

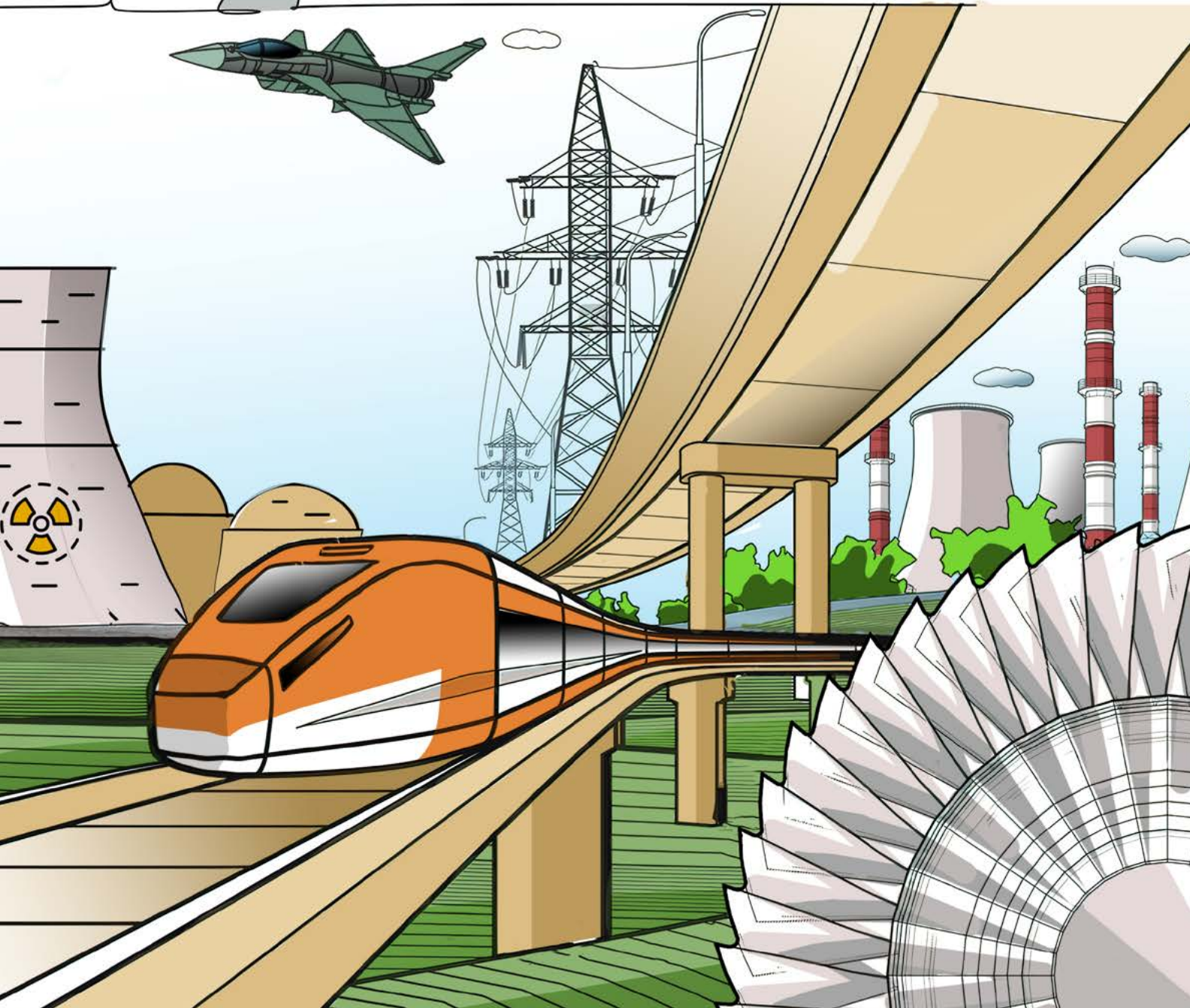
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ANNUAL REPORT
2022-23



ENGINEERING
INDIA'S 
SUSTAINABLE GROWTH





CREDENTIALS

- Making in India since 1964
- India's largest engineering & manufacturing enterprise of its kind
- One of the largest employer in the Indian Capital Goods industry
- 197 GW power generating capacity installed in India and abroad till date
- BHEL's share in country's total installed thermal generation capacity - 55%
- Pan India presence: 16 manufacturing units; 8 service centres
- Human capital base: 29,000+ strong; 8,300+ engineers



OFFERINGS

- Power- thermal, hydro, gas, nuclear, and solar PV
- Transportation
- Transmission
- Defence & Aerospace
- Oil & Gas
- Energy Storage



PRESENCE

- Executed 463 coal sets, 424 hydro sets, 103 gas sets, 12 nuclear sets & 60 nos. MW scale grid-connected solar PV plants across all states and 6 union territories of the country
- References in 88 countries in all 6 inhabited continents



BHEL

Making the Nation
Aatmanirbhar in
Power & Industry

- End to end sustainable solutions for energy, industry and infrastructure segments
- Undisputed leader amongst Indian power plant equipment manufacturers
- Serving core and strategic sectors of the country
- World class technology and assets
- High level of investment on R&D and innovation in the Indian engineering field

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Letter to Shareholders

Dear Shareholders,

It gives me pleasure to share the 59th annual report of your company, for the year 2022-23.

Overall business scenario in India has been robust with the country being one of the world's fastest-growing major economies, achieving a remarkable growth rate of 7.2% in FY 2022-23. The industrial production also witnessed a notable increase of 5.1% compared to the previous financial year. While the slowdown in the global economy and the geopolitical disturbances have had some impact on businesses, the continued expansion by domestic industries coupled with substantial investment in the infrastructure sector presents significant growth opportunities for your company.

The company has taken a number of initiatives in the areas of business diversification, project execution, technology development, quality, manpower development, etc., in recent years, which, I am happy to say, have started showing results.

While financial parameters are the ultimate yardstick of an organisation's performance, it is important to remember that the physicals are the actual drivers for the financials. Further, it is essential for any organisation, especially a large one, to build for the future, by putting in place suitable enablers for long term sustainable growth.

To this end, one of the most important changes that your company has seen in recent times is the change in operations ideology from being "Revenue Centric" to "Project Centric". The company has taken up focussed efforts in the area of project execution, including implementation of an Integrated Project Management System (IPMS), sequential despatches, advance engineering planning & action, enhanced delegation to project directors, site data digitization, etc., which have started paying off.

At the macro level, this can be seen from the fact that the company has achieved a doubling of erection tonnage at project sites over a period of three years (achieved 5.41 lakh MT in FY 2022-23) despite a declining order book and 'NIL' thermal ordering over three years between Aug'19 to Sep'22. Further, the increase in liquidation against



Dr. Nalin Shinghal
Chairman & Managing Director

current year billing from 59% in FY 2018-19 to 86% in FY 2022-23 is proof of the quality of the output & billing. At a micro level, recent successes in two major projects Maitree and North Karanpura are specific cases demonstrating the outcome of these efforts. The Unit 1 of Maitree Thermal power project in Bangladesh was synchronised in August 2022 (in an overall period of 64 months, despite two waves of COVID and mass airlift of manpower from project site in between, as well as numerous border and visa related challenges). More recently, the synchronisation of Unit 2 of Maitree project was achieved on 28th June, ahead of the commitment given at a high level G2G meeting, which was accepted to be a very tough target, even at the time it was being given. Nearer home, Unit 1 of North Karanpura 3x660 thermal power plant was synchronised in Oct'22 and Unit 2 is moving towards synchronisation in Oct'23. This plant is the first utility scale power plant with Air Cooled Condensers for reducing water consumption and will result in saving of 30,500 million litres of water annually when all the three units are functioning, (this saving equals the annual need of around 1.5 million people). This ACC was commissioned by BHEL engineers despite the absence of OEM experts due to COVID related issues.

Key performance highlights for FY 2022-23

Coming to our performance for the year gone by :

- The company achieved revenue from operations of ₹23,365 Crore as against ₹21,211 Crore during the previous year, an increase of 10% and made a profit after tax (PAT) of ₹448 Crore against a PAT of ₹410 Crore in the previous year.
- Despite increase in total receivables by nearly 9% during FY 2022-23—primarily on account of execution of projects with adverse payment terms, there is a reduction in terms of number of days of Revenue from Operations from 571 days last year to 567 days in current year and the Trade Receivables in terms of number of days of Revenue from Operations, have reduced to 102 days as against 107 days during FY 2021-22
- The company secured orders worth ₹23,548 Crore, excluding taxes, which is the highest in the last five years. The reporting of order book has been done excluding taxes for better understanding of all stakeholders, and is in line with the reporting of revenue numbers. Industry sector segment order booking is at ₹9,537 Crore – highest in last 13 years with highest-ever orders in the defence sector, which also includes the order for 20 upgraded SRGMs (main gun on Indian warships) for which BHEL is the sole supplier in the country.
- The company won the only thermal EPC order—2x660 MW, NTPC Talcher Thermal Power Plant, awarded in the

last four years, reasserting its market leadership position in the segment.

