Limited	Joint Venture Company	**3.24**	10.34
Aravali Power Company Private Ltd.	Joint Venture Company	**2.65**	4.38
NTPC Tamil Nadu Energy Company Ltd.	Joint Venture Company	**3.29**	8.77
Energy Efficiency Services Ltd.	Joint Venture Company	**7.08**	5.43
Sale of goods			
NTPC Vidyut Vyapar Nigam Ltd.	Subsidiary Company	**1,973.73**	1,796.32
Nabinagar Power Generating Company Ltd.	Subsidiary Company	**-**	100.09
Purchase of goods			
Energy Efficiency Services Ltd.	Joint Venture Company	**13.66**	18.47
NTPC-Tamil Nadu Energy Company Ltd.	Joint Venture Company	**4.91**	0.68
Transformers and Electricals Kerala Ltd.	Joint Venture Company	**0.64**	3.28
Dividend received			
NTPC-SAIL Power Company Ltd.	Joint Venture Company	**100.00**	95.00
Aravali Power Company Private Ltd.	Joint Venture Company	**750.00**	350.00
NTPC-Tamil Nadu Energy Company Ltd.	Joint Venture Company	**244.19**	51.41

₹ Crore

Particulars	Nature of relationship	For the year ended 31 March 2022	For the year ended 31 March 2021
NTPC Vidyut Vyapar Nigam Ltd.	Subsidiary Company	**30.00**	30.00
North Eastern Electric Power Corporation Ltd.	Subsidiary Company	**90.00**	25.00
Bhartiya Rail Bijlee Company Ltd.	Subsidiary Company	**125.80**	190.28
Kanti Bijlee Utpadan Nigam Ltd.	Subsidiary Company	**20.94**	-
Nabinagar Power Generating Company Ltd.	Subsidiary Company	**377.32**	-
THDC India Ltd.	Subsidiary Company	**378.59**	527.25
Utility Powertech Ltd.	Joint Venture Company	**17.50**	5.00
NTPC-GE Power Services Private Ltd.	Joint Venture Company	**-**	0.25
Equity contributions made			
Kanti Bijlee Utpadan Nigam Ltd.	Subsidiary Company	**-**	60.00
Patratu Vidyut Utpadan Nigam Ltd.	Subsidiary Company	**350.00**	389.50
Nabinagar Power Generating Company Ltd.	Subsidiary Company	**274.00**	270.02
NTPC Vidyut Vyapar Nigam Ltd.	Subsidiary Company	**-**	10.00
NTPC Renewable Energy Ltd.	Subsidiary Company	**436.12**	295.05
NTPC EDMC Waster Solutions Pvt. Ltd.	Subsidiary Company	**-**	0.15
Meja Urja Nigam Private Ltd.	Joint Venture Company	**25.76**	142.60
Bangladesh-India Friendship Power Company Pvt.Ltd.	Joint Venture Company	**86.78**	88.88
NTPC-Tamil Nadu Energy Company Ltd.	Joint Venture Company	**-**	8.29
Hindustan Urvarak & Rasayan Ltd.	Joint Venture Company	**497.65**	380.67
Loans granted			
Ratnagiri Gas & Power Private Ltd.	Subsidiary Company	**-**	885.00
Kanti Bijlee Utpadan Nigam Ltd.	Subsidiary Company	**-**	150.00
NTPC Renewable Energy Ltd.	Subsidiary Company	**0.70**	3.45
Interest on Loan			
Ratnagiri Gas & Power Private Ltd.	Subsidiary Company	**85.17**	22.06
Kanti Bijlee Utpadan Nigam Ltd.	Subsidiary Company	**20.48**	27.54
National High Power Test Laboratory Private Ltd.	Joint Venture Company	**0.19**	1.86
Guarantees received			
Utility Powertech Ltd.	Joint Venture Company	**23.59**	4.80
NTPC-GE Power Services Private Ltd.	Joint Venture Company	**22.28**	-
Financial Guarantees issued			
NTPC Electric Supply Company Ltd.	Subsidiary Company	**-**	10.00
Patratu Vidyut Utpadan Nigam Ltd.	Subsidiary Company	**-**	237.60

e) Terms and conditions of transactions with the related parties

i) Transactions with the related parties are made on normal commercial terms and conditions and at arm length price.

ii) The Company is assigning jobs on contract basis, for sundry works in plants/stations/offices to M/s Utility Powertech Ltd. (UPL), a 50:50 joint venture between the Company and Reliance Infrastructure Ltd. UPL inter-alia undertakes jobs such as overhauling, repair, refurbishment of various mechanical and electrical equipment of power stations. The Company has entered into Power Station Maintenance Agreement with UPL from time to time. The rates are fixed on cost plus basis after mutual discussion and after taking into account the prevailing market conditions.

iii) The Company is seconding its personnel to subsidiary and joint venture companies as per the terms and conditions agreed between the companies, which are similar to those applicable for secondment of employees to other companies and institutions. The cost incurred by the Company towards superannuation and employee benefits are recovered from these companies.

iv) Loans granted to subsidiaries and joint venture companies are detailed below:

Sl. No.	Name of the subsidiary (S)/ joint venture (JV) company	Loan granted (Amount in ₹ crore)	Rate of interest (p.a.)	Repayment schedule	Purpose	Year of grant of loan
1	Kanti Bijlee Utpadan Nigam Ltd. (S)	193.00	10% (quarterly rest) upto 31.12.2020. W.e.f 01.01.2021, SBI 1-year MCLR + 100 bps (quarterly rest) to be reset on 1st April every year based on SBI 1-year MCLR prevailing on the date of reset	Repayable in six equal semi-annual installments from 30 September 2020.	To sustain ongoing operation activities and meet debt servicing requirements.	2017-18
		150.00	10% (quarterly rest) upto 31.12.2020. w.e.f 01.01.2021 SBI 1-year MCLR + 100 bps (quarterly rest) to be reset on 1st April every year based on SBI 1-year MCLR prevailing on the date of reset	Repayable in six equal quarterly installments from 31 December 2021.	For loan repayment, interest payment and to discharge statutory obligations.	2019-20
2	National High Power Test Laboratory Private Ltd. (JV)	18.40	10% (quarterly rest)	Principal repayable in twenty semi-annual installments from 30 September 2022 . Interest payable half yearly.	For repayment of loans / contractual obligations	2019-20
3	Ratnagiri Gas and Power Pvt Ltd. (S)	885.00	10% p.a. (quarterly rest) which will be reviewed and mutually decided at the beginning of each financial year i.e., 1st April of each year and shall be applicable for the entire financial year.	Loan shall be repaid in 53 quarterly instalments as per the loan agreement starting from 31.03.2021 and Last Instalment shall be paid on 31.03.2034.	For debt settlement with Lenders	2020-21
		570.18	Interest shall be payable w.e.f. 01.04.2034 or after full repayment of Inter-Corporate Loan of ₹. 885 crore whichever is earlier as per mutually agreed terms & Conditions.	Principal Repayment shall start from FY 2034-35 or after full repayment of Inter-Corporate Loan of Rs. 885 crore whichever is earlier as per mutually decided Schedule.	Novation of residual debt by existing lenders in favor of NTPC .	2020-21*

Sl. No.	Name of the subsidiary (S)/ joint venture (JV) company	Loan granted (Amount in ₹ crore)	Rate of interest (p.a.)	Repayment schedule	Purpose	Year of grant of loan
4	NTPC Renewables Energy Ltd (S)	15.00	SBI 1-year MCLR + 100 bps on the date of first disbursement to be reset on 1st April 2021 based on SBI 1-year MCLR prevailing on the date of reset.	Out of the loan granted, an amount of ₹ 0.70 crore was drawn which has been fully repaid / adjusted during the year.	To meet immediate requirement for Filing application to AP upto 4 GW, filing an application to Registrars of Companies (RoC) for enhancing Authorized capital, meeting other immediate administrative expenditure, etc	2020-21 Renewed in 2021-22

*Note: The loan of ₹ 570.18 crore to RGPPL has not been recognized in the books due to uncertainty involved therein.

v) Consultancy services provided by the Company to subsidiary and joint venture companies are generally on nomination basis at the terms, conditions and principles applicable for consultancy services provided to other parties.

vi) Outstanding balances of subsidiary and joint venture companies at the year-end are unsecured, except in respect of loan to RGPPL which is secured (Refer Note 8 c) and settlement occurs through banking transaction. These balances other than loans are interest free. The Company has not recorded any impairment of receivables relating to amounts owed by related parties. This assessment is undertaken in each financial year through examining the financial position of the related party and the market in which the related party operates.

vii) Refer Note 59 (b), (c), (d) and (e) in respect of impairment loss on investment in certain subsidiaries and joint venture companies.

viii) Refer Note 72 (C) towards restrictions on disposal of investment and commitment towards further investments in the subsidiary and joint venture companies.

57. Disclosure as per Ind AS 27 'Separate financial statements'

a) Investment in subsidiary companies:*

Company name	Country of incorporation	Proportion of ownership interest	
		As at 31 March 2022	As at 31 March 2021
NTPC Electric Supply Company Ltd.	India	**100.00**	100.00
NTPC Vidyut Vyapar Nigam Ltd.	India	**100.00**	100.00
Kanti Bijlee Utpadan Nigam Ltd.	India	**100.00**	100.00
Bhartiya Rail Bijlee Company Ltd.	India	**74.00**	74.00
Patratu Vidyut Utpadan Nigam Ltd.	India	**74.00**	74.00
Nabinagar Power Generating Company Ltd.	India	**100.00**	100.00
NTPC Mining Ltd.	India	**100.00**	100.00
THDC India Ltd.	India	**74.496**	74.496
North Eastern Electric Power Corporation Ltd.	India	**100.00**	100.00
NTPC EDMC Waste Solutions Private Ltd.(w.e.f. 1 June 2020)	India	**74.00**	74.00
NTPC Renewable Energy Ltd. (w.e.f. 7 October 2020)	India	**100.00**	100.00
Ratnagiri Gas & Power Private Ltd. (Joint venture upto 30 December 2020)	India	**86.49**	86.49

b) **Investment in joint venture companies:***

Company name	Country of incorporation	Proportion of ownership interest	
		As at 31 March 2022	As at 31 March 2021
Utility Powertech Ltd.	India	**50.00**	50.00
NTPC-GE Power Services Private Ltd.	India	**50.00**	50.00
NTPC-SAIL Power Company Ltd.	India	**50.00**	50.00
NTPC-Tamil Nadu Energy Company Ltd.	India	**50.00**	50.00
Aravali Power Company Private Ltd.	India	**50.00**	50.00
NTPC BHEL Power Projects Private Ltd.	India	**50.00**	50.00
Meja Urja Nigam Private Ltd.	India	**50.00**	50.00
Transformers and Electricals Kerala Ltd.	India	**44.60**	44.60
National High Power Test Laboratory Private Ltd.	India	**20.00**	20.00
Energy Efficiency Services Ltd.	India	**33.334**	47.15
CIL NTPC Urja Private Ltd.	India	**50.00**	50.00
Anushakti Vidhyut Nigam Ltd.	India	**49.00**	49.00
Hindustan Urvarak and Rasayan Ltd.	India	**29.67**	29.67
Trincomalee Power Company Ltd.	Srilanka	**50.00**	50.00
Bangladesh-India Friendship Power Company Private Ltd.	Bangladesh	**50.00**	50.00

* Equity investments in subsidiary and joint venture companies are measured at cost as per the provisions of Ind AS 27 on 'Separate Financial Statements'.

58. Disclosure as per Ind AS 33 'Earnings per share'

(i) **Basic and diluted earnings per share (in ₹)**

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
From operations including net movement in regulatory deferral account balances (a) **[A/D]**	**16.62**	13.99
From regulatory deferral account balances (b) **[B/D]**	**1.36**	1.81
From operations excluding net movement in regulatory deferral account balances (a)-(b) **[C/D]**	**15.26**	12.18
Nominal value per share	**10.00**	10.00

(ii) **Profit attributable to equity shareholders (used as numerator) (₹ Crore)**

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
From operations including net movement in regulatory deferral account balances (a) **[A]**	**16,111.42**	13,769.52
From regulatory deferral account balances (b) **[B]**	**1,312.06**	1,779.39
From operations excluding net movement in regulatory deferral account balances (a)-(b) **[C]**	**14,799.36**	11,990.13

(iii) **Weighted average number of equity shares (used as denominator) (Nos.)**

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Opening balance of issued equity shares	**9,69,66,66,134**	9,89,45,57,280
Less: Buyback of shares during the year	-	19,78,91,146
Closing balance of issued equity shares	**9,69,66,66,134**	9,69,66,66,134
Weighted average number of equity shares for Basic and Diluted EPS [D]*	**9,69,66,66,134**	9,84,46,77,868

* Earning per share for the year ended 31 March 2021 has been computed on the basis of weighted average number of shares outstanding during the year considering buy back of 19,78,91,146 fully paid-up equity shares completed on 30 December 2020. (Also refer Note 20 (e)(i))

59. Disclosure as per Ind AS 36 'Impairment of Assets'

As required by Ind AS 36, an assessment of impairment of assets was carried out and based on such assessment, the Company has accounted impairment losses as under:

a) For the Company, the recoverable amount of the property, plant and equipment & intangible assets of the Cash Generating Units (CGU) is value in use and amounts to ₹ **2,67,954.01 crore** (31 March 2021: ₹ 2,54,366.54 crore). The net realisable value of the assets of the station has been assessed which is more than its carrying value.

The discount rate used for the computation of value in use for the generating plant (thermal, gas and hydro) and coal mining is **7.07%** (31 March 2021: 7.74%) and for solar plant is **6.20%** (31 March 2021: 7.57%).

b) In respect of investment in Ratnagiri Gas & Power Pvt. Ltd., provision for impairment on investments has been recognised at ₹ **834.55 crore** (31 March 2021: ₹ 834.55 crore).

c) In respect of investment in NTPC BHEL Power Project Pvt. Ltd., provision for impairment on investments has been recognised at ₹ **50.00 crore** (31 March 2021: ₹ 50.00 crore). (Also refer Note 6 b).

d) In respect of investment in National High Power Test Laboratory Private Ltd., provision for impairment on investments has been recognised at ₹ **16.16 crore** (31 March 2021: ₹ Nil).

e) In respect of investment in Trincomalee Power Company Limited, provision for impairment on investments has been recognised at ₹ **14.28 crore** (31 March 2021: ₹ 14.14 crore).

60. Disclosure as per Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets'

Movements in provisions: ₹ Crore

Particulars	Provision for obligations incidental to land acquisition		Provision for tariff adjustment		Arbitration awards and others		Mine closure and Stripping activity adjustments		Total	
	For the year ended		For the year ended		For the year ended		For the year ended		For the year ended	
	31 March 2022	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021
Carrying amount at the beginning of the year	**3,027.84**	3,281.60	**360.28**	190.68	**2,116.67**	1,610.27	**347.96**	224.41	**5,852.75**	5,306.96
Additions during the year	**167.63**	637.23	**122.00**	169.60	**351.69**	519.22	**268.26**	123.55	**909.58**	1,449.60
Amounts used during the year	**(494.22)**	(510.99)	-	-	**(0.98)**	(2.20)	-	-	**(495.20)**	(513.19)
Reversal/adjustments during the year	**(17.86)**	(380.00)	-	-	**(65.52)**	(10.62)	-	-	**(83.38)**	(390.62)
Carrying amount at the end of the year	**2,683.39**	3,027.84	**482.28**	360.28	**2,401.86**	2,116.67	**616.22**	347.96	**6,183.75**	5,852.75

i) Provision for obligations incidental to land acquisition

Provision for obligations incidental to land acquisition includes expenditure on rehabilitation & resettlement (R&R) including the amounts payable to the project affected persons (PAPs) towards land, expenditure for providing community facilities and expenditure in connection with environmental aspects of the project. The Company has estimated the provision based on the Rehabilitation Action Plan (RAP) approved by the board/competent authority or agreements/directions/demand letters of the local/government authorities. The outflow of said provision is expected to be incurred immediately on fulfilment of conditions by the land oustees/receipts of directions of the local/government authorities.

ii) Provision for tariff adjustment

Billing to beneficiaries is being done based on tariff orders issued under Regulation 2014 except few stations where billing is done on provisional basis due to non-receipt of tariff orders. In such cases, accounting is done based on trued up cash expenditure as per Regulation 2019. Provision for tariff adjustment of ₹ **122.00 crore** (31 March 2021: ₹ 169.60 crore) is mainly towards the estimated interest payable to beneficiaries at the time of issue of tariff orders.

iii) Provision - Arbitration awards and Others

(a) (i) Provision for arbitration awards represents provision created based on awards pronounced by the arbitrator in respect of various litigation cases amounting to ₹ **2,256.40 crore** (31 March 2021: ₹ 2,003.01 crore). These awards have been challenged before various appellate authorities / Courts.

(ii) Provision for others includes ₹ **111.96 crore** (31 March 2021: ₹ 103.88 crore) towards cost of unfinished minimum work programme demanded by the Ministry of Petroleum and Natural Gas (MoP&NG) including interest thereon in relation to Block AA-ONN-2003/2 (Refer Note 60), ₹ **7.25 crore** (31 March 2021: ₹ 2.62 crore) towards provision for shortage in property, plant and equipment on physical verification pending investigation and ₹ **17.86 crore** (31 March 2021: ₹ Nil) towards expected loss on investments of Provident Fund Trust.

(b) The Company had entered into an agreement for movement of coal through inland waterways for one of its stations. As per the agreement, the operator was to design, finance, build, operate and maintain the unloading and material handling infrastructure for 7 years, after which it was to be transferred to the Company at ₹ 1/-. After commencement of the operations, the operator had raised several disputes, invoked arbitration and raised substantial claims on the Company. Based on the interim arbitral award and subsequent directions of the Hon'ble Supreme Court of India, an amount of ₹ 356.31 crore was paid upto 31 March 2019.

Further, the Arbitral Tribunal had awarded a claim of ₹ 1,891.09 crore plus applicable interest in favour of the operator, during the financial year 2018-19. The Company aggrieved by the arbitral award and considering legal opinion obtained, had filed an appeal before the Hon'ble High Court of Delhi (Hon'ble High Court) against the said arbitral award in its entirety.

In the financial year 2019-20, against the appeal of the Company, Hon'ble High Court directed the Company to deposit ₹ 500.00 crore with the Registrar General of the Court. The said amount was deposited with the Hon'ble High Court on 5 November 2019. Hon'ble High Court vide its order dated 8 January 2020 directed the parties to commence formal handing over of the infrastructure in the presence of appointed Local Commissioner and also directed release of ₹ 500.00 crore to the operator by the Registrar General subject to verification of bank guarantee and outcome of the application of the Company for formal handing over of the infrastructure. On 17 January 2020 unconditional BG was submitted by the operator to Registrar General and ₹ 500.00 crore was released to the operator by the Hon'ble High Court. As per order of Hon'ble High Court, formal handing over of the infrastructure started on 20 January 2020 at the project site. However, due to certain local administrative issues initially and further due to Covid-19 pandemic, Local Commissioner's visit was deferred.

In view of delay in the handover exercise, The company had filed an Application in Hon'ble High Court praying to pass further directions to operator in this regard. Hon'ble High Court on 11 November 2020 disposed off the application requesting the Ld. Local Commissioner appointed by the Court, to visit the project site expeditiously preferably within 2 weeks and carry out the commission. The handing over exercise has been delayed due to operator's issues with local labours at the site and Covid situation. Date of hearing at Hon'ble High Court of Delhi has been adjourned several times in light of restricted functioning of the Hon'ble High Court and listed for hearing on 7 July 2022.

Pending final disposal of the appeal by the Hon'ble High Court, considering the provisions of Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets' and Significant Accounting Policies of the Company, provision has been updated by interest to ₹ **38.26 crore** (31 March 2021: ₹ 38.09 crore) (included at (a)(i) above) and the balance amount of ₹ **2,292.30 crore** (31 March 2021: ₹ 2,153.57 crore) has been considered as contingent liability.

Also Refer Note 69 and 72.

(iv) (a) Provision for Mine closure obligation represents Company's obligations for land reclamation and decommissioning of structure consist of spending at mines in accordance with the guidelines from Ministry of Coal, Government of India. The Company estimates its obligations for mine closure, site restoration and decommissioning based on the detailed calculation and technical assessment of the amount and timing of future cash spending for the required work and provided for as per approved mine closure plan. Accordingly, a provision amounting to ₹ **304.24 crore** (31 March 2021: ₹ 285.35 crore) has since been provided for. (Refer Significant accounting policy C.6.2)

(b) Provision for Expenditure incurred on removal of mine waste materials (overburden) necessary to extract the coal reserves is referred to as stripping cost. The Company has to incur such expenses over the life of the mine as technically estimated. Cost of stripping is charged on technically evaluated average stripping ratio at each mine with due adjustment for stripping activity asset and ratio-variance account after the mines are brought to revenue. Net of the balances of stripping activity asset and ratio variance at the Balance Sheet date is shown as 'Stripping activity adjustment' under the head 'Non-current assets/Non-current provisions' as the case may be, and adjusted as provided in the CERC Tariff Regulations. Accordingly, a provision amounting to ₹ **311.98 crore** (31 March 2021: ₹ 62.61 crore) has since been provided for. (Refer Significant accounting policy C.6.1)

v) In respect of provision for cases under litigation, outflow of economic benefits is dependent upon the final outcome of such cases.

vi) In all these cases, outflow of economic benefits is expected within next one year.

vii) **Sensitivity of estimates on provisions:**

The assumptions made for provisions relating to current period are consistent with those in the earlier years. The assumptions and estimates used for recognition of such provisions are qualitative in nature and their likelihood could alter in next financial year. It is impracticable for the Company to compute the possible effect of changes in assumptions and estimates used in recognizing these provisions.

viii) **Contingent liabilities and contingent assets**

Disclosure with respect to claims against the Company not acknowledged as debts and contingent assets are made in Note 72.

61. Disclosure as per Ind AS 38 'Intangible Assets'

Research expenditure recognised as expense in the Statement of Profit and Loss during the year is ₹ **195.82 crore** (31 March 2021: ₹ 161.34 crore).

62. Disclosure as per Ind AS 106, 'Exploration for and Evaluation of Mineral Resources'

a) The Company along-with some public sector undertakings had entered into Production Sharing Contracts (PSCs) with GOI for three oil exploration blocks namely KG-OSN-2009/1, KG-OSN-2009/4 and AN-DWN-2009/13 under VIII round of New Exploration Licensing Policy (NELP VIII) with 10% participating interest (PI) in each of the blocks.

In the case of Block AN-DWN-2009/13 and KG-OSN-2009/1, Oil and Natural Gas Corporation Ltd. (ONGC) was the operator and the Company along-with the consortium partners have relinquished both the blocks to Directorate General of Hydrocarbons (DGH).

Based on the un-audited statement of the accounts for the above blocks forwarded by ONGC, the operator, the Company's share in the assets and liabilities and expenses is as under:

₹ Crore

Particulars	As at 31 March 2022 (Unaudited)	As at 31 March 2021 (Unaudited)
Assets	**0.01**	0.01
Liabilities	**0.49**	0.49
Capital commitments	**-**	-

For the year ended 31 March 2022 and 31 March 2021, there are no income / expense and operating/investing cash flow from exploration activities.

For exploration activities in block KG-OSN-2009/4 DGH has agreed for drilling of one well and have instructed to carry out airborne Full Tensor Gravity Gradiometer (FTG) survey in conditionally & partial cleared area. ONGC has completed drilling of one well. Airborne Full Tensor Gravity Gradiometer (FTG) survey work is also completed. The Company along-with the consortium partners has decided to relinquish the block and Oil and Natural Gas Corporation Ltd. (ONGC), the operator, has submitted an application to Directorate General of Hydrocarbons (DGH) in this regard, in the earlier years.

b) Exploration activities in the block AA-ONN-2003/2 were abandoned in January 2011 due to unforeseen geological conditions and withdrawal of the operator. Attempts to reconstitute the consortium to accomplish the residual exploratory activities did not yield result. In the meanwhile, Ministry of Petroleum & Natural Gas, GoI demanded in January 2011 the cost of unfinished minimum work programme from the consortium with NTPC's share being USD 7.516 million. During the year, provision in this respect has been updated to ₹ 111.96 crore from ₹ 103.88 crore along-with interest. The Company has sought waiver of the claim citing force majeure conditions at site leading to discontinuation of exploratory activities.

The Company has accounted for expenditure of ₹ **21.58 crore** (31 March 2021: ₹ 2.92 crore) towards updation of liabilities relating to MWP and other liabilities of M/s Geopetrol International, the operator to complete the winding up activities of the Block. The Company's share in the assets and liabilities are as under:

₹ Crore

Particulars	**As at 31 March 2022 (Unaudited)**	As at 31 March 2021 (Unaudited)
Assets	**9.19**	9.19
Liabilities (including unfinished MWP)	**127.81**	106.24

Provision of ₹ **8.26 crore** as at 31 March 2022 (31 March 2021: ₹ 8.26 crore) has been made towards the assets under exploration and estimated obsolescence in the inventory. Further, a provision of ₹ **13.42 Crore** (31 March 2021: ₹ Nil) has been made towards NTPC's share as per arbitration decision given in favor of a contractor of the block. NTPC filed a writ petition under section 34 in this matter before Hon'ble Delhi High Court which is yet to be disposed.

For the year ended 31 March 2022 and 31 March 2021, there are no income and operating/investing cash flow from exploration activities. The value of assets reported above is based on statement received from the operator in the earlier years.

c) The Company had entered into production sharing contracts (PSC) with GOI for exploration block namely CB-ONN-2009/5 VIII round of New Exploration Licensing Policy (NELP VIII) with 100% participating interest (PI) in the block.

MWP for the block has been completed. No oil or gas of commercial value was observed in any of the wells. Accordingly, the block has been relinquished to DGH, GOI.

Company's share in assets and liabilities is as under:

₹ Crore

Particulars	**As at 31 March 2022**	As at 31 March 2021
Assets	**6.11**	6.11
Liabilities	**0.25**	0.25

Provision of ₹ **6.07 crore** as at 31 March 2022 (31 March 2021: ₹ 6.07 crore) has been made towards estimated obsolescence in the inventory.

For the year ended 31 March 2022 and 31 March 2021, there are no income, expenses, operating and investing cash flows from exploration activities.

d i) The Company has started coal production from three mines i.e Pakri-Barwadih, Dulanga & Talaipalli. Other mines i.e. Chatti-Bariatu, Kerandari & Badam are in various stages of development. Pakri Barwadih was declared commercial w.e.f. 1 April 2019 and about 8.32MMT coal was extracted during the current year. Dulanga was declared commercial w.e.f. 1 October 2020 and about 5.29 MMT coal was extracted during the current year. At Talaipalli, coal mine extraction has already started and at Chatti-Bariatu and Kerandari coal mining projects land acquisition and other mine development activities are in progress and these are also disclosed in Note 3 - Capital work in progress under 'Development of coal mines'.

ii) Exploration and evaluation activities are taking place at under ground mine area/dip side area (North west quarry) of PB block. An amount of ₹ **59.38 crore** (31 March 2021: ₹ 59.39 crore) has since been incurred at this area towards various exploratory activities.

iii) (a) **(i) Banai & Bhalumuda**

Due to geo-mining constraints, likely less percentage of coal extraction in the two adjacent coal blocks Banai and Bhalumuda and non-availability of any non-coal bearing land in the vicinity for OB dumping, NTPC surrendered these blocks to MoC on 26.12.2020. The Company expects that whenever these two coal blocks are allotted to any other company, the cost incurred towards exploration and GR at these mines would be reimbursed from the new allocatee through MOC as per past experience of the Company. Keeping in view the above, an amount of ₹ **124.00 crore** (31 March 2021: ₹ 121.57 crore) has been accounted as recoverable and included under Note-17- 'Current assets - Other financial assets'.

As per the Coal Block Development and Production Agreement (CBDPA) signed by the Company with MOC in respect of these blocks, the performance security (BG) submitted by the Company shall be released in the event of termination of agreement by the Company upon submitting the mine plan and the Company has requested for release of the same. Further, MoP has requested MoC to consider the request of NTPC for surrendering the coal blocks without appropriation of Performance Securities.

(ii) Mandakini

After approval of Mining Plan of Mandakini-B coal block by MoC, mine development activities at Mandakini-B coal block could not be proceeded due to the resistance of the villagers which was beyond control of the Company. Considering the above, the Company has approached Ministry of Coal on 26 December 2020 for surrendering these blocks, with a request for consideration of reimbursement of expenses incurred by the Company. The Company expects that whenever these two coal blocks are allotted to any other company, the cost incurred towards exploration and GR would be reimbursed from the new allocatee through MOC as per past experience of the Company. Keeping in view the above, an amount of ₹ **53.93 crore** (31 March 2022: ₹ 53.93 crore) has been accounted as recoverable and included under Note-17 'Current assets -Other financial assets'.

MoC has encashed the BG (Performance Security) of ₹ 168.00 crore on 22 March 2021 citing delay in achieving of the milestones of efficiency parameters which were beyond the control of the Company. The Company approached MoP on 30 March 2021 to take up the matter in Alternate Mechanism for Resolution of CPSE Disputes (AMRCD). Pending resolution of the dispute through AMRCD, the amount of BG encashed by MOC has been disclosed as recoverable from MOC under 'Claims recoverable' in Note-17-'Current assets-Other financial assets' . This issue is regularly being taken up with MoC by the Company and MoP for early settlement.

(iii) The Coal Block Development and Production Agreement (CBDPA) signed by the Company with MOC is silent about the recoverability of expenditure incurred in case of termination of the CBDPA. Moreover, the fresh auction / allocation of mines by MOC may also take substantial time and is dependent upon the coal demand-supply scenario of the country in the days to come. Considering the uncertainty involved on the recoverability of the amounts in respect of Banai, Bhalumunda and Mandakini-B coal blocks , the amount disclosed as claims recoverable has since been fully provided for. Further, the balance expenditure incurred at these blocks which may not be recovered has also been provided for fully (Refer Note 5- 'Non-current assets - Intangible assets under development').

b) **Badam**

In the year 2018-19, the Company took over Barauni Thermal Power Station from Bihar State Power Generation Company Limited (BSPGCL). Ministry of Coal, Government of India has transferred Badam coal mine, the linked coal mine of Barauni TPS. Environment Clearance for the project is available. Stage-I Forest Clearance was transferred to the Company from BSPGCL on 14 January 2020. Application for Stage-II forest clearance is pending with Forest Department, Govt. of Jharkhand. Mining lease is pending with Govt. of Jharkhand and tendering process for appointment of MDO is in progress.

c) **Assets and liabilities of coal exploration and evaluation activities are as under:**

₹ **Crore**

Particulars	**As at 31 March 2022**	As at 31 March 2021
Assets	**134.04**	108.38
Liabilities	**1.67**	4.07

For the year ended 31 March 2022 and 31 March 2021, there are no income, expenses and operating cash flows from coal exploration activities. Cash flows from investing activities for the year ended 31 March 2022 is ₹ **28.06 crore** (31 March 2021: ₹ 23.20 crore)

63. Disclosure as per Ind AS 108 'Operating Segments'

A. General Information

The Company has two reportable segments, as described below, which are the Company's strategic business units. The strategic business units offer different products and services, and are managed separately because they require different technology and marketing strategies. For each of the strategic business units, the Chief Operating Decision Maker (CODM) reviews internal management reports on at least a quarterly basis.

The following summary describes the operations in each of the Company's reportable segments:

Generation of energy : Generation and sale of bulk power to State Power Utilities.

Others : It includes providing consultancy, project management and supervision, energy trading, oil and gas exploration and coal mining.

Information regarding the results of each reportable segment is included below. Performance is measured based on segment profit before income tax, as included in the internal management reports that are reviewed by the Company's Board. Segment profit is used to measure performance as management believes that such information is the most relevant in evaluating the results of certain segments relative to other entities that operate within these industries.

Transfer prices between operating segments are on an arm's length basis in a manner similar to transactions with third parties.

B. Information about reportable segments and reconciliations to amounts reflected in the financial statements:

₹ Crore

Particulars	Generation of energy		Others		Total	
	For the year ended		For the year ended		For the year ended	
	31 March 2022	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021
Segment revenue						
Sale of energy/consultancy, project management and supervision fee *	**1,11,296.51**	95,579.66	**6,180.08**	4,884.47	**1,17,476.59**	1,00,464.13
Other income	**2,458.76**	2,881.20	**61.24**	87.98	**2,520.00**	2,969.18
	1,13,755.27	98,460.86	**6,241.32**	4,972.45	**1,19,996.59**	1,03,433.31
Intersegment elimination					**(2,454.77)**	(1,424.50)
Unallocated corporate interest and other income					**2,500.61**	1,543.90
Total	**1,13,755.27**	98,460.86	**6,241.32**	4,972.45	**1,20,042.43**	1,03,552.71
Segment result (including net movements in regulatory deferral account balances)**	**25,341.25**	23,799.44	**461.21**	(34.34)	**25,802.46**	23,765.10
Unallocated corporate interest and other income					**2,500.61**	1,543.90
Unallocated corporate expenses, interest and finance costs					**7,547.49**	7,874.37
Exceptional items					**-**	1,363.00
Profit before tax					**20,755.58**	16,071.63
Income tax expense (including tax on net movements in regulatory deferral account balances)					**4,644.16**	2,302.11
Profit after tax					**16,111.42**	13,769.52

₹ Crore

Particulars	Generation of energy		Others		Total	
	For the year ended		For the year ended		For the year ended	
	31 March 2022	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021
Depreciation and amortisation expense	**11,049.41**	10,251.07	**30.18**	22.48	**11,079.59**	10,273.55
Non-cash expenses other than depreciation and amortisation	**278.63**	453.19	**10.58**	391.13	**289.21**	844.32
Capital expenditure	**19,366.12**	21,315.90	**1,082.20**	205.33	**20,448.32**	21,521.23

₹ Crore

Particulars	Generation of energy		Others		Total	
	As at		As at		As at	
	31 March 2022	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021
Segment assets	**3,07,299.00**	2,96,224.95	**11,173.09**	10,653.55	**3,18,472.09**	3,06,878.50
Unallocated corporate and other assets					**36,024.71**	36,298.42
Total assets	**3,07,299.00**	2,96,224.95	**11,173.09**	10,653.55	**3,54,496.80**	3,43,176.92
Segment liabilities	**37,296.15**	33,673.66	**4,706.44**	4,640.18	**42,002.59**	38,313.84
Unallocated corporate and other liabilities					**1,84,443.14**	1,85,877.59
Total liabilities	**37,296.15**	33,673.66	**4,706.44**	4,640.18	**2,26,445.73**	2,24,191.43

* Includes ₹ **1,938.05 crore** (31 March 2021: ₹ 1,154.64 crore) for sales related to earlier years.

** Generation segment result would have been ₹ **23,417.44 crore** (31 March 2021: ₹ 22,639.09 crore) without including the sales related to earlier years.

Reconciliation of Assets and Liabilities

₹ Crore

Particulars	**As at 31 March 2022**	As at 31 March 2021
Segment assets (A)	**3,18,472.09**	3,06,878.50
Unallocated corporate and other assets:		
Non current investments	**29,881.07**	28,125.65
Current investments	**-**	499.99
Cash and cash equivalents and other bank balances	**1,302.75**	1,076.77
Loans	**1,212.13**	1,368.88
Other current assets	**64.14**	117.36
Advance tax (net of provision)	**2,633.12**	3,936.04
Other unallocable assets	**931.50**	1,173.73
Total unallocated corporate and other assets (B)	**36,024.71**	36,298.42
Total Assets (A+B)	**3,54,496.80**	3,43,176.92
Segment liabilities (A)	**42,002.59**	38,313.84
Unallocated corporate and other liabilities:		
Non current borrowings	**1,47,374.75**	1,50,509.00

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Deferred tax liability	**10,006.29**	9,160.99
Borrowings current	**23,272.33**	23,107.19
Current tax liabilities (net)	**134.17**	-
Other unallocable liabilities	**3,655.60**	3,100.41
Total unallocated corporate and other liabilities (B)	**1,84,443.14**	1,85,877.59
Total Liabilities (A+B)	**2,26,445.73**	2,24,191.43

Reconciliation of profit after tax

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Segment result (including net movements in regulatory deferral account balances) (A)	**25,802.46**	23,765.10
Unallocated corporate interest and other income (B)		
Dividend from non-current investments	**2,143.34**	1,283.19
Interest income	**317.07**	137.97
Miscellaneous income	**40.20**	122.74
Sub-total (B)	**2,500.61**	1,543.90
Unallocated corporate expenses, interest and finance costs(C)		
Finance costs	**7,350.91**	7,459.03
Other expenses	**196.58**	415.34
Sub total (C)	**7,547.49**	7,874.37
Profit before tax (including net movements in regulatory deferral account balances) (A+B-C)	**20,755.58**	17,434.63
Exceptional items	**-**	1,363.00
Income tax expense (including tax on net movements in regulatory deferral account balances)	**4,644.16**	2,302.11
Profit after tax	**16,111.42**	13,769.52

The operations of the Company are mainly carried out within the country and therefore there is no reportable geographical segment.

C. Information about major customers

Revenue from customers under 'Generation of energy' segment which is more than 10% of the Company's total revenues, are as under:

Sl. No.	Name of the customer	For the year ended			
		31 March 2022		31 March 2021	
		Amount (₹ Crore)	%age	Amount (₹ Crore)	%age
1.	Maharashtra State Electricity Distribution Company Ltd.	**12,719.82**	**10.95**	11,018.92	11.11
2.	Gujarat Urja Vikas Nigam Ltd.	**12,179.51**	**10.49**	7,903.03	7.97

64. Financial Risk Management

The Company's principal financial liabilities comprise loans and borrowings in foreign as well as domestic currency, trade payables and other payables. The main purpose of these financial liabilities is to finance the Company's operations. The Company's principal financial assets include loans, trade and other receivables, and cash and short-term deposits that derive directly from its operations. The Company also holds equity investments and enter into derivative contracts such as forward contracts, options and swaps. Derivatives are used exclusively for hedging purposes and not as trading or speculative instruments.

The Company is exposed to the following risks from its use of financial instruments:
- Credit risk
- Liquidity risk
- Market risk

This note presents information about the Company's exposure to each of the above risks, the Company's objectives, policies and processes for measuring and managing risk.

Risk	Exposure arising from	Measurement	Management
Credit Risk	Trade receivables, unbilled revenue, derivative financial instruments, financial assets measured at amortised cost and cash and cash equivalents.	Ageing analysis Credit ratings	Credit limits, letters of credit and diversification of bank deposits.
Liquidity risk	Borrowings and other liabilities	Rolling cash flows forecast	Availability of committed credit lines and borrowing facilities
Market risk – foreign currency risk	- Future commercial transactions - Recognised financial assets and liabilities not denominated in Indian rupee (₹)	Cash flow forecasting	Forward foreign exchange contracts Foreign currency options Currency and interest rate swaps and principal only swaps
Market risk – interest rate risk	Non-current borrowings at variable rates	Sensitivity analysis	Different kinds of loan arrangements with varied terms (e.g. fixed rate loans, floating rate loans, rupee term loans, foreign currency loans, etc.)

Risk management framework

The Company's activities make it susceptible to various risks. The Company has taken adequate measures to address such concerns by developing adequate systems and practices.

In order to institutionalize the risk management in the Company, an elaborate Enterprise Risk Management (ERM) framework has been developed. The Board of Directors has overall responsibility for the establishment and oversight of the Company's risk management framework. As a part of the implementation of ERM framework, a 'Risk Management Committee (RMC)' with functional directors as its members has been entrusted with the responsibility to identify and review the risks, formulate action plans and strategies to mitigate risks on short-term as well as long-term basis.

The RMC meets every quarter to deliberate on strategies. Risks are regularly monitored through reporting of key performance indicators. Outcomes of RMC are submitted for information of the Board of Directors.

Credit risk

Credit risk is the risk of financial loss to the Company if a customer or counterparty to a financial instrument fails to meet its contractual obligations resulting in a financial loss to the Company. Credit risk arises principally from trade receivables, unbilled revenue, loans, cash and cash equivalents and deposits with banks and financial institutions.

Trade receivables & unbilled revenue

The Company primarily sells electricity to bulk customers comprising mainly state utilities owned by State Governments. The Company has a robust payment security mechanism in the form of Letters of Credit (LC) backed by the Tri-Partite Agreement (TPA). The TPAs were signed among the Govt. of India, RBI and the individual State Governments subsequent to the issuance of the One Time Settlement Scheme of SEBs dues during 2001-02 by the GOI, which were valid till October 2016. Govt of India subsequently approved the extension of these TPAs for another period of 10 years. Most of the States have signed these extended TPAs and signing is in progress for the balance states.

CERC Tariff Regulations allow payment against monthly bill towards energy charges within a period of forty five days from the date of bill and levy of surcharge @ 18% p.a. on delayed payment beyond forty five days. GOI has notified Electricity (Late Payment Surcharge) Rules, 2021 on 22 February 2021.These rules envisage that base rate of LPSC to be considered as SBI one year MCLR, as on 1 April of the financial year, plus five percent. The rate of LPSC shall be increased by 0.5 percent for every month of delay, provided that the LPSC shall not be more than 3 percent higher than the base rate at any time.

A default occurs when in the view of management there is no significant possibility of recovery of receivables after considering all available options for recovery.

As per the provisions of the TPA, the customers are required to establish LC covering 105% of the average monthly billing of the Company for last 12 months. The TPA also provided that if there is any default in payment of current dues by any State Utility, the outstanding dues can be deducted from the State's RBI account and paid to the concerned CPSU. There is also provision of regulation of power by the Company in case of non payment of dues and non-establishment of LC.

These payment security mechanisms have served the Company well over the years. The Company has not experienced any significant impairment losses in respect of trade receivables in the past years. Since the Company has its power stations as well as customers spread over various states of India, geographically there is no concentration of credit risk.

Unbilled revenue primarily relates to the Company's right to consideration for sale effected but not billed at the reporting date and have substantially the same risk characteristics as the trade receivables for the same type of contracts.

Investments

The Company limits its exposure to credit risk by investing in only Government of India Securities, State Government Securities and other counterparties have a high credit rating. The management actively monitors the interest rate and maturity period of these investments. The Company does not expect the counterparty to fail to meet its obligations, and has not experienced any significant impairment losses in respect of any of the investments.

Loans

The Company has given loans to employees, subsidiary companies, joint venture companies and other parties. Loans to the employee are secured against the mortgage of the house properties and hypothecation of vehicles for which such loans have been given in line with the policies of the Company. The loan provided to group companies are collectible in full and risk of default is negligible. Loan to APIIC is against a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

Cash and cash equivalents

The Company held cash and cash equivalents of ₹ **17.04 crore** (31 March 2021: ₹ 90.05 crore). The cash and cash equivalents are held with banks with high rating.

Balances with banks and financial institutions, other than cash and cash equivalents

The Company held balances with banks and financial institutions, including earmarked balances, of ₹ **2,438.55 crore** (31 March 2021: ₹ 2,248.41 crore). In order to manage the risk, Company places deposits with only high rated banks/institutions.

(i) Exposure to credit risk

The carrying amount of financial assets represents the maximum credit exposure. The maximum exposure to credit risk at the reporting date was:

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Financial assets for which loss allowance is measured using 12 months Expected Credit Losses (ECL)		
Non-current investments	**29,881.07**	28,125.65
Non-current loans	**1,288.40**	1,498.12
Other non-current financial assets*	**1,017.98**	1,092.84

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₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Current investments	-	499.99
Cash and cash equivalents	**17.04**	90.05
Bank balances other than cash and cash equivalents	**2,438.55**	2,248.41
Current loans	**477.70**	416.82
Other current financial assets**	**641.63**	617.00
Total (A)	**35,762.37**	34,588.88
Financial assets for which loss allowance is measured using life-time Expected Credit Losses (ECL) as per simplified approach		
Trade receivables including unbilled revenue	**22,293.32**	22,976.26
Contract assets	**4,649.50**	2,987.87
Total (B)	**26,942.82**	25,964.13
Total (A+B)	**62,705.19**	60,553.01

* Excluding share application money pending allotment (Refer Note 9)

** Excluding contract assets (Refer Note 17)

(ii) Provision for expected credit losses

(a) Financial assets for which loss allowance is measured using 12 month expected credit losses

The Company has assets where the counter-parties have sufficient capacity to meet the obligations and where the risk of default is very low. Accordingly, no loss allowance for impairment has been recognised.

(b) Financial assets for which loss allowance is measured using life-time expected credit losses as per simplified approach

The Company has customers (State government utilities) with capacity to meet the obligations and therefore the risk of default is negligible or nil. Further, management believes that the unimpaired amounts that are past due by more than 30 days are still collectible in full, based on historical payment behaviour and extensive analysis of customer credit risk. Hence, no impairment loss has been recognised during the reporting periods in respect of trade receivables and unbilled revenue.

(iii) Ageing analysis of trade receivables

Refer Note 13(d)

(iv) Reconciliation of impairment loss provisions

The movement in the allowance for impairment in respect of financial assets during the year is as follows:

₹ Crore

Particulars	Investments	Trade receivables	Advances	Claims recoverable	Total
Balance as at 1 April 2020 (i)	974.44	0.20	0.06	0.12	974.82
Impairment loss recognised (ii)	32.20	-	-	343.51	375.71
Amounts adjusted (written off / written back) (iii)	103.47	-	0.03	0.01	103.51
Balance as at 31 March 2021(iv =i+ii-iii)	903.17	0.20	0.03	343.62	1,247.02
Impairment loss recognised (v)	16.30	-	-	3.16	19.46
Balance as at 31 March 2022 (vi = iv+v)	**919.47**	**0.20**	**0.03**	**346.78**	**1,266.48**

Based on historic default rates, the Company believes that no impairment allowance is necessary in respect of any other financial assets as the amounts of such allowances are not significant.

Liquidity risk

Liquidity risk is the risk that the Company will encounter difficulty in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Company's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Company's reputation.

The Company has an appropriate liquidity risk management framework for the management of short, medium and long-term funding and liquidity management requirements. The Company manages liquidity risk by maintaining adequate cash reserves, banking facilities and reserve borrowing facilities by continuously monitoring forecast and actual cash flows and matching the maturity profiles of financial assets and liabilities.

The Company's Treasury department is responsible for managing the short-term and long-term liquidity requirements of the Company. Short-term liquidity situation is reviewed daily by the Treasury department. The Board of directors has established policies to manage liquidity risk and the Company's Treasury department operates in line with such policies. Any breaches of these policies are reported to the Board of Directors. Long-term liquidity position is reviewed on a regular basis by the Board of Directors and appropriate decisions are taken according to the situation.

Typically, the Company ensures that it has sufficient cash on demand to meet expected operational expenses for a month, including the servicing of financial obligations, this excludes the potential impact of extreme circumstances that cannot reasonably be predicted, such as natural disasters.

As part of the CERC Regulations, tariff inter-alia includes recovery of capital cost. The tariff regulations also provide for recovery of energy charges, operations and maintenance expenses and interest on normative working capital requirements. Since billing to the customers are generally on a monthly basis, the Company maintains sufficient liquidity to service financial obligations and to meet its operational requirements.

(i) Financing arrangements

The Company had access to the following undrawn borrowing facilities at the end of the reporting period:

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Floating-rate borrowings		
Cash credit	**1,950.00**	2,465.00
Term loans	**4,131.58**	3,533.60
Foreign currency loans	**6,666.75**	4,617.56
Total	**12,748.33**	10,616.16

(ii) Maturities of financial liabilities

The following are the contractual maturities of derivative and non-derivative financial liabilities, based on contractual cash flows:

31 March 2022 ₹ Crore

Contractual maturities of financial liabilities	Contractual cash flows					
	3 months or less	3-12 months	1-2 years	2-5 years	More than 5 years	Total
Non-derivative financial liabilities						
Secured bonds	3,481.25	3,667.98	6,231.40	9,725.57	15,689.49	**38,795.69**
Unsecured bonds	534.96	302.68	4,374.10	4,000.00	11,671.00	**20,882.74**
Rupee term loans from banks	784.81	3,326.52	4,462.82	18,947.87	36,818.11	**64,340.13**
Rupee term loans from others	17.49	16.67	16.57	-	-	**50.73**
Lease obligations	148.08	75.04	58.54	184.51	2,341.87	**2,808.04**
Foreign currency notes	2,092.01	3,856.50	-	15,355.85	3,053.20	**24,357.56**

31 March 2022 ₹ Crore

Contractual maturities of financial liabilities	Contractual cash flows					
	3 months or less	3-12 months	1-2 years	2-5 years	More than 5 years	Total
Unsecured foreign currency loans from banks and financial institutions	184.47	554.68	867.30	4,129.55	11,200.31	**16,936.31**
Unsecured foreign currency loans (guaranteed by GOI)	-	186.38	184.11	550.40	400.24	**1,321.12**
Commercial paper and cash credit	6,175.00	500.00	-	-	-	**6,675.00**
Trade and other payables	18,762.15	6,771.09	1,802.12	2,488.53	135.76	**29,959.65**

31 March 2021 ₹ Crore

Contractual maturities of financial liabilities	Contractual cash flows					
	3 months or less	3-12 months	1-2 years	2-5 years	More than 5 years	Total
Non-derivative financial liabilities						
Secured bonds	806.71	1,541.51	6,044.87	12,862.47	18,783.99	40,039.55
Unsecured bonds	274.73	170.57	-	8,374.10	3,500.00	12,319.40
Rupee term loans from banks	678.75	2,305.98	3,962.45	16,379.51	41,610.88	64,937.57
Rupee term loans from others	18.03	16.67	33.34	16.57	-	84.61
Lease obligations	140.77	50.00	65.95	170.17	2,229.13	2,656.02
Foreign currency notes	182.29	4,841.95	5,611.00	10,738.70	7,326.40	28,700.34
Unsecured foreign currency loans from banks and financial institutions	161.41	1,026.29	686.98	2,088.80	11,376.01	15,339.49
Unsecured foreign currency loans (guaranteed by GOI)	-	200.10	197.30	591.89	624.16	1,613.45
Commercial paper and cash credit	8,500.00	4,500.00	-	-	-	13,000.00
Trade and other payables	17,036.31	6,600.78	829.01	1,788.07	2,068.78	28,322.95

Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates and interest rates will affect the Company's income. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimising the return.

The Board of Directors is responsible for setting up of policies and procedures to manage market risks of the Company. All such transactions are carried out within the guidelines set by the risk management committee.

Currency risk

The Company is exposed to foreign currency risk on certain transactions that are denominated in a currency other than entity's functional currency, hence exposure to exchange rate fluctuations arises. The risk is that the functional currency value of cash flows will vary as a result of movements in exchange rates.

The currency profile of financial assets and financial liabilities as at 31 March 2022 and 31 March 2021 are as below:

As at 31 March 2022 ₹ Crore

Particulars	USD	EURO	JPY	Others	Total
Financial assets					
Trade and other receivables	0.33	-	-	-	**0.33**
Cash and cash equivalents	0.01	-	-	0.02	**0.03**
Other financial assets	-	0.70	-	-	**0.70**
Total	**0.34**	**0.70**	-	**0.02**	**1.06**
Financial liabilities					
Foreign currency bonds	18,015.88	4,307.65	-	2,034.03*	**24,357.56**
Unsecured foreign currency loans from banks and financial institutions	2,088.98	2,853.83	13,314.62	-	**18,257.43**
Trade payables and other financial liabilities	2,674.80	789.57	151.47	27.68	**3,643.52**
Total	**22,779.66**	**7,951.05**	**13,466.09**	**2,061.71**	**46,258.51**

* ₹1,908.00 crore-Rupee denominated USD settled Masala bonds and interest accrued thereon.

As at 31 March 2021 ₹ Crore

Particulars	USD	EURO	JPY	Others	Total
Financial assets					
Trade and other receivables	0.23	-	-	-	0.23
Cash and cash equivalents	0.40	-	-	0.04	0.44
Other financial assets	1.41	0.01	0.83	0.53	2.78
Total	2.04	0.01	0.83	0.57	3.45
Financial liabilities					
Foreign currency bonds	21,227.65	4,384.00	-	3,088.69*	28,700.34
Unsecured foreign currency loans from banks and financial institutions	2,879.03	1,253.24	12,820.67	-	16,952.94
Trade payables and other financial liabilities	1,870.15	799.49	67.85	1.31	2,738.80
Total	25,976.83	6,436.73	12,888.52	3,090.00	48,392.08

* ₹ 1,007.00 crore - Rupee denominated USD settled Green Masala Bonds and ₹ 1,908.00 crore-Rupee denominated USD settled Masala bonds and interest accrued thereon.

The gain/(loss) on account of exchange rate variations on all foreign currency loans and foreign currency monetary items (up to COD) is recoverable from beneficiaries. Therefore, currency risk in respect of such exposure would not be very significant.

Sensitivity analysis

Since the impact of strengthening or weakening of INR against USD, EURO, JPY and other currencies on the statement of profit and loss would not be very significant; therefore, sensitivity analysis for currency risk is not disclosed.

Embedded derivatives

Certain contracts of the Company for construction of power plants with vendors awarded through International Competitive Bidding are denominated in a third currency i.e. a currency which is not the functional currency of any of the parties to the contract. The Company has awarded the above contracts without any intention to enter into any derivative contract or to leverage/ take position and without any option/intention to net settle at any point of time during the tenure of the contract. The Company has not separately recognised the foreign currency embedded derivative and has not designated the entire hybrid contract at fair value through profit or loss considering the same as not practicable and absence of a reliable valuation model.

Interest rate risk

The Company is exposed to interest rate risk arising mainly from non-current borrowings with floating interest rates. The Company is exposed to interest rate risk because the cash flows associated with floating rate borrowings will fluctuate with changes in interest rates. The Company manages the interest rate risks by entering into different kinds of loan arrangements with varied terms (e.g. fixed rate loans, floating rate loans, rupee term loans, foreign currency loans, etc.).

At the reporting date, the interest rate profile of the Company's interest-bearing financial instruments is as follows:

₹ Crore

Particulars	31 March 2022	31 March 2021
Financial Assets:		
Fixed-rate instruments		
Loans to related parties	**839.15**	892.25
Loans to others	**22.39**	23.28
Bank deposits	**2,344.28**	2,190.08
Total	**3,205.82**	3,105.61
Variable-rate instruments		
Loans to related parties	**164.33**	278.66
Total	**164.33**	278.66
Financial Liabilities:		
Fixed-rate instruments		
Bonds	**59,675.42**	52,355.90
Foreign currency loans/notes*	**27,581.74**	32,626.33
Rupee term loans	**50.73**	84.61
Commercial paper	**6,631.26**	12,859.74
Lease obligations	**983.08**	872.42
Total (A)	**94,922.23**	98,799.00
Variable-rate instruments		
Foreign currency loans/notes	**14,733.13**	12,729.58
Rupee term loans	**64,340.13**	64,937.58
Cash credit	**-**	-
Total (B)	**79,073.26**	77,667.16
Total (A+B)	**1,73,995.49**	1,76,466.16

* Includes ₹ 1,908.00 crore Rupee denominated USD settled Masala bonds (31 March 2021: includes ₹ 1,007.00 crore Rupee denominated USD settled Green Masala bonds and ₹ 1,908.00 crore Rupee denominated USD settled Masala bonds).

Fair value sensitivity analysis for fixed-rate instruments

The Company's fixed rate instruments are carried at amortised cost. They are therefore not subject to interest rate risk, since neither the carrying amount nor the future cash flows will fluctuate because of a change in market interest rates.

Cash flow sensitivity analysis for variable-rate instruments

A change of 50 basis points in interest rates at the reporting date would have increased (decreased) profit or loss by the amounts shown below. This analysis assumes that all other variables, in particular foreign currency rates, remain constant. The analysis is performed on the same basis for the previous year.

₹ Crore

Particulars	Profit or loss	
	50 bp increase	50 bp decrease
31 March 2022		
Foreign currency loans/notes	**(66.24)**	**66.24**
Rupee term loans	**(325.81)**	**325.81**
Cash credit	**(0.04)**	**0.04**
	(392.09)	**392.09**
31 March 2021		
Foreign currency loans/notes	(52.47)	52.47
Rupee term loans	(329.90)	329.90
Cash credit	(3.70)	3.70
	(386.07)	386.07

Of the above mentioned increase in the interest expense, an amount of ₹ **141.38 crore** (31 March 2021: ₹ 128.85 crore) is expected to be capitalised and recovered from beneficiaries through tariff.

Change in interest benchmarks

As part of the IBOR transition, the Company has replaced the JPY LIBOR with compounded TONA for all financial instruments, requiring the renegotiation of financing contracts. Changes to contractual cash flows as a result of replacing the existing benchmark interest rate on an economically equivalent basis as a direct consequence of the interest rate benchmark reform are accounted for by adjusting the effective interest rate without recognizing any direct modification gains or losses. There is no material impact on the change of the benchmark rate. The Company also plans to replace the USD LIBOR with the Term SOFR before the end of its publication on June 30, 2023.

(Note: IBOR-Inter Bank Offered Rates, LIBOR-London Interbank Offered Rate, TONA-Tokyo Overnight Average Rate, SOFR – Secured Overnight Financing Rate)

65. Fair Value Measurements

a) Financial instruments by category

₹ Crore

Particulars	31 March 2022			31 March 2021		
	FVTPL	FVTOCI	Amortised Cost	FVTPL	FVTOCI	Amortised Cost
Financial assets						
Investments						
- Equity instruments	**3.78**	**98.70**	**29,778.59**	3.78	93.30	28,028.57
- Mutual funds	-	-	-	499.99	-	-
Trade Receivables	-	-	**22,293.32**	-	-	22,976.26
Loans	-	-	**1,766.10**	-	-	1,914.94
Cash and cash equivalents	-	-	**17.04**	-	-	90.05
Other bank balances	-	-	**2,438.55**	-	-	2,248.41
Finance lease receivables	-	-	**355.49**	-	-	437.77
Other financial assets*	-	-	**5,953.62**	-	-	4,259.94
	3.78	**98.70**	**62,602.71**	503.77	93.30	59,955.94
Financial liabilities						
Borrowings	-	-	**1,66,381.15**	-	-	1,62,734.01
Commercial paper and cash credit	-	-	**6,631.26**	-	-	12,859.74
Lease obligations	-	-	**983.08**	-	-	872.42
Trade payables	-	-	**9,410.93**	-	-	7,262.48
Payable for capital expenditure	-	-	**16,838.09**	-	-	16,137.38
Other financial liabilities	-	-	**3,436.98**	-	-	2,885.75
	-	-	**2,03,681.49**	-	-	2,02,751.78

* Excluding share application money pending allotment (Refer Note 9)

b) **Fair value hierarchy**

This section explains the judgements and estimates made in determining the fair values of the financial instruments that are (a) recognised and measured at fair value and (b) measured at amortised cost and for which fair values are disclosed in the financial statements. To provide an indication about the reliability of the inputs used in determining fair value, the Company has classified its financial instruments into the three levels prescribed under the Ind AS. An explanation of each level follows underneath the table.

₹ Crore

Financial assets and liabilities measured at fair value- recurring fair value measurement as at 31 March 2022	**Level 1**	**Level 2**	**Level 3**	**Total**
Financial assets:				
Investments in quoted equity instruments - PTC India Ltd.	98.70	-	-	**98.70**
Investments in unquoted equity instruments	-	-	3.78	**3.78**
	98.70	-	**3.78**	**102.48**

₹ Crore

Financial assets and liabilities measured at fair value- recurring fair value measurement as at 31 March 2021	Level 1	Level 2	Level 3	Total
Financial assets:				
Investments in quoted equity instruments - PTC India Ltd.	93.30	-	-	93.30
Investments in mutual funds	-	499.99	-	499.99
Investments in unquoted equity instruments	-	-	3.78	3.78
	93.30	499.99	3.78	597.07

The Company has an established control framework with respect to the measurement of fair values. This includes a valuation team that has overall responsibility for overseeing all significant fair value measurements and reports directly to the Director (Finance). The valuation team regularly reviews significant unobservable inputs and valuation adjustments. If third party information, such as broker quotes or pricing services, is used to measure fair values, then the valuation team assesses the evidence obtained from the third parties to support the conclusion that these valuations meet the requirements of Ind AS, including the level in the fair value hierarchy in which the valuations should be classified. Significant valuation issues are reported to the Company's Audit Committee.

Fair values are categorised into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows.

Level 1: Level 1 hierarchy includes financial instruments measured using quoted prices. This includes investments in quoted equity instruments. Quoted equity instruments are valued using quoted prices on national stock exchange.

Level 2: The fair value of financial instruments that are not traded in an active market is determined using valuation techniques which maximise the use of observable market data and rely as little as possible on entity specific estimates. If all significant inputs required to fair value an instrument are observable, the instrument is included in level 2. This level includes mutual funds which are valued using the closing NAV.

Level 3: If one or more of the significant inputs is not based on observable market data, the instrument is included in level 3. The fair value of financial assets and liabilities included in Level 3 is determined in accordance with generally accepted pricing models based on discounted cash flow analysis using prices from prevailing market transactions and dealer quotes of similar instruments.

There have been no transfers in either direction for the years ended 31 March 2022 and 31 March 2021.

c) **Valuation technique used to determine fair value:**

Specific valuation techniques used to fair value of financial instruments include:

i) For financial instruments other than at ii), iii) and iv) - the use of quoted market prices

ii) For investments in mutual funds - Closing NAV is used.

iii) For financial liabilities (vendor liabilities, debentures/bonds, foreign currency notes, domestic/foreign currency loans): Discounted cash flow; appropriate market borrowing rate of the entity as of each balance sheet date used for discounting.

iv) For financial assets (employee loans) - Discounted cash flow; appropriate market rate (SBI lending rate) as of each balance sheet date used for discounting.

d) Fair value of financial assets and liabilities measured at amortised cost

₹ Crore

Particulars	Level	As at 31 March 2022		As at 31 March 2021	
		Carrying amount	Fair value	Carrying amount	Fair value
Financial assets					
Investments in subsidiary and joint venture companies	3	29,778.59	29,778.59	28,028.57	28,028.57
Loans	3	1,766.10	1,777.97	1,914.94	1,922.84
Finance lease receivables	3	355.49	355.49	437.77	437.77
Claims recoverable	3	879.42	879.42	747.65	747.65
Trade receivables	3	22,293.32	22,293.32	22,976.26	22,976.26
Cash and cash equivalents	1	17.04	17.04	90.05	90.05
Bank balances other than cash and cash equivalents	1	2,438.55	2,438.55	2,248.41	2,248.41
Other financial assets	3	5,074.20	5,074.20	3,608.29	3,608.29
Total		62,602.71	62,614.58	60,051.94	60,059.84
Financial liabilities					
Bonds/Debentures	1	8,820.73	9,810.68	7,701.05	8,103.59
	2	30,220.36	33,011.39	33,640.24	37,817.73
	3	20,634.33	23,108.14	11,014.62	13,205.23
Foreign currency notes	2	17,984.99	18,305.90	20,334.80	21,780.49
	3	6,328.53	6,446.15	8,308.56	8,933.60
Foreign currency loans	3	18,001.35	18,149.72	16,712.56	16,982.20
Rupee term loans	3	64,390.86	64,391.45	65,022.18	65,023.98
Lease obligations	3	983.08	983.08	872.42	872.42
Borrowings - current	1	6,631.26	6,631.26	12,859.74	12,859.74
Trade payables and payable for capital expenditure	3	26,249.02	26,214.88	23,399.86	23,299.28
Other financial liabilities	3	3,436.98	3,436.98	2,885.75	2,885.75
Total		2,03,681.49	2,10,489.63	2,02,751.78	2,11,764.01

The carrying amounts of current trade receivables, current trade payables, payable for capital expenditure, investment in subsidiary and joint venture companies, cash and cash equivalents and other financial assets and liabilities are considered to be the same as their fair values, due to their short-term nature.

The carrying values for finance lease receivables approximates the fair value as these are periodically evaluated based on credit worthiness of customer and allowance for estimated losses is recorded based on this evaluation. Also, carrying amount of claims recoverable approximates its fair value as these are recoverable immediately.

The fair values for loans, borrowings, non-current trade payables and payable for capital expenditure were calculated based on cash flows discounted using a current discount rate. They are classified at respective levels based on availability of quoted prices and inclusion of observable/non observable inputs.

66. Capital Management

The Company's objectives when managing capital are to:

- safeguard its ability to continue as a going concern, so that it can continue to provide returns for shareholders and benefits for other stakeholders and
- maintain an appropriate capital structure of debt and equity.

The Board of Directors has the primary responsibility to maintain a strong capital base and reduce the cost of capital through prudent management in deployment of funds and sourcing by leveraging opportunities in domestic and international financial markets so as to maintain investors, creditors & markets' confidence and to sustain future development of the business. The Board of Directors monitors the return on capital, which the Company defines as returns from operating activities divided by total shareholders' equity deployed in operating activities. The Board of Directors also monitors the level of dividends to equity shareholders in line with the dividend distribution policy of the Company.

Under the terms of major borrowing facilities, the Company is required to comply with the following financial covenants:

(i) Total liability to networth ranges between 2:1 to 3:1.

(ii) Ratio of EBITDA to interest expense shall not at any time be less than 1.75 : 1.

(iii) Debt service coverage ratio not less than 1.10:1 (in case of foreign currency borrowings).

There have been no breaches in the financial covenants of any interest bearing borrowings.

The Company monitors capital, using a medium term view of three to five years, on the basis of a number of financial ratios generally used by industry and by the rating agencies. The Company is not subject to externally imposed capital requirements.

The Company monitors capital using gearing ratio which is net debt divided by total equity. Net debt comprises of non-current borrowings (including current maturities and interest accrued there on) and current borrowings less cash and cash equivalents. Equity includes equity share capital and reserves that are managed as capital. The gearing ratio at the end of the reporting period was as follows:

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Borrowings (including interest accrued)	**1,73,012.41**	1,75,593.75
Less: Cash and cash equivalents	**17.04**	90.05
Net Debt	**1,72,995.37**	1,75,503.70
Total Equity	**1,28,051.07**	1,18,985.49
Net Debt to Equity Ratio	**1.35**	1.48

67. Disclosure as per Ind AS 114, 'Regulatory Deferral Accounts'

(i) Nature of rate regulated activities

The Company is mainly engaged in generation and sale of electricity. The price to be charged by the Company for electricity sold to its beneficiaries is determined by the CERC which provides extensive guidance on the principles and methodologies for determination of the tariff for the purpose of sale of electricity. The tariff is based on allowable costs like interest, depreciation, operation & maintenance expenses, etc. with a stipulated return.

This form of rate regulation is known as cost-of-service regulations which provide the Company to recover its costs of providing the goods or services plus a fair return.

(ii) Recognition and measurement

(a) As per the CERC Tariff Regulations, any gain or loss on account of exchange risk variation during the construction period shall form part of the capital cost till the declaration of Commercial Operation Date (COD) to be considered for calculation of tariff. The CERC during the past period in tariff orders for various stations has allowed exchange differences incurred during the construction period in the capital cost. Accordingly, exchange differences arising during the construction period is within the scope of Ind AS 114.

Further, any loss or gain on account of exchange differences on foreign currency loans for operating stations shall be recoverable from / payable to beneficiaries on actual payment basis, as per the said Regulations. Accordingly, such exchange differences are also within the scope of Ind AS 114.

In view of the above, exchange differences arising from settlement/translation of monetary item denominated in foreign currency to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized on an undiscounted basis as 'Regulatory deferral account debit/credit balance' by credit/debit to 'Net Movements in Regulatory deferral account balances' and adjusted from the year in which the same becomes recoverable from or payable to the beneficiaries. Accordingly, an amount of (-)₹ **729.75 crore** for the year ended as at 31 March 2022 has been accounted for as 'Regulatory deferral account debit balance' (31 March 2021: (-) ₹ 382.42 crore accounted as 'Regulatory deferral account debit balance'.). Further, an amount of ₹ **35.82 crore** (31 March 2021: ₹ 13.92 crore) has been realized/recognized during the year.

(b) Revision of pay scales of employees of PSEs w.e.f. 1 January 2017 has been implemented based on the guidelines issued by Department of Public Enterprises (DPE). The guidelines provide payment of superannuation benefits @ 30% of basic + DA to be provided to the employees of CPSEs which includes gratuity at the enhanced ceiling of ₹ 0.20 crore from the existing ceiling of ₹ 0.10 crore. As per Proviso 8(3) of Terms and Conditions of Tariff Regulations 2014 applicable for the period 2014-19, truing up exercise in respect of Change in Law or compliance of existing law will be taken up by CERC. The increase in gratuity limit from ₹ 0.10 crore to ₹ 0.20 crore falls under the category of 'Change in law' and a regulatory asset has been created. The Payment of Gratuity Act, 1972 has since been amended and the ceiling has been increased to ₹ 0.20 crore.

Considering the methodology followed by the CERC for allowing impact of the previous pay revision, various tariff orders issued by the CERC under Regulations, 2014 and the above-mentioned provision related to the change in law of CERC Tariff Regulations, 2014, a regulatory asset has been created upto 31 March 2019 (Regulatory deferral account debit balance) towards the increase in O&M expenditure due to the pay revision. This was taken up with CERC through truing up tariff petition. CERC has been allowing the same progressively and during the year, the expenditure has been allowed in respect of few stations and accordingly an amount of ₹ **127.02 crore** (31 March 2021: ₹ Nil) has been adjusted and an amount of ₹ **359.58 crore** (31 March 2021: ₹ Nil) has been reversed. Balance orders are expected in the coming years.

(c) CERC Regulations provide that deferred tax liability upto 31 March 2009 shall be recovered from the beneficiaries as and when the same gets materialized. Further, for the period commencing from 1 April 2014, CERC Tariff Regulations provide for grossing up of the return on equity based on effective tax rate for the financial year based on the actual tax paid during the year on the generation income. The Company has recognised a regulatory deferral account debit balance for such deferred tax liabilities (net) in the financial statements. Regulatory deferral account debit balance for deferred tax liability for the period commencing from 1 April 2014 will be reversed in future years when the related deferred tax liability forms part of current tax. Accordingly, an amount of ₹ **1,569.33 crore** (31 March 2021: ₹ 1,437.85 crore) for the year ended 31 March 2022 has been accounted for as 'Regulatory deferral account debit balance'.

(d) The petition filed by the Company before CERC for reimbursement of the expenditure on transportation of ash, was favourably considered by CERC vide order dated 5 November 2018 and it was allowed to reimburse the actual additional expenditure incurred towards transportation of ash in terms of MOEF notification under change in law, as additional O&M expenses, w.e.f. 25 January 2016 subject to prudence check. Keeping in view the above, regulatory asset has been created towards ash transportation expenses in respect of stations where there is shortfall in revenue from sale of ash over and above ash transportation expenses. Accordingly, an amount of ₹ **1,439.06 crore** (31 March 2021: ₹ 1,003.79 crore) for the year ended 31 March 2022 has been accounted for as 'Regulatory deferral account debit balance'. Further, the expenditure has been allowed by CERC during the year in respect of few stations and accordingly an amount of ₹ **55.58 crore** (31 March 2021: ₹ Nil) has been adjusted.

(e) CERC Regulations provide that the capital expenditure in respect of existing generating station incurred /projected to be incurred , inter-alia , towards liabilities to meet award of arbitration (i) within the original scope of work after the COD upto the cut off date (Regulations 24) ; (ii) within the original scope of work and after the cut off date (Regulations 25); and (iii) beyond the original scope of work (Regulation 26), will be admitted by CERC subject to prudence check. Keeping in view the above, regulatory deferral account debit balance has been accounted corresponding to the amount debited to Statement of profit & loss in respect of arbitration cases amounting to ₹ **Nil** for the year ended 31 March 2022 (31 March 2021: ₹ 110.81 crore). Further,'Regulatory deferral account debit balance' amounting to ₹**110.81 crore** (31 March 2021:₹ Nil) has been reversed based on assessment of its recoverability, by debit to Statement of profit and loss.

(iii) Risks associated with future recovery/reversal of regulatory deferral account balances:

(i) demand risk due to changes in consumer attitudes, the availability of alternative sources of supply

(ii) regulatory risk on account of changes in regulations and submission or approval of a rate-setting application or the entity's assessment of the expected future regulatory actions

(iii) other risks including currency or other market risks, if any

(iv) Reconciliation of the carrying amounts:

The regulated assets/liability recognized in the books to be recovered from or payable to beneficiaries in future periods are as follows:

a) Regulatory deferral account debit balance - Note 19

The regulatory assets recognized in the books to be recovered from the beneficiaries in future periods are as follows:

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
A. Opening balance	11,143.72	9,122.76
B. Additions during the year	1,808.25	2,170.03
C. Amount realized/recognized during the year	(218.42)	(13.92)
D. Regulatory deferral account balances recognized in the statement of profit and loss (B+C)	1,589.83	2,156.11
E. Adjustments during the year	(144.58)	(135.15)
F. Closing balance (A+D+E)	12,588.97	11,143.72

b) Net movements in regulatory deferral account balances [I]

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Exchange differences	(729.75)	(382.42)
Pay Revision	(359.58)	-
Deferred tax	1,569.33	1,437.85
Ash transportation cost	1,439.06	1,003.79
Arbitration cases	(110.81)	110.81
Sub total (i)	1,808.25	2,170.03
Amount realized/ recognized during the year (ii)	(218.42)	(13.92)
Net movement in regulatory deferral account balances (i)+(ii)	1,589.83	2,156.11

c) Tax on net movements in regulatory deferral account balances [II]	277.77	376.72
d) Total amount recognized in the statement of profit and loss during the year [I-II]	1,312.06	1,779.39

The Company expects to recover the carrying amount of regulatory deferral account debit balance over the life of the projects.

68. Disclosure as per Ind AS 115, 'Revenue from contracts with customers'

I. Nature of goods and services

The revenue of the Company comprises of income from energy sales, sale of energy through trading, consultancy and other services. The following is a description of the principal activities:

(a) Revenue from energy sales

The major revenue of the Company comes from energy sales. The Company sells electricity to bulk customers, mainly electricity utilities owned by State Governments as well as private Discoms operating in States. Sale of electricity is generally made pursuant to long-term Power Purchase Agreements (PPAs) entered into with the beneficiaries.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for energy sales:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Energy sales	The Company recognises revenue from contracts for energy sales over time as the customers simultaneously receive and consume the benefits provided by the Company. The tariff for computing revenue from energy sales is determined in terms of CERC Regulations as notified from time to time. The amount of revenue recognised for energy sales is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Company. The amounts are billed on a monthly basis and are payable within contractually agreed credit period. In case of power station which are not governed by CERC tariff regulations, revenue is recognized based on agreement entered with beneficieries.

(b) Revenue from energy trading, consultancy and other services

(i) Sale of Energy through trading

The Company is purchasing power from the developers and selling it to the Discoms on principal to principal basis.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for sale of energy through trading:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Sale of energy through trading	The Company recognises revenue from contracts for sale of energy through trading over time as the customers simultaneously receive and consume the benefits provided by the Company. The tariff for computing revenue from sale of energy through trading is determined as per the terms of the agreements. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Company. The amounts are billed on a monthly basis and are payable within contractually agreed credit period.

(ii) Consultancy and other services

The Company undertakes consultancy and turnkey project contracts for domestic and international clients in the different phases of power plants viz. engineering, project management & supervision, construction management, operation & maintenance of power plants, research & development, management consultancy etc.
Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for consultancy and other services:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Consultancy services	The Company recognises revenue from contracts for consultancy services over time as the customers simultaneously receive and consume the benefits provided by the Company. For the assets (e.g. deliverables, reports etc.) transferred under the contracts, the assets do not have alternative use to the Company and the Company has enforceable right to payment for performance completed to date. The revenue from consultancy services is determined as per the terms of the contracts. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Company. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Operation and maintenance services	The Company recognises revenue from contracts for operation and maintenance services over time as the customers simultaneously receive and consume the benefits provided by the Company. The revenue from operation and maintenance services is determined as per the terms of the contracts. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Company. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.
Deen Dayal Upadhyay Gramin Jyoti Yojna (DDUGJY Scheme)	The Company recognises revenue from work done under DDUGJY scheme over time as the assets do not have alternative use to the Company and the Company has enforceable right to payment for performance completed to date. The revenue from DDUGJY scheme is determined as per the terms of the contract. There is no component of variable consideration under the contract. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.
Pradhan Mantri Sahaj Bijli Har Ghar Yojna (SAUBHAGYA Scheme)	The Company recognises revenue from work done under SAUBHAGYA scheme at a point in time when the Company transfers control of goods and services under the contract to the customers. The revenue from SAUBHAGYA scheme is determined as per the terms of the contracts. There is no component of variable consideration under the contract. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.

(iii) Sale of captive coal to subsidiary company

The revenue also includes revenue from sale of captive coal to subsidiary.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for sale of captive coal:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Sale of captive coal to subsidiary company	The Company recognises revenue from contracts for sale of captive coal to subsidiary company when control of the goods is transferred to customers. The tariff for computing revenue from sale of captive coal to subsidiary company is determined in terms of CERC Tariff Regulations applicable for input price of coal from captive mines. The amounts are billed as and when goods are transferred and are payable as per agreed procedures.

II. Disaggregation of revenue

In the following table, revenue is disaggregated by type of product and services, geographical market and timing of revenue recognition:

₹ Crore

Particulars	Generation of energy		Others		Total	
	For the year ended		For the year ended		For the year ended	
	31 March 2022	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021
Geographical markets						
India	**1,11,296.51**	95,579.66	**3,724.93**	3,459.74	**1,15,021.44**	99,039.40
Outside India	**-**	-	**0.38**	0.23	**0.38**	0.23
	1,11,296.51	95,579.66	**3,725.31**	3,459.97	**1,15,021.82**	99,039.63
Timing of revenue recognition						
Products and services transferred over time	**1,11,296.51**	95,579.66	**3,725.31**	3,459.97	**1,15,021.82**	99,039.63
	1,11,296.51	95,579.66	**3,725.31**	3,459.97	**1,15,021.82**	99,039.63

III. Reconciliation of revenue recognised with contract price:

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Contract price	**1,15,563.37**	99,431.16
Adjustments for:		
Rebates	**(541.55)**	(391.53)
Revenue recognised	**1,15,021.82**	99,039.63

IV. Contract balances

Contract assets are recognised when there is excess of revenue earned over billings on contracts. Contract assets are transferred to trade receivables revenue when there is unconditional right to receive cash, and only passage of time is required, as per contractual terms. The contract liabilities primarily relate to the advance consideration received from the customers which are referred as 'advances from customers / payable to beneficiaries'.

The following table provides information about trade receivables including unbilled revenue, contract assets and advances from customers/payable to beneficiaries:

₹ Crore

Particulars	As at 31 March 2022		As at 31 March 2021	
	Current	Non-current	Current	Non-current
Trade receivables including unbilled revenue	**22,293.32**	-	22,976.26	-
Contract assets	**4,649.50**	-	2,987.87	-
Advances from customers/payable to beneficiaries	**1,493.79**	-	1,390.20	-

The amount of revenue recognised from performance obligations satisfied (or partially satisfied) in previous periods, mainly due to change in transaction prices is ₹ **1,938.05 crore** (31 March 2021 : ₹ 1,154.64 crore).

V. Transaction price allocated to the remaining performance obligations

Performance obligations related to sale of energy:

Revenue from sale of energy is accounted for based on tariff rates approved by the CERC (except items indicated as provisional) as modified by the orders of Appellate Tribunal for Electricity to the extent applicable. In case of power stations, where the tariff rates are yet to be approved/items indicated provisional by the CERC in their orders, provisional rates are adopted considering the applicable CERC Tariff Regulations. Revenue from sale of energy is recognized once the electricity has been delivered to the beneficiary and is measured through a regular review of usage meters. Beneficiaries are billed on a periodic and regular basis. Therefore, transaction price to be allocated to remaining performance obligations cannot be determined reliably for the entire duration of the contract.

Performance obligations related to other contracts:

For rest of the contracts, transaction price for remaining performance obligations amounts to ₹ **1,037.51 crore** (31 March 2021: ₹ 723.34 crore) which shall be received over the contract period in proportion of the work performed/services provided by the Company.

VI. Practical expedients applied as per Ind AS 115:

a. The company has not disclosed information about remaining performance obligations that have original expected duration of one year or less and where the revenue recognised corresponds directly with the value to the customer of the entity's performance completed to date.

b. The Company does not expect to have any contracts where the period between the transfer of the promised goods or services to the customer and payment by the customer exceeds one year. As a consequence, the Company has not adjusted any of the transaction prices for the time value of money.

VII. The Company has not incurred any incremental costs of obtaining contracts with a customer and therefore, not recognised an asset for such costs.

69. Disclosure as per Ind AS 116 'Leases'

(A) Company as Lessee

(i) The Company's significant leasing arrangements are in respect of the following assets:

(a) Premises for residential use of employees, offices and guest houses/ transit camps on lease which are not non-cancellable and are usually renewable on mutually agreeable terms. The company generally incurs amount on improvements which are significant to the respective lease and hence the cancellable period of the lease during which the company intends to continue considering the past experience / practice, is considered for the purpose of determining the lease period.