- The company recorded over 25% growth in the Spares & Services Business.
- The total outstanding order book as on 31st March 2023 stands at ₹91,336 Crore, net of taxes (PY ₹90,084 Crore). With the receipt of the prestigious order for 80 nos. "Vande Bharat" trainsets in April 2023, the total outstanding order book has crossed ₹1 Lakh Crore (excluding taxes), which is the highest in last 4 years.

In recent years, the company has twice won the ICAI Award for 'Excellence in Financial Reporting' in the 'Infrastructure and Construction Sector' category, reflecting the quality of accounting/ reporting practices.

Going forward

Various initiatives taken at the national level, in the areas of infrastructure development and technology self-reliance, in tune with the growing aspirations of 1.4 billion people, create a range of opportunities in the capital goods as well as energy sectors for your company. The AatmaNirbhar Bharat initiative launched by our Hon'ble Prime Minister is one such initiative opening up multiple opportunities and your company has been working relentlessly to capitalise on these emerging opportunities.

In the conventional (power) sector, we are seeing a consensus emerging that, for economic development and for meeting the aspirations of our people as well as from an energy security perspective, thermal power cannot be phased out. This has brought around a revival in the thermal power sector – albeit for short to medium term—this is a breather which will further enable your company to diversify into new & futuristic businesses.

Expanding business scope in the thermal related areas, the company has made substantial progress in successfully developing in-house solution for flexible operation of coal-fired power plants (an imperative for integrating RE in the grid). The company has demonstrated the target performance parameters in the company's first order and further four orders have already been received. Issue of guidelines, for implementing flexibilisation capabilities in existing thermal sets by CEA, is expected to generate further business in this area. Spares and Services business is also picking up with focussed efforts, including long term agreements (for supply as well as services) with customers, advance procurement action/ stocking to reduce delivery times, and efforts to improve service deliveries. Efforts are on to focus on Nuclear business with MoU being signed with NPCIL and developmental efforts initiated in the area of Small Modular Reactors. The dispatch of BHEL's 44th nuclear steam generator for GHAVP (Gorakhpur Haryana Anu Vidyut Pariyojana) demonstrates



our capability in this domain. The company continues to maintain its lead position in Hydro power with the capability to design, engineer and manufacture custom-made hydro turbines & generators of various sizes up to 400 MW and offer customized R&M solutions for the vast fleet of ageing hydro turbo-generators.

As far as diversification is concerned, the company is targeting at least 50% of its business to be from non-coal businesses. The company has achieved some notable successes in this area with industry segment order book going up to 40% of total order booking in the last year with highest-ever orders in defence sector including orders for upgraded SRGM, Heat Exchangers for fighter aircraft, maiden order for supply of Li-ion batteries for AMCA (making BHEL the sole Indian supplier of Li-ion batteries for next generation aircraft), etc. Further, BHEL continues to expand its role as a reliable partner for design, engineering and manufacturing of critical equipment for the strategic sectors with range of equipment including heat exchangers, control systems, turbines, motors, generators, etc.

One of BHEL's largest orders—for supply and 35 years' maintenance of 80 Vande Bharat trainsets—received in Apr'23 in consortium with M/s TRSL, is a landmark success which will open the way for future rail business, where huge expansion and modernisation plans are being rolled out – including in areas like semi-high speed trainsets, locomotives, signalling etc.

Yet another successful business initiative has been on the coal gasification front. The need for the country to utilise its vast coal reserves (in absence of any substantial gas/ oil reserves) has been recognised at various levels. At the same time, it is also accepted that, from a climate change perspective, the country will have to adopt clean coal technologies in a major way. BHEL has leveraged on its indigenously developed coal gasification technology—the world's first proven technology for gasification of high ash Indian Coals—and completed design & engineering of the gasifier for 2,000 TPD commercial scale plant. Further process of setting up a JV with Coal India Ltd, for setting up a Coal to Ammonium Nitrate plant is in advanced stages. This will open up a major business area for BHEL under the National Coal Gasification mission announced by our Hon'ble Prime Minister.

In line with the 'National Hydrogen Mission', your company is geared up and exploring various areas in the green hydrogen value chain and is setting up a Centre of Excellence, at Varanasi. These efforts will pave the way for future scalable businesses in this area.

These diverse initiatives collectively set the ground for BHEL's long-term growth prospects in the non-coal segment. They also demonstrate your company's commitment to sustainability, reduction of carbon footprint, and contribution towards global efforts in mitigating climate change.

The company has further signed technology agreements with M/s General Electric Technology GmbH Switzerland for enhanced rights of existing /uprated and new gas turbines models, M/s Sumitomo SHI-FW for subcritical and supercritical Circulating Fluidised Bed Combustion (CFBC) Boilers capable of firing a wide range of fuels, and M/s ABB for underslung propulsion equipment for rail segment which will provide the twin benefit of garnering orders in diversified businesses from domestic and international markets as well as help make BHEL self-sufficient in state-of-the-art technologies, in times to come.

The company has also made notable progress in indigenisation and reduction on import reliance, both in its own business areas as well as for other CPSEs. For its own business, BHEL has developed in-house a number of equipment including for FGDs, etc., and has further been working with industry for supporting development by its vendors/ associates. Recent successes include development of Sucker Rod Pumps – a major requirement of the oil industry which was hitherto largely imported from China.

However, challenges still remain for the company. Rising material costs, though moderated by multiple cost optimisation efforts, continue to hurt profitability. This, combined with the fact that some of the orders currently under execution have been taken at very competitive rates, is likely to continue to hurt the bottom line in the near future. The company is continuing with strict cost control measures to deal with this situation. Going forward, new orders where cost hikes are factored in coupled with the company's efforts on improving project management and engagement of PMC for specific sites would further help improve profitability. The liquidity position of the company will continue to be constrained on account of adverse payment terms in ongoing orders and is expected to improve as these orders are substantially completed in the next two years. Delivery against these new orders obtained in recent years with continued focus on timely delivery, would further aid recovery.

Quality First Initiative

Another major initiative taken by your company is the '**Quality First**' initiative, launched in mission mode throughout the organization, for making quality a hallmark of the company's products & services being offered to the customers. Sustained efforts on this front resulted in BHEL being awarded the CII-EXIM Bank's first-ever '**Special Jury Commendation for Adoption and Nurturance of Business Excellence**', reflecting your company's dedication to fostering and embracing excellence in all aspects of operations. Additionally, BHEL units HPBP Trichy, HEEP Haridwar, HEP Bhopal, and HPEP Hyderabad have received the prestigious "Platinum" recognition while PEM Noida, EDN

Bengaluru, BAP Ranipet and PSNR Noida bagged "Gold Plus" recognition in "CII EXIM Bank award for Business Excellence 2022". All 8 Quality Circle teams which participated at the 47th International Convention on Quality Control Circles in Jakarta, won the Gold awards (highest category of award), vindicating BHEL's position as the pioneer of the quality circle movement in India.

Developing a committed workforce & leadership pipeline

Your company has been recognized as a model employer for decades and believes that a dedicated and committed workforce is the key to success of any organization. A number of initiatives have been taken in this direction including engagement of a leading consultancy organization for designing & implementing a roadmap for HR excellence. For long term succession planning, leadership development models through competency assessment have been created and curated individual development plans, etc., are being implemented. A number of efforts are also being made for enhancing employee engagement through communication initiatives, unit reach-out programs, etc. Additionally, in view of the changing business scenario, special emphasis is being given on continuous training, for making our workforce agile through unlearning, learning and relearning initiatives focused on new upcoming technologies.

Green BHEL/Harit BHEL

Actions to mitigate climate change are of paramount importance across the globe for a sustainable future, and our country has adopted the 'Panchamrit' goals including commitment to become Net Zero by 2070. In line with our ethos as a sustainable company, we have undertaken a major initiative for "Making BHEL a Green Company" with the target of achieving Net Zero by the year 2047. In addition to making the company a model "Green Company" for the public sector, it is expected to support business performance by reducing costs and improve availability of borrowings & insurances, etc., in the long run. It would further help create a culture of innovation within the company to design, engineer and manufacture environment friendly products.