(b) The Company has taken electrical vehicles on operating lease for a period of six years, which can be further extended at mutually agreed terms. Lease rentals are subject to escalation of 10% per annum.

(c) A helicopter on wet lease basis.

(d) The Company has taken certain vehicles (other than electrical) on lease for a period of four years, which can be further extended at mutually agreed terms. There are no escalations in the lease rentals as per terms of the agreement. However, the Company has purchase option for such vehicles at the end of the lease term.

(e) The Company had entered into an agreement for movement of coal through inland waterways for one of its stations. As per the agreement, the operator was to design, finance, build, operate and maintain the unloading and material handling infrastructure for 7 years after which it was to be transferred to the Company at ₹ 1/-. Refer Note no. 60 (iii)(b).

(f) The Company acquires land on leasehold basis for a period generally ranging from 25 years to 99 years from the government authorities which can be renewed further based on mutually agreed terms and conditions. The leases are non cancellable. These leases are capitalised at the present value of the total minimum lease payments to be paid over the lease term. Future lease rentals are recognised as 'Lease obligations' at their present values. The Right-of-use land is amortised considering the significant accounting policies of the Company.

(ii) The following are the carrying amounts of lease liabilities recognised and the movements during the year :

₹ Crore

Particulars	**For the year ended 31 March 2022**	For the year ended 31 March 2021
Opening Balance	**872.42**	829.67
- Additions in lease liabilities	**85.92**	36.05
- Interest cost during the year	**60.34**	49.27
- Payment of lease liabilities	**(35.60)**	(42.57)
Closing Balance	**983.08**	872.42
Current	**168.01**	151.80
Non Current	**815.07**	720.62

(iii) Maturity Analysis of the lease liabilities:

₹ Crore

Contractual undiscounted cash flows	**As at 31 March 2022**	As at 31 March 2021
3 months or less	**148.08**	140.77
3-12 Months	**75.04**	50.00
1-2 Years	**58.54**	65.95
2-5 Years	**184.51**	170.17
More than 5 Years	**2,341.87**	2,229.13
Total	**2,808.04**	2,656.02

(iv) The following are the amounts recognised in Statement of profit and loss:

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Depreciation and amortisation expense for right-of-use assets	220.75	219.77
Interest expense on lease liabilities	60.34	49.27
Expense relating to short-term leases	6.43	7.24

(v) The following are the amounts disclosed in the cash flow statement:

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Cash Outflow from leases	42.03	49.81

(B) Leases as lessor

a) Finance leases

The Company had classified the arrangement with its customer for Stage I of a power station in the nature of lease based on the principles enunciated in Appendix C of Ind AS 17 - 'Leases' and accounted for as finance lease in accordance with those principles. This arrangement continues to be classified as finance lease after transition to Ind AS 116 - 'Leases'.

The power purchase agreement with the beneficiary is for a period of twenty five years from the date of transfer and the agreement may be mutually extended, renewed or replaced by another agreement on such terms and for such further period of time as the parties may mutually agree.

The following are the amounts recognised in Statement of profit and loss:

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
i) Finance income on the net investment in the lease	45.07	51.54
ii) Income relating to variable lease payments not included in the measurement of the net investment in the lease	730.68	690.11

Undiscounted lease payments to be received on an annual basis for a minimum of each of the first five years and for the remaining years:

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Less than one year	108.54	108.54
Between one and two years	108.54	108.54
Between two and three years	215.32	108.54
Between three and four years	-	217.20
Total minimum lease payments	432.40	542.82
Less amounts representing unearned finance income	76.90	105.05
Present value of minimum lease payments	355.50	437.77

b) **Operating leases**

The Company had classified the arrangement with its customer for two power stations (one thermal and one gas) as lease based on the principles enunciated in Appendix C of Ind AS 17 and accounted for as operating lease in accordance with those principles. These arrangements continue to be classified as operating lease after transition to Ind AS 116 'Leases'.

(i) Thermal Power Station

Power Purchase Agreements (PPA) signed with the beneficiary was operative for a period of five years from the date of take over of the plant and the agreement may be mutually extended, renewed or replaced by another agreement on such terms and conditions for such further period as the parties may mutually agree. However, the operations of this power station was suspended w.e.f. the end of 31 March 2021 and accordingly revenues were recognized upto 31 March 2021.

(ii) Gas Power Station

PPA signed with the beneficiary on 6 January 1995 was operative for five years from the date of commercial operation of last unit of the station and may be mutually extended, renewed or replaced by another agreement on such terms and on such further period of time as the parties may mutually agree. As per the supplementary agreement dated 15 February 2013 the validity period is extended for a further period of 12 years from 1 March 2013.

The following are the amounts recognised in Statement of profit and loss in respect of the above stations:

₹ Crore

Particulars	**For the year ended 31 March 2022**	For the year ended 31 March 2021
Lease Income	**19.59**	156.18
Income relating to variable lease payments that do not depend on an index or a rate	**84.53**	1,057.32

Undiscounted lease payments to be received on an annual basis for a minimum of each of the first five years and for the remaining years:

₹ Crore

Particulars	**As at 31 March 2022**	As at 31 March 2021
Less than one year	**19.58**	19.58
Between one and two years	**19.58**	19.58
Between two and three years	**3.91**	19.58
Between three and four years	**-**	3.91
Total	**43.07**	62.65

70. Information in respect of micro and small enterprises as at 31 March 2022 as required by Schedule III to the Companies Act, 2013 and Micro, Small and Medium Enterprises Development Act, 2006 (MSMED Act)

₹ Crore

Particulars	**31 March 2022**	31 March 2021
a) Amount remaining unpaid to any supplier:		
Principal amount	**701.03**	617.63
Interest due thereon	**-**	-
b) Amount of interest paid in terms of Section 16 of the MSMED Act along-with the amount paid to the suppliers beyond the appointed day.	**-**	-

Particulars	31 March 2022	31 March 2021
c) Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the year) but without adding the interest specified under the MSMED Act.	-	-
d) Amount of interest accrued and remaining unpaid	-	-
e) Amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprises, for the purpose of disallowances as a deductible expenditure under Section 23 of MSMED Act	-	-

The payment to the vendors are made as and when they are due, as per terms and conditions of respective contracts.

71. Disclosure as required by Schedule V of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015:

A. Loans and advances in the nature of loans:

1. To Subsidiary companies

₹ Crore

Name of the Company	Outstanding balance as at		Maximum amount outstanding during the year ended	
	31 March 2022	31 March 2021	**31 March 2022**	31 March 2021
Kanti Bijlee Utpadan Nigam Ltd.	**164.33**	278.66	**278.66**	343.00
Ratnagiri Gas and Power Private Ltd.	**818.62**	871.73	**871.73**	885.00
NTPC Renewable Energy Limited	-	-	**0.70**	3.45

2. To Joint venture companies

₹ Crore

Name of the Company	Outstanding balance as at		Maximum amount outstanding during the year ended	
	31 March 2022	31 March 2021	**31 March 2022**	31 March 2021
National High Power Test Laboratory Private Ltd.	**18.40**	18.40	**18.40**	18.40

3. To Firms/companies in which directors are interested : Nil

B. Investment by the loanee (as detailed above) in the shares of NTPC and its subsidiaries : Nil

72. Contingent liabilities, contingent assets and commitments

A. Contingent liabilities

a. Claims against the Company not acknowledged as debts

(i) Capital Works

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Claims by contractors under capital works	**10,443.97**	12,880.46

Some of the contractors for supply and installation of equipment and execution of works at our projects have lodged claims on the Company for the above amounts seeking enhancement of the contract price, revision of work schedule with price escalation, compensation for the extended period of work, idle charges etc. These claims are being contested by the Company as being not admissible in terms of the provisions of the respective contracts.

The Company is pursuing various options under the dispute resolution mechanism available in the contracts for settlement of these claims. It is not practicable to make a realistic estimate of the outflow of resources if any, for settlement of such claims pending resolution.

(ii) Land compensation cases

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Claims by land oustees	621.98	456.92

In respect of land acquired for the projects, the erstwhile land owners have claimed higher compensation before various authorities/courts which are yet to be settled. Against such cases, contingent liability of these amounts has been estimated.

(iii) Fuel suppliers

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Claims towards grade slippages	2,145.78	2,046.70
Other claims	2,561.29	1,776.27

Pending resolution of the issues with the coal companies, above amounts towards grade slippage pursuant to third party sampling has been estimated by the Company as contingent liability. Further, other claims represent claims made by fuel companies towards surface transportation charges, custom duty on service margin on imported coal, take or pay claims of gas suppliers, etc. ,estimated by the Company as contingent liability.

The Company is pursuing with the fuel companies, related ministries and other options under the dispute resolution mechanism available for settlement of these claims.

(iv) Others

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Claims by government agencies / others	823.65	1,004.52

In respect of claims made by various State/Central Government departments/Authorities towards building permission fee, penalty on diversion of agricultural land to non-agricultural use, non agricultural land assessment tax, water royalty, other claims, etc. and by others, a contingent liability of the above amounts has been estimated.

(v) Possible reimbursement in respect of (i) to (iii) above

In respect of claims included in (i) and (ii) above, payments, if any, by the Company on settlement of the claims would be eligible for inclusion in the capital cost for the purpose of determination of tariff as per CERC Tariff Regulations subject to prudence check by the CERC. In case of (iii), the estimated possible reimbursement by way of recovery through tariff as per Regulations is ₹ **4,696.06 crore** (31 March 2021: ₹ 3,810.71 crore).

b. Disputed tax matters

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Tax matters before various authorities	6,097.43	6,019.47

Disputed income tax/sales tax/excise and other tax matters are pending before various Appellate Authorities. Many of these matters were adjudicated in favour of the Company but are disputed before higher authorities by the concerned departments. In respect of these disputed cases, the Company estimate possible reimbursement of ₹ **2,347.59 crore** (31 March 2021: ₹ 2,301.10 crore). The amount paid under dispute/adjusted by the authorities in respect of the cases amounts to ₹ **2,868.97 crore** (31 March 2021: ₹ 2,866.26 crore).

c. **Others**

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Bills discounted with banks	**6,892.03**	16,295.05
Coal transportation [Refer Note 60(iii)(b)]	**2,292.30**	2,153.57
Others	**396.62**	433.13

Bills discounted with banks against trade receivables has been disclosed under contingent liabilities. (Refer Note-13). In case of any claim on the Company from the banks in this regard, entire amount shall be recoverable from the beneficiaries along with surcharge. Others include contingent liabilities disclosed on an estimated basis relating to likely claims that may arise in connection with abandoned oil exploration activities, land use agreements, service tax reimbursements, etc.

Some of the beneficiaries have filed appeals against the tariff orders of the CERC. The amount of contingent liability in this regard is not ascertainable.

B. Contingent assets

(i) While determining the tariff for some of the Company's power stations, CERC has disallowed certain capital expenditure incurred by the Company. The Company aggrieved over such issues has filed appeals with the Appellate Tribunal for Electricity (APTEL)/Hon'ble Supreme Court against the tariff orders issued by the CERC. Based on past experience, the Company believes that a favourable outcome is probable. However, it is impracticable to estimate the financial effect of the same as its receipt is dependent on the outcome of the judgement.

(ii) CERC Tariff Regulations provide for levy of Late Payment Surcharge by generating company in case of delay in payment by beneficiaries beyond specified number of days from the date of presentation of bill. However, in view of significant uncertainties in the ultimate collection of the said surcharge from some of the beneficiaries against partial bills as estimated by the management, an amount of ₹ **184.17 crore** as on 31 March 2022 (31 March 2021: ₹ 181.93 crore) has not been recognised.

C. Commitments

a) Estimated amount of contracts remaining to be executed on capital account is as under:

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Property, plant and equipment	**38,346.53**	45,278.28
Intangible assets	**43.65**	10.32
Total	**38,390.18**	45,288.60

b) In respect of investments in subsidiary companies (including share application money pending allotment), the Company has restrictions for their disposal as at 31 March 2022 as under:

₹ Crore

Name of the Subsidiary	Period of restrictions for disposal of investments as per related agreements	Amount invested as at	
		31 March 2022	31 March 2021
Bhartiya Rail Bijlee Company Ltd.	5 years from the date of commercial operation of the last unit of the project.	**1,774.12**	1,774.12
Kanti Bijlee Utpadan Nigam Ltd.	As per loan agreement, minimum equity of 51% shall be maintained at all times until final settlement of loan i.e., 4 years moratorium period and subsequently 11 years for repayment. (Also refer Note 6(d))	**1,670.67**	1,670.67
Patratu Vidyut Utpadan Nigam Ltd.	5 years from the date of signing of agreement or till the date of commercial operation of the last new unit of Phase-I, whichever is later.	**1,237.62**	887.62
Nabinagar Power Generating Company Ltd.	NTPC shall not transfer/assign or pledge shares until final settlement of loan i.e. 5 years moratorium and subsequently 15 years for repayment. (Also refer Note 6(d))	**4,961.03**	4,687.03

₹ Crore

Name of the Subsidiary	Period of restrictions for disposal of investments as per related agreements	Amount invested as at	
		31 March 2022	31 March 2021
THDC India Ltd.	Save and except with prior written consent of GOI, NTPC shall not take any action that may result in shareholding in the subsidiary falling below 51% and shall not take any action that may result in the subsidiary ceasing to be a government company.	**7,500.00**	7,500.00
North Eastern Electric Power Corporation Ltd.	Save and except with prior written consent of GOI, NTPC shall not take any action that may result in shareholding / or total voting power in the subsidiary falling below 51% and shall not take any action that may result in the subsidiary ceasing to be a government company. Further, NTPC shall continue to hold 100% of paid up capital and voting power in the subsidiary till all amounts repayable under the loan agreement executed between the subsidiary and KfW are repaid.	**4,000.00**	4,000.00
NTPC EDMC Waste Solutions Pvt Ltd	5 years from the date of incorporation (i.e. 01 June 2020)	**0.15**	0.15
Total		**21,143.59**	20,519.59

c) In respect of investments in joint venture companies (including share application money pending allotment), the Company has restrictions for their disposal as at 31 March 2022 as under:

₹ Crore

Name of the Joint Venture Company	Period of restrictions for disposal of investments as per related agreements	Amount invested as at	
		31 March 2022	31 March 2021
Transformers and Electricals Kerala Ltd.	3 years from the date of acquisition (i.e.19.06.2009) or upgradation capacity enhancement scheme whichever is later or such later period as may be mutually agreed. Also refer Note 6 (c).	**31.34**	31.34
NTPC BHEL Power Projects Private Ltd.	3 years from the date of completion of first EPC contract of single order value of not less than ₹500 crore or till further such time as mutually agreed. Also refer Note 6 (b).	**50.00**	50.00
National High Power Test Laboratory Private Ltd.	5 years from the date of incorporation (i.e. 22.05.2009) or completion of project whichever is later.	**30.40**	30.40
CIL NTPC Urja Private Ltd.	5 years from the date of incorporation (i.e. 27.04.2010) or commercial operation whichever is later.	**0.08**	0.08
Trincomalee Power Company Ltd.	12 years from the initial operation date.	**15.20**	15.20
Bangladesh-India Friendship Power Company Private Ltd.	15 years from the date of commercial operation date.	**620.38**	533.60
Hindustan Urvarak and Rasayan Ltd.	(a) 5 years from the date of incorporation (15.06.2016) or 2 years from commercial operation date of any one of the proposed projects at Sindri, Gorakhpur and Barauni or date of allotment of shares for first time, whichever is later. (b) As per Sponsors Support undertaking , NTPC shall jointly and severally with the other sponsors provide additional funds to meet all cost overrun incurred/to be incurred in relation to the Project. Further, NTPC shall jointly with the other sponsors, retain 51% of total equity share capital of the JV and management control until the final settlement date of the loan facility (door to door tenure of 15 years). (c) Assist in ensuring that HURL completes the tie-up of at-least 85% (eighty-five percent) of the total requirement of natural gas. (Also refer Note 6(e))	**1,629.42**	1,131.76
Total		**2,376.82**	1,792.38

d) In respect of other investments, the Company has restrictions for their disposal as at 31 March 2022 as under:

₹ Crore

Name of the Company	Period of restrictions for disposal of investments as per related agreements	Amount invested as at	
		31 March 2022	31 March 2021
International Coal Ventures Private Ltd.	5 years from the date of incorporation (i.e. 20.05.2009) or till such time an undertaking for non-disposal of such share is given to FI/Banks for their assistance to the Company whichever is later. Also refer Note 7(c).	1.40	1.40
Total		1.40	1.40

e) The Company has commitments of ₹ **7,616.23 crore** (31 March 2021: ₹ 7,499.90 crore) towards further investment in the subsidiary companies as at 31 March 2022.

f) The Company has commitments of ₹ **2,369.13 crore** (31 March 2021: ₹ 2,253.53 crore) towards further investment in the joint venture entities as at 31 March 2022.

g) The Company has commitments of ₹ **498.60 crore** (31 March 2021: ₹ 507.60 crore) towards further investment in other investments as at 31 March 2022.

h) The Company has commitments of bank guarantee of 0.50% of total contract price to be undertaken by NTPC-BHEL Power Projects Private Ltd. (a joint venture company) to a cumulative amount of ₹ **75.00 crore** (31 March 2021: ₹ 75.00 crore).

i) The Company has agreed to provide unconditional and irrevocable financial support to NTPC GE Power Services Ltd. (a joint venture company) for meeting financial qualifying requirement for execution of Flue Gas De-sulfurisation (FGD) projects in India. Such support shall be provided by way of Letter of Undertaking to a cumulative exposure up to the award value of the contract(s) not exceeding ₹ 600.00 Crore and cumulative exposure of the Company, in proportion to shareholding, would not exceed ₹ **300.00 crore** (31 March 2021: ₹ 300.00 crore).

j) The Company has provided corporate guarantee for an amount of ₹ **237.60 crore** (31 March 2021: ₹ 237.60 crore) for Patratu Vidyut Utpadan Nigam Ltd. (PVUNL) (a subsidiary company) in favor of Axis Bank for sanction of bank guarantee issued to Ministry of Coal for performance security against the milestones of Banhardih coal mine development of PVUNL.

k) The Company has provided comfort letter for NTPC Electric Supply Company Limited (NESCL) (a subsidiary company) to ICICI Bank in relation for sanction of Bank Guarantee facilities for an amount of ₹ **10.00 crore** (31 March 2021: ₹ 10.00 crore) to enable NESCL to participate in the bid process for privatization of DISCOM of Union Territory (UT) of Chandigarh.

l) The Company has agreed to provide borrowing support to NTPC Renewable Energy Limited (a subsidiary company) upto ₹ **6,000 crore** (31 March 2021: ₹ 6,000 crore) in the form of long term / short term loan, bank guarantee, corporate guarantee / comfort letter to banks, etc., in case it is required by NTPC Renewable Energy Limited.

m) The Company has agreed to provide sponsor undertaking to lenders for additional term loan upto ₹ **1,908.38 crore** (31 March 2021: ₹ Nil) for implementation of various projects of Hindustan Urvarak and Rasayan Limited, a Joint Venture Company.

n) Company's commitment towards the minimum work programme in respect of oil exploration activities of joint operations has been disclosed in Note 62.

o) Jhabua Power Limited (JPL), having an operational thermal power capacity of 1 x 600 MW was admitted to National Company Law Tribunal (NCLT) on 27 March 2019, and is presently undergoing Corporate Insolvency Resolution Process in NCLT. Invitation for Expression of Interest for submission of Resolution Plan for JPL was published by Resolution Professional on 19 August 2019. The Board of Directors of the Company had accorded in-principle approval for submission of Resolution Plan for acquisition of JPL. Subsequently, the Company has submitted the Resolution Plan to Resolution Professional on due date of 30 December 2019 and revised Resolution plan on 30 November 2020 and 16 April 2021 based on discussions with Committee of Creditors (CoC)/Resolution Professional.

After prolonged negotiations with CoC, NTPC submitted its Final Resolution Plan on 14 June 2021 which was approved on 26 June 2021 with 100% vote and LoI issued to NTPC which has been accepted by NTPC and submitted the LoI along with PBG on 28 June 2021.Resolution Professional has filed the Resolution Plan approved by CoC for approval of NCLT on 30 June 2021.

A petition was filed by erstwhile promoters questioning NTPC's qualification u/s 29A of IBC to submit the Resolution Plan. NCLT, on 8 March 2022 has pronounced its order dismissing the petition and has rejected all the prayers sought by them. The order of NCLT has been challenged by them before the National Company Law Appellate Tribunal (NCLAT) on 17 March 2022 which is under consideration by NCLAT. Meanwhile, hearing on approval of Resolution Plan before NCLT Kolkata has been completed on 20 April 2022 and the Order has been reserved by NCLT.

p) Company's commitment in respect of lease agreements has been disclosed in Note 69.

73. Additional Regulatory Information

i) Title deeds of Immovable Properties not held in name of the Company as at 31 March 2022

Item category Balance sheet	Description of Item of Property	Gross Carrying Value (₹ crore)	Title Deeds Held in the name of	Whether title deed holder is a promoter, director or relative# of promoter* /director or employee of promoter/ director	Property held since which date	Reason for not being held in the name of the company
Property, plant and equipment	Land - Freehold	10.34	Large number of land oustees and State authorities	No	2021-22	The Company is taking appropriate steps for completion of legal formalities.
		77.92			2020-21	
		12.52			2019-20	
		148.77			2016-17 to 2018-19	
		1,163.29			2011-12 to 2015-16	
		174.55			Prior to 2011-12	
	Land - Right of Use	22.45			2021-22	
		20.82			2020-21	
		20.83			2019-20	
		115.74			2016-17 to 2018-19	
		177.01			2011-12 to 2015-16	
		250.04			Prior to 2011-12	
	Building	4.97			Prior to 2011-12	

Title deeds of Immovable Properties not held in name of the Company as at 31 March 2021

Item category Balance sheet	Description of Item of Property	Gross Carrying Value (₹ crore)	Title Deeds Held in the name of	Whether title deed holder is a promoter, director or relative# of promoter* /director or employee of promoter/ director	Property held since which date	Reason for not being held in the name of the company
Property, plant and equipment	Land - Freehold	68.39	Large number of land oustees and State authorities	No	2020-21	The Company is taking appropriate steps for completion of legal formalities.
		19.07			2019-20	
		149.44			2016-17 to 2018-19	
		1,163.04			2011-12 to 2015-16	
		162.07			Prior to 2011-12	
	Land - Right of Use	0.46			2020-21	
		20.83			2019-20	
		115.94			2016-17 to 2018-19	
		953.06			2011-12 to 2015-16	
		250.50			Prior to 2011-12	
	Building	4.97			Prior to 2011-12	

ii) The company does not hold any Investment Property in its books of accounts, so fair valuation of investment property is not applicable.

iii) During the year the company has not revalued any of its Property,plant and equipment.

iv) During the year, the company has not revalued any of its Intangible assets.

v) The company has not granted any loans or advances to promoters, directors, KMP's and the related parties that are repayable on demand or without specifying any terms or period of repayment.

vi) (a) Capital-Work-in Progress (CWIP) - Ageing Schedule as at 31 March 2022

₹ Crore

Capital-Work-in Progress (CWIP)	**Amount in CWIP for a period of**				**Total**
	Less than 1 year	**1-2 years**	**2-3 years**	**More than 3 years**	
Projects in progress	18,392.74	13,133.04	10,691.73	26,267.03	**68,484.54**
Projects temporarily suspended	-	0.72	0.29	113.11	**114.12**

Capital-Work-in Progress (CWIP) - Ageing Schedule as at 31 March 2021

₹ Crore

Capital-Work-in Progress (CWIP)	Amount in CWIP for a period of				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
Projects in progress	18,201.42	11,753.06	11,780.39	33,494.61	75,229.48
Projects temporarily suspended	0.72	0.29	0.52	112.59	114.12

(b) Capital-Work-in Progress (CWIP) - Completion schedule for projects overdue or cost overruns as compared to original plan as on 31 March 2022

₹ Crore

Name of the project	**To be completed in**				**Total**
	Less than 1 year	**1-2 years**	**2-3 years**	**More than 3 years**	
	Upto 31 March 2023	**1 April 2023 to 31 March 2024**	**1 April 2024 to 31 March 2025**	**Beyond 1 April 2025**	
North Karanpura	-	13,102.82	-	-	**13,102.82**
Barh-I	-	10,508.33	-	-	**10,508.33**
Tapovan Hydro Electric	-	-	5,350.49	-	**5,350.49**
Rammam	-	-	-	648.31	**648.31**
Telangana-I	9,987.25	-	-	-	**9,987.25**

Capital-Work-in Progress (CWIP) - Completion schedule for projects overdue or cost overruns as compared to original plan as on 31 March 2021

₹ Crore

Name of the project	To be completed in				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
	Upto 31 March 2022	1 April 2022 to 31 March 2023	1 April 2023 to 31 March 2024	Beyond 1 April 2024	
North Karanpura	-	-	11,729.57	-	11,729.57
Barh-I	-	-	18,418.21	-	18,418.21
Tavopan Hydro Electric	-	-	-	4,985.75	4,985.75
Rammam	-	-	-	552.42	552.42
Telangana-I	-	9,190.53	-	-	9,190.53

vii) (a) **Intangible assets under development - Ageing Schedule as at 31 March 2022**

₹ Crore

Intangible assets under development	**Amount in CWIP for a period of**				**Total**
	Less than 1 year	**1-2 years**	**2-3 years**	**More than 3 years**	
Projects in progress	3.67	8.64	55.73	30.43	**98.47**
Projects temporarily suspended	-	-	-	-	-

Intangible assets under development - Ageing Schedule as at 31 March 2021

₹ Crore

Intangible assets under development	Amount in CWIP for a period of				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
Projects in progress	8.72	55.73	0.29	30.16	94.90
Projects temporarily suspended	-	-	-	-	-

(b) Intangible assets under development - Completion schedule for projects overdue or cost overruns as compared to original plan as on 31 March 2022: ₹ Nil (31 March 2021: ₹ Nil)

viii) No proceedings have been initiated or pending against the company under the Benami Transactions (Prohibition) Act,1988.

ix) The quarterly returns / statement of current assets filed by the company with banks / financial institutions are in agreement with the books of accounts.

x) The company has not been declared as a wilful defaulter by any bank or financial institution or any other lender.

xi) Relationship with Struck off Companies

(a) Payables / receivables

Name of struck off Company	**Nature of transactions with struck-off Company**	**Balance outstanding as at 31 March 2022 (₹ Crore)**	**Balance outstanding as at 31 March 2021 (₹ Crore)**	**Relationship with the struck off company**	**CIN**	**Remarks**
Aradhya Construction Private Limited	Receivables	**#**	#	Contractor	U45200BR2013PTC020295	
Pb Infrastructure & Engineering (P) Ltd	Receivables	**#**	#	Contractor	U45203OR2006PTC008648	
Shiv Singh Amar Singh And Company Private Limited	Receivables	**1.38**	1.38	Contractor	U70200DL1985PTC022577	Under Litigation
Ganga Mechanical works Pvt Ltd	Receivables	**0.05**	0.03	Contractor	U45201DL2003PTC119275	
Hello Marketing Pvt. Ltd	Receivables	**#**	#	Contractor	U67190DL1993PTC053859	
Srijan Materials And Eng.Pvt.Ltd	Payables	**#**	#	Contractor	U45200BR2010PTC016335	
Brindavan Projects Ltd	Payables	**0.01**	0.01	Contractor	U45200TG1994PLC018506	
Eco E-Waste Recyclers India Private Limited	Payables	**#**	0.07	Contractor	U37200KA2010PTC052547	
Go Green Buildtech Pvt. Ltd.	Payables	**#**	#	Contractor	U45400DL2014PTC264520	
Innutech Web Solutions Pvt Ltd	Payables	**#**	#	Contractor	U72200DL2010PTC200692	
Leonard Exports Private Limited	Payables	**0.10**	0.10	Contractor	U74900WB2009PTC133430	
Neway Engineers Msw Pvt. Ltd.	Payables	**0.18**	0.18	Contractor	U74900TN2015PTC100484	
Prava Trading Corporation (India) Private Limited	Payables	**0.05**	0.02	Contractor	U51909WB2013PTC197297	
Pyrotech Electronics Private Ltd	Payables	**#**	0.01	Contractor	U99999MH1988PTC046600	

Name of struck off Company	Nature of transactions with struck-off Company	Balance outstanding as at 31 March 2022 (₹ Crore)	Balance outstanding as at 31 March 2021 (₹ Crore)	Relationship with the struck off company	CIN	Remarks
S.V. Network Technologies India Private Limited	Payables	**0.10**	0.09	Contractor	U72200TG2006PTC051972	
U K Construction Pvt Ltd	Payables	**#**	#	Contractor	U00501BR1986PTC002490	
Business Standard Private Limited	Payables	**#**	#	Contractor	U22219WB1970PLC027883	
Excellent Technocrate Pvt Ltd	Payables	**0.01**	0.01	Contractor	U45200BR2009PTC014723	
Hanothia Industries Ltd.	Payables	**#**	#	Contractor	U27109TG2005PTC046327	
Hn18 Health Services Pvt Ltd	Payables	**#**	0.01	Contractor	U74900KA2015PTC080531	
Kkl Allied Marketing Services Pvt Ltd	Payables	**0.01**	0.01	Contractor	U74999TG2008PTC057231	
M M Raj Travels Private Limited	Payables	**#**	#	Contractor	U34101UP1996PTC020425	
Prime Development Consultants Pvt Ltd	Payables	**#**	#	Contractor	U00358BR2001PTC009696	
Pumos Lighting Pvt Ltd	Payables	**#**	#	Contractor	U31503DL2012PTC240358	
S S Builders (India) Pvt Ltd	Payables	**#**	#	Contractor	U45201DL1981PTC011552	
S.V. Ready Mix Private Limited	Payables	**#**	#	Contractor	U74999AP2007PTC055829	
Snr Bricks Private Limited	Payables	**#**	#	Contractor	U26931AP2008PTC058944	
Timetech Enterprises Pvt Ltd	Payables	**0.01**	0.01	Contractor	U51109DL1989PTC038628	
Uniteam Pvt Ltd	Payables	**#**	#	Contractor	U29253WB2011PTC169264	
Vijay Construction	Payables	**#**	#	Contractor	U45200MH1996PTC100231	
# Individual Amount recoverable/payable is less than ₹ 50,000/- and sum of all recoverable cases amounts to ₹ **47,164**/- (31 March 2021- ₹ 52,772/-) and sum of all payable cases amounts to ₹ **2,84,863**/- (31 March 2021 - ₹ 2,56,104/-)						

b) **Shares held by struck off companies**

Name of struck off Company	Nature of transactions with struck-off Company	Number of equity shares held	CIN
Stalag Investments & Management Services Pvt Ltd	Shares held by struck off company	60	U67120MH1987PTC042898
Tradeshare Financial Services Pvt Ltd		120	U67120KL2008PTC023516
Borkar Finance Private Limited		430	U99999MH1997PTC105534
Exponential Financial Services Pvt Ltd		120	U74110DL1995PTC064465
Dige And Associates Investment Consultants Pvt Ltd		34	U00893PN2006PTC022295
Canny Securities Pvt Ltd		1	U67120KA1995PTC018357
Satvik Financial Services Ltd.		24	U67100MH2009PLC196964
Vaishak Shares Limited		1	U85110KA1994PLC015178
Kothari Intergroup Ltd.		13	U51909KA1984PLC005952
Dreams Broking Private Limited		6	U67190MH2012PTC226215

xii) The company has no cases of any charges or satisfaction yet to be registered with ROC beyond the statutory time limits.

xiii) The provisions of clause (87) of section 2 of the Act read with the Companies (Restriction on number of Layers) Rules, 2017 are not applicable to the company as per Section 2(45) of the Companies Act,2013.

xiv) **Disclosure of Ratios**

Ratio	Numerator	Denominator	FY 2021-22	FY 2020-21	% Variance	Reason for Variance more than 25%
Current ratio	Current Assets	Current Liabilities	**0.78**	0.82	-5.06%	
Debt-equity ratio	Paid-up debt capital (Non current borrowings+Current borrowings)	Shareholder's Equity (Total Equity)	**1.33**	1.46	-8.67%	
Debt service coverage ratio	Profit for the year+Finance costs+ Depreciation and amortization expenses+Exceptional items	Finance Costs + lease payments+Scheduled principal repayments of non current borrowings	**1.97**	2.36	-16.58%	
Return on equity ratio (%)	Profit for the year	Average Shareholder's Equity	**13.04%**	11.84%	10.15%	
Inventory turnover ratio	Revenue from operations	Average Inventory	**12.44**	9.97	24.87%	Due to increase in revenue from operations and decrease in average inventory, in the current year.
Trade receivables turnover ratio	Revenue from operations	Average trade receivables	**5.13**	4.25	20.60%	
Trade payables turnover ratio	Total Purchases (Fuel Cost + Other Expenses+Closing Inventory-Opening Inventory)	Closing Trade Payables	**7.85**	8.38	-6.37%	
Net capital turnover ratio	Revenue from operations	Working Capital+current maturities of non current borrowings	**43.71**	**	0.00%	** Denominator is negative
Net profit ratio (%)	Profit for the year	Revenue from operations	**13.87%**	13.88%	-0.05%	
Return on capital employed (%)	Earning before interest and taxes	Capital Employed(i)	**8.66%**	7.89%	9.80%	
Return on investment(ii)- Investments in Quoted Equity (%)	{MV(T1) – MV(T0) – Sum [C(t_1)]}	{MV(T0) + Sum [W(t) * C(t_2)]}	**15.43%**	120.00%	-87.14%	Due to difference in opening and closing market prices of listed investments in the comparitive periods.
Return on investment(ii)- Investments in Subsidiaries (%)	{MV(T1) – MV(T0) – Sum [C(t_1)]}	{MV(T0) + Sum [W(t) * C(t_2)]}	**5.68%**	8.90%	-36.14%	Due to variation in the networth of subsidiaries in the comparitive periods.
Return on investment(ii)- Investments in Mutual Fund- Unquoted (%)	{MV(T1) – MV(T0) – Sum [C(t_1)]}	{MV(T0) + Sum [W(t) * C(t_2)]}	**3.21%**	1.23%	161.53%	The amount of investments in the current year is more compared to previous year

(i) Capital Employed= Tangible Net Worth + Total Debt + Deferred Tax Liabilities

(ii) Return on Investment where

T1 = End of time period

T0 = Beginning of time period

t = Specific date falling between T1 and T0

MV(T1) = Market Value at T1

MV(T0) = Market Value at T0

C(t_1) = Cash inflow, cash outflow on specific date including dividend received

C(t_2) = Cash inflow, cash outflow on specific date excluding dividend received

W(t) = Weight of the net cash flow (i.e. either net inflow or net outflow) on day 't', calculated as [T1 – t] / T1

xv) There were no scheme of Arrangements approved by the competent authority during the year in terms of sections 230 to 237 of the Companies Act,2013. Also refer Note 6 d) w.r.t. amalgamation of Subsidiaries.

xvi) The Company has not advanced or loaned or invested any fund to any entity (Intermediaries) with the understanding that the Intermediary shall lend or invest in party identified by or on behalf of the Company (Ultimate Beneficiaries). The Company has not received any fund from any party with the understanding that the Company shall whether, directly or indirectly lend or invest in other entities identified by or on behalf of the Company ("Ultimate Beneficiaries") or provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

xvii) The Company has not traded or invested in Crypto currency or Virtual Currency during the financial year.

xviii) The Company does not have any transaction which is not recorded in the books of accounts that has been surrendered or disclosed as income during the year in the tax assessments under the Income Tax Act, 1961.

74. Corporate Social Responsibility Expenses (CSR)

As per Section 135 of the Companies Act, 2013 read with guidelines issued by Department of Public Enterprises, GOI, the Company is required to spend, in every financial year, at least two per cent of the average net profits of the Company made during the three immediately preceding financial years in accordance with its CSR Policy. The details of CSR expenses for the year are as under:

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
A. Amount required to be spent during the year		
(i) Gross amount (2% of average net profit as per Section 135 of Companies Act,2013)	**281.80**	278.57
(ii) Surplus arising out of CSR projects	-	-
(iii) Set off available from previous year	**140.30**	-
(iv) Total CSR obligation for the year [(i)+(ii) -(iii)]	**141.50**	278.57
B. Amount approved by the Board to be spent during the year	**356.72**	418.87
C. Amount spent during the year on:		
a) Construction/acquisition of any asset	-	-
b) On purposes other than (a) above	**356.72**	418.87
Total	**356.72**	418.87
D. Set off available for succeeding years	**215.22**	140.30
E. Amount unspent during the year	-	-

Note:- The set off available in the succeeding years is not recognised as an asset as a matter of prudence, considering the uncertainty involved in the adjustment of the same in future years.

i) Amount spent during the year ended 31 March 2022:

₹ Crore

Particulars	In cash	Yet to be paid in cash	Total
a) Construction/acquisition of any asset	-	-	-
b) On purposes other than (a) above	**341.38**	**15.34**	**356.72**

Amount spent during the year ended 31 March 2021:

₹ Crore

Particulars	In cash	Yet to be paid in cash	Total
a) Construction/acquisition of any asset	-	-	-
b) On purposes other than (a) above	405.43	13.44	418.87

ii) **Details of contribution to a trust controlled by the company in relation to CSR expenditure:**

₹ **Crore**

Particulars	**For the year ended 31 March 2022**	For the year ended 31 March 2021
Contribution given to NTPC Foundation	**0.18**	2.21

iii) **Break-up of the CSR expenses under major heads is as under:**

₹ **Crore**

Particulars	**For the year ended 31 March 2022**	For the year ended 31 March 2021
1. Eradicating Hunger and Poverty, Health Care and Sanitation	**88.37**	38.00
2. Education and Skill Development	**105.44**	62.96
3. Empowerment of Women and other Economically Backward Sections	**7.24**	0.79
4. Environmental Sustainability	**31.08**	33.41
5. Art & Culture	**0.52**	0.03
6. Sports	**4.70**	1.74
7. Rural Development	**23.63**	31.83
8. Disaster management, including relief, rehabilitation and reconstruction activities	**15.74**	0.11
9. Contribution to PM CARES Fund	**80.00**	250.00
Total	**356.72**	418.87

For and on behalf of the Board of Directors

(Nandini Sarkar)
Company Secretary

(A.K. Gautam)
Director (Finance)
DIN: 08293632

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

These are the Notes referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382

For S.N. Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(Mukesh Bansal)
Partner
M No. 505269

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R. Prasanna Varma)
Partner
M No. 025854

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No. 079236

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K. Prusty)
Partner
M No. 057318

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M No. 073488

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M No. 072534

Place : New Delhi
Dated : 20 May 2022
Digitally signed by signatories

To

The Members of NTPC Limited

Report on the Audit of the Standalone Financial Statements

Opinion

We have audited the Standalone Financial Statements of NTPC Limited ("the Company"), which comprise the Balance Sheet as at 31 March 2022, the Statement of Profit and Loss (including Other Comprehensive Income), the Statement of Changes in Equity and the Statement of Cash Flows for the year then ended and notes to the financial statements, including a summary of the significant accounting policies and other explanatory information (hereinafter referred to as "Standalone Financial Statements").

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid Standalone Financial Statements give the information required by the Companies Act, 2013 ("the Act") in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India, of the state of affairs (financial position) of the Company as at 31 March, 2022, and its profit (financial performance including other comprehensive income), changes in equity and its cash flows for the year ended on that date.

Basis for Opinion

We conducted our audit in accordance with the Standards on Auditing (SAs) specified under section 143(10) of the Act. Our responsibilities under those Standards are further described in the Auditors' Responsibilities for the Audit of the Standalone Financial Statements section of our report. We are independent of the Company in accordance with the Code of Ethics issued by the Institute of Chartered Accountants of India together with the ethical requirements that are relevant to our audit of the Standalone Financial Statements under the provisions of the Act and the Rules thereunder, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of Matter

We draw attention to the following matters in the notes to the Standalone Financial Statements:

(a) Note No. 37(a) regarding billing and accounting of sales on provisional basis considering the provisions of Central Electricity Regulatory Commission (CERC) Tariff Regulations.

(b) Note No. 60(iii)(b) with respect to appeal filed by the company with the Hon'ble High Court of Delhi in the matter of Arbitral award pronounced against the company and the related provision made/disclosure of contingent liability as mentioned in the said note.

Our opinion is not modified in respect of these matters.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the Standalone Financial Statements of the current period. These matters were addressed in the context of our audit of the Standalone Financial Statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For each matter below, description of how our audit addressed the matter is provided in that context. We have determined the matters described below to be the key audit matters to be communicated in our report.

Sr. No.	Key Audit Matter	How our audit addressed the Key Audit Matter
1.	**Recognition and Measurement of revenue from Sale of Energy** The company records revenue from sale of energy as per the principles enunciated under Ind AS 115, based on tariff approved by the Central Electricity Regulatory Commission (CERC) as modified by the orders of Appellate Authorities. Pending issue of provisional/final tariff order w.e.f. 01 April 2019 capacity charges has been provisionally recognised considering the applicable CERC Tariff Regulations 2019. This is considered as key audit matter due to the nature and extent of estimates made as per the CERC Tariff Regulations, which leads to recognition and measurement of revenue from sale of energy being complex and judgemental. (Refer Note No. 37 to the Standalone Financial Statements, read with the Significant Accounting Policy No. C.15)	We have obtained an understanding of the CERC Tariff Regulations, orders, circulars, guidelines and the Company's internal circulars and procedures in respect of recognition and measurement of revenue from sale of energy comprising of capacity and energy charges and adopted the following audit procedures: - Evaluated and tested the effectiveness of the Company's design of internal controls relating to recognition and measurement of revenue from sale of energy. - Verified the accounting of revenue from sale of energy based on provisional tariff computed as per the principles of CERC Tariff Regulations 2019 Based on the above procedure performed, the recognition and measurement of revenue from sale of energy are considered to be adequate and reasonable.
2.	**Impairment assessment of Property, Plant and Equipment (PPE)** The Company has a material operational asset base (PPE) relating to generation of electricity and is one of the components for determining the tariff as per the CERC Tariff Regulations, which may be vulnerable to impairment. We considered this as a key audit matter as the carrying value of PPE requires impairment assessment based on the future expected cash flows associated with the power plants (Cash generating units). (Refer Note No. 59(a) to the Standalone Financial Statements, read with the Accounting Policy No. C.20)	We have obtained an understanding and tested the design and operating effectiveness of controls as established by the Company's management for impairment assessment of PPE. We evaluated the Company's process of impairment assessment in assessing the appropriateness of the impairment model including the independent assessment of discount rate, economic growth rate, terminal value etc. We evaluated and checked the calculations of the cash flow forecasts prepared by the Company taking into consideration the CERC (Terms and Conditions of Tariff) Regulations, 2019 (applicable for the tariff period of 5 years from 1 April 2019 to 31 March 2024) along with the aforementioned assumptions. Based on the above procedures performed, we observed that the Company's impairment assessment of the PPE is adequate and reasonable.

Sr. No.	Key Audit Matter	How our audit addressed the Key Audit Matter
3.	**Deferred Tax Asset relating to MAT Credit Entitlement and corresponding Regulatory Deferral Liability** The company has recognised deferred tax asset relating to MAT credit entitlement. Utilisation of MAT credit will result in lower outflow of Income Tax in future years and accordingly Regulatory Deferral Liability attributable to the said MAT credit entitlement has also been recognised, payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations. The recoverability of this deferred tax asset relating to MAT credit entitlement is dependent upon the generation of sufficient future taxable profits to utilise such entitlement within the stipulated period prescribed under the Income Tax Act,1961. We identified this as a key audit matter because of the importance of this matter to the intended users of the Financial Statements and its materiality; and requirement of judgement in forecasting future taxable profits for recognition of MAT credit entitlement considering the recoverability of such tax credits within allowed time frame as per the provisions of the Income Tax Act,1961. (Refer Note No. 19,27,52 & 67 to the Standalone Financial Statements, read with the Accounting Policy No. C.4 and C.18)	We have obtained an understanding for recognition of deferred tax asset relating to MAT credit entitlement and corresponding liability of the same in Regulatory Deferral Account including the management's judgement. We further assessed the related forecasts of future taxable profits and evaluated the reasonableness of the considerations /assumptions underlying the preparation of these forecasts. We have also verified the regulatory deferral account balance attributable to the said MAT credit, payable to the beneficiaries in subsequent periods. Based on the above procedures performed, the recognition and measurement of Deferred tax asset relating to MAT credit entitlement and attributable Regulatory Deferral Liability towards beneficiaries, are considered adequate and reasonable.
4.	**Contingent Liabilities** There are a number of litigations pending before various forums against the Company and the management's judgement is required for estimating the amount to be disclosed as contingent liability. We identified this as a key audit matter because the estimates on which these amounts are based involve a significant degree of management judgement in interpreting the cases and it may be subject to management bias. (Refer Note No. 72 (A) to the Standalone Financial Statements, read with the Accounting Policy No. C.13)	We have obtained an understanding of the Company's internal instructions and procedures in respect of estimation and disclosure of contingent liabilities and adopted the following audit procedures: - understood and tested the design and operating effectiveness of controls as established by the management for obtaining all relevant information for pending litigation cases; - discussed with the management regarding any material developments thereto and latest status of legal matters; - read various correspondences and related documents pertaining to litigation cases and relevant external legal opinions obtained by the management and performed substantive procedures on calculations supporting the disclosure of contingent liabilities; - examined management's judgements and assessments in respect of whether provisions are required; - considered the management assessments of those matters that are not disclosed as contingent liability since the probability of material outflow is considered to be remote; - reviewed the adequacy and completeness of disclosures; Based on the above procedures performed, the estimation and disclosures of contingent liabilities are considered to be adequate and reasonable.

Information other than the Standalone Financial Statements and Auditors' Report thereon

The Company's Board of Directors is responsible for the preparation of the other information. The other information comprises the Corporate Governance Report, and the information included in the Directors' Report including Annexures, Management Discussion and Analysis, Business Responsibility Report and other company related information (but does not include the Standalone Financial Statements and our auditors' report thereon), which are expected to be made available to us after the date of this auditors' report.

Our opinion on the Standalone Financial Statements does not cover the other information and we do not and will not express any form of assurance conclusion thereon.

In connection with our audit of the Standalone Financial Statements, our responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the Standalone Financial Statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

When we read other information, if we conclude that there is a material misstatement therein, we are required to communicate the matter to those charged with governance and take appropriate actions, if required.

Responsibilities of management and those charged with governance for the Standalone Financial Statements

The Company's Board of Directors is responsible for the matters stated in Section 134(5) of the Act with respect to the preparation of these Standalone Financial Statements that give a true and fair view of the financial position, financial performance, total comprehensive income, changes in equity and cash flows of the Company in accordance with the accounting principles generally accepted in India, including the Indian Accounting Standards (Ind AS) prescribed under Section 133 of the Act read with the Companies (Indian Accounting Standards) Rules, 2015 as amended. This responsibility also includes maintenance of adequate accounting records in accordance with the provisions of the Act for safeguarding the assets of the Company and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls, that were operating effectively for ensuring the accuracy and completeness of the accounting records, relevant to the preparation and presentation of the Standalone Financial Statements, that give a true and fair view and are free from material misstatement, whether due to fraud or error.

In preparing the Standalone Financial Statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

The Board of Directors is also responsible for overseeing the Company's financial reporting process.

Auditors' Responsibilities for the Audit of the Standalone Financial Statements

Our objectives are to obtain reasonable assurance about whether the Standalone Financial Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these Standalone Financial Statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the Standalone Financial Statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances. Under section 143(3)(i) of the Act, we are also responsible for expressing our opinion on whether the company has adequate Internal Financial Controls system in place and the operating effectiveness of such controls.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the

Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the Standalone Financial Statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Company to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the Standalone Financial Statements, including the disclosures, and whether the Standalone Financial Statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the Standalone Financial Statements of the current period and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Report on Other Legal and Regulatory Requirements

1. As required by the Companies (Auditor's Report) Order, 2020 ("the Order") issued by the Central Government of India in terms of Section 143(11) of the Act, and on the basis of such checks of the books and records of the Company as we considered appropriate and according to the information and explanations given to us, we give in "Annexure 1" a statement on the matters specified in paragraphs 3 and 4 of the said Order, to the extent applicable.

2. We are enclosing our report in terms of Section 143(5) of the Act, on the basis of such checks of the books and records of the Company as we considered appropriate and according to the information and explanations given to us, in the "Annexure 2" on the directions issued by the Comptroller and Auditor General of India.

3. As required by Section 143(3) of the Act, we report that:

    (a) We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit.

    (b) In our opinion, proper books of account as required by law have been kept by the Company so far as it appears from our examination of those books.

    (c) The Balance Sheet, the Statement of Profit and Loss (including Other Comprehensive Income), the Statement of Changes in Equity and the Statement of Cash Flows dealt with by this Report are in agreement with the books of account.

    (d) In our opinion, the aforesaid Standalone Financial Statements comply with the Indian Accounting Standards prescribed under Section 133 of the Act read with the Companies (Indian Accounting Standards) Rules, 2015 as amended.

    (e) Being a Government Company pursuant to the Notification No. GSR 463(E) dated 5 June 2015 issued by the Ministry of Corporate Affairs, Government of India, provisions of sub-section (2) of Section 164 of the Act, are not applicable to the Company

    (f) With respect to the adequacy of the Internal Financial Controls with reference to the Standalone Financial Statement of the Company and the operating effectiveness of such controls, refer to our separate report in "Annexure 3".

    (g) As per Notification No. GSR 463(E) dated 5 June 2015 issued by the Ministry of Corporate Affairs, Government of India, Section 197 of the Act is not applicable to the Government Companies. Accordingly, reporting in accordance with requirement of provisions of section 197(16) of the Act is not applicable on the Company.

    (h) With respect to the other matters to be included in the Auditors' Report in accordance with Rule 11 of the Companies (Audit and Auditors) Rules, 2014, as amended, in our opinion and to the best of our information and according to the explanations given to us:

        I. The Company has disclosed the impact of pending litigations on its financial position in its Standalone Financial Statements. Refer Note No. 72 (A) to the Standalone Financial Statements;

II. The Company has made provision, as required under the applicable law or Indian accounting standards, for material foreseeable losses, if any, on long-term contracts including derivative contracts.

III. There has been no delay in transferring amounts, required to be transferred, to the Investor Education and Protection Fund by the Company.

IV. (a) The Management has represented that, to the best of it's knowledge and belief, as disclosed in the note 73(xvi) to the accounts, no funds have been advanced or loaned or invested (either from borrowed funds or share premium or any other sources or kind of funds) by the Company to or in any other person(s) or entity(ies), including foreign entities ("Intermediaries"), with the understanding, whether recorded in writing or otherwise, that the Intermediary shall, directly or indirectly lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the Company ("Ultimate Beneficiaries") or provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

(b) The Management has represented, that, to the best of it's knowledge and belief, as disclosed in the note 73(xvi) to the accounts, no funds have been received by the Company from any person(s) or entity(ies), including foreign entities ("Funding Parties"), with the understanding, whether recorded in writing or otherwise, that the Company shall, directly or indirectly, lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the Funding Party ("Ultimate Beneficiaries") or provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

(c) Based on the audit procedures performed that have been considered reasonable and appropriate in the circumstances, nothing has come to our notice that has caused us to believe that the representations under sub-clause (i) and (ii) of Rule 11(e) contain any material misstatement.

V. (a) The final dividend proposed for the previous year, declared and paid by the Company during the year is in accordance with Section 123 of the Act, as applicable.

(b) Interim dividend declared and paid by the Company during the year is in accordance with Section 123 of the Act.

(c) As stated in note 20(c) to the financial statements, the Board of Directors of the Company has proposed final dividend for the year which is subject to the approval of the members at the ensuing Annual General Meeting. The amount of dividend proposed is in accordance with Section 123 of the Act to the extent it applies to declaration of dividend.

For S.K. Mehta & Co
Chartered Accountants
FRN 000478N

(Rohit Mehta)
Partner
M. No.091382
UDIN: 22091382AJHNXF5989

For S.N. Dhawan & Co LLP
Chartered Accountants
FRN 000050N/N500045

(Mukesh Bansal)
Partner
M. No.505269
UDIN: 22505269AJHRXQ3729

For Varma & Varma
Chartered Accountants
FRN 004532S

(P.R.Prasanna Varma)
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M. No.025854
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For Parakh & Co.
Chartered Accountants
FRN 001475C

(Thalendra Sharma)
Partner
M. No.079236
UDIN: 22079236AJHNOY2830

For C K Prusty & Associates
Chartered Accountants
FRN 323220E

(C.K.Prusty)
Partner
M. No.057318
UDIN: 22057318AJHOPR3303

For B C Jain & Co.
Chartered Accountants
FRN 001099C

(Ranjeet Singh)
Partner
M. No.073488
UDIN: 22073488AJHQBH9072

For V K Jindal & Co
Chartered Accountants
FRN 001468C

(Suresh Agarwal)
Partner
M. No.072534
UDIN: 22072534AJHOSX6768

Place : New Delhi
Dated: 20 May 2022
Digitally signed by signatories

ANNEXURE 1 TO THE INDEPENDENT AUDITORS' REPORT

Referred to in paragraph 1 under 'Report on Other Legal and Regulatory Requirements' section of our report of even date to the members of NTPC LIMITED on the Standalone Financial Statements for the year ended 31 March 2022.

(i) (a) (A) The Company has generally maintained proper records showing full particulars including quantitative details and situation of Property, Plant and Equipment and non-current assets held for sale.

(B) The Company has generally maintained proper records showing full particulars of Intangible assets.

(b) The Company is having a regular programme of physical verification of all Property, Plant and Equipment and non-current assets held for sale over a period of three years, which, in our opinion, is reasonable having regard to the size of the Company and the nature of its assets. No material discrepancies were noticed on such verification.

(c) According to the information and explanations given to us, we report that, the title deeds of all the immovable properties which are included under the head of property, plant and equipment (other than properties where the company is the lessee and the lease agreements are duly executed in favour of the lessee) are held in the name of the Company except as follows:

Description of Property	Gross Carrying Value (₹ in crore)	Held in the name of	Whether promoter, director or their relative or employee	Property held- range (Financial Year)	Reason for not being held in the name of the company
Land - Freehold	10.34	Large Number of land outsees and State Authorities	No	2021-22	Due to pending completion of legal formalities
	77.92			2020-21	
	12.52			2019-20	
	148.77			2016-17 to 2018-19	
	1,163.29			2011-12 to 2015-16	
	174.55			Prior to 2011-12	
Land - Right of Use	22.45			2021-22	
	20.82			2020-21	
	20.83			2019-20	
	115.74			2016-17 to 2018-19	
	177.01			2011-12 to 2015-16	
	250.04			Prior to 2011-12	
Building & Structures	4.97	Government Authorities	No	Prior to 2011-12	Due to pending completion of legal formalities

(d) The Company has not revalued its Property, Plant and Equipment (including Right of Use assets) and intangible assets during the year. Accordingly, the provisions of clause 3(i)(d) of the Order are not applicable.

(e) According to the information and explanations given to us, there are no proceedings which have been initiated or are pending against the Company for holding benami property under the Benami Transactions (Prohibition) Act, 1988 (as amended in 2016) and rules made thereunder.

(ii) (a) In our opinion, the management has conducted physical verification of inventory at reasonable intervals during the year. According to the information and explanations given to us and based on the audit procedures performed by us, we are of the opinion that the coverage and procedure of such verification by the management is appropriate and no material discrepancies of 10% or more in the aggregate for each class of inventory between physical inventory and book records were noticed on physical verification.

(b) In our opinion and according to the information and explanations given to us, during the year, the Company has been sanctioned working capital limits in excess of ₹.5 crores, in aggregate, from a bank on the basis of security of current assets. The quarterly returns or statements filed by the Company with the bank are in agreement with the books of account of the Company. During the year Company has not availed working capital limit from any financial institution.

(iii) The Company has made investments in, given unsecured loan to subsidiaries, Joint Venture companies during the year, in respect of which:

(a) According to the information and explanations given to us, the Company has not provided guarantee, security and not granted loans and advances in the nature of loans, secured and unsecured to subsidiaries, Joint Ventures and other entities during the year, except aggregate amount of unsecured loan of ₹ 0.70 crore during the year given to a subsidiary Company who has repaid the amount and there is no balance outstanding in respect of this case, as at the balance sheet date.

(b) According to the information and explanations given to us and based on the audit procedures performed by us, we are of the opinion that the investments made, and the terms and conditions of loans given by the company are, prima facie, not prejudicial to the company's interest.

(c) According to the information and explanations given to us and based on the audit procedures performed by us, we are of the opinion that in respect of loans, the schedule of repayment of principal and payment of interest has been stipulated and the repayments of principal and receipts of interest are regular, except in a case of, a joint venture of the Company, which has not paid due amount of interest for the year, detail of which is disclosed in para (iii)(d) below.

(d) According to the information and explanations given to us and based on the audit procedures performed by us, receipt of interest is overdue for a period of more than 90 days in respect of a loan given to National High Power Test Laboratory Private Limited, a joint venture company, detail of which is given hereunder:

No. of cases	Principal amount overdue	Interest overdue (₹ in crore)	Total overdue (₹ in crore)	Remarks
One	NIL	2.22	2.22	Interest Overdue for more than 90 days. Principal amount will be due for repayment from 30.09.2022.

In our opinion, the Company has taken reasonable steps for recovery of above interest.

(e) According to the information and explanations given to us and based on the audit procedures performed by us, we are of the opinion that no loan or advance in the nature of loan granted which has fallen due during the year, has been renewed or extended or fresh loans granted to settle the overdue of existing loans given to the same parties.

(f) According to the information and explanations given to us and based on the audit procedures performed by us, we are of the opinion that the Company has not granted any loans or advances in the nature of loans either repayable on demand or without specifying any terms or period of repayment.

(iv) In our opinion and according to the information and explanations given to us, the Company has complied with the provisions of Section 185 and 186 of the Act, as applicable, in respect of loans advanced to subsidiary companies & joint venture companies and investments made in the subsidiary and joint venture companies and guarantees issued in favor of Banks for subsidiary companies. The Company has not provided any security in respect of which the provisions of section 185 and 186 of the Act are applicable.

(v) In our opinion and according to the information and explanations given to us, the Company has not accepted deposits or amount which deemed to be deposits. As such, the directives issued by the Reserve Bank of India, the provisions of Sections 73 to 76 or any other relevant provisions of the Act and the rules framed thereunder are not applicable to the Company. The Company has obtained deposits from the dependents of employees pursuant to one of the employee benefit schemes of the company who die or suffer permanent total disability for which the Company has applied to the Ministry of Corporate Affairs, Government of India for continuation of the exemption earlier obtained in respect of applicability of Section 58A of the Companies Act, 1956, which is still awaited (refer Note No. 32(c) of the Standalone Financial Statements). No order has been passed with respect to Section 73 to 76, by the Company Law Board or National Company Law Tribunal or Reserve Bank of India or any Court or any other Tribunal.

(vi) We have broadly reviewed the accounts and records maintained by the Company pursuant to the Rules made by the Central Government for the maintenance of cost records under sub-section (1) of Section 148 of the Act read with Companies (Cost Records & Audit) Rules, 2014, as amended and we are of the opinion that prima facie the prescribed accounts and records have been made and maintained. We have not, however, made detailed examination of the records with a view to determine whether they are accurate and complete.

(vii) (a) According to the information and explanations given to us, the Company is generally regular in depositing undisputed statutory dues including goods and service tax, provident fund, income tax, sales tax, service tax, duty of customs, duty of excise, value added tax, cess and other statutory dues as applicable to the appropriate authorities. Further, no undisputed statutory dues is outstanding as on 31 March 2022 for a period of more than six months from the date they became payable. We have been informed that employees' state insurance is not applicable to the Company.

(b) According to information and explanations given to us, the gross disputed statutory dues of income tax or sales tax or service tax or duty of customs or duty of excise or value added tax or other statutory dues amounts to ₹16,116.39 crore in aggregate as on 31 March 2022, out of which ₹ 5,216.83 crore has been deposited under protest/adjusted by tax authorities and the balance of ₹ 10,899.56 crore of dues have not been deposited on account of matters pending before appropriate authorities as detailed below:

S. No.	Name of the Statute	Nature of the Dues	Forum where dispute is pending	Period to which the amount relates (Financial Year)	Gross Disputed Amount (₹ Crores)	Amount deposited under protest / adjusted by Tax authorities (₹ Crores)	Amount Not deposited (₹ Crores)
1	Income Tax Act, 1961	Income Tax / TDS	Assistant Commissioner of Income Tax	2013-14	0.12	0.12	-
			Income Tax Appellate Tribunal *	2001-02, 2005-06 to 2007-08, 2009-10 to 2011-12	13,627.80	3,625.67	10,002.13
			Commissioner of Income Tax (Appeals)	2009-10 to 2018-19	1,522.50	1,522.50	-
			Assessing Officer	2006-07	0.78	0.78	-
				Sub Total	**15,151.20**	**5,149.07**	**10,002.13**
2	Entry Tax Act of various States	Entry tax	Additional Commissioner of Sales Tax	2014-15 to 2016-17	19.63	-	19.63
			Appellate Tribunal / Board of Revenue	2001-02, 2006-07 to 2016-17	13.56	3.74	9.82
			Assistant Commissioner of Sales Tax	1985-86, 1986-87, 2003-04, 2005-06, 2016-17	5.44	2.04	3.40
			Commissioner of Sales Tax	2007-08	1.65	-	1.65
			Deputy Commissioner of Sales Tax	1997-98	4.61	0.46	4.15
			High Court #	1990-91, 2005-06 to 2016-17	553.83	44.61	509.22
			Joint Commissioner of Sales Tax	2005-06	0.04	-	0.04
			Sales Tax Officer	2017-18	0.18	-	0.18
			Deputy Commissioner of Sales Tax (Appeals)	2007-08	0.08	-	0.08
				Sub Total	**599.02**	**50.85**	**548.17**

S. No.	Name of the Statute	Nature of the Dues	Forum where dispute is pending	Period to which the amount relates (Financial Year)	Gross Disputed Amount (₹ Crores)	Amount deposited under protest / adjusted by Tax authorities (₹ Crores)	Amount Not deposited (₹ Crores)
3	Finance Act, 1994	Service Tax	CESTAT	2012-13 to 2017-18	251.44	2.81	248.63
			Commissioner (Appeals)	2009-10 to 2016-17	1.47	0.06	1.41
			Commissioner of GST & Central Excise	2009-10 to 2016-17	6.37	-	6.37
				Sub Total	**259.28**	**2.87**	**256.41**
4	Sales tax and Value Added Tax Act of various states	Sales Tax/ Trade Tax/ Value Added Tax	Additional Commissioner of Sales Tax **	2001-02, 2002-03, 2004-05, 2006-07, 2014-15 to 2016-17	20.93	1.86	19.07
			Additional Commissioner of Sales Tax (Appeals)	1988-89 to 1997-98, 2015-16	2.11	0.17	1.94
			Appellate Tribunal / Board of Revenue	1985-86, 2000-01 to 2010-11, 2014-15	32.99	7.53	25.46
			High Court	2000-01	2.85	0.05	2.80
			Joint Commissioner of Sales Tax ***	2000-01, 2004-05, 2005-06	3.82	0.36	3.46
			Deputy Commissioner Sales Tax	2001-02 to 2006-07	11.66	-	11.66
			Commissioner of Sales Tax (Appeals)	2005-06 to 2008-09	5.37	1.17	4.20
			Joint Commissioner of Sales Tax (Appeals)	2015-16	1.12	0.49	0.63
				Sub Total	**80.85**	**11.63**	**69.22**
5	Customs Act, 1962	Excise Duty / Service Tax/ Customs Duty	CESTAT	1999-00, 2010-11	4.50	-	4.50
			Commissioner Of Customs (Appeals)	2005-06 to 2015-16	0.29	0.03	0.26
				Sub Total	**4.79**	**0.03**	**4.76**
6	Rajasthan Land Tax Act, 1985	Land Development Tax	Rajasthan Revenue Department	2006-07 to 2012-13	2.04	0.60	1.44
				Sub Total	**2.04**	**0.60**	**1.44**
7	The Employees' Provident Funds and Misc. Provisions Act, 1952	EPS Contribution	High Court	2006-07	17.97	1.37	16.60
			PF Commissioner	1996-97 to 2014-15	0.58	0.07	0.51
			EP Appellate Tribunal, New Delhi	2006-07	0.13	-	0.13
				Sub Total	**18.68**	**1.44**	**17.24**

S. No.	Name of the Statute	Nature of the Dues	Forum where dispute is pending	Period to which the amount relates (Financial Year)	Gross Disputed Amount (₹ Crores)	Amount deposited under protest / adjusted by Tax authorities (₹ Crores)	Amount Not deposited (₹ Crores)
8	Mines and Minerals (Development and Regulation) Act, 1957	Royalty	High Court	2011-12	0.53	0.34	0.19
				Sub Total	**0.53**	**0.34**	**0.19**
	Total				**16,116.39**	**5,216.83**	**10,899.56**

Remarks: * includes disputed amount of income tax ₹ 10,725.62 crore including interest of ₹ 6,220.57 crore in respect of certain matters, where the lower Appellate Authority has decided in favor of the company, although the Assessing Officer has disputed the same with appropriate Appellate Authority.

** includes ₹ 19.96 crore towards demand for VAT and CST raised by Sales Tax authority, which has been stayed by Commissioner / Additional Commissioner of sales tax.

*** includes ₹ 8.77 crore towards demand for CST raised by Sales Tax Officer, which has been stayed by the Hon'ble High Court.

includes ₹ 36.76 crore towards demand for Entry Tax raised by Entry Tax authority, which has been stayed by the Commissioner of Sales Tax.

Disputed statutory dues include interest and penalty wherever applicable.

(viii) In our opinion and according to the information and explanations given to us, the Company has not surrendered or disclosed as income, any transaction not recorded in the books of account, during the year in the tax assessments under the Income Tax Act, 1961 (43 of 1961). Accordingly, the provisions of clause 3(viii) of the Order are not applicable.

(ix) (a) In our opinion and according to the information and explanations given to us, the Company has not defaulted in repayment of loans or other borrowings or in the payment of interest thereon to any lender.

(b) According to the information and explanations given to us and on the basis of our audit procedures, we report that the Company has not been declared willful defaulter by any bank or financial institution or other lender.

(c) In our opinion and according to the information and explanations given to us, the term loans were applied for the purposes for which the loans were obtained.

(d) According to the information and explanations given to us, and the procedures performed by us, and on an overall examination of the financial statements of the company, we report that no funds raised on short-term basis have been used for long-term purposes by the Company.

(e) According to the information and explanations given to us and on an overall examination of the financial statements of the company, we report that the company has not taken any funds from any entity or person on account of or to meet the obligations of its subsidiaries and joint ventures except Company has taken loan from Banks and given loan to one of the subsidiaries, as per details given below:

Nature of fund taken	Name of lender	Amount Involved / outstanding (₹ in Crore)	Name of the subsidiary to whom loan given	Relation	Nature of Transaction for which funds utilized	Remarks, if any
Unsecured Term Loan	HDFC Bank Ltd.	276.18	Ratnagiri Gas and Power Pvt. Ltd.	Subsidiary	Secured loan given on account of Debt Settlement of Subsidiary.	Loan of ₹ 885 crore was taken and granted by the Company in the year 2020-21
	Bank of India Ltd.	542.45				
Total		**818.63**				

(f) According to the information and explanations given to us and procedures performed by us, we report that the Company has not raised loans during the year on the pledge of securities held in its subsidiaries and joint ventures.

(x) (a) In our opinion and according to the information and explanations given to us, the Company did not raise moneys by way of initial public offer or further public offer during the year. Company has raised Privately Placed Non-convertible Debentures during the year and in our opinion and according to the explanations given to us the money raised by way of Privately Placed Non-convertible Debentures were applied for the purposes for which they were raised.

(b) During the year, the Company has not made any preferential allotment or private placement of shares or convertible debentures (fully, partially or optionally). Accordingly, provisions of clause 3(x)(b) of the order are not applicable.

(xi) (a) According to the information and explanations given to us and as represented by the Management and based on our examination of the books and records of the Company and in accordance with generally accepted auditing practices in India, no case of material fraud by the Company or on the Company has been noticed or reported during the year.

(b) We have not submitted any report under subsection (12) of section 143 of the Companies Act, 2013 in Form ADT-4 as prescribed under Rule 13 of Companies (Audit and Auditors) Rules, 2014 with the Central Government, during the year and up to the date of this audit report.

(c) As represented to us by the management, there are no whistle blower complaints received by the company during the year, accordingly, provisions of clause 3(xi)(c) of the order are not applicable.

(xii) The Company is not a Nidhi Company. Accordingly, provisions of clause 3(xii) of the Order are not applicable.

(xiii) In our opinion and according to the information and explanations given to us, all transactions with the related parties are in compliance with Sections 177 and 188 of Act, where applicable, and the requisite details have been disclosed in the standalone financial statements, as required by the applicable Indian Accounting Standards.

(xiv) (a) In our opinion and based on our examination, the Company has an internal audit system commensurate with the size and nature of its business.

(b) We have considered the reports of the Internal Auditors for the year under audit, issued to the Company during the year and till date, in determining the nature, timing and extent of our audit procedures.

(xv) In our opinion and according to the information and explanations given to us, the Company has not entered into any non-cash transactions with the directors or persons connected with them covered under Section 192 of the Act. Accordingly, provisions of clause 3(xv) of the Order are not applicable.

(xvi) (a) In our opinion and according to the information and explanations given to us, the Company is not required to be registered under Section 45-IA of the Reserve Bank of India Act, 1934. Accordingly, provisions of clause (xvi)(a) of the Order are not applicable to the Company.

(b) According to the information and explanations provided to us, the Company has not conducted any Non-Banking Financial or Housing Finance activities therefore the Company is not required to be registered under Section 45-IA of the Reserve Bank of India Act, 1934. Accordingly, provisions of clause 3(xvi)(b) of the Order are not applicable

(c) The Company is not a Core Investment Company (CIC) as defined in the regulations made by the Reserve Bank of India. Accordingly, provisions of clause 3(xvi)(c) of the Order are not applicable

(d) In our opinion, there is no core investment company within the Group (as defined in the Core Investment Companies (Reserve Bank) Directions, 2016). Accordingly, provisions of clause 3(xvi)(d) of the Order are not applicable.

(xvii) Based on our examination of the books and records of the Company, the Company has not incurred cash losses in the financial year and in the immediately preceding financial year. Accordingly, provisions of clause 3(xvii) of the order are not applicable.

(xviii) There has been no resignation of the statutory auditors during the year. Accordingly, provisions of clause 3 (xviii) of the order are not applicable.

(xix) According to the information and explanations given to us and on the basis of the financial ratios, ageing and expected dates of realization of financial assets and payment of financial liabilities, other information accompanying the financial statements, our knowledge of the Board of Directors and management plans and based on our examination of the evidence supporting the assumptions, nothing has come to our attention, which causes us to believe that any material uncertainty exists as on the date of the audit report that Company is not capable of meeting its liabilities existing at the date of balance sheet as and when they fall due within a period of one year from the balance sheet date. We, however, state that this is not an assurance as to the future viability of the Company. We further state that our reporting is based on the facts up to the date of the audit report and we neither give any guarantee nor any assurance that all liabilities falling due within a period of one year from the balance sheet date, will get discharged by the Company as and when they fall due.

(xx) In our opinion and according to the information and explanations given to us, the company has incurred expenditure under Corporate Social Responsibility as required by the provisions of Section 135 of the Act and there are no unspent amounts which are to be transferred pursuant to section 135(5) and 135(6) of the Act.

For S.K. Mehta & Co Chartered Accountants FRN 000478N	For S.N. Dhawan & Co LLP Chartered Accountants FRN 000050N/N500045	For Varma & Varma Chartered Accountants FRN 004532S
(Rohit Mehta) Partner M. No.091382 UDIN: 22091382AJHNXF5989	(Mukesh Bansal) Partner M. No.505269 UDIN: 22505269AJHRXQ3729	(P.R.Prasanna Varma) Partner M. No.025854 UDIN: 22025854AJHOWH7255

For Parakh & Co. Chartered Accountants FRN 001475C	For C K Prusty & Associates Chartered Accountants FRN 323220E	For B C Jain & Co. Chartered Accountants FRN 001099C	For V K Jindal & Co Chartered Accountants FRN 001468C
(Thalendra Sharma) Partner M. No.079236 UDIN: 22079236AJHNOY2830	(C.K.Prusty) Partner M. No.057318 UDIN: 22057318AJHOPR3303	(Ranjeet Singh) Partner M. No.073488 UDIN: 22073488AJHQBH9072	(Suresh Agarwal) Partner M. No.072534 UDIN: 22072534AJHOSX6768

Place : New Delhi

Dated: 20 May 2022

Digitally signed by signatories

ANNEXURE 2 TO THE INDEPENDENT AUDITORS' REPORT

Referred to in paragraph 2 under 'Report on Other Legal and Regulatory Requirements' section of our report of even date to the members of NTPC LIMITED on the Standalone Financial Statements for the year ended 31 March 2022

Sl. No.	Directions u/s 143(5) of the Companies Act, 2013	Auditors' reply on action taken on the directions	Impact on financial statement
1	Whether the Company has system in place to process all the accounting transactions through IT system? If yes, the implications of processing of accounting transactions outside IT system on the integrity of the accounts along with the financial implications, if any, may be stated.	As per the information and explanations given to us, the Company has a system in place to process all the accounting transactions through IT system. SAP-ERP has been implemented for all the processes like Financial Accounting (FI), Controlling (CO), Sales and Distribution (SD), Payroll / Human Capital Management (HCM), Material Management (MM), Commercial billing / Industry Solution Utilities (ISU), etc. Based on the audit procedures carried out and as per the information and explanations given to us, no accounting transactions have been processed /carried outside the IT system. Accordingly, there are no implications on the integrity of the accounts.	Nil
2	Whether there is any restructuring of an existing loan or cases of waiver/write off of debts/ loans/ interest etc. made by a lender to the company due to the company's inability to repay the loan? If yes, the financial impact may be stated.	Based on the audit procedures carried out and as per the information and explanations given to us, there was no restructuring of existing loans or cases of waiver/write off of debts/ loans/ interest etc. made by the lender to the company due to the company's inability to repay the loan.	Nil
3	Whether funds (grants/subsidy etc.) received / receivable for specific schemes from Central / State agencies were properly accounted for/utilized as per its term and conditions? List the cases of deviation.	Based on the audit procedures carried out and as per the information and explanations given to us, the funds (grants/ subsidy etc.) received/receivable for specific schemes from Central/State agencies were properly accounted for/utilized as per the respective terms and conditions.	Nil

For S.K. Mehta & Co
Chartered Accountants
FRN 000478N

(Rohit Mehta)
Partner
M. No.091382
UDIN: 22091382AJHNXF5989

For S.N. Dhawan & Co LLP
Chartered Accountants
FRN 000050N/N500045

(Mukesh Bansal)
Partner
M. No.505269
UDIN: 22505269AJHRXQ3729

For Varma & Varma
Chartered Accountants
FRN 004532S

(P.R.Prasanna Varma)
Partner
M. No.025854
UDIN: 22025854AJHOWH7255

For Parakh & Co.
Chartered Accountants
FRN 001475C

(Thalendra Sharma)
Partner
M. No.079236
UDIN: 22079236AJHNOY2830

For C K Prusty & Associates
Chartered Accountants
FRN 323220E

(C.K.Prusty)
Partner
M. No.057318
UDIN: 22057318AJHOPR3303

For B C Jain & Co.
Chartered Accountants
FRN 001099C

(Ranjeet Singh)
Partner
M. No.073488
UDIN: 22073488AJHQBH9072

For V K Jindal & Co
Chartered Accountants
FRN 001468C

(Suresh Agarwal)
Partner
M. No.072534
UDIN: 22072534AJHOSX6768

Place : New Delhi
Dated: 20 May 2022
Digitally signed by signatories

ANNEXURE 3 TO THE INDEPENDENT AUDITORS' REPORT

Referred to in paragraph 3 (f) under 'Report on Other Legal and Regulatory Requirements' section of our report of even date to the members of NTPC LIMITED on the Standalone Financial Statements for the year ended 31 March 2022

Report on the Internal Financial Controls with reference to the Standalone Financial Statement under Clause (i) of Sub-section 3 of Section 143 of the Companies Act, 2013 ("the Act").

We have audited the internal financial controls with reference to the Standalone Financial Statements of NTPC Limited ("the Company") as of 31 March 2022 in conjunction with our audit of the Standalone Financial Statements of the Company for the year ended on that date.

Management's Responsibility for Internal Financial Controls

The Company's management is responsible for establishing and maintaining internal financial controls based on the internal controls over financial reporting criteria established by the Company considering the essential components of internal control stated in the Guidance Note on Audit of Internal Financial Controls over Financial Reporting issued by The Institute of Chartered Accountants of India (ICAI). These responsibilities include the design, implementation and maintenance of adequate internal financial controls that were operating effectively for ensuring the orderly and efficient conduct of its business, including adherence to Company's policies, the safeguarding of its assets, the prevention and detection of frauds and errors, the accuracy and completeness of the accounting records, and the timely preparation of reliable financial information, as required under the Act.

Auditors' Responsibility

Our responsibility is to express an opinion on the Company's internal financial controls with reference to the Standalone Financial Statements based on our audit. We conducted our audit in accordance with the Guidance Note on Audit of Internal Financial Controls over Financial Reporting (the "Guidance Note") and the Standards on Auditing, issued by ICAI and deemed to be prescribed under section 143(10) of the Act, to the extent applicable to an audit of internal financial controls, both applicable to an audit of Internal Financial Controls and, both issued by ICAI. Those Standards and the Guidance Note require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether adequate internal financial controls with reference to the Standalone Financial Statements was established and maintained and if such controls operated effectively in all material respects.

Our audit involves performing procedures to obtain audit evidence about the adequacy of the internal financial control with reference to the standalone Financial Statements and their operating effectiveness. Our audit of internal financial control with reference to the Standalone Financial Statements included obtaining an understanding of internal financial control with reference to the Standalone Financial Statements, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. The procedures selected depend on the auditors' judgement,

including the assessment of the risks of material misstatement of the Standalone Financial Statements, whether due to fraud or error.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion on the Company's internal financial controls system with reference to the Standalone Financial Statements.

Meaning of Internal Financial Controls with reference to the Standalone Financial Statements

A Company's internal financial control with reference to the Standalone Financial Statements is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of Standalone Financial Statements for external purposes in accordance with generally accepted accounting principles. A Company's internal financial control with reference to the Standalone Financial Statements includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of Standalone Financial Statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the Standalone Financial Statements.

Inherent Limitations of Internal Financial Controls with reference to the Standalone Financial Statements

Because of the inherent limitations of internal financial controls with reference to the Standalone Financial Statements, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may occur and not be detected. Also, projections of any evaluation of the internal financial controls with reference to the Standalone Financial Statements to future periods are subject to the risk that the internal financial controls with reference to the Standalone Financial Statements may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Opinion

In our opinion, to the best of our information and according to the explanations given to us, the Company has, in all material respects, an adequate internal financial controls with reference to the Standalone Financial Statements in place and such internal financial controls with reference to the Standalone Financial Statements were operating effectively as at 31 March 2022, based on the internal controls over financial reporting criteria established by the Company considering the components of internal controls stated in the Guidance Note on Audit of Internal Financial Controls over Financial Reporting issued by the ICAI.

For S.K. Mehta & Co
Chartered Accountants
FRN 000478N

(Rohit Mehta)
Partner
M. No.091382
UDIN: 22091382AJHNXF5989

For S.N. Dhawan & Co LLP
Chartered Accountants
FRN 000050N/N500045

(Mukesh Bansal)
Partner
M. No.505269
UDIN: 22505269AJHRXQ3729

For Varma & Varma
Chartered Accountants
FRN 004532S

(P.R.Prasanna Varma)
Partner
M. No.025854
UDIN: 22025854AJHOWH7255

For Parakh & Co.
Chartered Accountants
FRN 001475C

(Thalendra Sharma)
Partner
M. No.079236
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For C K Prusty & Associates
Chartered Accountants
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(C.K.Prusty)
Partner
M. No.057318
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For B C Jain & Co.
Chartered Accountants
FRN 001099C

(Ranjeet Singh)
Partner
M. No.073488
UDIN: 22073488AJHQBH9072

For V K Jindal & Co
Chartered Accountants
FRN 001468C

(Suresh Agarwal)
Partner
M. No.072534
UDIN: 22072534AJHOSX6768

Place : New Delhi
Dated: 20 May 2022
Digitally signed by signatories

COMMENTS OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA UNDER SECTION 143(6)(b) OF THE COMPANIES ACT, 2013 ON THE FINANCIAL STATEMENTS OF NTPC LIMITED FOR THE YEAR ENDED 31 MARCH 2022

The preparation of financial statements of NTPC Limited for the year ended 31 March 2022 in accordance with the financial reporting framework prescribed under the Companies Act, 2013 (Act) is the responsibility of the management of the company. The statutory auditors appointed by the Comptroller and Auditor General of India under section 139 (5) of the Act are responsible for expressing opinion on the financial statements under section 143 of the Act based on independent audit in accordance with the standards on auditing prescribed under section 143 (10) of the Act. This is stated to have been done by them vide their Audit Report dated 20 May 2022.

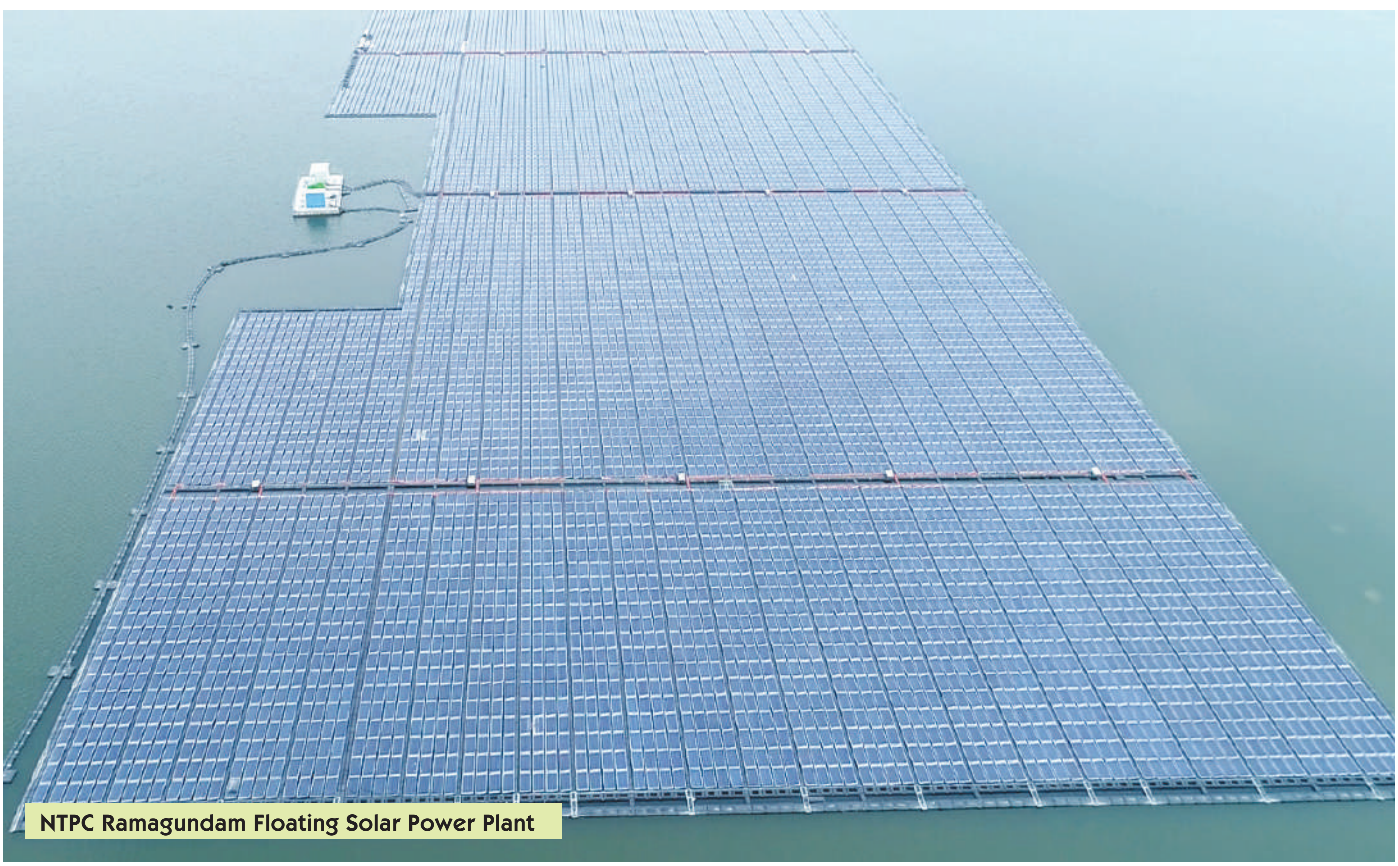
I, on behalf of the Comptroller and Auditor General of India, have conducted a supplementary audit of the financial statements of NTPC Limited for the year ended 31 March 2022 under Section 143(6) (a) of the Act. This supplementary audit has been carried out independently without access to the working papers of the statutory auditors and is limited primarily to inquiries of the statutory auditors and company personnel and a selective examination of some of the accounting records.

On the basis of my supplementary audit nothing significant has come to my knowledge which would give rise to any comment upon or supplement to statutory auditors' report under section 143(6) (b) of the Act.

For and on behalf of the
Comptroller & Auditor General of India

(Deepak Kapoor)
Director General of Audit (Energy),
Delhi

Place: New Delhi
Dated: 22 July 2022



NTPC Ramagundam Floating Solar Power Plant

Girl Empowerment Mission (GEM), the flagship CSR Initiative of NTPC is empowering young Girls, to realise their dreams and help to achieve the newer heights of success.

EMPLOYEE COST SUMMARY

₹ Crore

Description		2017-18	2018-19	2019-20	2020-21	2021-22
A.	Salary, wages and benefits	5,469.28	5,596.61	5,530.64	5,302.16	**5,561.38**
	(Including Provident fund and other contributions)					
B.	Other benefits					
	1. Welfare expenses	308.47	302.11	257.12	272.56	**337.56**
	2. Township	245.86	260.94	281.79	288.57	**316.73**
	3. Educational and school facilities	33.98	31.12	31.77	27.67	**26.82**
	4. Medical facilities	192.03	234.82	254.44	249.53	**318.44**
	5. Subsidised transport	11.51	13.32	13.04	2.90	**3.88**
	6. Social and cultural activities	7.74	9.31	9.96	9.08	**6.54**
	7. Subsidised canteen	62.42	76.48	86.85	81.80	**95.84**
	Total (B)	**862.01**	**928.10**	**934.97**	**932.11**	**1,105.81**
	Total (A+B)	**6,331.29**	**6,524.71**	**6,465.61**	**6,234.27**	**6,667.19**
	8. Year end no. of employees	19,739	18,359	17,398	16,798	**15,794**
	9. Average no. of employees	20,166	19,049	17,879	17,098	**16,296**
	10. Average salary, wages and benefits per employee per annum (₹)	2,712,129	2,938,007	3,093,372	3,101,041	**3,412,727**
	11. Average cost of other benefits per employee per annum (₹)	427,457	487,217	522,943	545,157	**678,578**
	12. Average cost of employees remuneration and benefits per annum (₹)	3,139,586	3,425,224	3,616,315	3,646,198	**4,091,305**

Note:1. Welfare expenses are net of amounts included in Sl. no. 2 to Sl. no. 7.

Revenue expenditure on Social Overhead for the year ended on 31.3.2022

₹ Crore

S No	Particular	Township	Educational and School Facilities	Medical Facilities	Subsidised Transport	Social and Cultural Activities	Subsidised Canteen	Total	Previous Year
1	Payment to employees	33.02	-	165.70	-	-	-	**198.72**	200.71
2	Material consumed	15.02	-	10.03	-	-	-	**25.05**	30.43
3	Rates and taxes	1.18	-	-	-	-	-	**1.18**	1.23
4	Welfare expenses	2.31	24.52	190.47	3.99	6.40	95.42	**323.11**	269.46
5	Others including repairs & maintenance	225.37	0.57	103.17	-	-	-	**329.11**	298.52
6	Depreciation	95.73	1.73	16.23	-	0.14	0.42	**114.25**	86.85
7	**Sub-total (1 to 6)**	**372.63**	**26.82**	**485.60**	**3.99**	**6.54**	**95.84**	**991.42**	887.20
8	Less : Recoveries	22.88	-	1.46	0.11	-	-	**24.45**	26.94
9	**Net expenditure (7-8)**	**349.75**	**26.82**	**484.14**	**3.88**	**6.54**	**95.84**	**966.97**	860.26
10	Previous Year	327.22	27.67	411.59	2.90	9.08	81.80	860.26	-

CONSOLIDATED BALANCE SHEET AS AT 31 MARCH 2022

₹ Crore

Particulars	Note No.	As at 31 March 2022	As at 31 March 2021
ASSETS			
Non-current assets			
Property, plant and equipment	2	**2,24,343.75**	2,02,598.05
Capital work-in-progress	3	**91,025.21**	97,404.16
Intangible assets	4	**579.27**	647.13
Intangible assets under development	5	**101.05**	101.87
Investments accounted for using the equity method	6	**10,522.14**	9,992.18
Financial assets			
Investments	7	**104.10**	97.08
Loans	8	**559.81**	554.97
Other financial assets	9	**1,017.98**	1,092.84
Deferred tax assets (net)	10	**995.70**	1,075.89
Other non-current assets	11	**15,873.86**	17,031.51
Total non-current assets		**3,45,122.87**	3,30,595.68
Current assets			
Inventories	12	**10,139.29**	9,809.60
Financial assets			
Investments	13	**-**	499.99
Trade receivables	14	**27,342.08**	28,199.83
Cash and cash equivalents	15	**728.45**	950.02
Bank balances other than cash and cash equivalents	16	**3,729.63**	3,437.78
Loans	17	**270.37**	259.13
Other financial assets	18	**6,375.25**	4,430.93
Current tax assets (net)	19	**62.64**	64.70
Other current assets	20	**9,546.98**	9,086.70
Total current assets		**58,194.69**	56,738.68
Regulatory deferral account debit balances	21	**13,199.17**	11,553.28
TOTAL ASSETS		**4,16,516.73**	3,98,887.64
EQUITY AND LIABILITIES			
Equity			
Equity share capital	22	**9,696.67**	9,696.67
Other equity	23	**1,25,677.07**	1,16,041.80
Total equity attributable to owners of the Company		**1,35,373.74**	1,25,738.47
Non-controlling interests	24	**3,760.41**	3,523.71
Total equity		**1,39,134.15**	1,29,262.18
Liabilities			
Non-current liabilities			
Financial liabilities			
Borrowings	25	**1,81,871.19**	1,80,536.21
Lease liabilities	26	**962.69**	735.70
Trade payables	27		
Total outstanding dues of micro and small enterprises		**13.45**	13.78
Total outstanding dues of creditors other than micro and small enterprises		**71.19**	66.35
Other financial liabilities	28	**1,059.86**	2,089.14
Provisions	29	**1,655.19**	1,390.35
Deferred tax liabilities (net)	30	**10,951.67**	9,887.82
Other non-current liabilities	31	**1,926.65**	1,996.47
Total non-current liabilities		**1,98,511.89**	1,96,715.82

CONSOLIDATED BALANCE SHEET AS AT 31 MARCH 2022

₹ Crore

Particulars	Note No.	As at 31 March 2022	As at 31 March 2021
Current liabilities			
Financial liabilities			
Borrowings	32	**27,684.07**	28,774.17
Lease liabilities	33	**188.61**	161.79
Trade payables	34		
Total outstanding dues of micro and small enterprises		**496.04**	404.12
Total outstanding dues of creditors other than micro and small enterprises		**10,781.28**	8,322.16
Other financial liabilities	35	**27,547.84**	23,287.58
Other current liabilities	36	**1,877.61**	1,949.50
Provisions	37	**7,875.69**	7,729.54
Current tax liabilities (net)	38	**141.13**	17.50
Total current liabilities		**76,592.27**	70,646.36
Deferred revenue	39	**2,278.42**	2,263.28
TOTAL EQUITY AND LIABILITIES		**4,16,516.73**	3,98,887.64

Significant accounting policies 1

The accompanying notes 1 to 78 form an integral part of these financial statements.

For and on behalf of the Board of Directors

(Nandini Sarkar) Company Secretary	(A.K. Gautam) Director (Finance) DIN: 08293632	(Gurdeep Singh) Chairman & Managing Director DIN: 00307037

This is the Consolidated Balance Sheet referred to in our report of even date

For S.K. Mehta & Co. Chartered Accountants Firm Reg. No.000478N	For S.N. Dhawan & Co LLP Chartered Accountants Firm Reg. No. 000050N/N500045	For Varma & Varma Chartered Accountants Firm Reg. No. 004532S
(Rohit Mehta) Partner M No. 091382	(Mukesh Bansal) Partner M No. 505269	(P.R. Prasanna Varma) Partner M No. 025854

For Parakh & Co. Chartered Accountants Firm Reg. No. 001475C	For C.K. Prusty & Associates Chartered Accountants Firm Reg. No. 323220E	For B.C. Jain & Co. Chartered Accountants Firm Reg. No. 001099C	For V.K. Jindal & Co Chartered Accountants Firm Reg. No. 001468C
(Thalendra Sharma) Partner M No. 079236	(C.K. Prusty) Partner M No. 057318	(Ranjeet Singh) Partner M No. 073488	(Suresh Agarwal) Partner M No. 072534

Place : New Delhi
Dated : 20 May 2022

Digitally signed by signatories

CONSOLIDATED STATEMENT OF PROFIT AND LOSS FOR THE YEAR ENDED 31 MARCH 2022

₹ Crore

Particulars	Note No.	For the year ended 31 March 2022	For the year ended 31 March 2021
Income			
Revenue from operations	40	**1,32,669.28**	1,11,531.15
Other income	41	**2,325.03**	4,015.68
Total income		**1,34,994.31**	1,15,546.83
Expenses			
Fuel cost	42	**69,752.97**	56,099.26
Electricity purchased for trading		**5,584.69**	5,049.42
Employee benefits expense	43	**6,310.09**	5,953.93
Finance costs	44	**9,315.98**	9,224.14
Depreciation, amortization and impairment expense	45	**13,787.83**	12,450.31
Other expenses	46	**10,741.97**	10,454.71
Total expenses		**1,15,493.53**	99,231.77
Profit before share of profits of joint ventures accounted for using equity method, exceptional items, tax and regulatory deferral account balances		**19,500.78**	16,315.06
Add: Share of profits of joint ventures accounted for using equity method		**1,020.13**	683.87
Profit before exceptional items, tax and regulatory deferral account balances		**20,520.91**	16,998.93
Exceptional items	49	**-**	1,512.19
Profit before tax and regulatory deferral account balances		**20,520.91**	15,486.74
Tax expense	56		
Current tax			
Current year		**3,760.62**	2,958.80
Earlier years		**(2.69)**	(1,867.74)
Deferred tax		**1,289.17**	1,329.47
Total tax expense		**5,047.10**	2,420.53
Profit before regulatory deferral account balances		**15,473.81**	13,066.21
Net movement in regulatory deferral account balances (net of tax)	71	**1,486.48**	1,903.19
Profit for the year		**16,960.29**	14 ,969.40
Other comprehensive income			
Items that will not be reclassified to profit or loss			
- Net actuarial gains/(losses) on defined benefit plans		**(126.98)**	(151.74)
- Net gains/(losses) on fair value of equity instruments		**5.40**	46.80
- Share of other comprehensive income of joint ventures accounted for using the equity method		**2.16**	(2.77)
Income tax on items that will not be classified to profit or loss			
- Net actuarial gains/(losses) on defined benefit plans		**23.01**	28.82
Items that will be reclassified to profit or loss			
- Exchange differences on translation of foreign operations		**9.16**	(20.20)
Other comprehensive income for the year, net of tax		**(87.25)**	(99.09)
Total comprehensive income for the year		**16,873.04**	14,870.31
Profit attributable to:			
Owners of the Parent Company		**16,675.90**	14,634.63
Non-controlling interests		**284.39**	334.77
		16,960.29	14,969.40

CONSOLIDATED STATEMENT OF PROFIT AND LOSS FOR THE YEAR ENDED 31 MARCH 2022

₹ Crore

Particulars	Note No.	For the year ended 31 March 2022	For the year ended 31 March 2021
Other comprehensive income attributable to:			
Owners of the Parent Company		**(87.80)**	(99.17)
Non-controlling interests		**0.55**	0.08
		(87.25)	(99.09)
Total comprehensive income attributable to:			
Owners of the Parent Company		**16,588.10**	14,535.46
Non-controlling interests		**284.94**	334.85
		16,873.04	14,870.31
Earnings per equity share attributable to owners of the parent company (Par value ₹ 10/- each)	61		
Basic & Diluted (₹) (including net movement in regulatory deferral account balances)		**17.20**	14.87
Basic & Diluted (₹) (excluding net movement in regulatory deferral account balances)		**15.66**	12.93
Significant accounting policies	1		

The accompanying notes 1 to 78 form an integral part of these financial statements.

For and on behalf of the Board of Directors

(Nandini Sarkar)
Company Secretary

(A.K. Gautam)
Director (Finance)
DIN: 08293632

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

This is the Consolidated Statement of Profit and Loss referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382

For S.N. Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(Mukesh Bansal)
Partner
M No. 505269

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R. Prasanna Varma)
Partner
M No. 025854

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No. 079236

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K. Prusty)
Partner
M No. 057318

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M No. 073488

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M No. 072534

Place : New Delhi
Dated : 20 May 2022

Digitally signed by signatories

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 31 MARCH 2022

(A) Equity share capital

For the year ended 31 March 2022 ₹ Crore

Particulars	Amount
Balance as at 1 April 2021	**9,696.67**
Changes in equity share capital due to prior period errors	-
Restated balance as at 1 April 2021	**9,696.67**
Changes in equity share capital during the year	-
Balance as at 31 March 2022	**9,696.67**

For the year ended 31 March 2021 ₹ Crore

Particulars	Amount
Balance as at 1 April 2020	9,894.56
Changes in equity share capital due to prior period errors	-
Restated balance as at 1 April 2020	9,894.56
Changes in equity share capital due to buyback of shares during the year (refer Note 22)	(197.89)
Balance as at 31 March 2021	9,696.67

(B) Other equity

For the year ended 31 March 2022 ₹ Crore

Particulars	Attributable to owners of the parent company												Other equity attributable to owners of the parent company	Non-controlling interests	Total
	Reserves & surplus										Items of other comprehensive income (OCI)				
	Capital reserve	Other capital reserve - common control	Securities premium	Capital redemption reserve	Bonds/ Debentures redemption reserve	Self insurance reserve	Fly ash utilisation reserve fund	Corporate Social Responsibility reserve	General reserve	Retained earnings	Equity instruments through OCI	Foreign currency translation reserve			
Balance as at 1 April 2021	**511.47**	**(5,159.26)**	-	**197.89**	**6,970.47**	**200.00**	**619.60**	-	**98,544.79**	**14,054.16**	**81.30**	**21.38**	**1,16,041.80**	**3,523.71**	**1,19,565.51**
Profit for the year	-	-	-	-	-	-	-	-	-	16,675.90	-	-	16,675.90	284.39	**16,960.29**
Other comprehensive income	-	-	-	-	-	-	-	-	-	(102.36)	5.40	9.16	(87.80)	0.55	**(87.25)**
Total comprehensive income	-	-	-	-	-	-	-	-	-	**16,573.54**	**5.40**	**9.16**	**16,588.10**	**284.94**	**16,873.04**
Impact of business combination and additional non-controlling interest arising on acquisition / disposal of interest & other adjustments	-	-	-	-	-	-	-	-	-	-	-	-	-	125.57	**125.57**
Transfer to retained earnings	-	-	-	-	(597.25)	-	-	-	-	597.25	-	-	-	-	-
Transfer from retained earnings	-	-	-	-	48.50	-	-	-	110.00	(158.50)	-	-	-	-	-
Accretion / (utilisation) in fly ash utlisation fund (net) (Note 23)	-	-	-	-	-	-	(19.71)	-	-	-	-	-	(19.71)	-	**(19.71)**
Final dividend paid for the year 2020-21 (Note 23)	-	-	-	-	-	-	-	-	-	(3,054.45)	-	-	(3,054.45)	(173.81)	**(3,228.26)**
Interim dividend paid for the year 2021-22 (Note 23)	-	-	-	-	-	-	-	-	-	(3,878.67)	-	-	(3,878.67)	-	**(3,878.67)**
Balance as at 31 March 2022	**511.47**	**(5,159.26)**	-	**197.89**	**6,421.72**	**200.00**	**599.89**	-	**98,654.79**	**24,133.33**	**86.70**	**30.54**	**1,25,677.07**	**3,760.41**	**1,29,437.48**

Generating Power & Smiles 24x7 for the Nation

For the year ended 31 March 2021

₹ Crore

Particulars	Attributable to owners of the parent company														
	Reserves & surplus										Items of other comprehensive income (OCI)		Other equity attributable to owners of the parent company	Non-controlling interests (NCI)	Total
	Capital reserve	Other capital reserve - common control	Securities premium	Capital redemption reserve	Bonds/ Debentures redemption reserve	Self insurance reserve	Fly ash utilisation reserve fund	Corporate Social Responsibility reserve	General reserve	Retained earnings	Equity instruments through OCI	Foreign currency translation reserve			
Balance as at 1 April 2020	72.86	(5,159.26)	2,228.46	-	7,700.97	-	599.72	2.35	92,499.15	11,009.35	(50.58)	41.58	1,08,944.60	3,317.19	1,12,261.79
Profit for the year	-	-	-	-	-	-	-	-	-	14,634.63	-	-	14,634.63	334.77	14,969.40
Other comprehensive income	-	-	-	-	-	-	-	-	-	(125.77)	46.80	(20.20)	(99.17)	0.08	(99.09)
Total comprehensive income	-	-	-	-	-	-	-	-	-	14,508.86	46.80	(20.20)	14,535.46	334.85	14,870.31
Impact of business combination and additional non-controlling interest arising on acquisition /disposal of interest & other adjustments	438.61	-	-	-	-	200.00	-	-	-	0.24	-	-	638.85	119.03	757.88
Adjustments from retained earnings	-	-	-	-	-	-	-	-	-	(85.08)	85.08	-	-	-	-
Transfer to retained earnings	-	-	-	-	(771.00)	-	-	(2.35)	-	773.35	-	-	-	-	-
Transfer from retained earnings	-	-	-	-	40.50	-	-	-	6,581.00	(6,621.50)	-	-	-	-	-
Accretion / (utilisation) in fly ash utlisation fund (net) (Note 23)	-	-	-	-	-	-	19.88	-	-	-	-	-	19.88	-	19.88
Utilised for buyback of equity shares (Note 23)			(2,228.46)						(337.47)				(2,565.93)		(2,565.93)
Transferred to capital redemption reserve (Note 23)				197.89					(197.89)				-		-
Final dividend paid for the year 2019-20 (Refer Note 23)	-	-	-	-	-	-	-	-	-	(2,622.06)	-	-	(2,622.06)	(247.36)	(2,869.42)
Interim dividend paid for the year 2020-21 (Refer Note 23)	-	-	-	-	-	-	-	-	-	(2,909.00)	-	-	(2,909.00)	-	(2,909.00)
Balance as at 31 March 2021	511.47	(5,159.26)	-	197.89	6,970.47	200.00	619.60	-	98,544.79	14,054.16	81.30	21.38	1,16,041.80	3,523.71	1,19,565.51

Note: Other comprehensive income adjusted in retained earnings amounting to ₹ **102.36 crore** (31 March 2021: ₹ 125.77 crore) represents remeasurement of defined benefit plans.

For and on behalf of the Board of Directors

(Nandini Sarkar)
Company Secretary

(A.K. Gautam)
Director (Finance)
DIN: 08293632

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

This is the Consolidated Statement of Changes in Equity referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382

For S.N. Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(Mukesh Bansal)
Partner
M No. 505269

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R. Prasanna Varma)
Partner
M No. 025854

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No. 079236

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K. Prusty)
Partner
M No. 057318

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M No. 073488

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M No. 072534

Place : New Delhi
Dated : 20 May 2022

Digitally signed by signatories

CONSOLIDATED STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 MARCH 2022

₹ Crore

Particulars		For the year ended 31 March 2022	For the year ended 31 March 2021
A. CASH FLOW FROM OPERATING ACTIVITIES			
Profit before exceptional items, tax and regulatory deferral account balances		**20,520.91**	16,998.93
Add: Net movement in regulatory deferral account balances (net of tax)		**1,486.48**	1,903.19
Add: Tax on net movement in regulatory deferral account balances		**303.99**	387.50
Profit before tax including movement in regulatory deferral account balances		**22,311.38**	19,289.62
Adjustment for:			
Depreciation, amortisation and impairment expense	**13,787.83**		12,450.31
Provisions	**407.63**		879.61
Impairment on investments	-		27.93
Special rebate to beneficiaries - exceptional item	-		(1,512.19)
Share of net profits of joint ventures accounted for using equity method	**(1,020.13)**		(683.87)
On account of government grants	**(109.50)**		477.38
Deferred foreign currency fluctuation asset	**416.75**		527.46
Deferred income from foreign currency fluctuation	**224.94**		(412.13)
Regulatory deferral account debit balances	**(1,790.47)**		(2,290.69)
Fly ash utilisation reserve fund	**(19.71)**		19.88
Finance costs	**9,238.86**		9,162.74
Unwinding of discount on vendor liabilities	**77.12**		61.40
Interest income/Late payment Surcharge/Income on investments	**(1,292.30)**		(3,390.34)
Dividend income	**(9.00)**		(9.00)
Provisions written back	**(378.01)**		(64.19)
Loss on disposal of investment accounted through equity method	-		15.88
Profit on de-recognition of property, plant and equipment	**(6.27)**		(3.36)
Loss on de-recognition of property, plant and equipment	**108.06**		137.27
		19,635.80	15,394.09
Operating profit before working capital changes		**41,947.18**	34,683.71
Adjustment for:			
Trade receivables	**828.52**		340.75
Inventories	**538.68**		2,032.27
Trade payables, provisions, other financial liabilities and other liabilities	**3,617.73**		(546.48)
Loans, other financial assets and other assets	**(3,070.83)**		(997.90)
		1,914.10	828.64
Cash generated from operations		**43,861.28**	35,512.35
Income taxes (paid) / refunded		**(2,073.05)**	(3,068.29)
Net cash from/(used in) operating activities - A		**41,788.23**	32,444.06
B. CASH FLOW FROM INVESTING ACTIVITIES			
Purchase of property, plant and equipment & intangible assets	**(24,444.42)**		(23,312.34)
Disposal of property, plant and equipment & intangible assets	**113.50**		30.36
Proceeds / Investment in mutual funds	**499.99**		(499.99)
Investment in joint venture companies (net)	**499.87**		(118.78)
Business combinations	-		126.69
Interest income/Late payment Surcharge/Income on investments received	**1,325.77**		4,186.63

CONSOLIDATED STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 MARCH 2022

₹ Crore

Particulars		For the year ended 31 March 2022	For the year ended 31 March 2021
Dividend received from other investments	9.00		9.00
Income tax paid on income from investing activities	(545.86)		(637.37)
Bank balances other than cash and cash equivalents	(296.09)		(818.65)
Net cash from/(used in) investing activities - B		(22,838.24)	(21,034.45)
C. CASH FLOW FROM FINANCING ACTIVITIES			
Proceeds from non-current borrowings	27,237.43		35,361.97
Repayment of non-current borrowings	(19,079.93)		(23,912.83)
Proceeds from current borrowings	(7,434.15)		(591.61)
Payment of lease obligations	(55.10)		(57.03)
Interest paid	(12,732.88)		(13,307.37)
Buy back of equity share capital	-		(2,763.82)
Dividend paid	(7,106.93)		(5,778.42)
Net cash from/(used in) financing activities - C		(19,171.56)	(11,049.11)
Net increase/(decrease) in cash and cash equivalents (A+B+C)		(221.57)	360.50
Cash and cash equivalents at the beginning of the year (see Note 1 and 2 below)		950.02	589.52
Cash and cash equivalents at the end of the year (see Note 1 and 2 below)		728.45	950.02

Notes:

1. Cash and cash equivalents consist of cheques, drafts, stamps in hand, balances with banks and deposits with original maturity of upto three months.
2. Reconciliation of cash and cash equivalents:

	For the year ended 31 March 2022	For the year ended 31 March 2021
Cash and cash equivalents as per Note 15	728.45	950.02

3. Refer Note 67 for details of undrawn borrowing facilities that may be available for future operating activities and to settle capital commitments.
4. Reconciliation between the opening and closing balances in the Balance Sheet for liabilities arising from financing activities:

For the year ended 31 March 2022 ₹ Crore

Particulars	Non-current borrowings*	Finance lease obligations	Current borrowings
Opening balance as at 1 April 2021	1,95,589.08	897.49	15,964.62
Cash flows during the year	(4,575.38)	(55.10)	(7,434.15)
Non-cash changes due to:			
- Acquisitions under finance lease		308.91	-
- Equity shares issued	(65.85)	-	-
- Interest on borrowings	13,142.83	-	-
- Variation in exchange rates	(410.34)	-	-
- Transaction costs on borrowings	(2.28)	-	-
Closing balance as at 31 March 2022	2,03,678.06	1,151.30	8,530.47

CONSOLIDATED STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 MARCH 2022

For the year ended 31 March 2021 ₹ Crore

Particulars	Non-current borrowings*	Finance lease obligations	Current borrowings
Opening balance as at 1 April 2020	1,85,572.47	855.61	16,556.23
Cash flows during the year	(1,858.23)	(57.03)	(591.61)
Non-cash changes due to:			
- Acquisitions under finance lease	-	98.91	-
- Acquisition of subsidiary	(136.86)	-	-
- Interest on borrowings	13,196.05	-	-
- Variation in exchange rates	(1,126.49)	-	-
- Transaction costs on borrowings	(57.86)	-	-
Closing balance as at 31 March 2021	1,95,589.08	897.49	15,964.62

* Includes current maturities of non-current borrowings and interest accrued thereon, refer Note 25 and Note 32.

For and on behalf of the Board of Directors

(Nandini Sarkar)
Company Secretary

(A.K. Gautam)
Director (Finance)
DIN: 08293632

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

This is the Consolidated statement of cash flows referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382

For S.N. Dhawan & Co LLP
Chartered Accountants
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(C.K. Prusty)
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For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M No. 073488

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M No. 072534

Place : New Delhi
Dated : 20 May 2022
Digitally signed by signatories

Note 1. Company Information and Significant Accounting Policies

A. Reporting entity

NTPC Limited (the 'Company' or 'Parent Company') is a Company domiciled in India and limited by shares (CIN: L40101DL1975GOI007966). The shares of the Company are listed and traded on the National Stock Exchange of India Limited (NSE) and BSE Limited in India. The address of the Company's registered office is NTPC Bhawan, SCOPE Complex, 7 Institutional Area, Lodhi Road, New Delhi - 110003.These consolidated financial statements comprise the financial statements of the Company and its subsidiaries (referred to collectively as the 'Group') and the Group's interest in its joint ventures. The Group is primarily involved in the generation and sale of bulk power to State Power Utilities. Other business of the Group includes providing consultancy, project management & supervision, energy trading, oil & gas exploration and coal mining.

B. Basis of preparation

1. Statement of Compliance

These consolidated financial statements are prepared on going concern basis following accrual system of accounting and comply with the Indian Accounting Standards (Ind AS) prescribed under Section 133 of the Companies Act, 2013 read with the Companies (Indian Accounting Standards) Rules, 2015 as amended, and other relevant provisions of the Companies Act, 2013 and the provisions of the Electricity Act, 2003 to the extent applicable.

These financial statements were approved for issue by the Board of Directors in its meeting held on 20 May 2022

2. Basis of measurement

The consolidated financial statements have been prepared on the historical cost basis except for:

- Certain financial assets and liabilities (including derivative instruments) that are measured at fair value (refer serial no. 28 of accounting policy regarding financial instruments); and
- Plan assets in the case of employees defined benefit plans that are measured at fair value.

The methods used to measure fair values are discussed in notes to the financial statements.

Historical cost is the amount of cash or cash equivalents paid or the fair value of the consideration given to acquire assets at the time of their acquisition or the amount of proceeds received in exchange for the obligation, or at the amounts of cash or cash equivalents expected to be paid to satisfy the liability in the normal course of business. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

3. Functional and presentation currency

These consolidated financial statements are presented in Indian Rupees (₹) which is the Company's functional currency. All financial information presented in (₹) has been rounded to the nearest crore (up to two decimals), except when indicated otherwise.

4. Current and non-current classification

The Group presents assets and liabilities in the balance sheet based on current/non-current classification.

An asset is classified as current when it is:

- Expected to be realized or intended to be sold or consumed in normal operating cycle;
- Held primarily for the purpose of trading;
- Expected to be realized within twelve months after the reporting period; or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is classified as current when:

- It is expected to be settled in normal operating cycle;
- It is held primarily for the purpose of trading;
- It is due to be settled within twelve months after the reporting period; or
- There is no unconditional right to defer settlement of the liability for at least twelve months after the reporting period.

All other liabilities are classified as non-current.

Deferred tax assets/liabilities are classified as non-current.

Assets and liabilities are classified between current and non-current considering 12 months period as normal operating cycle.

C. Significant accounting policies

A summary of the significant accounting policies applied in the preparation of the consolidated financial statements are as given below. These accounting policies have been applied consistently to all periods presented in the consolidated financial statements.

The Group has elected to utilize the option under Ind AS 101 - 'First time adoption of Indian Accounting Standards' by not applying the provisions of Ind AS 16 - 'Property, plant and equipment' & Ind AS 38 - 'Intangible assets' retrospectively and continue to use the previous GAAP carrying amount as a deemed cost under Ind AS at the date of transition to Ind AS i.e. 1 April 2015. Therefore, the carrying amount of property, plant and equipment and intangible assets as per the previous GAAP as at 1 April 2015, i.e. the Group's date of transition to Ind AS, were maintained on transition to Ind AS.

1. Basis of consolidation

The financial statements of subsidiary companies and joint venture companies are drawn up to the same reporting date as of the Company for the purpose of consolidation.

1.1 Subsidiaries

Subsidiaries are all entities over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power to direct the relevant activities of the investee. Subsidiaries are fully consolidated from the date on which control is acquired by the Group and are continued to be consolidated until the date that such control ceases.

The Group combines the financial statements of the parent and its subsidiaries line by line adding together like items of assets, liabilities, equity, income and expenses. Intercompany transactions, balances and unrealized gains on transactions between Group companies are eliminated. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the transferred asset. When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies in line with Group's accounting policies.

Non-controlling interests (NCI) in the results and equity of subsidiaries are shown separately in the consolidated statement of profit and loss, consolidated statement of changes in equity and consolidated balance sheet respectively.

Changes in the Group's equity interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions.

When the Group loses control over a subsidiary, it derecognizes the assets and liabilities of the subsidiary, and any related NCI and other components of equity. Any interest retained in the former subsidiary is measured at fair value at the date the control is lost. Any resulting gain or loss is recognized in statement of profit and loss. All amounts previously recognized in other comprehensive income in relation to that subsidiary are accounted for as if the Group had directly disposed of the related assets and liabilities of the subsidiary i.e. reclassified to consolidated statement of profit and loss or transferred to equity as specified by applicable Ind AS. This fair value becomes the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset.

1.2 Joint ventures

A joint venture is a type of joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint venture. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

Interests in joint ventures are accounted for using the equity method, after initially being recognized at cost in the consolidated balance sheet.

Under the equity method of accounting, the investments are initially recognized at cost and adjusted thereafter to recognize the Group's share of the post-acquisition profits or losses of the investee in profit and loss, and the Group's share of other comprehensive income (OCI) of the investee in OCI. Dividends received or receivable from joint ventures are recognized as a reduction in the carrying amount of the investment.

When the Group's share of losses in an equity-accounted investment equals or exceeds its interest in the entity, which includes any long term interest that, in substance, form part of Group investment in joint venture, the Group does not recognize further losses, unless it has incurred legal or constructive obligations or made payments on behalf of the joint venture. Losses recognized using the equity method in excess of the entity's investment in ordinary shares are applied to the other components of the entity's interest in an associate or a joint venture in the reverse order of their seniority i.e. priority in liquidation.

The statement of profit and loss reflects the Group' share of results of operations of the joint venture. Any change in the OCI of those investee is presented as presented as part of the Group OCI. Unrealized gains on transactions between the Group and its joint ventures are eliminated to the extent of the Group's interest in these entities. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred. When necessary, adjustments are made to the financial statements of joint ventures to bring their accounting policies into line with the Group's accounting policies.

The carrying amount of equity accounted as investments are tested for impairment in accordance with the policy described in D.11 below.

When the Group ceases to apply equity method of accounting for an investment because of a loss of joint control, any retained interest in the entity is re-measured to its fair value with the change in carrying amount recognized in statement of profit and loss. This fair value becomes the initial carrying amount for the purposes of subsequently accounting for the retained interest as a financial asset. In addition, any amounts previously recognized in OCI in respect of that entity are accounted for as if the Group had directly disposed of the related assets or liabilities. This may mean that amounts previously recognized in OCI are reclassified to profit or loss.

If the ownership interest in a joint venture is reduced but joint control is retained, only a proportionate share of the amounts previously recognized in OCI are reclassified to profit or loss where appropriate.

2. Property, plant and equipment

2.1. Initial recognition and measurement

An item of property, plant and equipment is recognized as an asset if and only if it is probable that future economic benefits associated with the item will flow to the and the cost of the item can be measured reliably.

Items of property, plant and equipment are initially recognized at cost. Cost comprises purchase price including import duties and non-refundable purchase taxes after deducting trade discounts and rebates, any cost directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and the present value of initial estimate of cost of dismantling, removal and restoration.

Subsequent measurement is done at cost less accumulated depreciation/amortization and accumulated impairment losses.

When parts of an item of property, plant and equipment that are significant in value and have different useful lives as compared to the main asset, they are recognized separately.

Deposits, payments/liabilities made provisionally towards compensation, rehabilitation and other expenses relatable to land in possession are treated as cost of land.

In the case of assets put to use, where final settlement of bills with contractors is yet to be effected, capitalization is done on provisional basis subject to necessary adjustment in the year of final settlement.

Assets and systems common to more than one generating unit are capitalized on the basis of engineering estimates/ assessments.

Items of spare parts, stand-by equipment and servicing equipment which meet the definition of property, plant and equipment are capitalized. Other spare parts are carried as inventory and recognized in the statement of profit and loss on consumption.

The acquisition or construction of some items of property, plant and equipment although not directly increasing the future economic benefits of any particular existing item of property, plant and equipment, may be necessary for the Group to obtain future economic benefits from its other assets. Such items are recognized as property, plant and equipment.

2.2. Subsequent costs

Subsequent expenditure is recognized in the carrying amount of the asset when it is probable that future economic benefits deriving from the cost incurred will flow to the enterprise and the cost of the item can be measured reliably.

Expenditure on major inspection and overhauls of generating unit is capitalized, when it meets the asset recognition criteria. Any remaining carrying amount of the cost of the previous inspection and overhaul is derecognized.

The cost of replacing major part of an item of property, plant and equipment is recognized in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Group and its cost can be measured reliably. The carrying amount of the replaced part is derecognized regardless of whether the replaced part has been depreciated separately. If it is not practicable to determine the carrying amount of the replaced part, the Group uses the cost of the replacement as an indication of what the cost of replaced part was at the time it was acquired or constructed. The costs of the day-to-day servicing of property, plant and equipment are recognized in the statement of profit and loss as and when incurred.

2.3. Decommissioning costs

The present value of the expected cost for the decommissioning of the asset after its use is included in the cost of the respective asset if the recognition criteria for a provision are met.

2.4. De-recognition

Property, plant and equipment is derecognized when no future economic benefits are expected from their use or upon their disposal. Gains and losses on de-recognition of an item of property, plant and equipment are determined as the difference between sale proceeds from disposal, if any, and the carrying amount of property, plant and equipment and are recognized in the statement of profit and loss.

In circumstance, where an item of property, plant and equipment is abandoned, the net carrying cost relating to the property, plant and equipment is written off in the same period.

2.5. Depreciation/amortization

Depreciation is recognized in statement of profit and loss on a straight-line basis over the estimated useful life of each part of an item of property, plant and equipment.

Depreciation on the assets of the generation of electricity business, integrated coal mining and on the assets of Corporate & other offices of the Group, covered under Part B of Schedule II of the Companies Act, 2013, is charged on straight-line method following the rates and methodology notified by the Central Electricity Regulatory Commission (CERC) Tariff Regulations.

Depreciation on the assets of the oil & gas exploration, power plants not governed by CERC Tariff Regulations and consultancy business is charged on straight-line method following the useful life specified in Schedule II of the Companies Act, 2013 except for the assets referred below.

Depreciation on the following assets is provided on their estimated useful lives, which are different from the useful lives as prescribed under Schedule II to the Companies Act, 2013, ascertained on the basis of technical evaluation/ assessment:

a)	Kutcha roads	2 years
b)	Enabling works	
	- residential buildings	15 years
	- internal electrification of residential buildings	10 years
	- non-residential buildings including their internal electrification, water supply, sewerage & drainage works, railway sidings, aerodromes, helipads and airstrips	5 years
c)	Personal computers & laptops including peripherals	3 years
d)	Photocopiers, fax machines, water coolers and refrigerators	5 years
e)	Temporary erections including wooden structures	1 year
f)	Telephone exchange	15 years
g)	Wireless systems, VSAT equipment, display devices viz. projectors, screens, CCTV, audio video conferencing systems and other communication equipment	6 years
h)	Energy saving electrical appliances and fittings	2-7 years
i)	Solar/wind power plants which are not governed by CERC Tariff Regulations	25 years
j)	Hospital equipment	5-10 years
k)	Furniture and Fixture	5-15 years

Major overhaul and inspection costs which have been capitalized are depreciated over the period until the next scheduled outage or actual major inspection/overhaul, whichever is earlier.

Capital spares are depreciated considering the useful life ranging between 2 to 40 years based on technical assessment.

Right-of-use land and buildings relating to generation of electricity business governed by CERC Tariff Regulations are fully amortized over the lease period or life of the related plant whichever is lower following the rates and methodology notified by the CERC Tariff Regulations.

Right-of-use land and buildings relating to generation of electricity business not governed by CERC tariff Regulations are fully amortized over the lease period or life of the related plant whichever is lower.

Right-of-use land and buildings relating to corporate, and other offices are fully amortized over lease period or twenty-five years whichever is lower following the rates and methodology notified by the CERC Tariff Regulations.

Land acquired under Coal Bearing Areas (Acquisition & Development) Act, 1957 and Other right-of-use land acquired for mining business are amortized over the right of use period or balance life of the project whichever is lower.

In respect of integrated coal mines, the mines closure, site restoration and decommissioning obligations are amortized on straight line method over the balance life of the mine on commercial declaration.

Depreciation on additions to/deductions from property, plant and equipment during the year is charged on pro-rata basis from/up to the month in which the asset is available for use/sale, disposal or earmarked for disposal.

Where the cost of depreciable assets has undergone a change during the year due to increase/decrease in long-term liabilities (recognized up to 31 March 2016) on account of exchange fluctuation and price adjustment change in duties or similar factors, the unamortized balance of such asset is charged off prospectively over the remaining useful life determined following the applicable accounting policies relating to depreciation/amortization.

Where it is probable that future economic benefits deriving from the expenditure incurred will flow to the Group and the cost of the item can be measured reliably, subsequent expenditure on a property, plant and equipment along-with its unamortized depreciable amount is charged off prospectively over the revised useful life determined by technical assessment.

The residual values, useful lives and method of depreciation of assets other than the assets of generation of electricity business and integrated coal mines governed by CERC Tariff Regulations, are reviewed at each financial year end and adjusted prospectively, wherever required.

Depreciation of an asset ceases at the earlier of the date that the asset is classified as held for sale (or included in a disposal group that is classified as held for sale) in accordance with Ind AS 105 and the date that the asset is derecognised.

Refer policy no. C.20 in respect of depreciation/amortization of right-of-use assets other than land and buildings.

3. **Capital work-in-progress**

Cost incurred for property, plant and equipment that are not ready for their intended use as on the reporting date, is classified under capital work-in-progress.

The cost of self-constructed assets includes the cost of materials & direct labour, any other costs directly attributable to bringing the assets to the location and condition necessary for it to be capable of operating in the manner intended by management and the borrowing costs attributable to the acquisition or construction of qualifying asset.

Expenses directly attributable to construction of property, plant and equipment incurred till they are ready for their intended use are identified and allocated on a systematic basis on the cost of related assets.

Deposit works/cost plus contracts are accounted for on the basis of statements of account received from the contractors.

Unsettled liabilities for price variation/exchange rate variation in case of contracts are accounted for on estimated basis as per terms of the contracts.

4. **Intangible assets and intangible assets under development**

4.1. Initial recognition and measurement

An intangible asset is recognized if and only if it is probable that the expected future economic benefits that are attributable to the asset will flow to the Group and the cost of the asset can be measured reliably.

Intangible assets that are acquired by the Group, which have finite useful lives, are recognized at cost. Subsequent measurement is done at cost less accumulated amortization and accumulated impairment losses. Cost comprises purchase price including import duties, non-refundable taxes after deducting trade discounts and rebates and any directly attributable expenses of preparing the asset for its intended use.

Expenditure on development activities is capitalized only if the expenditure can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable and the Group intends to & has sufficient resources to complete development and to use or sell the asset.

Expenditure incurred which are eligible for capitalizations under intangible assets are carried as intangible assets under development till they are ready for their intended use.

4.2. Subsequent costs

Subsequent expenditure is recognized as an increase in the carrying amount of the asset when it is probable that future economic benefits deriving from the cost incurred will flow to the enterprise and the cost of the item can be measured reliably.

4.3. De-recognition

An intangible asset is derecognized when no future economic benefits are expected from their use or upon their disposal. Gain or loss on de-recognition of an intangible asset is determined as the difference between the net disposal proceeds, if any, and the carrying amount of intangible assets and are recognized in the statement of profit and loss.

4.4. Amortization

Cost of software recognized as intangible asset, is amortized on straight-line method over a period of legal right to use or 3 years, whichever is less. Other intangible assets are amortized on straight-line method over the period of legal right to use or life of the related plant, whichever is less.

The amortization period and the amortization method of intangible assets with a finite useful life is reviewed at each financial year end and adjusted prospectively, wherever required.

5. **Regulatory deferral account balances**

Expense/income recognized in the statement of profit and loss to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized as 'Regulatory deferral account balances'.

Regulatory deferral account balances are adjusted in the year in which the same become recoverable from or payable to the beneficiaries.

Regulatory deferral account balances are evaluated at each balance sheet date to ensure that the underlying activities meet the recognition criteria and it is probable that future economic benefits associated with such balances will flow to the Group. If these criteria are not met, the regulatory deferral account balances are derecognized.

6. Exploration for and evaluation of mineral resources

6.1. Oil and gas exploration activities

All exploration costs incurred in drilling and equipping exploratory and appraisal wells, cost of drilling exploratory type stratigraphic test wells are initially capitalized as 'Exploratory wells-in-progress' under 'Intangible assets under development' till the time these are either transferred to oil and gas assets when a well is ready for commercial production or expensed as exploration cost (including allocated depreciation) as and when determined to be dry or of no further use, as the case may be.

Costs of exploratory wells are not carried over unless it could be reasonably demonstrated that there are indications of sufficient quantity of reserves and sufficient progress is being made in assessing the reserves and the economic & operating viability of the project. All such carried over costs are subject to review for impairment.

Cost of surveys and prospecting activities conducted in the search of oil and gas are expensed in the year in which these are incurred.

6.2. Coal mining exploration activities

Exploration and evaluation assets comprise capitalized costs which is generally the expenditure incurred associated with finding the mineral by carrying out topographical, geological, geochemical and geophysical studies, exploratory drilling, trenching, sampling, expenditure for activities in relation to evaluation of technical feasibility and commercial viability, acquisition of rights to explore etc.

Exploration and evaluation expenditure incurred after obtaining the mining right or the legal right to explore are capitalized as exploration and evaluation assets under 'Intangible assets under development' and stated at cost less impairment if any. Exploration and evaluation assets are assessed for impairment indicators at least annually.

Once the proved reserves are determined and development of mine/project is sanctioned. Exploration and evaluation assets are transferred to 'Development of Coal Mines' under 'Capital Work in Progress'. However, if proved reserves are not determined, exploration and evaluation asset is derecognized.

Exploration and evaluation expenditure incurred prior to obtaining the mining right or the legal right to explore are expensed as and when incurred.

7. Development expenditure on coal mines

When proved reserves are determined and development of mines/project is sanctioned, exploration and evaluation assets are transferred to 'Development of coal mines' under 'Capital work-in-progress'.

Subsequent expenditure is capitalized only where it either enhances the economic benefits of the development/producing asset or replaces part of the existing development/producing asset. Any remaining costs associated with the part replaced are expensed.

The development expenditure capitalized is net of value of coal extracted during development phase.

Date of commercial operation of integrated coal mines shall be determined on the occurring of earliest of following milestones as provided in CERC tariff regulations:

1) The first date of the year succeeding the year in which 25% of the peak rated capacity as per the mining plan is achieved; or

2) The first date of the year succeeding the year in which the value of production exceeds the total expenditure in that year; or

3) The date of two years from the date of commencement of production;

On the date of commercial operation, the assets under capital work-in-progress are classified as a component of property, plant and equipment under 'Mining property'.

Gains and losses on de-recognition of assets referred above, are determined as the difference between the net disposal proceeds, if any, and the carrying amount of respective assets and are recognized in the statement of profit and loss.

7.1. Stripping activity expense/adjustment

Expenditure incurred on removal of mine waste materials (overburden) necessary to extract the coal reserves is referred to as stripping cost. The Group has to incur such expenses over the life of the mine as technically estimated.

Cost of stripping is charged on technically evaluated average stripping ratio at each mine with due adjustment for stripping activity asset and ratio-variance account after the mines are brought to revenue.

Net of the balances of stripping activity asset and ratio variance at the Balance Sheet date is shown as 'Stripping activity adjustment' under the head 'Non-current assets/Non-current provisions' as the case may be, and adjusted as provided in the CERC Tariff Regulations.

7.2. Mines closure, site restoration and decommissioning obligations

The Group's obligations for land reclamation and decommissioning of structure consist of spending at mines in accordance with the guidelines from Ministry of Coal, Government of India. The Group estimates its obligations for mine closure, site restoration and decommissioning based on the detailed calculation and technical assessment of the amount and timing of future cash spending for the required work and provided for as per approved mine closure plan. The estimate of expenses is escalated for inflation and then discounted at a pre-tax discount rate that reflects current market assessment of the time value of money and risk, such that the amount of provision reflects the present value of expenditure required to settle the obligation. The Group recognizes a corresponding asset under property, plant and equipment as a separate item for the cost associated with such obligation. Upon commercial declaration of mines, the mine closure, site restoration and decommissioning obligations are amortized on straight line method over the balance life of the mine.The value of the obligation is progressively increased over time as the effect of discounting unwinds and the same is recognized as finance costs.

Further, a specific escrow account is maintained for this purpose as per approved mine closure plan. The progressive mine closure expenses incurred on year to year basis, forming part of the total mine closure obligation, are initially recognized as receivable from escrow account and thereafter adjusted with the obligation in the year in which the amount is withdrawn from escrow account after concurrence of the certifying agency.

8. Joint operations

The Group has joint arrangements with others for operations in the nature of joint operations. The Group recognizes, on a line-by-line basis its share of the assets, liabilities and expenses of these joint operations as per the arrangement which are accounted based on the respective accounting policies of the Group.

9. Borrowing costs

Borrowing costs consist of (a) interest expense calculated using the effective interest method as described in Ind AS 109 – 'Financial Instruments' (b) interest expense on lease liabilities recognized in accordance with Ind AS 116– 'Leases' and(c) exchange differences arising from foreign currency borrowings to the extent that they are regarded as an adjustment to interest costs.

Borrowing costs that are directly attributable to the acquisition, construction/exploration/ development or erection of qualifying assets are capitalized as part of cost of such asset until such time the assets are substantially ready for their intended use. Qualifying assets are assets which necessarily take substantial period of time to get ready for their intended use or sale.

When the Group borrows funds specifically for the purpose of obtaining a qualifying asset, the borrowing costs incurred are capitalized. When Group borrows funds generally and uses them for the purpose of obtaining a qualifying asset, the capitalization of the borrowing costs is computed based on the weighted average cost of all borrowings that are outstanding during the period and used for the acquisition, construction/exploration or erection of the qualifying asset. However, borrowing costs applicable to borrowings made specifically for the purpose of obtaining a qualifying asset, are excluded from this calculation, until substantially all the activities necessary to prepare that asset for its intended use or sale are complete.

Income earned on temporary investment made out of the borrowings pending utilization for expenditure on the qualifying assets is deducted from the borrowing costs eligible for capitalization.

Capitalization of borrowing costs ceases when substantially all the activities necessary to prepare the qualifying assets for their intended use are complete.

Other borrowing costs are recognized as an expense in the year in which they are incurred.

10. **Inventories**

Inventories are valued at the lower of cost and net realizable value. Cost includes cost of purchase, cost of conversion and other costs incurred in bringing the inventories to their present location and condition. Cost is determined on weighted average basis. Costs of purchased inventory are determined after deducting rebates, trade discounts and other similar items. Net realizable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and the estimated costs necessary to make the sale.

The diminution in the value of obsolete, unserviceable, surplus and non-moving items of stores and spares is ascertained on review and provided for.

Steel scrap is valued at estimated realizable value.

11. **Cash and cash equivalents**

Cash and cash equivalents in the balance sheet comprise cash at banks, cash on hand and short-term deposits with an original maturity of three months or less, that are readily convertible to known amount of cash and which are subject to an insignificant risk of changes in value.

12. **Government grants**

Government grants are recognized when there is reasonable assurance that they will be received and the Group will comply with the conditions associated with the grant. Grants that compensate the Group for the cost of depreciable asset are recognized as income in statement of profit and loss on a systematic basis over the period and in the proportion in which depreciation is charged. Grants that compensate the Group for expenses incurred are recognized over the period in which the related costs are incurred and the same is deducted from the related expenses.

13. **Fly ash utilization reserve fund**

Proceeds from sale of ash/ash products along-with income on investment of surplus fund are transferred to 'Fly ash utilization reserve fund' in terms of provisions of gazette notification dated 3 November 2009 issued by Ministry of Environment and Forests, Government of India. The fund is utilized towards expenditure on development of infrastructure/ facilities, promotion & facilitation activities for use of fly ash.

14. **Provisions, contingent liabilities and contingent assets**

A provision is recognized if, as a result of a past event, the Group has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. If the effect of the time value of money is material, provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognized as a finance cost.

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation at reporting date, taking into account the risks and uncertainties surrounding the obligation.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, the receivable is recognized as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably. The expense relating to a provision is presented in the statement of profit and loss net of reimbursement, if any.

Contingent liabilities are possible obligations that arise from past events and whose existence will only be confirmed by the occurrence or non-occurrence of one or more future events not wholly within the control of the Group. Where it is not probable that an outflow of economic benefits will be required, or the amount cannot be estimated reliably, the obligation is disclosed as a contingent liability, unless the probability of outflow of economic benefits is remote. Contingent liabilities are disclosed on the basis of judgment of the management/independent experts. These are reviewed at each balance sheet date and are adjusted to reflect the current management estimate.

Contingent assets are possible assets that arise from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Group. Contingent assets are disclosed in the financial statements when inflow of economic benefits is probable on the basis of judgment of management. These are assessed continually to ensure that developments are appropriately reflected in the financial statements.

15. Foreign currency transactions and translation

Transactions in foreign currencies are initially recorded at the functional currency spot exchange rates at the date the transaction first qualifies for recognition.

Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date. Exchange differences arising on settlement or translation of monetary items are recognized in the statement of profit and loss in the year in which it arises with the exception that exchange differences on long term monetary items related to acquisition of property, plant and equipment recognized up to 31 March 2016 are adjusted to the carrying cost of property, plant and equipment.

Non-monetary items denominated in foreign currency which are measured in terms of historical cost are recorded using the exchange rate at the date of the transaction. In case of advance consideration received or paid in a foreign currency, the date of transaction for the purpose of determining the exchange rate to use on initial recognition of the related asset, expense or income (or part of it), is when the Group initially recognizes the non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration.

The results and financial position of foreign operations (none of which has the currency of a hyperinflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- Assets and liabilities are translated at the closing rate at the date of that balance sheet
- Income and expenses are translated at average exchange rates (unless this is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are translated at the dates of the transactions), and
- All resulting exchange differences are recognized in OCI.

On consolidation, exchange differences arising from the translation of any net investment in foreign entities are recognized in OCI. The associated exchange differences are reclassified to profit or loss, as part of the gain or loss on disposal of the net investment.

16. Revenue

Group's revenues arise from sale and trading of energy, consultancy, project management & supervision services, income on assets under lease, supply of coal from integrated coal mines and other income. Revenue from other income comprises interest from banks, employees, contractors etc., dividend from mutual fund investments, surcharge received from beneficiaries for delayed payments, sale of scrap, other miscellaneous income, etc.

16.1. Revenue from sale of energy

The majority of the Group's operations in India are regulated under the Electricity Act, 2003. Accordingly, the CERC determines the tariff for the Group's power plants based on the norms prescribed in the tariff regulations as applicable from time to time. Tariff is based on the capital cost incurred for a specific power plant and primarily comprises two components: capacity charge i.e. a fixed charge that includes depreciation, return on equity, interest on working capital, operating & maintenance expenses, interest on loan and energy charge i.e. a variable charge primarily based on fuel costs. Tariff for Group's integrated coal mines are also determined by CERC based on the norms prescribed in the CERC Tariff Regulations.

Revenue is measured based on the consideration that is specified in a contract with a customer or is expected to be received in exchange for the products or services and excludes amounts collected on behalf of third parties. The Group recognizes revenue when (or as) the performance obligation is satisfied, which typically occurs when (or as) control over the products or services is transferred to a customer.

Revenue from sale of energy is accounted for based on tariff rates approved by the CERC (except items indicated as provisional) as modified by the orders of Appellate Tribunal for Electricity to the extent applicable. In case of power stations where the tariff rates are yet to be approved/items indicated provisional by the CERC in their orders, provisional rates are adopted considering the applicable CERC Tariff Regulations. Revenue from sale of energy is recognized once the electricity has been delivered to the beneficiary and is measured through a regular review of usage meters. Beneficiaries are billed on a periodic and regular basis. As at each reporting date, revenue from sale of energy includes an accrual for sales delivered to beneficiaries but not yet billed i.e. contract assets/ unbilled revenue.

The incentives/disincentives are accounted for based on the norms notified/approved by the CERC as per principles enunciated in Ind AS 115 - 'Revenue from contracts with customers'. In cases of power stations where the same have not been notified/approved, incentives/disincentives are accounted for on provisional basis.

Part of revenue from energy sale where CERC tariff Regulations are not applicable is recognized based on the rates, terms & conditions mutually agreed with the beneficiaries and trading of power through power exchanges.

Exchange differences arising from settlement/translation of monetary items denominated in foreign currency to the extent recoverable from or payable to the beneficiaries in subsequent periods as per the CERC Tariff Regulations are accounted as 'Regulatory deferred account balances' and such balances are adjusted in the year in which the same becomes recoverable/payable to the beneficiaries.

Exchange differences on account of translation of foreign currency borrowings recognized up to 31 March 2016, to the extent recoverable from or payable to the beneficiaries in subsequent periods as per the CERC Tariff Regulations are accounted as 'Deferred foreign currency fluctuation asset' with corresponding credit to 'Deferred income from foreign currency fluctuation'. Deferred income from foreign currency fluctuation account is amortized in the proportion in which depreciation is charged on such exchange differences and same is adjusted against depreciation expense. Fair value changes in respect of forward exchange contracts for derivatives recoverable from/payable to the beneficiaries as per the CERC Tariff Regulations, are recognized in sales.

Revenue from sale of energy through trading is recognized based on the rates, terms & conditions mutually agreed with the beneficiaries as per the guidelines issued by Ministry of New and Renewable Energy, Government of India.

Rebates allowed to beneficiaries as early payment incentives are deducted from the amount of revenue.

16.2. Revenue from services

Revenue from consultancy, project management and supervision services rendered is measured based on the consideration that is specified in a contract with a customer or is expected to be received in exchange for the services, which is determined on output method and excludes amounts collected on behalf of third parties. The Group recognizes revenue when the performance obligation is satisfied, which typically occurs when control over the services is transferred to a customer.

Reimbursement of expenses is recognized as other income, as per the terms of the service contracts.

Contract modifications are accounted for when additions, deletions or changes are approved either to the contract scope or contract price. The accounting for modifications of contracts involves assessing whether the services added to an existing contract are distinct and whether the pricing is at the standalone selling price. Services added that are not distinct are accounted for on a cumulative catch up basis, while those that are distinct are accounted for prospectively, either as a separate contract, if the additional services are priced at the standalone selling price, or as a termination of the existing contract and creation of a new contract if not priced at the standalone selling price.

16.3. Other income

Interest income is recognized, when no significant uncertainty as to measurability or collectability exist, on a time proportion basis taking into account the amount outstanding and the applicable interest rate, using the effective interest rate method (EIR). For debt instruments measured either at amortized cost or at fair value through other comprehensive income (OCI), interest income is recorded using the EIR. For credit impaired financial assets the EIR is applied to the net carrying amount of the financial asset (after deduction of the loss allowance). EIR is the rate that exactly discounts the estimated future cash payments or receipts over the expected life of the financial instrument or a shorter period, where appropriate, to the gross carrying amount of the financial asset or to the amortized cost of a financial liability. When calculating the EIR, the group estimates the expected cash flows by considering all the contractual terms of the financial instrument (for example, prepayment, extension, call and similar options) but does not consider the expected credit losses. Interest income is included in other income in the statement of profit and loss.

For purchased or originated credit-impaired (POCI) financial assets interest income is recognized by calculating the credit-adjusted EIR and applying that rate to the amortized cost of the asset. The credit-adjusted EIR is the interest rate that, at original recognition, discounts the estimated future cash flows (including credit losses) to the amortized cost of the POCI assets.

Scrap other than steel scrap is accounted for as and when sold.

Insurance claims for loss of profit are accounted for in the year of acceptance. Other insurance claims are accounted for based on certainty of realization.

Revenue from rentals and operating leases is recognized on an accrual basis in accordance with the substance of the relevant agreement.

The interest/surcharge on late payment/overdue trade receivables for sale of energy is recognized when no significant uncertainty as to measurability or collectability exists.

Interest/surcharge recoverable on advances to contractors and suppliers as well as warranty claims wherever there is uncertainty of realization/acceptance are not treated as accrued and are therefore, accounted for on receipt/acceptance.

Dividend income is recognized in profit or loss only when the right to receive is established, it is probable that the economic benefits associated with the dividend will flow to the Group, and the amount of the dividend can be measured reliably.

17. Employee benefits

17.1. Defined contribution plans

A defined contribution plan is a post-employment benefit plan under which an entity pays fixed contributions to separate entities and will have no legal or constructive obligation to pay further amounts. Obligations for contributions to defined contribution plans are recognized as an employee benefits expense in statement of profit and loss in the period during which services are rendered by employees. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in future payments is available. Contributions to a defined contribution plan that are due after more than 12 months after the end of the period in which the employees render the service are discounted to their present value.

The Group has a defined contribution pension scheme which is administered through a separate trust. The obligation of the Group is to contribute to the trust to the extent of amount not exceeding 30% of basic pay and dearness allowance less employer's contribution towards provident fund, gratuity, post-retirement medical facility (PRMF) or any other retirement benefits. The Group's contribution towards pension is made to National Pension System Trust (NPS) for the employees opted for the scheme. The contributions to the defined contribution pension scheme of the Group/NPS for the year are recognized as an expense and charged to the statement of profit and loss.

17.2. Defined benefit plans

A defined benefit plan is a post-employment benefit plan other than a defined contribution plan. The Group's liability towards gratuity, pension scheme at two of the stations in respect of taken over employees from the erstwhile state government power utility, post-retirement medical facility(PRMF), baggage allowance for settlement at home town after retirement, farewell gift on retirement and provident fund scheme to the extent of interest liability on provident fund contribution are in the nature of defined benefit plans.

The Group pays fixed contribution to the provident fund at predetermined rates to a separate trust, which invests the funds in permitted securities. The contributions to the fund for the year are recognized as expense and are charged to the statement of profit and loss. The obligation of the Group is to make such fixed contributions and to ensure a minimum rate of return to the members as specified by the Government of India. Shortfall in the fund assets, if any, is made good by the Group and charged to the statement of profit and loss.

The gratuity is funded by the Group and is managed by separate trust. The Group has PRMF, under which retired employee and the spouse are provided medical facilities in the Group hospitals/empaneled hospitals. They can also avail treatment as out-patient subject to a ceiling fixed by the Group.

The Group's net obligation in respect of defined benefit plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value. The fair value of any plan assets is deducted. The discount rate is based on the prevailing market yields of Indian government securities as at the reporting date that have maturity dates approximating the terms of the Group's obligations and that are denominated in the same currency in which the benefits are expected to be paid.

The actuarial calculation is performed annually by a qualified actuary using the projected unit credit method. When the calculation results in a benefit to the Group, the recognized asset is limited to the present value of economic benefits available in the form of any future refunds from the plan or reductions in future contributions to the plan.

An economic benefit is available to the Group if it is realizable during the life of the plan, or on settlement of the plan liabilities. Remeasurement comprising actuarial gain and losses, return on plan assets (excluding the amount included in net interest on the net defined liability) & effect of asset ceiling (excluding the amount included in net interest on the net defined liability) and the same are recognized in the Other Comprehensive Income (OCI) in the period in which they arise.

Past service costs are recognized in statement of profit and loss on the earlier of the date of the plan amendment or curtailment, and the date that the Group recognizes related restructuring costs. If a plan amendment, curtailment or settlement occurs, the current service cost and the net interest for the period after the re-measurement are determined using the assumptions used for the re-measurement.

17.3. Other long-term employee benefits

Benefits under the Group's leave encashment, long-service award and economic rehabilitation scheme constitute other long term employee benefits.

The Group's net obligation in respect of these long-term employee benefits is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value and the fair value of any related assets is deducted. The discount rate is based on the prevailing market yields of Indian government securities as at the reporting date that have maturity dates approximating the terms of the Group's obligations and that are denominated in the same currency in which the benefits are expected to be paid.

The actuarial calculation is performed annually by a qualified actuary using the projected unit credit method. Remeasurement comprising of actuarial gain and losses, return on plan assets (excluding the amount included in net interest on the net defined liability) & effect of asset ceiling (excluding the amount included in net interest on the net defined liability) and the same are recognized in statement of profit and loss account in the period in which they arise.

The obligations are presented as current liabilities in the balance sheet if the Group does not have an unconditional right to defer settlement for at least twelve months after the reporting period, regardless of when the actual settlement is expected to occur.

17.4. Short-term benefits

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided.

A liability is recognized for the amount expected to be paid under performance related pay if the Group has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

18. Other expenses

Expenses on ex-gratia payments under voluntary retirement scheme, training & recruitment and voluntary community development are charged to statement of profit and loss in the year incurred.

Expenditure on research is charged to revenue as and when incurred. Expenditure on development is charged to revenue as and when incurred unless it meets the recognition criteria for intangible asset as per Ind AS 38- 'Intangible assets'.

Preliminary expenses on account of new projects incurred prior to approval of feasibility report/techno economic clearance are charged to statement of profit and loss.

Net pre-commissioning income/expenditure is adjusted directly in the cost of related assets and systems.

Transit and handling losses of coal as per Group's norms are included in cost of coal.

19. Income tax

Income tax expense comprises current and deferred tax. Current tax expense is recognized in statement of profit and loss except to the extent that it relates to items recognized directly in OCI or equity, in which case it is recognized in OCI or equity, respectively.

Current tax is the expected tax payable on the taxable income for the year computed as per the provisions of Income

Tax Act, 1961, using tax rates enacted or substantively enacted by the end of the reporting period, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognized using the balance sheet method, on temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the tax bases of assets and liabilities. Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they materialize, based on the laws that have been enacted or substantively enacted by the reporting date. Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax assets against the current tax liabilities, and they relate to income taxes levied by the same tax authority.

Deferred tax is recognized in statement of profit and loss except to the extent that it relates to items recognized directly in OCI or equity, in which case it is recognized in OCI or equity, respectively.

A deferred tax asset is recognized for all deductible temporary differences to the extent that it is probable that future taxable profits will be available against which the deductible temporary difference can be utilized. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the sufficient taxable profits will be available in future to allow all or part of deferred tax assets to be utilized.

Deferred tax liabilities are not recognized for taxable temporary differences between the carrying amount and tax bases of investments in subsidiaries and interests in joint venture where the Group is able to control the timing of the reversal of the temporary differences and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are not recognized for deductible temporary differences between the carrying amount and tax bases of investments in subsidiaries and interest in joint arrangements where it is not probable that the differences will reverse in the foreseeable future or taxable profit will not be available against which the temporary difference can be utilized.

Additional income taxes that arise from the distribution of dividends are recognized at the same time that the liability to pay the related dividend is recognized. The income tax consequences of dividends are recognized in profit or loss, other comprehensive income or equity according to where the Group originally recognized those past transactions or events.

Deferred tax assets include Minimum Alternative Tax (MAT) paid in accordance with the tax laws in India, which is likely to give future economic benefits in the form of availability of set off against future income tax liability. MAT credit is recognized as deferred tax asset in the balance sheet when the asset can be measured reliably and it is probable that the future taxable profit will be available against which MAT credit can be utilized.

When there is uncertainty regarding income tax treatments, the Group assesses whether a tax authority is likely to accept an uncertain tax treatment. If it concludes that the tax authority is unlikely to accept an uncertain tax treatment, the effect of the uncertainty on taxable income, tax bases and unused tax losses and unused tax credits is recognized. The effect of the uncertainty is recognized using the method that, in each case, best reflects the outcome of the uncertainty: the most likely outcome or the expected value. For each case, the Group evaluates whether to consider each uncertain tax treatment separately, or in conjunction with another or several other uncertain tax treatments, based on the approach that best prefixes the resolution of uncertainty.

20. Leases

20.1. As lessee

The Group assesses whether a contract contains a lease, at inception of a contract. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, the Group assesses whether: (1) the contact involves the use of an identified asset (2) the Group has substantially all of the economic benefits from use of the asset through the period of the lease and (3) the Group has the right to direct the use of the asset.

The Group recognizes a right-of-use asset and a corresponding lease liability for all lease arrangements in which it is a lessee, except for leases with a term of twelve months or less (short-term leases) and leases for low value underlying assets. For these short-term and leases for low value underlying assets, the Group recognizes the lease payments as an operating expense on a straight-line basis over the term of the lease.

Certain lease arrangements include the options to extend or terminate the lease before the end of the lease term. Right-of use assets and lease liabilities include these options when it is reasonably certain that the option to extend the lease will be exercised/option to terminate the lease will not be exercised.

The right-of-use assets (other than land and buildings) are initially recognized at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or prior to the commencement date of the lease plus any initial direct costs less any lease incentives. They are subsequently measured at cost less accumulated depreciation/amortization and impairment losses and adjusted for any reassessment of lease liabilities.

Right-of-use assets are depreciated/amortized from the commencement date to the end of the useful life of the underlying asset, if the lease transfers ownership of the underlying asset by the end of lease term or if the cost of right-of-use assets reflects that the purchase option will be exercised. Otherwise, Right-of-use assets are depreciated/ amortized from the commencement date on a straight-line basis over the shorter of the lease term and useful life of the underlying asset.

Right-of-use assets are evaluated for recoverability whenever events or changes in circumstances indicate that their carrying amounts may not be recoverable. For the purpose of impairment testing, the recoverable amount (i.e. the higher of the fair value less costs of disposal and the value-in-use) is determined on an individual asset basis unless the asset does not generate cash flows that are largely independent of those from other assets. In such cases, the recoverable amount is determined for the Cash Generating Unit (CGU) to which the asset belongs.

The lease liability is initially measured at amortized cost at the present value of the future lease payments. In calculating the present value, lease payments are discounted using the interest rate implicit in the lease or, if not readily determinable, using the incremental borrowing rate. Lease liabilities are re-measured with a corresponding adjustment to the related right-of-use asset if the Group changes its assessment whether it will exercise an extension or a termination option.

20.2. As lessor

At the inception of an arrangement, the Group determines whether such an arrangement is or contains a lease. A specific asset is subject of a lease if fulfillment of the arrangement is dependent on the use of that specified asset. An arrangement conveys the right to use the asset if the arrangement conveys to the customer the right to control the use of the underlying asset. Arrangements that do not take the legal form of a lease but convey rights to customers/ suppliers to use an asset in return for a payment or a series of payments are identified as either finance leases or operating leases.

Accounting for finance leases

Where the Group determines a long term Power Purchase Agreement (PPA) to be or to contain a lease and where the off taker has the principal risk and rewards of ownership of the power plant through its contractual arrangements with the Group, the arrangement is considered a finance lease. Capacity payments are apportioned between capital repayments relating to the provision of the plant, finance income and service income. The finance income element of the capacity payment is recognized as revenue, using a rate of return specific to the plant to give a constant periodic rate of return on the net investment in each period. The service income element of the capacity payment is the difference between the total capacity payment and the amount recognized as finance income and capital repayments and recognized as revenue as it is earned.

The amounts due from lessees under finance leases are recorded in the balance sheet as financial assets, classified as 'Finance lease receivables', at the amount equal to the net investment in the lease.

Accounting for operating leases

Where the Group determines a long term PPA to be or to contain a lease and where the Group retains the principal risks and rewards of ownership of the power plant, the arrangement is considered an operating lease.

For operating leases, the power plant is capitalized as property, plant and equipment and depreciated over its economic life. Rental income from operating leases is recognized on a straight line basis over the term of the arrangement.

21. Impairment of non-financial assets

The carrying amounts of the Group's non-financial assets are reviewed at each reporting date to determine whether there is any indication of impairment considering the provisions of Ind AS 36 - 'Impairment of Assets'. If any such indication exists, then the asset's recoverable amount is estimated.

The recoverable amount of an asset or cash-generating unit is the higher of its fair value less costs of disposal and its value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For the purpose of impairment testing, assets that cannot be tested individually are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or groups of assets (the 'cash-generating unit', or "CGU").

An impairment loss is recognized if the carrying amount of an asset or its CGU exceeds its estimated recoverable amount. Impairment losses are recognized in the statement of profit and loss. Impairment losses recognized in respect of CGUs are reduced from the carrying amounts of the assets of the CGU.

Impairment losses recognized in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of accumulated depreciation or amortization, if no impairment loss had been recognized.

22. Operating segments

In accordance with Ind AS 108 – 'Operating segments', the operating segments used to present segment information are identified on the basis of internal reports used by the Group's management to allocate resources to the segments and assess their performance. The Board of Directors is collectively the Group's 'Chief Operating Decision Maker' or 'CODM' within the meaning of Ind AS 108. The indicators used for internal reporting purposes may evolve in connection with performance assessment measures put in place.

Segment results that are reported to the CODM include items directly attributable to a segment as well as those that can be allocated on a reasonable basis. Unallocated items comprise mainly corporate expenses, finance costs, income tax expenses and corporate income that are not directly attributable to segments.

Revenue directly attributable to the segments is considered as segment revenue. Expenses directly attributable to the segments and common expenses allocated on a reasonable basis are considered as segment expenses.

Segment capital expenditure is the total cost incurred during the period to acquire property, plant and equipment, capital work in progress, intangible assets other than goodwill and intangible assets under development.

Segment assets comprise property, plant and equipment, intangible assets, capital work in progress, intangible assets under development, advances for capital expenditures, trade and other receivables, inventories and other assets that can be directly or reasonably allocated to segments. For the purpose of segment reporting, property, plant and equipment have been allocated to segments based on the extent of usage of assets for operations attributable to the respective segments. Unallocated assets comprise investments, income tax assets, corporate assets and other assets that cannot reasonably be allocated to segments.

Segment liabilities include all operating liabilities in respect of a segment and consist principally of trade payable, payable for capital expenditure and other payables, provision for employee benefits and other provisions. Unallocated liabilities comprise equity, income tax liabilities, loans and borrowings and other liabilities and provisions that cannot reasonably be allocated to segments.

23. Business Combinations

Acquisition of subsidiaries and businesses are accounted for using the acquisition method as at the date of the acquisition, which is the date at which control is transferred to the Group. The consideration transferred in each business combination is measured at the aggregate of the acquisition date fair values of assets transferred by the Group, liabilities incurred by the Group to the former owners of the acquiree, equity interests issued by the Group in exchange for control of the acquiree and fair value of any asset or liability resulting from a contingent consideration arrangement. The identifiable assets acquired and liabilities assumed are recognized at fair values on their acquisition date (except certain assets and liabilities which are required to be measured as per the applicable standard) and the non-controlling interest is initially recognized at the non-controlling interest's proportionate share of the acquiree's net identifiable assets.

Acquisition related costs are recognized in the consolidated statement of profit and loss.

Goodwill is initially measured at cost, being the excess of the consideration transferred, amount of any non-controlling interest recognized in the acquired entity and acquisition date fair value of any previous equity interest in the acquired entity over the Group's interest in the net fair value of the identifiable assets acquired, liabilities assumed and contingent liabilities recognized. Where the fair value of the identifiable assets acquired and liabilities assumed exceed the consideration transferred, amount of any non-controlling interest recognized in the acquired entity and acquisition date fair value of any previous equity interest in the acquired entity after reassessing the fair values of the net assets and contingent liabilities, the excess is recognized as capital reserve on consolidation.

Business combinations arising from transfers of interests in entities that are under the common control are accounted for using the pooling of interest method. The difference, if any, between the amounts recorded as share capital issued plus any additional consideration in the form of cash or other assets and the amount of share capital of the transferor is transferred to capital reserve and is presented separately from other capital reserves.

If the business combination is achieved in stages, the acquisition date carrying value of the acquirer's previously held equity interest in the acquiree is re-measured to fair value at the acquisition date. Any gains or losses arising from such re-measurement are recognized in statement of profit and loss or OCI, as appropriate. When the Group obtains control of a business that is a joint operation, then it considers such an acquisition as a business combination achieved in stages.

24. Dividends

Dividends and interim dividends payable to the Group's shareholders are recognized as changes in equity in the period in which they are approved by the shareholders and the Board of Directors respectively.

25. Material prior period errors

Material prior period errors are corrected retrospectively by restating the comparative amounts for the prior periods presented in which the error occurred. If the error occurred before the earliest period presented, the opening balances of assets, liabilities and equity for the earliest period presented, are restated.

26. Earnings per share

Basic earnings per equity share is computed by dividing the net profit or loss attributable to equity shareholders of the Group by the weighted average number of equity shares outstanding during the financial year.

Diluted earnings per equity share is computed by dividing the net profit or loss attributable to equity shareholders of the Group by the weighted average number of equity shares considered for deriving basic earnings per equity share and also the weighted average number of equity shares that could have been issued upon conversion of all dilutive potential equity shares.

The number of equity shares and potentially dilutive equity shares are adjusted retrospectively for all periods presented for any bonus shares issued during the financial year.

Basic and diluted earnings per equity share are also computed using the earnings amounts excluding the movements in regulatory deferral account balances.

27. Statement of cash flows

Statement of cash flows is prepared in accordance with the indirect method prescribed in Ind AS 7 - 'Statement of cash flows'.

28. Financial instruments

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity. The Group recognizes a financial asset or a financial liability only when it becomes party to the contractual provisions of the instrument.

28.1. Financial assets

Initial recognition and measurement

All financial assets are recognized at fair value on initial recognition, except for trade receivables which are initially measured at transaction price. Transaction costs that are directly attributable to the acquisition of financial assets, which are not valued at fair value through profit or loss, are added to the fair value on initial recognition.

Subsequent measurement

Debt instruments at amortized cost

A 'debt instrument' is measured at the amortized cost if both the following conditions are met:

(a) The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and

(b) Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

After initial measurement, such financial assets are subsequently measured at amortized cost using the effective interest rate (EIR) method. Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance income in the statement of profit and loss. The losses arising from impairment are recognized in the statement of profit and loss. This category generally applies to trade and other receivables.

Debt instrument at FVTOCI (Fair value through OCI)

A 'debt instrument' is classified as at the FVTOCI if both of the following criteria are met:

(a) The objective of the business model is achieved both by collecting contractual cash flows and selling the financial assets, and

(b) The asset's contractual cash flows represent SPPI

Debt instruments included within the FVTOCI category are measured initially as well as at each reporting date at fair value. Fair value movements are recognized in the OCI. However, the Group recognizes interest income, impairment losses & reversals and foreign exchange gain or loss in the statement of profit and loss. On de-recognition of the asset, cumulative gain or loss previously recognized in OCI is reclassified from the equity to the statement of profit and loss. Interest earned whilst holding FVTOCI debt instrument is reported as interest income using the EIR method.