Skill Development Initiatives

Supporting the country's commitment towards skill development as well as leveraging BHEL's capabilities and infrastructure, your company has established a Common Engineering Facility Centre (CEFC) at Welding Research Institute (WRI), Trichy (the leading welding research institution in the country) and extension centres at Varanasi, Haridwar, Bhopal, Jhansi and Ranipet with support from Ministry of Heavy Industries (MHI), to train welders. The CEFC has already trained 2,000+ welders in the first year of its inception. This initiative will not just ensure availability of skilled welders for

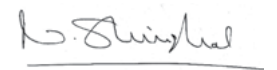
BHEL's own sites but also contribute to various sectors in the country and the neighbourhood as well, where there is currently a shortage of skilled welders. The endeavour has also been appreciated by Hon'ble Minister of Heavy Industries and the Hon'ble Prime Minister of India.

Acknowledgement

The success of your company is only possible with the goodwill, constant support and encouragement of our stakeholders. I express my sincere gratitude to our valued customers as well as business partners for their persistent faith in our capabilities, to employees for their tireless efforts, passion and perseverance, members of Board for their guidance, and you, our esteemed shareholders, for your support and trust in the company. I would also like to thank various Ministries of Government of India, particularly the Ministry of Heavy Industries for their continuous support and valuable guidance throughout.

Your company has undertaken a journey to establish itself as a future-ready global engineering and manufacturing enterprise, and I am confident that with your support and cooperation, we will complete the same with flying colours.

With best wishes,



(Dr. Nalin Shinghal)
Chairman & Managing Director

New Delhi
July 28, 2023

Leadership at **BHEL**

Board of Directors as on 20th July 2023

FUNCTIONAL DIRECTORS



Dr. Nalin Shinghal

Chairman & Managing Director



Ms. Renuka Gera

Director
(Industrial Systems & Products)



Shri Upinder Singh Matharu

Director (Power)



Shri Jai Prakash Srivastava

Director
(Engineering, Research & Development)
Addl. Charge (Finance)



Shri Krishna Kumar Thakur

Director (Human Resources)

GOVERNMENT DIRECTORS/ PART-TIME OFFICIAL DIRECTORS



Ms. Arti Bhatnagar

Additional Secretary & Financial Adviser,
Ministry of Commerce & Industry



Shri Vijay Mittal

Joint Secretary
Ministry of Heavy Industry

INDEPENDENT DIRECTORS



Dr. K Sivaprasad

Independent Director



**Dr. Lekhasri
Samantsinghar**

Independent Director



**Shri Ramesh Patlya
Mawaskar**

Independent Director

Leadership at BHEL

Management Team as on 20th July 2023

MANAGEMENT TEAM



Dr. Nalin Shinghal
Chairman & Managing Director

Renuka Gera
Director
(Industrial Systems & Products)

Upinder Singh Matharu
Director (Power)

Jai Prakash Srivastava
Director (Engineering, R&D),
Addl. Charge (Finance)

Krishna Kumar Thakur
Director (HR)



Shakil Kumar Manocha
ED (OSD)

Anil Joshi
ED (Industry Sector),
New Delhi

G Murali
ED (PS-SR), Chennai

Pankaj Gupta
ED (SBD), Bengaluru

Pravin Chandra Jha
ED (HEEP & CFFP)
Haridwar; Addl charge-
SSBG, Noida

S B Naithani
ED (PEM) Noida & ISG,
Bengaluru



Sushil Kumar Baveja
ED (COC & CDT),
New Delhi

T S Varadarajan
ED (HPEP), Hyderabad

M Isadore
ED (HR), New Delhi

Vinay Nigam
ED (HEP) Bhopal ; Addl.
charge-TP, Jhansi

T S Murali
ED (CSM & CC) New
Delhi; Secretary - MC

Rajeev Singh
ED (BAP), Ranipet



Praveen Kishore
ED (PS-ER), Kolkata

K S Murthy
ED (COM), New Delhi

Bani Varma
ED (EDN), Bengaluru &
TBSG, New Delhi

P Sudhir Babu
GM I/c (PE&SD),
Hyderabad

Pushpendra Kumar Saxena
GM I/c (PS-HQ) , New Delhi

K Ravishankar
GM I/c (Corporate R&D),
Hyderabad

MANAGEMENT TEAM



Asim Sur

GM I/c (PSTG-II),
New Delhi

S Jithender Reddy

GM I/c (HPVP), Vizag

Arumoy Mukherjee

GM I/c (PS-WR), Nagpur

Rajesh Kohli

GM I/c (CTM), New Delhi

S M Ramanathan

GM I/c (HPBP), Tiruchy

Navin Saxena

GM I/c (PS-NR), Noida



R K Chokhani

GM I/c (NBG) Noida;

**Rajeev Kumar
Gupta**

GM I/c (IO),
New Delhi

Amit Kerketta

GM & Head (Capex and
SS&P) New Delhi, Addl.
charge- FSIP, Jagdishpur &
CFP, Rudrapur

Jitendra Das

GM & Head (IPM),
New Delhi

Pankaj Rastogi

GM & Head (HBG),
Noida

Vinay Kumar Bassi

GM & Head (ROD),
New Delhi



Rajnish Goyal

GM & Head (ESSG &
NBA), New Delhi

Rahul Bansal

GM & Head (CQ&BE),
New Delhi

S Prabhakar

GM & Head (Coal to
Chemical Group),
New Delhi

Rakesh Singh

GM & Head (TBG), Noida

R P S Sisodia

GM & Head (PSTG-I),
New Delhi

Sumeet Salhotra

GM & Head
(Corp. Finance),
New Delhi



**Dhiman
Chattopadhyay**

GM (PS-TS), Noida

R Veerabahu

GM (Corporate Internal
Audit), New Delhi

Rajeev Kalra

Company Secretary

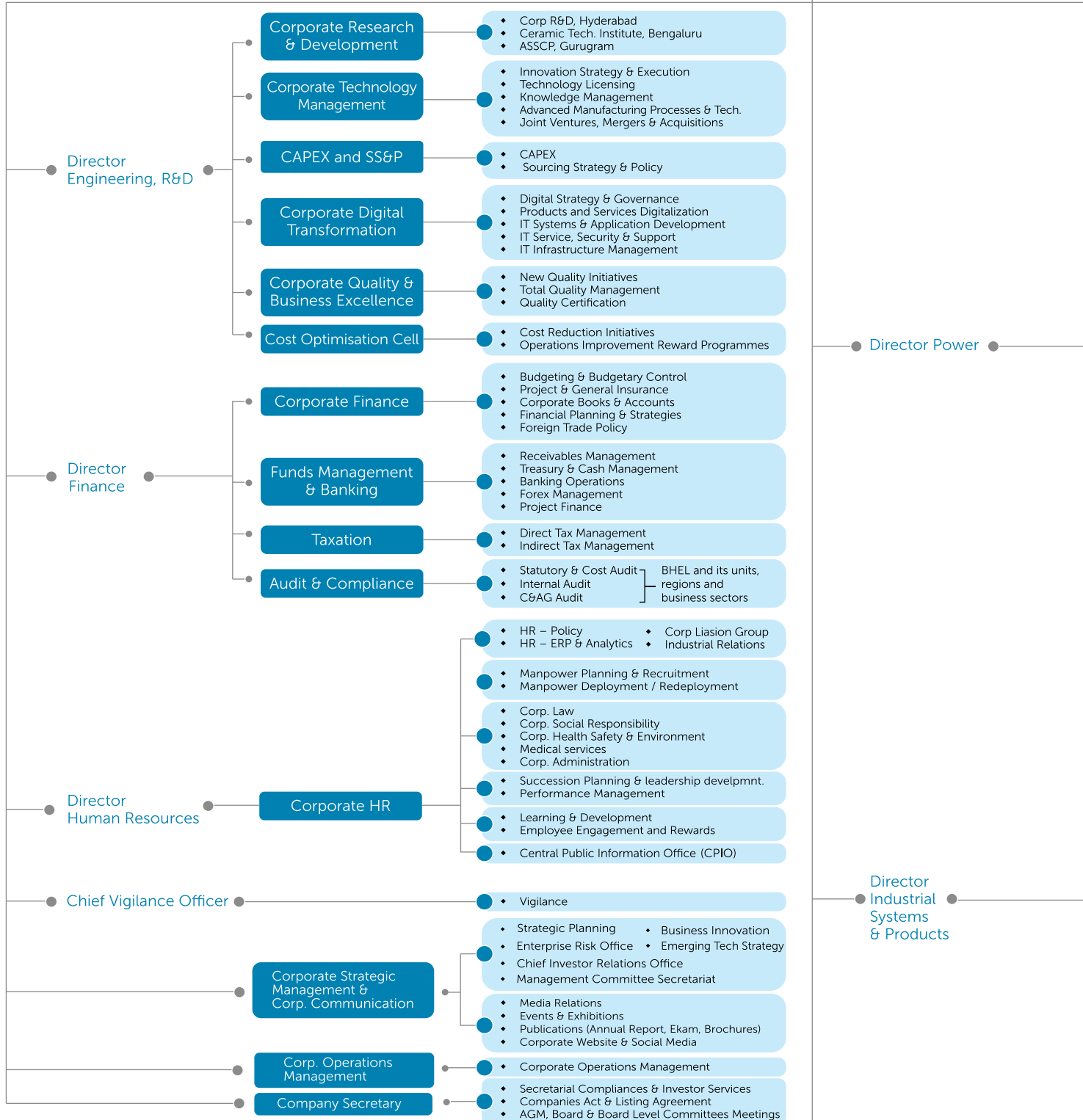
LEADERSHIP AT BHEL

BOARD OF DIRECTORS

CORPORATE ORGANISATIONAL STRUCTURE (As on 1st April 2023)

CHAIRMAN & MANAGING DIRECTOR

COMMITTEE OF FUNCTIONAL DIRECTORS



MANAGEMENT COMMITTEE



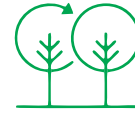
1 : Reports to Director (Industrial Systems & Products)

2 : Reports to Director (Engineering, R&D)



Strategic partnerships for commercialisation of indigenous coal gasification technology -

Signed MoUs with Coal India Limited (CIL) and NLC India Limited (NLCIL) for commercial size coal gasification projects.



Focus on developing non-coal business-

highest ever share of Industry Sector (~40%) in the yearly order booking.



Highest orders in 13 yrs in the Industry sector ~ ₹ 9,500 Crore* -

Highest ever orders in the defence sector ~ ₹ 3,600 Crore*.



Highest ever orders in the Spares & Services Business

~ ₹ 3,800 Crore*



BHEL entered into a technology tie-up with Sumitomo SHI FW Energia Oy, Finland

for supercritical and subcritical Circulating Fluidised Bed Combustion (CFBC) Boilers

YEAR AT A GLANCE
2022-23



₹ 691 Crore invested in R&D and innovation;
503 patents and copyrights filed; 5,443 Total Intellectual Capital



Delivery ahead of schedule –

supplies of 75 nos. of 6000 HP WAG-9H Electric Locomotives to Indian Railways



Successfully demonstrated India's first flexible-operations at 1x600 MW Adani Raigarh thermal power plant-

establishing harmony between renewable and conventional thermal power.

*excluding taxes



REVOLUTIONIZING RAIL EXPERIENCE

BHEL's contribution to India's Modernization Journey

Indian Railways, in its pursuit of expansion & modernization, has found a valuable ally in BHEL. Further to winning the order of four propulsion systems for Vande Bharat Trainsets, BHEL in consortium with Titagarh Rail Systems Ltd. (TRSL), has **successfully secured another significant order from Indian Railways for 80 Vande Bharat Sleeper Trainsets** – a major realisation in BHEL's diversification drive. These sleeper version of Vande Bharat Trainsets can be deployed for longer distances, and are capable of operating at a high speed of 160 kmph.

This path breaking order includes engineering, manufacturing, testing, commissioning, and supply & maintenance of 80 energy-efficient Vande Bharat trainsets. The entire fleet of these trainsets will be maintained for 35 years, ensuring optimal reliability and availability. Passengers can look forward to advanced features that prioritize comfort and safety, while reducing travel time between cities.

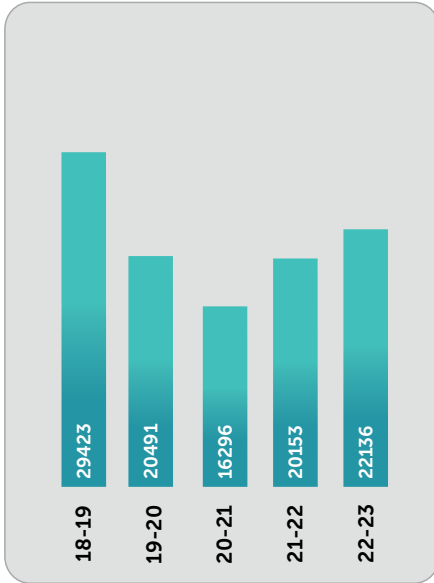
Experience the future of rail transportation with BHEL's cutting-edge technology, 'Made in India'. **Embarking on a journey towards a modern, efficient, and self-reliant Indian Railways.**



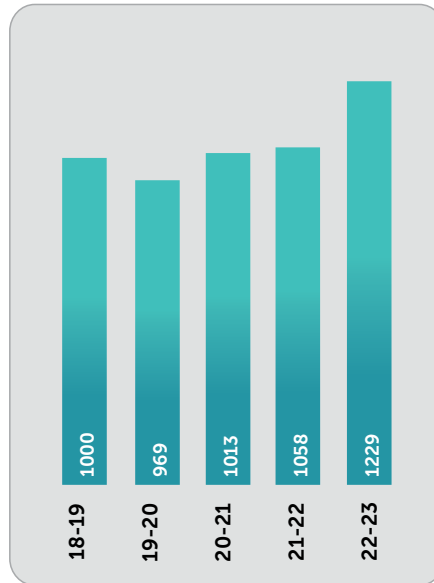
YEAR AT A GLANCE

(Figures are in ₹ Crore unless otherwise stated)

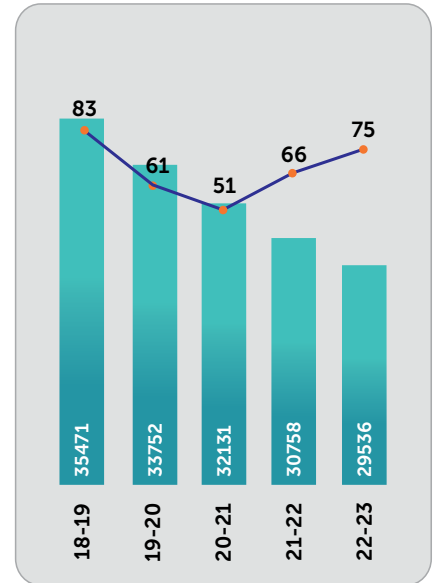
REVENUE



OTHER OPERATIONAL INCOME

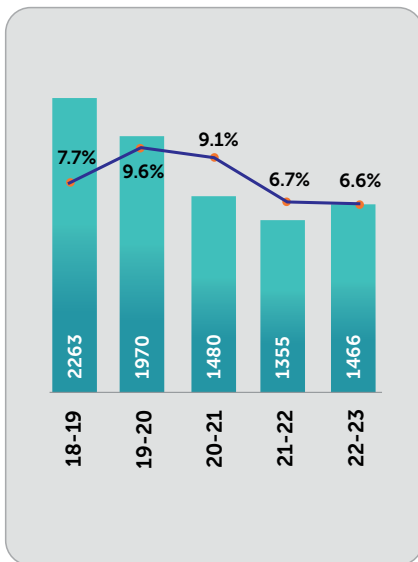


MANPOWER (NOS) AND REVENUE PER EMPLOYEE (₹ /Lakh)



TOTAL (Nos) REVENUE PER EMPLOYEE (₹/LAKH)

OTHER EXPENSES TO REVENUE %



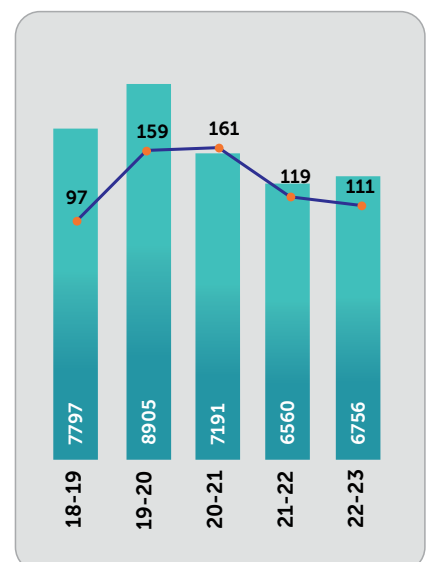
OTHER EXPENSES % OF REVENUE

EBITDA



EBITDA EBITDA AS % OF TOTAL INCOME

INVENTORY POSITION (₹ CRORE) AND NO. OF DAYS



INVENTORY INVENTORY IN NO OF DAYS (₹ CRORE)

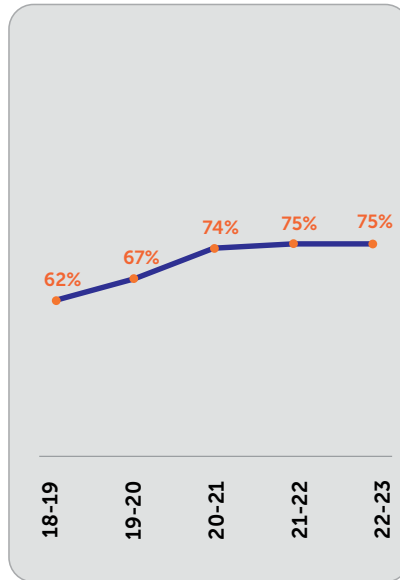
YEAR AT A GLANCE

(Figures are in ₹ Crore unless otherwise stated)