Debt instrument at FVTPL (Fair value through profit or loss)

FVTPL is a residual category for debt instruments. Any debt instrument, which does not meet the criteria for categorization as at amortized cost or as FVTOCI, is classified as at FVTPL.

In addition, the Group may elect to classify a debt instrument, which otherwise meets amortized cost or FVTOCI criteria, as at FVTPL. However, such election is allowed only if doing so reduces or eliminates a measurement or recognition inconsistency (referred to as 'accounting mismatch'). Debt instruments included within the FVTPL category are measured at fair value with all changes recognized in the statement of profit and loss. Interest income on such investments is presented under 'Other income'.

Investment in Equity instruments

All equity investments in entities other than subsidiaries and joint venture companies are measured at fair value. Equity instruments which are held for trading are classified as at FVTPL. For all other equity instruments, the Group decides to classify the same either as at FVTOCI or FVTPL. The Group makes such election on an instrument by instrument basis. The classification is made on initial recognition and is irrevocable.

If the Group decides to classify an equity instrument as at FVTOCI, then all fair value changes on the instrument, excluding dividends, are recognized in the OCI. There is no recycling of the amounts from OCI to statement of profit and loss, even on sale/disposal of investments. However, the Group may transfer the cumulative gain or loss within equity on sale / disposal of the investments.

Equity instruments included within the FVTPL category are measured at fair value with all changes recognized in the statement of profit and loss. Dividend on such investments is presented under 'Other income'.

De-recognition

A financial asset (or, where applicable, a part of a financial asset or part of a Group of similar financial assets) is primarily de-recognized (i.e. removed from the Group's balance sheet) when:

- The rights to receive cash flows from the asset have expired, or
- The Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Group has transferred substantially all the risks and rewards of the asset, or (b) the Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

The difference between the carrying amount and the amount of consideration received/receivable is recognized in the statement of profit and loss except for equity instruments classified as at FVOCI, where such differences are recorded in OCI.

Impairment of financial assets

In accordance with Ind AS 109 – 'Financial Instruments', the Group applies expected credit loss (ECL) model for measurement and recognition of impairment loss on the following financial assets and credit risk exposure:

(a) Financial assets that are debt instruments, and are measured at amortized cost e.g., loans, debt securities, deposits and bank balance.

(b) Financial assets that are debt instruments and are measured as at FVTOCI.

(c) Lease receivables under Ind AS 116.

(d) Trade receivables, unbilled revenue and contract assets under Ind AS 115.

(e) Loan commitments which are not measured as at FVTPL.

(f) Financial guarantee contracts which are not measured as at FVTPL.

For trade receivables and contract assets/unbilled revenue, the Group applies the simplified approach required by Ind AS 109 - 'Financial Instruments', which requires lifetime expected losses to be recognized from initial recognition.

For recognition of impairment loss on other financial assets and risk exposure (other than purchased or originated credit impaired financial assets), the Group determines that whether there has been a significant increase in the credit risk since initial recognition. If credit risk has not increased significantly, 12-month ECL is used to provide for impairment loss. However, if credit risk has increased significantly, lifetime ECL is used. If, in a subsequent period, credit quality of the instrument improves such that there is no longer a significant increase in credit risk since initial recognition, then the Group reverts to recognizing impairment loss allowance based on 12-month ECL.

For purchased or originated credit impaired financial assets, a loss allowance is recognized for the cumulative changes in lifetime expected credited losses since initial recognition.

28.2. Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss and financial liabilities at amortized cost, as appropriate. All financial liabilities are recognized initially at fair value and, in the case of liabilities subsequently measured at amortized cost net of directly attributable transaction cost. The Group's financial liabilities include trade and other payables, borrowings including bank overdrafts, financial guarantee contracts and derivative financial instruments.

Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at amortized cost

After initial measurement, such financial liabilities are subsequently measured at amortized cost using the EIR method. Gains and losses are recognized in statement of profit and loss when the liabilities are derecognized as well as through the EIR amortization process Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance costs in the statement of profit and loss. This category generally applies to borrowings, trade payables and other contractual liabilities.

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Group that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109. Separated embedded derivatives are also classified as held for trading unless they are designated as effective hedging instruments.

Gains or losses on liabilities held for trading are recognized in the statement of profit and loss.

Financial liabilities designated upon initial recognition at fair value through profit or loss are designated at the initial date of recognition, and only if the criteria in Ind AS 109 are satisfied. For liabilities designated as FVTPL, fair value gains/losses attributable to changes in own credit risk is recognized in OCI. These gains/losses are not subsequently transferred to profit and loss. However, the Group may transfer the cumulative gain or loss within equity on disposal. All other changes in fair value of such liability are recognized in the statement of profit and loss. The Group has not designated any financial liability as at fair value through profit and loss.

De-recognition

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the de-recognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognized in the statement of profit and loss.

Interest rate benchmark reform

When the basis for determining the contractual cash flows of a financial asset or financial liability measured at amortised cost changed as a result of interest rate benchmark reform, the Group updated the effective interest rate of the financial asset or financial liability to reflect the change that is required by the reform. A change in the basis for determining the contractual cash flows is required by interest rate benchmark reform if the following conditions are met:

– the change is necessary as a direct consequence of the reform; and

– the new basis for determining the contractual cash flows is economically equivalent to the previous basis – i.e. the basis immediately before the change.

When changes were made to a financial asset or financial liability in addition to changes to the basis for determining the contractual cash flows required by interest rate benchmark reform, the Group first updated the effective interest rate of the financial asset or financial liability to reflect the change that is required by interest rate benchmark reform. After that, the Group applied the policies on accounting for modifications to the additional changes.

28.3. Financial guarantee contracts

Financial guarantee contracts issued by the Group are those contracts that require a payment to be made to reimburse the holder for a loss it incurs because the specified debtor fails to make a payment when due in accordance with the terms of a debt instrument. Financial guarantee contracts are recognized initially as a liability at fair value, adjusted for transaction costs that are directly attributable to the issuance of the guarantee. Subsequently, the liability is measured at the higher of the amount of loss allowance determined as per impairment requirements of Ind AS 109 - 'Financial Instruments' and the amount recognized less the cumulative amount of income recognized in accordance with the principles of Ind AS 115 'Revenue from Contracts with Customers'.

28.4. Derivative financial instruments

Initial recognition and subsequent measurement

The Group uses derivative financial instruments, such as forward currency contracts and interest rate swaps to hedge its foreign currency risks and interest rate risks of foreign currency loans. Such derivative financial instruments are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently re-measured at fair value. Derivatives are carried as financial assets when the fair value is positive and as financial liabilities when the fair value is negative. Any gains or losses arising from changes in the fair value of derivatives are taken to statement of profit and loss.

28.5. Offsetting of financial assets and financial liabilities

Financial assets and financial liabilities are offset and the net amount is presented in the balance sheet if there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, to realize the assets and settle the liabilities simultaneously.

29. Non-current assets held for sale

The Group classifies non-current assets and disposal groups as held for sale if their carrying amounts will be recovered principally through a sale rather than through continuing use and a sale is considered highly probable.

Management must be committed to the sale, which should be expected to qualify for recognition as a completed sale within one year from the date of classification as held for sale, and actions required to complete the plan of sale should indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn.

Non-current assets held for sale and disposal groups are measured at the lower of their carrying amount and the fair value less costs of disposal.

Non-current assets classified as held for sale are not depreciated or amortized.

D. Use of estimates and management judgements

The preparation of financial statements requires management to make judgments, estimates and assumptions that may impact the application of accounting policies and the reported value of assets, liabilities, revenue, expenses and related disclosures concerning the items involved as well as contingent assets and liabilities at the balance sheet date. The estimates and management's judgments are based on previous experience & other factors considered reasonable and prudent in the circumstances. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

In order to enhance understanding of the financial statements, information about significant areas of estimation, uncertainty and critical judgments in applying accounting policies that have the most significant effect on the amounts recognized in the financial statements is as under:

1. Formulation of accounting policies

The accounting policies are formulated in a manner that results in financial statements containing relevant and reliable information about the transactions, other events and conditions to which they apply. Those policies need not be applied when the effect of applying them is immaterial.

2. Useful life of property, plant and equipment and intangible assets

The estimated useful life of property, plant and equipment and intangible assets is based on a number of factors including the effects of obsolescence, demand, competition and other economic factors (such as the stability of the industry and known technological advances) and the level of maintenance expenditures required to obtain the expected future cash flows from the asset.

Useful life of the assets of the generation of electricity business and integrated coal mines (where tariff is regulated) is determined by the CERC Tariff Regulations in accordance with Schedule II of the Companies Act, 2013.

3. Recoverable amount of property, plant and equipment and intangible assets

The recoverable amount of property, plant and equipment and intangible assets is based on estimates and assumptions regarding in particular the expected market outlook and future cash flows associated with the power plants. Any changes in these assumptions may have a material impact on the measurement of the recoverable amount and could result in impairment.

4. Defined benefit plans and long-term employee benefits

Employee benefit obligations are measured on the basis of actuarial assumptions which include mortality and withdrawal rates as well as assumptions concerning future developments in discount rates, the rate of salary increases and the inflation rate. The Group considers that the assumptions used to measure its obligations are appropriate and documented. However, any changes in these assumptions may have a material impact on the resulting calculations.

5. Revenues

The Group records revenue from sale of energy based on tariff rates approved by the CERC as modified by the orders of Appellate Tribunal for Electricity, as per principles enunciated under Ind AS 115. However, in cases where tariff rates are yet to be approved, provisional rates are adopted considering the applicable CERC Tariff Regulations.

6. **Leases not in legal form of lease**

Significant judgment is required to apply lease accounting rules as per Ind AS 116 in determining whether an arrangement contains a lease. In assessing arrangements entered into by the Group, management has exercised judgment to evaluate the right to use the underlying asset, substance of the transactions including legally enforceable agreements and other significant terms and conditions of the arrangements to conclude whether the arrangement meets the criteria as per Ind AS 116.

7. **Assets held for sale**

Significant judgment is required to apply the accounting of non-current assets held for sale under Ind AS 105 - 'Non-current assets held for sale and discontinued operations'. In assessing the applicability, management has exercised judgment to evaluate the availability of the asset for immediate sale, management's commitment for the sale and probability of sale within one year to conclude if their carrying amount will be recovered principally through a sale transaction rather than through continuing use.

8. **Regulatory deferral account balances**

Recognition of regulatory deferral account balances involves significant judgments including about future tariff regulations since these are based on estimation of the amounts expected to be recoverable/payable through tariff in future.

9. **Provisions and contingencies**

The assessments undertaken in recognizing provisions and contingencies have been made in accordance with Ind AS 37 - 'Provisions, contingent liabilities and contingent assets'. The evaluation of the likelihood of the contingent events require best judgment by management regarding the probability of exposure to potential loss. Should circumstances change following unforeseeable developments, this likelihood could alter.

10. **Classification of joint arrangements**

Group's joint arrangements in the nature of joint operations and joint ventures require unanimous consent from all parties sharing control for decisions about the relevant activities. Parties are jointly and severally liable for the liabilities incurred by the joint arrangements. These arrangements are classified and accounted for as either joint operation or joint venture in accordance with the provisions of Ind AS 111 - 'Joint Arrangements'.

11. **Impairment test of investments in Joint Venture Companies**

The recoverable amount of investment in joint venture companies is based on estimates and assumptions regarding in particular the future cash flows associated with the operations of the investee Company. Any changes in these assumptions may have a material impact on the measurement of the recoverable amount and could result in impairment.

12. **Income taxes**

Significant estimates are involved in determining the provision for current and deferred tax, including amount expected to be paid/recovered for uncertain tax positions.

2. Non-current assets - Property, plant and equipment

As at 31 March 2022

₹ Crore

Particulars	Gross block				Depreciation, amortisation and impairment				Net block
	As at 1 April 2021	Additions	Deductions/ adjustments	As at 31 March 2022	As at 1 April 2021	For the year	Deductions/ adjustments	Upto 31 March 2022	As at 31 March 2022
Land									
(including development expenses)									
Freehold	9,008.62	138.83	(5.95)	**9,141.50**	-			-	9,141.50
Right of use	3,580.74	631.49	(778.80)	**3,433.43**	594.48	113.47	(125.71)	**582.24**	2,851.19
Under submergence (refer footnote (f) below)	2,450.15	80.09	(0.01)	**2,530.23**	869.42	67.76	-	**937.18**	1,593.05
Right of use - Coal Bearing Area Land	3,666.94	415.70	-	**4,082.64**	229.92	101.21	-	**331.13**	3,751.51
Roads, bridges, culverts and helipads	2,062.96	174.49	(6.97)	**2,230.48**	361.44	80.93	(1.46)	**440.91**	1,789.57
Building									
Freehold									
Main plant	11,487.40	1,062.81	(12.20)	**12,538.01**	2,304.01	428.23	(3.33)	**2,728.91**	9,809.10
Others	5,925.59	810.88	(13.55)	**6,722.92**	1,017.65	279.04	(2.17)	**1,294.52**	5,428.40
Right of use	48.83	16.06	(9.04)	**55.85**	23.46	8.80	(6.60)	**25.66**	30.19
Temporary erection	72.61	8.62	(0.08)	**81.15**	69.29	9.83	-	**79.12**	2.03
Water supply, drainage and sewerage system	985.76	109.93	-	**1,095.69**	277.93	47.10	-	**325.03**	770.66
Hydraulic works, barrages, dams, tunnels and power channel	11,150.71	101.16	8.90	**11,260.77**	5,375.48	367.89	-	**5,743.37**	5,517.40
MGR track and signalling system	3,440.65	474.24	233.38	**4,148.27**	541.98	229.12	35.85	**806.95**	3,341.32
Railway siding	3,359.18	305.44	24.31	**3,688.93**	525.44	191.33	(0.02)	**716.75**	2,972.18
Earth dam reservoir	536.13	9.65	-	**545.78**	112.37	31.20	-	**143.57**	402.21
Plant and equipment									
Owned	2,08,588.17	32,228.84	(1,367.67)	**2,39,449.34**	55,928.82	12,536.76	(1,166.91)	**67,298.67**	1,72,150.67
Right of use	85.77	-	0.01	**85.78**	28.37	4.76	-	**33.13**	52.65
Mining Properties	1,011.57	274.40	-	**1,285.97**	78.32	55.16	-	**133.48**	1,152.49
Site restoration cost	253.46	-	-	**253.46**	8.99	6.81	-	**15.80**	237.66
Furniture and fixtures	844.04	106.41	(9.68)	**940.77**	262.70	74.06	(6.53)	**330.23**	610.54
Vehicles including speedboats / helicopter									
Owned	92.70	91.98	(1.32)	**183.36**	24.59	11.29	(0.85)	**35.03**	148.33
Right of use	49.92	7.38	(5.01)	**52.29**	26.05	18.25	(4.61)	**39.69**	12.60
Office equipment	526.58	70.70	(12.27)	**585.01**	266.92	61.07	(10.24)	**317.75**	267.26
EDP, WP machines and satcom equipment	501.27	66.70	(23.58)	**544.39**	341.48	84.78	(23.01)	**403.25**	141.14
Construction equipment	285.05	10.53	(1.24)	**294.34**	106.03	23.29	(0.90)	**128.42**	165.92
Electrical installations	2,258.93	179.96	(4.26)	**2,434.63**	577.36	132.45	(1.40)	**708.41**	1,726.22
Communication equipment	114.50	11.11	0.06	**125.67**	58.61	10.31	(0.07)	**68.85**	56.82
Hospital equipment	44.31	20.27	(0.02)	**64.56**	10.71	15.48	(0.08)	**26.11**	38.45
Laboratory and workshop equipment	261.16	8.84	(0.04)	**269.96**	73.83	13.44	-	**87.27**	182.69
Assets for ash utilisation	57.47	0.37	-	**57.84**	-	-	-	-	57.84
Less: Adjusted from fly ash utilisation reserve fund	57.47	0.37	-	**57.84**	-	-	-	-	57.84
Total	**2,72,693.70**	**37,416.51**	**(1,985.03)**	**3,08,125.18**	**70,095.65**	**15,003.82**	**(1,318.04)**	**83,781.43**	**2,24,343.75**

As at 31 March 2021 ₹ Crore

Particulars	Gross block				Depreciation, amortisation and impairment				Net block
	As at 1 April 2020	Additions	Deductions/ adjustments	As at 31 March 2021	As at 1 April 2020	For the year	Deductions/ adjustments	Upto 31 March 2021	As at 31 March 2021
Land									
(including development expenses)									
Freehold	8,759.75	266.03	(17.16)	9,008.62	-	-	-	-	9,008.62
Right of use	3,378.18	202.20	0.36	3,580.74	451.31	135.09	8.08	594.48	2,986.26
Under submergence (refer footnote (f) below)	2,424.95	25.20	-	2,450.15	803.66	65.76	-	869.42	1,580.73
Right of use - Coal Bearing Area Land	3,214.33	452.61	-	3,666.94	151.48	78.44	-	229.92	3,437.02
Roads, bridges, culverts and helipads	1,869.32	192.34	1.30	2,062.96	278.41	81.86	1.17	361.44	1,701.52
Building									
Freehold									
Main plant	9,540.86	796.51	1,150.03	11,487.40	1,469.13	403.91	430.97	2,304.01	9,183.39
Others	5,359.79	520.80	45.00	5,925.59	734.42	245.65	37.58	1,017.65	4,907.94
Right of use	33.78	10.21	4.84	48.83	13.30	8.30	1.86	23.46	25.37
Temporary erection	67.60	1.95	3.06	72.61	60.60	5.20	3.49	69.29	3.32
Water supply, drainage and sewerage system	816.99	84.18	84.59	985.76	158.92	43.24	75.77	277.93	707.83
Hydraulic works, barrages, dams, tunnels and power channel	11,153.97	5.92	(9.18)	11,150.71	5,009.00	366.52	(0.04)	5,375.48	5,775.23
MGR track and signalling system	2,225.76	1,216.31	(1.42)	3,440.65	360.12	181.86	-	541.98	2,898.67
Railway siding	3,255.19	103.99		3,359.18	347.44	178.00	-	525.44	2,833.74
Earth dam reservoir	467.37	68.76		536.13	82.41	29.96	-	112.37	423.76
Plant and equipment									
Owned	1,78,341.93	23,390.44	6,855.80	2,08,588.17	37,800.79	11,257.52	6,870.51	55,928.82	1,52,659.35
Right of use	85.77	-	-	85.77	23.62	4.75	-	28.37	57.40
Mining Properties	707.03	304.54	-	1,011.57	35.35	42.97	-	78.32	933.25
Site restoration cost	182.43	71.03	-	253.46	3.72	5.27	-	8.99	244.47
Furniture and fixtures	775.36	71.70	(3.02)	844.04	196.04	67.18	(0.52)	262.70	581.34
Vehicles including speedboats									
Owned	56.87	49.96	(14.13)	92.70	25.44	3.95	(4.80)	24.59	68.11
Right of use	33.09	6.33	10.50	49.92	5.22	19.12	1.71	26.05	23.87
Office equipment	460.70	76.78	(10.90)	526.58	221.06	52.00	(6.14)	266.92	259.66
EDP, WP machines and satcom equipment	429.83	96.76	(25.32)	501.27	282.48	82.37	(23.37)	341.48	159.79
Construction equipment	270.30	12.13	2.62	285.05	83.07	22.31	0.65	106.03	179.02
Electrical installations	1,841.99	404.77	12.17	2,258.93	239.56	120.02	217.78	577.36	1,681.57
Communication equipment	103.28	10.59	0.63	114.50	48.58	9.28	0.75	58.61	55.89
Hospital Equipment	35.43	9.03	(0.15)	44.31	8.40	2.25	0.06	10.71	33.60
Laboratory and workshop equipment	212.41	18.11	30.64	261.16	34.27	13.20	26.36	73.83	187.33
Assets for ash utilisation	45.52	11.95	-	57.47	-	-	-	-	57.47
Less: Adjusted from fly ash utilisation reserve fund	45.52	11.95	-	57.47	-	-	-	-	57.47
Total	2,36,104.26	28,469.18	8,120.26	2,72,693.70	48,927.80	13,525.98	7,641.87	70,095.65	2,02,598.05

a) The conveyancing of the title to **10,638.98 acres** of freehold land of value ₹ **1,774.39 crore** (31 March 2021: 10,552.92 acres of value ₹ 1,753.25 crore), buildings and structures of value ₹ **4.97 crore** (31 March 2021: ₹ 4.97 crore) and also execution of lease agreements for **9,350.14 acres** of right of use land of value ₹ **614.02 crore** (31 March 2021: 9,711.14 acres of value ₹ 1,347.92 crore) in favour of the Group are awaiting completion of legal formalities.

b) Land includes **284.35 acres** of freehold land of value ₹ **0.52 crore** (31 March 2021: 284.35 acres of value ₹ 0.52 crore), and **1,939.55 acres** of right of use land of value ₹ **3.81 crore** (31 March 2021: 1939.55 acres of value ₹ 3.81 crore), the value thereof including periodical lease rent accruing thereon is subject to revision on final settlement with the State Government Authorities with demand of late payment charges, if any.

c) Land right of use does not include value of **Nil** acres (31 March 2021: 33 acres) of land in possession of the Company. This will be accounted for on settlement of the price thereof by the State Government Authorities.

d) Land includes **1,275.84 acres** of freehold land of value ₹ **44.92 crore** (31 March 2021: 1,281.32 acres of value ₹ 118.32 crore) and **377.11 acres** of right of use land of value ₹ **3.10 crore** (31 March 2021: 395 acres of value ₹ 3.10 crore) not in possession of the Company. The Company is taking appropriate steps for repossession of the same.

e) Land-freehold includes an amount of ₹ **263.92 crore** (31 March 2021: ₹ 263.92 crore) deposited with various authorities in respect of land in possession which is subject to adjustment on final determination of price.

f) Gross block of land under submergence represents ₹ **2,351.39 crore** (31 March 2021: ₹ 2,271.32 crore) of freehold land and ₹ **178.83 crore** (31 March 2021: ₹ 178.83 crore) of right of use land. The land has been amortized considering the rate of depreciation provided by the CERC in the tariff regulations and the fact that it will not have any economic value due to deposit of silt and other foreign materials.

g) Possession of land measuring **98 acres** (31 March 2021: 98 acres) consisting of **79 acres** of freehold land (31 March 2021: 79 acres) and **19 acres** of right of use land (31 March 2021: 19 acres) of value ₹ **0.21 crore** (31 March 2021: ₹ 0.21 crore) was transferred to Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd. (erstwhile UPSEB) for a consideration of ₹ 0.21 crore. Pending approval for transfer of the said land, the area and value of this land has been included in the total land of the Company. The consideration received from erstwhile UPSEB is disclosed under Note 35 - Current liabilities - Other financial liabilities.

h) Adjustment to Land-right of use includes an amount of ₹ 776.05 crore, being the cost de-recognised consequent to order of APIIC for cancellation of 1200 acres of land allotted to the Company in the state of Andra Pradesh. Further, the depreciation/ amortisation provided till the end of previous financial year amounting to ₹ 131.92 crore has also been written back. The order provides allotment of alternate land in lieu of the same, subject to attached conditions. Consequently, the amount derecognized net of related liabilities, has been included under Capital advances (Note 11).

i) Operations of one of the thermal power stations of the Company (460 MW) was discontinued w.e.f. the end of 31 March 2021. Carrying value of the PPE of the station included above as at 31 March 2022 is ₹ **227.93 crore** (31 March 2021: ₹ 213.64 crore). The Company is in the process of implementing construction of new 1320 MW (2 X 660 MW) thermal power plant on the existing location of the power plant. It is expected that many of the items of PPE are expected to be used in the proposed new power plant while few are under transfer to other units of the Company. Notwithstanding the above, the net realisable value of the assets of the station has been assessed which is more than its carrying value.

j) Refer Note 73 regarding property, plant and equipment under lease.

k) Spare parts of ₹ 5 lakh and above, stand-by equipment and servicing equipment which meet the definition of property, plant and equipment are capitalized.

l) Property, plant and equipment costing ₹ 5,000/- or less, are depreciated fully in the year of acquisition.

m) Refer Note 25 and Note 32 for information on property, plant and equipment pledged as security by the Group.

n) Refer Note 75(C)(a) for disclosure of contractual commitments for the acquisition of property, plant and equipment.

o) Deduction/adjustments from gross block and depreciation, amortisation and impairment for the year includes:

₹ Crore

Particulars	Gross block		Depreciation, amortisation and impairment	
	For the year ended		For the year ended	
	31 March 2022	31 March 2021	**31 March 2022**	31 March 2021
Disposal of assets	**(46.00)**	(39.78)	**(37.35)**	(30.22)
Retirement of assets	**(2,132.26)**	(532.01)	**(1,270.89)**	(377.31)
Cost adjustments due to exchange differences	**237.88**	(455.16)	**-**	-
Assets capitalised with retrospective effect/ Write back of excess capitalisation	**(0.75)**	0.48	**(0.05)**	-
Business combinations	**-**	9,159.72	**-**	8,049.91
Others	**(43.90)**	(12.99)	**(9.75)**	(0.51)
Total	**(1,985.03)**	8,120.26	**(1,318.04)**	7,641.87

During the year, cost adjustments in respect of assets capitalised in the earlier years which was hither to disclosed under adjustment column, have been included in the addition column of the respective asset class in the Note. Corresponding adjustments in the previous year information have also been made.

p) Exchange differences capitalized in Capital work-in-progress (CWIP) are allocated to various heads of CWIP in the year of capitalisation. Exchange differences in respect of assets already capitalised are disclosed in the 'Deductions/Adjustments' column of Property, plant and equipment. Asset-wise details of exchange differences and borrowing costs included in the cost of major heads of CWIP and property, plant and equipment through 'Addition' or 'Deductions/Adjustments' column are given below:

₹ Crore

Particulars	For the year ended 31 March 2022		For the year ended 31 March 2021	
	Exchange Difference included in PPE/ CWIP	**Borrowing costs included in PPE/ CWIP**	Exchange Difference included in PPE / CWIP	Borrowing costs included in PPE/ CWIP
Building - Freehold				
Main plant	**(5.27)**	**44.15**	(8.65)	80.11
Others	**(0.60)**	**71.76**	(1.86)	79.17
Hydraulic works, barrages, dams, tunnels and power channel	**5.94**	**219.55**	0.58	296.05
MGR track and signalling system	**0.31**	**396.71**	(2.36)	43.01
Railway siding	**24.75**	**81.10**	-	12.31
Plant and equipment	**263.81**	**2,603.22**	(474.08)	3,008.48
Others including pending allocation	**38.18**	**622.22**	(77.71)	558.57
Total	**327.12**	**4,038.71**	(564.08)	4,077.70

q) **Impairment loss**

Depreciation, amortisation and impairment expense for the year includes impairment loss of M/s Kanti Bijlee Utpadan Nigam Limited (KBUNL) & M/s Ratnagiri Gas & Power Pvt.Ltd. (RGPPL) subsidiaries of the Company, for the year ended 31 March 2022 (31 March 2021: M/s Ratnagiri Gas & Power Pvt.Ltd.) as detailed below:

₹ Crore

Particulars	**As at 31 March 2022**	As at 31 March 2021
Leasehold land	**1.46**	1.29
Roads, bridges, culverts and helipads	**0.05**	0.09
Main plant building-Freehold	**4.92**	6.49
Other building-Freehold	**2.27**	2.70

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Water supply, drainage and sewerage system	**0.15**	0.24
Plant and equipment - Owned	**212.28**	109.69
Electrical installation	**7.93**	7.28
Communication equipment	**0.04**	0.06
Others	**2.31**	3.30
Total	**231.41**	131.14

During the year, the operations of Stage I of the 220 MW, Unit of KBUNL was suspended with effect from 8 September 2021. Consequently an impairment loss of ₹ **21.99 crore** (31 March 2021: ₹ Nil) has been recognised. Further, impairment Loss of ₹ **209.42 crore** (31 March 2021 : ₹ 131.14 crore) crore has been recognised in respect of RGPPL. Refer Note no. 62.

r) **Property, plant and equipment subject to operating lease**

(i) The Power Purchase Agreements (PPA) signed in respect of two of the thermal power stations were operative initially for a period of five years with the respective beneficiaries which are extended, renewed or replaced as the parties mutually agree. The Company has continued to classify these arrangement with its customers as lease based on the practical expedient provided in Ind AS 116. The net carrying value of such leased assets included above are as under:

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Land- Free hold	**51.75**	75.10
Land- Right of use	-	0.54
Roads, bridges, culverts and helipads	**9.40**	12.08
Main plant building-Freehold	**9.51**	13.93
Other building-Freehold	**23.53**	38.99
Water supply, drainage and sewerage system	**5.46**	10.44
Plant and equipment - Owned	**217.51**	404.53
Railway siding	**0.76**	2.40
Electrical installation	**3.14**	4.83
Others	**5.04**	13.40
Total	**326.10**	576.24

The operatons of one of the stations was suspended w.e.f. the end of 31 March 2021 and hence not included above for the year ended 31 March 2022.

(ii) Freehold land includes land measuring **92.23 acres** (31 March 2021: 92.23 acres) of value ₹ **62.23 crore** (31 March 2021: ₹ 62.23 crore) given under operating lease by M/s Patratu Vidyut Utpadan Nigam Ltd., a subsidiary of the Company. Also refer Note 73.

(iii) Vehicles-owned includes electric buses of value ₹ **129.58 crore** (31 March 2021: ₹ 46.54 crore) given under operating lease by M/s NTPC Vidyut Vayapar Nigam Ltd., a subsidiary of the Company. Also refer Note 73.

3. Non current assets - Capital work-in-progress

As at 31 March 2022 ₹ Crore

Particulars	As at 1 April 2021	Additions	Deductions/ adjustments	Capitalised	As at 31 March 2022
Development of land	552.55	187.86	(326.98)	36.96	**376.47**
Roads, bridges, culverts and helipads	564.35	349.55	(266.54)	65.86	**581.50**
Piling and foundation	746.53	-	(341.56)	-	**404.97**
Buildings					
Freehold					
Main plant	2,036.60	573.64	(200.14)	803.29	**1,606.81**
Others	1,880.81	791.83	(424.36)	461.46	**1,786.82**
Temporary erections	27.03	12.19	(6.57)	6.25	**26.40**
Water supply, drainage and sewerage system	114.65	94.71	(20.16)	63.15	**126.05**
Hydraulic works, barrages, dams, tunnels and power channel	5,162.53	942.93	(2.78)	0.12	**6,102.56**
MGR track and signalling system	183.96	219.54	(164.37)	149.56	**89.57**
Railway siding	1,931.96	564.59	(317.36)	190.08	**1,989.11**
Earth dam reservoir	377.33	114.93	(5.51)	5.71	**481.04**
Plant and equipment - owned	73,732.18	22,831.70	(257.35)	28,876.65	**67,429.88**
Furniture and fixtures	46.16	9.65	(14.73)	32.09	**8.99**
Vehicles	1.96	93.80	(0.17)	92.26	**3.33**
Office equipment	21.71	18.47	(7.63)	1.39	**31.16**
EDP/WP machines and satcom equipment	3.22	5.95	(1.81)	3.87	**3.49**
Construction equipment	0.06	0.08	-	0.06	**0.08**
Electrical installations	543.34	218.53	(82.27)	108.45	**571.15**
Communication equipment	20.56	23.23	(0.71)	6.95	**36.13**
Hospital equipment	0.46	0.20	(0.02)	0.44	**0.20**
Laboratory and workshop equipment	2.21	0.97	(0.11)	1.08	**1.99**
Development of coal mines	1,580.01	546.04	39.24	268.59	**1,896.70**
	89,530.17	27,600.39	(2,401.89)	31,174.27	**83,554.40**
Expenditure pending allocation					
Survey, investigation, consultancy and supervision charges	499.20	(38.51)	(56.54)	21.08	**383.07**
Difference in exchange on foreign currency loans	1,194.94	75.34	(555.19)	-	**715.09**
Pre-commissioning expenses (net)	459.19	586.78	(919.26)	-	**126.71**
Expenditure during construction period (net)*	1,613.30	5,120.95	(159.90)	-	**6,574.35**
Other expenditure directly attributable to project construction	1,111.48	170.23	(19.30)	25.29	**1,237.12**
Less: Allocated to related works	-	1,373.42	2,969.21	-	**4,342.63**
	4,878.11	4,541.37	(4,679.40)	46.37	**4,693.71**
Sub-total	94,408.28	32,141.76	(7,081.29)	31,220.64	**88,248.11**
Less: Provision for unserviceable works	721.39	9.90	(191.61)	-	**539.68**
Construction stores (net of provision)	3,717.27	1,526.98	(1,927.47)	-	**3,316.78**
Total	**97,404.16**	**33,658.84**	**(8,817.15)**	**31,220.64**	**91,025.21**

As at 31 March 2021 ₹ Crore

Particulars	As at 1 April 2020	Additions	Deductions/ adjustments	Capitalised	As at 31 March 2021
Development of land	649.77	238.97	(336.19)	-	552.55
Roads, bridges, culverts and helipads	750.99	164.38	(228.89)	122.13	564.35
Piling and foundation	712.60	33.93	-	-	746.53
Buildings					
Freehold					
Main plant	1,948.67	581.81	225.69	719.57	2,036.60
Others	2,039.91	791.28	(478.76)	471.62	1,880.81
Temporary erections	27.39	9.16	(8.87)	0.65	27.03
Water supply, drainage and sewerage system	104.02	37.52	13.42	40.31	114.65
Hydraulic works, barrages, dams, tunnels and power channel	4,284.52	886.94	(8.93)	-	5,162.53
MGR track and signalling system	875.57	431.47	(2.07)	1,121.01	183.96
Railway siding	1,555.73	614.86	(238.63)	-	1,931.96
Earth dam reservoir	309.76	74.06	54.28	60.77	377.33
Plant and equipment-owned	72,183.00	18,831.07	4,060.02	21,341.91	73,732.18
Furniture and fixtures	40.20	16.43	8.93	19.40	46.16
Vehicles	-	48.96	-	47.00	1.96
Office equipment	4.65	28.84	1.96	13.74	21.71
EDP/WP machines and satcom equipment	8.73	6.40	(0.55)	11.36	3.22
Construction equipment	0.13	0.09	(0.04)	0.12	0.06
Electrical installations	580.43	166.33	181.97	385.39	543.34
Communication equipment	2.89	21.11	(0.49)	2.95	20.56
Hospital equipment	0.11	0.57	-	0.22	0.46
Laboratory and workshop equipment	5.18	0.54	(0.02)	3.49	2.21
Development of coal mines	1,700.62	398.66	(295.46)	223.81	1,580.01
	87,784.87	23,383.38	2,947.37	24,585.45	89,530.17
Expenditure pending allocation					
Survey, investigation, consultancy and supervision charges	465.55	34.16	(0.51)	-	499.20
Difference in exchange on foreign currency loans	1,401.54	0.94	(207.54)	-	1,194.94
Pre-commissioning expenses (net)	268.14	550.33	(359.28)	-	459.19
Expenditure during construction period (net)*	4,984.18	5,371.35	(5.81)	-	10,349.72
Other expenditure directly attributable to project construction	1,157.32	198.54	(231.80)	12.58	1,111.48
Less: Allocated to related works	-	8,736.42	-	-	8,736.42
	8,276.73	(2,581.10)	(804.94)	12.58	4,878.11
Sub-total	96,061.60	20,802.28	2,142.43	24,598.03	94,408.28
Less: Provision for unserviceable works	629.04	92.35	-	-	721.39
Construction stores (net of provision)	2,778.38	1,479.74	(540.85)	-	3,717.27
Total	98,210.94	22,189.67	1,601.58	24,598.03	97,404.16

* Brought from expenditure during construction period (net) - Note 47

a) Construction stores includes material lying with contractors for construction works and are net of provision for shortages pending investigation amounting to ₹ **28.69 crore** (31 March 2021: ₹ 29.66 crore).

b) Pre-commissioning expenses for the year amount to ₹ **696.77 crore** (31 March 2021: ₹ 651.75 crore) and after adjustment of pre-commissioning sales of ₹ **109.99 crore** (31 March 2021: ₹ 101.42 crore) resulted in net pre-commissioning expenditure of ₹ **586.78 crore** (31 March 2021: ₹ 550.33 crore).

c) Additions to the development of coal mines include expenditure during construction period (net) of ₹ **610.88 crore** (31 March 2021: ₹ 677.42 crore) and after netting off the receipts from coal extracted during the development phase amounting to ₹ **64.84 crore** (31 March 2021: ₹ 278.76 crore).

d) Details of exchange differences and borrowing costs capitalised are disclosed in Note 2 (p).

e) Amount capitalised under development of coal mines is included in assets capitalised under 'Mining properties' and 'Site restoration cost' under Property, plant and equipment.

4. Non-current assets - Intangible assets

As at 31 March 2022 — **₹ Crore**

Particulars	**Gross block**				**Amortisation**				**Net block**
	As at 1 April 2021	**Additions**	**Deductions/ adjustments**	**As at 31 March 2022**	**As at 1 April 2021**	**For the year**	**Deductions/ adjustments**	**Upto 31 March 2022**	**As at 31 March 2022**
Software	136.78	15.13	(1.71)	**150.20**	93.54	24.96	(1.65)	**116.85**	**33.35**
Right to use - Land	296.82	6.84	(47.21)	**256.45**	36.47	11.07	(7.14)	**40.40**	**216.05**
- Others	419.59	8.28	-	**427.87**	76.05	21.95	-	**98.00**	**329.87**
Total	**853.19**	**30.25**	**(48.92)**	**834.52**	**206.06**	**57.98**	**(8.79)**	**255.25**	**579.27**

As at 31 March 2021 — **₹ Crore**

Particulars	Gross block				Amortisation				Net block
	As at 1 April 2020	Additions	Deductions/ adjustments	As at 31 March 2021	As at 1 April 2020	For the year	Deductions/ adjustments	Upto 31 March 2021	As at 31 March 2021
Software	104.25	30.62	1.91	136.78	66.81	25.26	1.47	93.54	43.24
Right to use - Land	285.79	3.75	7.28	296.82	26.18	9.83	0.46	36.47	260.35
- Others	384.87	34.72	-	419.59	55.59	20.46	-	76.05	343.54
Total	774.91	69.09	9.19	853.19	148.58	55.55	1.93	206.06	647.13

(a) The right to use of land and others are amortized over the period of legal right to use or life of the related plant, whichever is less.

(b) Cost of acquisition of the right for drawl of water amounting to ₹ **427.87 crore** (31 March 2021: ₹ 419.59 crore) is included under intangible assets – Right to use - Others.

(c) Deductions/adjustments from gross block and amortisation for the year includes:

₹ Crore

Particulars	**Gross block**		**Amortisation**	
	For the year ended		**For the year ended**	
	31 March 2022	31 March 2021	**31 March 2022**	31 March 2021
Retirements and other adjustments	**(48.92)**	9.19	**(8.79)**	1.93
Total	**(48.92)**	9.19	**(8.79)**	1.93

During the year , cost adjustments in respect of assets capitalised in the earlier years which was hither to disclosed under adjustment column, have been included in the addition column of the respective asset class in the Note. Corresponding adjustments in the previous year information have also been made.

(d) Refer Note 75 (C)(a) for disclosure of contractual commitments for the acquisition of intangible assets.

5. Non-current assets - Intangible assets under development

As at 31 March 2022

₹ Crore

Particulars	**As at 1 April 2021**	**Additions**	**Deductions/ adjustments**	**Capitalised**	**As at 31 March 2022**
Exploration and evaluation assets - coal mines	139.61	2.44	-	-	**142.05**
Exploratory wells-in-progress	7.64	-	-	-	**7.64**
Software	107.05	6.43	(0.80)	8.89	**103.79**
	254.30	8.87	(0.80)	8.89	**253.48**
Less: Provision for unserviceable works	152.43	-	-	-	**152.43**
Total	**101.87**	**8.87**	**(0.80)**	**8.89**	**101.05**

As at 31 March 2021

₹ Crore

Particulars	As at 1 April 2020	Additions	Deductions/ adjustments	Capitalised	As at 31 March 2021
Exploration and evaluation assets - coal mines	292.46	22.65	(175.50)	-	139.61
Exploratory wells-in-progress	7.64	-	-	-	7.64
Software	105.07	2.52	0.46	1.00	107.05
	405.17	25.17	(175.04)	1.00	254.30
Less: Provision for unserviceable works	107.64	44.79	-	-	152.43
Total	297.53	(19.62)	(175.04)	1.00	101.87

a) Refer Note 65(d) w.r.t. exploration and evaluation of assets-coal mines.

6. Non-current assets - Investments accounted for using the equity method

₹ Crore

Particulars	**Number of shares Current year/ (previous year)**	**Face value per share in ₹ Current year/ (previous year)**	**As at 31 March 2022**	As at 31 March 2021
Equity instruments - Unquoted (fully paid up - unless otherwise stated, at cost)				
Joint venture companies				
Utility Powertech Ltd. (includes 10,00,000 bonus shares)	20,00,000 (20,00,000)	10 (10)	**94.67**	89.44
NTPC-GE Power Services Private Ltd.	30,00,000 (30,00,000)	10 (10)	**7.42**	3.07
NTPC-SAIL Power Company Ltd.	49,02,50,050 (49,02,50,050)	10 (10)	**1,528.61**	1,449.58
NTPC Tamil Nadu Energy Company Ltd.	1,43,63,96,112 (1,43,63,96,112)	10 (10)	**1,850.14**	1,695.27
Aravali Power Company Private Ltd.	1,43,30,08,200 (1,43,30,08,200)	10 (10)	**2,671.51**	3,007.35
NTPC BHEL Power Projects Private Ltd.	5,00,00,000 (5,00,00,000)	10 (10)	**-**	-
Meja Urja Nigam Private Ltd.	1,74,99,99,800 (1,72,42,39,800)	10 (10)	**1,629.89**	1,468.02

₹ Crore

Particulars	Number of shares Current year/ (previous year)	Face value per share in ₹ Current year/ (previous year)	As at 31 March 2022	As at 31 March 2021
Transformers and Electricals Kerala Ltd.	1,91,63,438 (1,91,63,438)	10 (10)	**23.46**	35.00
National High Power Test Laboratory Private Ltd.	3,04,00,000 (3,04,00,000)	10 (10)	**14.24**	18.22
Energy Efficiency Services Ltd.	46,36,10,000 (46,36,10,000)	10 (10)	**423.09**	534.61
CIL NTPC Urja Private Ltd.	76,900 (76,900)	10 (10)	**0.01**	0.02
Anushakti Vidhyut Nigam Ltd.	49,000 (49,000)	10 (10)	**0.01**	0.01
Hindustan Urvarak and Rasayan Ltd.	1,62,94,15,000 (1,13,17,65,000)	10 (10)	**1,621.43**	1,129.66
KSK Dibbin Hydro Power Private Ltd. (Joint venture of Subsidiary Company, NEEPCO Ltd.)	2,79,30,000 (2,79,30,000)	10 (10)	**4.45**	4.46
Trincomalee Power Company Ltd. (* Srilankan rupees)	32,86,061 (32,86,061)	100* (100)*	**0.55**	1.06
Bangladesh-India Friendship Power Company Private Ltd. (** Bangladeshi Taka)	7,42,50,000 (6,42,50,000)	100** (100)**	**652.66**	556.41
Total			**10,522.14**	9,992.18
Aggregate amount of unquoted investments			**10,522.14**	9,992.18

a) Details of interest in joint venture companies, their summarised financial information, restrictions for the disposal of investments held by the Group and commitments towards certain Joint venture companies are disclosed in Note 70.

7. Non-current financial assets - Investments

₹ Crore

Particulars	Number of shares Current year/ (previous year)	Face value per share in ₹ Current year/ (previous year)	As at 31 March 2022	As at 31 March 2021
Equity instruments (fully paid up - unless otherwise stated)				
Quoted (designated at fair value through other comprehensive income)				
PTC India Ltd.	1,20,00,000 (1,20,00,000)	10 (10)	**98.70**	93.30
			98.70	93.30
Unquoted (measured at fair value through profit or loss)				
International Coal Ventures Private Ltd.	14,00,000 (14,00,000)	10 (10)	**1.40**	1.40
BF-NTPC Energy Systems Ltd.	68,48,681 (68,48,681)	10 (10)	**2.38**	2.38
			3.78	3.78

₹ Crore

Particulars	Number of shares Current year/ (previous year)	Face value per share in ₹ Current year/ (previous year)	As at 31 March 2022	As at 31 March 2021
Unquoted (designated at fair value through other comprehensive income)				
Power Exchange India limited (PXIL)	29,23,503 (Nil)	10 (Nil)	**1.62**	-
Co-operative societies			**#**	#
Total			**104.10**	97.08
Aggregate amount of quoted investments - at cost			**12.00**	12.00
Aggregate market value of the quoted investments			**98.70**	93.30
Aggregate amount of unquoted investments			**5.40**	3.78

#Equity shares of ₹ **30,200** /- (31 March 2021: ₹ 30,200/-) held in various employee co-operative societies.

a) Investments have been valued as per accounting policy no. C.28.1 (Note 1).

b) The Board of Directors of NTPC Limited in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from PTC India Ltd. (PTC). As the Company was formed by a directive from the GOI, approval of the GOI was required for exit by NTPC. Ministry of Power has accorded permission for NTPC to exit from PTC on 22 February 2022. NTPC is in discussion with other promoters to finalize the modalities of exit from PTC.

c) The Board of Directors of NTPC Limited in its meeting held on 27 January 2012 accorded in principle approval for withdrawal from International Coal Ventures Private Ltd. (ICVPL). As the Company was formed by a directive from the GOI, approval of the Ministry of Steel, GOI is awaited for exit by NTPC Limited. The Company has approached Steel Authority of India Ltd., to expedite the exit related activities. The Company has also approached Ministry of Power for taking up with Ministry of Steel. Ministry of Power has advised NTPC to take fresh approval of Board for exiting from ICVPL and the same is in process. Pending withdrawal, the Company had lost the joint control over the entity and accordingly, has classified the investment in ICVPL as 'Investment in unquoted equity instruments'.

d) The Board of Directors of NTPC Limited in its meeting held on 19 June 2014 accorded in principle approval for withdrawal from BF-NTPC Energy Systems Ltd. (BF-NTPC), a joint venture of the Company. As BF-NTPC was formed by a directive from the GOI, approval of the GOI was sought for exit by the Company. Ministry of Power, GoI conveyed its approval for winding up of BF-NTPC on 8 January 2018. Consequently, liquidator was appointed in the extra-ordinary general meeting of BF-NTPC held on 9 October 2018. The winding up is under process. Pursuant to winding up proceedings, the Company had lost the joint control over the entity and accordingly, has classified the investment in BF NTPC as 'Investment in unquoted equity instruments'. The difference between the cost of investment and the fair value has been provided for in the earlier years.

e) The Group is of the view that provisions of Ind AS 24 'Related Party Disclosures' and Ind AS 111 'Joint Arrangements' are not applicable to the investments made in PTC India Ltd., International Coal Ventures Private Ltd. and BF-NTPC Energy systems Ltd., and the same has been accounted for as per the provisions of Ind AS 109 'Financial Instruments'.

f) Investment for 5% equity stake of PXIL acquired by NVVN (a subsidiary of the Company) from NSE Investment Limited, a wholly owned subsidiary of National Stock Exchange of India Limited, to gain exposure of evolving power market, Transactional & Decision-making support, Commercial Discounts and Incentives, Specific Product development in line with Company's requirement, Capacity Building and other business advisory goals.

g) No strategic investments in equity instruments measured at FVTOCI were disposed during the financial year 2021-22, and there were no transfers of any cumulative gain or loss within equity relating to these investments.

h) **Movement in quoted investments**

Opening balance	**93.30**	46.50
Add / less: Mark to Market gain / loss through FVTOCI	**5.40**	46.80
Closing balance	**98.70**	93.30

8. Non-current financial assets - Loans

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Loans (Considered good, unless otherwise stated)		
Related parties		
Unsecured	**17.23**	19.08
Employees (including accrued interest)		
Secured	**323.07**	317.21
Unsecured	**197.96**	196.23
Others		
Unsecured	**21.55**	22.45
Total	**559.81**	554.97
a) Due from directors and officers of the Group		
Directors	**0.07**	0.08
b) Loans to related parties include:		
Key management personnel	**0.07**	0.08
National High Power Test Laboratory Private Ltd. (Joint venture company)	**16.56**	18.40
NTPC Education and Research Society	**0.60**	0.60

c) Other loans include loan of ₹ **21.50 crore** (31 March 2021: ₹ 22.39 crore) given to Andhra Pradesh Industrial Infrastructure Corporation Ltd. (APIIC) which is covered by a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

d) Loans to the employees are secured against the mortgage of the house properties and hypothecation of vehicles for which such loans have been given in line with the policies of the Group.

9. Non-current assets - Other financial assets

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Claims recoverable	**696.19**	702.27
Finance lease receivables (Refer Note 73)	**281.93**	366.88
Mine closure deposit	**39.86**	23.69
Total	**1,017.98**	1,092.84

a) Claims recoverable includes ₹ **696.19 crore** (31 March 2021: ₹ 700.30 crore) towards the cost incurred upto 31 March 2022 in respect of one of the hydro power projects, the construction of which has been discontinued on the advice of the Ministry of Power (MOP), GOI which includes ₹ **456.85 crore** (31 March 2021: ₹ 449.88 crore) in respect of arbitration awards challenged by the Company before Hon'ble High Court of Delhi. In the event the Hon'ble High Court grants relief to the Company, the amount would be adjusted against Current liabilities - Provisions - Provision for arbitration awards (Note 37). Management expects that the total cost incurred, anticipated expenditure on the safety and stabilisation measures, other recurring site expenses and interest costs as well as claims of contractors/vendors for various packages for this project will be compensated in full by the GOI. Hence, no provision is considered necessary.

b) The Company had ascertained that the Power Purchase Agreement (PPA) entered into for Stage-I of a power station with the beneficiary falls under the definition of finance lease. Accordingly, the written down value of the specified assets was derecognized from PPE and accounted as Finance Lease Receivable (FLR) on transition to Ind AS. The Company has continued to classify this arrangement with its customer as lease based on the practical expedient provided in Ind AS 116. Accordingly, recovery of capacity charges towards depreciation, interest on loan capital & return on equity (pre-tax) components from the beneficiary are continued to be adjusted against FLR. The interest component of the FLR and amount received on account of revision of tariff of previous periods in respect of the above three elements are continued to be recognised as 'Interest income on Assets under finance lease' under 'Revenue from operations' (Note 40).

c) As per the guidelines from Ministry of Coal, Government of India for preparation of Mine Closure Plan, Escrow Accounts have been opened for each captive mine and the balances held in these escrow accounts are presented as 'Mine closure deposit'. Up to 80% of the total deposited amount including interest accrued in the escrow account shall be released after every five years in line with the periodic examination of the closure plan as per the Guidelines. Interest earned on the escrow account is added to mine closure deposit account.

10. Non-current assets - Deferred tax assets (net)

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Deferred tax assets		
Provisions	**70.06**	93.88
Leave encashment	**21.75**	7.83
Unabsorbed depreciation	**984.66**	942.69
MAT credit entitlement	**163.55**	87.51
Others	**72.38**	71.39
Less: Deferred tax liabilities		
Difference in book depreciation and tax depreciation	**316.70**	127.41
Total	**995.70**	1,075.89

a) Deferred tax assets and deferred tax liabilities have been offset to the extent they relate to the same governing laws.

b) The Group has been recognising MAT credit available as the same is likely to give future economic benefits in the form of availability of set off against future income tax liability.

c) Disclosures as per Ind AS 12 'Income Taxes' are provided in Note 56.

Movement in deferred tax assets (net) balances

As at 31 March 2022 ₹ Crore

Particulars	As at 1 April 2021	Recognised in statement of profit and loss	Recognised in OCI	Other	As at 31 March 2022
Deferred tax assets					
Provisions	93.88	(23.82)	-	-	**70.06**
Leave encashment	7.83	13.38	0.54	-	**21.75**
Unabsorbed depreciation	942.69	41.97	-	-	**984.66**
MAT credit entitlement	87.51	76.04	-	-	**163.55**
Others	71.39	0.99	-	-	**72.38**
Less: Deferred tax liabilities					
Difference in book depreciation and tax depreciation	127.41	189.29	-	-	**316.70**
Deferred tax assets (net)	**1,075.89**	**(80.73)**	**0.54**	**-**	**995.70**

As at 31 March 2021 ₹ Crore

Particulars	As at 1 April 2020	Recognised in statement of profit and loss	Recognised in OCI	Other	As at 31 March 2021
Deferred tax assets					
Provisions	107.17	(12.03)	-	(1.26)	93.88
Leave encashment	51.04	(43.21)	-	-	7.83
Unabsorbed depreciation	835.00	107.69	-	-	942.69
MAT credit entitlement	37.45	50.06	-	-	87.51
Others	75.94	0.09	0.08	(4.72)	71.39
Less: Deferred tax liabilities					
Difference in book depreciation and tax depreciation	10.00	123.38	-	(5.97)	127.41
Deferred tax assets (net)	1,096.60	(20.78)	0.08	(0.01)	1,075.89

11. Other non-current assets

₹ Crore

Particulars		**As at 31 March 2022**	As at 31 March 2021
Capital advances			
(Considered good unless otherwise stated)			
Secured		**13.99**	17.75
Unsecured			
Covered by bank guarantee		**3,568.59**	3,598.78
Others		**5,438.82**	4,757.75
Considered doubtful		**168.24**	168.46
Less: Allowance for bad and doubtful advances		**168.24**	168.46
		9,021.40	8,374.28
Advances other than capital advances			
(Considered good unless otherwise stated)			
Security deposits		**407.84**	370.44
Advances to contractors and suppliers			
Unsecured	**2,014.03**		2,137.08
Considered doubtful	**112.57**		112.57
Less: Allowances for bad and doubtful advances	**112.57**		112.57
		2,014.03	2,137.08
Advance tax and tax deducted at source	**11,682.25**		15,510.94
Less: Provision for tax	**8,868.40**		11,398.70
		2,813.85	4,112.24
Deferred foreign currency fluctuation asset		**1,480.72**	1,897.47
Deferred payroll expenditure		**119.35**	132.47
Adjustable from escrow account towards mine cloaure expenses		**16.67**	7.52
Others		-	0.01
Total		**15,873.86**	17,031.51

a) In line with accounting policy no. 15 (Note 1), deferred foreign currency fluctuation asset has been accounted and ₹ **630.97 crore** (31 March 2021: ₹ 98.16 crore) being the exchange fluctuations on account of foreign currency loans have been adjusted in 'Energy sales' under 'Revenue from operations' (Note 40).

b) Capital advances include amounts given as advance against works to the following private companies (related parties) in which one or more directors of the Company are directors:

NTPC-GE Power Services Private Ltd.	**0.06**	0.07
NTPC BHEL Power Projects Private Ltd.	**283.35**	216.64

c) Capital advances include ₹ **224.29 crore** (31 March 2021: ₹ 224.29 crore), paid to a contractor pending settlement of certain claims which are under litigation. The amount will be adjusted with the cost of related work or recovered from the party, depending upon the outcome of the legal proceedings.

d) Advances to contractors and suppliers include payments to Railways amounting to ₹ **1,862.94 crore** (31 March 2021: ₹ 1,963.25 crore) under customer funding model as per policy on 'Participative model for rail-connectivity and capacity augmentation projects' issued by the Ministry of Railways, GOI. As per this policy, an agreement has been signed between the Company and the Ministry of Railways, GOI on 6 June 2016. As per the agreement, railway projects agreed between the Company and Railways will be constructed, maintained and operated by Railways and ownership of the line and its operations and maintenance will always remain with them. Railways will pay upto 7% of the amount invested through freight rebate on freight volumes every year till the funds provided by the Company are fully recovered along-with interest (equal to the prevailing rate of dividend payable by Railways at the time of signing of respective agreements), subject to the rebate not exceeding the freight amount in the accounting year, after commercial operation date (COD) of the railway projects. The advance is adjusted at projects which have acheived COD based on confirmation from Railways towards freight rebate in consonance with the agreement terms and the interest portion is recognised in Note-41-'Other income'.

e) Secured capital advances are secured against the hypothecation of the construction equipment/material supplied by the contractors/suppliers.

f) Loans given to employees are measured at amortized cost. The deferred payroll expenditure represents the benefits on account of interest rate on loans being lower than the market rate of interest. The same is amortized on a straight-line basis over the remaining period of the loan.

12. Current assets - Inventories

₹ **Crore**

Particulars	**As at 31 March 2022**	As at 31 March 2021
Coal	**2,897.22**	3,668.02
Fuel oil	**715.25**	423.44
Naphtha	**56.74**	66.30
Stores and spares	**5,445.35**	4,772.54
Chemicals and consumables	**199.24**	175.10
Loose tools	**13.74**	13.78
Steel scrap	**27.30**	28.15
Others	**1,015.16**	872.31
	10,370.00	10,019.64
Less: Provision for shortages	**59.27**	48.70
Provision for obsolete/unserviceable items/ diminution in value of surplus inventory	**171.44**	161.34
Total	**10,139.29**	9,809.60
Inventories include material-in-transit		
Coal	**330.91**	356.74
Stores and spares	**23.04**	46.23
Chemicals and consumables	**2.74**	3.24
Loose tools	**0.04**	0.03
Others	**3.02**	1.10

a) Inventory items have been valued as per accounting policy no. C.10 (Note 1).

b) Inventories - Others includes steel, cement, ash bricks etc.

c) Refer Note 25 and 54(b) for information on inventories pledged as security by the Group.

d) Refer Note 54(a) for information on inventories consumed and recognised as expense during the year.

e) Paragraph 32 of Ind AS 2 - Inventories provides that materials and other supplies held for use in the production of inventories are not written down below cost if the finished products in which they will be incorporated are expected to be sold at or above cost. The Group is mainly operating in the regulatory environment and as per CERC Tariff Regulations, cost of fuel and other inventory items are recovered as per extant tariff regulations. Accordingly, the realizable value of the inventories is not lower than the cost.

13. Current financial assets - Investments

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Unquoted		
Investment in mutual funds (measured at fair value through profit or loss)		
Baroda Liquid Fund - Plan-B-Growth	-	499.99
Total	-	499.99

a) Investments have been valued as per accounting policy no. C.28 (Note 1)

14. Current financial assets - Trade receivables

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Trade receivables		
Unsecured, considered good	**27,342.08**	28,199.83
Credit impaired	**479.45**	546.84
	27,821.53	28,746.67
Less: Allowance for credit impaired trade receivables	**479.45**	546.84
Total	**27,342.08**	28,199.83

a) Based on arrangements between Group, banks and beneficiaries, the bills of the beneficiaries have been discounted. Accordingly, trade receivables have been disclosed net off bills discounted amounting to ₹ **8,349.59 crore** (31 March 2021: ₹ 16,410.05 crore). Also refer Note 75 A(c).

b) Amounts receivable from related parties are disclosed in Note 60.

c) Trade receivables include unbilled revenue amounting to ₹ **11,010.64 Crore** (31 March 2021: ₹ 10,760.14 crore) billed to the beneficiaries after 31 March.

d) The margin and other tariff have been billed to Discoms including Rajasthan as per the guidelines of MNRE for JNNSM-I uniformely by M/s NVVN Ltd., a subsidiary of the Company. However, three Rajasthan Discoms have not paid the bills issued amounting to ₹ **163.36 crore** (31 March 2021: ₹ 163.36 crore). The above cases were filed with Central Electricity Regulatory Commission (CERC) wherein CERC has decided in favour of the subsidiary in all the matters stated above. However, in all the above cases Rajasthan Discoms have filed appeal with Appellate Tribunal for Electricity (ATE) against order of CERC. The case is pending with ATE. Hence, the subsidiary has not considered making provision for these outstanding dues in the Books.

e) Further, in matters related to outstanding dues towards payment of trading margin @1.5 paise/unit instead of 7.0 paise/unit in respect of M/s NVVN Ltd, CERC has advised to decide the matter with mutual consent. However, the subsidiary has filed appeal with Appellate Tribunal for Electricity (ATE) against CERC order and requested ATE to direct Rajasthan Discoms to make payment of differential trading margin and surcharge thereon. The case is pending with ATE. Based on order of CERC a provision for the disputed amount of ₹ 85.15 crore has been recognised during the previous year.

f) Credit impaired receivables as at 31 March 2022 also include dues of M/s Ratnagiri Gas & Power Pvt. Ltd, a subsidiary of the Company amounting to ₹ **392.54 crore** (31 March 2021: ₹ 392.54 crore) towards non payment of dues by its beneficiaries considering the uncertainty involved.

g) **Trade Receivables ageing schedule as at 31 March 2022**

₹ Crore

Particulars	**Unbilled**	**Not Due**	**Outstanding for following periods from due date of payment**					**Total**
			Less than 6 months	**6 months -1 year**	**1-2 years**	**2-3 years**	**More than 3 years**	
(i) Undisputed Trade receivables – considered good	11,010.34	8,444.20	2,604.36	1,355.40	2,178.80	422.40	315.19	**26,330.69**
(ii) Undisputed Trade Receivables – which have significant increase in credit risk	-	-	-	-	-	-	-	-
(iii) Undisputed Trade Receivables – credit impaired	-	-	-	-	-	-	0.20	**0.20**
(iv) Disputed Trade Receivables– considered good	0.30	26.76	18.27	283.64	210.64	218.75	253.03	**1,011.39**
(v) Disputed Trade Receivables – which have significant increase in credit risk	-	-	-	-	-	-	85.42	**85.42**
(vi) Disputed Trade Receivables – credit impaired	-	-	-	-	-	-	393.83	**393.83**
Sub-total	**11,010.64**	**8,470.96**	**2,622.63**	**1,639.04**	**2,389.44**	**641.15**	**1,047.67**	**27,821.53**
Less: Allowance for credit impaired trade receivables	-	-	-	-	-	-	479.45	**479.45**
Total	**11,010.64**	**8,470.96**	**2,622.63**	**1,639.04**	**2,389.44**	**641.15**	**568.22**	**27,342.08**

Trade Receivables ageing schedule as at 31 March 2021

₹ Crore

Particulars	Unbilled	Not Due	Outstanding for following periods from due date of payment					Total
			Less than 6 months	6 months -1 year	1-2 years	2-3 years	More than 3 years	
(i) Undisputed Trade receivables – considered good	10,760.14	7,353.95	5,034.04	2,104.85	1,272.14	286.97	230.64	27,042.73
(ii) Undisputed Trade Receivables – which have significant increase in credit risk	-	-	-	-	-	-	-	-
(iii) Undisputed Trade Receivables – credit impaired	-	-	-	-	-	-	67.59	67.59
(iv) Disputed Trade Receivables– considered good	-	31.45	270.38	362.26	233.21	83.72	176.08	1,157.10
(v) Disputed Trade Receivables – which have significant increase in credit risk	-	-	-	-	-	-	85.42	85.42

Trade Receivables ageing schedule as at 31 March 2021

₹ Crore

Particulars	Unbilled	Not Due	Outstanding for following periods from due date of payment					Total
			Less than 6 months	6 months -1 year	1-2 years	2-3 years	More than 3 years	
(vi) Disputed Trade Receivables – credit impaired	-	-	-	-	-	16.83	377.00	393.83
Total	10,760.14	7,385.40	5,304.42	2,467.11	1,505.35	387.52	936.73	28,746.67
Less: Allowance for credit impaired trade receivables	-	-	-	-	-	16.83	530.01	546.84
Total	10,760.14	7,385.40	5,304.42	2,467.11	1,505.35	370.69	406.72	28,199.83

15. Current financial assets - Cash and cash equivalents

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Balances with banks		
Current accounts	**515.92**	514.31
Deposits with original maturity upto three months (including interest accrued)	**212.47**	435.50
Cheques and drafts on hand	**0.06**	0.15
Others (stamps on hand)	**-**	0.06
Total	**728.45**	950.02

16. Current financial assets - Bank balances other than cash and cash equivalents

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Deposits with original maturity of more than three months and maturing within one year (including interest accrued)	**1,821.80**	1,736.37
Earmarked balances with banks #	**1,907.83**	1,701.41
Total	**3,729.63**	3,437.78
# Earmarked balances with banks towards:		
Redemption of bonds due for repayment within one year	**-**	-
Fly ash utilisation reserve fund*	**599.89**	619.60
DDUGJY Scheme of the GOI**	**546.55**	599.72
Unpaid dividend account balance	**17.99**	19.84
Amount deposited as per court orders	**56.86**	24.00
Unpaid interest/refund account balance - Bonds	**6.81**	6.15
Payment Security Fund - MNRE(a)	**27.34**	27.34
Payment Security Scheme of MNRE(b)	**203.10**	0.01
Unpaid interest on public deposit	**0.03**	0.03
Amount received under PM-Kusum Scheme	**4.89**	-
Margin money	**140.16**	118.14
Security with government authorities	**-**	0.01
Amount received on sale of old plant & held on behalf of Government of Jharkhand	**302.74**	250.41
Others	**1.47**	36.16
Total	**1,907.83**	1,701.41

* Refer Note 23 (g) regarding fly ash utilization reserve fund.

** Out of advance for DDUGJY Scheme of the GOI. Refer Note 35(c) and 36(a).

a) In line with the guidelines issued by Ministry of New and Renewable Energy (MNRE), GOI under National Solar Mission-II, a Payment Security Fund/Working Capital Fund will be set up/created by the MNRE. Upon creation of the said fund, amounts accrued from encashment of bank guarantee, penalties/liquidated damages on developers deducted by the Group from the Solar Power Developers (SPDs) as per the guidelines of MNRE shall be transferred to this fund. The said fund is yet to be created by MNRE. Pending creation of the fund, amount deducted by the Group on account of liquidated damages/penalties from the SPDs is earmarked for the said fund and is not available for use by the Group.

b) Funds received from MNRE under payment security scheme. For corresponding liability refer Note 35(h).

17. Current financial assets - Loans

₹ Crore

Particulars	**As at 31 March 2022**	As at 31 March 2021
Loans (including interest accrued)		
(Considered good unless otherwise stated)		
Related parties		
Unsecured	**3.30**	1.44
Employees		
Secured	**82.37**	81.72
Unsecured	**183.79**	175.06
Others		
Unsecured	**0.91**	0.91
Total	**270.37**	259.13
a) Due from Directors and Officers of the Group		
Directors	**0.08**	0.07
b) Loans to related parties include:		
Key management personnel	**0.08**	0.07
National High Power Test Laboratory Private Ltd. (Joint venture company)	**3.22**	1.37

c) Other loans include loans of ₹ **0.89 crore** (31 March 2021: ₹ 0.89 crore) given to APIIC which is covered by a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

d) Loans to the employees are secured against the mortgage of the house properties and hypothecation of vehicles for which such loans have been given in line with the policies of the Group.

18. Current assets - Other financial assets

₹ Crore

Particulars		**As at 31 March 2022**	As at 31 March 2021
Advances			
(Considered good unless otherwise stated)			
Related parties			
Unsecured		**101.41**	240.45
Employees			
Unsecured	**39.41**		18.44
Considered doubtful	**0.09**		0.09

₹ Crore

Particulars		As at 31 March 2022	As at 31 March 2021
Less: Allowance for bad and doubtful advances	**0.09**		0.09
		39.41	18.44
Others			
Unsecured	**1.13**		4.44
Considered doubtful	**0.02**		0.02
Less: Allowance for bad and doubtful advances	**0.02**		0.02
		1.13	4.44
		141.95	263.33
Claims recoverable			
Unsecured, considered good	**218.86**		39.83
Considered doubtful	**346.78**		343.62
Less: Allowance for doubtful claims	**346.78**		343.62
		218.86	39.83
Contract assets		**5,299.22**	3,393.97
Finance lease receivables		**73.56**	70.89
Mine closure deposit		**42.56**	39.59
Security deposits		**499.70**	495.58
Others		**99.40**	127.74
Total		**6,375.25**	4,430.93

a) Contract Assets represent Company's right to consideration in exchange for goods and services that the Company has transferred / provided to customers when that right is conditioned on matters, other than passage of time, like receipt of income tax assessment orders, trueing up orders from CERC,etc. and are net of credits to be passed to customers.

b) Advances to related parties include:

Joint venture companies	**40.30**	39.29
Post employment benefits Trusts	**60.87**	201.15

c) Advances include amounts due from the following private companies in which one or more directors of the Company are directors:

NTPC-GE Power Services Private Ltd.	**2.24**	1.76
Aravali Power Company Private Ltd.	**0.62**	1.22
NTPC BHEL Power Projects Private Ltd.	**0.73**	-
Meja Urja Nigam Private Ltd.	**14.43**	13.78

d) Other financial assets - Others include amount recoverable from contractors and other parties towards hire charges, rent/electricity etc.

19. Current assets - Current tax assets (net)

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Current tax assets (net)	**62.64**	64.70

20. Current assets - Other current assets

₹ Crore

Particulars		As at 31 March 2022	As at 31 March 2021
Security deposits (unsecured)		**2,024.59**	1,825.37
Advances			
(Considered good unless otherwise stated)			
Related parties			
Unsecured		**0.29**	4.55
Employees			
Unsecured		**4.18**	1.51
Contractors and suppliers			
Unsecured	**3,087.24**		3,063.29
Considered doubtful	**18.22**		18.40
Less: Allowance for bad and doubtful advances	**18.22**		18.40
		3,087.24	3,063.29
Others			
Unsecured		**145.45**	172.10
		3,237.16	3,241.45
Interest accrued on			
Advance to contractors		**43.93**	33.41
Claims recoverable			
Unsecured, considered good	**4,139.54**		3,763.44
Considered doubtful	**136.43**		125.87
Less: Allowance for doubtful claims	**136.43**		125.87
		4,139.54	3,763.44
Assets held for disposal		**18.51**	96.94
Deferred payroll expenditure		**23.42**	24.94
Adjustable from Escrow Account for mine closure expenses		**37.71**	30.08
Others		**22.12**	71.07
Total		**9,546.98**	9,086.70

a) Security deposits (unsecured) include ₹ **29.55 crore** (31 March 2021: ₹ 28.97 crore) towards sales tax deposited with sales/commercial tax authorities, ₹ **1,138.11 crore** (31 March 2021: ₹ 902.14 crore) deposited with Courts, ₹ **225.00 crore** (31 March 2021: ₹ 209.56 crore) deposited with LIC for making annuity payments to the land oustees and ₹ **500.00 crore** (31 March 2021: ₹ 500.00 crore) deposited against bank guarantee with one of the party as per the direction of the Hon'ble Supreme Court of India, refer Note 63(iii).

b) Advances - others include prepaid expenses amounting to ₹ **97.42 crore** (31 March 2021: ₹ 138.67 crore).

c) Advances - Related parties include amounts due from the following private companies in which one or more directors of the Company are directors:

NTPC-GE Power Services Private Ltd.	**0.01**	0.01
NTPC BHEL Power Projects Private Ltd.	**-**	3.91

d) Loans given to employees are measured at amortized cost. The deferred payroll expenditure represents the benefits on account of interest rate on loans being lower than the market rate of interest. The same is amortized on a straight-line basis over the remaining period of the loan.

e) Claims recoverable includes claims amounting to ₹ **1,893.68 crore** (31 March 2021: ₹ 1,751.10 crore) made against coal companies in accordance with the fuel supply agreements mainly towards grade slippages. Claims recoverable also includes claims against Railways amounting to ₹ **2084.83 crore** (31 March 2021: ₹ 1,815.71 crore) mainly towards diversion of coal rakes. These are regularly reviewed and reconciled with the Coal Companies and Indian Railways.

f) Assets held for disposal includes an amount of ₹ **Nil** (31 March 2021: ₹ 78.76 crore) of M/s Patratu Vidyut Utpadan Nigam Ltd., a subsidiary, accounted at fair realisable value net of decommissioning cost based on assessment made by the subsidiary. These assets were initially transferred to the subsidiary by the Scheme notified by the Government of Jharkhand (GoJ) vide notification No. 888 dated 1 April 2016 of Patratu Thermal Power Station, for generation of the electricity under power supply arrangement to Jharkhand Bijli Vitran Nigam Limited (JBVNL), an enterprise of Government of Jharkand (GoJ). However due to heavy cost of generation, JBVNL / GoJ proposed to shut down the plant and scrap all the existing units and accordingly plant has been shut down on 24 Jan 2017. It has been further agreed that consideration of these assets shall be the amount realised from sale of scrap, net of cost. The proceeds realised during the year from dismantling of the existing units, current assets & Scrap less administrative expenses towards the sale, land lease and any other incidental expenses has been credited to GoJ in lieu of the Specified Assets Transfer consideration as per the agreement. The corresponding liability on account of these assets has been created and disclosed under Note 36(c) after setting off amount recoverable toward dismantling cost.

21. Regulatory deferral account debit balances

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
On account of		
Exchange differences	**194.86**	954.80
Employee benefits expense	**363.00**	932.42
Deferred tax	**9,191.46**	7,582.55
Ash transportation cost	**3,267.54**	1,830.65
Arbitration cases	-	110.81
Others	**182.31**	142.05
Total	**13,199.17**	11,553.28

a) Regulatory deferral account balances have been accounted in line with Accounting policy no. C.5 (Note 1). Refer Note 71 for detailed disclosures.

b) CERC Tariff Regulations, 2019 provide for recovery of deferred tax liability (DTL) as at 31 March 2009 from the beneficiaries. Accordingly, DTL as at 31 March 2009 is recoverable on materialisation from the beneficiaries. Regulations, 2014 and Regulations, 2019 provide for grossing-up the rate of return on equity based on effective tax rate for the financial year based on the actual tax paid during the year on the generation income. Accordingly, deferred tax liability for the period from 1 April 2014 will be reversed in future years when the related DTL forms part of current tax. Keeping in view the above, the Group has recognized such deferred tax as regulatory deferral account debit balances, since the amounts are recoverable in future years.

22. Equity share capital

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Equity share capital		
Authorised		
10,00,00,00,000 shares of par value ₹10/- each (10,00,00,00,000 shares of par value ₹10/- each as at 31 March 2021)	**10,000.00**	10,000.00
Issued, subscribed and fully paid up		
9,69,66,66,134 shares of par value ₹ 10/- each (9,69,66,66,134 shares of par value ₹10/- each as at 31 March 2021)	**9,696.67**	9,696.67

a) **Reconciliation of the shares outstanding at the beginning and at the end of the year:**

Particulars	Number of shares	
	31 March 2022	31 March 2021
At the beginning of the year	**9,69,66,66,134**	9,89,45,57,280
Less: Buyback of shares during the year	-	19,78,91,146
Outstanding at the end of the year	**9,69,66,66,134**	9,69,66,66,134

b) **Terms and rights attached to equity shares:**

The Company has only one class of equity shares having a par value ₹10/- per share. The holders of the equity shares are entitled to receive dividends as declared from time to time and are entitled to voting rights proportionate to their share holding at the meetings of shareholders.

c) **Dividends:**

₹ Crore

Particulars	Paid during the year ended	
	31 March 2022	31 March 2021
(i) Dividends paid and recognised during the year		
Final dividend for the year ended 31 March 2021 of ₹ **3.15** (31 March 2020: ₹ 2.65) per equity share	**3,054.45**	2,622.06
Interim dividend for the year ended 31 March 2022 of ₹ **4.00** (31 March 2021: ₹ 3.00) per equity share	**3,878.67**	2,909.00

(ii) Dividends not recognised at the end of the reporting period	**31 March 2022**	31 March 2021
In addition to the above dividends, since year end the directors have recommended the payment of a final dividend of ₹ **3.00** (31 March 2021: ₹ 3.15) per fully paid equity share. This proposed dividend is subject to the approval of shareholders in the ensuing Annual General Meeting.	**2,909.00**	3,054.45

d) **Details of shareholders holding more than 5% shares in the Company:**

Particulars	As at 31 March 2022		As at 31 March 2021	
	No. of shares	**%age holding**	No. of shares	%age holding
- President of India	**4,95,53,46,251**	**51.10**	4,95,53,46,251	51.10
- Life Insurance Corporation of India (including shares held in various Funds/Schemes)	**1,00,42,47,653**	**10.36**	1,06,24,20,836	10.96
- ICICI Prudential Mutual Fund	**53,69,26,248**	**5.54**	64,75,68,645	6.68

e) **For the period of preceeding five years as on the Balance sheet date:**

(i) **Shares bought back:**

The Company has bought back 19,78,91,146 equity shares of the Company for an aggregate amount of ₹ 2,275.75 crore being 2% of the total paid up equity share capital at ₹ 115.00 per equity share , during the financial year 2020-21. Accordingly, the paid up equity share capital was reduced in the previous year by ₹ 197.89 crore and other equity was reduced by ₹ 2,565.93 crore (including tax on buy back of shares of ₹ 484.06 crore and other buyback expenses of ₹ 4.01 crore (net of tax)). Further, earnings per share was adjusted on account of buy back of shares.

(ii) **Shares allotted as fully paid up by way of bonus shares:**

The Company had issued 164,90,92,880 equity shares of ₹ 10/- each as fully paid bonus shares in the financial year 2018-19 in the ratio of one equity share of ₹ 10/- each for every five equity shares held.

f) **Details of shareholding of promoters:**

Shares held by promoters as at 31 March 2022				
Sl. No.	**Promoter name**	**No. of shares**	**%age of total shares**	**%age changes during the year**
1.	President of India	**4,95,53,46,251**	**51.10**	-

Shares held by promoters as at 31 March 2021				
Sl. No.	Promoter name	No. of shares	%age of total shares	%age changes during the year
1.	President of India	4,95,53,46,251	51.10	0.08%

23. Other equity

₹ Crore

Particulars	**As at 31 March 2022**	As at 31 March 2021
Capital reserve	**511.47**	511.47
Other capital reserve - common control	**(5,159.26)**	(5,159.26)
Capital redemption reserve	**197.89**	197.89
Bonds/debentures redemption reserve	**6,421.72**	6,970.47
Self insurance reserve	**200.00**	200.00
Fly ash utilisation reserve fund	**599.89**	619.60
General reserve	**98,654.79**	98,544.79
Retained earnings	**24,133.33**	14,054.16
Items of other comprehensive income	**117.24**	102.68
Total	**1,25,677.07**	1,16,041.80

(a) **Capital reserve**

₹ Crore

Particulars	**For the year ended 31 March 2022**	For the year ended 31 March 2021
Opening balance	**511.47**	72.86
Add: Addition during the year	**-**	438.61
Closing balance	**511.47**	511.47

Opening capital reserve represents amount received by the parent company as consideration under settlement for withdrawal from a erstwhile JV project, acquisition of M/s NPGCL and M/s RGPPL, subsidiaries of the Company. This amount will be utilised as per the provisions of the Companies Act, 2013.

(b) **Other capital reserve - common control**

₹ Crore

Particulars	**For the year ended 31 March 2022**	For the year ended 31 March 2021
Opening balance	**(5,159.26)**	(5,159.26)
Closing balance	**(5,159.26)**	(5,159.26)

Consequent to the acquisition of THDC India Ltd. and NEEPCO in the earlier years, the difference between the Company's share in their share capitals and the consideration paid, was recognized as other capital reserve - common control.

(c) Securities premium

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Opening balance	-	2,228.46
Less: Utilised for buyback of equity shares	-	2,228.46
Closing balance	-	-

Securities premium is used to record the premium on issue of shares/securities. The amount was utilised for buyback of equity shares in the previous year in accordance with the provisions of the Companies Act, 2013.

(d) Capital redemption reserve

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Opening balance	**197.89**	-
Add: Transfer from General Reserve	-	197.89
Closing balance	**197.89**	197.89

Capital redemption reserve is created when company purchases its own shares out of free reserves or securities premium, as required by Companies Act, 2013. A sum equal to the nominal value of the shares so purchased is transferred to capital redemption reserve. This reserve will be utilised in accordance with the provisions of the Companies Act, 2013. Also refer Note 22 (e)(i).

(e) Bonds/Debentures redemption reserve

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Opening balance	**6,970.47**	7,700.97
Add : Transfer from retained earnings	**48.50**	40.50
Less: Transfer to retained earnings	**597.25**	771.00
Closing balance	**6,421.72**	6,970.47

In accordance with applicable provisions of the Companies Act, 2013 read with Rules, the Group has created Debenture Redemption Reserve out of profits of the Company, considering the Companies (Share Capital and Debentures) Amendment Rules, 2019 notified on 16 August 2019. The outstanding balance of Bonds / Debenture Redemption Reserve will be utlised as and when the respective bonds / debentures are redeemed.

(f) Self insurance reserve

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Opening balance	**200.00**	-
Add: Addition during the year	-	200.00
Closing balance	**200.00**	200.00

Self Insurance reserve was created by M/s RGPPL (a subsidiary of the Company), to cover machinery break down for which the subsidiary has not entered into any insurance cover agreement with insurance companies.