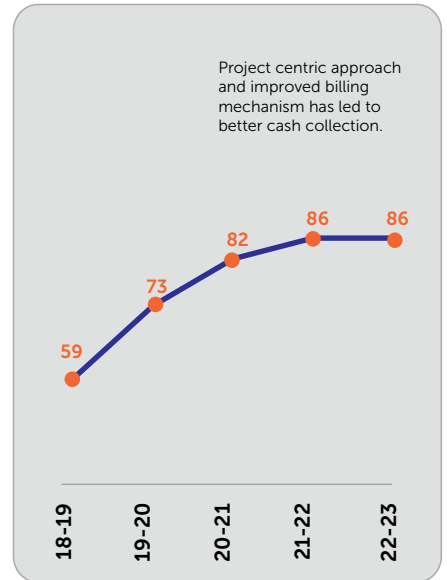
CURRENT RATIO



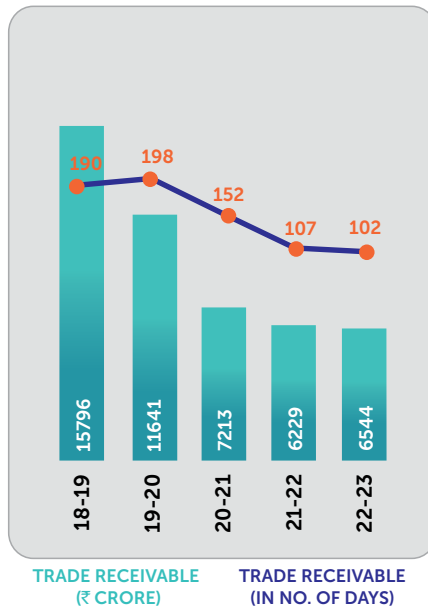
% LIQUIDATION OUT OF TOTAL POTENTIAL
(Opening net Trade receivable + Current year Net billing)



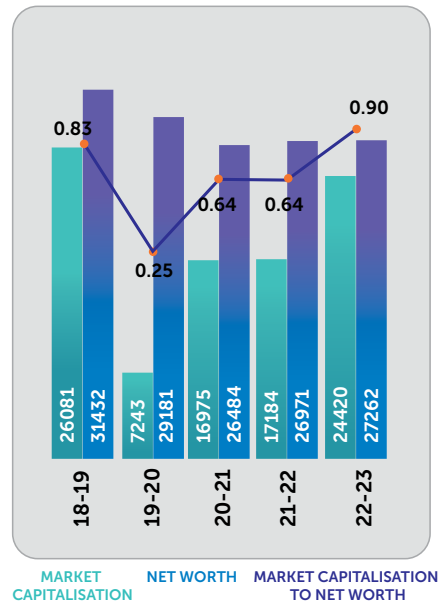
LIQUIDATION OUT OF CURRENT YEAR NET BILLING %



TRADE RECEIVABLES (₹ CRORE) AND NO. OF DAYS



MARKET CAPITALISATION TO NET WORTH





About **BHEL**

BHEL is India's largest engineering and manufacturing enterprise, operating in the energy, industry and infrastructure sector. Company was established in the year 1964 and since then it has been "Making in India" offering comprehensive products, systems, and services in various areas including power generation (thermal, hydro, gas, nuclear, and solar PV), transmission, transportation, defense, aerospace, oil and gas, and emerging sectors like battery energy storage systems and electric vehicle chargers.

BHEL has been instrumental in developing the country's power generation capacity, contributing to core industrial and strategic sectors since the time of its humble beginning. The company's commitment toward its customer is evident through wide range of product portfolio, development and absorption of new technologies, consistent investment of more than 2.5% of its revenue on R&D and innovation, establishment of world-class manufacturing facilities and offering sustainable business solutions. Apart from serving customers, BHEL has been supporting communities through programs like skill development, promoting health, hygiene, education, cleanliness and environmental protection, thus contributing to the society as a whole.



Making in India since **1964** and supplying products and services globally



One of India's largest employers in the engineering space

29,000+ highly skilled employees incl.

8,300 engineers



Ranks **one of the largest in the capital goods manufacturing** space in India





16 manufacturing facilities spread across the country producing equipment conforming to international standards



Consistent R&D spend of over **2.5%** of the annual revenue



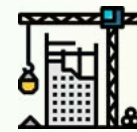
One of the few companies in the world having the **capability to design and manufacture equipment for entire range of power plants** – nuclear, hydro, thermal & gas, with proven capabilities to execute large size projects



4 regional offices, **8** service centres and **15** regional marketing centres



80+ technology collaborations undertaken with several global OEMs over the years



140+ ongoing projects in different parts of India & abroad



State-of-the-art facilities specializing in engineering, manufacturing, testing, aftermarket services for equipment in the core infrastructure sectors - Power, Railways, Industrial Systems & Products, Defence & Aerospace



References in **88** countries in all six inhabited continents



Shaping innovation capabilities & technology- with **dedicated R&D** centre in Hyderabad, 14 Centres of Excellence & 5 research centres



Power Sector

BHEL is one of the few companies in the world having the capability to manufacture the equipment for entire range of power plants - thermal, gas, hydro and nuclear, with proven capabilities to execute large size projects. BHEL's offering include:

- Steam turbines, generators, boilers and matching auxiliaries for fossil-fuel applications upto 1000 MW unit size
- Emission control equipment including Flue Gas Desulphurisation systems for SO_x emission control, high efficiency Electrostatic Precipitators for particulate emission control, and Boiler modification and Selective Catalytic Reduction systems for NO_x emission control
- Gas turbines and generators upto 299 MW unit size
- Hydro turbines and generators up to 400 MW unit size
- 220/235/500/540/700 MWe nuclear turbine generator sets
- Plant performance improvement through renovation, modernization, flexibilization, uprating, residual life assessment, health diagnostics and life extension of plants

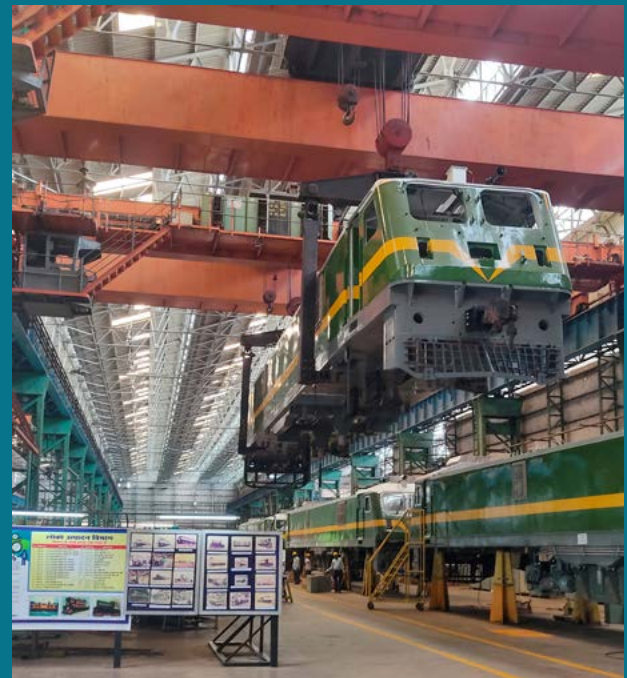


Industry Sector

BHEL's major offerings for industry and infrastructure sectors include:

- Transportation: Semi high speed (Vande Bharat) trainsets, electric locomotives upto 9000 HP, diesel electric locos upto 3000 HP, EMU coaches, IGBT based propulsion equipment (traction converter/auxiliary converter/vehicle control unit), traction transformers for electric Locos & ACEMUs/ MEMUs
- Defence & Aerospace: Strategic equipment for Indian defence forces including Super Rapid Gun Mount (SRGM), upgraded SRGM, Integrated Platform Management System for naval ships, compact heat exchangers, space grade Lithium ion cells, space grade solar panels and space grade batteries etc, hot forming of spacecraft propellant tank, forming of Titanium Shell/Domes, welding & machining of Titanium sheet and tubes, rotary main motor generators
- Renewables: EPC solutions from concept to commissioning for grid connected, standalone solar PV applications including floating solar power plants and Mono-PERC Solar PV Modules up to 400 Wp
- Energy Storage Solutions & new business areas: EV Chargers and associated electrical system, EPC solutions for Electric vehicle charging station with upstream electrical system;
- Captive Power & Process Plant - Standalone STGs, BTG package, Refinery CPP on EPC basis, AFBC and CFBC boilers, UB package, Downstream Oil & Gas packages on EPC basis

- Transmission: EHV substations (AIS and GIS types) ranging upto 765 kV, UHV substations and HVDC converter stations up to ± 800 kV, power transformers, shunt reactors, vacuum switchgear, gas insulated switchgears, Flexible AC Transmission system devices, composite insulators for upto 765 kV application etc.
- Industrial Products: Oil rigs, wellheads & X-mas tree valves, mechanical packages, fabricated equipment & boiler feed pumps, compressors & AC machines



BHEL's success over the years is driven by its skilled and motivated workforce of over 29,000 employees coupled with physical assets spread across India that include a network of 16 manufacturing facilities, 2 repair units, 4 regional offices, 8 service centres, 3 active joint ventures, 15 regional marketing centres, 1 overseas office and current project execution at more than 140 project sites across India and abroad. The manufacturing facilities churn out a wide range of high quality & reliable products adhering to national and international standards.

BHEL has a strong presence in various sectors of the Indian capital goods industry, including Power Generating equipment for the utilities. The worldwide installed base of power generating equipment supplied by BHEL is 197 GW, making it the undisputed leader amongst Indian power plant equipment manufacturers. Besides, the company has supplied 800+ locomotives and other traction equipment for locomotives & EMUs; commissioned 240+ electric substations and 6 major HVDC projects in the country, becoming the largest manufacturer and supplier of power transformers and electrical AC machines in the country, and

installed & commissioned 1.2+ GW solar portfolio spread across the country.

BHEL has a widespread footprint in all the inhabited continents of the world with references in 88 countries including the neighbouring countries of Bangladesh, Afghanistan, Bhutan, and Nepal, Indonesia, Oman, Iraq, Sudan, Afghanistan, United States and New Zealand. Around 12 GW power generating capacity has been installed in overseas markets and additional 5 GW is under execution, including 2x660 MW Maitree Super Thermal Power Project in Bangladesh and 4x225 MW Arun-3 Hydroelectric Project in Nepal.

In certain strategic sectors, BHEL holds a crucial position as the sole Indian supplier of technology-intensive products and systems. It is the only manufacturer of nuclear steam turbines in the country and has been involved in all three stages of India's Nuclear Power program. Furthermore, BHEL has been a major supplier of critical equipment and services in the defense and aerospace sector for over three decades and is a trusted supplier of naval guns to the Indian Navy for their warships.



PAN INDIA PRESENCE



Manufacturing Plants/ Unit Locations

BHEL Manufacturing Units

Bengaluru	1. Electronics Division (EDN)
	2. Electronics Systems Division (ESD)
	3. Solar Business Division (SBD)
Bhopal	4. Heavy Electrical Plant (HEP)
Goindwal	5. Industrial Valves Plant (IVP)
Haridwar	6. Heavy Electrical Equipment Plant (HEEP)
	7. Central Foundry Forge Plant (CFFP)
Hyderabad	8. Heavy Power Equipment Plant (HPEP)
Jagdishpur	9. Fabrication Stamping & Insulator Plant (FSIP)
Jhansi	10. Transformer Plant (TP)
Rudrapur	11. Component Fabrication Plant (CFP)
Ranipet	12. Boiler Auxliaries Plant (BAP)
Tiruchirappalli	13. High Pressure Boiler Plant (HPBP)
	14. Seamless Steel Tube Plant (SSTP)
Thirumayam	15. Power Plant Piping Unit (PPPU)
Visakhapatnam	16. Heavy Plates & Vessels Plant (HPVP)

BHEL Repair Units

Mumbai	1. Electrical Machine Repair Plant (EMRP)
Varanasi	2. Heavy Equipment Repair Plant (HERP)

INDIA





Vision

A global engineering enterprise providing solutions for a better tomorrow



The World of BHEL



Mission

Providing sustainable business solutions in the fields of Energy, Industry & Infrastructure



A National Institution

- One of the largest engineering & manufacturing companies in India serving core sectors of the economy
- Pan India presence with 16 Manufacturing Units and 140+ project sites (including overseas)

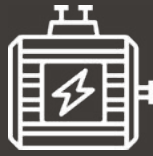
Did you know?

- BHEL is the only company associated with all three stages of Indian Nuclear Power Programme
- BHEL dispatched its 44th Nuclear Steam Generator for Rawatbhata Nuclear Power Plant from its Trichy manufacturing unit
- BHEL has been the pioneer in the Coal Gasification Technology in the country since 1990
- BHEL has designed & developed 2 kW Air Cycle Machine (ACM) based Liquid Cooling System (LCS) for Light Combat Aircraft – Tejas Mk1
- BHEL has successfully indigenized Ceramic Pouring Tube for the manufacturing process of cast steel wheels at Rail Wheel Factory, Yelahanka and Bela
- BHEL will be sole supplier of Li-ion batteries for next generation aircraft



Energizing India

- 197 GW power generating equipment installed (including overseas)
- 18.8 GW Captive Power Plants commissioned
- 1.2+ GW Solar portfolio
- BHEL supplied 55% of the Thermal Power generation capacity, 48% of the Nuclear Power generation capacity (secondary side) and 44% of the Hydro Power generation capacity installed in the country



Unparalleled contribution in core sectors

- 7,30,000+ MVA Transmission Equipment supplied
- 33,500+ AC Machines supplied
- 800+ Locos supplied to Indian Railways
- 415+ Compressors supplied and 90 Oil drilling Rigs supplied
- 13500+ Well Heads & Christmas Tree valves supplied
- 40+ Super Rapid Gun Mount (main gun) supplied for Indian Navy ships



Global Footprints

- Footprints in 88 countries
- 12 GW Power generation capacity built outside India; 5 GW under installation



Valuing people

- Committed workforce, more than 29,000+ employees
- 8,300+ Engineers
- Participative management culture since 1973



Technology for a sustainable future

- Successfully executed India's first flexible operation at M/s Adani REGL (1x600 MW) unit for integration of renewable power to grid - developed in-house by BHEL
- Successfully established methanol firing system as an alternative to Light Diesel Oil and Heavy Fuel Oil in Thermal Power Plants
- Commissioned the largest floating solar power plant of India with 100 MW capacity at NTPC Ramagundam in Telangana
- Carbon footprint avoidance of nearly 26,964 MT of CO₂-equivalent through in-house ~35 MWp solar power installations
- Import substitution of oil extraction product Sucker Rod Pumping (SRP) through in-house design & development
- 10 manufacturing units are now 'Zero Liquid Discharge' entities



Growing with society

- Committed to Principles of UN Global Compact
- Signatory to Integrity Pact of Transparency International
- 49,200 saplings planted across BHEL during FY 2022-23 to enhance green cover



Innovation

- R&D Expenditure consistently more than 2.5% of Turnover, 5,400+ IP equity
- Collaborative R&D with leading academic institutions & research organizations
- 5 Research Institutes; 14 Centres of Excellence
- In-house R&D Centres of 12 Manufacturing Units & Divisions recognized by DSIR

Recognition of Excellence



1. CMD, BHEL conferred with ICC PSE Excellence Award for 'CEO of the Year' for transformational leadership



2. CMD conferred with 'Governance Now CMD Leadership Award 2022' for putting in place multidimensional transformational strategies.

3. CMD, BHEL has been conferred with Outstanding Contribution to National Development, IIT Delhi Alumni Award.

4. 20 teams won Par Excellence award (highest category), 13 teams won Excellence award and 1 team won Distinguished award during 36th National Convention on Quality Concepts (NCQC) – 2022, organised by Quality Circle Forum of India, Aurangabad Chapter.

5. Ms. Renuka Gera, Director (IS&P), BHEL, was conferred with the prestigious 'CIGRE Women in Energy Award' at the CIGRE, Paris Session in France.

6. Ms. Sireesha Baile of Corporate R&D, Hyderabad received the coveted 'Young Engineer of the Year Award 2022' from Govt. of Telangana and Institution of Engineers (India), Telangana State Centre for her achievements in technological innovations.

7. 'Governance Now PSU awards 2022' in various categories – Best PSU award in Research & Innovation, HR Excellence, Increase in Geo-Strategic Reach, Digital Security and Use of Emerging Technologies: IoT/IIoT.



8. BHEL conferred with National Intellectual Property Awards 2021 & 2022 in the category of 'Top Public Limited Company/Private Limited Company for Patents Filing, Grant & Commercialization' in India in the Manufacturing Sector' by Office of Controller General of Patents, Designs & Trade Marks under, DPIIT, Ministry of Commerce & Industry.

9. BHEL recognised as one of the Top 50 Innovative Companies in India and awarded 'CII's Industrial Innovation Award 2022'.



10. BHEL received CII-Exim Bank's first-ever Special Jury Commendation for Adoption and Nurturance of Business Excellence. The company's Trichy, Haridwar, Bhopal and Hyderabad units have received the Platinum recognition while Project Engineering Management Group, Electronics Division - Bengaluru, Power Sector – Northern Region and Ranipet Division have been awarded the 'Gold Plus' recognition.