(g) **Fly ash utilisation reserve fund**

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Opening balance	**619.60**	599.72
Add: Transferred during the year:		
Revenue from operations	**243.20**	185.92
Other income	**19.61**	20.92
Less: Utilised during the year:		
Capital expenditure	**0.37**	11.95
Other Expenses including Tax expenses	**282.15**	175.01
Closing balance	**599.89**	619.60

Pursuant to Gazette Notification dated 3 November 2009, issued by the Ministry of Environment and Forest (MOEF), Government of India (GOI), the amount collected from sale of fly ash and fly ash based products should be kept in a separate account head and shall be utilized only for the development of infrastructure or facility, promotion & facilitation activities for use of fly ash until 100 percent fly ash utilization level is achieved.

The fund balance has been kept in 'Bank balances other than cash & cash equivalents' (Note 16). Also refer Note 21 & 71 for ash transportation cost.

(h) **Corporate social responsibility (CSR) reserve**

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Opening balance	-	2.35
Less: Transfer to retained earnings	-	2.35
Closing balance	-	-

In terms of Section 135 of the Companies Act, 2013 read with guidelines on corporate social responsibility issued by Department of Public Enterprises (DPE), GOI, the companies in the Group wherever applicable are required to spend, in every financial year, at least two per cent of the average net profits of the respective companies made during the three immediately preceding financial years in accordance with their CSR Policy. The reserve created by the subsidiaries in the earlier years, was transferred to retained earnings in the previous year.

(i) **General reserve**

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Opening balance	**98,544.79**	92,499.15
Add : Transfer from retained earnings	**110.00**	6,581.00
Less : Utilised for buyback of equity shares	-	337.47
Less : Transferred to capital redemption reserve	-	197.89
Closing balance	**98,654.79**	98,544.79

General reserve is used from time to time to transfer profits from retained earnings for appropriation purposes. The same will be utilised as per the provisions of the Companies Act, 2013. During the previous year, an amount of ₹ 337.47 crore was utilised for buyback of equity shares in accordance with the provisions of the Companies Act, 2013 and an amount equivalent to face value of shares bought back amounting to ₹ 197.89 crore was transferred to capital redemption reserve.

(j) **Retained earnings**

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Opening balance	14,054.16	11,009.35
Add: Profit for the year as per statement of profit and loss	16,675.90	14,634.63
Impact of changes in NCI interest and other adjustments	-	0.24
Transfer from bonds/debentures redemption reserve	597.25	771.00
Transfer from CSR reserve	-	2.35
Less: Transfer to bonds/debentures redemption reserve	48.50	40.50
Transfer to general reserve	110.00	6,581.00
Adjustment with reserve for equity instruments through OCI	-	85.08
Final dividend paid (2020-21)	3,054.45	2,622.06
Interim dividend paid (2021-22)	3,878.67	2,909.00
	24,235.69	14,179.93
Items of other comprehensive income recognised directly in retained earnings:		
- Net actuarial gains/(losses) on defined benefit plans (net of tax)	(104.52)	(123.00)
- Share of other comprehensive income/(expense) of joint ventures accounted for using the equity method (net of tax)	2.16	(2.77)
Closing balance	24,133.33	14,054.16

Retained Earnings are the profits of the Company earned till date net of appropriations. The same will be utilised for the purposes as per the provisions of the Companies Act, 2013.

(k) **Items of other comprehensive income**

(i) **Reserve for equity instruments through OCI**

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Opening balance	81.30	(50.58)
Add: Fair value gains/(losses) on equity instruments for the year	5.40	46.80
Add: Adjustment from retained earnings	-	85.08
Closing balance (i)	86.70	81.30

The Group has elected to recognize changes in the fair value of certain investments in equity instruments in other comprehensive income. These changes are accumulated in reserve for equity instruments through OCI within equity. The Group transfers amounts from this reserve to retained earnings when the relevant equity instruments are derecognized. The adjustment during the year is on account of reconciliation of cost of the equity instruments and its fair value.

(ii) **Foreign currency translation reserve**

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Opening balance	21.38	41.58
Add: Gain (Loss) on Currency translation of foreign operations	9.16	(20.20)
Closing balance (ii)	30.54	21.38
Total (i+ii)	117.24	102.68

Exchange differences arising on translation of the joint ventures are recognised in other comprehensive income as described in accounting policy and accumulated in a separate reserve within equity. The cumulative amount will be reclassified to profit or loss when the net investment is disposed-off.

24. Non-controlling interest

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Opening balance	**3,523.71**	3,317.19
Add: Share of profit for the year	**284.39**	334.77
Share of OCI	**0.55**	0.08
Additional non-controlling interest arising on acquisition / disposal of interest & other adjustments	**125.57**	119.03
Less: Dividend paid to NCI	**173.81**	247.36
Closing balance	**3,760.41**	3,523.71

25. Non current financial liabilities -Borrowings

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Bonds/debentures		
Secured		
7.37% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2035 (Fifty Sixth Issue - Public Issue - Series 3A)[IX]	**188.97**	188.97
7.62% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2035 (Fifty Sixth Issue - Public Issue - Series 3B)[IX]	**171.74**	171.73
8.61% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 March 2034 (Fifty First Issue C - Private Placement) [III]	**322.11**	322.11
8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2033 (Fiftieth Issue - Public Issue - Series 3A)[VI]	**319.87**	319.87
8.91% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2033 (Fiftieth Issue - Public Issue - Series 3B)[VI]	**410.32**	410.32
7.37% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 14 December 2031 (Sixty Sixth Issue - Private Placement)[II]	**4,010.40**	4,010.39
7.49% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 7 November 2031 (Sixty Fourth Issue - Private Placement)[IV]	**720.49**	720.62
7.28% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2030 (Fifty Sixth Issue - Public Issue - Series 2A)[IX]	**133.49**	133.48
7.53% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2030 (Fifty Sixth Issue - Public Issue - Series 2B)IX	**49.93**	49.92
7.32% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 17 July 2029 (Sixty Ninth Issue - Private Placement)[IV]	**4,522.29**	4,522.27
8.63% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 March 2029 (Fifty First Issue B - Private Placement) [III]	**105.70**	105.70

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
8.30% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 January 2029 (Sixty Seventh Issue - Private Placement) V	**4,068.94**	4,068.92
8.48% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2028 (Fiftieth Issue - Public Issue - Series 2A) VI	**256.10**	256.10
8.73% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2028 (Fiftieth Issue - Public Issue - Series 2B) VI	**93.71**	93.71
7.47% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 16 September 2026 (Sixty Third Issue - Private Placement) IV	**696.88**	696.85
7.58% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 23 August 2026 (Sixty Second Issue - Private Placement) IV	**836.58**	836.39
8.05% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 5 May 2026 (Sixtieth Issue - Private Placement) IV	**1,072.87**	1,072.85
8.19% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 December 2025 (Fifty Seventh Issue - Private Placement) IV	**511.89**	511.86
7.11% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2025 (Fifty Sixth Issue - Public Issue - Series 1A) IX	**112.05**	112.03
7.36% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2025 (Fifty Sixth Issue - Public Issue - Series 1B) IX	**68.25**	68.23
7.15% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 10,00,000/- each redeemable at par in full on 21 August 2025 (Fifty Fifth Issue - Private Placement) VII	**313.10**	313.10
9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 22 September 2024 (Fifty Third Issue - Private Placement) VII	**1,047.99**	1,047.99
9.34% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 24 March 2024 (Fifty Second Issue - Private Placement) III	**751.54**	751.54
8.19% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 10,00,000/- each redeemable at par in full on 4 March 2024 (Fifty First Issue A - Private Placement) III	**75.47**	75.47
8.41% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2023 (Fiftieth Issue - Public Issue - Series 1A) VI	**499.95**	499.95
8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2023 (Fiftieth Issue - Public Issue - Series 1B) VI	**213.89**	213.89
9.25% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 04 May 2023 and ending on 04 May 2027 (Forty Fourth Issue - Private Placement) VI	**542.07**	542.07

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
8.48% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 1 May 2023 (Seventeenth Issue - Private Placement)[I]	**50.01**	50.01
8.80% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 April 2023 (Forty Ninth Issue - Private Placement)[VI]	**217.50**	217.46
8.49% Secured non-cumulative non-convertible redeemable taxable fully paid-up bonus debentures of ₹ 12.50 each redeemable at par in three annual installments of ₹ 2.50, ₹ 5.00 and ₹ 5.00 at the end of 8th year, 9th year and 10th year on 25 March 2023, 25 March 2024 and 25 March 2025 respectively (Fifty Fourth Issue -Bonus Debentures)[VIII]	**10,323.61**	10,323.61
8.73% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 7 March 2023 (Forty Eighth Issue - Private Placement)[VI]	**301.79**	301.86
9.00% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 25 January 2023 and ending on 25 January 2027 (Forty Second Issue - Private Placement)[III]	**508.14**	508.14
8.84% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 October 2022 (Forty Seventh Issue - Private Placement)[VI]	**406.91**	407.00
7.93% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 3 May 2022 (Sixty Eighth Issue - Private Placement)[IV]	**3,277.62**	3,277.53
6.72% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 24 November 2021 (Sixty Fifth Issue - Private Placement)[IV]	**-**	716.46
8.10% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 30,00,000/- each redeemable at par in three equal separately transferable redeemable principal parts (STRPP) at the end of 5th year, 10th year & 15th year on 27 May 2021, 27 May 2026 and 27 May 2031 respectively (Sixty first issue - Private Placement)[IX]	**763.98**	1,145.99
11.25% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in five equal annual installments commencing from 6 November 2019 and ending on 6 November 2023 (Twenty Seventh Issue - Private Placement)[III]	**147.29**	220.87
9.3473% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 20 July 2018 and ending on 20 July 2032 (Forty Sixth Issue - Private Placement)[VI]	**58.70**	64.07
9.4376% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 16 May 2018 and ending on 16 May 2032 (Forty Fifth Issue - Private Placement)[VI]	**58.78**	64.11
9.2573% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 2 March 2018 and ending on 2 March 2032 (Forty Third Issue - Private Placement)[III]	**53.34**	58.70

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
9.6713% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 23 December 2017 and ending on 23 December 2031 (Forty First Issue - Private Placement)[III]	**53.52**	58.86
9.558% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 29 July 2017 and ending on 29 July 2031 (Fortieth Issue - Private Placement)[III]	**53.44**	58.82
9.3896% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 9 June 2017 and ending on 9 June 2031 (Thirty Ninth Issue - Private Placement)[III]	**74.74**	82.25
9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 22 March 2017 and ending on 22 March 2031 (Thirty Eighth Issue - Private Placement)[III]	**47.97**	53.33
8.8086% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 15 December 2016 and ending on 15 December 2030 (Thirty Sixth Issue - Private Placement)[III]	**47.86**	53.20
8.785% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 15 September 2016 and ending on 15 September 2030 (Thirty Fifth Issue - Private Placement)[III]	**76.56**	85.10
8.71% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 10 June 2016 and ending on 10 June 2030 (Thirty Fourth Issue - Private Placement)[III]	**95.65**	106.32
8.8493% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 25 March 2016 and ending on 25 March 2030 (Thirty Second Issue - Private Placement)[III]	**59.57**	67.05
Bonds issued by NEEPCO, a subsidiary of the Company		
7.55% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in four installments on 10 December 2026, 10 June 2027, 10 December 2027 and 10 June 2028 with call option on 10 June 2025, 10 December 2025, 10 June 2026, 10 December 2026, 10 June 2027 and 10 December 2027. (Twenty Second Issue - Private Placement)[X(i)]	**511.28**	511.23
8.68% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in five installments on 30 september 2026, 30 September 2027, 30 September 2028, 30 September 2029 and 30 September 2030 (Sixteenth Issue - Private Placement)[X(iii)]	**922.45**	922.40

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₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
8.69% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in two installments on 26 September 2026 and 26 September 2027 with call option on 26 September 2024, 26 March 2025, 26 September 2025, 26 March 2026, 26 September 2026 and 26 March 2027 (Twenty First Issue - Private Placement)X(i)	**150.01**	149.97
8.75% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in four installments on 6 September 2026, 6 March 2027, 6 September 2027 and 6 March 2028 with call option on 6 March 2023, 10 August 2023, 10 February 2024, 10 August 2024, 10 February 2025, 10 August 2025, 10 February 2026, 10 August 2026, 10 February 2027, 10 August 2027, 10 February 2028 (Nineteenth Issue - Private Placement)X(ii)	**303.39**	303.35
7.68% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in two installments on 15 May 2025 and 15 November 2025 with call option on 15 November 2022, 15 May 2023, 15 November 2023, 15 May 2024, 15 November 2024, 15 May 2025 (Eighteenth Issue - Private Placement)X(ii)	**514.21**	514.17
9.50% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in four installments on 29 May 2024, 29 November 2024, 29 May 2025 & 29 November 2025 with call option on 29 November 2023, 29 May 2024, 29 November 2024, 29 May 2025 (Twentieth Issue - Private Placement)X(i)	**309.44**	309.39
10.20% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par on 15 December 2021 with a put & call option on 15 December 2018 (Eleventh Issue - Private Placement)X(vii)	**-**	40.86
9.15% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in five installments on 25 March 2021, 25 March 2022, 25 March 2023, 25 March 2024 and 25 March 2025 (Fifteenth Issue - Private Placement)X(iv)	**360.63**	480.84
9.60% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in five installments on 1 October 2020, 1 October 2021, 1 October 2022, 1 October 2023 and 1 October 2024 (Fourteenth Issue - Private Placement)X(i)	**1,500.00**	2,000.00
9.00% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in five installments on 15 March 2019, 15 March 2020, 15 March 2021, 15 March 2022 and 15 March 2023 (Thirteenth Issue - Private Placement)X(v)	**14.56**	29.18
9.25% Secured redeemable non-convertible taxable bonds of ₹ 10,00,000 each redeemable at par in five installments on 27 June 2018, 27 June 2019, 27 June 2020, 27 June 2021 and 27 June 2022 (Twelth Issue - Private Placement)X(vi)	**24.83**	49.67
Bonds issued by THDC India Ltd., a subsidiary of the Company		
7.45% Secured redeemable non-convertible bonds of ₹ 10,00,000 each redeemable on 20 Janurary 2031 (Series IV)XI(iv)	**760.87**	760.87
7.19% Secured redeemable non-convertible bonds of ₹ 10,00,000 each redeemable on 23 July 2030 (Series III)XI(iii)	**839.55**	839.55
8.75% Secured redeemable non-convertible bonds of ₹ 10,00,000 each redeemable on 5 September 2029 (Series II)XI(i)	**1,574.44**	1,574.08
7.59% Secured redeemable non-convertible bonds of ₹ 10,00,000 each redeemable on 3 October 2025 (Series I)XI(ii)	**622.33**	622.46
7.39% Secured redeemable non-convertible bonds of ₹ 10,00,000 each redeemable on 25 August 2031 (Series V)XI(iv)	**1,253.21**	-
	48,454.77	49,145.09

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Bonds/debentures		
Unsecured		
6.29% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 11 April 2031 (Seventy First Issue - Private Placement)	**1,042.00**	1,041.99
6.43% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 27 January 2031 (Seventy Third Issue - Private Placement)	**2,528.07**	2,528.05
5.45% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 October 2025 (Seventy Second Issue - Private Placement)	**4,100.18**	4,100.15
6.55% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 17 April 2023 (Seventy Issue - Private Placement)	**4,648.74**	4,648.65
6.87% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 21 April 2036 (Seventy Fourth Issue - Private Placement)	**4,256.03**	-
6.69% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 13 September 2031 (Seventy Fifth Issue - Private Placement)	**3,109.82**	-
6.74% Unsecured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 14 April 2032 (Seventy Sixth Issue - Private Placement)	**1,197.01**	-
Bonds issued by NEEPCO, a subsidiary of the Company		
7.14% Unsecured redeemable non-covertible taxable bonds of ₹ 10,00,000/- each redeemable at par in four installments on 22 September 2028, 23 March 2029, 24 September 2029 & 22 March 2030 with call option on 24 March 2026, 24 September 2026, 24 march 2027, 24 September 2027, 24 March 2028 (Twenty Third Issue - Private Placement)	**200.26**	-
	69,536.88	61,463.93
Foreign currency notes		
Unsecured		
4.500 % Fixed rate notes due for repayment on 19 March 2028	**3,042.30**	2,948.68
2.750 % Fixed rate notes due for repayment on 1 February 2027	**4,294.61**	4,367.53
4.250 % Fixed rate notes due for repayment on 26 February 2026	**3,820.37**	3,703.35
4.375 % Fixed rate notes due for repayment on 26 November 2024	**3,874.48**	3,759.25
3.750 % Fixed rate notes due for repayment on 3 April 2024	**3,431.34**	3,327.46
4.750 % Fixed rate notes due for repayment on 3 October 2022	**3,816.50**	3,703.00
7.250 % Fixed global INR denominated bonds due for repayment on 3 May 2022	**2,033.92**	2,032.42
7.375 % Fixed green global INR denominated bonds due for repayment on 10 August 2021	-	1,054.12
5.625 % Fixed rate notes due for repayment on 14 July 2021	-	3,747.55
	24,313.52	28,643.36
Term loans		
From Banks		
Secured		
Rupee term loans[XII]	**16,073.96**	7,565.26

CONSOLIDATED FINANCIAL STATEMENTS

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Foreign currency loans[XIII]	136.20	207.48
Unsecured		
Foreign currency loans	13,277.71	12,198.00
Rupee term loans	64,340.13	64,937.57
From Others		
Secured		
Rupee term loans[XII]	8,803.04	13,431.94
Unsecured		
Foreign currency loans (guaranteed by GOI)	2,764.47	3,111.05
Other foreign currency loans	3,402.52	2,901.11
Rupee term loans	738.39	838.13
Rupee term loans from Government of India	291.24	291.25
	2,03,678.06	1,95,589.08
Less: Current maturities of		
Bonds - secured	6,703.37	1,893.00
Foreign Currency Fixed Rate Notes	5,724.50	4,710.00
Foreign currency loans from banks - secured	77.75	75.38
Rupee term loans from banks - secured	1,269.99	739.36
Foreign currency loans from banks - unsecured	301.01	756.63
Rupee term loans from banks - unsecured	4,070.60	2,962.46
Rupee term loans from others - secured	282.57	935.48
Foreign currency loans from other - unsecured (guaranteed by GOI)	300.03	310.68
Other foreign currency loans from others - unsecured	390.44	393.22
Rupee term loans from others - unsecured	33.34	33.34
Interest accrued but not due on secured borrowings	1,385.59	1,419.48
Interest accrued but not due on unsecured borrowings	1,267.68	823.84
Total	**1,81,871.19**	1,80,536.21

a) Details of terms of repayment and rate of interest

i) Secured rupee term loan from banks and financial institutions carry floating rate of interest linked to SBI base rate or Base rate of respective lender or three year AAA bond yield rate plus agreed margin or three year AAA bond yield rate plus agreed margin with reset after three years or one year MCLR plus annual reset or prevalent rate notified by the lender for category 'A' public sector undertakings or fixed interest rate of 9.36% p.a. or RBI's repo rate plus applicable margin. These loans are repayable in installments as per the terms of the respective loan agreements. The repayment period extends from a period of five to twenty years after 6 months from the date of COD or from the date specified in the loan agreements.

ii) Secured foreign currency loans from banks carry interest rate of 3 months LIBOR plus 2.75% p.a. as margin and is repayable in 39 equal quarterly installments w.e.f. 20.06.2014 for USD ECB Loan in one of the subsidiaries of the company.

iii) Unsecured foreign currency loans (guaranteed by GOI) - Others include loans carrying fixed rate of interest ranging from 0.85% p.a. to 3.46% p.a. and are repayable in 9 to 20 semi annual installments.

Unsecured foreign currency loans (guaranteed by GOI) - Others also include loans carrying interest rate linked to LIBOR plus variable spread and are repayable in 23 years on half yearly instalment from 15 November 2017 to 15 May 2040.

iv) Unsecured foreign currency loans – Banks include loans of ₹ **84.14 crore** (31 March 2021: ₹ 108.20 crore) which carry fixed rate of interest of 1.88% p.a. and loans of ₹ **13,193.57 crore** (31 March 2021: ₹ 12,089.80 crore) which carry floating rate of interest linked to 6M USD LIBOR/6M EURIBOR/3M TONA/6M TONA*. These loans are repayable in 1 to 25 semi-annual/annual installments as of 31 March 2022, commencing after moratorium period if any, as per the terms of the respective loan agreements.

v) Unsecured foreign currency loans – Others include loans of ₹ **1,862.96 crore** (31 March 2021: ₹ 2,261.33 crore) which carry fixed rate of interest ranging from 1.88% p.a. to 4.13% p.a and loans of ₹ **1539.56 crore** (31 March 2021: ₹ 639.78 crore) which carry floating rate of interest linked to 3M TONA/6M TONA*. These loans are repayable in 3 to 25 semi annual installments as of 31 March 2022, commencing after moratorium period if any, as per the terms of the respective loan agreements.

*6M JPY LIBOR has been changed to 3M TONA/6M TONA w.e .f 1 January 2022 due to discontinuance in publication of LIBOR after 31 December 2021 of various currencies by Financial Conduct Authority of United Kingdom.

vi) Unsecured rupee term loans from banks and others carry interest rate ranging from 5.65% p.a. to 6.84% p.a. with monthly/half-yearly rests. These loans are repayable in half-yearly/yearly instalments as per the terms of the respective loan agreements. The repayment period extends from a period of 9 to 15 years after a moratorium period of 3 to 6 years.

Unsecured rupee term loans include ₹ **687.66 crore** (31 March 2021: ₹ 753.51 crore) from Government of Jharkhand to M/s Patratu Vidyut Utpadan Nigam Ltd., a Subsidiary of the parent company, which carry interest at the rate of 10% p.a. until the date of investment approval and afterwards equivalent to weighted average cost of borrowing subject to ceiling of 10% per annum. The said loan is proposed to be utilised as consideration for subsequent issue and allotment of shares in its % ownership as prescribed in the related JV agreement. This also includes deemed loan on account of cost of land transferred to the subsidiary company.

vii) Unsecured rupee term loans from Government of India carry interest rate of 1% p.a.. This loan is repayable in yearly installments as per the terms of the loan agreement. The repayment period is 15 years starting from 30 January 2018.

b) There has been no default in repayment of any of the loans or interest thereon as at the end of the year.

c) The group has used the borrowings from banks and financial institutions for the purposes for which it were taken.

Details of securities

I Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage, by way of first charge, by deposit of title deeds of the immovable properties pertaining to National Capital Power Station.

II Secured by Equitable mortgage of the immovable properties pertaining to Vindhyachal Super Thermal Power Station on first charge basis.

III Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage of the immovable properties, on first pari-passu charge basis, pertaining to Sipat Super Thermal Power Project by extension of charge already created.

IV Secured by Equitable mortgage, on pari-passu charge basis, of the immovable properties pertaining to Barh Super Thermal Power Project.

V Secured by Equitable mortgage, on pari-passu charge basis, of the immovable properties pertaining to Vindhyachal Super Thermal Power Station.

VI Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage of the immovable properties, on first pari-passu charge basis, pertaining to National Capital Power Station by extension of charge already created.

VII Secured by English mortgage of the immovable properties pertaining to Solapur Super Thermal Power Project on first charge basis.

VIII Secured by Equitable mortgage of the immovable properties pertaining to Barh Super Thermal Power Project on first charge basis.

IX Secured by English mortgage, on pari-passu charge basis, of the immovable properties pertaining to Solapur Super Thermal Power Project.

X (i) Secured by way of mortgage of assets attached to the earth as well as other movable assets of the Kameng Hydro Electric Project, Arunchal Pradesh and the landed property in the District of Mehsana, Gujarat.

(ii) Secured by way of mortgage of the assets attached to the earth as well as other movable assets of the Pare Hydro Electric Project, Arunchal Pradesh and the landed property in the District of Mehsana, Gujarat.

(iii) Secured by way of mortgage of the assets attached to the earth as well as other movable assets of the Tuirial Hydro Electric Project in Mizoram, Kopili Hydro Electric Project in Assam and the landed property in the District of Mehsana, Gujarat.

(iv) Secured by way of mortgage of the assets of the Agartala Gas Turbine Project (original open-cycle plant) in Tripura, assets except the gas turbines & steam turbines in the Assam Gas Based Project, Assam, assets except plant & machinery in the generating station in the Ranganadi Hydro Electric Project, Arunachal Pradesh and the landed property in the District of Mehsana, Gujarat.

(v) Secured by way of mortgage of the steam turbines of the Assam Gas Based Power Plant, Assam and the landed property in the District of Mehsana, Gujarat.

(vi) Secured by way of mortgage of all the plant and machinery in the generating station of the Ranganadi Hydro Electric Project, Arunachal Pradesh and the landed property in the District of Mehsana, Gujarat.

(vii) Secured by way of mortgage of the gas turbines of the Assam Gas Based Power Project, Assam and the landed property in the District of Mehsana, Gujarat.

XI (i) Secured by first charge on paripassu basis on movable assets of Tehri HPP Stage-I including book debts.

(ii) Secured by first charge on paripassu basis on movable assets of Tehri HPP Stage-I.

(iii) Secured by first charge on paripassu basis on movable assets of Koteshwar HEP & Wind Power Projects of Patan & Dwarka.

(iv) Secured by first charge on paripassu basis on the movable CWIP and future movable assets of pump storage plant located at Tehri.

XII (i) Secured by a first priority charge on all assets, present & future, movable & immovable and land of 975.05 acres and second charge on all inventories and receivables, in respect of loan from consortium led by SBI for Kanti Bijlee Utpadan Nigam Ltd. expansion project. The security will rank pari-pasu with all term lenders of the project. The charge has been created in favor of SBI Cap Trustee Co. Ltd. and Canara Bank. Legal mortgage of land in favour of security trustee has been executed for 877.18 acres out of 975.05 acres of land.

(ii) Secured by equitable mortgage/ hypothecation of all present and future fixed and movable assets of Nabinagar TPP (4*250) MW of Bhartiya Rail Bijlee Company Ltd., a subsidiary company, as first charge, ranking pari passu. The term loan is secured on pari passu basis on the project assets (Units - I to IV).

(iii) Secured by all existing and future moveable assets of Patratu Vidyut Utpadan Nigam Ltd, a subsidiary company, including equipment, machinery and other current assets, book debts, receivables and all other moveables.

(iv) Secured by a first pari passu charge on entire current assets and fixed assets of Nabinagar Power Generating Company Limited, a subsidiary of the Company.

Secured by a first pari passu charge on all assets, present and future, movable and immovable through a deed of hypothecation and simple mortgage of 2500 acres of land of Nabinagar Power Generating Company Limited, a subsidiary of the Company.

(v) Secured by pari passu charge over assets of the Kameng Hydro Electric Power Project (600 MW) situated at Arunachal Pradesh of NEEPCO, a subsidiary company.

(vi) Secured by first charge on pari passu basis on assets of Tehri stage-I i.e. dam, power house civil construction, power house electrical & mechanical equipments not covered under other borrowings and project township of Tehri dam and HPP together with all rights and interest appertaining there to, of THDC India Ltd., a subsidiary company.

(vii) Secured by first charge on pari passu basis on assets of Koteshwar HEP, of THDC India Ltd., a subsidiary company.

(viii) Secured against first charge on pari passu basis on assets of Tehri PSP of THDC India Ltd., a subsidiary company.

(ix) Secured against first charge on pari passu basis on movable fixed assets (including plant & machinery and cwip) both existing & future of Kasargod Solar Power Plant, Khurja STPP and Amelia coal mine of THDC India Ltd., a subsidiary company.

XIII Secured by hypothecation of all movable & immovable assets (including plant, machinery) created / to be created in respect of Tripura Gas Based Power Plant, Agartala and Agartala Gas Turbine Projects –Extension, Agartala of NEEPCO, a sucbsidiary of the Company.

XIV Security cover mentioned at Sl. No. I to XIII is above 100% of the secured debt outstanding.

26. Non-current financial liabilities - Lease liabilities

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Lease liabilities	1,151.30	897.49
Less: current maturities of lease liabilities	188.61	161.79
Total	**962.69**	735.70

a) The lease liabilities are repayable in installments as per the terms of the respective lease agreements generally over a period of more than 1 year and upto 99 years.

27. Non-current financial liabilities - Trade payables

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Trade payables for goods and services		
Total outstanding dues of		
- micro and small enterprises	13.45	13.78
- creditors other than micro and small enterprises	71.19	66.35
Total	**84.64**	80.13

a) Disclosures as required under Companies Act, 2013 / Micro, Small and Medium Enterprises Development Act, 2006 (MSMED) are provided in Note 77.

b) Amounts payable to related parties are disclosed in Note 60.

c) The above balances are due for payment after 12 months from the balance sheet date.

28. Non-current liabilities- Other financial liabilities

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Payable for capital expenditure		
- micro and small enterprises	17.59	13.71
- other than micro and small enterprises	876.89	2,045.56
Deposits from contractors and others	164.04	29.75
Others	1.34	0.12
Total	**1,059.86**	2,089.14

a) Disclosures as required under Companies Act, 2013 / MSMED Act, 2006 are provided in Note 77.

b) Amounts payable to related parties are disclosed in Note 60.

29. Non-current liabilities - Provisions

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Provision for		
Employee benefits	**1,022.99**	1,023.71
Mine Closure	**304.24**	285.35
Stripping Activity Adjustments	**311.98**	62.61
Others	**15.98**	18.68
Total	**1,655.19**	1,390.35

Disclosures as per Ind AS 19 ‘Employee benefits’ are provided in Note 57.

30. Non-current liabilities - Deferred tax liabilities (net)

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Deferred tax liability		
Difference in book depreciation and tax depreciation	**30,288.21**	25,387.36
Less: Deferred tax assets		
Provisions	**968.99**	925.01
Statutory dues	**294.97**	363.67
Leave encashment	**520.86**	468.67
Unabsorbed depreciation	**1,273.21**	1,024.49
MAT credit entitlement	**16,263.41**	12,705.04
Others	**15.10**	12.66
Total	**10,951.67**	9,887.82

a) Deferred tax assets and deferred tax liabilities have been offset to the extent they relate to the same governing laws.

b) The Company has been recognising MAT credit available to the Company as the same is likely to give future economic benefits in the form of availability of set off against future income tax liability.

c) Disclosures as per Ind AS 12 ‘Income Taxes’ are provided in Note 56.

d) Others include deferred tax assets on account of payments related to voluntary retirement schemes and other deferred tax adjustments.

Movement in deferred tax balances

As at 31 March 2022 ₹ Crore

Particulars	As at 1 April 2021	Recognised in statement of profit and loss	Recognised in OCI	Others	As at 31 March 2022
Deferred tax liability					
Difference in book depreciation and tax depreciation	25,387.36	5,045.48	-	(144.63)	**30,288.21**
Less: Deferred tax assets					
Provisions	925.01	44.02	-	(0.04)	**968.99**
Statutory dues	363.67	(47.17)	-	(21.53)	**294.97**
Leave encashment	468.67	30.66	-	21.53	**520.86**
Unabsorbed depreciation	1,024.49	248.72		-	**1,273.21**
MAT credit entitlement	12,705.04	3,558.37	-	-	**16,263.41**
Others	12.66	2.44	-	-	**15.10**
Deferred tax liability (net)	**9,887.82**	**1,208.44**	-	**(144.59)**	**10,951.67**

As at 31 March 2021 ₹ Crore

Particulars	As at 1 April 2020	Recognised in statement of profit and loss	Recognised in OCI	Others	As at 31 March 2021
Deferred tax liability					
Difference in book depreciation and tax depreciation	20,918.95	4,606.03	-	(137.62)	25,387.36
Less: Deferred tax assets					
Provisions	1,200.23	(193.51)	-	(81.71)	925.01
Statutory dues	325.21	(12.73)	-	51.19	363.67
Leave encashment	399.15	40.34	-	29.18	468.67
Unabsorbed depreciation	619.99	404.50	-	-	1,024.49
MAT credit entitlement	9,639.70	3,065.34	-	-	12,705.04
Others	19.25	(6.60)	-	0.01	12.66
Deferred tax liability (net)	8,715.42	1,308.69	-	(136.29)	9,887.82

31. Other non-current liabilities

₹ Crore

Particulars	**As at 31 March 2022**	As at 31 March 2021
Government grants	**1,926.65**	1,996.47

a) Government grants include grant received in advance amounting to ₹ **522.31 crore** (31 March 2021: ₹ 592.20 crore) for which attached conditions are to be fulfilled / works to be completed relating to various solar power plants. This amount will be recognized as revenue corresponding to the depreciation charge in future years on completion of related projects.

b) Government grants also include:

(i) Grant received from GOI through Government of Bihar for renovation & modernisation of Kanti Bijlee Utpadan Nigam Ltd. (a subsidiary of the Company) amounting to ₹ **Nil** (31 March 2021: ₹ 44.85 crore).

(ii) Grant received from Govt. of Uttar Pradesh towards irrigation sector by THDC India Ltd. (a subsidiary of the Company) amounting to ₹ **582.20 crore** (31 March 2021: ₹ 595.87 crore). This amount will be recognized as revenue corresponding to the depreciation charge in future years.

(iii) Grant received from Ministry of Development of North Eastern Region by NEEPCO (a subsidiary of the Company) amounting to ₹ **227.98 crore** (31 March 2021: ₹ 243.94 crore). As per the Investment Approval sanctioned vide the Ministry of Power's letter no.7/7/2009-H-I dated 14 January 2011, an amount of ₹ 300.00 crores has been sanctioned by the Ministry of Development of North Eastern Region (MDONER) as a part of the approved funding pattern for the Tuirial Hydro Electric Project, Mizoram. The grant is being amortised during normative useful life of the project since its commissioning.

(iv) Unamortised grant also includes amount ₹ **34.36 crore** (31 March 2021: ₹ Nil) received/ receivable from Bangalore Metropolitan Transport Corporation (BMTC) for supply of e-Buses by NVVN (a subsidiary of the Company). This amount will be recognised as revenue corresponding to depreciation charge in future years.

(v) Balance Government grants mainly represent unamortised portion of grant received. This includes ₹ **534.94 crore** (31 March 2021: ₹ 493.43 crore) received from Solar Energy Corporation of India under MNRE Scheme for setting up Solar PV power projects. This amount will be recognized as revenue corresponding to the depreciation charge in future years.

Refer Note 36 w.r.t. current portion of Government grants.

32. Current financial liabilities -Borrowings

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Current borrowings		
Loans repayable on demand		
From banks		
Secured		
Cash credit	**1,731.09**	627.84
Unsecured		
Cash credit	**168.12**	727.04
Other Loans		
Secured		
Short term loans	**-**	1,750.00
Unsecured		
Commercial paper	**6,631.26**	12,859.74
	8,530.47	15,964.62
Current maturities of non-current borrowings		
Bonds - secured	**6,703.37**	1,893.00
Foreign currency notes - unsecured	**5,724.50**	4,710.00
From Banks		
Secured		
Foreign currency loans	**77.75**	75.38
Rupee term loans	**1,269.99**	739.36
Unsecured		
Foreign currency loans	**301.01**	756.63
Rupee term loans	**4,070.60**	2,962.46
From Others		
Secured		
Rupee term loans	**282.57**	935.48
Unsecured		
Foreign currency loans (guaranteed by GOI)	**300.03**	310.68
Other foreign currency loans	**390.44**	393.22
Rupee term loans	**33.34**	33.34
	19,153.60	12,809.55
Total	**27,684.07**	28,774.17

(a) Secured cash credit includes:

(i) Cash credit secured by first (hypothecation) charge on stock / stores / spares and other current assets (excluding receivables), of the parent company, paripassu with other consortium banks and trustees for bond holders and first (hypothecation) charge on receivables ranking pari passu with consortium banks.

(ii) Cash credit secured by hypothecation of trade receivables and inventory of Kanti Bijlee Utpadan Nigam Ltd., a subsidiary of the Company, with floating rate of interest linked to the bank's MCLR rate. The loan is secured by second charges on all immovable properties, movable properties, both present & future, pertaining to project, including land measuring 975.05 acres.

(iii) Cash credit secured by a first pari passu charge on entire current assets and first and second pari passu charge on fixed assets of the of Nabinagar Power Generating Company Limited, a subsidiary of the Company.

(iv) Cash credit secured against hypothecation of the stocks of stores and spares and book debt, both present and future, of the NEEPCO, a subsidiary of the Company.

(v) Cash credit secured against secured by way of second charge on block of assets of Tehri Stage-1, Koteshwar HEP including machinery spares, tools & accsesories, fuel stock, spares & material at project site and by way of exclusive charge on debtors of Patan Wind Power Project,Dev Bhoomi dwarka wind power project, Dhukuwan project and Solar power plant Kerala of THDC India Ltd., a subsidiary of the Company.

(vi) Cash credit secured by a first pari passu charge on entire current assets and second pari passu charge on fixed assets of the of Bhartiya Rail Bijlee Company Limited, a subsidiary of the Company.

(b) Secured short term loans include:

(i) Secured by pari passu charge over assets of the Kameng Hydro Electric Power Project (600 MW) situated at Arunachal Pradesh of NEEPCO, a subsidiary of the Company.

(ii) Secured against trade receivables of Koteshwar HEP and second charge on block of assets of Teheri Stage-I and Koteshwar HEP of THDC India Ltd., a subsidiary of the Company.

(iii) Secured by pari passu first charge on fixed assets and & first charge on entire current assets of Bhartiya Rail Bijlee Company Limited, a subsidiary of the Company.

(c) Borrowings under Commercial paper are net of unamortised discount as at 31 March 2022 amounting to ₹ **43.74 crore** (31 March 2021: ₹ 140.26 crore)

(d) Details in respect of rate of interest and terms of repayment of current maturities of secured and unsecured non-current borrowings indicated above are disclosed in Note 25.

(e) There has been no default in repayment of any of the loans or interest thereon as at the end of the year.

33. Current financial liabilities - Lease liabilities

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Current maturities of lease liabilities	**188.61**	161.79

a) Refer Note 26 for details in respect of non-current lease lilibilities.

34. Current financial liabilities - Trade payables

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Trade payables for goods and services		
Total outstanding dues of		
- micro and small enterprises	**496.04**	404.12
- creditors other than micro and small enterprises	**10,781.28**	8,322.16
Total	**11,277.32**	8,726.28

a) Disclosures as required under Companies Act, 2013 / MSMED Act, 2006 are provided in Note 77.

b) Amounts payable to related parties are disclosed in Note 60.

(c) Trade payables ageing schedule

As at 31 March 2022 ₹ Crore

Particulars	Unbilled Dues	Not Due	Outstanding for following periods from due date of payment				Total
			Less than 1 year	1-2 years	2-3 years	More than 3 years	
(i) MSME	193.96	226.30	75.25	0.04	0.26	0.23	**496.04**
(ii) Others	2,117.87	1,254.69	4,260.35	451.55	818.39	1,661.77	**10,564.62**
(iii) Disputed dues – MSME	-	-	-	-	-	-	-
(iv) Disputed dues – Others	-	-	-	-	0.14	216.52	**216.66**
Total	**2,311.83**	**1,480.99**	**4,335.60**	**451.59**	**818.79**	**1,878.52**	**11,277.32**

Trade Payables ageing schedule as at 31 March 2021 ₹ Crore

Particulars	Unbilled Dues	Not Due	Outstanding for following periods from due date of payment				Total
			Less than 1 year	1-2 years	2-3 years	More than 3 years	
(i) MSME	135.70	196.76	66.61	2.86	0.67	1.52	404.12
(ii) Others	1,375.56	704.30	3,254.37	1,055.94	536.74	1,175.17	8,102.08
(iii) Disputed dues – MSME	-	-	-	-	-	-	-
(iv) Disputed dues – Others	-	-	-	0.14	-	219.94	220.08
Total	1,511.26	901.06	3,320.98	1,058.94	537.41	1,396.63	8,726.28

(d) The amounts payable to MSME vendors beyond the statutory period represents security deposit, retention money and other payments which are to be paid after such period as per respective contract conditions and bills which are pending for completion of documentation by the vendors.

35. Current liabilities - Other financial liabilities

₹ **Crore**

Particulars	**As at 31 March 2022**	As at 31 March 2021
Interest accrued but not due on secured borrowings	**1,385.59**	1,419.48
Interest accrued but not due on unsecured borrowings	**1,267.68**	823.84
Unpaid dividends	**17.99**	19.84
Unpaid matured deposits and interest accrued thereon	**0.19**	0.19
Unpaid matured bonds and interest accrued thereon	**7.20**	6.54
Unpaid bond refund money-Tax free bonds	**0.19**	0.19
Book overdraft	**33.19**	2.92
Payable to customers	**1,057.79**	876.66
Payable for capital expenditure		
- micro and small enterprises	**264.93**	238.98
- other than micro and small enterprises	**20,200.91**	17,054.82
Other payables		
Deposits from contractors and others	**551.52**	388.83
Payable to employees	**1,087.41**	700.79
Retention on account of encashment of bank guarantee (solar)	**285.67**	286.72
Payable to Solar Payment Security account	**313.26**	299.84
Others	**1,074.32**	1,167.94
Total	**27,547.84**	23,287.58

a) Unpaid dividends, matured deposits, bonds and interest include the amounts which have either not been claimed by the investors/holders of the equity shares/bonds/fixed deposits or are on hold pending legal formalities etc. Out of the above, the amount required to be transferred to Investor Education and Protection Fund has been transferred.

b) 'Other payables - Others' mainly includes ₹ **250.39 crore** (31 March 2021: ₹ 286.16 crore) towards the implementation of Deen Dayal Upadhyay Gram Jyoti Yojana (DDUGJY) Scheme of the GOI being carried out by the Company. The funds for the implementation of these schemes are provided by the agencies nominated by the GOI in this regard. Further, 'Other payables - Others' also include ₹ **380.48 crore** (31 March 2021: ₹ 380.48 crore) payable to the Department of Water Resource, Government of Odisha and ₹ **251.53 crore** (31 March 2021: ₹ 251.53 crore) in respect of an amount payable under a contract which is under dispute and balance towards amount payable to hospitals, etc.

c) The Company had obtained exemption from the Ministry of Corporate Affairs (MCA), GOI in respect of applicability of Section 58A from the erstwhile Companies Act, 1956 in respect of deposits held from the dependants of employees who die or suffer permanent total disability under the 'Employees Rehabilitation Scheme' (said amount is included in "Other payables - Others"). Consequent upon enactment of the Companies Act, 2013, the Company has written to the MCA for clarification on continuation of above exemption granted earlier, which is still awaited. Based on an expert opinion, the amount accepted under the Scheme is not considered as a deposit under the Companies Act, 2013.

d) Retention on account of encashment of bank guarantee (solar) represents amounts retained by M/s NVVN Ltd., a wholly owned subsidiary, pursuant to directions received from the Ministry of New and Renewable Energy vide letter ref. no. 29/5/2010-11/JNNSM(ST) dated 29 June 2012 and clarifications thereafter.

e) Disclosures as required under the Companies Act, 2013 / MSMED Act, 2006 are provided in Note 77.

f) Amounts payable to related parties are disclosed in Note 60.

g) Solar Payment Security Account was created by MNRE, Government of India vide OM No. 29/5/2010-11/JNNSM(ST) dated 30 June 2011 as Gross Budgetary Support (GBS) by Ministry of New and Renewable Energy (MNRE), Government of India for ensuring timely payment to Solar Power Developers (SPDs) in the event of default by State Utilities/Discoms. This fund is to be recouped after receipt of payment from State Utilities/Discoms against these bills. This fund was incorporated in the books of accounts of NVVN with effect from 01 Jan 2019 for better monitoring and control of the fund. The funds not withdrawn are invested in Term deposits and balance amount is kept in Current account (refer Note 16).

36. Current liabilities - Other current liabilities

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Advances from customers and others	757.89	863.52
Government Grants	111.84	151.52
Other payables		
Statutory dues	634.45	564.80
Others	373.43	369.66
Total	**1,877.61**	1,949.50

(a) Advance received for the DDUGJY (including interest thereon) of ₹ **309.13 crore** (31 March 2021: ₹ 377.31 crore) is included in 'Advance from customers and others'. Refer Note 35(b). Tax deducted at source on the interest is included in 'Advance tax and tax deducted at source' - Note 11.

(b) Refer Note 31 w.r.t. accounting of Government grants.

(c) Others include an amount ₹ **302.74 crore** (31 March 2021: ₹ 250.41 crore) payable to Government of Jharkand on disposal of the assets held for sale. Refer Note 20(f).

37. Current liabilities - Provisions

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Provision for		
Employee benefits	2,010.66	1,912.72
Obligations incidental to land acquisition	2,879.76	3,242.17
Tariff adjustment	482.28	360.28
Arbitration awards	2,302.18	2,058.97
Others	200.81	155.40
Total	**7,875.69**	7,729.54

a) Disclosures required by Ind AS 19 'Employee Benefits' are provided in Note 57.

b) Disclosures required by Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets' are provided in Note 63.

c) Provision for others mainly comprise ₹ **111.96 crore** (31 March 2021: ₹ 103.88 crore) towards cost of unfinished minimum work programme demanded by the Ministry of Petroleum and Natural Gas (MoP&NG) including interest thereon in relation to Block AA-ONN-2003/2 (Refer Note 65) and ₹ **7.55 crore** (31 March 2021: ₹ 3.05 crore) towards provision for shortage in property, plant and equipment on physical verification pending investigation and ₹ **17.86 crore** (31 March 2021: ₹ Nil) towards expected loss on investments of Provident Fund Trust.

38. Current liabilities - Current tax liabilities (net)

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Current tax liabilities (net)	**141.13**	17.50

39. Deferred revenue

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
On account of		
Advance against depreciation	**197.51**	205.12
Income from foreign currency fluctuation	**2,036.79**	2,055.01
Deferred fair valuation gain	**44.12**	3.15
Total	**2,278.42**	2,263.28

a) Advance against depreciation (AAD) was an element of tariff provided under the Tariff Regulations for 2001-04 and 2004-09 to facilitate debt servicing by the generators since it was considered that depreciation recovered in the tariff considering a useful life of 25 years is not adequate for debt servicing. Though this amount is not repayable to the beneficiaries, keeping in view the matching principle, and in line with the opinion of the Expert Advisory Committee (EAC) of the Institute of Chartered Accountants of India (ICAI), this was treated as deferred revenue to the extent depreciation chargeable in the accounts is considered to be higher than the depreciation recoverable in tariff in future years. Since AAD is in the nature of deferred revenue and does not constitute a liability, it has been disclosed in this note separately from equity and liabilities.

b) Foreign exchange rate variation (FERV) on foreign currency loans and interest thereon is recoverable from/payable to the customers in line with the Tariff Regulations. Keeping in view the opinion of the EAC of ICAI, the Company is recognizing deferred foreign currency fluctuation asset by corresponding credit to deferred income from foreign currency fluctuation in respect of the FERV on foreign currency loans adjusted in the cost of property, plant and equipment, which is recoverable from the customers in future years as provided in accounting policy no. C.16 (Note 1). This amount will be recognized as revenue corresponding to the depreciation charge in future years. The amount does not constitute a liability to be discharged in future periods and hence, it has been disclosed separately from equity and liabilities.

40. Revenue from operations

₹ Crore

Particulars		For the year ended 31 March 2022	For the year ended 31 March 2021
Energy sales (including electricity duty)		**1,23,683.94**	1,03,794.08
Sale of energy through trading		**7,428.04**	7,143.81
Consultancy, project management and supervision fee		**128.14**	172.03
Lease rentals on assets on operating lease		**19.59**	156.18
Commission - energy trading business		**4.43**	1.78
		1,31,264.14	1,11,267.88
Sale of fly ash/ash products	**243.20**		185.92
Less: Transferred to fly ash utilisation reserve fund	**243.20**		185.92
		-	-
Other operating revenues			
Interest from beneficiaries		**1,014.22**	31.27
Energy internally consumed		**65.17**	62.58
Interest income on assets under finance lease		**45.07**	51.54

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Recognised from government grants	**150.40**	117.83
Provision written back-others	**122.50**	-
Income from E-mobility business	-	0.05
Leasing of E- vehicles	**7.78**	-
	1,405.14	263.27
Total	**1,32,669.28**	1,11,531.15

a) (i) CERC notified the The Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 vide Order dated 7 March 2019 (Regulations, 2019) for determination of tariff for the tariff period 2019-2024. During the year, CERC has issued provisional tariff orders in respect of nine stations for the tariff period 2019-24. Pending issue of provisional tariff orders in respect of balance stations, capacity charges are billed to beneficiaries in accordance with the tariff approved and applicable as on 31 March 2019, as provided in Regulations, 2019. In case of new stations, which got commercialised from 1 April 2019 and stations where tariff approved and applicable as on 31 March 2019 is pending from CERC, billing is done based on capacity charges as filed with CERC in tariff petition. Accordingly, capacity charges provisionally billed for the year ended 31 March 2022 is ₹ **49,698.43 crore** (31 March 2021: ₹ 46,684.79 crore). Energy and other charges are billed as per the operational norms specified in the Regulations 2019. Accordingly, energy charged billed for the year ended 31 March 2022 is ₹ **68,139.42 crore** (31 March 2021: ₹ 54,446.47 crore).

(ii) Capacity charges for the year ended 31 March 2022 have been provisionally recognized considering the provisions of CERC Tariff Regulations amounting to ₹ **48,481.39 crore** (31 March 2021: ₹ 46,557.31 crore). Energy and Other charges for the year ended 31 March 2022 have been recognized at ₹ **71,292.96 crore** (31 March 2021: ₹ 55,478.90 crore) as per the operational norms specified in the Regulations 2019.

b) Capacity charges for the year ended 31 March 2022 include ₹ **1,268.53 crore** (31 March 2021: ₹ 134.94 crore) pertaining to earlier years on account of impact of CERC orders and other adjustments. Energy and other charges for the year ended 31 March 2022 include ₹ **765.29 crore** (31 March 2021: ₹ 1,050.08 crore) pertaining to earlier years on account of revision of energy charges due to grade slippages and other adjustments.

c) Sales for the year ended 31 March 2022 include ₹ **99.72 crore** (31 March 2021: ₹ 95.08 crore) on account of deferred tax materialized which is recoverable from beneficiaries as per Regulations, 2019.

d) During the previous year ended 31 March 2021, excess tax provision of ₹ 1,889.05 crore was reversed consequent to adjustment of tax provision created in accordance with Vivad se Vishwas Scheme (VsVs Scheme) notified through 'The Direct Tax Vivad Se Vishwas Act, 2020'. Correspondingly, sales amounting to ₹ 1,101.47 crore was reversed on account of income tax recoverable from / (refundable to) the beneficiaries as per Regulations, 2004.

e) Energy sales include electricity duty amounting to ₹ **1,352.73 crore** (31 March 2021: ₹ 1,228.54 crore).

f) Revenue from operations for the year ended 31 March 2022 include ₹ **7,471.99 crore** (31 March 2021: ₹ 7,186.88 crore) on account of sale of energy through trading.

g) Other operating revenue includes ₹ **65.17 crore** (31 March 2021: ₹ 62.58 crore) towards energy internally consumed, valued at variable cost of generation and the corresponding amount is included in power charges in Note 46.

h) CERC Regulations provides that where after the truing-up, the tariff recovered is less/more than the tariff approved by the Commission, the generating Company shall recover from /pay to the beneficiaries the under/over recovered amount along-with simple interest. Based on the above, the interest recoverable from the beneficiaries amounting to ₹ **1,014.22 crore** (31 March 2021: ₹ 31.27 crore) has been accounted as 'Interest from beneficiaries'. Further, the amount payable to the beneficiaries has been accounted as 'Interest to beneficiaries' in Note 46.

i) Provision written back-others represents write back of provision of water charges in one of the projects which is no longer required.

j) The Power Purchase Agreements (PPA) signed in respect of two power stations (one thermal and one gas) were operative initially for a period of five years with the respective beneficiaries which may be extended, renewed or replaced as the parties mutually agree. The Company has continued to classify these arrangement with its customers as lease based on the practical expedient provided in Appendix C of Ind AS 116. Accordingly, recovery of capacity charges towards depreciation, interest on loan capital & return on equity (pre-tax) components from the beneficiaries are considered as lease rentals on the assets which are on operating lease. The operations of one of the stations was suspended on 31 March 2021 and hence there are no revenues from the station during the year.

k) The Company had ascertained that the PPA entered into for Stage-I of a power station with the beneficiary falls under the definition of finance lease. Accordingly, the written down value of the specified assets was derecognized from PPE and accounted as Finance Lease Receivable (FLR) on transition date to Ind AS. The Company has continued to classify this arrangement with its customer as lease based on the practical expedient provided in Appendix C of Ind AS 116. Accordingly, recovery of capacity charges towards depreciation (including AAD), interest on loan capital & return on equity (pre-tax) components from the beneficiary are continued to be adjusted against FLR. The interest component of the FLR and amount received on account of revision of tariff of previous periods in respect of the above three elements are continued to be recognised as 'Interest income on Assets under finance lease'.

l) CERC vide notification dated 19 February 2021, notified the Second amendment to Tariff Regulations 2019, which inter alia includes mechanism for determination of transfer price of coal from integrated coal mines to generating stations and are effective for the period 2019-24. Coal extracted from Company's captive mines and supplied to generating stations have been accounted considering these Regulations.

m) Sale of energy through trading includes export sales amounting to ₹ **1,241.71 crore** (31 March 2021: ₹ 1,491.77 crore) to Nepal and Bangladesh by M/s NVVN Ltd., a subsidiary of the Company.

41. Other income

₹ Crore

Particulars		**For the year ended 31 March 2022**	For the year ended 31 March 2021
Interest from			
Financial assets at amortized cost			
Loan to employees		**69.00**	71.02
Deposits with banks		**87.92**	71.45
Deposits with banks out of fly ash utilisation reserve fund	**19.61**		20.92
Less: Transferred to fly ash utilisation reserve fund	**19.61**		20.92
		-	-
Deposits with banks - DDUGJY funds	**13.83**		28.41
Less: Transferred to DDUGJY advance from customers	**13.83**		28.41
		-	-
Deposits with banks - Solar payment security account	**2.86**		-
Less: Transferred to Solar payment security account	**2.86**		-
		-	-
Advance to contractors and suppliers		**120.99**	129.91
Income Tax refunds		**148.08**	32.66
Others		**23.08**	18.51
Dividend from			
Non-current investment in equity instruments designated at fair value through OCI		**9.00**	9.00
Other non-operating income			
Late payment surcharge from beneficiaries		**1193.57**	3318.87
Hire charges for equipment		**5.95**	2.25
Sale of scrap		**164.54**	150.00
Gain on sale of current investments measured at fair value through profit or loss		**10.81**	0.02
Gain on Option Contract		**15.43**	-
Miscellaneous income		**294.01**	224.39
Profit on de-recognition of property, plant and equipment		**6.27**	3.36

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Provisions written back		
Doubtful loans, advances and claims	**0.05**	0.11
Shortage in inventories	**18.75**	11.89
Obsolescence in inventories	**13.54**	7.23
Arbitration cases	**10.04**	7.60
Unserviceable capital works	**134.81**	-
Others	**78.32**	37.36
	2,404.16	4,095.63
Less: Transferred to expenditure during construction period (net) - Note 47	**70.56**	57.30
Transferred to expenditure during development of coal mines (net) - Note 48	**0.89**	1.97
Transferred to payable to Govt. of Jharkhand-Note 36	**7.68**	20.68
Total	**2,325.03**	4,015.68

a) 'Interest from others' includes interest on advance to APIIC for drawal of water and deposits with LIC towards annuity to the land losers.

b) Miscellaneous income includes income from township recoveries and receipts towards insurance claims.

c) Provision written back-Unserviceable CWIP includes ₹ **134.11 crore** (31 March 2021: ₹ Nil) pertaining to cancellation of allotment of land during the year and consequential write back of of depreciation/amortisation and other expenses capitalised in the earlier years. Also refer Note 2(h).

d) 'Provisions written back - Others' includes provision for shortage in construction stores, shortage in property, plant and equipment.

42. Fuel cost

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Coal	**66,293.95**	53,387.79
Gas	**2,317.60**	2,047.10
Naptha	**63.41**	68.44
Oil	**1,043.45**	576.36
Biomass pellets	**34.56**	19.57
Total	**69,752.97**	56,099.26

43. Employee benefits expense

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Salaries and wages	**5,886.43**	5,691.56
Contribution to provident and other funds	**850.36**	804.39
Staff welfare expenses	**817.84**	653.64
	7,554.63	7,149.59

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Less: Allocated to fuel inventory	**299.27**	274.44
Transferred to expenditure during construction period (net) - Note 47	**826.97**	797.36
Transferred to expenditure during development of coal mines (net) - Note 48	**56.16**	60.51
Reimbursements for employees on deputation	**59.84**	61.84
Adjusted with payable to Govt. of Jharkhand - Note 36	**2.30**	1.51
Total	**6,310.09**	5,953.93

a) Disclosures as per Ind AS 19 - 'Employee Benefits' in respect of provision made towards various employee benefits are provided in Note 57.

44. Finance costs

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Finance costs on financial liabilities measured at amortised cost		
Bonds	**4,990.37**	4,423.44
Foreign currency term loans	**289.06**	309.19
Rupee term loans	**6,254.19**	6,462.78
Foreign currency bonds/notes	**1,191.96**	1,507.54
Cash credit	**87.17**	185.97
Unwinding of discount on vendor liabilities	**214.14**	163.65
Commercial papers	**281.82**	556.95
	13,308.71	13,609.52
Interest on non financial items	**65.25**	78.86
Exchange differences regarded as an adjustment to borrowing costs	**(58.74)**	(431.08)
Other borrowing costs		
Guarantee fee	**25.66**	29.95
Others	**13.81**	14.59
	39.47	44.54
Sub-Total	**13,354.69**	13,301.84
Less: Transferred to expenditure during construction period (net) - Note 47	**3,823.11**	3,809.18
Transferred to expenditure during development of coal mines (net) - Note 48	**215.60**	268.52
Total	**9,315.98**	9,224.14

a) 'Other borrowing costs - Others' include bond issue and service expenses, commitment charges, exposure premium and insurance premium & other expenses on foreign currency loans / bonds/ notes.

b) Interest on non financial items above includes interest on shortfall in payment of advance income-tax amounting ₹ **2.49 crore** (31 March 2021: ₹ 0.81 crore)

c) Refer Note 73 w.r.t. Interest expense relating to lease obligations.

45. Depreciation, amortisation and impairment expense

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
On property, plant and equipment - Note 2	**15,003.82**	13,525.98
On intangible assets - Note 4	**57.98**	55.55
	15,061.80	13,581.53
Less:		
Allocated to fuel inventory	**896.57**	723.91
Transferred to expenditure during construction period (net) - Note 47	**101.69**	113.70
Transferred to expenditure during development of coal mines (net) - Note 48	**32.55**	32.43
Adjustment with deferred revenue from deferred foreign currency fluctuation	**243.16**	261.18
Total	**13,787.83**	12,450.31

a) Refer Note 73 w.r.t. depreciation expense of right of use assets.

46. Other expenses

₹ Crore

Particulars		For the year ended 31 March 2022	For the year ended 31 March 2021
Power charges	**253.87**		443.60
Less: Recovered from contractors and employees	**50.38**		42.86
		203.49	400.74
Water charges		**710.15**	696.15
Cost of captive coal		**1,876.41**	1,412.21
Stores consumed		**152.37**	99.49
Rent		**7.97**	9.51
Repairs and maintenance			
Buildings	**376.08**		342.49
Plant and equipment	**3,588.59**		3,372.27
Others	**458.98**		427.93
		4,423.65	4,142.69
Load dispatch centre charges		**46.40**	33.60
Insurance		**389.36**	370.26
Interest to beneficiaries		**59.70**	0.07
Rates and taxes		**182.35**	136.75
Water cess and environment protection cess		**0.47**	1.53
Training and recruitment expenses	**29.53**		23.60
Less: Receipts	**0.39**		0.62
		29.14	22.98
Communication expenses		**85.24**	83.04
Travelling expenses		**235.62**	195.47

₹ Crore

Particulars		For the year ended 31 March 2022	For the year ended 31 March 2021
Tender expenses	29.79		24.00
Less: Receipt from sale of tenders	1.29		3.66
		28.50	20.34
Remuneration to auditors		6.23	6.58
Advertisement and publicity		31.89	10.39
Electricity duty		1,282.07	1,162.98
Security expenses		1,291.55	1,261.95
Entertainment expenses		65.88	62.59
Expenses for guest house	70.78		60.40
Less: Recoveries	3.95		1.04
		66.83	59.36
Education expenses		67.35	69.07
Donation / Grants		12.54	11.60
Ash utilisation and marketing expenses		1,783.73	1,175.17
Directors sitting fee		0.30	0.57
Professional charges and consultancy fee		107.43	103.62
Legal expenses		77.55	47.74
EDP hire and other charges		70.40	50.65
Printing and stationery		5.76	5.51
Oil and gas exploration expenses		0.07	0.09
Hiring of vehicles		117.48	101.95
Net loss/(gain) in foreign currency transactions and translations		(622.22)	(152.01)
Cost of hedging		-	0.34
Horticulture expenses		66.27	61.49
Hire charges of helicopter/aircraft		8.27	8.40
Hire charges of construction equipment		6.11	8.62
Transport vehicle running expenses		19.98	15.44
Demurrage charges		0.03	-
Loss on de-recognition of property, plant and equipment		108.06	137.27
Loss on disposal of investments in joint venture accounted through equity method		-	15.88
Annual Maintainence Expenses - e mobility		2.13	-
Miscellaneous expenses		382.07	293.64
		13,388.58	12,143.72
Less: Allocated to fuel inventory		2,564.03	1,854.64
Transferred to expenditure during construction period (net) - Note 47		438.47	703.94
Transferred to expenditure during development of coal mines (net) - Note 48		108.40	263.71

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Transferred to corporate social responsibility expenses	**51.15**	55.46
Adjusted with payable to Govt. of Jharkhand-Note 36	**8.72**	10.37
Transferred to fly ash utilisation reserve fund	**287.38**	170.39
	9,930.43	9,085.21
Corporate Social Responsibility (CSR) expense	**403.91**	461.96
Provisions for		
Tariff adjustments	**122.00**	169.60
Obsolescence in inventories	**31.14**	4.47
Shortages in inventories	**29.35**	35.23
Unserviceable capital works	**29.26**	137.15
Unfinished minimum work programme for oil and gas exploration	**8.08**	2.83
Arbitration cases	**105.25**	181.92
Shortages in construction stores	**2.00**	5.66
Doubtful loans, advances and claims	**4.01**	344.83
Others	**76.54**	25.85
	407.63	907.54
Total	**10,741.97**	10,454.71

a) During the development stage of mine, transfer price of coal extracted from Company's captive mine has been determined considering the CERC Regulations. The same has been netted from the cost of captive coal and carried to 'Development of coal mines' (Note 3) through 'Transferred to expenditure during development of coal mines' (Note 48).

b) Details of remuneration to auditors:

As Auditor		
Audit fee	**2.87**	2.72
Tax audit fee	**0.89**	0.86
Limited review	**1.49**	1.44
In other capacity		
Other services (certification fee)	**0.77**	1.23
Reimbursement of expenses	**0.21**	0.33
Total	**6.23**	6.58

Remuneration to the auditors includes ₹ **0.33 crore** (31 March 2021: ₹ 0.83 crore) relating to earlier year.

c) CERC Regulations provides that where after the truing-up, the tariff recovered is more than the tariff approved by the Commission, the generating Company shall pay to the beneficiaries the over recovered amount along-with simple interest. Accordingly, the interest payable to the beneficiaries amounting to ₹ **59.70 crore** (31 March 2021: ₹ 0.07 crore) has been accounted and disclosed as 'Interest to beneficiaries'.

d) Miscellaneous expenses include expenditure on books & periodicals, workshops, operating expenses of DG sets, brokerage and commission, bank charges, furnishing expenses, etc.

e) Provisions - Others include provision for doubtful debts, shortages in property, plant and equipment and other losses.

47. Expenditure during construction period (net)*

₹ Crore

		For the year ended 31 March 2022	For the year ended 31 March 2021
A. Employee benefits expense			
Salaries and wages		**669.36**	650.08
Contribution to provident and other funds		**100.62**	99.09
Staff welfare expenses		**56.99**	48.19
Total (A)		**826.97**	797.36
B. Finance costs			
Finance costs on financial liabilities measured at amortised cost			
Bonds		**1,364.37**	1,310.07
Foreign currency term loans		**52.86**	54.66
Rupee term loans		**1,925.86**	2,074.14
Foreign currency bonds/notes		**245.43**	354.35
Others		**57.14**	72.05
Unwinding of discount on vendor liabilities		**128.04**	94.00
Exchange differences regarded as an adjustment to borrowing costs		**15.61**	(172.63)
Other borrowing costs - others		**33.80**	22.54
Total (B)		**3,823.11**	3,809.18
C. Depreciation and amortisation expense		**101.69**	113.70
D. Other expenses			
Power charges	**29.61**		296.60
Less: Recovered from contractors and employees	**9.33**		10.91
		20.28	285.69
Water charges		**4.85**	12.30
Rent		**2.16**	2.03
Repairs and maintenance			
Buildings	**10.70**		2.73
Plant and equipment	**7.53**		0.07
Others	**54.06**		69.92
		72.29	72.72
Insurance		**5.58**	13.08
Rates and taxes		**40.96**	13.41
Communication expenses		**8.35**	8.06
Travelling expenses		**25.54**	23.29
Tender expenses		**26.43**	21.75
Advertisement and publicity		**0.84**	0.88
Security expenses		**120.63**	136.26
Entertainment expenses		**4.09**	3.08
Expenses for guest house		**6.22**	6.16
Professional charges and consultancy fee		**14.09**	5.79
Legal expenses		**13.07**	3.87
EDP hire and other charges		**1.16**	1.23

₹ Crore

	For the year ended 31 March 2022	For the year ended 31 March 2021
Printing and stationery	**0.38**	0.37
Miscellaneous expenses	**71.55**	93.97
Total (D)	**438.47**	703.94
E. Less: Other income		
Interest from advances to contractors and suppliers	**33.41**	27.43
Interest others	**22.36**	16.22
Hire charges for equipment	**0.12**	0.37
Sale of scrap	**0.32**	-
Miscellaneous income	**14.35**	13.28
Total (E)	**70.56**	57.30
F. Net actuarial losses on defined benefit plans	**1.27**	4.47
Grand total (A+B+C+D-E+F)**	**5,120.95**	5,371.35

* Other than for expenditure during development of coal mines- (Note 48)

** Carried to Capital work-in-progress - (Note 3)

48. Expenditure during development of coal mines (net)

₹ Crore

Particulars		**For the year ended 31 March 2022**	For the year ended 31 March 2021
A. Employee benefits expense			
Salaries and wages		**46.16**	48.37
Contribution to provident and other funds		**5.32**	5.28
Staff welfare expenses		**4.68**	6.86
Total (A)		**56.16**	60.51
B. Finance costs			
Finance costs on financial liabilities measured at amortised cost			
Bonds		**87.70**	86.57
Foreign currency term loans		**0.71**	-
Rupee term loans		**117.64**	173.65
Unwinding of discount on vendor liabilities		**8.98**	8.25
Other borrowing costs - others		**0.57**	0.05
Total (B)		**215.60**	268.52
C. Depreciation and amortisation expense		**32.55**	32.43
D. Other expenses			
Power charges		**1.59**	1.03
Water charges		**0.06**	-
Rent		**0.56**	0.72
Repairs and maintenance			
Buildings	**0.04**		0.16
Others	**1.76**		3.66
		1.80	3.82

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Cost of captive coal produced	**64.04**	218.17
Insurance	**-**	0.01
Rates and taxes	**0.86**	1.38
Communication expenses	**0.91**	0.95
Travelling expenses	**2.34**	2.28
Advertisement and publicity	**0.14**	0.04
Security expenses	**17.07**	15.65
Entertainment expenses	**0.45**	0.65
Expenses for guest house	**1.34**	0.12
Professional charges and consultancy fee	**8.34**	7.54
Legal expenses	**2.56**	1.11
EDP hire and other charges	**0.08**	0.16
Printing and stationery	**0.11**	0.19
Miscellaneous expenses	**6.15**	9.89
Total (D)	**108.40**	263.71
E. Less: Other income		
Interest from advances to contractors and suppliers	**0.71**	1.43
Miscellaneous income	**0.18**	0.54
Total (E)	**0.89**	1.97
F. Net actuarial losses on defined benefit plans	**0.17**	0.50
Grand total (A+B+C+D-E+F)*	**411.99**	623.70

* Carried to Capital work-in-progress - (Note 3)

49. Exceptional items

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Special rebate to beneficiaries - Covid-19	**-**	1,512.19
	-	1,512.19

a) In line with the directions of MOP issued in accordance with the announcement of GOI under the Atmanirbhar Bharat Special Economic and Comprehensive package, a rebate on the capacity charges during the lockdown period in view of Covid 19 pandemic, was accounted during the previous year 2020-21 and disclosed as exceptional item.

50. (a) The Group has a system of obtaining periodic confirmation of balances from banks and other parties. There are no unconfirmed balances in respect of bank accounts and borrowings from banks & financial institutions. With regard to receivables for energy sales, the Group sends demand intimations to the beneficiaries with details of amount paid and balance outstanding which can be said to be automatically confirmed on receipt of subsequent payment from such beneficiaries. In addition, reconciliation with beneficiaries and other customers is generally done on quarterly basis. So far as trade/other payables and loans and advances are concerned, the balance confirmation letters/emails with the negative assertion as referred in the Standard on Auditing (SA) 505 (Revised) 'External Confirmations', were sent to the parties. Some of such balances are subject to confirmation/reconciliation. Adjustments, if any will be accounted for on confirmation/reconciliation of the same, which in the opinion of the management will not have a material impact.

(b) In the opinion of the management, the value of assets, other than property, plant and equipment and non-current investments, on realisation in the ordinary course of business, will not be less than the value at which these are stated in the Balance Sheet.

(c) The levy of transit fee/entry tax on supplies of fuel to some of the power stations has been paid under protest as the matters are sub-judice at various courts. In case the Company gets refund/demand from fuel suppliers/tax authorities on settlement of these cases, the same will be passed on to respective beneficiaries.

51. (a) During the previous year, penstock I - feeding 02 (two) units (50 MW each) of Kopili Hydro Power Station, Umrongso, Assam of the NEEPCO, a subsidiary of the Company, got ruptured on 7 October 2019 following a load through off and tripping of Unit -I (50 MW). Three other units were in full load during the mishap. Rupture happend at three locations of penstock including at location immediately downstream of valve house. Penstock protection valve closing mechanism was damaged in the incident and therefore, the valve could not be closed to isolate the penstock, consequently thereafter, the power house was flooded upto EOT crane beam level within a very short period. At present, Kopili (4 X 50 MW) system in in shutdown condition. Estimated carrying cost of the assets damaged due to aforesaid mishap amounts to ₹ **103.67 crore** (31 March 2021: ₹ 103.67 crore) as per internal assessment by NEEPCO, has been provided for. The subsidiary has lodged a initial insurance claim for an amount of ₹ 250.00 crore and further action in this matter is in progress.

(b) M/s Patratu Utpadan Nigam Ltd., a subsidiary of the Company, had signed the deed of adherence with Ministry of Coal (MoC) and Jharkhand Urja Utpadan Nigam Ltd. (JUUNL) for Banhardih coal block on 2 June 2017. Subsequently, deed of assignment between PVUNL and JUUNL was executed on 18 May 2018 after consent from MoC. Geological report for the coal block has been handed over by JUUNL in July 2019, and the mining plan has been submitted to MoC in March 2020. A Bank guarantee (BG) of ₹ 237.60 crore has been submitted to MoC towards performance security and MoC appropriated 50% of the BG amount i.e. ₹ 118.80 crore in July 2019 for not complying with the efficiency parameters as specified in the allotment agreement. MoC has been approached for revision of the efficiency parameters (milestones) and also refund of the appropriated amount. A further appropriation of 15% of BG amount i.e. ₹ 35.64 crore has been done by MoC in December 2020 for not complying with some more efficiency parameters as specified in the allotment agreement. The subsidiary company has decided to exercise remedies available in the allotment agreement both for revision of efficiency parameteres (milestones) and refund of appropriated value of the bank gaurantee and accordingly approached MoC which inter alia includes referring the matter to appropriate tribunal for redressal.

52. (a) The environmental clearance (EC) granted by the Ministry of Environment and Forest, Government of India (MoEF), based on the recommendations of Expert Appraisal Committee (EAC), for one of the Company's project consisting of three units of 800 MW each, whose carrying cost as at 31 March 2022 is ₹ **14,874.47 crore** (31 March 2021: ₹ 15,115.02 crore), was challenged before the National Green Tribunal (NGT) vide appeal no.12/2012. The NGT disposed off the appeal vide Order dated March 13, 2014, inter alia, directing that the order of clearance be remanded to the MoEF to pass an order granting or declining clearance to the project proponent afresh in accordance with the law and the judgement of the NGT and also directed that the EC shall be kept in abeyance and the Company shall maintain status quo in relation to the project during the period of review by the Committee or till fresh order is passed by the MoEF, whichever is earlier.

The Company filed an appeal challenging the NGT order before the Hon'ble Supreme Court of India which stayed the order of the NGT and the matter is sub-judice and pending for listing in the Court. The Company has been complying with various conditions stipulated in the EC and reporting to the appropriate environment authorities periodically. The EAC has been accepting the amendments sought by the Company in the EC.

During the year the Company has obtained a legal opinion based on which the Company does not envisage any threat to the continuance to the project. All the units of the project have been declared commercial in the earlier years and are fully operational since September 2018.

(b) The Company is executing a thermal power project consisting of two units of 800 MW each in the State of Telangana whose carrying cost of the project as at 31 March 2022 is ₹ **10,233.66 crore** (31 March 2021: ₹ 9,376.31 crore). The project construction commenced in the year 2016 after obtaining the requisite approval and Environment Clearance (EC) from MOEF&CC (Ministry of Environment, Forest and Climate Change). On 27 May 2021, the National Green Tribunal (NGT) has passed an order instructing MOEF&CC to keep the EC granted for the project in abeyance for a period of seven months or till the period the re-appraisal is done and additional conditions imposed by the MOEF&CC, whichever is earlier. NGT has further directed the MOEF&CC to conduct additional studies pertaining to Environment Impact Assessment of the project, to be carried out through the Company, for further assessment by its Expert Appraisal Committee (EAC) and get recommendations of the EAC for imposing additional conditions by the MOEF&CC, if any, on the Company for allowing the units to operate.

The Company filed an appeal before Hon'ble Supreme Court of India against the directions of NGT. The Hon'ble Supreme Court of India has passed the order on 20 July 2021 and directed that while the EC is in abeyance, various construction activities at site may be continued till the commissioning of the project and the various studies as directed by NGT are to be conducted simultaneously. The Company has carried out the additional studies as directed by NGT and the reports are under finalization and submission to appropriate authorities.

During the year the Company has obtained a legal opinion based on which the Company does not envisage any threat to the continuance to the project. Both the units of the project are in advanced stage of construction and the commissioning is envisaged in the year 2022-23.

c) The Company is executing a hydro power project in the state of Uttarakhand, where all the clearances were accorded. A case was filed in Hon'ble Supreme Court of India after the natural disaster in Uttarakhand in June 2013 to review whether the various existing and ongoing hydro projects have contributed to environmental degradation. Hon'ble Supreme Court of India on 7 May 2014, ordered that no further construction shall be undertaken in the projects under consideration until further orders, which included the said hydro project of the Company. In the proceedings, Hon'ble Supreme Court is examining to allow few projects which have all clearances which includes the project of the Company where the work has been stopped. Aggregate cost incurred on the project up to 31 March 2022 is ₹ **163.57 crore** (31 March 2021: ₹ 163.86 crore). Management is confident that the approval for proceeding with the project shall be granted, hence no adjustment is considered necessary in respect of the carrying value of the project.

53. Disclosure as per Ind AS 1 'Presentation of financial statements'

a) Changes in significant accounting policies:

During the year, following changes to the accounting policies have been made:

i) Depreciation on Hospital equipment and Furniture and fixtures has been revised based on review of their useful lives. Consequently, significant accounting policies C.2.5 has been modified. Impact on profit due to the above change is insignificant.

ii) Certain other changes have also been made in the policies nos. C.6.2, C.7.2, C.16.3, C.17.1, C.17.2, C.19,C.20.1, C.21, C.28.2, and C.29 for improved disclosures. There is no impact on the financial statements due to these changes.

b) Reclassifications and comparative figures

Certain reclassifications have been made to the comparative period's financial statements to enhance comparability with the current year's financial statements.

Items of balance sheet before and after reclassification as at 31 March 2021

₹ Crore

Sl. No.	Particulars	Amount before reclassification	Reclassification	Amount after reclassification
1	Trade receivables (Note-14)	17,718.07	10,481.76	28,199.83
	Other financial assets-Current (Note-18)	14,991.26	(10,560.33)	4,430.93
2	Borrowings-Non current (Note-25)	1,81,271.91	(735.70)	1,80,536.21
	Lease liabilities-Non current (Note-26)	-	735.70	735.70
	Provisions - Non current (Note-29)	1,042.39	347.96	1,390.35
	Borrowings-current (Note-32)	15,964.62	12,809.55	28,774.17
	Lease liabilities-current (Note-33)	-	161.79	161.79
	Other financial liabilities - Current (Note-35)	36,301.39	(13,013.81)	23,287.58
	Provisions - current (Note-37)	8,113.60	(384.06)	7,729.54

Note:- There are no changes in the cash flows from operating, investing and financing activites on account of the above.

54. Disclosure as per Ind AS 2 'Inventories'

(a) Amount of inventories consumed and recognised as expense during the year is as under:

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Fuel cost	**69,752.97**	56,099.26
Others (included in Note 46 - Other expenses)	**1,432.14**	1,458.26
Total*	**71,185.11**	57,557.52

*Includes imported materials consumed during the year ended 31 March 2022 amounting to ₹ **3,094.94 crore** (31 March 2021: ₹ 778.05 crore)

(b) Carrying amount of inventories pledged as security for borrowings as at 31 March 2022 is ₹ **652.08 crore** (31 March 2021: ₹ 630.67 crore).

55. Disclosure as per Ind AS 8 - 'Accounting Policies, Changes in Accounting Estimates and Errors'

Recent accounting pronouncements

Standards / amendments issued but not yet effective:

The Ministry of Corporate Affairs ,vide notification dated 23 March 2022, has notified Companies (Indian Accounting Standards) Amendment Rules, 2022 which amends certain accounting standards which are effective 1 April 2022. Below is a summary of such amendments.

1. Ind AS 16 Property, Plant and Equipment

   Proceeds before intended use of property, plant, and equipment.

   The amendment clarifies that an entity shall deduct from the cost of an item of property, plant, and equipment any proceeds received from selling items produced while the entity is preparing the asset for its intended use (for example, the proceeds from selling samples produced when testing a machine to see if it is functioning properly).

2. Ind AS 37 Provisions, Contingent Liabilities and Contingent Assets

   Onerous Contracts – Cost of fulfilling a contract.

   The amendment explains that the cost of fulfilling a contract comprises: the incremental costs of fulfilling that contract and an allocation of other costs that relate directly to fulfilling contracts.

3. Ind AS 103 Business combinations

   References to the conceptual framework.

   The amendment adds a new exception in Ind AS 103 for liabilities and contingent liabilities.

4. Ind AS 109 Financial Instruments

   Fees included in the 10% test for derecognition of financial liabilities.

   The amendment clarifies which fees an entity includes when it applies the '10%' test in assessing whether to derecognise a financial liability. An entity includes only fees paid or received between the entity (the borrower) and the lender, including fees paid or received by either the entity or the lender on the other's behalf.

5. Ind AS 101 First time adoption

   Subsidiary as a first-time adopter.

   Simplifies the application of Ind AS 101 by a subsidiary that becomes a first-time adopter after its parent in relation to the measurement of cumulative translation differences.

The Group has evaluated the requirements of the above amendments and the effect on the financial statements is not material.

56. Income taxes related disclosures

(I) Disclosure as per Ind AS 12 'Income taxes'

(a) Income tax expense

i) Income tax recognised in the statement of profit and loss

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Current tax expense		
Current year	**3,760.62**	2,958.80
Taxes for earlier years	**(2.69)**	(1,867.74)
Pertaining to regulatory deferral account balances (A)	**303.99**	387.50
Total current tax expense (B)	**4,061.92**	1,478.56
Deferred tax expense		
Origination and reversal of temporary differences	**4,923.57**	4,444.87
Less: MAT credit entitlement	**3,634.40**	3,115.40
Total deferred tax expense (C)	**1,289.17**	1,329.47
Income tax expense (D=B+C-A)	**5,047.10**	2,420.53
Pertaining to regulatory deferral account balances	**303.99**	387.50
Total tax expense including tax on movement in regulatory deferral account balances	**5,351.09**	2,808.03

ii) Income tax recognised in other comprehensive income

₹ Crore

Particulars	For the year ended					
	31 March 2022			31 March 2021		
	Before tax	Tax expense/ (benefit)	Net of tax	Before tax	Tax expense/ (benefit)	Net of tax
- Net actuarial gains/(losses) on defined benefit plans	**(126.98)**	**23.01**	**(103.97)**	(151.74)	28.82	(122.92)
- Net gains/(losses) on fair value of equity instruments	**5.40**	**-**	**5.40**	46.80	-	46.80
- Share of other comprehensive income/(expense) of joint ventures accounted for using the equity method	**2.16**	**-**	**2.16**	(2.77)	-	(2.77)
- Exchange differences on translation of foreign operations	**9.16**	**-**	**9.16**	(20.20)	-	(20.20)
	(110.26)	**23.01**	**(87.25)**	(127.91)	28.82	(99.09)

(b) Tax losses carried forward

₹ Crore

Particulars	31 March 2022	Expiry date	31 March 2021	Expiry date
Long-term capital loss for which no deferred tax asset has been recognised due to uncertainty involved	**2,105.19**	**31-03-2029**	2,105.19	31-03-2029

57. Disclosure as per Ind AS 19 'Employee benefits'

(i) Defined contribution plans:

Pension

The defined contribution pension scheme of the Group for its employees which is effective from 1 January 2007, is administered through a separate trust. The obligation of the Group is to contribute to the trust to the extent of amount not exceeding 30% of basic pay and dearness allowance less employer's contribution towards provident fund, gratuity, post retirement medical facility (PRMF) or any other retirement benefits. The Group's contribution towards pension is made to National Pension System Trust (NPS) for the employees opted for the scheme. An amount of ₹ **298.09 crore** (31 March 2021: ₹ 270.41 crore) for the year is recognized as expense towards contributions to the defined contribution pension scheme of the Group/NPS for the year and charged to the statement of profit and loss.

(ii) Defined benefit plans:

A. Provident fund

The Group pays fixed contribution to provident fund at predetermined rates to a separate trust, which invests the funds in permitted securities. The Group has an obligation to ensure minimum rate of return to the members as specified by GOI. Accordingly, the Group has obtained report of the actuary, based on which overall interest earnings and cumulative surplus is more than the statutory interest payment requirement for all the periods presented. Further, contribution to employees pension scheme is paid to the appropriate authorities.

Based on the actuarial valuation obtained in this respect, the following table sets out the status of the provident fund plan as at balance sheet date:

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Net defined benefit (asset)/liability - Current	(32.83)	(94.61)

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset)/liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2022	31 March 2021	31 March 2022	31 March 2021	31 March 2022	31 March 2021
Opening balance	11,505.50	10,513.78	11,600.12	10,585.10	(94.61)	(71.32)
Current service cost recognised in statement of profit and loss	344.38	367.67	-	-	344.38	367.67
Interest cost/(income)	946.89	883.93	(940.44)	(885.68)	6.45	(1.75)
Total	1,291.27	1,251.60	(940.44)	(885.68)	350.83	365.92
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	-	-	-	-	-	-
Financial assumptions	(1.39)	-	-	-	(1.39)	-
Experience adjustment	5.13	0.88	4.66	-	9.79	0.88
Return on plan assets excluding interest income	-	-	35.44	(22.42)	35.44	(22.42)
Total	3.74	0.88	40.10	(22.42)	43.84	(21.54)
Other*	-	-	11.49	-	(11.49)	-
Contribution by participants	770.30	1,155.97	770.30	1,155.98	-	(0.01)
Contribution by employer	-	-	344.37	367.67	(344.37)	(367.67)
Benefits paid	1,359.85	1,416.73	1,359.84	1,416.73	0.01	-
Closing balance	12,210.96	11,505.50	12,243.80	11,600.12	(32.83)	(94.61)

*In one of the subsidiaries investment of PF trust fund incurred loss on investment on DHFL amounting to ₹ **11.49 crore** (31 March 2021: ₹ Nil)

Pursuant to paragraph 57 of Ind AS 19, accounting by an entity for defined benefit plans, inter-alia, involves determining the amount of the net defined benefit liability (asset) which shall be adjusted for any effect of limiting a net defined benefit asset to the asset ceiling prescribed in paragraph 64. As per Para 64 of Ind AS 19, in case of surplus in a defined benefit plan, an entity shall measure the net defined benefit asset at the lower of actual surplus or the value of the assets ceiling determined using the discount rate. The asset ceiling is the present value of any economic benefits available in the form of refunds from the plan or reductions in future contributions to the plan. Further, paragraph 65 provides that a net defined benefit asset may arise where a defined benefit plan has been overfunded or where actuarial gains have arisen.

As per the provisions of the Employees' Provident Funds and Miscellaneous Provisions Act, 1952, the Group has no right to the benefits either in the form of refund from the plan or lower future contribution to the plan towards the net surplus of ₹ **32.83 crore** (31 March 2021: ₹ 94.61 crore) determined through actuarial valuation. Accordingly, Group has not recognised the surplus as an asset, and the actuarial gains in 'Other Comprehensive Income', as these pertain to the Provident Fund Trust and not to the Group.

As per the provisions of Employee's Provident Funds Scheme 1952, the employer shall be liable to make good the loss to the Trust in the event of any loss as a result of any fraud, defalcation, wrong investment decisions etc. to the Trust. Keeping in view the above, a provision of ₹ **17.86 crore** (31 March 2021 ₹ Nil) has been recognized in the Statement of Profit and Loss during the year, towards such loss to the trust.

B. Gratuity and pension

a) The Group has a defined benefit gratuity plan. Every employee who has rendered continuous service of five years or more is entitled to gratuity at 15 days salary (15/26 X last drawn basic salary plus dearness allowance) for each completed year of service subject to a maximum of ₹ 0.20 crore on superannuation, resignation, termination, disablement or on death, considering the provisions of the Payment of Gratuity Act,1972, as amended.

b) The Group has pension schemes at two of its stations in respect of employees taken over from erstwhile state government power utilities. These pension schemes are unfunded. The liability for the pension schemes is recognised on the basis of actuarial valuation.

Based on the actuarial valuation obtained in this respect, the following table sets out the status of the gratuity and pension plan and the amounts recognised in the Group's financial statements as at balance sheet date:

₹ Crore

Particulars	**As at 31 March 2022**	As at 31 March 2021
Net defined benefit (asset)/liability :		
Gratuity (funded)	**88.05**	128.12
Gratuity (non-funded)	**183.91**	190.35
Pension (non-funded)	**560.57**	569.36
	832.53	887.83
Breakup		
Non-current	**690.28**	706.24
Current	**142.25**	181.59

Movement in net defined benefit (asset)/liability ₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset) liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2022	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021
Opening balance	**3,019.76**	3,022.22	**2,131.92**	2,061.74	**887.83**	960.48
Included in profit or loss:						
Current service cost	**116.41**	117.96	**-**	-	**116.41**	117.96
Past service cost	**-**	0.06	**-**	-	**-**	0.06
Interest cost (income)	**203.83**	204.04	**(151.52)**	(150.26)	**52.31**	53.78
Total amount recognised in profit or loss	**320.24**	322.06	**(151.52)**	(150.26)	**168.72**	171.80
Included in other comprehensive income:						
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	**-**	-	**-**	-	**-**	-
Financial assumptions	**(53.84)**	-	**-**	0.01	**(53.84)**	(0.01)
Experience adjustment	**43.38**	19.68	**-**	-	**43.38**	19.68
Return on plan assets excluding interest income	**-**	-	**(27.36)**	(33.28)	**(27.36)**	(33.28)
Total amount recognised in other comprehensive income	**(10.46)**	19.68	**(27.36)**	(33.27)	**(37.82)**	(13.61)
Out of the above an amount of (-) ₹ **0.94 crore** (31 March 2021: ₹ 0.83 crore) has been transferred to expenditure during construction period / development of coal mines.						
Other						
Contribution by employer	**-**	-	**128.12**	177.44	**(128.12)**	(177.44)
Benefits paid	**339.94**	344.19	**281.86**	290.79	**58.08**	53.40
Closing balance	**2,989.60**	3,019.76	**2,157.06**	2,131.92	**832.53**	887.83

Out of the above net liability, an amount of ₹ **77.59 crore** (31 March 2021: ₹ 112.82 crore) has been adjusted with the amount recoverable from the trust.

C. Post-Retirement Medical Facility (PRMF)

The Group has Post-Retirement Medical Facility (PRMF), under which the retired employees and their spouses are provided medical facilities in the Group hospitals/empanelled hospitals. They can also avail treatment as out-patient subject to a ceiling fixed by the Group. The liability for the same is recognised annually on the basis of actuarial valuation. A trust has been constituted for its employees superannuated on or after 1 January 2007, for the sole purpose of providing post retirement medical facility to them.

Based on the actuarial valuation obtained in this respect, the following table sets out the status of the PRMF and the amounts recognised in the Group's financial statements as at balance sheet date:

₹ Crore

Particulars	**As at 31 March 2022**	As at 31 March 2021
Net defined benefit (asset)/liability - (funded)	**207.47**	189.46
Net defined benefit (asset)/liability - (non-funded)	**0.08**	-
	207.55	189.46
Non-current	**0.08**	-
Current	**207.47**	189.46

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset) liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2022	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021
Opening balance	**2,362.02**	2,110.72	**2,172.56**	1,781.61	**189.46**	329.11
Included in profit or loss:						
Current service cost	**50.45**	48.00	**-**	-	**50.45**	48.00
Past service cost		-	**-**	-	**-**	-
Interest cost (income)	**159.43**	142.47	**(158.41)**	(140.70)	**1.02**	1.77
Total amount recognised in profit or loss	**209.88**	190.47	**(158.41)**	(140.70)	**51.47**	49.77
Included in other comprehensive income:						
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	**-**	-	**-**	-	**-**	-
Financial assumptions	**(45.30)**	12.08	**-**	-	**(45.30)**	12.08
Experience adjustment	**236.37**	174.70	**-**	-	**236.37**	174.70
Return on plan assets excluding interest income	**10.20**	(3.37)	**(25.88)**	(14.54)	**(15.68)**	(17.91)
Total amount recognised in other comprehensive income	**201.27**	183.41	**(25.88)**	(14.54)	**175.39**	168.87
Out of the above an amount of ₹ **3.28 crore** (31 March 2021: ₹ 4.14 crore) has been transferred to expenditure during construction period / development of coal mines.						
Other						
Contribution by participants	**-**	-	**19.32**	27.43	**(19.32)**	(27.43)
Contribution by employer	**-**	-	**189.46**	329.10	**(189.46)**	(329.10)
Benefits paid	**154.87**	122.58	**154.88**	120.82	**(0.01)**	1.76
Closing balance	**2,618.30**	2,362.02	**2,410.75**	2,172.56	**207.55**	189.46

Out of the above net liability, an amount of ₹ **65.28 crore** (31 March 2021: ₹ 170.04 crore) has been adjusted with the amount recoverable from the trust.

D. Other retirement benefit plans

Other retirement benefit plans include baggage allowance for settlement at home town for employees and dependents and farewell gift to the superannuating employees. The scheme above is unfunded and liability for the same is recognised on the basis of actuarial valuation.

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Net defined benefit (asset)/liability (non-funded) :	**211.20**	205.40
Non-current	**183.22**	180.55
Current	**27.98**	24.85

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation	
	As at 31 March 2022	As at 31 March 2021
Opening balance	**205.40**	194.79
Included in profit or loss:		
Current service cost	**10.66**	10.28
Past service cost	**-**	-
Interest cost (income)	**13.85**	13.15
Total amount recognised in profit or loss	**24.51**	23.43
Included in other comprehensive income:		
Remeasurement loss (gain):		
Actuarial loss (gain) arising from:		
Demographic assumptions	**-**	-
Financial assumptions	**(3.75)**	-
Experience adjustment	**(3.49)**	(2.38)
Return on plan assets excluding interest income	**-**	-
Total amount recognised in other comprehensive income	**(7.24)**	(2.38)
Other		
Contributions paid by the employer	**-**	-
Benefits paid	**11.47**	10.44
Closing balance	**211.20**	205.40

E. Plan assets

Plan assets comprise the following:

₹ Crore

Particulars	As at 31 March 2022			As at 31 March 2021		
	Quoted	Unquoted	Total	Quoted	Unquoted	Total
State government securities	**6,609.81**	**-**	**6,609.81**	5,647.80	-	5,647.80
Central government securities	**1,863.75**	**-**	**1,863.75**	2,001.47	-	2,001.47
Corporate bonds and term deposits	**4,514.61**	**86.84**	**4,601.45**	4,763.22	80.91	4,844.13
Money market instruments/liquid mutual fund	**-**	**93.82**	**93.82**	-	28.10	28.10
Equity and equity linked investments	**171.53**	**-**	**171.53**	121.32	-	121.32
Investments with insurance companies	**-**	**3,525.16**	**3,525.16**	-	3,326.67	3,326.67
Total (excluding accrued interest)	**13,159.70**	**3,705.82**	**16,865.52**	12,533.81	3,435.68	15,969.49

As at 31 March 2022, an amount of ₹ **140.00 crore** (31 March 2021: ₹ 210.00 crore) is included in the value of plan assets (in respect of the reporting enterprise's own financial instruments (Corporate bonds)).

Actual return on plan assets is ₹ **1,269.95 crore** (31 March 2021: ₹ 1,245.12 crore).

F. **Defined benefit obligations**

i. **Actuarial assumptions**

The following were the principal actuarial assumptions at the reporting date:

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Discount rate	**7.00%**	6.75%
Expected return on plan assets		
Gratuity	**7.00%**	6.75%
Pension	**7.00%**	6.75%
PRMF	**7.00%**	6.75%
Annual increase in costs	**6.50%**	6.50%
Salary escalation rate	**6.50%**	6.50%

The estimates of future salary increases considered in actuarial valuation, take account of inflation, seniority, promotion and other relevant factors, such as supply and demand in the employment market. Further, the expected return on plan assets is determined considering several applicable factors mainly the composition of plan assets held, assessed risk of asset management and historical returns from plan assets.

ii. **Sensitivity analysis**

Reasonably possible changes at the reporting date to one of the relevant actuarial assumptions, holding other assumptions constant, would have affected the defined benefit obligation by the amounts shown below.

₹ Crore

Particulars	As at 31 March 2022		As at 31 March 2021	
	Increase	Decrease	Increase	Decrease
Discount rate (0.5% movement)	**(209.62)**	**219.39**	(190.73)	200.32
Annual increase in costs (0.5% movement)	**94.21**	**(91.99)**	90.61	(78.32)
Salary escalation rate (0.5% movement)	**114.25**	**(109.62)**	99.50	(94.54)

Although the analysis does not take account of the full distribution of cash flows expected under the plan, it does provide an approximation of the sensitivity of the assumptions shown.

The sensitivity analysis above have been determined based on a method that extrapolates the impact on defined benefit obligation as a result of reasonable changes in key assumptions occurring at the end of the reporting period. This analysis may not be representative of the actual change in the defined benefit obligations as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

G. **Risk exposure**

Through its defined benefit plans, the Company is exposed to a number of risks, the most significant of which are detailed below:

a) **Asset volatility**

The plan liabilities are calculated using a discount rate set with reference to bond yields; if plan assets underperform this yield, this will create a deficit. Most of the plan asset investments are in fixed income securities with high grades and in government securities. These are subject to interest rate risk and the fund manages interest rate risk with derivatives to minimise risk to an acceptable level. A portion of the funds are invested in equity securities and in alternative investments which have low correlation with equity securities. The equity securities are expected to earn a return in excess of the discount rate and contribute to the plan deficit. The Group has a risk management strategy where the aggregate amount of risk exposure on a portfolio level is maintained at a fixed range. Any deviations from the range are corrected by rebalancing the portfolio. The Group intends to maintain the above investment mix in the continuing years.

b) **Changes in discount rate**

A decrease in discount rate will increase plan liabilities, although this will be partially offset by an increase in the value of the plans' assets holdings.

c) **Inflation risks**

In the pension plans, the pensions in payment are not linked to inflation, so this is a less material risk.

d) **Life expectancy**

The pension plan obligations are to provide benefits for the life of the member, so increases in life expectancy will result in an increase in the plans' liabilities. This is particularly significant where inflationary increases result in higher sensitivity to changes in life expectancy.

The Group ensures that the investment positions are managed within an asset-liability matching (ALM) framework that has been developed to achieve long-term investments that are in line with the obligations under the employee benefit plans. Within this framework, the Group's ALM objective is to match assets to the pension obligations by investing in long-term fixed interest securities with maturities that match the benefit payments as they fall due and in the appropriate currency.

The Group actively monitors how the duration and the expected yield of the investments are matching the expected cash outflows arising from the employee benefit obligations. The Group has not changed the processes used to manage its risks from previous periods. The Group uses derivatives to manage some of its risk. Investments are well diversified, such that the failure of any single investment would not have a material impact on the overall level of assets.

A large portion of assets consists of government and corporate bonds. The plan asset mix is in compliance with the requirements of the respective local regulations.

H. Expected maturity analysis of the defined benefit plans in future years

₹ Crore

Particulars	Less than 1 year	Between 1-2 years	Between 2-5 years	Over 5 years	Total
31 March 2022					
Gratuity and pension	343.61	311.92	731.56	1,602.51	**2,989.60**
Post-retirement medical facility (PRMF)	155.69	191.44	686.77	1,584.40	**2,618.30**
Provident fund	2,014.97	1,100.49	2,225.90	6,869.61	**12,210.97**
Other post-employment benefit plans	27.97	24.61	53.71	104.90	**211.19**
Total	**2,542.24**	**1,628.46**	**3,697.94**	**10,161.42**	**18,030.06**
31 March 2021					
Gratuity and pension	331.87	327.15	769.65	1,591.09	3,019.76
Post-retirement medical facility (PRMF)	142.87	175.47	627.31	1,416.37	2,362.02
Provident fund	1,398.53	1,454.96	3,127.10	5,524.91	11,505.50
Other post-employment benefit plans	25.01	24.51	57.62	98.27	205.40
Total	1,898.28	1,982.09	4,581.68	8,630.64	17,092.68

Expected contributions to post-employment benefit plans for the year ending 31 March 2023 are ₹ **579.16 crore**.

The weighted average duration of the defined benefit plan obligation at the end of the reporting period is **15.29 years** (31 March 2021: 14.93 years).

(iii) Other long term employee benefit plans

A. Leave

The Group provides for earned leave benefit (including compensated absences) and half-pay leave to the employees of the Companies which accrue annually at 30 days and 20 days respectively. Earned leave (EL) is en-cashable while in service. Half-pay leaves (HPL) are en-cashable only on separation beyond the age of 50 years up to the maximum of 300 days. However, total number of leave (i.e. EL & HPL combined) that can be encashed on superannuation shall be restricted to 300 days and no commutation of half-pay leave shall be permissible. The scheme is unfunded and liability for the same is recognised on the basis of actuarial valuation. During the year, provision amounting to ₹ **101.03 crore** has been made on the basis of actuarial valuation at the year end and debited to statement of profit and loss (31 March 2021: ₹ 132.98 crore).

B. Other employee benefits

Provision for long service award and family economic rehabilitation scheme amounting to ₹ **14.49 crore** (31 March 2021: ₹ 5.29 crore) for the year have been made on the basis of actuarial valuation at the year end and debited to the statement of profit and loss.

58. Disclosure as per Ind AS 21 'The Effects of Changes in Foreign Exchange Rates'

The amount of exchange differences (net) debited to the statement of profit and loss, net of movement in regulatory deferral account balances, is ₹ **17.00 crore** (31 March 2021: debited to the statement of profit and loss (-) ₹ 9.70 crore).

59. Disclosure as per Ind AS 23 'Borrowing Costs'

Borrowing costs capitalised during the year is ₹ **4,038.71 crore** (31 March 2021: ₹ 4,077.70 crore).

60. Disclosure as per Ind AS 24 'Related Party Disclosures'

a) List of related parties:

i) Joint venture companies:

1. Utility Powertech Ltd.
2. NTPC-GE Power Services Private Ltd.
3. NTPC-SAIL Power Company Ltd.
4. NTPC Tamil Nadu Energy Company Ltd.
5. Aravali Power Company Private Ltd.
6. NTPC BHEL Power Projects Private Ltd.
7. Meja Urja Nigam Private Ltd.
8. Transformers and Electricals Kerala Ltd.
9. National High Power Test Laboratory Private Ltd.
10. Energy Efficiency Services Ltd.
11. CIL NTPC Urja Private Ltd.
12. Anushakti Vidhyut Nigam Ltd.
13. Hindustan Urvarak & Rasayan Ltd.
14. Konkan LNG Ltd. (upto 23 February 2021)
15. Trincomalee Power Company Ltd.
16. Bangladesh-India Friendship Power Company Private Ltd.

Joint venture company of NEEPCO (a Subsidiary of the Company)

1. KSK Dibbin Hydro Power Private Ltd

ii) **Key Management Personnel (KMP):**

Parent Company:

Whole Time Directors

Mr. Gurdeep Singh	Chairman and Managing Director	
Mr. A.K.Gautam	Director (Finance)	
Mr. Dillip Kumar Patel	Director (HR)	W.e.f. 1 April 2020
Mr Ramesh Babu V.	Director (Operations)	W.e.f. 1 May 2020
Mr. Chandan Kumar Mondol	Director (Commercial)	W.e.f. 1 August 2020
Mr. Ujjwal Kanti Bhattacharya	Director (Projects)	W.e.f. 28 August 2020
Mr. A.K.Gupta	Director (Commercial)	Upto 31 July 2020
Mr. Prakash Tiwari	Director (Operations)	Upto 30 April 2020
Independent Directors		
Mr. Jitendra Jayantilal Tanna	Non-executive Director	W.e.f. 30 November 2021
Mr. Vivek Gupta	Non-executive Director	W.e.f. 30 November 2021
Mr. Vidyadhar Vaishampayan	Non-executive Director	W.e.f. 30 November 2021
Ms. Sangitha Varier	Non-executive Director	W.e.f. 7 December 2021
Mr. M.P.Singh	Non-executive Director	Upto 7 September 2020
Mr. Pradeep Kumar Deb	Non-executive Director	Upto 7 September 2020
Mr. Shashi Shekhar	Non-executive Director	Upto 7 September 2020
Mr. Subhash Joshi	Non-executive Director	Upto 7 September 2020
Mr. Vinod Kumar	Non-executive Director	Upto 7 September 2020
Dr. K.P.K.Pillay	Non-executive Director	Upto 16 July 2021
Dr. Bhim Singh	Non-executive Director	Upto 16 July 2021
Government Nominee Directors		
Mr. Vivek Kumar Dewangan	Non-executive Director	
Mr. Ashish Upadhyaya	Non-executive Director	
Company Secretary		
Ms. Nandini Sarkar	Company Secretary	

Subsidiary Companies:

1. NTPC Vidyut Vyapar Nigam Ltd.

Shri A.K. Gautam	Chairman & Director	Director W.e.f. 03 December 2018, Chairman W.e.f 18 August 2020
Shri A.K. Gupta	Chairman & Director	Chairman W.e.f 07 August 2019 upto 31 July 2020
Shri Chandan Kumar Mondol	Director	W.e.f. 18 August 2020
Shri Anil Nautiyal	Director	W.e.f. 06 January 2021
Ms Nandini Sarkar	Director	
Shri Rajnish Bhagat	Director	Upto 30 November 2020
Shri Praveen Saxena	Chief Executive Officer	W.e.f. 27 November 2021
Shri Mohit Bhargava	Chief Executive Officer	Upto 15 November 2021
Shri Kumar sanjay	Chief Financial Officer	
Shri Nitin Mehra	Company Secretary	

2.	**NTPC Electric Supply Company Ltd.**		
	Shri Dillip Kumar Patel	Chairman	W.e.f. 6 April 2020
	Shri Parveen Saxena	Director	
	Shri Rajendra Mohan Arya	Director	
	Ms. Renu Narang	Chief Eexcutive Officer	W.e.f. 28 January 2021
	Shri Ajay Dua	Chief Eexcutive Officer	Upto 8 October 2020
	Shri Amit Prakash	Company Secretary	W.e.f. 28 January 2021
3.	**Kanti Bijlee Utpadan Nigam Ltd.**		
	Shri Ramesh Babu V.	Chairman (Non-Executive)	W.e.f. 11 May 2020
	Shri Prakash Tiwari	Chairman (Non-Executive)	Upto 30 April 2020
	Shri Ajay Dua	Non-Executive Director	
	Shri Praveen Saxena	Non-Executive Director	W.e.f. 7 February 2021 upto 22 November 2021
	Shri Sudharshan Babu Velivela	Non-executive Director	W.e.f. 7 December 2021 upto 9 February 2022
	Shri Sital Kumar Nischal	Non-Executive Director	W.e.f. 17 February 2022
	Shri Asit Kumar Mukherjee	Non-Executive Director	W.e.f. 18 May 2020 upto 31 January 2021
	Ms. Shoba Pattabhiraman	Non-Executive Director	
	Shri S. Narendra	Non-Executive Director	Upto 30 April 2020
	Shri A.K. Tandon	Chief Executive Officer	W.e.f. 8 November 2021
	Shri S.C. Naik	Chief Executive Officer	W.e.f. 28 April 2021 upto 8 November 2021
	Shri A.K. Munda	Chief Executive Officer	W.e.f. 4 December 2020 upto 6 April 2021
	Shri Subrata Mandal	Chief Executive Officer	Upto 4 December 2020
	Shri Ranjeet Bhattacharya	Chief Financial Officer	W.e.f. 1 July 2020
	Shri V.K.Mittal	Chief Financial Officer	Upto 30 June 2020
	Ms. Priyanka Sethi	Company Secretary	W.e.f. 22 September 2020
4.	**Bhartiya Rail Bijlee Company Limited**		
	Shri Ramesh Babu V	Chairman	W.e.f. 18 August 2020
	Shri A.K. Gupta	Non-executive Director	Upto 31 July 2020
	Shri R.K. Jain	Non-executive Director	
	Shri Sital Kumar Nischal	Additional Director	W.e.f. 14 February 2022
	Shri Praveen Saxena	Non-executive Director	W.e.f. 05 February 2021 upto 22 November 2021
	Shri Asit Kumar Mukherjee	Non-executive Director	W.e.f. 26 May 2020 upto 31 January 2021
	Shri Sudharshan Babu Velivela	Non-executive Director	W.e.f. 06 December 2021 upto 19 January 2022
	Shri S. Narendra	Non-executive Director	Upto 30 April 2020
	Ms. Renu Narang	Non-executive Director	
	Shri P M Jena	Chief Executive Officer	W.e.f. 01 June 2020
	Shri C Sivakumar	Chief Executive Officer	Upto 31 May 2020
	Shri N Venkataramana	Chief Financial Officer	W.e.f. 01 January 2022
	Shri Amarendra Kumar	Chief Financial Officer	W.e.f. 14 January 2021 upto 31 December 2021
	Shri Manoj Srivastava	Chief Financial Officer	Upto 14 January 2021
	Shri Kamal Nath Thakur	Company Secretary	W.e.f. 18 February 2022
	Shri Vishal Garg	Company Secretary	Upto 09 February 2022

5. Patratu Vidyut Utpadan Nigam Ltd.

Shri Ujjwal Kanti Bhattacharya	Chairman	W.e.f. 14 September 2021
Shri Dillip Kumar Patel	Chairman	W.e.f. 20 August 2020 upto 8 September 2021
Shri A K Gupta	Chairman	W.e.f. 10 April 2020 to 31 July 2020
Shri Avinash Kumar, IAS	Director	W.e.f. 18 September 2020
Shri Avnish Srivastava	Director	
Ms. Nandini Sarkar	Director	
Shri L. Khiangte, IAS	Director	Upto 15 September 2020
Shri Prem Parkash	Chief Executive Officer	W.e.f. 09 July 2021
Shri Sital Kumar	Chief Executive Officer	W.e.f. 9 March 2021 upto 9 July 2021
Shri Sudarsan Chakrabarti	Chief Executive Officer	Upto 9 March 2021
Shri A. K. Acharya	Chief Finance Officer	Upto 31 October 2021
Shri Sipan K. Garg	Chief Finance Officer & Company Secretary	Chief Finance Officer W.e.f from 2 December 2021

6. Nabinagar Power Generating Company Ltd.

Shri Ramesh Babu V.	Chairman (Non-Executive)	W.e.f. 18 August 2020
Shri A. K. Gupta	Chairman (Non-Executive)	Upto 31 July 2020
Shri Sital Kumar Nischal	Non-Executive Director	W.e.f. 17 February 2022
Shri Partha Mazumder	Non-Executive Director	W.e.f. 23 July 2021
Shri Praveen Saxena	Non-Executive Director	W.e.f 05 February 2021 upto 22 November 2021
Shri Sudharshan Babu Velivela	Non-Executive Director	W.e.f 10 December 2021 upto 9 February 2022
Shri C.V.Anand	Non-Executive Director	Upto 30 June 2021
Ms. Alka Saigal	Non-Executive Director	
Shri S. Narendra	Non-Executive Director	Upto 30 April 2020
Shri Asit Kumar Mukerjee	Non-Executive Director	W.e.f. 13 May 2020 upto 31 January 2021
Shri Raj Kumar Pandey	Chief Executive Officer	W.e.f. 19 January 2022
Shri Vijai Singh	Chief Executive Officer	Upto 18 January 2022
Shri Paras Mani	Chief Financial Officer	W.e.f. 21 July 2021
Shri S.K.Rath	Chief Financial Officer	Upto 31 May 2021
Shri Manish Kumar	Company Secretary	

7. NTPC Mining Ltd.

Mr. Chandan Kumar Mondol	Chairman	W.e.f. 17 August 2020
Shri A. K. Gupta	Chairman	Upto 31 July 2020
Shri Partha Mazumder	Non-Executive Director	
Shri Aditya Dar	Non-Executive Director	

8. THDC India Ltd.

Shri R K Vishnoi*	Chairman & Managing Director	W.e.f. 06 August 2021
Shri D V Singh	Chairman & Managing Director	Upto 30 April 2021
Shri Vijay Goel	Director (Personnel)	Upto 31 October 2021
Shri J. Behera	Director (Finance) & Chief Financial Officer	
Shri U.K.Bhattacharya	Non-executive Director	W.e.f. 26 August 2020
Shri A.K.Gautam	Non-executive Director	W.e.f. 23 April 2020

Shri T.Venkatesh	Non-executive Director	Upto 31 January 2022
Shri Rajpal	Non-executive Director	Upto 30 April 2021
Shri Jitesh John	Non-executive Director	W.e.f. 21 June 2021
Smt. Sajal Jha	Independent Director	W.e.f. 10 November 2021
Dr. Bajalakaria JayaPrakash Naik	Independent Director	W.e.f. 10 November 2021
Shri A.K. Gupta	Non-executive Director	W.e.f. 23 April 2020 to 31 July 2020
Ms. Rashmi Sharma	Company Secretary	

*Holding additional charge of Director (Technical) w.e.f. 06 August 2021 and of Director (Personnel) W.e.f. 01 November 2021

9. North Eastern Electric Power Corporation Ltd.

Shri V K Singh*	Chairman & Managing Director	
Shri Anil Kumar**	Director (Personnel)	
Shri B Maharana	Director (Finance) & Chief Financial officer	W.e.f. 10 September 2021
Shri Hemanta Kumar Deka	Director (Technical)	W.e.f. 6 July 2020 Upto 28 February 2022
Smt. Mala Sinha	Independent Director	
Dr Viveka Nand Paswan	Independent Director	W.e.f. 10 November 2021
Bimal Chand Oswal	Independent Director	W.e.f. 10 November 2021
Shri Jithesh John	Nominee Director GOI	W.e.f. 21 June 2021
Shri Anil Kumar Gautam	Nominee Director NTPC LTD	
Shri Ujjwal Kanti Bhattacharya	Nominee Director NTPC LTD	
Shri Abinoam Panu Rong	Company Secretary	W.e.f. 1 June 2021
Shri Chirajeeb Sharma	Company Secretary	Upto 31 May 2021

*Holding additional charge of Director (Technical) w.e.f 1 March 2022

**Holding additional charge of Director (Finance) w.e.f 2 April 2020 Upto 09 September 2021

10. NTPC Renewable Energy Limited

Shri C K Mondol	Chairman	W.e.f. 7 October 2020
Shri Vinay Kumar	Director	W.e.f. 7 October 2020
Shri Aditya Dar	Director	W.e.f. 7 October 2020
Ms. Nandini Sarkar	Director	W.e.f. 9 October 2020
Shri Mohit Bhargava	Chief Eexcutive Officer	W.e.f. 9 October 2020
Shri Semant Juneja	Company Secretary	W.e.f. 14 July 2021 upto 29 September 2021
Ms. Rashmi	Company Secretary	

11. NTPC EDMC Waste Solutions Private Ltd.

Shri Sital Kumar Nischal	Chairman	W.e.f. 1 June 2020
Shri Achal Kumar Arora	Director	W.e.f. 1 June 2020
Shri Sundeep Kumar Sharma	Director	W.e.f. 12 March 2021
Shri Arun Kumar	Director	W.e.f. 24 March 2022
Shri Amit Kumar Kulshreshtha*	Chief Executive Officer	W.e.f. 14 January 2022
Shri Sanjiv Kumar	Chief Executive Officer	W.e.f. 26 February 2021 upto 1 September 2021
Shri Manoj Srivastava	Chief Financial Officer	W.e.f. 26 February 2021

* Director w.e.f. from 1 June 2020 upto 14 January 2022

12. Ratnagiri Gas & Power Private Ltd.

Shri Praveen Saxena	Chairman	W.e.f. 19 April 2021
Shri Sital Kumar*	Chairman	W.e.f. 14 December 2020 upto 18 April 2021
Shri Chandan Kumar Mondol	Chairman	Upto 14 December 2020
Shri Parrag Jaiin Nainutia	Non-executive Director	Upto 13 May 2020
Shri Sanjeev Kumar	Non-executive Director	Upto 01 June 2020
Ms. Sangeeta Kaushik	Non-executive Director	W.e.f. 26 April 2021
Shri Sanjay Khandare	Non-executive Director	W.e.f. 29 September 2020
Shri Pankaj Patel	Non-executive Director	Upto 26 March 2021
Shri A K Tiwari	Non-executive Director	Upto 07 July 2020
Shri Prasoon Kumar	Non-executive Director	Upto 26 March 2021
Shri Rakesh Kumar Jain	Non-executive Director	Upto 26 March 2021
Shri Aditya Dar	Non-executive Director	
Shri Manoj Sharma	Non-executive Director	Upto 03 February 2021
Shri Bhaskar Niyogi	Non-executive Director	Upto 09 January 2021
Shri Anilraj Chellan	Non-executive Director	Upto 21 January 2021
Shri D Paul	Managing Director	Upto 15 June 2020
Shri Asim Kumar Samanta**	Chief Executive Officer	W.e.f. 24 April 2021
Shri Aditya Agarwal	Company Secretary	Upto 31 October 2021
Shri Ajay Sharma	Chief Financial Officer	

* Managing Director upto 03 December 2020

** Managing Director upto 23 April 2021

13. TUSCO Limited - Subsidiary of THDC

Shri R K Vishnoi	Chairman	W.e.f. 06 August 2021
Shri D V Singh	Chairman	Upto 30 April 2021
Shri Vijay Goel	Chairman	W.e.f. 01 May 2021 Upto 05 August 2021
Shri J. Behera	Nominee Director-THDCIL	
Shri Bhawani Singh Khangarot	Nominee Director-UPNEDA	
Shri Shailendra Singh	Chief Executive Officer	
Shri K.K.Srivastava	Chief Financial Officer	
Shri H.Bajpai	Company Secretary	

iii) Post Employment Benefit Plans:

1. NTPC Limited Employees Provident Fund
2. NTPC Employees Gratuity Fund
3. NTPC Post Retirement Employees Medical Benefit Fund
4. NTPC Limited Defined Contribution Pension Trust
5. THDC Employees Provident Fund Trust
6. THDCIL Employees Defined Contribution Superannuation Pension Trust
7. THDCIL Post Retirement Medical Facility Fund Trust
8. NEEPCO Employees Provident Fund Trust
9. NEEPCO Employees Defined Contribution Superannuation Scheme Trust

10. NEEPCO Employees Social Security Scheme Trust

11. NEEPCO Employees Group Gratuity Assurance Fund Trust

12. RGPPL Employees Gratuity Fund Trust

iv) Entities under the control of the same government:

The Parent company is a Central Public Sector Undertaking (CPSU) controlled by Central Government by holding majority of shares (Note 22). Pursuant to Paragraph 25 and 26 of Ind AS 24, entities over which the same government has control or joint control of, or significant influence, then the reporting entity and other entities shall be regarded as related parties. Transactions with these parties are carried out at market terms at arm length basis. The Group has applied the exemption available for government related entities and have made limited disclosures in the financial statements. Such entities with which the Company has significant transactions include but not limited to Coal India Ltd., Singareni Coalfields Ltd., GAIL (India) Ltd., BHEL Ltd., SAIL Ltd., Indian Oil Corporation Ltd., Bharat Petroleum Corporation Ltd and PGCIL.

v) Others:

1. NTPC Education and Research Society

2. NTPC Foundation

b) Transactions with the related parties are as follows:

₹ Crore

Particulars	Joint venture Companies	
	For the year ended	
	31 March 2022	31 March 2021
i) Sales/purchase of goods and services during the year		
- Contracts for works/services for services received by the Group	**1,654.41**	1,711.51
- Contracts for works/services for services provided by the Group	**24.22**	37.11
- Sale/Purchase of goods	**21.18**	23.82
ii) Sales/purchase of assets	**17.55**	2.52
iii) Deputation of employees	**53.42**	57.42
iv) Dividend received	**1,111.69**	501.66
v) Equity contributions made	**610.19**	620.45
vi) Loans granted	**-**	-
vii) Interest on loan	**0.19**	1.86
viii) Guarantees received	**45.87**	4.80

Note: Refer Note no. 75 for other commitments with Joint Venture Companies.

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Transactions with post employment benefit plans		
- Contributions made during the year	**1,044.38**	1,011.14
Compensation to Key management personnel		
- Short term employee benefits	**20.00**	19.04
- Post employment benefits	**1.69**	1.37
- Other long term benefits	**1.37**	0.68
- Termination benefits	**0.03**	0.81
- Sitting fee	**0.35**	0.57
Total compensation to key management personnel	**23.44**	22.47

Transactions with the related parties under the control of the same government: ₹ Crore

Sl. No.	Name of the Company	Nature of transaction by the Company	For the year ended 31 March 2022	For the year ended 31 March 2021
1	Bharat Coking Coal Ltd.	Purchase of coal	**2,241.01**	423.46
2	Central Coalfields Ltd		**5,221.33**	4,428.45
3	Eastern Coalfields Ltd		**6,092.72**	6,585.07
4	Mahanadi Coalfields Ltd		**5,639.25**	3,967.78
5	Northern Coalfields Ltd.		**11,141.13**	10,758.98
6	South Eastern Coalfields Ltd		**5,616.98**	5,371.79
7	Western Coalfields Ltd.		**2,657.34**	985.01
8	Singareni Collieries Company Ltd.		**5,528.04**	4,801.46
9	Coal India Ltd.		**0.02**	33.33
10	Bharat Heavy Electricals Ltd.	Purchase of equipment & erection services	**3,177.21**	2,943.73
		Purchase of spares	**708.34**	625.78
		Receipt of maintenance services	**888.39**	829.67
11	GAIL (India) Ltd.	Purchase of natural gas	**2,867.44**	2,076.16
12	Indian Oil Corporation Ltd.	Purchase fuel / oil products	**1,357.61**	699.44
13	Bharat Petroleum Corporation Ltd.	Purchase fuel / oil products	**346.62**	250.82
14	Hindustan Petroleum Corporation Ltd.	Purchase fuel / oil products	**483.84**	242.65
15	Steel Authority of India Ltd.	Purchase of steel and iron products	**301.53**	273.66
16	IRCON International Limited	Receipt of maintenance services	**145.73**	87.14
17	Rites Ltd	Receipt of maintenance services	**466.34**	478.74
18	National Aluminium Company Limited	Purchase of Bilateral Energy	**25.15**	22.72
19	Power Grid Corporation of India Ltd.	Purchase of equipment and providing services	**128.60**	329.58
20	Central Transmission Utility of India Limited	Open Access Booking	**195.04**	65.41
21	Power Grid Corporation of India Ltd.		**5.28**	57.42
22	Others		**0.06**	0.16
23	Damodar Valley Corporation	Purchase of Bilateral Energy	**1,178.38**	1,124.69
		Sale of Bundled Power	**27.49**	29.94
		Sale of Power	**37.13**	29.22
		Transmission & other Charges	**3.94**	4.10
24	Other entities	Purchase of equipment & erection services	**34.87**	31.99
		Purchase of spares	**41.89**	32.14
		Receipt of maintenance/ consultancy services	**249.88**	211.09
		Consultancy and Other Services provided by the Group	**101.23**	92.82
		Purchase of Solar Energy	**32.60**	35.47

₹ Crore

Transactions with others listed at (a)(v) above	For the year ended 31 March 2022	For the year ended 31 March 2021
- Contracts for works/services for services received by the Group	20.34	5.52

c) **Outstanding balances with related parties are as follows:**

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Amount recoverable towards loans from		
- Joint venture companies	19.78	19.78
- Key management personnel	0.44	0.15
- Others	0.60	0.60
Amount recoverable other than loans from		
- Joint venture companies	113.57	55.30
- Post employment benefit plans	63.23	205.23
- Others	0.49	0.57
Amount payable to		
- Joint venture companies	267.27	300.15
- Post employment benefit plans	68.23	0.01

d) **Individually significant transactions**

₹ Crore

Particulars	Nature of relationship	For the year ended 31 March 2022	For the year ended 31 March 2021
Contracts for works/services for services received by the Group			
Utility Powertech Ltd.	Joint venture company	1,623.05	1,457.33
NTPC BHEL Power Projects Private Ltd.	Joint venture company	11.59	87.29
NTPC-GE Power Services Private Ltd.	Joint venture company	16.53	140.21
Contracts for works/services for services provided by the Group			
NTPC-SAIL Power Company Ltd.	Joint venture company	3.00	7.54
Meja Urja Nigam Private Ltd.	Joint venture company	3.24	10.34
Aravali Power Company Private Ltd.	Joint venture company	2.65	4.38
NTPC-Tamil Nadu Energy Company Ltd.	Joint venture company	3.29	8.77
Energy Efficiency Services Ltd.	Joint venture company	7.08	5.43
Sale/purchase of goods			
Energy Efficiency Services Ltd.	Joint venture company	13.76	19.54
NTPC-Tamil Nadu Energy Company Ltd.	Joint venture company	4.91	0.68
Transformers and Electricals Kerala Ltd.	Joint venture company	0.64	3.28
Dividend received			
NTPC-SAIL Power Company Ltd.	Joint venture company	100.00	95.00
Aravali Power Company Private Ltd.	Joint venture company	750.00	350.00
NTPC-Tamil Nadu Energy Company Ltd.	Joint venture company	244.19	51.41

₹ Crore

Particulars	Nature of relationship	For the year ended 31 March 2022	For the year ended 31 March 2021
Utility Powertech Ltd.	Joint venture company	**17.50**	5.00
NTPC-GE Power Services Private Ltd.	Joint venture company	**-**	0.25
Equity contributions made			
Meja Urja Nigam Private Ltd.	Joint venture company	**25.76**	142.60
Bangladesh-India Friendship Power Company Pvt. Ltd.	Joint venture company	**86.78**	88.88
NTPC-Tamil Nadu Energy Company Ltd.	Joint venture company	**-**	8.29
Hindustan Urvarak & Rasayan Ltd.	Joint venture company	**497.65**	380.67
Interest on Loan			
National High Power Test Laboratory Private Ltd.	Joint venture company	**0.19**	1.86
Guarantees received			
Utility Powertech Ltd.	Joint venture company	**23.59**	4.80
NTPC-GE Power Services Private Ltd.	Joint venture company	**22.28**	-

e) Terms and conditions of transactions with the related parties

(i) Transactions with the related parties are made on normal commercial terms and conditions and at arm length price.

(ii) The Group is assigning jobs on contract basis, for sundry works in plants/stations/offices to M/s Utility Powertech Ltd (UPL), a 50:50 joint venture between the Parent Company and Reliance Infrastructure Ltd. UPL inter-alia undertakes jobs such as overhauling, repair, refurbishment of various mechanical and electrical equipment of power stations. The Group has entered into Power Station Maintenance Agreement with UPL from time to time. The rates are fixed on cost plus basis after mutual discussion and after taking into account the prevailing market conditions.

(iii) The Group is seconding its personnel to Joint venture companies as per the terms and conditions agreed between the companies, which are similar to those applicable for secondment of employees to other companies and institutions. The cost incurred by the group towards superannuation and employee benefits are recovered from these companies.

(iv) Loans granted to joint venture companies are detailed below:

Sl. No.	Name of the joint venture company	Loan granted (Amount in ₹ crore)	Rate of interest (p.a.)	Repayment schedule	Purpose	Year of grant of loan
1	National High Power Test Laboratory Private Ltd. (JV)	18.40	10% (quarterly rest)	Principal repayable in twenty semi-annual installments from 30 September 2022 . Interest payable half yearly.	For repayment of loans / contractual obligations	2019-20

(v) Consultancy services provided by the Group to Joint venture companies are generally on nomination basis at the terms, conditions and principles applicable for consultancy services provided to other parties.

(vi) Outstanding balances of joint venture companies at the year-end are unsecured and settlement occurs through banking transaction. These balances other than loans are interest free. The Group has not recorded any impairment of receivables relating to amounts owed by related parties. This assessment is undertaken in each financial year through examining the financial position of the related party and the market in which the related party operates.

(vii) Restrictions on disposal of investments and commitments towards further investments in respect of joint venture companies are disclosed in Note 70.

61. Disclosure as per Ind AS 33 'Earnings per Share'

Basic and diluted earnings per share attributable to owners of the parent company (in ₹)

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
From operations including net movement in regulatory deferral account balances (a) **[A/D]**	**17.20**	14.87
From regulatory deferral account balances (b) **[B/D]**	**1.54**	1.94
From operations excluding net movement in regulatory deferral account balances (a)-(b) **[C/D]**	**15.66**	12.93
Nominal value per share	**10.00**	10.00

(a) Profit attributable to equity shareholders (used as numerator) (₹ crore)

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
From operations including net movement in regulatory deferral account balances (a) **[A]**	**16,675.90**	14,634.63
From regulatory deferral account balances (b) **[B]**	**1,486.48**	1,903.19
From operations excluding net movement in regulatory deferral account balances (a)-(b) **[C]**	**15,189.42**	12,731.44

(b) Weighted average number of equity shares (used as denominator) (in Nos.)

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Opening balance of issued equity shares	**9,69,66,66,134**	9,89,45,57,280
Less: Buyback of shares during the year	-	19,78,91,146
Closing balance of issued equity shares	**9,69,66,66,134**	9,69,66,66,134
Weighted average number of equity shares for Basic and Diluted EPS [D]*	**9,69,66,66,134**	9,84,46,77,868

* Earning per share for the year ended 31 March 2021 has been computed on the basis of weighted average number of shares outstanding during the year considering buy back of 19,78,91,146 fully paid-up equity shares completed on 30 December 2020. (Also refer Note 22(e)(i))

62. Disclosure as per Ind AS 36 'Impairment of Assets'

As required by Ind AS 36, an assessment of impairment of assets was carried out and following has been assessed:

(i) The recoverable amount of the property, plant and equipment & intangible assets of the Cash Generating Units (CGU) of the parent company is value in use and amounts to ₹ **2,67,954.01 crore** (31 March 2021: ₹ 2,54,366.54 crore). The net realisable value of the assets of the station has been assessed which is more than its carrying value. The discount rate used for the computation of value in use for the generating plant (thermal, gas and hydro) and coal mining is **7.07%** (31 March 2021: 7.74%) and for solar plant is **6.20 %** (31 March 2021: 7.57%).

(ii) During the year, M/s Kanti Bijlee Utpadan Nigam Limited (KBUNL) has decommissioned its MTPS Stage-1 (2 X 110 MW) plant with effect from 8 September 2021 as a result of exit of the customers from PPA. The Board of Directors of the Company accorded their approval for discontinuance of operations in the meeting held on 26 October 2021. The Board of Directors of the Parent Company also accorded their approval in the meeting held on 30 December 2021. The Company has assessed all the assets of the decommissioned plant for impairment as per Ind AS 36, 'Impairment of assets' and a provision for impairment of ₹ 21.99 crore has been recognised for the year ended 31 March 2022. Company has provided an amount of ₹ 1.51 crore against Provision for unserviceable works (CWIP) related to MTPS Stage-1. The provision for Obsolete/Diminution in the value of Stores & Spares in respect of MTPS Stage-1 amounting to ₹ 10.14 crore has also been made during the financial year 2021-22.

(iii) Based on the impairment study of M/s Ratnagiri Gas & Power Pvt Ltd, an impairment loss of ₹ **228.16 crores** (31 March 2021: ₹ 134.70 crore) has been recognised during the year. The impairment study has been done using discounted cash flow income approach. The post tax discount rates used for the future cash flows is 18% (31 March 2021 ; 12.50%). The differential discount rate is based on the effective tax rates likely to be applicable during the forecast years. Salvage value of PPE & CWIP and release of net working capital at the end of explicit period has been added to the present value of free cash flows to arrive at the enterprise value. Also refer Note 2.

63. Disclosure as per Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets'

Movement in provisions:

₹ Crore

Particulars	Provision for obligations incidental to land acquisition		Provision for tariff adjustment		Arbitration awards and others		Mine closure and Stripping activity adjustments		Total	
	For the year ended		For the year ended		For the year ended		For the year ended		For the year ended	
	31 March 2022	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021
Carrying amount at the beginning of the year	**3,242.17**	3,529.88	**360.28**	190.68	**2,250.47**	1,696.34	**347.96**	224.41	**6,200.88**	5,641.31
Additions during the year	**167.63**	637.22	**122.00**	169.60	**387.59**	591.29	**268.26**	123.55	**945.48**	1,521.66
Amounts used during the year	**(512.18)**	(544.94)	-	-	**(22.16)**	(18.16)	-	-	**(534.34)**	(563.10)
Reversal / adjustments during the year	**(17.86)**	(379.99)	-	-	**(112.91)**	(19.00)	-	-	**(130.77)**	(398.99)
Carrying amount at the end of the year	**2,879.76**	3,242.17	**482.28**	360.28	**2,502.99**	2,250.47	**616.22**	347.96	**6,481.25**	6,200.88

i) Provision for obligations incidental to land acquisition

Provision for obligations incidental to land acquisition includes expenditure on rehabilitation & resettlement (R&R) including the amounts payable to the project affected persons (PAPs) towards land, expenditure for providing community facilities and expenditure in connection with environmental aspects of the project. The Company has estimated the provision based on the Rehabilitation Action Plan (RAP) approved by the board/competent authority or agreements/ directions/demand letters of the local/government authorities. The outflow of said provision is expected to be incurred immediately on fulfilment of conditions by the land oustees/receipts of directions of the local/government authorities.

ii) Provision for tariff adjustment

Billing to beneficiaries is being done based on tariff orders issued under Regulation 2014 except few stations where billing is done on provisional basis due to non-receipt of tariff orders. In such cases, accounting is done based on trued up cash expenditure as per Regulation 2019. Provision for tariff adjustment of ₹ **122.00 crore** (31 March 2021: ₹ 169.60 crore) is mainly towards the estimated interest payable to beneficiaries at the time of issue of tariff orders.

iii) Provision - Arbitration awards and Others

(a) (i) Provision for arbitration awards represents provision created based on awards pronounced by the arbitrator in respect of various litigation cases amounting to ₹ **2,302.18 crore** (31 March 2021: ₹ 2,058.97 crore). These awards have been challenged before various appellate authorities / Courts.

(ii) Provision for others includes ₹ **111.96 crore** (31 March 2021: ₹ 103.88 crore) towards cost of unfinished minimum work programme demanded by the Ministry of Petroleum and Natural Gas (MoP&NG) including interest thereon in relation to block AA-ONN-2003/2 [Refer Note 65], ₹ **7.55 crore** (31 March 2021: ₹ 3.05 crore) towards provision for shortage in property, plant and equipment on physical verification pending investigation and ₹ **17.86 crore** (31 March 2021: ₹ Nil) towards expected loss on investments of Provident Fund Trust.

(b) The Company had entered into an agreement for movement of coal through inland waterways for one of its stations. As per the agreement, the operator was to design, finance, build, operate and maintain the unloading and material handling infrastructure for 7 years, after which it was to be transferred to the Company at ₹ 1/-. After commencement of the operations, the operator had raised several disputes, invoked arbitration and raised substantial claims on the

Company. Based on the interim arbitral award and subsequent directions of the Hon'ble Supreme Court of India, an amount of ₹ 356.31 crore was paid upto 31 March 2019.

Further, the Arbitral Tribunal had awarded a claim of ₹ 1,891.09 crore plus applicable interest in favour of the operator, during the financial year 2018-19. The Company aggrieved by the arbitral award and considering legal opinion obtained, had filed an appeal before the Hon'ble High Court of Delhi (Hon'ble High Court) against the said arbitral award in its entirety.

In the financial year 2019-20, against the appeal of the Company, Hon'ble High Court directed the Company to deposit ₹ 500.00 crore with the Registrar General of the Court. The said amount was deposited with the Hon'ble High Court on 5 November 2019. Hon'ble High Court vide its order dated 8 January 2020 directed the parties to commence formal handing over of the infrastructure in the presence of appointed Local Commissioner and also directed release of ₹ 500.00 crore to the operator by the Registrar General subject to verification of bank guarantee and outcome of the application of the Company for formal handing over of the infrastructure. On 17 January 2020 unconditional BG was submitted by the operator to Registrar General and ₹500.00 crore was released to the operator by the Hon'ble High Court. As per order of Hon'ble High Court, formal handing over of the infrastructure started on 20 January 2020 at the project site. However, due to certain local administrative issues initially and further due to Covid-19 pandemic, Local Commissioner's visit had to be deferred.

In view of delay in the handover exercise, The company had filed an Application in Hon'ble High Court praying to pass further directions to operator in this regard. Hon'ble High Court on 11 November 2020 disposed off the application requesting the Ld. Local Commissioner appointed by the Court, to visit the project site expeditiously preferably within 2 weeks and carry out the commission. The handing over exercise has been delayed due to operator's issues with local labours at the site and Covid situation. Date of hearing at Hon'ble High Court of Delhi has been adjourned several times in light of restricted functioning of the Hon'ble High Court and listed for hearing on 7 July 2022.

Pending final disposal of the appeal by the Hon'ble High Court, considering the provisions of Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets' and Significant Accounting Policies of the Company, provision has been updated by interest to ₹ **38.26 crore** (31 March 2021: ₹ 38.09 crore) and the balance amount of ₹ **2292.30 crore** (31 March 2021: ₹ 2,153.57 crore) has been considered as contingent liability.

Also Refer Note 73 and 75.

iv) **(a)** Provision for Mine closure obligation represents Company's obligations for land reclamation and decommissioning of structure consist of spending at mines in accordance with the guidelines from Ministry of Coal, Government of India. The Company estimates its obligations for mine closure, site restoration and decommissioning based on the detailed calculation and technical assessment of the amount and timing of future cash spending for the required work and provided for as per approved mine closure plan. Accordingly, a provision amounting to ₹ **304.24 crore** (31 March 2021: ₹ 285.35 crore) has since been provided for. (Refer Significant accounting policy C.7.2)

(b) Provision for Expenditure incurred on removal of mine waste materials (overburden) necessary to extract the coal reserves is referred to as stripping cost. The Company has to incur such expenses over the life of the mine as technically estimated. Cost of stripping is charged on technically evaluated average stripping ratio at each mine with due adjustment for stripping activity asset and ratio-variance account after the mines are brought to revenue. Net of the balances of stripping activity asset and ratio variance at the Balance Sheet date is shown as 'Stripping activity adjustment' under the head 'Non-current assets/Non-current provisions' as the case may be, and adjusted as provided in the CERC Tariff Regulations. Accordingly, a provision amounting to ₹ **311.98 crore** (31 March 2021: ₹ 62.61 crore) has since been provided for. (Refer Significant accounting policy C.7.1)

v) In respect of provision for cases under litigation, outflow of economic benefits is dependent upon the final outcome of such cases.

vi) In all these cases, outflow of economic benefits is expected within next one year.

vii) Sensitivity of estimates on provisions

The assumptions made for provisions relating to current period are consistent with those in the earlier years. The assumptions and estimates used for recognition of such provisions are qualitative in nature and their likelihood could alter in next financial year. It is impracticable for the group to compute the possible effect of assumptions and estimates made in recognizing these provisions.

viii) **Contingent liabilities and contingent assets**

Disclosure with respect to claims against the Group not acknowledged as debts and contingent assets are made in Note 75.

64. Disclosure as per Ind AS 38 'Intangible Assets'

Research expenditure recognised as expense in the Statement of Profit and Loss during the year is ₹ **199.43 crore** (31 March 2021: ₹ 165.86 crore).

65. Disclosure as per Ind AS 106, 'Exploration for and Evaluation of Mineral Resources'

(a) The Company along-with some public sector undertakings had entered into Production Sharing Contracts (PSCs) with GOI for three oil exploration blocks namely KG-OSN-2009/1, KG-OSN-2009/4 and AN-DWN-2009/13 under VIII round of New Exploration Licensing Policy (NELP VIII) with 10% participating interest (PI) in each of the blocks.

In the case of Block AN-DWN-2009/13 and KG-OSN-2009/1, Oil and Natural Gas Corporation Ltd. (ONGC) was the operator and the Company along-with the consortium partners have relinquished both the blocks to Directorate General of Hydrocarbons (DGH).

Based on the un-audited statement of the accounts for the above blocks forwarded by ONGC, the operator, the Company's share in the assets and liabilities and expenses is as under:

₹ **Crore**

Particulars	**As at 31 March 2022 (Unaudited)**	As at 31 March 2021 (Unaudited)
Assets	**0.01**	0.01
Liabilities	**0.49**	0.49
Capital commitments	**-**	-

For the year ended 31 March 2022 and 31 March 2021, there are no income / expense and operating/investing cash flow from exploration activities.

For exploration activities in block KG-OSN-2009/4 DGH has agreed for drilling of one well and have instructed to carry out airborne Full Tensor Gravity Gradiometer (FTG) survey in conditionally & partial cleared area. ONGC has completed drilling of one well. Airborne Full Tensor Gravity Gradiometer (FTG) survey work is also completed. The Company along-with the consortium partners has decided to relinquish the block and Oil and Natural Gas Corporation Ltd. (ONGC), the operator, has submitted an application to Directorate General of Hydrocarbons (DGH) in this regard, in the earlier years.

(b) Exploration activities in the block AA-ONN-2003/2 were abandoned in January 2011 due to unforeseen geological conditions and withdrawal of the operator. Attempts to reconstitute the consortium to accomplish the residual exploratory activities did not yield result. In the meanwhile, Ministry of Petroleum & Natural Gas, GoI demanded in January 2011 the cost of unfinished minimum work programme from the consortium with NTPC's share being USD 7.516 million. During the year, provision in this respect has been updated to ₹ 111.96 crore from ₹ 103.88 crore along-with interest. The Company has sought waiver of the claim citing force majeure conditions at site leading to discontinuation of exploratory activities.

The Company has accounted for expenditure of ₹ **21.58 crore** (31 March 2021: ₹ 2.92 crore) towards updation of liabilities relating to MWP and other liabilities of M/s Geopetrol International, the operator to complete the winding up activities of the Block. The Company's share in the assets and liabilities are as under:

₹ **Crore**

Particulars	**As at 31 March 2022 (Unaudited)**	As at 31 March 2021 (Unaudited)
Assets	**9.19**	9.19
Liabilities (including unfinished MWP)	**127.81**	106.24

Provision of ₹ **8.26 crore** as at 31 March 2022 (31 March 2021: ₹ 8.26 crore) has been made towards the assets under exploration and estimated obsolescence in the inventory. Further, a provision of ₹ **13.42 Crore** (31 March 2021: Nil) has been made towards NTPC's share as per arbitration decision given in favor of a contractor of the block. NTPC filed a writ petition under section 34 in this matter before Hon'ble Delhi High Court which is yet to be disposed.

For the year ended 31 March 2022 and 31 March 2021, there are no income and operating/investing cash flow from exploration activities. The value of assets reported above is based on statement received from the operator in the earlier years.

(c) The Company had entered into production sharing contracts (PSC) with GOI for exploration block namely CB-ONN-2009/5 VIII round of New Exploration Licensing Policy (NELP VIII) with 100% participating interest (PI) in the block.

MWP for the block has been completed. No oil or gas of commercial value was observed in any of the wells. Accordingly, the block has been relinquished to DGH, GOI.

Company's share in assets and liabilities is as under:

₹ Crore

Particulars	**As at 31 March 2022**	As at 31 March 2021
Assets	**6.11**	6.11
Liabilities	**0.25**	0.25

Provision of ₹ **6.07 crore** as at 31 March 2022 (31 March 2021: ₹ 6.07 crore) has been made towards estimated obsolescence in the inventory.

For the year ended 31 March 2022 and 31 March 2021, there are no income, expenses, operating and investing cash flows from exploration activities.

(d) i) The Company has started coal production from three mines i.e Pakri-Barwadih, Dulanga & Talaipalli. Other mines i.e. Chatti-Bariatu, Kerandari & Badam are in various stages of development. Pakri Barwadih was declared commercial w.e.f. 1 April 2019 and about 8.32MMT coal was extracted during the current year. Dulanga was declared commercial w.e.f. 1 October 2020 and about 5.29 MMT coal was extracted during the current year. At Talaipalli, coal mine extraction has already started and at Chatti-Bariatu and Kerandari coal mining projects land acquisition and other mine development activities are in progress and these are also disclosed in Note 3 - Capital work in progress under 'Development of coal mines'.

ii) Exploration and evaluation activities are taking place at under ground mine area/dip side area (North west quarry) of PB block. An amount of ₹ **59.38 crore** (31 March 2021: ₹ 59.39 crore) has since been incurred at this area towards various exploratory activities.

iii) (a) (i) **Banai & Bhalumuda**

Due to geo-mining constraints, likely less percentage of coal extraction in the two adjacent coal blocks Banai and Bhalumuda and non-availability of any non-coal bearing land in the vicinity for OB dumping, NTPC surrendered these blocks to MoC on 26.12.2020. The Company expects that whenever these two coal blocks are allotted to any other company, the cost incurred towards exploration and GR at these mines would be reimbursed from the new allocatee through MOC as per past experience of the Company. Keeping in view the above, an amount of ₹ **124.00 crore** (31 March 2021: ₹ 121.57 crore) has been accounted as recoverable and included under Note-18- 'Current assets -Other financial assets'.

As per the Coal Block Development and Production Agreement (CBDPA) signed by the Company with MOC in respect of these blocks, the performance security (BG) submitted by the Company shall be released in the event of termination of agreement by the Company upon submitting the mine plan and the Company has requested for release of the same. Further, MoP has requested MoC to consider the request of NTPC for surrendering the coal blocks without appropriation of Performance Securities.

(ii) **Mandakini**

After approval of Mining Plan of Mandakini-B coal block by MoC, mine development activities at Mandakini-B coal block could not be proceeded due to the resistance of the villagers which was beyond control of the Company. Considering the above, the Company has approached Ministry of Coal on 26 December 2020 for surrendering these blocks, with a request for consideration of reimbursement of expenses incurred by the Company. The Company expects that whenever these two coal blocks are allotted to any other company, the cost incurred towards exploration and GR would be reimbursed from the new allocatee through MOC as per past experience of the Company. Keeping in view the above, an amount of ₹ **53.93 crore** (31 March 2022: ₹ 53.93 crore) has been accounted as recoverable and included under Note-18 'Current assets-Other financial assets'.

MoC has encashed the BG (Performance Security) of ₹ 168.00 crore on 22 March 2021 citing delay in achieving of the milestones of efficiency parameters which were beyond the control of the Company. The Company approached MoP on 30 March 2021 to take up the matter in Alternate Mechanism for Resolution of CPSE Disputes (AMRCD). Pending resolution of the dispute through AMRCD, the amount of BG encashed by MOC has been disclosed as recoverable from MOC under 'Claims recoverable' in Note-18-'Current assets-Other financial assets' . This issue is regularly being taken up with MoC by the Company and MoP for early settlement.

(iii) The Coal Block Development and Production Agreement (CBDPA) signed by the Company with MOC is silent about the recoverability of expenditure incurred in case of termination of the CBDPA. Moreover, the fresh auction / allocation of mines by MOC may also take substantial time and is dependent upon the coal demand-supply scenario of the country in the days to come. Considering the uncertainty involved on the recoverability of the amounts in respect of Banai, Bhalumunda and Mandakini-B coal blocks , the amount disclosed as claims recoverable has since been fully provided for. Further, the balance expenditure incurred at these blocks which may not be recovered has also been provided for fully (Refer Note 5-'Non-current assets - Intangible assets under development').

b) Badam

In the year 2018-19, the Company took over Barauni Thermal Power Station from Bihar State Power Generation Company Limited (BSPGCL). Ministry of Coal, Government of India has transferred Badam coal mine, the linked coal mine of Barauni TPS. Environment Clearance for the project is available. Stage-I Forest Clearance was transferred to the Company from BSPGCL on 14 January 2020. Application for Stage-II forest clearance is pending with Forest Department, Govt. of Jharkhand. Mining lease is pending with Govt. of Jharkhand and tendering process for appointment of MDO is in progress."

c) Assets and liabilities of coal exploration and evaluation activities are as under:

₹ Crore

Particulars	**As at 31 March 2022**	As at 31 March 2021
Assets	**134.04**	108.38
Liabilities	**1.67**	4.07

For the year ended 31 March 2022 and 31 March 2021, there are no income, expenses and operating cash flows from coal exploration activities. Cash flows from investing activities for the year ended 31 March 2022 is ₹ **28.06 crore** (31 March 2021: ₹ 23.20 crore)

66. Disclosure as per Ind AS 108 'Operating segments'

A. General Information

The Group has two reportable segments, as described below, which are the Group's strategic business units. The strategic business units offer different products and services, and are managed separately because they require different technology and marketing strategies. For each of the strategic business units, the Chief Operating Decision Maker (CODM) reviews internal management reports on at least a quarterly basis.

The following summary describes the operations in each of the Group's reportable segments:

Generation of energy: Generation and sale of bulk power to State Power Utilities.

Others: It includes providing consultancy, project management & supervision, energy trading, oil and gas exploration and coal mining.

Information regarding the results of each reportable segment is included below. Performance is measured based on segment profit before income tax, as included in the internal management reports that are reviewed by the Board of Directors. Segment profit is used to measure performance as management believes that such information is the most relevant in evaluating the results of certain segments relative to other entities that operate within these industries.

Transfer prices between operating segments are on an arm's length basis in a manner similar to transactions with third parties.

B. **Information about reportable segments and reconciliations to amounts reflected in the financial statements:**

₹ Crore

Particulars	Generation of energy		Others		Inter-segment eliminations		Total	
	For the year ended		For the year ended		For the year ended		For the year ended	
	31 March 2022	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021
Segment revenue								
Revenue from external customers*	**1,23,694.54**	1,03,946.32	**7,569.60**	7,321.56	**-**	-	**1,31,264.14**	1,11,267.88
Inter-segment revenue	**2,030.52**	1,879.21	**2,516.52**	1,600.28	**(4,547.04)**	(3,479.49)	**-**	-
	1,25,725.06	1,05,825.53	**10,086.12**	8,921.84	**(4,547.04)**	(3,479.49)	**1,31,264.14**	1,11,267.88
Other income	**3,316.75**	4,052.71	**160.68**	116.66	**(7.88)**	(7.02)	**3,469.55**	4,162.35
	1,29,041.81	1,09,878.24	**10,246.80**	9,038.50	**(4,554.92)**	(3,486.51)	**1,34,733.69**	1,15,430.23
Unallocated corporate interest and other income							**260.62**	116.60
Total	**1,29,041.81**	1,09,878.24	**10,246.80**	9,038.50	**(4,554.92)**	(3,486.51)	**1,34,994.31**	1,15,546.83
Segment result (including net movements in regulatory deferral account balances)**	**29,850.29**	27,871.73	**676.60**	100.83	**-**	-	**30,526.89**	27,972.56
Unallocated corporate interest and other income							**260.62**	116.60
Unallocated corporate expenses, interest and finance charges							**9,496.26**	9,483.41
Exceptional items							**-**	1,512.19
Profit before share of net profits of investments accounted for using equity method and tax							**21,291.25**	17,093.56
Add: Share of net profits of joint ventures accounted for using equity method							**1,020.13**	683.87
Profit before tax							**22,311.38**	17,777.43
Income tax expense (including tax on net movements in regulatory deferral account balances)							**5,351.09**	2,808.03
Profit after tax							**16,960.29**	14,969.40

₹ Crore

Particulars	Generation of energy		Others		Total	
	For the year ended		For the year ended		For the year ended	
	31 March 2022	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021
Depreciation, amortisation and impairment expense	**13,594.96**	12,288.85	**38.32**	23.21	**13,633.28**	12,312.06
Non-cash expenses other than depreciation and amortisation	**359.97**	478.28	**10.58**	391.13	**370.55**	869.41
Capital expenditure	**28,682.77**	36,774.53	**1,195.16**	255.13	**29,877.93**	37,029.66

₹ Crore

Particulars	Generation of energy		Others		Inter-segment eliminations		Total	
	For the year ended		For the year ended		For the year ended		For the year ended	
	31 March 2022	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021
Segment assets	**3,86,431.23**	3,68,311.31	**13,613.66**	12,788.14	**(347.32)**	(391.88)	**3,99,697.57**	3,80,707.57
Unallocated corporate and other assets							**16,819.16**	18,180.07
Total assets	**3,86,431.23**	3,68,311.31	**13,613.66**	12,788.14	**(347.32)**	(391.88)	**4,16,516.73**	3,98,887.64
Segment liabilities	**50,524.29**	44,880.69	**6,579.64**	6,230.86	**(347.32)**	(391.88)	**56,756.61**	50,719.67
Unallocated corporate and other liabilities							**2,24,386.38**	2,22,429.50
Total liabilities	**50,524.29**	44,880.69	**6,579.64**	6,230.86	**(347.32)**	(391.88)	**2,81,142.99**	2,73,149.17

* Generation segment includes ₹ **2,033.82 crore** (31 March 2021: ₹ 1,185.02 crore) for sales related to earlier years.

** Generation segment result would have been ₹ **27,820.62 crore** (31 March 2021: ₹ 26,686.71 crore) without including the sales related to earlier years.

Reconciliation of Assets and Liabilities

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Segment assets (A)	**3,99,697.57**	3,80,707.57
Unallocated corporate and other assets:		
Non current investments	**10,626.24**	10,089.26
Current investments	**-**	499.99
Cash and cash equivalents and other bank balances	**1,302.75**	1,076.77
Other current assets	**64.14**	117.36
Advance tax (net of provision)	**2,813.85**	4,112.24
Other unallocable assets	**2,012.18**	2,284.45
Total unallocated corporate and other assets (B)	**16,819.16**	18,180.07
Total Assets (A+B)	**4,16,516.73**	3,98,887.64
Segment liabilities (A)	**56,756.61**	50,719.67
Unallocated corporate and other liabilities:		
Non current borrowings	**2,03,678.06**	1,80,536.21
Deferred tax liability	**10,951.67**	9,887.82
Borrowings current	**8,530.47**	28,774.17
Other unallocable liabilities	**1,226.18**	3,231.30
Total unallocated corporate and other liabilities (B)	**2,24,386.38**	2,22,429.50
Total Liabilities (A+B)	**2,81,142.99**	2,73,149.17

Reconciliation of profit after tax

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Segment result (including net movements in regulatory deferral account balances) (A)	**30,526.89**	27,972.56
Unallocated corporate interest and other income (B)		
Other Income	**260.62**	116.60
Sub-total (B)	**260.62**	116.60
Unallocated corporate expenses, interest and finance costs (C)		
Finance costs	**9,315.98**	9,224.14
Other expenses	**180.28**	259.27
Sub total (C)	**9,496.26**	9,483.41
Profit before tax (including net movements in regulatory deferral account balances) [D=(A+B-C)]	**21,291.25**	18,605.75
Exceptional items	**-**	1,512.19
Share of net profits of joint ventures accounted for using equity method (E)	**1,020.13**	683.87
Profit before tax (F=D+E)	**22,311.38**	17,777.43
Income tax expense (including tax on net movements in regulatory deferral account balances) (G)	**5,351.09**	2,808.03
Profit after tax (H=F-G)	**16,960.29**	14,969.40

The operations of the Group are mainly carried out within the country and therefore there is no reportable geographical segment.

C. Information about geographical areas

Segment revenue - Others include export sale of energy through trading amounting to ₹ **1,241.71 crore** (31 March 2021: ₹ 1,491.77 crore) to Nepal and Bangladesh by M/s NVVN Ltd., a subsidiary of the Company.

D. Information about major customers

Revenue from customers under 'Generation of energy' segment which is more than 10% of the Group's total revenues is Nil.

67. Financial Risk Management

The Group's principal financial liabilities comprise loans and borrowings in foreign as well as domestic currency, trade payables and other payables. The main purpose of these financial liabilities is to finance the Group's operations. The Group's principal financial assets include loans, trade and other receivables, and cash and short-term deposits that derive directly from its operations. The Group also holds equity investments and enter into derivative contracts such as forward contracts, options and swaps. Derivatives are used exclusively for hedging purposes and not as trading or speculative instruments.

The Group is exposed to the following risks from its use of financial instruments:
- Credit risk
- Liquidity risk
- Market risk

This note presents information about the Group's exposure to each of the above risks, the Group's objectives, policies and processes for measuring and managing risk.

Risk	Exposure arising from	Measurement	Management
Credit Risk	Trade receivables, unbilled revenue, derivative financial instruments, financial assets measured at amortised cost and cash and cash equivalents.	Ageing analysis Credit ratings	Credit limits, letters of credit and diversification of bank deposits.
Liquidity risk	Borrowings and other liabilities	Rolling cash flows forecast	Availability of committed credit lines and borrowing facilities
Market risk – foreign currency risk	- Future commercial transactions - Recognised financial assets and liabilities not denominated in Indian rupee (₹)	Cash flow forecasting	Forward foreign exchange contracts Foreign currency options Currency and interest rate swaps and principal only swaps
Market risk – interest rate risk	Non-current borrowings at variable rates	Sensitivity analysis	Different kinds of loan arrangements with varied terms (e.g. fixed rate loans, floating rate loans, rupee term loans, foreign currency loans, etc.)

Risk management framework

The Group's activities make it susceptible to various risks. The Group has taken adequate measures to address such concerns by developing adequate systems and practices.

In order to institutionalize the risk management in the Group, an elaborate Enterprise Risk Management (ERM) framework has been developed. The Board of Directors has overall responsibility for the establishment and oversight of the parent company's risk management framework. As a part of the implementation of ERM framework, a 'Risk Management Committee (RMC)' with functional directors as its members has been entrusted with the responsibility to identify and review the risks, formulate action plans and strategies to mitigate risks on short-term as well as long-term basis.

The RMC meets every quarter to deliberate on strategies. Risks are regularly monitored through reporting of key performance indicators. Outcomes of RMC are submitted for information of the Board of Directors.

Credit risk

Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations resulting in a financial loss to the Group. Credit risk arises principally from trade receivables, unbilled revenue, loans, cash and cash equivalents and deposits with banks and financial institutions.

Trade receivables & unbilled revenue

The Group primarily sells electricity to bulk customers comprising mainly state utilities owned by State Governments. The Company has a robust payment security mechanism in the form of Letters of Credit (LC) backed by the Tri-Partite Agreement (TPA). The TPAs were signed among the Govt. of India, RBI and the individual State Governments subsequent to the issuance of the One Time Settlement Scheme of SEBs dues during 2001-02 by the GOI, which were valid till October 2016. Govt of India subsequently approved the extension of these TPAs for another period of 10 years. Most of the States have signed these extended TPAs and signing is in progress for the balance states.

CERC Tariff Regulations allow payment against monthly bill towards energy charges within a period of forty five days from the date of bill and levy of surcharge @ 18% p.a. on delayed payment beyond forty five days. On 22 February 2021, Ministry of power has issued a notification and accordingly Late Payment Surcharge (LPSC) shall be payable on the payment outstanding after the due date at the base rate of LPSC applicable for the period for the first month of default and the rate of LPSC for the successive months of default shall increase by 0.5 percent for every month of delay provided that the LPSC shall not be more than 3 percent higher than the base rate at any time.

A default occurs when in the view of management there is no significant possibility of recovery of receivables after considering all available options for recovery.

As per the provisions of the TPA, the customers are required to establish LC covering 105% of the average monthly billing of the Company for last 12 months. The TPA also provided that if there is any default in payment of current dues by any State Utility the outstanding dues can be deducted from the State's RBI account and paid to the concerned CPSU. There is also provision of regulation of power by the Group in case of non payment of dues and non-establishment of LC.

In addition to above, MoP vide its communications dated 28 June 2019 and subsequent clarifications, further emphasised on ensuring availability of suitable payment security mechanism to be maintained by DISCOMs. Further, to liquidate the outstanding dues of the discoms towards the generating companies, GOI has announced a Scheme for offering ₹ 90,000 crore in soft loans under the Aatmanirbhar Bharat package. The Discoms are expected to take the benefit of the this Scheme and pay their outstanding dues.

These payment security mechanisms have served the Group well over the years. The Group has not experienced any significant impairment losses in respect of trade receivables in the past years. Since the Group has its power stations as well as customers spread over various states of India, geographically there is no concentration of credit risk.

Unbilled revenue primarily relates to the Group's right to consideration for sale effected but not billed at the reporting date and have substantially the same risk characteristics as the trade receivables for the same type of contracts.

Investments

The Group limits its exposure to credit risk by investing in only Government of India Securities, State Government Securities and other counterparties have a high credit rating. The management actively monitors the interest rate and maturity period of these investments. The Group does not expect the counterparty to fail to meet its obligations, and has not experienced any significant impairment losses in respect of any of the investments.

Loans

The Group has given loans to employees, joint venture companies and other parties. Loans to the employee are secured against the mortgage of the house properties and hypothecation of vehicles for which such loans have been given in line with the policies of the Company. The loan provided to group companies are collectible in full and risk of default is negligible. Loan to APIIC is against a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

Cash and cash equivalents

The Group held cash and cash equivalents of ₹ **728.45 crore** (31 March 2021: ₹ 950.02 crore). The cash and cash equivalents are held with banks with high rating.

Deposits with banks and financial institutions

The Group held deposits with banks and financial institutions of ₹ **3,729.63 crore** (31 March 2021: ₹ 3,437.78 crore). In order to manage the risk, Group places deposits with only high rated banks/institutions.

(i) Exposure to credit risk

The carrying amount of financial assets represents the maximum credit exposure. The maximum exposure to credit risk at the reporting date was:

₹ Crore

Particulars	**As at 31 March 2022**	As at 31 March 2021
Financial assets for which loss allowance is measured using 12 months Expected Credit Losses (ECL)		
Non-current investments	**104.10**	97.08
Non-current loans	**559.81**	554.97
Other non-current financial assets	**1,017.98**	1,092.84
Current investments	**-**	499.99
Cash and cash equivalents	**728.45**	950.02
Bank balances other than cash and cash equivalents	**3,729.63**	3,437.78
Current loans	**270.37**	259.13
Other current financial assets*	**1,076.03**	1,036.96
Total (A)	**7,486.37**	7,928.77

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Financial assets for which loss allowance is measured using Life time Expected Credit Losses (ECL) as per simplified approach		
Trade receivables including unbilled revenue	**27,342.08**	28,199.83
Contract Assets	**5,299.22**	3,393.97
Total (B)	**32,641.30**	31,593.80
Total (A+B)	**40,127.67**	39,522.57

* Excluding Contract Assets (Refer Note 18)

(ii) Provision for expected credit losses

(a) Financial assets for which loss allowance is measured using 12 month expected credit losses

The Group has assets where the counter-parties have sufficient capacity to meet the obligations and where the risk of default is very low. Accordingly, no loss allowance for impairment has been recognised.

(b) Financial assets for which loss allowance is measured using life time expected credit losses as per simplified approach

The Group has customers (State government utilities) with capacity to meet the obligations and therefore the risk of default is negligible or nil. Further, management believes that the unimpaired amounts that are past due by more than 30 days are still collectible in full, based on historical payment behaviour and extensive analysis of customer credit risk. Hence, no impairment loss has been recognised during the reporting periods in respect of trade receivables and unbilled revenue.