11. BHEL won CBIP Award 2022 for Best Contribution in Solar Energy. The Award was received by CMD, BHEL, along with Ms. Renuka Gera, Director (IS&P), BHEL from Shri R K Singh, Hon'ble Union Minister of Power and New & Renewable Energy.

12. BHEL was awarded for the 'Highest procurement in number of orders on GeM in FY 2021-22'.

13. BHEL was conferred with the Best Performing CPSE in e-procurement award at the National Workshop for Electronic Procurement under the aegis of Ministry of Finance, Department of Expenditure along-with National Informatics Center, Ministry of Electronics & Information Technology.



14. BHEL bagged 8 Gold Awards at the International Convention on Quality Circles 2022 held at Jakarta Indonesia by IQMA (Indonesia Quality Management Association). More than 20 Countries participated in the International event. The prestigious awards were conferred on the teams for bringing new thinking, simplifying work, bringing quality and developing new tools & techniques in their field of work.



15. BHEL's HPEP Hyderabad Unit conferred with Best Organisation Award for supporting Quality Circle Movement in the Country and contributing to its growth by Quality Circle Forum of India (QCFI), Hyderabad during Annual Chapter convention on Quality Circles (CCQC-2022).

16. BHEL received Renewable Energy India Awards – 2022 in the category of Leading EPC-Solar at Renewable Energy India Expo.



17. BHEL received ICC PSE Excellence Award for 'Contribution of Women and Differently-abled' in the Maharatna CPSE category.

18. BHEL received the prestigious North India Best Employer Brand Award 2022 for demonstrating exemplary HR practices and effectively cultivating HR competencies to enable the organization to be future-ready by World HRD Congress.



19. BHEL received Golden Peacock Environment Management Award 2022 under the category 'Power Equipment Sector'.

20. The prestigious award for Star Performer for 2018-19 in the product group: Project Exports - Large Enterprise' at the 51st EEPC India National Awards.

21. BHEL received Golden Peacock Award 2022 in the Power Equipment Sector for its inclusive CSR program - 'Motivating AgRarian communities of Kandhamal for Economic Transformation (MARKET)' in the Kandhamal district of Odisha.



22. BHEL conferred with the Apex India HR Excellence Platinum Award 2022 for innovative HR practices and Apex India Occupational Health & Safety Gold Award 2022 for its sterling track record in safety in Engineering Sector.



23. BHEL received ICC Social Impact Awards 2023 in Healthcare for CSR Project - 'Lifeline Express-Hospital on train' at Panki-Dham, Kanpur.

24. BHEL recognized as the 'Most Preferred Workplace in Manufacturing 2022-23' by Team Marksmen for maximising employee happiness and productivity along with organisational performance.



25. BHEL conferred with a Memento on World Hemophillia Day by Hemophillia Federation India for its valuable support and making the life of the persons with Hemophillia better through CSR Project 'Heal A Soul-IV'.

26. BHEL honoured by Rail Analysis India at the 4th Rail Analysis Innovation & Excellence Summit 2023 for exemplary achievement in 'Sustainable and Energy Efficient Solutions for Rail sector'.

27. Mr. Bijaya Kumar Das completed the gruelling 'IRONMAN' long-distance triathlon race, held in Astana, Kazakhstan. It is one of the most difficult one-day sporting events in the world.

CAPACITY BUILDING FOR THE NATION

BHEL has taken a significant step towards enhancing the competitiveness of the Indian capital goods sector by establishing the "Common Engineering Facility Centre" (CEFC) at its Welding Research Institute (WRI) in Trichy. This initiative is supported by a grant from the Ministry of Heavy Industries (MHI) under the "Enhancement of Competitiveness in Indian Capital Goods Sector Scheme, Phase-II."

The CEFC, with a target capacity to skill 5,000 welders annually, offers comprehensive training in various welding technologies. These include Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Gas Tungsten Arc Welding (GTAW), as well as advanced welding technologies such as Robotic Welding, Laser Welding, Friction Welding and Dissimilar Metal Welding. The training programs not only cover theoretical aspects but also provide hands-on skills to the participants.

Operating under the hub and spoke model, the CEFC has WRI-Trichy as the hub and extension centers located at Varanasi, Bhopal, Jhansi, Haridwar, and Ranipet as the spokes. This model enables the CEFC to reach a larger population across India, ensuring that skilling opportunities are available nationwide. As a result, a pool of trained welders is being created throughout the

Dr. Mahendra Nath Pandey Retweeted

Narendra Modi @narendramodi

प्रशंसनीय पहल! युवाओं के कौशल को निखारने का यह प्रयास जहाँ उन्हें हुनरमंद बनाएगा, वहीं उनके लिए रोजगार के नए-नए अवसर भी लाएगा।

Translated from Hindi by Google

Commendable initiative! While this effort to enhance the skills of the youth will make them skilled, it will also bring new employment opportunities for them.


Dr. Mahendra Nath Pandey @DrMNPandeyMP · Jun 8

कौशल व सशक्त भारत की ओर बढ़ते कदम!

प्रधानमंत्री श्री @narendramodi जी के 'प्रत्येक युवा सशक्त हो के विज्ञान को बल देते हुए बनारस ने अग्रणी भूमिका निभाई है।

बनारस के वेल्डिंग रिसर्च इंस्टिट्यूट (WRI) के माध्यम से युवाओं को सशक्त बनाकर उनको कौशल प्रदान किया जा रहा है।

[Show this thread](#)



7:00 PM · Jun 8, 2023 · 557.1K Views

country to meet the requirements of both traditional and modern manufacturing industries in India.

Currently, all the skilling centers of the CEFC are operational, and in its first year of operation, they have already successfully trained over 2,000 welders.





BOARD'S REPORT

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Report of the Board of Directors

Dear Members,

The Board of Directors takes pleasure in presenting the 59th Annual Report on the business and operations of your Company and the Audited Financial Statements for the year ended March 31, 2023.

Financial Results

(₹ Crore)

	For the year ended	
	March 31, 2023	March 31, 2022
Revenue	22136	20153
Revenue from operations	23365	21211
Profit/(loss) after tax	448	410
Total comprehensive income / (loss)	430	487
EPS (in ₹)	1.29	1.18

State of Company Affairs

The company posted a growth of 10% in Revenue from Operations, achieving ₹23,365 Crore during FY 2022-23 as against ₹21,211 Crore in last financial year and a growth of 9.3% in Profit After Tax achieving ₹448 Crore as against ₹410 Crore in the previous year.

The results of continued focus in recent years on project execution, closures and physical performance have become clearly visible with erection tonnage at project sites at a record 5.41 lakh MT (doubled over a period of previous 3 years) despite decline in order book on the back of 'nil' ordering in thermal sector for over three years as well as increase in liquidation of Current Year billing to 86% in FY 2022-23 from 59% over the past four years. This is a clear indication of success of the major initiatives including implementation of Integrated Project Management System (IPMS) for real time project monitoring, Site Data Digitization for ensuring single source of data, focus on sequential supplies and technical & financial closure of completed projects. Focused project management efforts saw excellent results with commissioning of North Karanpura Unit 1, Nation's first utility scale thermal power plant fitted with Air Cooled Condenser (ACC), as well as commissioning of Unit 1 of the prestigious 2x660 MW Maitree Super Thermal Power Project, Bangladesh. Further, Unit 2 of the Maitree Project has been synchronized on 28 June 2023 ahead of a very tough time target given by Government of Bangladesh, for the same.

Diversification efforts in recent years saw fruits in the form of signing of MoU with Coal India Ltd for setting-up of 2,000 TPD Coal to Ammonium Nitrate plant based on BHEL's indigenous technology for gasification of high ash Indian coal (first proven technology for the same), which has been followed with completion of engineering, optimization & validation by international experts and formation of the Joint Venture is progressing well. Further efforts for increasing our

rail transportation business led to award of prestigious order for manufacturing and maintenance of 80 sets of "Vande Bharat" trainsets. This project is being taken-up by BHEL as lead partner in consortium with Titagarh Rail Systems Ltd. and is valued at over ₹23,000 Crore excluding taxes (BHEL share at about ₹13,500 Crore).

With regard to future growth perspective, the order booking for the company in FY 2022-23 touched ₹23,548 Crore (net of taxes), which is highest in the last 5 years. It is also pertinent to note that the company's efforts in the Industry Sector have borne fruits and the order booking at ₹9,537 Crore (net of



taxes) is highest in the last 13 years, with its share at 40% of the yearly order book. The reporting of order book is done excluding applicable taxes for better understanding of all stakeholders, and is in line with the reporting of revenue numbers.