(iii) Ageing analysis of trade receivables

Refer Note 14(g)

(iv) Reconciliation of impairment loss provisions

The movement in the allowance for impairment in respect of financial assets during the year was as follows:

₹ Crore

Particulars	Trade receivables	Advances	Claims recoverable	Total
Balance as at 1 April 2020	188.57	0.14	0.12	188.83
Impairment loss recognised	-	-	343.51	343.51
Amounts written off / written back / adjustment during the period	(358.27)	0.03	0.01	(358.23)
Balance as at 31 March 2021	546.84	0.11	343.62	890.57
Impairment loss recognised	-	-	3.16	3.16
Amounts written off / written back / adjustment during the period	67.39	-	-	67.39
Balance as at 31 March 2022	**479.45**	**0.11**	**346.78**	**826.34**

Based on historic default rates, the Group believes that no impairment allowance is necessary in respect of any other financial assets as the amounts of such allowances are not significant.

Liquidity risk

Liquidity risk is the risk that the Group will encounter difficulty in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Group's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Group's reputation.

The Group has an appropriate liquidity risk management framework for the management of short, medium and long-term funding and liquidity management requirements. The Group manages liquidity risk by maintaining adequate cash reserves, banking facilities and reserve borrowing facilities by continuously monitoring forecast and actual cash flows and matching the maturity profiles of financial assets and liabilities.

The Group's Treasury department is responsible for managing the short-term and long-term liquidity requirements of the Group. Short-term liquidity situation is reviewed daily by the Treasury department. The Board of directors has established policies to manage liquidity risk and the Group's Treasury department operates in line with such policies. Any breaches of these policies are reported to the Board of Directors. Long-term liquidity position is reviewed on a regular basis by the Board of Directors and appropriate decisions are taken according to the situation.

Typically, the Group ensures that it has sufficient cash on demand to meet expected operational expenses for a month, including the servicing of financial obligations, this excludes the potential impact of extreme circumstances that cannot reasonably be predicted, such as natural disasters.

As part of the CERC Regulations, tariff inter-alia includes recovery of capital cost. The tariff regulations also provide for recovery of energy charges, operations and maintenance expenses and interest on normative working capital requirements. Since billing to the customers are generally on a monthly basis, the Group maintains sufficient liquidity to service financial obligations and to meet its operational requirements.

(i) Financing arrangements

The Group had access to the following undrawn borrowing facilities at the end of the reporting period:

₹ Crore

Particulars	31 March 2022	31 March 2021
Floating-rate borrowings		
Cash credit	**4,181.62**	5,230.17
Term loans	**18,933.83**	18,907.83
Foreign currency loans	**8,841.01**	7,534.04
Total	**31,956.46**	31,672.04

(ii) Maturities of financial liabilities

The following are the contractual maturities of derivative and non-derivative financial liabilities, based on contractual cash flows:

31 March 2022 ₹ Crore

Contractual maturities of financial liabilities	Contractual cash flows					
	3 months or less	3-12 months	1-2 years	2-5 years	More than 5 years	Total
Non-derivative financial liabilities						
Secured bonds	3,569.09	4,502.88	6,851.40	12,275.57	21,259.49	**48,458.43**
Unsecured bonds	535.27	302.68	4,374.10	4,000.00	11,871.00	**21,083.05**
Rupee term loans from banks	1,035.67	4,385.66	5,973.89	23,150.80	45,868.07	**80,414.09**
Rupee term loans from others	70.00	357.27	428.78	2,526.06	6,451.28	**9,833.39**
Lease obligations	155.84	91.16	79.63	226.88	2,631.83	**3,185.34**
Foreign currency notes	2,092.01	3,856.50	-	15,355.85	3,053.20	**24,357.56**
Secured foreign currency loans from banks	19.55	58.31	58.34	-	-	**136.20**
Unsecured foreign currency loans from banks and financial institutions	184.47	554.68	867.30	4,129.55	11,200.31	**16,936.31**
Unsecured foreign currency loans (guaranteed by GOI)	65.77	244.34	300.03	898.16	1,256.17	**2,764.47**
Commercial paper, cash credit and short term loans	7,819.80	754.41	-	-	-	**8,574.21**
Trade and other payables	25,158.80	7,733.04	1,899.37	2,491.33	135.76	**37,418.30**

31 March 2021 ₹ Crore

Contractual maturities of financial liabilities	Contractual cash flows					
	3 months or less	3-12 months	1-2 years	2-5 years	More than 5 years	Total
Non-derivative financial liabilities						
Secured bonds	830.71	2,216.01	6,703.37	14,902.47	24,430.95	49,083.51
Unsecured bonds	274.73	170.57	-	8,374.10	3,500.00	12,319.40
Rupee term loans from banks	838.74	4,388.13	4,760.92	18,545.36	45,468.37	74,001.52
Rupee term loans from others	190.71	821.32	885.58	2,450.81	10,213.60	14,562.02
Lease obligations	143.40	57.96	74.00	175.18	2,237.38	2,687.92
Foreign currency notes	182.29	4,841.95	5,611.00	10,738.70	7,326.40	28,700.34
Secured foreign currency loans from banks	18.85	56.53	75.39	56.57	-	207.34
Unsecured foreign currency loans from banks and financial institutions	161.41	1,026.29	686.98	2,088.80	11,376.01	15,339.49
Unsecured foreign currency loans (guaranteed by GOI)	26.50	290.52	310.68	932.01	1,546.83	3,106.54
Commercial paper, cash credit and short term loans	11,604.88	4,500.00	-	-	-	16,104.88
Trade and other payables	20,267.74	6,905.31	1,466.81	1,822.34	2,068.78	32,530.98

Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates and interest rates will affect the Group's income. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimising the return.

The Board of directors is responsible for setting up of policies and procedures to manage market risks of the Group. All such transactions are carried out within the guidelines set by the risk management committee.

Currency risk

The Group is exposed to foreign currency risk on certain transactions that are denominated in a currency other than entity's functional currency, hence exposure to exchange rate fluctuations arises. The risk is that the functional currency value of cash flows will vary as a result of movements in exchange rates.

The currency profile of financial assets and financial liabilities as at 31 March 2022 and 31 March 2021 are as below:

31 March 2022 **₹ Crore**

Particulars	USD	EURO	JPY	Others	Total
Financial assets					
Trade and other receivables	0.33	-	-	-	**0.33**
Cash and cash equivalents	0.01	-	-	0.02	**0.03**
Other financial assets	-	0.70	-	-	**0.70**
Total	**0.34**	**0.70**	**-**	**0.02**	**1.06**
Financial liabilities					
Foreign currency bonds	18,015.88	4,307.65	-	2,034.03*	**24,357.56**
Unsecured foreign currency loans from banks and financial institutions	3,528.07	2,853.83	13,314.62		**19,696.52**
Secured foreign currency loans from banks	136.20	-	-	-	**136.20**
Trade payables and other financial liabilities	2,961.37	1,481.53	151.64	30.38	**4,624.92**
Total	**24,641.52**	**8,643.01**	**13,466.26**	**2,064.41**	**48,815.20**

* ₹ 1,908.00 crore - Rupee denominated USD settled Green Masala Bonds and interest accrued thereon.

31 March 2021 ₹ Crore

Particulars	USD	EURO	JPY	Others	Total
Financial assets					
Trade and other receivables	0.23	-	-	-	0.23
Cash and cash equivalents	0.40	-	-	0.04	0.44
Other financial assets	1.41	0.01	0.83	0.53	2.78
Total	2.04	0.01	0.83	0.57	3.45
Financial liabilities					
Foreign currency bonds	21,227.65	4,384.00	-	3,088.69 *	28,700.34
Unsecured foreign currency loans from banks and financial institutions	4,372.12	1,253.24	12,820.67	-	18,446.03
Secured foreign currency loans from banks	207.34	-	-	-	207.34
Trade payables and other financial liabilities	1,962.03	964.32	67.85	8.11	3,002.31
Total	27,769.14	6,601.56	12,888.52	3,096.80	50,356.02

* ₹ 1,007.00 crore - Rupee denominated USD settled Green Masala Bonds and ₹ 1,908.00 crore-Rupee denominated USD settled Masala bonds and interest accrued thereon.

The gain/(loss) on account of exchange rate variations on all foreign currency loans and foreign currency monetary items (up to COD) is recoverable from beneficiaries. Therefore, currency risk in respect of such exposure would not be very significant.

Sensitivity analysis

Since the impact of strengthening or weakening of INR against USD, Euro, JPY and other currencies on the statement of profit and loss would not be very significant; therefore, sensitivity analysis for currency risk is not disclosed.

Embedded derivatives

Certain contracts of the Group for construction of power plants with vendors awarded through International Competitive Bidding are denominated in a third currency i.e. a currency which is not the functional currency of any of the parties to the contract. The Group has awarded the above contracts without any intention to enter into any derivative contract or to leverage/ take position and without any option/intention to net settle at any point of time during the tenure of the contract. The Group has not separately recognised the foreign currency embedded derivative and has not designated the entire hybrid contract at fair value through profit or loss considering the same as impracticable and absence of a reliable valuation model.

Interest rate risk

The Group is exposed to interest rate risk arising mainly from non-current borrowings with floating interest rates. The Group is exposed to interest rate risk because the cash flows associated with floating rate borrowings will fluctuate with changes in interest rates. The Group manages the interest rate risks by entering into different kinds of loan arrangements with varied terms (e.g. fixed rate loans, floating rate loans, rupee term loans, foreign currency loans, etc.).

At the reporting date the interest rate profile of the Group's interest-bearing financial instruments is as follows:

₹ Crore

Particulars	**31 March 2022**	31 March 2021
Financial Assets:		
Fixed-rate instruments		
Loan to related parties	**20.53**	20.52
Loans to others	**22.46**	23.36
Bank deposits	**3,180.71**	3,391.19
Total	**3,223.70**	3,435.07

₹ Crore

Particulars	31 March 2022	31 March 2021
Financial Liabilities:		
Fixed-rate instruments		
Bonds	**69,536.88**	61,463.93
Foreign currency loans/notes*	**28,023.45**	33,138.86
Rupee term loans	**506.30**	375.86
Commercial paper	**6,631.26**	12,859.74
Lease obligations	**1,151.30**	897.49
Total (A)	**1,05,849.19**	1,08,735.88
Variable-rate instruments		
Foreign currency loans/notes	**15,870.97**	13,922.12
Rupee term loans	**89,904.79**	86,688.29
Cash credit and short term loans	**1,899.21**	3,104.88
Total (B)	**1,07,674.97**	1,03,715.29
Total (A+B)	**2,13,524.16**	2,12,451.17

* Includes ₹ 1,908.00 crore Rupee denominated USD settled Masala bonds (31 March 2021: includes ₹ 1,007.00 crore Rupee denominated USD settled Green Masala bonds and ₹ 1,908.00 crore Rupee denominated USD settled Masala bonds).

Fair value sensitivity analysis for fixed-rate instruments

The Group's fixed rate instruments are carried at amortised cost. They are therefore not subject to interest rate risk, since neither the carrying amount nor the future cash flows will fluctuate because of a change in market interest rates.

Cash flow sensitivity analysis for variable-rate instruments

A change of 50 basis points in interest rates at the reporting date would have increased (decreased) profit or loss by the amounts shown below. This analysis assumes that all other variables, in particular foreign currency rates, remain constant. The analysis is performed on the same basis for the previous year.

₹ Crore

	Profit or loss	
	50 bp increase	**50 bp decrease**
31 March 2022		
Foreign currency loans/notes	**(68.98)**	**68.98**
Rupee term loans	**(456.46)**	**456.46**
Cash credit	**(2.55)**	**2.55**
	(527.99)	**527.99**
31 March 2021		
Foreign currency loans/notes	(56.51)	56.51
Rupee term loans	(451.76)	451.76
Cash credit	(5.99)	5.99
	(514.26)	514.26

Of the above mentioned increase in the interest expense, an amount of ₹ **142.26 crore** (31 March 2021: ₹ 128.85 crore) is expected to be capitalised and recovered from beneficiaries through tariff.

Change in interest benchmarks

As part of the IBOR transition, the Company has replaced the JPY LIBOR with compounded TONA for all financial instruments, requiring the renegotiation of financing contracts. Changes to contractual cash flows as a result of replacing the existing benchmark interest rate on an economically equivalent basis as a direct consequence of the interest rate benchmark reform are accounted for by adjusting the effective interest rate without recognizing any direct modification gains or losses. There is no material impact on the change of the benchmark rate. The Company also plans to replace the USD LIBOR with the Term SOFR before the end of its publication on June 30, 2023. (Note: IBOR-Inter Bank Offered Rates, LIBOR-London Interbank Offered Rate, TONA-Tokyo Overnight Average Rate, SOFR – Secured Overnight Financing Rate)

68. Fair Value Measurements

(a) Financial instruments by category

₹ Crore

Particulars	31 March 2022			31 March 2021		
	FVTPL	FVTOCI	Amortised Cost	FVTPL	FVTOCI	Amortised Cost
Financial assets						
Investments						
- Equity instruments	3.78	100.32	-	3.78	93.30	-
- Mutual funds	-	-	-	499.99	-	-
Trade Receivables	-	-	27,342.08	-	-	28,199.83
Loans	-	-	830.18	-	-	814.10
Cash and cash equivalents	-	-	728.45	-	-	950.02
Other bank balances	-	-	3,729.63	-	-	3,437.78
Finance lease receivables	-	-	355.49	-	-	437.77
Other financial assets	-	-	7,037.74	-	-	5,086.00
Total	3.78	100.32	40,023.57	503.77	93.30	38,925.50
Financial liabilities						
Borrowings	-	-	2,03,678.06	-	-	1,95,589.08
Commercial paper and cash credit	-	-	8,530.47	-	-	15,964.62
Lease obligations	-	-	1,151.30	-	-	897.49
Trade payables	-	-	11,361.96	-	-	8,806.41
Payable for capital expenditure	-	-	21,360.32	-	-	19,353.07
Other financial liabilities	-	-	4,594.11	-	-	3,780.33
Total	-	-	2,50,676.22	-	-	2,44,391.00

(b) Fair value hierarchy

This section explains the judgements and estimates made in determining the fair values of the financial instruments that are (a) recognised and measured at fair value and (b) measured at amortised cost and for which fair values are disclosed in the financial statements. To provide an indication about the reliability of the inputs used in determining fair value, the Group has classified its financial instruments into the three levels prescribed under the accounting standard. An explanation of each level follows underneath the table.

₹ Crore

Financial assets and liabilities measured at fair value- recurring fair value measurement as at 31 March 2022	Level 1	Level 2	Level 3	Total
Financial assets:				
Investments in quoted equity instruments - PTC India Ltd.	98.70	-	-	**98.70**
Investments in unquoted equity instruments	-	-	5.40	**5.40**
	98.70	-	**5.40**	**104.10**

₹ Crore

Financial assets and liabilities measured at fair value- recurring fair value measurement as at 31 March 2021	Level 1	Level 2	Level 3	Total
Financial assets:				
Investments in quoted equity instruments - PTC India Ltd.	93.30	-	-	93.30
Investments in mutual funds	-	499.99	-	499.99
Investments in unquoted equity instruments	-	-	3.78	3.78
	93.30	499.99	3.78	597.07

The Group has an established control framework with respect to the measurement of fair values. This includes a valuation team that has overall responsibility for overseeing all significant fair value measurements and reports directly to the Director (Finance). The valuation team regularly reviews significant unobservable inputs and valuation adjustments. If third party information, such as broker quotes or pricing services, is used to measure fair values, then the valuation team assesses the evidence obtained from the third parties to support the conclusion that these valuations meet the requirements of Ind AS, including the level in the fair value hierarchy in which the valuations should be classified. Significant valuation issues are reported to the audit committee.

Fair values are categorised into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows:

Level 1: Level 1 hierarchy includes financial instruments measured using quoted prices. This includes investments in quoted equity instruments. Quoted equity instruments are valued using quoted prices on national stock exchange.

Level 2: The fair value of financial instruments that are not traded in an active market is determined using valuation techniques which maximise the use of observable market data and rely as little as possible on entity specific estimates. If all significant inputs required to fair value an instrument are observable, the instrument is included in level 2. This level includes mutual funds which are valued using the closing NAV.

Level 3: If one or more of the significant inputs is not based on observable market data, the instrument is included in level 3. The fair value of financial assets and liabilities included in Level 3 is determined in accordance with generally accepted pricing models based on discounted cash flow analysis using prices from prevailing market transactions and dealer quotes of similar instruments.

There have been no transfers in either direction for the years ended 31 March 2022 and 31 March 2021.

(c) Valuation technique used to determine fair value:

Specific valuation techniques used to fair value of financial instruments include:

i) For financial instruments other than at ii), iii) and iv) - the use of quoted market prices.

ii) For investments in mutual funds - Closing NAV is used.

iii) For financial liabilities (vendor liabilities, debentures/bonds, foreign currency notes, domestic/foreign currency loans): Discounted cash flow; appropriate market borrowing rate of the entity as of each balance sheet date used for discounting.

iv) For financial assets (employee loans) - Discounted cash flow; appropriate market rate (SBI lending rate) as of each balance sheet date used for discounting.

(d) Fair value of financial assets and liabilities measured at amortised cost

₹ Crore

Particulars	**Level**	**As at 31 March 2022**		As at 31 March 2021	
		Carrying amount	**Fair value**	Carrying amount	Fair value
Financial assets					
Loans	3	**830.18**	**830.18**	814.10	822.00
Finance lease receivables	3	**355.49**	**355.49**	437.77	437.77
Claims recoverable	3	**915.05**	**915.05**	742.10	742.10

₹ Crore

Particulars	Level	As at 31 March 2022		As at 31 March 2021	
		Carrying amount	Fair value	Carrying amount	Fair value
Trade receivables	3	27,342.08	27,342.08	28,199.83	28,199.83
Cash and cash equivalents	1	728.45	728.45	950.02	950.02
Bank balances other than cash and cash equivalents	1	3,729.63	3,729.63	3,437.78	3,437.78
Other financial assets	3	6,122.69	6,122.69	4,343.90	4,343.90
Total		40,023.57	40,023.57	38,925.50	38,933.40
Financial liabilities					
Bonds/Debentures	1	8,820.73	9,810.68	7,701.05	8,103.59
	2	30,220.36	33,011.39	33,640.24	37,817.73
	3	30,495.79	33,220.19	20,122.64	22,609.68
Foreign currency notes	2	17,984.99	18,305.90	20,334.80	21,780.49
	3	6,328.53	6,446.15	8,308.56	8,933.60
Foreign currency loans	3	19,580.90	19,580.90	18,417.64	18,734.07
Rupee term loans	2	11,037.33	10,748.21	5,892.04	6,281.47
	3	79,209.43	79,617.56	81,172.11	82,265.90
Lease Obligations	3	1,151.30	1,151.30	897.49	897.49
Borrowings - current	1	8,530.47	8,530.47	15,964.62	15,964.62
Trade payables & payable for capital expenditure	2	8.19	7.89	27.84	29.22
	3	32,714.09	32,763.96	28,131.64	28,014.30
Other financial liabilities	3	4,594.11	4,594.11	3,780.33	3,780.33
Total		2,50,676.22	2,57,788.71	2,44,391.00	2,55,212.49

The carrying amounts of current trade receivables, current trade payables, payable for capital expenditure, cash and cash equivalents and other financial assets and liabilities are considered to be the same as their fair values, due to their short-term nature.

The carrying values for finance lease receivables approximates the fair value as these are periodically evaluated based on credit worthiness of customer and allowance for estimated losses is recorded based on this evaluation. Also, carrying amount of claims recoverable approximates its fair value as these are recoverable immediately.

The fair values for loans, borrowings, non-current trade payables and payable for capital expenditure were calculated based on cash flows discounted using a current discount rate. They are classified at respective levels based on availability of quoted prices and inclusion of observable/non observable inputs.

69. Capital Management

The Group's objectives when managing capital are to:

- safeguard its ability to continue as a going concern, so that it can continue to provide returns for shareholders and benefits for other stakeholders and

- maintain an appropriate capital structure of debt and equity.

The Board of Directors has the primary responsibility to maintain a strong capital base and reduce the cost of capital through prudent management in deployment of funds and sourcing by leveraging opportunities in domestic and international financial markets so as to maintain investors, creditors & markets' confidence and to sustain future development of the business. The Board of Directors monitors the return on capital, which the Company defines as returns from operating activities divided by total shareholders' equity deployed in operating activities. The Board of Directors also monitors the level of dividends to equity shareholders in line with the dividend distribution policy of the Company.

Under the terms of major borrowing facilities, the Group is required to comply with the following financial covenants:

(i) Total liability to networth ranges between 2:1 to 3:1.

(ii) Ratio of EBITDA to interest expense shall not at any time be less than 1.75 : 1.

(iii) Debt service coverage ratio not less than 1.10:1 (in case of foreign currency borrowings).

There have been no breaches in the financial covenants of any interest bearing borrowings.

The Group monitors capital, using a medium term view of three to five years, on the basis of a number of financial ratios generally used by industry and by the rating agencies. The Group is not subject to externally imposed capital requirements.

The Group monitors capital using gearing ratio which is net debt divided by total equity. Net debt comprises of non-current and current borrowings less cash and cash equivalent. Equity includes equity share capital and reserves that are managed as capital. The gearing ratio at the end of the reporting period was as follows:

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Borrowings (including interest accrued)	**2,12,208.53**	2,11,553.70
Less: Cash and cash equivalent	**728.45**	950.02
Net Debt	**2,11,480.08**	2,10,603.68
Total Equity	**1,39,134.15**	1,29,262.18
Net Debt to Equity ratio	**1.52**	1.63

70. Disclosure as per Ind AS 112 'Disclosure of Interest in Other Entities'

(a) Subsidiary companies

The Group's subsidiaries at 31 March 2022 are set out below. Unless otherwise stated, they have share capital consisting solely of equity shares that are held directly by the group, and the proportion of ownership interests held equals the voting rights held by the group. The country of incorporation or registration is also their principal place of business.

Name of subsidiary company	Place of business/ country of incorporation	Ownership interest held by the group as at		Ownership interest held by non-controlling interests as at		Principal activities
		31 March 2022	31 March 2021	**31 March 2022**	31 March 2021	
NTPC Electric Supply Company Ltd. (NESCL)	India	**100.00**	100.00	**-**	-	Consultancy & Distribution of energy
NTPC Vidyut Vyapar Nigam Ltd. (NVVN)	India	**100.00**	100.00	**-**	-	Trading of energy
Kanti Bijlee Utpadan Nigam Ltd. (KBUNL)	India	**100.00**	100.00	**-**	-	Generation of energy
Bhartiya Rail Bijlee Company Ltd. (BRBCL)	India	**74.00**	74.00	**26.00**	26.00	Generation of energy
Patratu Vidyut Utpadan Nigam Ltd. (PVUNL)	India	**74.00**	74.00	**26.00**	26.00	Generation of energy
Nabinagar Power Generating Company Ltd. (NPGCL)	India	**100.00**	100.00	**-**	-	Generation of energy
NTPC Mining Ltd. (NML)	India	**100.00**	100.00	**-**	-	Coal mining
THDC India Ltd. (THDCIL)	India	**74.496**	74.496	**25.504**	25.504	Generation of energy
North Eastern Electric Power Corporation Ltd. (NEEPCO)	India	**100.00**	100.00	**-**	-	Generation of energy

Name of subsidiary company	Place of business/ country of incorporation	Ownership interest held by the group as at		Ownership interest held by non-controlling interests as at		Principal activities
		31 March 2022	31 March 2021	**31 March 2022**	31 March 2021	
NTPC EDMC Waste Solutions Private Ltd. (NTPC EDMC)	India	**74.00**	74.00	**26.00**	26.00	Generation of energy
NTPC Renewable Energy Ltd. (NREL)	India	**100.00**	100.00	**-**	-	Generation of energy
Ratnagiri Gas & Power Private Ltd. (RGPPL)	India	**86.49**	86.49	**13.51**	13.51	Generation of energy

(1) The shareholders of the NESCL in its Extra-ordinary General Meeting held on 24 March, 2015, inter alia, approved the proposal for transfer and vesting of all existing operations of NESCL together with all assets and liabilities relating to such operations to NTPC Limited, the Parent Company, with effect from 1 April, 2015. After obtaining the aforesaid approval, an agreement was entered into with the Parent Company to implement such transfer. In pursuance of the above, it does not have any operations w.e.f 1 April 2015.

(2) The Company has incorporated a subsidiary company 'NTPC EDMC Waste Solutions Pvt. Ltd.', in joint venture with East Delhi Municipal Corporation (EDMC) on 1 June 2020, with equity participation of 74:26 respectively to develop and operate state of the art / modern integrated waste management & energy generation facility. The Board of Directors of the Company in its 494th meeting held on 4 February 2021 had accorded approval for transfer of its shareholding in the subsidiary to M/s NVVN Ltd., a wholly owned subsidiary of the Company which is yet to take place.

(3) NTPC Renewable Energy Ltd. has been incorporated on 7 October 2020 as a wholly owned subsidiary of the Company for taking up renewable energy business.

(4) The Company had an investment of ₹ 834.55 crore as at 1 April 2020 in the equity shares of Ratnagiri Gas and Power Private Ltd. (RGPPL), an erstwhile joint venture of the Company. During the previous year, the Company had entered into a tripartite framework agreement with RGPPL and its lenders on 31 December 2020 for settlement of RGPPL's outstanding debt liabilities as per the Composite Resolution Plan. As per the Resolution Plan, the Company has provided inter corporate loan of ₹ 885 crore to RGPPL for settlement of loan with the lenders. Further, 35.47% of equity held by lenders in RGPPL have been transferred to the Company as a part of the Resolution Plan at nominal value. Consequently, the Company's equity shareholding in RGPPL has increased from 25.51% to 60.98% and RGPPL has become a subsidiary company of the Company with effect from 31 December 2020. Further, the Company had an investment of ₹ 139.75 crore as at 1 April 2020 in the equity shares of Konkan LNG Ltd. (KLL), an erstwhile joint venture of the Company. The Company had executed Share Purchase Agreements with GAIL (India) Ltd. on 23 February 2021, for purchase of GAIL's share (25.51%) in RGPPL and Sale of Company's share (14.82%) (on fully dilutive basis) in KLL, at a nominal vaue of ₹ 1/-. Consequently, the Company had exited from KLL after transfer of shares as per the Share Purchase Agreements and the Company's shareholding in RGPPL has become 86.49% with effect from 23 February 2021.

(5) The Board of Directors of the Company in its 479th Board meeting held on 9 November 2019 had accorded approval of Scheme of Amalgamation of Nabinagar Power Generating Co. Limited and Kanti Bijlee Utpadan Nigam Limited (wholly owned subsidiaries of the Company) with the Company under provisions of Section 230-232 of the Companies Act, 2013. The Company has filed application to the Ministry of Corporate Affairs on 5 February, 2021 for approval of Scheme of Amalgamation. The scheme has been approved by the shareholders and Unsecured Creditors of the Company in their respective meetings held on 18 April 2022 as per the Order of the Ministry of Corporate Affairs. Approval of the Scheme by the Ministry of Corporate Affairs is awaited.

(b) Non-controlling interests (NCI)

Set out below is summarised financial information for each subsidiary that has non-controlling interest. The amounts disclosed for each subsidiary are before inter-company eliminations.

Summarised balance sheet ₹ Crore

Particulars	Bhartiya Rail Bijlee Company Ltd.		Patratu Vidyut Utpadan Nigam Ltd.		THDC India Ltd.		NTPC EDMC Waste Solutions Pvt Ltd		Ratnagiri Gas & Power Private Ltd.	
	As at 31 March 2022	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021
Current assets	**1,043.06**	944.30	**488.69**	553.35	**1,824.23**	2,307.21	**0.25**	0.20	**771.23**	864.71
Current liabilities	**1,388.67**	2,616.97	**2,924.71**	1,152.57	**2,441.92**	2,211.54	**3.12**	1.02	**563.99**	576.06
Net current assets/ (liabilities)	**(345.61)**	(1,672.67)	**(2,436.02)**	(599.22)	**(617.69)**	95.67	**(2.87)**	(0.82)	**207.24**	288.65
Non-current assets	**8,152.42**	8,165.57	**8,271.44**	5,030.71	**19,231.59**	16,243.31	**0.11**	0.11	**863.31**	1,036.69
Non-current liabilities	**4,764.67**	3,544.73	**4,158.68**	3,233.68	**7,885.52**	6,038.71	**-**	-	**1,349.14**	1,402.69
Net non-current assets	**3,387.75**	4,620.84	**4,112.76**	1,797.03	**11,346.07**	10,204.60	**0.11**	0.11	**(485.83)**	(366.00)
Regulatory deferral account debit balances	**19.92**	6.56	**-**	-	**98.70**	169.72	**-**	-	**-**	-
Regulatory deferral account credit balances	**144.23**	184.60	**6.35**	0.36	**515.20**	550.22	**-**	-	**-**	-
Net assets	**2,917.83**	2,770.13	**1,670.39**	1,197.45	**10,311.88**	9,919.77	**(2.76)**	(0.71)	**(278.59)**	(77.35)
Accumulated NCI	**758.25**	718.07	**434.30**	311.34	**2,628.24**	2,529.30	**(0.72)**	(0.19)	**(64.52)**	(37.34)

Summarised statement of profit and loss for the year ended ₹ Crore

Particulars	Bhartiya Rail Bijlee Company Ltd.		Patratu Vidyut Utpadan Nigam Ltd.		THDC India Ltd.		NTPC EDMC Waste Solutions Pvt Ltd		Ratnagiri Gas & Power Private Ltd.	
	For the year ended 31 March 2022	For the year ended 31 March 2021	**For the year ended 31 March 2022**	For the year ended 31 March 2021	**For the year ended 31 March 2022**	For the year ended 31 March 2021	**For the year ended 31 March 2022**	For the year ended 31 March 2021	**For the year ended 31 March 2022**	For the year ended 31 March 2021
Total income	**2,607.69**	2,231.48	**0.22**	0.01	**2,227.44**	2,502.01	**0.01**	-	**2,012.98**	358.26
Profit/(loss) for the year	**324.55**	282.48	**(0.03)**	(0.21)	**893.75**	1,092.15	**(2.05)**	(0.91)	**(201.23)**	(125.38)
Other comprehensive income/(expense)	**-**	-	**-**	-	**2.14**	0.31	**-**	-	**-**	-
Total comprehensive income/(expense)	**324.55**	282.48	**(0.03)**	(0.21)	**895.89**	1,092.46	**(2.05)**	(0.91)	**(201.23)**	(125.38)
Profit/(loss) allocated to NCI	**84.38**	73.45	**(0.01)**	(0.05)	**228.49**	278.62	**(0.53)**	(0.24)	**(27.19)**	(16.94)
Dividends paid to NCI	**44.20**	66.86	**-**	-	**129.61**	180.50	**-**	-	**-**	-

Summarised cash flows for the year ended ₹ Crore

Particulars	Bhartiya Rail Bijlee Company Ltd.		Patratu Vidyut Utpadan Nigam Ltd.		THDC India Ltd.		NTPC EDMC Waste Solutions Pvt Ltd		Ratnagiri Gas & Power Private Ltd.	
	For the year ended 31 March 2022	For the year ended 31 March 2021	**For the year ended 31 March 2022**	For the year ended 31 March 2021	**For the year ended 31 March 2022**	For the year ended 31 March 2021	**For the year ended 31 March 2022**	For the year ended 31 March 2021	**For the year ended 31 March 2022**	For the year ended 31 March 2021
Cash flows from/(used in) operating activities	**764.44**	1,293.70	**3.00**	(148.79)	**1,775.68**	1,938.99	**0.01**	(0.11)	**134.84**	268.31
Cash flows from/(used in) investing activities	**(428.90)**	(326.85)	**(1,431.99)**	(952.95)	**(3,334.70)**	(2,094.80)	**(0.01)**	0.11	**(74.63)**	(44.26)
Cash flows from/(used in) financing activities	**(496.29)**	(1,098.80)	1,453.52	1,101.02	**490.95**	1,082.39	**-**	0.20	**(130.30)**	(169.47)
Net increase/ (decrease) in cash and cash equivalents	**(160.75)**	(131.95)	**24.53**	(0.72)	**(1,068.07)**	926.58	**-**	0.20	**(70.09)**	54.58

(c) Details of significant restrictions

In respect of investments in subsidiary companies, the Group has restrictions for their disposal as under:

₹ Crore

Name of the Subsidiary	Period of restrictions for disposal of investments as per related agreements	Amount invested	
		As at 31 March 2022	As at 31 March 2021
Bhartiya Rail Bijlee Company Ltd.	5 years from the date of commercial operation of the last unit of the project.	**1,774.12**	1,774.12
Kanti Bijlee Utpadan Nigam Ltd.	As per loan agreement, minimum equity of 51% shall be maintained at all times until final settlement of loan i.e., 4 years moratorium period and subsequently 11 years for repayment.	**1,670.67**	1,670.67
Patratu Vidyut Utpadan Nigam Ltd.	5 years from the date of signing of agreement or till the date of commercial operation of the last new unit of Phase-I, whichever is later.	**1,237.62**	887.62
Nabinagar Power Generating Company Ltd.	NTPC shall not transfer/assign or pledge shares until final settlement of loan i.e. 5 years moratorium and subsequently 15 years for repayment.	**4,961.03**	4,687.03
THDC India Ltd.	Save and except with prior written consent of GOI, NTPC shall not take any action that may result in shareholding in the subsidiary falling below 51% and shall not take any action that may result in the subsidiary ceasing to be a government company.	**7,500.00**	7,500.00
North Eastern Electric Power Corporation Ltd.	Save and except with prior written consent of GOI, NTPC shall not take any action that may result in shareholding / or total voting power in the subsidiary falling below 51% and shall not take any action that may result in the subsidiary ceasing to be a government company. Further, NTPC shall continue to hold 100% of paid up capital and voting power in the subsidiary till all amounts repayable under the loan agreement executed between the subsidiary and KfW are repaid.	**4,000.00**	4,000.00
NTPC EDMC Waste Solutions Pvt Ltd	5 years from the date of incorporation (i.e. 01 June 2020)	**0.15**	0.15
Total		**21,143.59**	20,519.59

(d) Joint operations

The group has entered into production sharing contracts (PSCs) with GoI for some exploration blocks whose principal place of business is in India. For detailed disclosures of these joint operations, refer Note 65.

(e) Interests in joint venture companies

List of joint venture companies as at 31 March 2022 in which the group has interest, is as below. These entities have share capital consisting solely of equity shares, which are held directly by the group. The country of incorporation or registration is also their principal place of business, and the proportion of ownership interest is the same as the proportion of voting rights held.

₹ Crore

Name of joint venture company	Place of business/ country of in-corporation	Ownership interest held by the group (in %) as at		Accounting method	Carrying amount as at	
		31 March 2022	31 March 2021		**31 March 2022**	31 March 2021
Utility Powertech Ltd.	India	**50.00**	50.00	Equity method	**94.67**	89.44
NTPC-GE Power Services Private Ltd. $	India	**50.00**	50.00	Equity method	**7.42**	3.07
NTPC-SAIL Power Company Ltd.	India	**50.00**	50.00	Equity method	**1,528.61**	1,449.58
NTPC Tamil Nadu Energy Company Ltd.	India	**50.00**	50.00	Equity method	**1,850.14**	1,695.27
Aravali Power Company Private Ltd.	India	**50.00**	50.00	Equity method	**2,671.51**	3,007.35
NTPC BHEL Power Projects Private Ltd. *$	India	**50.00**	50.00	Equity method	**-**	-
Meja Urja Nigam Private Ltd.	India	**50.00**	50.00	Equity method	**1,629.89**	1,468.02
Transformers and Electricals Kerala Ltd. **$	India	**44.60**	44.60	Equity method	**23.46**	35.00
National High Power Test Laboratory Private Ltd. $	India	**20.00**	20.00	Equity method	**14.24**	18.22
Energy Efficiency Services Ltd. $	India	**33.334**	47.15	Equity method	**423.09**	534.61
CIL NTPC Urja Private Ltd. $	India	**50.00**	50.00	Equity method	**0.01**	0.02
Anushakti Vidhyut Nigam Ltd. $	India	**49.00**	49.00	Equity method	**0.01**	0.01
Hindustan Urvarak and Rasayan Ltd.	India	**29.67**	29.67	Equity method	**1,621.43**	1,129.66
KSK Dibbin Hydro Power Private Ltd. (Joint venture of Subsidiary Company, NEEPCO Ltd.) $	India	**30.00**	30.00	Equity method	**4.45**	4.46
Trincomalee Power Company Ltd. $	Srilanka	**50.00**	50.00	Equity method	**0.55**	1.06
Bangladesh-India Friendship Power Company Pvt.Ltd. $	Bangladesh	**50.00**	50.00	Equity method	**652.66**	556.41

$ The financial statements are un-audited and certified by the management of respective companies and have been considered for Consolidated Financial Statements of the Group. The figures appearing in their respective financial statements may change upon completion of their audit.

* The Board of Directors of NTPC Limited in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from NTPC BHEL Power Projects Private Ltd. (NTPC-BHEL), a Joint venture of the Group. As NTPC-BHEL was formed by a directive from the GOI, approval of exit from GOI is awaited.

**The Board of Directors of the Company in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from Transformers and Electricals Kerala Ltd. (TELK), a joint venture of the Company. GOI has accorded its approval for exit of NTPC from the joint venture. The decison of the Board of Directors of NTPC Limited and approval of GOI has been conveyed to the Government of Kerala (GoK) (JV Partner) & TELK. The GoK has requested NTPC to review the decision. NTPC again took up the matter with GoK who has now in principally agreed for the exit of NTPC. Further discussions on modalities for exit are underway.

(i) NTPC BHEL Power Projects Pvt Ltd (NTPC BHEL) (joint venture company) has accumulated losses due to which the Group has recognised accumulated losses equal to the cost of investments of NTPC BHEL as at 31 March 2022. The Group has unrecognised share of losses in respect of NTPC BHEL amounting to ₹ **99.38 crore** as at 31 March 2022 (31 March 2021: ₹ 85.04 crore) as per their unaudited financial statements for the year ended 31 March 2022.

(ii) Summarised financial information of joint venture companies of the group

The tables below provide summarised financial information of joint venture companies of the group. The information disclosed reflects the amounts presented in the financial statements of the relevant joint venture companies and not the group's share of those amounts.

Summarised balance sheet

₹ Crore

Particulars	Utility Powertech Ltd.		NTPC-GE Power Services Pvt. Ltd.		NTPC-SAIL Power Company Ltd.		NTPC-Tamil Nadu Energy Company Ltd.		Aravali Power Company Private Ltd.	
	As at 31 March 2022	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021
Current assets										
Cash and cash equivalents	**51.27**	28.82	**35.01**	(0.25)	**45.07**	83.37	**13.72**	0.59	**277.33**	743.99
Other assets	**545.72**	488.61	**132.44**	92.00	**630.00**	653.62	**2,470.66**	2,322.05	**2,847.47**	3,037.56
Total current assets	**596.99**	517.43	**167.45**	91.75	**675.07**	736.99	**2,484.38**	2,322.64	**3,124.80**	3,781.55
Total non-current assets	**73.25**	49.65	**20.67**	9.82	**4,606.97**	4,322.95	**6,570.81**	6,857.39	**6,707.13**	6,777.86
Current liabilities										
Financial liabilities (excluding trade payables and provisions)	**183.14**	158.69	**0.80**	(0.10)	**1,089.62**	490.20	**1,395.43**	1,556.80	**1,129.56**	1,094.83
Other liabilities	**265.75**	188.52	**169.37**	94.23	**263.16**	246.28	**519.49**	543.66	**218.04**	143.07
Total current liabilities	**448.89**	347.21	**170.17**	94.13	**1,352.78**	736.48	**1,914.92**	2,100.46	**1,347.60**	1,237.90
Non-current liabilities										
Financial liabilities (excluding trade payables and provisions)	**3.87**	14.49	**0.70**	-	**865.98**	1,418.54	**3,401.84**	3,692.88	**2,491.30**	2,796.74
Other liabilities	**28.14**	26.52	**2.41**	1.30	**6.07**	5.66	**179.51**	114.40	**10.87**	11.33
Total non-current liabilities	**32.01**	41.01	**3.11**	1.30	**872.05**	1,424.20	**3,581.35**	3,807.28	**2,502.17**	2,808.07
Regulatory deferral account debit balances	-	-	-	-	-	-	**187.78**	122.71	**56.01**	65.53
Regulatory deferral account credit balances	-	-	-	-	-	-	-	-	**424.96**	344.62
Share application money pending allotment	-	-	-	-	-	-	**30.00**	-	-	-
Net assets	**189.34**	178.86	**14.84**	6.14	**3,057.21**	2,899.26	**3,716.70**	3,395.00	**5,613.21**	6,234.35

Reconciliation to carrying amounts

₹ Crore

Particulars	Utility Powertech Ltd.		NTPC-GE Power Services Pvt. Ltd.		NTPC-SAIL Power Company Ltd.		NTPC-Tamil Nadu Energy Company Ltd.		Aravali Power Company Private Ltd.	
	As at 31 March 2022	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021
Opening net assets	**178.86**	144.50	**6.14**	12.67	**2,899.26**	2,742.52	**3,395.00**	3,154.65	**6,234.35**	6,173.13
Profit/(loss) for the year	**40.82**	50.05	**5.99**	(5.48)	**357.99**	348.68	**798.11**	326.04	**823.11**	726.78
Other comprehensive income/(expense)	**4.66**	(5.69)	**(0.02)**	-	**(0.04)**	0.30	**0.01**	0.02	**0.29**	0.11
Dividends paid	**(35.00)**	(10.00)	-	(0.50)	**(200.00)**	(190.00)	**(488.38)**	(102.82)	**(1,500.00)**	(700.00)
Other adjustments*	-	-	**2.73**	(0.55)	-	(2.24)	**11.96**	17.11	**55.46**	34.33
Closing net assets	**189.34**	178.86	**14.84**	6.14	**3,057.21**	2,899.26	**3,716.70**	3,395.00	**5,613.21**	6,234.35
Group's share in %	**50.00**	50.00	**50.00**	50.00	**50.00**	50.00	**50.00**	50.00	**50.00**	50.00
Group's share in INR	**94.67**	89.43	**7.42**	3.07	**1,528.61**	1,449.63	**1,858.35**	1,697.50	**2,806.61**	3,117.18
Goodwill/(Restricted reserves)	-	-	-	-	-	(0.05)	**(8.21)**	(2.23)	**(135.10)**	(109.83)
Carrying amount	**94.67**	89.43	**7.42**	3.07	**1,528.61**	1,449.58	**1,850.14**	1,695.27	**2,671.51**	3,007.35

* Includes adjustments on account of further investment by the joint venture partners.

Summarised statement of profit and loss for the year ended

₹ Crore

Particulars	Utility Powertech Ltd.		NTPC-GE Power Services Pvt. Ltd.		NTPC-SAIL Power Company Ltd.		NTPC-Tamil Nadu Energy Company Ltd.		Aravali Power Company Private Ltd.	
	31 March 2022	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021
Revenue from operations	**1,593.85**	1,406.55	**269.84**	123.46	**2,938.36**	2,741.62	**4,222.06**	2,940.99	**4,233.53**	2,912.55
Other income	**14.53**	13.32	**0.59**	0.73	**16.98**	16.53	**702.94**	139.67	**216.20**	170.22
Depreciation and amortisation	**1.38**	1.26	**1.96**	1.06	**138.71**	139.93	**500.81**	494.38	**422.94**	426.23
Interest expense	**4.55**	1.97	**2.35**	1.35	**9.10**	9.31	**392.93**	552.39	**186.70**	259.57
Income tax expense/(income)	**13.04**	16.40	**(0.47)**	(2.75)	**13.03**	16.57	**326.05**	147.04	**96.22**	94.40
Profit/(loss) for the year	**40.82**	50.05	**5.99**	(5.48)	**357.99**	348.68	**798.11**	326.04	**823.11**	726.78
Other comprehensive income/(expense)	**4.66**	(5.69)	**(0.02)**	-	**(0.04)**	0.30	**0.01**	0.02	**0.29**	0.11
Total comprehensive income/(expense)	**45.48**	44.36	**5.97**	(5.48)	**357.95**	348.98	**798.12**	326.06	**823.40**	726.89
Dividends received	-	-	-	-	-	-	-	-	-	-

Summarised balance sheet

₹ Crore

Particulars	NTPC BHEL Power Projects Private Ltd.		Meja Urja Nigam Private Ltd.		Transformers and Electricals Kerala Ltd.		National High Power Test Laboratory Private Ltd.		Energy Efficiency Services Ltd.	
	As at 31 March 2022	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021
Current assets										
Cash and cash equivalents	**1.17**	1.06	**191.59**	397.16	**0.01**	8.17	**2.58**	4.09	**724.05**	211.55
Other assets	**363.59**	253.51	**1,274.50**	899.21	**190.95**	185.03	**3.15**	5.54	**4,713.42**	4,779.35
Total current assets	**364.76**	254.57	**1,466.09**	1,296.37	**190.96**	193.20	**5.73**	9.63	**5,437.47**	4,990.90
Total non-current assets	**205.92**	366.87	**10,930.51**	11,428.85	**33.06**	12.27	**328.61**	332.96	**4,694.25**	4,571.80
Current liabilities										
Financial liabilities (excluding trade payables and provisions)	**25.20**	67.45	**2,081.45**	1,724.96	**83.59**	42.75	**65.60**	62.23	**2,997.96**	1,791.18
Other liabilities	**546.66**	493.18	**129.58**	81.74	**87.83**	75.44	**9.69**	2.47	**1,255.68**	1,133.52
Total current liabilities	**571.86**	560.63	**2,211.03**	1,806.70	**171.42**	118.19	**75.29**	64.70	**4,253.64**	2,924.70
Non-current liabilities										
Financial liabilities (excluding trade payables and provisions)	**-**	-	**6,873.02**	7,856.00	**-**	-	**187.05**	186.53	**4,484.33**	5,413.18
Other liabilities	**197.57**	230.89	**-**	-	**-**	8.80	**0.80**	0.28	**124.52**	90.98
Total non-current liabilities	**197.57**	230.89	**6,873.02**	7,856.00	**-**	8.80	**187.85**	186.81	**4,608.85**	5,504.16
Regulatory deferral account debit balances	**-**	-	**63.23**	32.19	**-**	-	**-**	-	**-**	-
Regulatory deferral account credit balances	**-**	-	**69.52**	155.01	**-**	-	**-**	-	**-**	-
Share application money pending allotment	**-**	-	**34.41**	-	**-**	-	**-**	-	**-**	-
Net assets	**(198.75)**	(170.08)	**3,271.85**	2,939.70	**52.60**	78.48	**71.20**	91.08	**1,269.23**	1,133.84

Reconciliation to carrying amounts

₹ Crore

Particulars	NTPC BHEL Power Projects Private Ltd.		Meja Urja Nigam Private Ltd.		Transformers and Electricals Kerala Ltd.		National High Power Test Laboratory Private Ltd.		Energy Efficiency Services Ltd.	
	As at 31 March 2022	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021
Opening net assets	**(170.08)**	(120.14)	**2,939.70**	2,606.44	**78.48**	105.08	**91.08**	109.85	**1,133.84**	1,181.09
Profit/(loss) for the year	**(40.52)**	(24.51)	**278.01**	44.40	**(25.88)**	(13.18)	**(20.03)**	(19.23)	**(139.99)**	32.87
Other comprehensive income/(expense)	**-**	-	**-**	-	**-**	-	**-**	-	**(0.91)**	(0.29)
Dividends paid	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-
Other adjustments*	**11.85**	(25.43)	**54.14**	288.86	**-**	(13.42)	**0.15**	0.46	**276.29**	(79.83)
Closing net assets	**(198.75)**	(170.08)	**3,271.85**	2,939.70	**52.60**	78.48	**71.20**	91.08	**1,269.23**	1,133.84
Group's share in %	**50.00**	50.00	**50.00**	50.00	**44.60**	44.60	**20.00**	20.00	**33.334**	47.15
Group's share in INR	**-**	-	**1,635.93**	1,469.85	**23.46**	35.00	**14.24**	18.22	**423.09**	534.61
Goodwill/(Restricted reserves)	**-**	-	**(6.04)**	(1.83)	**-**	-	**-**	-	**-**	-
Carrying amount	**-**	-	**1,629.89**	1,468.02	**23.46**	35.00	**14.24**	18.22	**423.09**	534.61

* Includes adjustments on account of further investment by the joint venture partners.

Summarised statement of profit and loss for the year ended

₹ Crore

Particulars	NTPC BHEL Power Projects Private Ltd.		Meja Urja Nigam Private Ltd.		Transformers and Electricals Kerala Ltd.		National High Power Test Laboratory Private Ltd.		Energy Efficiency Services Ltd.	
	31 March 2022	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021
Revenue from operations	**24.06**	49.17	**3,470.80**	2,096.35	**140.48**	157.03	**14.65**	15.39	**1,506.42**	1,471.85
Other income	**0.28**	1.42	**53.23**	38.08	**0.91**	3.47	**0.38**	0.15	**60.70**	58.43
Depreciation and amortisation	**5.81**	5.84	**493.50**	372.91	**1.23**	1.24	**8.51**	8.32	**661.78**	533.05
Interest expense	**0.94**	2.16	**594.58**	446.38	**7.71**	6.08	**19.17**	18.91	**390.52**	328.50
Income tax expense/(income)	**(13.57)**	(8.39)	**159.93**	0.12	**-**	-	**-**	-	**(64.03)**	11.09
Profit/(loss) for the year	**(40.52)**	(24.51)	**278.01**	44.40	**(25.88)**	(13.18)	**(20.03)**	(19.23)	**(139.99)**	32.87
Other comprehensive income/(expense)	**-**	-	**-**	-	**-**	-	**-**	-	**(0.91)**	(0.29)
Total comprehensive income/(expense)	**(40.52)**	(24.51)	**278.01**	44.40	**(25.88)**	(13.18)	**(20.03)**	(19.23)	**(140.90)**	32.58
Dividends received	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-

Summarised balance sheet

₹ Crore

Particulars	CIL NTPC Urja Private Ltd.		Anushakti Vidhyut Nigam Ltd.		Hindustan Urvarak and Rasayan Ltd.		KSK Dibbin Hydro Power Private Ltd.		Trincomalee Power Company Ltd.		Bangladesh-India Friendship Power Company Pvt. Ltd.	
	As at 31 March 2022	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021
Current assets												
Cash and cash equivalents	**0.03**	0.04	**0.02**	0.02	**46.73**	592.43	**0.04**	0.17	**0.04**	0.19	**109.58**	191.00
Other assets	**-**	-	**-**	-	**50.54**	42.96	**5.74**	6.52	**0.01**	0.02	**4.61**	1.37
Total current assets	**0.03**	0.04	**0.02**	0.02	**97.27**	635.39	**5.78**	6.69	**0.05**	0.21	**114.19**	192.37
Total non-current assets	**-**	-	**-**	-	**20,947.44**	16,485.16	**117.51**	114.95	**1.37**	2.23	**11,961.30**	10,056.29
Current liabilities												
Financial liabilities (excluding trade payables and provisions)	**-**	-	**-**	-	**1,781.41**	2,246.43	**1.59**	1.59	**-**	-	**652.71**	643.09
Other liabilities	**0.01**	0.01	**-**	-	**312.55**	23.83	**0.53**	0.53	**0.04**	0.04	**8.95**	12.03
Total current liabilities	**0.01**	0.01	**-**	-	**2,093.96**	2,270.26	**2.12**	2.12	**0.04**	0.04	**661.66**	655.12
Non-current liabilities												
Financial liabilities (excluding trade payables and provisions)	**-**	-	**-**	-	**12,370.78**	9,873.67	**13.20**	11.48	**0.29**	0.28	**10,108.51**	8,480.73
Other liabilities	**-**	-	**-**	-	**1,223.63**	1,169.20	**0.05**	0.07	**-**	-	**-**	-
Total non-current liabilities	**-**	-	**-**	-	**13,594.41**	11,042.87	**13.25**	11.55	**0.29**	0.28	**10,108.51**	8,480.73
Regulatory deferral account debit balances	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-
Regulatory deferral account credit balances	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-
Share application money pending allotment	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-
Net assets	**0.02**	0.03	**0.02**	0.02	**5,356.34**	3,807.42	**107.92**	107.97	**1.09**	2.12	**1,305.32**	1,112.81

Reconciliation to carrying amounts

₹ Crore

Particulars	CIL NTPC Urja Private Ltd.		Anushakti Vidhyut Nigam Ltd.		Hindustan Urvarak and Rasayan Ltd.		KSK Dibbin Hydro Power Private Ltd.		Trincomalee Power Company Ltd.		Bangladesh-India Friendship Power Company Pvt. Ltd.	
	As at 31 March 2022	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021	**As at 31 March 2022**	As at 31 March 2021
Opening net assets	**0.03**	0.03	**0.02**	0.02	**3,807.42**	2,540.70	**107.97**	107.92	**2.12**	2.61	**1,112.81**	975.42
Profit/(loss) for the year	**(0.01)**	-	**-**	-	**(19.84)**	(16.32)	**(0.05)**	0.05	**(0.41)**	(0.52)	**0.01**	-
Other comprehensive income/(expense)	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-
Dividends paid	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-
Other adjustments*	**-**	-	**-**	-	**1,568.76**	1,283.04	**-**	-	**(0.62)**	0.03	**192.50**	137.39
Closing net assets	**0.02**	0.03	**0.02**	0.02	**5,356.34**	3,807.42	**107.92**	107.97	**1.09**	2.12	**1,305.32**	1,112.81
Group's share in %	**50.00**	50.00	**49.00**	49.00	**29.67**	29.67	**30.00**	30.00	**50.00**	50.00	**50.00**	50.00
Group's share in INR	**0.01**	0.02	**0.01**	0.01	**1,589.23**	1,129.66	**32.38**	32.39	**0.55**	1.06	**652.66**	556.41
Goodwill/(Restricted reserves)	**-**	-	**-**	-	**-**	-	**(27.93)**	(27.93)	**-**	-	**-**	-
Carrying amount	**0.01**	0.02	**0.01**	0.01	**1,589.23**	1,129.66	**4.45**	4.46	**0.55**	1.06	**652.66**	556.41

* Includes adjustments on account of further investment by the joint venture partners.

Summarised statement of profit and loss for the year ended

₹ Crore

Particulars	CIL NTPC Urja Private Ltd.		Anushakti Vidhyut Nigam Ltd.		Hindustan Urvarak and Rasayan Ltd.		KSK Dibbin Hydro Power Private Ltd.		Trincomalee Power Company Ltd.		Bangladesh-India Friendship Power Company Pvt. Ltd.	
	31 March 2022	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021
Revenue from operations	**-**	-	**-**	-	**-**	1.53	**-**	-	**-**	-	**-**	-
Other income	**-**	-	**-**	-	**6.29**	2.53	**0.23**	0.52	**-**	0.02	**-**	-
Depreciation and amortisation	**-**	-	**-**	-	**4.06**	4.24	**0.19**	0.19	**-**	-	**-**	-
Interest expense	**-**	-	**-**	-	**0.55**	1.02	**-**	0.14	**-**	-	**-**	-
Income tax expense/(income)	**-**	-	**-**	-	**1.01**	0.39	**0.06**	0.10	**-**	-	**-**	-
Profit/(loss) for the year	**(0.01)**	-	**-**	-	**(19.84)**	(16.32)	**(0.05)**	0.05	**(0.41)**	(0.52)	**0.01**	-
Other comprehensive income/(expense)	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-
Total comprehensive income/(expense)	**(0.01)**	-	**-**	-	**(19.84)**	(16.32)	**(0.05)**	0.05	**(0.41)**	(0.52)	**0.01**	-
Dividends received	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-

(iii) Commitments and contingent liabilities in respect of joint venture companies

The Group has commitments of ₹ **2,369.13 crore** (31 March 2021: ₹ 2,253.53 crore) towards further investment in the joint venture companies as at 31 March 2022.

The Group has commitments of bank guarantee of 0.50 % of total contract price to be undertaken by NTPC-BHEL Power Projects Private Ltd. limited to a cumulative amount of ₹ **75.00 crore** (31 March 2021: ₹ 75.00 crore).

The Group has agreed to provide unconditional and irrevocable financial support to NTPC GE Power Services Ltd. (a joint venture company) for meeting financial qualifying requirement for execution of Flue Gas De-sulfurisation (FGD) projects in India. Such support shall be provided by way of Letter of Undertaking to a cumulative exposure up to the award value of the contract(s) not exceeding ₹ 600.00 crore and cumulative exposure of the Company, in proportion to shareholding, would not exceed ₹ **300.00 crore** (31 March 2021: ₹ 300.00 crore).

The Group has agreed to provide sponsor undertaking to lenders for additional term loan upto ₹ **1,908.38 crore** (31 March 2021: ₹ Nil) for implementation of various projects of Hindustan Urvarak and Rasayan Limited, a Joint Venture Company.

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Contingent liabilities		
Share of contingent liabilities incurred jointly with other investors of the joint venture companies	**2,065.29**	2,045.34
Possible reimbursements	**383.27**	336.59
Capital commitments	**191.64**	4,604.52

(iv) Details of significant restrictions

In respect of investments in joint venture companies, the Group has restrictions for their disposal as under:

₹ Crore

Name of the joint venture company	Period of restrictions for disposal of investments as per related agreements	Amount invested as at	
		31 March 2022	31 March 2021
Transformers and Electricals Kerala Ltd.	3 years from the date of acquisition (i.e.19.06.2009) or upgradation capacity enhancement scheme whichever is later.	**31.34**	31.34
NTPC BHEL Power Projects Private Ltd.	3 years from the date of completion of first EPC contract of single order value of not less than ₹500 crore or till further such time as mutually agreed.	**50.00**	50.00
National High Power Test Laboratory Private Ltd.	5 years from the date of incorporation (i.e. 22.05.2009) or completion of project whichever is later.	**30.40**	30.40
CIL NTPC Urja Private Ltd.	5 years from the date of incorporation (i.e. 27.04.2010) or commercial operation whichever is later.	**0.08**	0.08
Trincomalee Power Company Ltd.	12 years from the initial operation date.	**15.20**	15.20
Bangladesh-India Friendship Power Company Private Ltd.	15 years from the date of commercial operation date.	**620.38**	533.60

₹ Crore

Name of the joint venture company	Period of restrictions for disposal of investments as per related agreements	Amount invested as at	
		31 March 2022	31 March 2021
Hindustan Urvarak & Rasayan Ltd.	(a) 5 years from the date of incorporation (15.06.2016) or 2 years from commercial operation date of any one of the proposed projects at Sindri, Gorakhpur and Barauni or date of allotment of shares for first time, whichever is later. (b) As per Sponsors Support undertaking , NTPC shall jointly and severally with the other sponsors provide additional funds to meet all cost overrun incurred/to be incurred in relation to the Project. Further, NTPC shall jointly with the other sponsors, retain 51% of total equity share capital of the JV and management control until the final settlement date of the loan facility (door to door tenure of 15 years). (c) Assist in ensuring that HURL completes the tie-up of at-least 85% (eighty-five percent) of the total requirement of natural gas.	**1,629.42**	1,131.76
Total		**2,376.82**	1,792.38

71. Disclosure as per Ind AS 114, 'Regulatory Deferral Accounts'

(i) Nature of rate regulated activities

The Group is mainly engaged in generation and sale of electricity. The price to be charged by the Group for electricity sold to its beneficiaries is determined by the CERC which provides extensive guidance on the principles and methodologies for determination of the tariff for the purpose of sale of electricity. The tariff is based on allowable costs like interest, depreciation, operation & maintenance expenses, etc. with a stipulated return.

This form of rate regulation is known as cost-of-service regulations which provide the Group to recover its costs of providing the goods or services plus a fair return.

(ii) Recognition and measurement

(a) As per the CERC Tariff Regulations, any gain or loss on account of exchange risk variation during the construction period shall form part of the capital cost till the declaration of Commercial Operation Date (COD) to be considered for calculation of tariff. The CERC during the past period in tariff orders for various stations has allowed exchange differences incurred during the construction period in the capital cost. Accordingly, exchange differences arising during the construction period is within the scope of Ind AS 114.

Further, any loss or gain on account of exchange differences on foreign currency loans for opearting stations shall be recoverable from / payable to beneficiaries on actual payment basis, as per the said Regulations. Accordingly, such exchange differences are also within the scope of Ind AS 114.

In view of the above, exchange differences arising from settlement/translation of monetary item denominated in foreign currency to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized on an undiscounted basis as 'Regulatory deferral account debit/credit balance' by credit/debit to 'Net Movements in Regulatory deferral account balances' and adjusted from the year in which the same becomes recoverable from or payable to the beneficiaries. Accordingly, an amount of (-) ₹ **807.87 crore** for the year ended as at 31 March 2022 has been accounted for as 'Regulatory deferral account debit balance' (31 March 2021: (-) ₹ 390.80 crore accounted as 'Regulatory deferral account debit balance'.). Further, an amount of ₹ **35.82 crore** (31 March 2021: ₹ 13.92 crore) has been realized/recognized during the year.

(b) Revision of pay scales of employees of PSEs w.e.f. 1 January 2017 has been implemented based on the guidelines issued by Department of Public Enterprises (DPE). The guidelines provide payment of superannuation benefits @ 30% of basic + DA to be provided to the employees of CPSEs which includes gratuity at the enhanced ceiling of ₹ 0.20 crore from the existing ceiling of ₹ 0.10 crore. As per Proviso 8(3) of Terms and Conditions of Tariff Regulations 2014 applicable for the period 2014-19, truing up exercise in respect of Change in Law or compliance of existing law will be taken up by CERC. The increase in gratuity limit from ₹ 0.10 crore to ₹ 0.20 crore falls under the category of 'Change in law' and a regulatory asset has been created. The Payment of Gratuity Act, 1972 has since been amended and the ceiling has been increased to ₹ 0.20 crore.

Considering the methodology followed by the CERC for allowing impact of the previous pay revision, various tariff orders issued by the CERC under Regulations, 2014 and the above-mentioned provision related to the change in law of CERC Tariff Regulations, 2014, a regulatory asset has been created upto 31 March 2019 (Regulatory deferral account debit balance) towards the increase in O&M expenditure due to the pay revision. This was taken up with CERC through truing up tariff petition. CERC has been allowing the same progressively and during the year, the expenditure has been allowed in respect of few stations and accordingly an amount of ₹ **127.02 crore** (31 March 2021: ₹ Nil) has been adjusted and an amount of ₹ **359.58 crore** (31 March 2021: ₹ Nil) has been reversed. Balance orders are expected in the coming years.

(c) CERC Regulations provide that deferred tax liability upto 31 March 2009 shall be recovered from the beneficiaries as and when the same gets materialized. Further, for the period commencing from 1 April 2014, CERC Tariff Regulations provide for grossing up of the return on equity based on effective tax rate for the financial year based on the actual tax paid during the year on the generation income. The Company has recognised a regulatory deferral account debit balance for such deferred tax liabilities (net) in the financial statements. Regulatory deferral account debit balance for deferred tax liability for the period commencing from 1 April 2014 will be reversed in future years when the related deferred tax liability forms part of current tax. Accordingly, an amount of ₹ **1,753.50 crore** (31 March 2021: ₹ 1,539.61 crore) for the year ended 31 March 2022 has been accounted for as 'Regulatory deferral account debit balance'.

(d) The petition filed by the Company before CERC for reimbursement of the expenditure on transportation of ash, was favourably considered by CERC vide order dated 5 November 2018 and it was allowed to reimburse the actual additional expenditure incurred towards transportation of ash in terms of MOEF notification under change in law, as additional O&M expenses, w.e.f. 25 January 2016 subject to prudence check. Keeping in view the above, regulatory asset has been created towards ash transportation expenses in respect of stations where there is shortfall in revenue from sale of ash over and above ash transportation expenses. Accordingly, an amount of ₹ **1,492.47 crore** (31 March 2021: ₹ 1,003.79 crore) for the year ended 31 March 2022 has been accounted for as 'Regulatory deferral account debit balance'. Further, the expenditure has been allowed by CERC during the year in respect of few stations and accordingly an amount of ₹ **55.58 crore** (31 March 2021: ₹ Nil) has been adjusted.

(e) CERC Regulations provide that the capital expenditure in respect of existing generating station incurred /projected to be incurred , inter-alia , towards liabilities to meet award of arbitration (i) within the original scope of work after the COD upto the cut off date (Regulations 24) ; (ii) within the original scope of work and after the cut off date (Regulations 25); and (iii) beyond the original scope of work (Regulation 26), will be admitted by CERC subject to prudence check. Keeping in view the above, regulatory deferral account debit balance has been accounted corresponding to the amount debited to Statement of profit & loss in respect of arbitration cases amounting to ₹ **Nil** for the year ended 31 March 2022 (31 March 2021: ₹ 110.81 crore). Further,'Regulatory deferral account debit balance' amounting to ₹ **110.81 crore** (31 March 2021:₹ Nil) has been reversed based on assessment of its recoverability, by debit to Statement of profit and loss.

(f) CERC while determining the annual fixed cost of the Tuirial Hydro Electric Project (TrHEP) of NEEPCO, a subsidiary of the Company, for the period of 30.10.2017 to 31.03.2019 by CERC, allowed depreciation @2% for the said purposes in line with the decision of the Public Investment Board (PIB) of the Govt. of India. The rates and methodology as per the CERC tariff regulations based on which depreciation for TrHEP has been calculated and charged to the Statement of Profit & Loss vary from that allowed to recover through tariff as per the CERC order. Due to higher rate of depreciation as per the CERC regulations, depreciation charged for the first 12 (twelve) years of operation TrHEP will be more than that of the depreciation recoverable through tariff, which will be reversed in future periods during remaining period of normative life of the generating station. Accordingly, the lower depreciation realized during the earlier period of its operation will be recovered/adjusted during later period. In view of above, an amount of ₹ **41.18 crore** (31 March 2021: ₹ 41.20 crore) being the difference of depreciation to the extent recoverable/ adjustable in future period has been recognized as Regulatory deferral account debit balances.

(iii) Risks associated with future recovery/reversal of regulatory deferral account balances:

(a) demand risk due to changes in consumer attitudes, the availability of alternative sources of supply.

(b) regulatory risk on account of changes in regulations and submission or approval of a rate-setting application or the entity's assessment of the expected future regulatory actions.

(c) other risks including currency or other market risks, if any.

(iv) **Reconciliation of the carrying amounts:**

The regulated assets/liability recognized in the books to be recovered from or payable to beneficiaries in future periods are as follows:

a) **Regulatory deferral account debit balance - Note 21**

The regulatory assets recognized in the books to be recovered from the beneficiaries in future periods are as follows:

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
A. Opening balance	**11,553.28**	9,397.73
B. Additions during the year	**2,008.89**	2,304.61
C. Amount realized/recognized during the year	**(218.42)**	(13.92)
D. Regulatory deferral account balances recognized in the statement of profit and loss (B+C)	**1,790.47**	2,290.69
E. Adjustments during the year	**(144.58)**	(135.14)
F. **Closing balance (A+D+E)**	**13,199.17**	11,553.28

b) **Net movements in regulatory deferral account balances [I]**

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Exchange differences	**(807.87)**	(390.80)
Deferred tax	**1,753.50**	1,539.61
Ash transportation cost	**1,492.47**	1,003.79
Revision of pay scales	**(359.58)**	-
Arbitration cases	**(110.81)**	110.81
Others	**41.18**	41.20
Sub total (i)	**2,008.89**	2,304.61
Amount realized/ recognized during the year (ii)	**(218.42)**	(13.92)
Net movement in regulatory deferral account balances (i)-(ii)	**1,790.47**	2,290.69

c) **Tax on net movements in regulatory deferral account balances [II]**	**303.99**	387.50
d) **Total amount recognized in the statement of profit and loss during the year [I-II]**	**1,486.48**	1,903.19

The Company expects to recover the carrying amount of regulatory deferral account debit balance over the life of the projects.

72. Disclosure as per Ind AS 115, 'Revenue from contracts with customers'

I. **Nature of goods and services**

The revenue of the Group comprises of income from energy sales, sale of energy through trading, consultancy and other services. The following is a description of the principal activities:

(A) **Revenue from energy sales**

The major revenue of the Group comes from energy sales. The Group sells electricity to bulk customers, mainly electricity utilities owned by State Governments as well as private Discoms operating in States. Sale of electricity is generally made pursuant to long-term Power Purchase Agreements (PPAs) entered into with the beneficiaries.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for energy sales:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Energy sales	The Group recognises revenue from contracts for energy sales over time as the customers simultaneously receive and consume the benefits provided by the Group. The tariff for computing revenue from energy sales is determined in terms of CERC Regulations as notified from time to time. The amount of revenue recognised for energy sales is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Group. The amounts are billed on a monthly basis and are payable within contractually agreed credit period. In case of power station which are not governed by CERC tariff regulations, revenue is recognized based on agreement entered with beneficieries.

(B) Revenue from energy trading, consultancy and other services

(i) Sale of Energy through trading

(a) The Group is purchasing power from the developers and selling it to the Discoms on principal to principal basis.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for sale of energy through trading:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Energy trading (principal to principal basis)	The Group recognises revenue from contracts for sale of energy through trading over time as the customers simultaneously receive and consume the benefits provided by the Group. The tariff for computing revenue from sale of energy through trading is determined as per the terms of the agreements. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Group. The amounts are billed on a monthly basis and are payable within contractually agreed credit period.

(b) For some of its revenue arrangements, the Group has determined that it is acting as an agent and has recognized revenue on such contracts net of power purchase cost based on the following factors:

a. Another party is primarily responsible for fulfilling the contract as the Group does not have the ability to direct the use of energy supplied or obtain benefits from supply of power.

b. The Group does not have inventory risk before or after the power has been delivered to customers as the power is directly supplied to customer.

c. The Group has no discretion in establishing the price for supply of power. The Group's consideration in these contracts is only based on the difference between sales price charged to procurer and purchase price given to supplier.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for sale of energy through trading on agency nature:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Energy trading (agency nature)	The Group recognises revenue from such arrangements over time on net basis when the units of electricity are delivered to power procurers as the procurers simultaneously receive and consume the benefits from the Group's agency services. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Group. The amounts are billed as per the terms of the contracts.

(c) The Group carries out energy trading operations on commission basis. NVVN, a subsidiary of the Parent Company is a "Trader Member" of India Energy Exchange Ltd. (IEX) & Power Exchange India Ltd (PXIL) and undertakes trading of Power and REC on Power Exchange Platform of IEX and PXIL.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for sale of energy through trading on energy exchange:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Energy trading on energy exchange	The Group recognises revenue from contracts for commission for trading on energy exchange over time as the customers simultaneously receive and consume the benefits provided by the Group's performance. The commission for trading of energy is determined as per the terms of the respective agreement. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Group. The amounts are billed as per the terms of the contracts.

(ii) Consultancy and other services

The Group undertakes consultancy and turnkey project contracts for domestic and international clients in the different phases of power plants viz. engineering, project management & supervision, construction management, operation & maintenance of power plants, research & development, management consultancy etc.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for consultancy and other services:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Consultancy services	The Group recognises revenue from contracts for consultancy services over time as the customers simultaneously receive and consume the benefits provided by the Group. For the assets (e.g. deliverables, reports etc.) transferred under the contracts, the assets do not have alternative use to the Group and the Group has enforceable right to payment for performance completed to date. The revenue from consultancy services is determined as per the terms of the contracts. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Group. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.
Operation and maintenance services	The Group recognises revenue from contracts for operation and maintenance services over time as the customers simultaneously receive and consume the benefits provided by the Group. The revenue from opertion and maintenance services is determined as per the terms of the contracts. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Group. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.
Deen Dayal Upadhyay Gramin Jyoti Yojna (DDUGJY Scheme)	The Group recognises revenue from work done under DDUGJY scheme over time as the assets do not have alternative use to the Group and the Group has enforceable right to payment for performance completed to date. The revenue from DDUGJY scheme is determined as per the terms of the contract. There is no component of variable consideration under the contract. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.
Pradhan Mantri Sahaj Bijli Har Ghar Vojna (SAUBHAGYA Scheme)	The Group recognises revenue from work done under SAUBHAGYA scheme at a point in time when the Group transfers control of goods and services under the contract to the customers. The revenue from SAUBHAGYA scheme is determined as per the terms of the contracts. There is no component of variable consideration under the contract. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.

II. Disaggregation of revenue

In the following table, revenue is disaggregated by type of product and services, geographical market and timing of revenue recognition:

₹ Crore

Particulars	Generation of energy		Others		Total	
	For the year ended		For the year ended		For the year ended	
	31 March 2022	31 March 2021	**31 March 2022**	31 March 2021	**31 March 2022**	31 March 2021
Geographical markets						
India	**1,23,703.53**	1,03,950.26	**6,318.52**	5,825.62	**1,30,022.05**	1,09,775.88
Outside India	**-**	-	**1,242.09**	1,492.00	**1,242.09**	1,492.00
	1,23,703.53	1,03,950.26	**7,560.61**	7,317.62	**1,31,264.14**	1,11,267.88
Timing of revenue recognition						
Products and services transferred over time	**1,23,703.53**	1,03,950.26	**7,560.61**	7,317.62	**1,31,264.14**	1,11,267.88
	1,23,703.53	1,03,950.26	**7,560.61**	7,317.62	**1,31,264.14**	1,11,267.88

III. Reconciliation of revenue recognised with contract price:

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Contract price	**1,31,874.35**	1,11,785.91
Adjustments for:		
Rebates	**(610.21)**	(518.03)
Revenue recognised	**1,31,264.14**	1,11,267.88

IV. Contract balances

Contract assets are recognised when there is excess of revenue earned over billings on contracts. Contract assets are transferred to trade receivables revenue when there is unconditional right to receive cash, and only passage of time is required, as per contractual terms. The contract liabilities primarily relate to the advance consideration received from the customers which are referred as 'advances from customers / payable to beneficiaries'.

The following table provides information about trade receivables including unbilled revenue, contract assets and advances from customers/payable to beneficiaries:

₹ Crore

Particulars	As at 31 March 2022		As at 31 March 2021	
	Current	**Non-current**	Current	Non-current
Trade receivables including unbilled revenue	**27,342.08**	**-**	28,199.83	-
Contract assets	**5,299.22**	**-**	3,393.97	-
Advances from customers/payable to beneficiaries	**1,815.68**	**-**	1,740.18	-

The amount of revenue recognised from performance obligations satisfied (or partially satisfied) in previous periods, mainly due to change in transaction prices is ₹ **2,033.82 crore** (31 March 2021 : ₹ 1,185.02 crore).

V. Transaction price allocated to the remaining performance obligations

Performance obligations related to sale of energy:

Revenue from sale of energy is accounted for based on tariff rates approved by the CERC (except items indicated as provisional) as modified by the orders of Appellate Tribunal for Electricity to the extent applicable. In case of power stations, where the tariff rates are yet to be approved/items indicated provisional by the CERC in their orders, provisional rates are adopted considering the applicable CERC Tariff Regulations. Revenue from sale of energy is recognized once the electricity has been delivered to the beneficiary and is measured through a regular review of usage meters. Beneficiaries are billed on a periodic and regular basis. Therefore, transaction price to be allocated to remaining performance obligations cannot be determined reliably for the entire duration of the contract.

Performance obligations related to other contracts:

For rest of the contracts, transaction price for remaining performance obligations amounts to ₹ **1,037.51 crore** (31 March 2021: ₹ 723.34 crore) which shall be received over the contract period in proportion of the work performed/services provided by the Group.

VI. Practical expedients applied as per Ind AS 115:

a. The Group has not disclosed information about remaining performance obligations that have original expected duration of one year or less and where the revenue recognised corresponds directly with the value to the customer of the entity's performance completed to date.

b. The Group does not expect to have any contracts where the period between the transfer of the promised goods or services to the customer and payment by the customer exceeds one year. As a consequence, the Group has not adjusted any of the transaction prices for the time value of money.

VII. The Group has not incurred any incremental costs of obtaining contracts with a customer and therefore, not recognised an asset for such costs.

73. Disclosure as per Ind AS 116 'Leases'

(A) Group as Lessee

(i) The Group's significant leasing arrangements are in respect of the following assets:

(a) Premises for residential use of employees, offices and guest houses/ transit camps on lease which are not non-cancellable and are usually renewable on mutually agreeable terms. The company generally incurs amount on improvements which are significant to the respective lease and hence the cancellable period of the lease during which the company intends to continue considering the past experience / practice, is considered for the purpose of determining the lease period.

(b) The Group has taken electrical vehicles on operating lease for a period of five to six years, which can be further extended at mutually agreed terms. Lease rentals are subject to escalation of 10% per annum.

(c) A helicopter on wet lease basis.

(d) The Group has taken certain vehicles (other than electrical) on lease for a period of more than one year to four years, which can be further extended at mutually agreed terms. There are no escalations in the lease rentals as per terms of the agreement. However, the Group has purchase option for some of such vehicles at the end of the lease term.

(e) The Group had entered into an agreement for movement of coal through inland waterways for one of its stations. As per the agreement, the operator was to design, finance, build, operate and maintain the unloading and material handling infrastructure for 7 years after which it was to be transferred to the Company at ₹ 1/-. Refer Note no. 63(iii)(b).

(f) The Group acquires land on leasehold basis for a period generally ranging from 5 years to 99 years from the government authorities which can be renewed further based on mutually agreed terms and conditions. The leases are non cancellable. These leases are capitalised at the present value of the total minimum lease payments to be paid over the lease term. Future lease rentals are recognised as 'Lease liablities' at their present values. The Right-of-use land is amortised considering the signifcant accounting policies of the Group.

(ii) The following are the carrying amounts of lease liabilities recognised and the movements during the year:

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Opening Balance	**897.49**	855.61
- Additions in lease liabilities	**238.39**	46.40
- Interest cost during the year	**70.52**	52.51
- Payment of lease liabilities	**(55.10)**	(57.03)
Closing Balance	**1,151.30**	897.49
Current	**188.61**	161.79
Non Current	**962.69**	735.70

(iii) Maturity Analysis of the lease liabilities:

₹ Crore

Contractual undiscounted cash flows	As at 31 March 2022	As at 31 March 2021
3 months or less	**155.84**	143.40
3-12 Months	**91.16**	57.96
1-2 Years	**79.63**	74.00
2-5 Years	**226.88**	175.18
More than 5 Years	**2,631.83**	2,237.38
Total Lease liabilities	**3,185.34**	2,687.92

(iv) The following are the amounts recognised in profit or loss:

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Depreciation and amortisation expense for right-of-use assets	**254.12**	253.33
Interest expense on lease liabilities	**70.52**	52.51
Expense relating to short-term leases	**9.24**	11.17

(v) The following are the amounts disclosed in the cash flow statement:

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Cash Outlow from leases	**64.34**	68.20

(B) Leases as lessor

a) Finance leases

The Company had classified the arrangement with its customer for Stage I of a power station in the nature of lease based on the principles enunciated in Appendix C of Ind AS 17 - 'Leases' and accounted for as finance lease in accordance with those principles. This arrangement continues to be classified as finance lease after transition to Ind AS 116 - 'Leases'.

The power purchase agreement with the beneficiary is for a period of twenty five years from the date of transfer and the agreement may be mutually extended, renewed or replaced by another agreement on such terms and for such further period of time as the parties may mutually agree.

The following are the amounts recognised in profit or loss:

₹ Crore

Particulars		For the year ended 31 March 2022	For the year ended 31 March 2021
i)	Finance income on the net investment in the lease	45.07	51.54
ii)	Income relating to variable lease payments not included in the measurement of the net investment in the lease	730.68	690.11

Undiscounted lease payments to be received on an annual basis for a minimum of each of the first five years and for the remaining years:

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Less than one year	108.54	108.54
Between one and two years	108.54	108.54
Between two and three years	215.32	108.54
Between three and four years	-	217.20
Between four and five years	-	-
More than five years	-	-
Total minimum lease payments	432.40	542.82
Less amounts representing unearned finance income	76.90	105.05
Present value of minimum lease payments	355.50	437.77

b) **Operating leases**

(1) The Company had classified the arrangement with its customer for two power stations (one thermal and one gas) as lease based on the principles enunciated in Appendix C of Ind AS 17 'Leases' and accounted for as operating lease in accordance with those principles. These arrangements continue to be classified as operating lease after transition to Ind AS 116 'Leases'.

(i) Thermal Power Station

Power Purchase Agreements (PPA) signed with the beneficiary was operative for a period of five years from the date of take over of the plant and the agreement may be mutually extended, renewed or replaced by another agreement on such terms and conditions for such further period as the parties may mutually agree. However, the operations of this power station was suspended w.e.f. the end of 31 March 2021 and accordingly revenues were recognized upto 31 March 2021.

(ii) Gas Power Station

PPA signed with the beneficiary on 6 January 1995 was operative for five years from the date of commercial operation of last unit of the station and may be mutually extended, renewed or replaced by another agreement on such terms and on such further period of time as the parties may mutually agree. As per the supplementary agreement dated 15 February 2013 the validity period is extended for a further period of 12 years from 1 March 2013.

The following are the amounts recognised in profit or loss:

₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Lease Income	19.59	156.18
Income relating to variable lease payments that do not depend on an index or a rate	84.53	1057.32

Undiscounted lease payments to be received on an annual basis for a minimum of each of the first five years and for the remaining years:

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Less than one year	**19.58**	19.58
Between one and two years	**19.58**	19.58
Between two and three years	**3.91**	19.59
Between three and four years	-	3.91
Between four and five years	-	-
More than five years	-	-
Total	**43.07**	62.66

(2) Land given on operating lease

The Group has enetered into two leases agreements with one of the vendor for right to use of freehold land of 24.50 acre and 67.73 acre for the period of two years w.e.f. from 25 January 2021 and 28 August 2021 respectively. The Group continues to classify the same as operating lease.

The following are the amounts recognised in profit or loss: ₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Lease Income	**2.84**	1.55
Income relating to variable lease payments that do not depend on an index or a rate	-	-

Undiscounted lease payments to be received on an annual basis for a minimum of each of the first five years and for the remaining years:

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Less than one year	**2.15**	0.38
Between one and two years	**0.65**	-
Between two and three years	-	-
Between three and four years	-	-
Between four and five years	-	-
More than five years	-	-
Total	**2.80**	0.38

(3) Buses given on operating lease

The Group has entered into an agreement with Directorate of Transport (DoT), Andaman and Nicobar administration & Bangalore Metropolitan Transport Corporation (BMTC) to supply (operate and maintain in case of BMTC) the fully built AC electric buses for a period of 10 years on fixed hire charges per Km per bus. In addition, the Group has also install, commissioned and shall maintain necessary charging infrastructure at its depots and identified routes, wherever necessary. The Group has classified these arrangement with customers as operating lease as per Ind AS 116 because it does not transfer substantially all the risk and rewards incidental to the ownership of the assets

The following are the amounts recognised in profit or loss: ₹ Crore

Particulars	For the year ended 31 March 2022	For the year ended 31 March 2021
Lease Income	**7.78**	-
Income relating to variable lease payments that do not depend on an index or a rate	-	-

Undiscounted lease payments to be received on an annual basis for a minimum of each of the first five years and for the remaining years:

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Less than one year	**39.95**	13.20
Between one and two years	**42.49**	13.20
Between two and three years	**42.79**	13.20
Between three and four years	**43.08**	13.20
Between four and five years	**43.37**	13.20
More than five years	**217.72**	65.99
Total	**429.40**	131.99

74. Disclosure as per Schedule III to the Companies Act,2013

₹ Crore

Name of the entity in the Group	Net Assets, i.e., total assets minus total liabilities as at		Share in profit or loss for the year ended		Share in other comprehensive income for the year ended		Share in total comprehensive income for the year ended	
	As % age of consolidated net assets	Amount	As % age of consolidated profit or loss	Amount	As % age of consolidated other comprehensive income	Amount	As % age of consolidated total comprehensive income	Amount
Parent								
NTPC Limited								
31 March 2022	**92.03%**	**1,28,051.07**	**94.99%**	**16,111.42**	**100.44%**	**(87.63)**	**94.97%**	**16,023.79**
31 March 2021	92.05%	1,18,985.49	91.98%	13,769.52	68.82%	(68.19)	92.14%	13,701.33
Subsidiaries (Indian)								
Bhartiya Rail Bijlee Company Ltd.								
31 March 2022	**2.10%**	**2,917.83**	**1.91%**	**324.55**	**0.00%**	-	**1.92%**	**324.55**
31 March 2021	2.14%	2,770.13	1.89%	282.48	0.00%	-	1.90%	282.48
Kanti Bijlee Utpadan Nigam Ltd.								
31 March 2022	**1.34%**	**1,865.75**	**0.78%**	**131.84**	**0.02%**	**(0.02)**	**0.78%**	**131.82**
31 March 2021	1.36%	1,755.60	0.90%	134.53	0.06%	(0.06)	0.90%	134.47
NTPC Vidyut Vyapar Nigam Ltd.								
31 March 2022	**0.40%**	**562.57**	**0.89%**	**150.26**	**0.00%**	-	**0.89%**	**150.26**
31 March 2021	0.34%	442.31	0.61%	92.03	0.00%	-	0.62%	92.03
NTPC Electric Supply Company Ltd.								
31 March 2022	**0.04%**	**55.58**	**0.00%**	**0.30**	**0.00%**	-	**0.00%**	**0.30**
31 March 2021	0.04%	55.28	0.04%	5.52	0.00%	-	0.04%	5.52
Patratu Vidyut Utpadan Nigam Ltd.								
31 March 2022	**1.20%**	**1,670.39**	**0.00%**	**(0.03)**	**0.00%**	-	**0.00%**	**(0.03)**
31 March 2021	0.93%	1,197.45	0.00%	(0.21)	0.00%	-	0.00%	(0.21)

₹ Crore

Name of the entity in the Group	Net Assets, i.e., total assets minus total liabilities as at		Share in profit or loss for the year ended		Share in other comprehensive income for the year ended		Share in total comprehensive income for the year ended	
	As % age of consolidated net assets	Amount	As % age of consolidated profit or loss	Amount	As % age of consolidated other comprehensive income	Amount	As % age of consolidated total comprehensive income	Amount
Nabinagar Power Generating Company Ltd.								
31 March 2022	**3.87%**	**5,382.40**	**2.58%**	**436.99**	**0.00%**	**-**	**2.59%**	**436.99**
31 March 2021	3.90%	5,035.77	1.22%	182.57	0.00%	-	1.23%	182.57
NTPC Mining Ltd.								
31 March 2022	**0.00%**	**0.05**	**0.00%**	**-**	**0.00%**	**-**	**0.00%**	**-**
31 March 2021	0.00%	0.05	0.00%	-	0.00%	-	0.00%	-
THDC India Ltd.								
31 March 2022	**7.41%**	**10,305.20**	**5.27%**	**893.75**	**-2.45%**	**2.14**	**5.31%**	**895.89**
31 March 2021	7.67%	9,917.24	7.30%	1,092.15	-0.31%	0.31	7.35%	1,092.46
North Eastern Electric Power Corporation Ltd.								
31 March 2022	**4.72%**	**6,562.74**	**1.25%**	**212.29**	**14.97%**	**(13.06)**	**1.18%**	**199.23**
31 March 2021	4.99%	6,453.52	0.52%	78.33	8.26%	(8.18)	0.47%	70.15
NTPC EDMC Waste Solutions Private Ltd.								
31 March 2022	**0.00%**	**(2.76)**	**-0.01%**	**(2.05)**	**0.00%**	**-**	**-0.01%**	**(2.05)**
31 March 2021	0.00%	(0.71)	-0.01%	(0.91)	0.00%	-	-0.01%	(0.91)
NTPC Renewable Energy Ltd.								
31 March 2022	**0.52%**	**727.77**	**0.00%**	**0.11**	**0.00%**	**-**	**0.00%**	**0.11**
31 March 2021	0.23%	291.54	-0.02%	(3.51)	0.00%	-	-0.02%	(3.51)
Ratnagiri Gas & Power Private Ltd.								
31 March 2022	**-0.20%**	**(278.59)**	**-1.19%**	**(201.23)**	**0.00%**	**-**	**-1.19%**	**(201.23)**
31 March 2021	-0.06%	(77.35)	-0.84%	(125.38)	0.00%	-	-0.84%	(125.38)
Non-controlling interests in all subsidiaries								
31 March 2022	**2.72%**	**3,791.23**	**1.68%**	**284.39**	**-0.63%**	**0.55**	**1.69%**	**284.94**
31 March 2021	2.73%	3,523.71	2.24%	334.77	-0.08%	0.08	2.25%	334.85
Joint ventures (Investment as per equity method)								
Indian								
Utility Powertech Ltd.								
31 March 2022	**0.07%**	**94.67**	**0.12%**	**20.40**	**-2.67%**	**2.33**	**0.13%**	**22.73**
31 March 2021	0.07%	89.44	0.17%	25.04	2.88%	(2.85)	0.15%	22.19

₹ Crore

Name of the entity in the Group	Net Assets, i.e., total assets minus total liabilities as at		Share in profit or loss for the year ended		Share in other comprehensive income for the year ended		Share in total comprehensive income for the year ended	
	As % age of consolidated net assets	Amount	As % age of consolidated profit or loss	Amount	As % age of consolidated other comprehensive income	Amount	As % age of consolidated total comprehensive income	Amount
NTPC-GE Power Services Private Ltd.								
31 March 2022	**0.01%**	**7.42**	**0.03%**	**4.36**	**0.01%**	**(0.01)**	**0.03%**	**4.35**
31 March 2021	0.00%	3.07	-0.02%	(3.02)	0.00%	-	-0.02%	(3.02)
NTPC-SAIL Power Company Ltd.								
31 March 2022	**1.10%**	**1,528.61**	**1.06%**	**179.05**	**0.02%**	**(0.02)**	**1.06%**	**179.03**
31 March 2021	1.12%	1,449.58	1.17%	174.50	-0.15%	0.15	1.17%	174.65
NTPC-Tamil Nadu Energy Company Ltd.								
31 March 2022	**1.33%**	**1,850.14**	**2.35%**	**399.05**	**-0.01%**	**0.01**	**2.37%**	**399.06**
31 March 2021	1.31%	1,695.27	1.09%	163.01	-0.01%	0.01	1.10%	163.02
Konkan LNG Ltd.								
31 March 2022	**0.00%**	**-**	**0.00%**	**-**	**0.00%**	**-**	**0.00%**	**-**
31 March 2021	0.00%	-	-0.12%	(18.50)	0.00%	-	-0.12%	(18.50)
Aravali Power Company Private Ltd.								
31 March 2022	**1.92%**	**2,671.51**	**2.44%**	**414.01**	**-0.17%**	**0.15**	**2.45%**	**414.16**
31 March 2021	2.33%	3,007.35	2.43%	363.38	-0.06%	0.06	2.44%	363.44
NTPC BHEL Power Projects Private Ltd.								
31 March 2022	**0.00%**	**-**	**0.00%**	**-**	**0.00%**	**-**	**0.00%**	**-**
31 March 2021	0.00%	-	0.00%	-	0.00%	-	0.00%	-
Meja Urja Nigam Private Ltd.								
31 March 2022	**1.17%**	**1,629.89**	**0.80%**	**136.11**	**0.00%**	**-**	**0.81%**	**136.11**
31 March 2021	1.14%	1,468.02	0.15%	22.20	0.00%	-	0.15%	22.20
Transformers and Electricals Kerala Ltd.								
31 March 2022	**0.02%**	**23.46**	**-0.07%**	**(11.54)**	**0.00%**	**-**	**-0.07%**	**(11.54)**
31 March 2021	0.03%	35.00	-0.08%	(11.87)	0.00%	-	-0.08%	(11.87)
National High Power Test Laboratory Pvt. Ltd.								
31 March 2022	**0.01%**	**14.24**	**-0.02%**	**(3.98)**	**0.00%**	**-**	**-0.02%**	**(3.98)**
31 March 2021	0.01%	18.22	-0.03%	(3.75)	0.00%	-	-0.03%	(3.75)
Energy Efficiency Services Ltd.								
31 March 2022	**0.30%**	**423.09**	**-0.66%**	**(111.22)**	**0.34%**	**(0.30)**	**-0.66%**	**(111.52)**
31 March 2021	0.41%	534.61	-0.15%	(22.13)	0.14%	(0.14)	-0.15%	(22.27)

₹ Crore

Name of the entity in the Group	Net Assets, i.e., total assets minus total liabilities as at		Share in profit or loss for the year ended		Share in other comprehensive income for the year ended		Share in total comprehensive income for the year ended	
	As % age of consolidated net assets	Amount	As % age of consolidated profit or loss	Amount	As % age of consolidated other comprehensive income	Amount	As % age of consolidated total comprehensive income	Amount
CIL NTPC Urja Private Ltd.								
31 March 2022	**0.00%**	**0.01**	**0.00%**	**(0.01)**	**0.00%**	**-**	**0.00%**	**(0.01)**
31 March 2021	0.00%	0.02	0.00%	-	0.00%	-	0.00%	-
Anushakti Vidhyut Nigam Ltd.								
31 March 2022	**0.00%**	**0.01**	**0.00%**	**-**	**0.00%**	**-**	**0.00%**	**-**
31 March 2021	0.00%	0.01	0.00%	-	0.00%	-	0.00%	-
Hindustan Urvarak and Rasayan Ltd.								
31 March 2022	**1.17%**	**1,621.43**	**-0.03%**	**(5.89)**	**0.00%**	**-**	**-0.03%**	**(5.89)**
31 March 2021	0.87%	1,129.66	-0.03%	(4.78)	0.00%	-	-0.03%	(4.78)
KSK Dibbin Hydro Power Private Ltd.								
31 March 2022	**0.00%**	**4.45**	**0.00%**	**(0.01)**	**0.00%**	**-**	**0.00%**	**(0.01)**
31 March 2021	0.00%	4.46	0.00%	0.02	0.00%	-	0.00%	0.02
Foreign								
Trincomalee Power Company Ltd.								
31 March 2022	**0.00%**	**0.55**	**0.00%**	**(0.20)**	**0.00%**	**-**	**0.00%**	**(0.20)**
31 March 2021	0.00%	1.06	0.00%	(0.23)	0.00%	-	0.00%	(0.23)
Bangladesh-India Friendship Power Company Private Ltd.								
31 March 2022	**0.47%**	**652.66**	**0.00%**	**-**	**0.00%**	**-**	**0.00%**	**-**
31 March 2021	0.43%	556.41	0.00%	-	0.00%	-	0.00%	-
Intra Group Eliminations								
31 March 2022	**-23.72%**	**(32,999.22)**	**-14.17%**	**(2,402.43)**	**-9.87%**	**8.61**	**-14.19%**	**(2,393.82)**
31 March 2021	-24.04%	(31,080.03)	-10.40%	(1,556.36)	20.47%	(20.28)	-10.60%	(1,576.64)
Total								
31 March 2022	**100.00%**	**1,39,134.15**	**100.00%**	**16,960.29**	**100.00%**	**(87.25)**	**100.00%**	**16,873.04**
31 March 2021	100.00%	1,29,262.18	100.00%	14,969.40	100.00%	(99.09)	100.00%	14,870.31

75. Contingent liabilities and commitments

A. Contingent liabilities

a. Claims against the group not acknowledged as debts

(i) Capital works ₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Claims by contractors under capital works	**13,642.71**	15,701.97

Some of the contractors for supply and installation of equipment and execution of works at our projects have lodged claims on the Group for the above amounts seeking enhancement of the contract price, revision of work schedule with price escalation, compensation for the extended period of work, idle charges etc. These claims are being contested by the Group as being not admissible in terms of the provisions of the respective contracts.

The Group is pursuing various options under the dispute resolution mechanism available in the contracts for settlement of these claims. It is not practicable to make a realistic estimate of the outflow of resources if any, for settlement of such claims pending resolution.

(ii) Land compensation cases ₹ Crore

Particulars	**As at 31 March 2022**	As at 31 March 2021
Claims by land oustees	**720.24**	551.54

In respect of land acquired for the projects, the erstwhile land owners have claimed higher compensation before various authorities/courts which are yet to be settled. Against such cases, contingent liability of these amounts has been estimated.

(iii) Fuel suppliers ₹ Crore

Particulars	**As at 31 March 2022**	As at 31 March 2021
Claims towards grade slippages	**2,145.78**	2,046.70
Other claims	**2,584.04**	1,776.27

Pending resolution of the issues with the coal companies, above amounts towards grade slippage pursuant to third party sampling has been estimated by the Group as contingent liability. Further, other claims represent claims made by fuel companies towards surface transportation charges, custom duty on service margin on imported coal, take or pay claims of gas suppliers, etc. estimated by the Group as contingent liability.

The Group is pursuing with the fuel companies, related ministries and other options under the dispute resolution mechanism available for settlement of these claims.

(iv) Others ₹ Crore

Particulars	**As at 31 March 2022**	As at 31 March 2021
Claims by government agencies	**2,083.95**	2,143.15

In respect of claims (including applicable interest) made by various State/Central Government departments/ Authorities towards building permission fee, penalty on diversion of agricultural land to non-agricultural use, non agricultural land assessment tax, water royalty, other claims, etc. and by others, contingent liability of the above amounts has been estimated.

(v) Possible reimbursement in respect of (i) to (iii) above

In respect of claims included in (i) and (ii) above, payments, if any, by the Group on settlement of the claims would be eligible for inclusion in the capital cost for the purpose of determination of tariff as per CERC Tariff Regulations subject to prudence check by the CERC. In case of (iii), the estimated possible reimbursement by way of recovery through tariff as per Regulations is ₹ **4,718.81 crore** (31 March 2021: ₹ 3,810.71 crore).

b. Disputed tax matters

₹ Crore

Particulars	**As at 31 March 2022**	As at 31 March 2021
Tax matters before various authorities	**7,761.08**	7,615.11

Disputed income tax/sales tax/excise and other tax matters are pending before various Appellate Authorities. Many of these matters were adjudicated in favour of the Group but are disputed before higher authorities by the concerned departments. In respect of these disputed cases, the Group estimate possible reimbursement of ₹ **3,399.78 crore** (31 March 2021: ₹ 3,316.50 crore). The amount paid under dispute/adjusted by the authorities in respect of the cases amounts to ₹ **3,343.07 crore** (31 March 2021: ₹ 3,336.00 crore). Also refer Note 56(II)(b).

c. **Others**

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Bills discounted with banks	**8,349.59**	16,410.05
Coal transportation [Refer Note 63(iii)(b)]	**2,292.30**	2,153.57
Others	**3,395.97**	3,434.38

Bills discounted with banks against trade receivables has been disclosed under contingent liabilities (Refer Note-14). In case of any claim on the Group from the banks in this regard, entire amount shall be recoverable from the beneficiaries along with surcharge. Others include contingent liabilities disclosed on an estimated basis relating to likely claims that may arise in connection with abandoned oil exploration activities, land use agreements, service tax reimbursements, etc.

In respect of NTPC Vidyut Vyapar Nigam Ltd., a subsidiary of the Company, electricity supplied by the sellers under SWAP arrangements of **133.8166 MUs** (31 March 2021: 305.57849 MUs) are yet to be returned for which the amount is not ascertainable.

Some of the beneficiaries have filed appeals against the tariff orders of the CERC. The amount of contingent liability in this regard is not ascertainable.

d. **Joint venture companies**

Refer Note 70 for contingent liability relating to joint venture companies.

B. **Contingent assets**

(i) While determining the tariff for some of the Parent Company's power stations, CERC has disallowed certain capital expenditure incurred by the Parent Company. The Parent Company aggrieved over such issues has filed appeals with the Appellate Tribunal for Electricity (APTEL)/Hon'ble Supreme Court against the tariff orders issued by the CERC. Based on past experience, the Parent Company believes that a favourable outcome is probable. However, it is impracticable to estimate the financial effect of the same as its receipt is dependent on the outcome of the judgement.

(ii) CERC (Terms & Conditions of Tariff) Regulations 2019-24 provide for levy of Late Payment Surcharge by generating company in case of delay in payment by beneficiaries beyond 45 days from the date of presentation of bill. However, in view of significant uncertainities in the ultimate collection from some of the beneficiaries against partial bills as resolved by the management, an amount of ₹ **1,072.77 crore** as at 31 March 2022 (31 March 2021: ₹ 960.21 crore) has not been recognised.

(iii) An amount of ₹ **Nil** as at 31 March 2022 (31 March 2021: ₹ 7.86 crore) recoverable by M/s Kanti Bijlee Utpadan Nigam Ltd., a subsidiary of the Company, from a bank on account of a bank guarantee encashment has not been recognised in view of uncertainities involved.

C. **Commitments**

a) Estimated amount of contracts remaining to be executed on capital account (property, plant & equipment and intangible assets) and not provided for is as under:

₹ Crore

Particulars	As at 31 March 2022	As at 31 March 2021
Property, plant and equipment	**58,876.71**	67,355.62
Intangible assets	**43.65**	10.32
Total	**58,920.36**	67,365.94

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b) In respect of the following investments, the Group has restrictions for their disposal as at 31 March 2022 as under:

₹ Crore

Name of the Company	Period of restrictions for disposal of investments as per related agreements	Amount invested as at	
		31 March 2022	31 March 2021
International Coal Ventures Private Ltd.	5 years from the date of incorporation (i.e. 20.05.2009) or till such time an undertaking for non-disposal of such share is given to FI/Banks for their assistance to the Company whichever is later. Also refer Note 7.	**1.40**	1.40
Total		**1.40**	1.40

Further, the Group has commitments of ₹ **498.60 crore** (31 March 2021: ₹ 507.60 crore) towards further investment in the other companies as at 31 March 2022.

c) Group's commitment towards the minimum work programme in respect of oil exploration activities of joint operations has been disclosed in Note 65.

d) Group's commitment in respect of lease agreements has been disclosed in Note 73.

e) Jhabua Power Limited (JPL), having an operational thermal power capacity of 1 x 600 MW was admitted to National Company Law Tribunal (NCLT) on 27 March 2019, and is presently undergoing Corporate Insolvency Resolution Process in NCLT. Invitation for Expression of Interest for submission of Resolution Plan for JPL was published by Resolution Professional on 19 August 2019. The Board of Directors of the Company had accorded in-principle approval for submission of Resolution Plan for acquisition of JPL. Subsequently, the Company has submitted the Resolution Plan to Resolution Professional on due date of 30 December 2019 and revised Resolution plan on 30 November 2020 and 16 April 2021 based on discussions with Committee of Creditors (CoC)/Resolution Professional.

After prolonged negotiations with CoC, NTPC submitted its Final Resolution Plan on 14 June 2021 which was approved on 26 June 2021 with 100% vote and LoI issued to NTPC which has been accepted by NTPC and submitted the LoI along with PBG on 28 June 2021.Resolution Professional has filed the Resolution Plan approved by CoC for approval of NCLT on 30 June 2021.

A petition was filed by erstwhile promoters questioning NTPC's qualification u/s 29A of IBC to submit the Resolution Plan. NCLT, on 8 March 2022 has pronounced its order dismissing the petition and has rejected all the prayers sought by them. The order of NCLT has been challenged by them before the National Company Law Appellate Tribunal (NCLAT) on 17 March 2022 which is under consideration by NCLAT. Meanwhile, hearing on approval of Resolution Plan before NCLT Kolkata has been completed on 20 April 2022 and the Order has been reserved by NCLT.

f) Refer Note 70 for commitments relating to joint venture companies.

76. Additional Regulatory Information

i) The Group does not hold any Invetsment Property in its books of accounts, so fair valuation of investment property is not applicable.

ii) During the year the Group has not revalued any of its Property,plant and equipment.

iii) During the year, the Group has not revalued any of its Intangible assets.

iv) The Group has not granted any loans or advances to promoters, directors, KMP's and the related parties that are repayable on demand or without specifying any terms or period of repayment.

v) **(a) Capital-Work-in Progress (CWIP) - Ageing Schedule as at 31 March 2022**

₹ Crore

Capital-Work-in Progress (CWIP)	Amount in CWIP for a period of				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
Projects in progress	26,904.95	17,595.98	14,438.74	31,971.42	**90,911.09**
Projects temporarily suspended	-	0.72	0.29	113.11	**114.12**

Capital-Work-in Progress (CWIP) - Ageing Schedule as at 31 March 2021

₹ Crore

Capital-Work-in Progress (CWIP)	Amount in CWIP for a period of				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
Projects in progress	23,079.21	16,347.51	15,004.18	42,848.01	97,278.91
Projects temporarily suspended	0.72	0.29	0.52	123.72	125.25

(b) Capital-Work-in Progress (CWIP) - Completion schedule for projects overdue or cost overruns as compared to original plan as on 31 March 2022

₹ Crore

Capital-Work-in Progress (CWIP)	**To be completed in**				**Total**
	Less than 1 year	**1-2 years**	**2-3 years**	**More than 3 years**	
	Upto 31 March 2023	**1 April 2023 to 31 March 2024**	**1April 2024 to 31 March 2025**	**Beyond 1 April 2025**	
North Karanpura	-	13,102.82	-	-	**13,102.82**
Barh-I	-	10,508.33	-	-	**10,508.33**
Tavopan Hydro Electric	-	-	5,350.49	-	**5,350.49**
Rammam	-	-	-	648.31	**648.31**
Telangana-I	9,987.25	-	-	-	**9,987.25**
THPP (1000 MW) [THDC]	569.61	153.20	-	-	**722.81**
VPHEP (444 MW) [THDC]	500.00	500.00	406.00	-	**1,406.00**
Patratu Stage-1	-	-	6,926.40	-	**6,926.40**
BRBCL	335.81	-	-	-	**335.81**
Nabinagar Thermal Power Project(NPGC)	4,414.98	-	-	-	**4,414.98**
Muzaffarpur Thermal (KBUNL)	505.48	-	-	-	**505.48**
Assam GBPS (NEEPCO)	14.12	25.22	-	-	**39.34**
Tuirial HPS (NEEPCO)	0.74	0.11	-	-	**0.85**

Capital-Work-in Progress (CWIP) - Completion schedule for projects overdue or cost overruns as compared to original plan as on 31 March 2021

₹ Crore

Capital-Work-in Progress (CWIP)	To be completed in				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
	Upto 31 March 2022	1 April 2022 to 31 March 2023	1 April 2023 to 31 March 2024	Beyond 1 April 2024	
North Karanpura	-	-	11,729.57	-	11,729.57
Barh-I	-	-	18,418.21	-	18,418.21
Tavopan Hydro Electric	-	-	-	4,985.75	4,985.75
Rammam	-	-	-	552.42	552.42
Telangana-I	-	9,190.53	-	-	9,190.53
THPP (1000 MW) [THDC]	546.22	210.00	112.24	-	868.46
VPHEP (444 MW) [THDC]	413.30	430.00	425.00	371.77	1,640.07
BRBCL	2,092.15	-	-	-	2,092.15
Nabinagar Thermal Power Project(NPGC)	9,126.98	-	-	-	9,126.98
Muzaffarpur Thermal (KBUNL)	-	455.44	-	-	455.44
Assam GBPS (NEEPCO)	25.22	-	-	-	25.22
Tuirial HPS (NEEPCO)	0.11	-	-	-	0.11

vi) (a) **Intangible assets under development - Ageing Schedule as at 31 March 2022**

₹ Crore

Intangible assets under development	**Amount in CWIP for a period of**				**Total**
	Less than 1 year	**1-2 years**	**2-3 years**	**More than 3 years**	
Projects in progress	5.42	8.64	55.73	31.26	**101.05**
Projects temporarily suspended	-	-	-	-	**-**

Intangible assets under development - Ageing Schedule as at 31 March 2021

₹ Crore

Intangible assets under development	Amount in CWIP for a period of				Total
	Less than 1 year	1-2 years	2-3 years	More than 3 years	
Projects in progress	10.38	60.21	0.29	30.99	101.87
Projects temporarily suspended	-	-	-	-	-

(b) **Intangible assets under development - Completion schedule for projects overdue or cost overruns as compared to original plan as on 31 March 2022**

₹ Crore

Intangible assets under development	**To be completed in**				**Total**
	Less than 1 year	**1-2 years**	**2-3 years**	**More than 3 years**	
	Upto 31 March 2023	**1 April 2023 to 31 March 2024**	**1 April 2024 to 31 March 2025**	**Beyond 1 April 2025**	
Software	1.62	-	-	-	**1.62**

Intangible assets under development - Completion schedule for projects overdue or cost overruns as compared to original plan as on 31 March 2021: ₹ Nil.

vii) No proceedings have been initiated or pending against the Group under the Benami Transactions (Prohibition) Act,1988.

viii) The quarterly returns / statement of current assets filed by the Group with banks / financial institutions are generally in agreement with the books of accounts

ix) None of the entities of the Group have been declared as a wilful defaulter by any bank or financial institution or any other lender.

x) **Relationship with Struck off Companies**

(a) **Payables / receivables**

₹ Crore

Name of struck off Company	**Nature of transactions with struck-off Company**	**Balance outstanding as at 31 March 2022**	**Balance outstanding as at 31 March 2021**	**Relationship with the struck off company**	**CIN**	**Remarks**
Aradhya Construction Private Limited	Receivables	**#**	#	Contractor	U45200BR2013PTC020295	
Pb Infrastructure & Engineering (P) Ltd	Receivables	**#**	#	Contractor	U45203OR2006PTC008648	
Shiv Singh Amar Singh And Company Private Limited	Receivables	**1.38**	1.38	Contractor	U70200DL1985PTC022577	Under Litigation
Ganga Mechanical works Pvt Ltd	Receivables	**0.05**	0.03	Contractor	U45201DL2003PTC119275	
Hello Marketing Pvt. Ltd	Receivables	**#**	#	Contractor	U67190DL1993PTC053859	
Srijan Materials And Eng.Pvt.Ltd	Payables	**#**	#	Contractor	U45200BR2010PTC016335	
Brindavan Projects Ltd	Payables	**0.01**	0.01	Contractor	U45200TG1994PLC018506	
Eco E-Waste Recyclers India Private Limited	Payables	**#**	0.07	Contractor	U37200KA2010PTC052547	
Go Green Buildtech Pvt. Ltd.	Payables	**#**	#	Contractor	U45400DL2014PTC264520	
Innutech Web Solutions Pvt Ltd	Payables	**#**	#	Contractor	U72200DL2010PTC200692	

₹ Crore

Name of struck off Company	Nature of transactions with struck-off Company	Balance outstanding as at 31 March 2022	Balance outstanding as at 31 March 2021	Relationship with the struck off company	CIN	Remarks
Leonard Exports Private Limited	Payables	**0.10**	0.10	Contractor	U74900WB2009PTC133430	
Neway Engineers Msw Pvt. Ltd.	Payables	**0.18**	0.18	Contractor	U74900TN2015PTC100484	
Prava Trading Corporation (India) Private Limited	Payables	**0.05**	0.02	Contractor	U51909WB2013PTC197297	
Pyrotech Electronics Private Ltd	Payables	**#**	0.01	Contractor	U99999MH1988PTC046600	
S.V. Network Technologies India Private Limited	Payables	**0.10**	0.09	Contractor	U72200TG2006PTC051972	
U K Construction Pvt Ltd	Payables	**#**	#	Contractor	U00501BR1986PTC002490	
Business Standard Private Limited	Payables	**#**	#	Contractor	U22219WB1970PLC027883	
Excellent Technocrate Pvt Ltd	Payables	**0.01**	0.01	Contractor	U45200BR2009PTC014723	
Hanothia Industries Ltd.	Payables	**#**	#	Contractor	U27109TG2005PTC046327	
Hn18 Health Services Pvt Ltd	Payables	**#**	0.01	Contractor	U74900KA2015PTC080531	
Kkl Allied Marketing Services Pvt Ltd	Payables	**0.01**	0.01	Contractor	U74999TG2008PTC057231	
M M Raj Travels Private Limited	Payables	**#**	#	Contractor	U34101UP1996PTC020425	
Prime Development Consultants Pvt Ltd	Payables	**#**	#	Contractor	U00358BR2001PTC009696	
Pumos Lighting Pvt Ltd	Payables	**#**	#	Contractor	U31503DL2012PTC240358	
S S Builders (India) Pvt Ltd	Payables	**#**	#	Contractor	U45201DL1981PTC011552	
S.V. Ready Mix Private Limited	Payables	**#**	#	Contractor	U74999AP2007PTC055829	
Snr Bricks Private Limited	Payables	**#**	#	Contractor	U26931AP2008PTC058944	
Timetech Enterprises Pvt Ltd	Payables	**0.01**	0.01	Contractor	U51109DL1989PTC038628	
Uniteam Pvt Ltd	Payables	**#**	#	Contractor	U29253WB2011PTC169264	
Vijay Construction	Payables	**#**	#	Contractor	U45200MH1996PTC100231	
A.P.Construction Pvt. Ltd	Payables	**0.01**	0.02	Contractor	U74210WB1979PTC032397	
Hi-Tech Reprographics Pvt Ltd	Payables	**#**	#	Contractor	U22190WB1996PTC079759	
S.K.Engineering and Work Pvt. Ltd	Payables	**#**	#	Contractor	U29253MH2013PTC247348	
Ocean Star Diving Services Ltd	Payables	**0.08**	-	Contractor	U93000AS2012PTC011206	
Elshadai Infratech Pvt Ltd.	Payables	-	0.01	Supplier	U45203AR2013PTC008401	
Oriental Engineering Works Pvt Ltd	Payables	-	-	Contractor	U99999DL2000PTC002393	
Globex Steel Pvt. Ltd	Payables	-	-	Contractor	U27101DL2011PTC227333	
Destiny Enterprise Pvt. Ltd	Payables	-	-	Contractor	U45201KA2007PTC043577	
Galaxy Enterprise Pvt. Ltd	Payables	-	-	Contractor	U74999MH2003PTC057452	
Simran Enterprises (I) Ltd	Payables	-	-	Contractor	U32109DL1992PLC051206	
Industrial Equipments Pvt. Ltd	Payables	-	-	Supplier	U23524WB1957PTC023524	
Electromech Engineering Pvt. Ltd	Payables	-	-	Contractor	U74210MH2010PTC206175	
Advance Technologies Application Pvt. Ltd	Payables	-	-	Supplier	U72200MH1995PTC092967	
Amar Enterprises Pvt. Ltd	Payables	-	-	Contractor	U52100GJ1993PTC020364	
Data Sync Solutions Pvt. Ltd	Payables	-	-	Supplier	U72200TN2008PTC070331	
Emerging Solutions Pvt. Ltd	Payables	-	-	Supplier	U72200TG1999PTC032018	
B.M. Associates Pvt. Ltd	Payables	-	-	Supplier	U45200DL2006PTC155219	
Pixel Webtech Private Limited	Payables	**#**	#	Service Provider	U72100DL2006PTC155887	
Imperia Techsolutions Private limited	Payables	-	0.01	Contractor	U51101MH2013PTC242798	

₹ Crore

Name of struck off Company	Nature of transactions with struck-off Company	Balance outstanding as at 31 March 2022	Balance outstanding as at 31 March 2021	Relationship with the struck off company	CIN	Remarks
Anantshri Industrial Security (OPC) Private Limited	Payables	**0.04**	-	Contractor	U93090MP2017OPC042984	
Shashidhar Construction & Carriers Private Limited	Payable	**0.72**	-	Contractor	U45200JH1994PTC005864	
Shashidhar Construction & Carriers Private Limited	Receivables	-	0.15	Contractor	U45200JH1994PTC005864	
Swiss Cabs (India) Private Limited	Payables	**0.01**	0.01	Contractor	U60231MH2008PTC178118	
Sankat Mochan Construction Private Limited	Payables	**0.01**	0.01	Contractor	U45200BR2003PTC010344	
Shaba Infra Projects Private Limited	Payables	**0.14**	0.14	Contractor	U45200JH2013PTC001333	
Great Eastern Trading Co Limited	Payables	-	-	Contractor	U51109WB1950PLC018863	
Yugesh & Chandan Construction Private Limited	Payable	-	-	Contractor	U45200BR2015PTC023996	

Individual Amount recoverable/payable is less than ₹ 50,000/- and sum of all recoverable cases amounts to ₹ **47,164**/- (31 March 2021 - ₹ 52,772/-) and sum of all payable cases amounts to ₹ **3,46,383**/- (31 March 2021 - ₹ 2,69,821/-)

b) Shares held by struck off companies

Name of struck off Company	Nature of transactions with struck-off Company	Number of equity shares held	CIN
Stalag Investments & Management Services Pvt Ltd	Shares held by struck off company	60	U67120MH1987PTC042898
Tradeshare Financial Services Pvt Ltd		120	U67120KL2008PTC023516
Borkar Finance Private Limited		430	U99999MH1997PTC105534
Exponential Financial Services Pvt Ltd		120	U74110DL1995PTC064465
Dige And Associates Investment Consultants Pvt Ltd		34	U00893PN2006PTC022295
Canny Securities Pvt Ltd		1	U67120KA1995PTC018357
Satvik Financial Services Ltd.		24	U67100MH2009PLC196964
Vaishak Shares Limited		1	U85110KA1994PLC015178
Kothari Intergroup Ltd.		13	U51909KA1984PLC005952
Dreams Broking Private Limited		6	U67190MH2012PTC226215

xi) The provisions of clause (87) of section 2 of the Act read with the Companies (Restriction on number of Layers) Rules, 2017 are not applicable to the group as per Section 2(45) of the Companies Act, 2013.

xii) There were no scheme of Arrangements approved by the competent authority during the year in terms of sections 230 to 237 of the Companies Act,2013.

xiii) The Group has not advanced or loaned or invested any fund to any entity (Intermediaries) with the understanding that the Intermediary shall lend or invest in party identified by or on behalf of the Company (Ultimate Beneficiaries). The Company has not received any fund from any party with the understanding that the Company shall whether, directly or indirectly lend or invest in other entities identified by or on behalf of the Company ("Ultimate Beneficiaries") or provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

xiv) The Group has not traded or invested in Crypto currency or Virtual Currency during the financial year.

xv) The Group does not have any transaction which is not recorded in the books of accounts that has been surrendered or disclosed as income during the year in the tax assessments under the Income Tax Act, 1961.

77. Information in respect of micro and small enterprises as at 31 March 2022 as required by Schedule III to the Companies Act, 2013 and Micro, Small and Medium Enterprises Development Act, 2006 (MSMED Act)

₹ Crore

Particulars		31 March 2022	31 March 2021
(a)	Amount remaining unpaid to any supplier:		
	Principal amount	**792.01**	670.59
	Interest due thereon	-	-
(b)	Amount of interest paid in terms of Section 16 of the MSMED Act along-with the amount paid to the suppliers beyond the appointed day.	-	-
(c)	Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the year) but without adding the interest specified under the MSMED Act.	-	-
(d)	Amount of interest accrued and remaining unpaid	-	-
(e)	Amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprises, for the purpose of disallowances as a deductible expenditure under Section 23 of MSMED Act	-	-

The payment to the vendors are made as and when they are due, as per terms and conditions of respective contracts.

78. Statement containing salient features of the financial statements of Subsidiaries/Joint Ventures of NTPC Ltd. pursuant to first proviso to sub-section (3) of Section 129 read with Rule 5 of Companies (Accounts) Rules, 2014, in form AOC I is attached.

For and on behalf of the Board of Directors

(Nandini Sarkar)
Company Secretary

(A.K. Gautam)
Director (Finance)
DIN: 08293632

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

These are the Notes referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382

For S.N. Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(Mukesh Bansal)
Partner
M No. 505269

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R. Prasanna Varma)
Partner
M No. 025854

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No. 079236

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K. Prusty)
Partner
M No. 057318

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M No. 073488

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M No. 072534

Place : New Delhi
Dated : 20 May 2022

Digitally signed by signatories

FORM NO. AOC.1

Statement containing salient features of the financial statements of Subsidiaries/Associate Companies/Joint Ventures of NTPC Ltd.
(Pursuant to first proviso to sub-section (3) of Section 129 read with Rule 5 of Companies (Accounts) Rules, 2014)
Part "A": Subsidiaries

(Amount in ₹ crore)

1.	Sl. No.	1	2	3	4	5	6	7	8	9	10	11	12
2.	Name of the Subsidiary	NTPC Electric Supply Company Ltd.	NTPC Vidyut Vyapar Nigam Ltd.	Kanti Bijlee Utpadan Nigam Ltd.	Bhartiya Rail Bijlee Company Ltd.	Patratu Vidyut Utpadan Nigam Ltd.	Nabinagar Power Generating Company Ltd.	NTPC Mining Ltd.	THDC India Ltd.	North Eastern Electric Power Corporation Ltd.	NTPC EDMC Waste Solutions Private Ltd.	NTPC Renewable Energy Ltd.	Ratnagiri Gas & Power Private Ltd.
3.	The date since when subsidiary was acquired	21.08.2002	01.11.2002	06.09.2006	22.11.2007	15.10.2015	29.06.2018	29.08.2019	27.03.2020	27.03.2020	01.06.2020	07.10.2020	31.12.2020
4.	Reporting period for the subsidiary concerned, if different from the holding company's reporting period	Same as that of Holding Company (01.04.2021 -31.03.2022)	Same as that of Holding Company (01.04.2021 -31.03.2022)	Same as that of Holding Company (01.04.2021 -31.03.2022)	Same as that of Holding Company (01.04.2021 -31.03.2022)	Same as that of Holding Company (01.04.2021 -31.03.2022)	Same as that of Holding Company (01.04.2021 -31.03.2022)	Same as that of Holding Company (01.04.2021 -31.03.2022)	Same as that of Holding Company (01.04.2021 -31.03.2022)	Same as that of Holding Company (01.04.2021 -31.03.2022)	Same as that of Holding Company (01.04.2021 -31.03.2022)	Same as that of Holding Company (01.04.2021 -31.03.2022)	Same as that of Holding Company (01.04.2021 -31.03.2022)
5.	Reporting currency and exchange rate as on the last date of the relevant financial year in the case of foreign subsidiaries.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6.	Share capital	0.08	30.00	1,670.67	2,397.46	1,672.46	4,961.03	0.05	3,665.88	3,609.81	0.20	731.17	3,272.30
7.	Reserves & surplus	55.50	532.57	195.07	520.37	(2.07)	421.37	-	6,639.32	2,952.93	(2.96)	(3.40)	(3,550.89)
8.	Total assets	55.58	2,442.73	5,049.77	9,215.41	8,760.14	18,456.41	0.05	21,154.53	15,817.55	0.35	895.05	1,634.54
9.	Total liabilities	-	1,880.16	3,184.03	6,297.58	7,089.75	13,074.01	-	10,849.33	9,254.81	3.11	167.28	1,913.13
10.	Investments	-	-	-	-	-	-	-	-	4.45	-	-	-
11.	Turnover	-	3,899.59	1,602.76	2,578.94	-	3,441.94	-	1,921.49	3,206.84	-	-	1,955.34
12.	Profit before taxation	(0.24)	201.01	152.87	434.19	(0.03)	507.34	-	1,118.23	417.24	(2.05)	0.15	(201.23)
13.	Provision for taxation	(0.54)	50.75	21.03	109.64	-	70.35	-	224.48	204.96	-	0.04	-
14.	Profit after taxation	0.30	150.26	131.84	324.55	(0.03)	436.99	-	893.75	212.28	(2.05)	0.11	(201.23)
15.	Proposed dividend	-	-	-	-	-	-	-	-	-	-	-	-
16.	% of Shareholding	100.00%	100.00%	100.00%	74.00%	74.00%	100.00%	100.00%	74.496%	100.00%	74.00%	100.00%	86.49%

Notes:

1.	Subsidiaries which are yet to commence operations.	1. NTPC Mining Limited
		2. NTPC EDMC Waste Solutions Private Ltd.
		3. NTPC Renewable Energy Ltd.
2.	Subsidiaries which have been liquidated or sold during the year.	Nil

Part "B" : Associates and Joint Ventures
Statement pursuant to Section 129 (3) of the Companies Act, 2013

Sl. No.	Name of Joint Ventures	Utility Powertech Ltd.	NTPC - GE Power Services Pvt. Ltd.	NTPC-SAIL Power Company Ltd.	NTPC Tamil Nadu Energy Company Ltd.	Aravali Power Company Pvt. Ltd.	NTPC-BHEL Power Projects Pvt. Ltd.	Meja Urja Nigam Pvt. Ltd.	Transformers & Electricals Kerela Ltd.	National High Power Test Laboratory Pvt. Ltd.	Energy Efficiency Services Ltd.	CIL NTPC Urja Pvt. Ltd.	Anushakti Vidhyut Nigam Ltd.	Hindustan Urvarak & Rasayan Limited	Trincomalee Power Company Ltd.	Bangladesh-India Friendship Power Company Pvt. Ltd.
1.	Latest Audited Balance Sheet Date	31.03.2022	31.03.2021	31.03.2022	31.03.2022	31.03.2022	31.03.2021	31.03.2022	31.03.2020	31.03.2021	31.03.2021	31.03.2021	31.03.2021	31.03.2022	31.03.2021	30.06.2021
2.	Date on which the Associate or Joint venture was associated or acquired	23.11.1995	27.09.1999	08.02.1999	23.05.2003	21.12.2006	28.04.2008	02.04.2008	19.06.2009	22.05.2009	10.12.2009	27.04.2010	27.01.2011	15.06.2016	26.09.2011	31.10.2012
3.	Shares of Joint Ventures held by the Company on the year end as at 31.03.2022															
-	Number	20,00,000	30,00,000	49,02,50,050	1,43,63,96,112	1,43,30,08,200	5,00,00,000	1,74,99,99,800	1,91,63,438	3,04,00,000	46,36,10,000	76,900	49,000	1,62,94,15,000	32,86,061	7,42,50,000
-	Amount of Investment in Joint Venture (₹ crore)	1.00	3.00	490.25	1,436.40	1,433.01	50.00	1,750.00	31.34	30.40	463.61	0.08	0.05	1,629.42	15.20	620.38
-	Extent of Holding (%)	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	50.00%	44.60%	20.00%	33.334%	50.00%	49.00%	29.67%	50.00%	50.00%
4.	Description of how there is significant influence	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5.	Reason why the Joint Venture is not consolidated	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
6.	Networth atributable to Shareholding as per latest audited Balance Sheet (₹ crore)	94.67	7.42	1,528.61	1,850.14	2,671.51	-	1,629.89	23.46	14.24	423.09	0.01	0.01	1,621.43	0.55	652.66
7.	Profit/ Loss for the year (Total Comprehensive Income) (₹ crore)															
	i Considered for Consolidation	22.73	4.35	179.03	399.06	414.16	-	136.11	(11.54)	(3.98)	(111.52)	(0.01)	-	(5.89)	(0.20)	-
	ii Not Considered in Consolidation	NA	NA	NA	NA	NA	(99.38)	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

A. Names of Joint Ventures which are yet to commence operations.

1 CIL NTPC Urja Private Ltd.

2 Anushakti Vidyut Nigam Ltd.

3 Hindustan Urvarak & Rasayan Ltd.

4 Trincomalee Power Company Ltd. (incorporated in Srilanka)

5 Bangladesh-India Friendship Power Company Private Ltd. (incorporated in Bangladesh)

B. Names of Associates or Joint Ventures which have been liquidated or sold during the year.

1 BF-NTPC Energy Systems Ltd. is in the process of voluntary winding up.

For and on behalf of the Board of Directors

(Nandini Sarkar)
Company Secretary

(A.K. Gautam)
Director (Finance)
DIN: 08293632

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382

For S.N. Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(Mukesh Bansal)
Partner
M No. 505269

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R. Prasanna Varma)
Partner
M No. 025854

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No. 079236

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K. Prusty)
Partner
M No. 057318

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M No. 073488

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M No. 072534

Place : New Delhi
Dated : 20 May 2022
Digitally signed by signatories

To

The Members of NTPC Limited

Report on the Audit of the Consolidated Financial Statements

Opinion

We have audited the accompanying Consolidated Financial Statements of NTPC Limited (hereinafter referred to as "the Holding Company") and its subsidiaries (the Holding Company and its subsidiaries together referred to as "the Group"), and its joint ventures, which comprise the Consolidated Balance Sheet as at 31 March 2022, the Consolidated Statement of Profit and Loss (including Other Comprehensive Income), the Consolidated Statement of Changes in Equity and the Consolidated Statement of Cash Flows for the year then ended, and notes to the Consolidated Financial Statements, including a summary of the significant accounting policies and other explanatory information (hereinafter referred to as "Consolidated Financial Statements").

In our opinion and to the best of our information and according to the explanations given to us the aforesaid Consolidated Financial Statements give the information required by the Companies Act, 2013 ('the Act') in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India, of the consolidated state of affairs (financial position) of the Group and its joint ventures as at 31 March 2022, and their consolidated net profit (financial performance including other comprehensive income), their consolidated changes in equity and consolidated cash flows for the year ended on that date.

Basis for Opinion

We conducted our audit of the Consolidated Financial Statements in accordance with the Standards on Auditing (SAs) specified under section 143(10) of the Act. Our responsibilities under those Standards are further described in the Auditors' Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the 'Code of Ethics' issued by the Institute of Chartered Accountants of India (ICAI) together with the ethical requirements that are relevant to our audit of the Consolidated Financial Statements under the provisions of the Act and the Rules made thereunder, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the ICAI's Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion on the Consolidated Financial Statements.

Emphasis of Matter

Considering the requirement of Standard on Auditing (SA 600) on 'Using the work of Another Auditor' including materiality, we draw attention to the following matters in the notes to the Consolidated Financial Statements:

(a) Note No. 40 (a)regarding billing and accounting of sales on provisional basis considering the provisions of Central Electricity Regulatory Commission (CERC) Tariff Regulations.

(b) Note No. 63 (iii)(b) with respect to appeal filed by the Holding Company with the Hon'ble High Court of Delhi in the matter of Arbitral award pronounced against the Holding Company and the related provision made/disclosure of contingent liability as mentioned in the said note.

Our opinion is not modified in respect of these matters.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the Consolidated Financial Statements of the current period. These matters were addressed in the context of our audit of the Consolidated Financial Statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For each matter below, description of how our audit addressed the matter is provided in that context. Considering the requirement of Standard on Auditing (SA 600) on 'Using the work of Another Auditor' including materiality, below Key Audit Matters have been reproduced from the Independent Auditors' report on the audit of Standalone Financial Statements of the Holding Company.

Sl. No.	Key Audit Matter	How our audit addressed the Key Audit Matter
1.	**Recognition and Measurement of revenue from Sale of Energy** The company records revenue from sale of energy as per the principles enunciated under Ind AS 115, based on tariff approved by the Central Electricity Regulatory Commission (CERC) as modified by the orders of Appellate Authorities. Pending issue of provisional/final tariff order w.e.f. 01 April, 2019 capacity charges has been provisionally recognised considering the applicable CERC Tariff Regulations 2019. This is considered as key audit matter due to the nature and extent of estimates made as per the CERC Tariff Regulations, which leads to recognition and measurement of revenue from sale of energy being complex and judgmental. (Refer Note No. 40 to the Consolidated Financial Statements, read with the Significant Accounting Policy No. C.16)	We have obtained an understanding of the CERC Tariff Regulations, orders, circulars, guidelines and the Company's internal circulars and procedures in respect of recognition and measurement of revenue from sale of energy comprising of capacity and energy charges and adopted the following audit procedures: - Evaluated and tested the effectiveness of the Company's design of internal controls relating to recognition and measurement of revenue from sale of energy. - Verified the accounting of revenue from sale of energy based on provisional tariff computed as per the principles of CERC Tariff Regulations 2019. Based on the above procedure performed, the recognition and measurement of revenue from sale of energy is considered to be adequate and reasonable.
2.	**Impairment assessment of Property, Plant and Equipment (PPE)** The Company has a material operational asset base (PPE) relating to generation of electricity and is one of the components for determining the tariff as per the CERC Tariff Regulations, which may be vulnerable to impairment. We considered this as a key audit matter as the carrying value of PPE requires impairment assessment based on the future expected cash flows associated with the power plants (Cash generating units). (Refer Note No. 62 to the Consolidated Financial Statements, read with the Accounting Policy No. C.21)	We have obtained an understanding and tested the design and operating effectiveness of controls as established by the Company's management for impairment assessment of PPE. We evaluated the Company's process of impairment assessment in assessing the appropriateness of the impairment model including the independent assessment of discount rate, economic growth rate, terminal value etc. We evaluated and checked the calculations of the cash flow forecasts prepared by the Company taking into consideration the CERC (Terms and Conditions of Tariff) Regulations, 2019 (applicable for the tariff period of 5 years from 1 April 2019 to 31 March 2024) along with the aforementioned assumptions. Based on the above procedures performed, we observed that the Company's impairment assessment of the PPE is adequate and reasonable.

Sl. No.	Key Audit Matter	How our audit addressed the Key Audit Matter
3.	**Deferred Tax Asset relating to MAT Credit Entitlement and corresponding Regulatory Deferral Liability** The company has recognised deferred tax asset relating to MAT credit entitlement. Utilisation of MAT credit will result in lower outflow of Income Tax in future years and accordingly Regulatory Deferral Liability attributable to the said MAT credit entitlement has also been recognised, payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations. The recoverability of this deferred tax asset relating to MAT credit entitlement is dependent upon the generation of sufficient future taxable profits to utilise such entitlement within the stipulated period prescribed under the Income Tax Act,1961. We identified this as a key audit matter because of the importance of this matter to the intended users of the Financial Statements and its materiality; and requirement of judgement in forecasting future taxable profits for recognition of MAT credit entitlement considering the recoverability of such tax credits within allowed time frame as per the provisions of the Income Tax Act,1961. (Refer Note No. 21,30,56 & 71 to the Consolidated Financial Statements, read with the Accounting Policy No. C.5 and C.19)	We have obtained an understanding for recognition of deferred tax asset relating to MAT credit entitlement and attributable liability of the same in Regulatory Deferral Account including the management's judgement. We further assessed the related forecasts of future taxable profits and evaluated the reasonableness of the considerations/assumptions underlying the preparation of these forecasts. We have also verified the regulatory deferral account balance corresponding to the said MAT credit payable to the beneficiaries in subsequent periods. Based on the above procedures performed, the recognition and measurement of Deferred tax asset relating to MAT credit entitlement and attributable Regulatory Deferral Liability towards beneficiaries, is considered adequate and reasonable.
4.	**Contingent Liabilities** There are a number of litigations pending before various forums against the Company and the management's judgement is required for estimating the amount to be disclosed as contingent liability. We identified this as a key audit matter because the estimates on which these amounts are based involve a significant degree of management judgement in interpreting the cases and it may be subject to management bias. (Refer Note No. 75(A) to the Consolidated Financial Statements, read with the Accounting Policy No. C.14)	We have obtained an understanding of the Company's internal instructions and procedures in respect of estimation and disclosure of contingent liabilities and adopted the following audit procedures: - understood and tested the design and operating effectiveness of controls as established by the management for obtaining all relevant information for pending litigation cases; - discussed with the management regarding any material developments thereto and latest status of legal matters; - read various correspondences and related documents pertaining to litigation cases and relevant external legal opinions obtained by the management and performed substantive procedures on calculations supporting the disclosure of contingent liabilities; - examined management's judgements and assessments in respect of whether provisions are required; - considered the management assessments of those matters that are not disclosed as contingent liability since the probability of material outflow is considered to be remote; - reviewed the adequacy and completeness of disclosures; Based on the above procedures performed, the estimation and disclosures of contingent liabilities is considered to be adequate and reasonable.

Information Other than the Consolidated Financial Statements and Auditors' Report Thereon

The Holding Company's Board of Directors is responsible for the preparation of the other information. The other information comprises the information included in the Annual Report related to the Consolidated Financial Statements, but does not include the Consolidated Financial Statements and our auditors' report thereon. The other information is expected to be made available to us after the date of this auditors' report.

Our opinion on the Consolidated Financial Statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the Consolidated Financial Statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the Consolidated Financial Statements or our knowledge obtained during the course of our audit or otherwise appears to be materially misstated.

When we read the other information, if we conclude that there is a material misstatement therein, we are required to communicate the matter to those charged with governance and take appropriate actions, if required.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

The Holding Company's Board of Directors is responsible for the preparation and presentation of these Consolidated Financial Statements in terms of the requirements of the Act, that give a true and fair view of the consolidated financial position, consolidated financial performance including other comprehensive income, consolidated Statement of Changes in Equity and consolidated cash flows of the Group including its joint ventures in accordance with the accounting principles generally accepted in India, including the Ind AS Accounting Standards specified under section 133 of the Act read with the Companies (Indian Accounting Standards) Rules, 2015 as amended. The respective Board of Directors of the companies included in the Group and of its joint ventures are responsible for maintenance of adequate accounting records in accordance with the provisions of the Act for safeguarding the assets of the Group and its joint ventures and for preventing and detecting frauds and other irregularities; the selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and the design, implementation and maintenance of adequate internal financial controls, that were operating effectively for ensuring accuracy and completeness of the accounting records, relevant to the preparation and presentation of the Consolidated Financial Statements that give a true and fair view and are free from material misstatement, whether due to fraud or error, which have been used for the purpose of preparation of the Consolidated Financial Statements by the Directors of the Holding Company, as aforesaid.

In preparing the Consolidated Financial Statements, the respective Board of Directors of the companies included in the Group and of its joint ventures are responsible for assessing the ability of the Group and of its joint ventures to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group and its Joint Ventures or to cease operations, or has no realistic alternative but to do so.

The respective Board of Directors of the companies included in the Group and of its joint ventures are responsible for overseeing the financial reporting process of the Group and of its joint ventures.

Auditors' Responsibility for the audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the Consolidated Financial Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these Consolidated Financial Statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the Consolidated Financial Statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances. Under section 143(3)(i) of the Act, we are also responsible for expressing our opinion on whether the

holding company, its subsidiaries and joint ventures incorporated in India have adequate internal financial controls with reference to Consolidated Financial Statements in place and the operating effectiveness of such controls.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of Holding Company's management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the ability of the Group and its joint ventures to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the Consolidated Financial Statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Group and its joint ventures to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the Consolidated Financial Statements, including the disclosures, and whether the Consolidated Financial Statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group and its joint ventures to express an opinion on the Consolidated Financial Statements. We are responsible for the direction, supervision and performance of the audit of the financial statements of such entities included in the Consolidated Financial Statements of which we are the independent auditors. For the other entities included in the Consolidated Financial Statements, which have been audited by other auditors, such other auditors remain responsible for the direction, supervision and performance of the audits carried out by them. We remain solely responsible for our audit opinion.

We communicate with those charged with governance of the Holding Company and such other entities included in the Consolidated Financial Statements of which we are the independent auditors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the Consolidated Financial Statements of the current period and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Other Matters

a) We did not audit the financial statements/ financial information of Ten subsidiaries included in the Consolidated Financial Statement, whose financial statements reflects total Assets of ₹ 81,181.42 crore and Net Assets ₹ 30,050.28 crore as at 31 March 2022; total Revenues of ₹ 17,279.03 crore and Net Cash Inflows amounting to ₹ (78.46) crore for the year ended on that date, as considered in the Consolidated Financial Statements. The Consolidated Financial Statement also includes the Group's share of net profit using the equity method, of ₹ 1,142.73 crore and total comprehensive income of ₹ 1,145.20 crore for the year ended 31 March 2022, as considered in the consolidated financial results, in respect of six joint ventures, whose financial statements have not been audited by us. These financial statements have been audited by their respective independent auditors whose reports have been furnished to us by the management upto 16 May, 2022 and our opinion on the Statement, in so far as it relates to the aforesaid subsidiaries and joint ventures is based solely on the reports of the other auditors and the procedures performed by us are as stated Auditors' Responsibility section above after considering the requirement of Standard on Auditing (SA 600) on 'Using the work of Another Auditor' including materiality.

b) The Consolidated Financial Statements also include two subsidiaries, whose financial statements / financial information reflect total Assets of ₹ 1,634.90 crore and Net Assets of ₹ (281.35) crore as at 31 March 2022; total Revenues of ₹ 2,012.99 crore for the year ended on that date respectively, and net cash flows amounting to ₹ (70.10) crore for the year ended on that date, as considered in the consolidated financial statements, have not been audited by their auditors. The consolidated financial statements also include the Group's share of net profit/(loss) after tax using the equity method, of ₹ (122.59) crore and total comprehensive income of ₹ (122.90) crore for the year ended 31 March 2022 respectively as considered in the Consolidated Financial Statements in respect of nine joint ventures whose financial statements/ financial information are unaudited.These financial statements/ financial information have been furnished to us by the Holding Company's Management and our opinion on the Consolidated Financial Statements, in so far as it relates to the unaudited financial statement/financial information in respect of unaudited subsidaries and joint ventures companies and disclosures included in respect of these companies, and our report in terms of sub-section (3) of Section 143 of the Act, in so far as it relates to the aforesaid subsidiaries and joint ventures, is based solely on such unaudited financial statements/ financial information. Two of the joint ventures as above are located outside India in respect of which the Holding Company's management has provided us the financial statements prepared in accordance with accounting principles generally accepted in India. In our opinion and according to the information and explanations given to us by the Holding Company's Management these financial statements / financial information are not material to the Group.

Our opinion on the Consolidated Financial Statements, and our report on Other Legal and Regulatory Requirements below, is not modified in respect of the matters as stated in para (a) & (b) above, with respect to our reliance on the work done and the reports of the other auditors, the financial statements/financial information certified by the Holding Company's Management.

Report on Other Legal and Regulatory Requirements

1. As required by paragraph 3(xxi) of the Companies (Auditor's Report) Order, 2020 ("the Order") issued by the Central Government of India in terms of Section 143(11) of the Act, , . We report that there are no qualifications or adverse remarks included in the CARO report in respect of the standalone financial statements of the Holding Company which are included in these Consolidated Financial Statements. In respect of Subsidiaries and Joint Ventures incorporated in India whose accounts are audited, we report that no qualifications or adverse remarks given by the respective auditors in the Companies (Auditor's Report) Order (CARO) reports of the Companies included in the consolidated financial statements.

   In respect of following components included in the consolidated financial statements, respective auditors have not issued their statutory audit report till the cut-off date considered for the independent auditors' report:

Sl. No.	Name of the Company	Subsidiary/ Joint Venture
1.	NTPC EDMC Waste Solutions Private Ltd	Subsidiary
2.	Ratnagiri Gas & Power Pvt Ltd	Subsidiary
3.	National High Power Test Laboratory Pvt. Ltd	Joint Venture
4.	NTPC- GE Power Services Private Ltd.	Joint Venture
5.	NTPC-BHEL Power Project Pvt. Ltd	Joint Venture
6.	Transformers and Electricals Kerala Ltd.	Joint Venture
7.	Energy Efficiency Services Ltd.	Joint Venture
8.	CIL NTPC Urja Pvt. Ltd.	Joint Venture
9.	Anushakti Vidyut Nigam Ltd.	Joint Venture
10.	Trincomalee Power Company Ltd*	Joint Venture
11.	Bangladesh India Friendship Power Company Pvt. Ltd.*	Joint Venture

   * Incorporated outside India

2. As required by Section 143(3) of the Act, based on our audit and on the consideration of report of the other auditors on separate financial statements and the other financial information of subsidiaries and joint ventures as mentioned in the 'Other Matters' paragraph, we report, to the extent applicable, that:

   a) We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit of the aforesaid Consolidated Financial Statements.

   b) In our opinion, proper books of account as required by law relating to preparation of the aforesaid Consolidated Financial Statements have been kept so far as it appears from our examination of those books and the reports of the other auditors.

   c) The Consolidated Balance Sheet, the Consolidated Statement of Profit and Loss (including Other Comprehensive Income), the Consolidated Statement of Changes in Equity and the Consolidated Statement of Cash Flows dealt with by this Report are in agreement with the relevant books of account maintained for the purpose of preparation of the Consolidated Financial Statements.

d) In our opinion, the aforesaid Consolidated Financial Statements comply with the Indian Accounting Standards specified under Section 133 of the Act read with the Companies (Indian Accounting Standards) Rules, 2015 as amended.

e) Being a Government Company, pursuant to the Notification No. GSR 463(E) dated 5th June 2015 issued by Ministry of Corporate Affairs, Government of India, provisions of sub-section (2) of Section 164 of the Act, are not applicable to the Holding company and its subsidiaries and three Joint Ventures. Further, on the basis of the reports of the auditors of three joint venture incorporated in India, none of the directors of the joint ventures incorporated in India is disqualified as on 31 March 2022 from being appointed as a director in terms of Section 164 (2) of the Act, wherever applicable.

f) With respect to the adequacy of the Internal Financial Controls with reference to consolidated financial statements of the Holding Company, its subsidiaries and joint ventures incorporated in India and the operating effectiveness of such controls, refer to our separate report in Annexure 1.

g) As per Notification No. GSR 463(E) dated 5 June 2015 issued by the Ministry of Corporate Affairs, Government of India, Section 197 of the Act is not applicable to the Government Companies. Accordingly, reporting in accordance with requirement of provisions of section 197(16) of the Act is not applicable to the Holding company and its subsidiaries and three Joint Ventures. Further, on the basis of the reports of the auditors of three joint ventures incorporated in India, the managerial remuneration paid/provided by such joint ventures to its directors during the year was in accordance with the provisions of section 197 read with Schedule V of the Act, wherever applicable.

h) With respect to the other matters to be included in the Auditor's Report in accordance with Rule 11 of the Companies (Audit and Auditor's) Rules, 2014, as amended in our opinion and to the best of our information and according to the explanations given to us and based on the consideration of the report of the other auditors on separate financial statements and also the other financial information of the subsidiaries and joint ventures, as mentioned in the 'Other Matters' paragraph:

i. The Consolidated Financial Statements disclose the impact of pending litigations on the consolidated financial position of the Group and its joint ventures. Refer Note No. 75(A) to the Consolidated Financial Statements;

ii. Provision has been made in the Consolidated Financial Statements, as required under the applicable law or Indian Accounting Standards, for material foreseeable losses, on long-term contracts including derivative contracts;

iii. There has been no delay in transferring amounts, required to be transferred, to the Investor Education and Protection Fund by the Holding Company, its subsidiaries and joint ventures incorporated in India.

iv. (a) The respective Managements of the Holding Company and its subsidiaries and joint ventures which are companies incorporated in India, whose financial statements have been audited under the Act, have represented to us and the other auditors of such subsidiaries and its joint ventures that, to the best of their knowledge and belief, as disclosed in the note 76 (xiii) to the accounts, no funds have been advanced or loaned or invested (either from borrowed funds or share premium or any other sources or kind of funds) by the Holding Company or any such subsidiaries and joint ventures to or in any other person(s) or entity(ies), including foreign entities ("Intermediaries"), with the understanding, whether recorded in writing or otherwise, that the Intermediary shall, directly or indirectly lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the Holding Company or any of such subsidiaries and joint ventures ("Ultimate Beneficiaries") or provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

(b) The respective Managements of the Holding Company and its subsidiaries and joint ventures whose financial statements have been audited under the Act, have represented to us and the other auditors of such subsidiaries and joint ventures that to the best of their knowledge and belief, as disclosed in the note 76 (xiii) to the accounts, no funds have been received by the Holding Company or any of such subsidiaries and joint ventures from any person(s) or entity(ies), including foreign entities ("Funding Parties"), with the understanding, whether recorded in writing or otherwise, that the Holding Company or any of such subsidiaries and joint ventures shall directly or indirectly, lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the Funding Party ("Ultimate Beneficiaries") or provide any guarantee, security or the like on behalf of the Ultimate Beneficiaries.

(c) Based on the audit procedures that have been considered reasonable and appropriate in the circumstances performed by us and that performed by the auditors of the subsidiaries and joint ventures which are companies incorporated in India whose financial statements have been audited under the Act, nothing has come to our or other auditors' notice that has caused us or other auditors to believe that the representations under sub-clause (i) and (ii) of Rule 11(e) contain any material misstatement.

v. The final proposed dividend for the previous year and for the year and interim dividend declared or paid during the year by the Holding Company and its subsidiaries and joint ventures incorporated in India is in compliance with section 123 of the Act.

For S.K. Mehta & Co
Chartered Accountants
FRN 000478N

(Rohit Mehta)
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For S.N. Dhawan & Co LLP
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For Varma & Varma
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For B C Jain & Co.
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(Ranjeet Singh)
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For V K Jindal & Co
Chartered Accountants
FRN 001468C

(Suresh Agarwal)
Partner
M. No.072534
UDIN: 22072534AJHOVM2681

Place : New Delhi
Dated: 20 May 2022
Digitally signed by signatories

ANNEXURE 1 TO THE INDEPENDENT AUDITORS' REPORT

Referred to in paragraph 2 (f) under 'Report on Other Legal and Regulatory Requirements' section of our report of even date to the members of NTPC LIMITED on the Consolidated Financial Statements for the year ended 31 March 2022

Report on the Internal Financial Controls with reference to Consolidated Financial Statements under Clause (i) of Sub-section 3 of Section 143 of the Companies Act, 2013 ("the Act")

In conjunction with our audit of the Consolidated Financial Statements of the Company as of and for the year ended 31 March 2022, we have audited the internal financial controls with reference to Consolidated Financial Statements of NTPC Limited (hereinafter referred to as "the Holding Company") and its subsidiaries (the Holding Company and its subsidiaries together referred to as "the Group"), and joint ventures, which are companies incorporated in India, as of that date.

Management's Responsibility for Internal Financial Controls

The respective Board of Directors of the Holding Company, its subsidiaries, and joint ventures, which are companies incorporated in India, are responsible for establishing and maintaining internal financial controls based on the internal controls over financial reporting criteria established by the respective companies considering the essential components of internal control stated in the Guidance Note on Audit of Internal Financial Controls over Financial Reporting issued by the Institute of Chartered Accountants of India (ICAI). These responsibilities include the design, implementation and maintenance of adequate internal financial controls that were operating effectively for ensuring the orderly and efficient conduct of its business, including adherence to the respective company's policies, the safeguarding of its assets, the prevention and detection of frauds and errors, the accuracy and completeness of the accounting records, and the timely preparation of reliable financial information, as required under the Act.

Auditors' Responsibility

Our responsibility is to express an opinion on the Company's internal financial controls with reference to Consolidated Financial Statements based on our audit. We conducted our audit in accordance with the Guidance Note on Audit of Internal Financial Controls over Financial Reporting (the "Guidance Note") and the Standards on Auditing prescribed under section 143(10) of the Act, to the extent applicable to an audit of internal financial controls with reference to Consolidated Financial Statements. Those Standards and the Guidance Note require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether adequate internal financial controls with reference to Consolidated Financial Statements was established and maintained and if such controls operated effectively in all material respects.

Our audit involves performing procedures to obtain audit evidence about the adequacy of the internal financial control with reference to Consolidated Financial Statements and their operating effectiveness. Our audit of internal financial controls with reference to Consolidated Financial Statements included obtaining an understanding of internal financial controls with reference to Consolidated Financial Statements, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. The procedures selected depend on the auditors' judgement, including the assessment of the risks of material misstatement of the Consolidated Financial Statements, whether due to fraud or error.

We believe that the audit evidence we have obtained and the audit evidence obtained by the other auditors of the subsidiaries and joint ventures, incorporated in India, in terms of their reports referred to in the 'Other Matters' paragraph below, is sufficient and appropriate to provide a basis for our audit opinion on the internal financial controls of the Group and its Joint Venture Companies incorporated in India, with reference to Consolidated Financial Statements.

Meaning of Internal Financial Controls with reference to Consolidated Financial Statements

A company's internal financial control with reference to Consolidated Financial Statements is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of Consolidated Financial Statements for external purposes in accordance with generally accepted accounting principles. A company's internal financial control with reference to Consolidated Financial Statements includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of Consolidated Financial Statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the Consolidated Financial Statements.

Inherent Limitations of Internal Financial Controls with reference to Consolidated Financial Statements

Because of the inherent limitations of internal financial controls with reference to Consolidated Financial Statements, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may occur and not be detected. Also, projections of any evaluation of the internal financial controls with reference to Consolidated Financial Statements to future periods are subject to the risk that the internal financial control with reference to Consolidated Financial Statements may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Opinion

In our opinion and to the best of our information and according to the explanations given to us, the Holding Company, its subsidiaries and joint ventures, which are companies incorporated in India, have, in all material respects, an adequate internal financial controls with reference to Consolidated Financial Statements in place and such internal financial controls with reference to Consolidated Financial Statements were operating effectively as at 31 March 2022, based on the internal controls over financial reporting criteria established by the Group and its Joint Venture Companies incorporated in India considering the essential components of internal control stated in the Guidance Note on Audit of Internal Financial Controls Over Financial Reporting issued by ICAI.

Other Matters

Our aforesaid report under Section 143(3)(i) of the Act on the adequacy and operating effectiveness of the internal financial controls with reference to Consolidated Financial Statements of the Holding Company, in so far as it relates to ten subsidiaries and six joint ventures incorporated in India, is based on the corresponding reports of the auditors of such companies incorporated in India.

Our aforesaid report under Section 143(3)(i) of the Act on the adequacy and operating effectiveness of the internal financial controls with reference to Consolidated Financial Statements in so far as it relates to two subsidiaries and nine joint ventures incorporated in India, whose financial statements / financial information are unaudited and our opinion on the adequacy and operating effectiveness of the internal financial controls with reference to Consolidated Financial Statements of the Group is not affected as the Group's share of net profit/loss (including Other Comprehensive Income) and disclosures included in respect of these joint ventures in these Consolidated Financial Statements are not material to the Group.

Our report is not modified in respect of the above matters.

For S.K. Mehta & Co
Chartered Accountants
FRN 000478N

(Rohit Mehta)
Partner
M. No.091382
UDIN: 22091382AJHOBD8879

For S.N. Dhawan & Co LLP
Chartered Accountants
FRN 000050N/N500045

(Mukesh Bansal)
Partner
M. No.505269
UDIN: 22505269AJHSAI8952

For Varma & Varma
Chartered Accountants
FRN 004532S

(P.R.Prasanna Varma)
Partner
M. No.025854
UDIN: 22025854AJHPIU2907

For Parakh & Co.
Chartered Accountants
FRN 001475C

(Thalendra Sharma)
Partner
M. No.079236
UDIN: 22079236AJHNTY5243

For C K Prusty & Associates
Chartered Accountants
FRN 323220E

(C.K.Prusty)
Partner
M. No.057318
UDIN: 22057318AJHPAT4858

For B C Jain & Co.
Chartered Accountants
FRN 001099C

(Ranjeet Singh)
Partner
M. No.073488
UDIN: 22073488AJHQPB8107

For V K Jindal & Co
Chartered Accountants
FRN 001468C

(Suresh Agarwal)
Partner
M. No.072534
UDIN: 22072534AJHOVM2681

Place : New Delhi
Dated: 20 May 2022
Digitally signed by signatories

COMMENTS OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA UNDER SECTION 143 (6) (b) READ WITH SECTION 129 (4) OF THE COMPANIES ACT, 2013 ON THE CONSOLIDATED FINANCIAL STATEMENTS OF NTPC LIMITED FOR THE YEAR ENDED 31 MARCH 2022

The preparation of consolidated financial statements of NTPC Limited for the year ended 31 March 2022 in accordance with the financial reporting framework prescribed under the Companies Act, 2013 (Act) is the responsibility of the management of the company. The statutory auditors appointed by the Comptroller and Auditor General of India under section 139(5) read with section 129(4) of the Act are responsible for expressing opinion on the financial statements under section 143 read with section 129(4) of the Act based on independent audit in accordance with the standards on auditing prescribed under section 143(10) of the Act. This is stated to have been done by them vide their Audit Report dated 20 May 2022.

I, on behalf of the Comptroller and Auditor General of India, have conducted a supplementary audit of the consolidated financial statements of NTPC Limited for the year ended 31 March 2022 under section 143(6)(a) read with section 129(4) of the Act. We conducted a supplementary audit of the financial statements of NTPC Limited, and subsidiaries, associate companies and jointly controlled entities listed in Annexure 1 but did not conduct supplementary audit of the financial statements of subsidiaries, associate companies and jointly controlled entities listed in Annexure II for the year ended on that date. Further, section 139(5) and 143(6)(a) of the act are not applicable to Utility Powertech Limited and NTPC - GE Power Services Private Limited being private entities and Tricomalee Power Company Limited and Bangladesh - India Friendship Power Company Private Limited being incorporated in Foreign countries under the respective laws, for appointment of their Statutory Auditor and for conduct of supplementary audit. Accordingly, Comptroller and Auditor General of India has neither appointed the Statutory Auditors nor conducted the supplementary audit of these companies. This supplementary audit has been carried out independently without access to the working papers of the statutory auditors and is limited primarily to inquiries of the statutory auditors and company personnel and a selective examination of some of the accounting records.

On the basis of my supplementary audit nothing significant has come to my knowledge which would give rise to any comment upon or supplement to statutory auditors' report under section 143(6)(b) of the Act.

For and on behalf of the
Comptroller & Auditor General of India

(Deepak Kapoor)
Director General of Audit (Energy),
Delhi

Place: New Delhi
Dated: 22 July 2022

ANNEXURE I

List of Subsidiaries, Associates Companies and Jointly Controlled Entities of NTPC Limited whose financial statements were audited by the Comptroller and Auditor General of India

A. Subsidiaries Companies:

1. NTPC Vidyut Vyapar Nigam Limited
2. Bhartiya Rail Bijlee Company Limited
3. Kanti Bijlee Utpadan Nigam Limited
4. Patratu Vidyut Utpadan Nigam Limited
5. NTPC Renewable Energy Limited
6. THDC India Limited

B. Associate Companies and Joint Ventures:

1. NTPC-SAIL Power Company Limited
2. NTPC Tamil Nadu Energy Company Limited
3. Aravali Power Company Private Limited
4. Meja Urja Nigam Private Limited
5. CIL NTPC Urja Private Limited
6. Hindustan Urvarak and Rasayan Limited

List of Subsidiaries, Associates Companies and Jointly Controlled Entities of NTPC Limited whose financial statements were not audited by the Comptroller and Auditor General of India

C. Subsidiaries Companies:

1. NTPC Electric Supply Company Limited
2. Nabinagar Power Generating Company Limited
3. NTPC Mining Limited
4. NTPC EDMC Waste Solutions Private Limited
5. North Eastern Electric Power Corporation Limited
6. Ratnagiri Gas & Power Private Limited

D. Associate Companies and Joint Ventures:

1. NTPC - BHEL Power Projects Private Limited
2. Transformers & Electricals Kerala Limited
3. National High Power Test Laboratory Private Limited
4. Energy Efficiency Services Limited
5. Anushakti Vidhyut Nigam Ltd.

Subsidiaries (12)**

POWER GENERATION

- Kanti Bijlee Utpadan Nigam Ltd. (100%)
- THDC India Ltd. (74.496%)
- Nabinagar Power Generating Company Ltd. (100%)
- North Eastern Electric Power Corporation Ltd. (100%)
- Bhartiya Rail Bijlee Company Ltd. (74%)
- NTPC Renewable Energy Limited (100%)
- Patratu Vidyut Utpadan Nigam Ltd. (74%)
- Ratnagiri Gas and Power Private Ltd. (86.49%)

SERVICES

- NTPC Electric Supply Company Ltd. (100%)
- NTPC EDMC Waste Solutions Private Ltd. (74%)

POWER TRADING

- NTPC Vidyut Vyapar Nigam Ltd. (100%)

COAL MINING

- NTPC Mining Ltd. (100%)

Joint Ventures (17)**

POWER GENERATION

- Aravali Power Company Pvt. Ltd. (50%)
- Bangladesh India Friendship Power Company Pvt. Ltd. (50%)
- NTPC Tamil Nadu Energy Company Ltd. (50%)
- Trincomalee Power Company Ltd. (50%)
- NTPC SAIL Power Company Ltd. (50%)
- Meja Urja Nigam Pvt. Ltd. (50%)
- Anushakti Vidyut Nigam Ltd. (49%)

COAL ACQUISITION

- CIL NTPC Urja Pvt. Ltd. (50%)
- International Coal Ventures Pvt. Ltd. (0.09%)*

FERTILIZERS

- Hindustan Urvarak & Rasayan Ltd. (29.67%)

POWER SERVICES

- Utility Powertech Ltd. (50%)
- NTPC GE Power Services Pvt. Ltd. (50%)
- National High Power Test Laboratory Pvt. Ltd. (20%)
- Energy Efficiency Services Ltd. (33.33%)

EQUIPMENT MANUFACTURING

- NTPC BHEL Power Projects Pvt. Ltd. (50%)*
- Transformers and Electricals Kerala Ltd. (44.60%)*
- BF-NTPC Energy Systems Ltd. (49%)*

* Company has resolved to withdraw from NTPC-BHEL, International Coat Ventures Pvt. Ltd., BF-NTPC Energy Systems Ltd. and TELK

**As on 31.03.2022

BOARD OF DIRECTORS

(As on July 31, 2022)

Shri Gurdeep Singh
Chairman & Managing Director

Shri Dillip Kumar Patel
Director (HR)

Shri Ramesh Babu V
Director (Operations)

Shri Chandan Kumar Mondol
Director (Commercial)

Shri Ujjwal Kanti Bhattacharya
Director (Projects)

Shri Jaikumar Srinivasan
Director (Finance)

Shri Ashish Upadhyaya
Government Nominee Director

Shri Piyush Singh
Government Nominee Director

Ms. Sangitha Varier
Independent Director

Shri Jitendra Jayantilal Tanna
Independent Director

Shri Vidyadhar Vaishampayan
Independent Director

Shri Vivek Gupta
Independent Director

NTPC Limited
(A Govt. of India Enterprise)

(CIN : L40101DL1975GOI007966)
Regd. Office: NTPC Bhawan, SCOPE Complex, 7, Institutional Area,
Lodhi Road, New Delhi - 110003, Tel No. : 011-24387333, Fax No. : 011-24361018
E-Mail: ntpccc@ntpc.co.in; Website : www.ntpc.co.in