The total outstanding order book as on 31st March 2023 stands at ₹91,336 Crore, net of taxes (PY ₹90,084 Crore). With the receipt of the prestigious "Vande Bharat" trainset order in April 2023, the total outstanding order book has crossed ₹1 Lakh crore (excluding taxes), which is the highest in last 4 years.

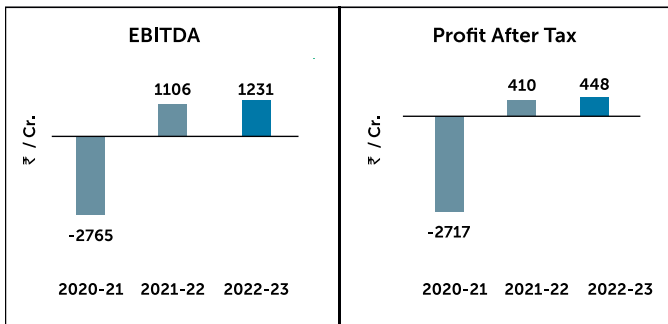
The increase in revenue in FY 2022-23 has been achieved despite challenges persisting for material availability on account of geopolitical issues and scarcity of key inputs such as semiconductors. The spares & services business, which has been a focus area for your company, recorded a growth of about 25%.

Material cost in the recent past has been a challenge, not only for BHEL but also across the industry spectrum, domestic as well as global. Though metal prices have seen some corrections, they are still at substantially elevated levels. Despite these constraints, your company was able to maintain the material cost during FY 2022-23, at levels similar

to previous year. In the coming year, rising raw material prices as well as execution of old projects, won through highly competitive bidding, are expected to continue to affect the financial position & liquidity of the company.

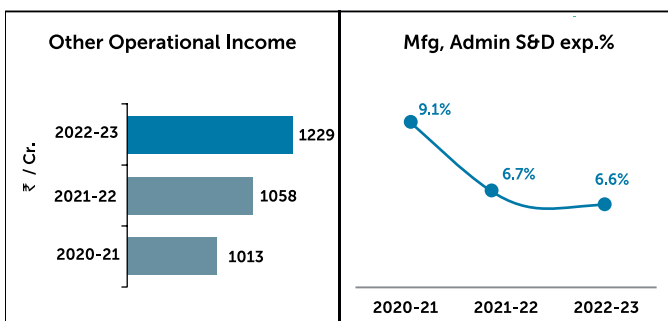
Higher fuel prices have adversely impacted the bottom-line. Furthermore, inflation in general is also putting persistent pressures on operational budgets which are being dealt through stringent budgetary controls measures. The company is focusing on project completion despite poor margins in civil revenues, which would continue to challenge the bottom-line.

Your company optimized the inventory levels by unlocking the blocked inventories, and during the year 2022-23, ₹230 Crore worth of non-moving inventory was liquidated. The efforts in sale of scrap, disposal of non-moving inventory, etc., in the company have helped increase other operational income and has assisted in improving EBITDA levels to ₹1,231 Crore, up by about 11% from EBITDA of ₹1,106 Crore for FY 2021-22. Profit After Tax for FY 2022-23 was further aided by the gains made in the taxation area. During the year, the company received Income Tax refunds (including interest) totalling ₹266 Crore, which have helped in the net cash generation as well as the bottom line.



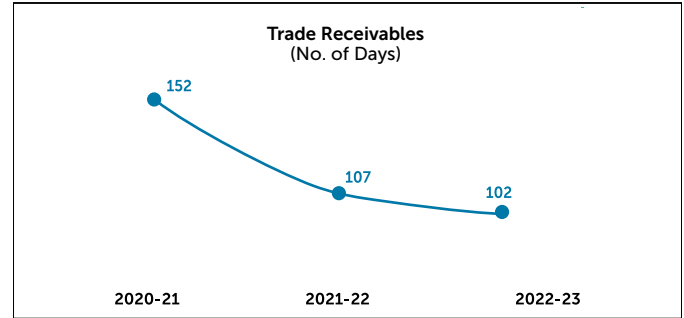
Other operational income, directly contributing to bottom line, reached its highest levels at ₹1,229 Crore during FY 2022-23, which is up by 16% over FY 2021-22. The increase in Profit After Tax was also aided by continued stringent budgetary control on Manufacturing, Administrative and S&D expenses, which have been at their lowest level at 6.6% of Revenues, reflecting strong budgetary controls in the company.

Concerted efforts & thrust on 'Project Centric' operations resulted in liquidation of current year billing at 86% in FY 2022-23, which is similar to last year. The trade receivables



in terms of no. of days of Revenue from Operations, have reduced to 102 days during FY 2022-23, as against 107 days during FY 2021-22.

The Trade Receivables were at ₹6,544 Crore as on 31st March 2023 (₹6,229 Crore as on 31st March 2022) and Contract Assets stand at ₹29,740 Crore as on 31st March 2023 (₹26,940 Crore as on 31st March 2022). Though overall receivables have increased during FY 2022-23, there is a reduction in terms of no. of days of Revenue from Operations from 571 days last



year to 567 days current year. The increase in receivables is mainly on account of skewed payment terms in contracts under execution that resulted in higher accumulation of deferred debts that are payable on completion of intermediate and final milestones.

Due to high investment in contract assets, the company had some pressures on cash position. However, the company retained its debt free status with closing positive cash & bank balance (net of short-term borrowings) of ₹1,258 Crore, and has enough leverage to invest in capex and diversification initiatives.

Transfer to Reserve

The company has not transferred any amount to the Reserves during FY 2022-23.

Dividend

The Board of Directors, in its meeting held on May 26, 2023 has recommended a final dividend @20 % (₹0.40 per share of ₹2 each), amounting to ₹139.28 Crore, out of profit for FY 2022-23, subject to your approval.

The Company has a dividend distribution policy in place in pursuance of the requirements of Regulation 43A of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 ("LODR"). Dividend distribution policy is available on the Company's website at <https://www.bhel.com/dividend-distribution-policy-bhel-0>.

Deposits

The Company has not accepted deposits from the public falling within the ambit of Section 73 of the Companies Act, 2013 during FY 2022-23.

Capital & Finance

During FY 2022-23, the company has met its CAPEX and operating fund requirements through internal accruals. The company invests any available surplus funds to maximize the interest income to the company. To meet any intermittent operational fund requirement, short term borrowing options used by the company including WCDL, Commercial Papers (listed on NSE and BSE), PCFC, etc. PCFC borrowings provide a natural forex hedge to the company. The company continues to retain its status as Zero Debt Company.

Loans and Investments

There are no instances of investments by the loanee in the company or its subsidiary.

Credit Rating

The credit ratings of your Company are as follows:

Rating Agency	Date of Rating	Long Term Rating	Outlook	Short Term Rating
CRISIL	18-06-2021	CRISIL AA-	Negative	CRISIL A1+
	25-07-2022	CRISIL AA-	Negative	CRISIL A1+
INDIA RATINGS & RESEARCH	01-07-2021	Ind AA-	Negative	Ind A1+
	30-06-2022	Ind AA-	Negative	Ind A1+
CARE	24-06-2021	CARE AA-	Stable	CARE A1+
	17-06-2022	CARE AA-	Stable	CARE A1+
	19-06-2023	CARE AA-	Stable	CARE A1+

Persistent efforts by the company during the financial year for cutting down miscellaneous expenses and liquidation of old outstanding resulted in positive cash flows from operations and helped maintain the credit rating of the organization.

Material Changes and Commitments affecting the Financial Position

There are no material changes and commitments affecting the financial position of the Company between the end of FY 2022-23 and the date of this report. There are no significant and material orders passed by the regulators or courts or tribunals impacting the going concern status and company's operations in future.

Suspension of Trading

The Equity Shares of the company are listed on NSE & BSE. The shares of the company were not suspended from trading during FY 2022-23.

Directors' Responsibility Statement

Pursuant to section 134(5) of the Companies Act, 2013, the Board of Directors confirm that:

- In the preparation of the Annual Accounts, the applicable Accounting Standards (Ind AS) have been followed along with proper explanations relating to material departures;

- The Directors have selected such accounting policies & 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 at the end of financial year and of the profit of the Company for that period;
- The Directors have taken proper and sufficient care for maintenance of adequate accounting records in accordance with the provisions of this Act for safeguarding the assets of the Company and for preventing and detecting fraud and other irregularities;
- The Directors have prepared the Annual Accounts on a going concern basis;
- The Directors have laid down internal financial controls to be followed by the Company and that such internal financial controls are adequate and operating effectively;
- The Directors have devised proper systems to ensure compliance with the provisions of all applicable laws and that such systems were adequate and operating effectively.

Management Discussion & Analysis

This report conveys the Management's perspective on the external environment, company's strategy for the future, operating and financial performance, risks and concerns, and initiatives taken in various areas during the year; such as diversification of business areas, revamping project execution, cost optimization, technology development, digitalization, quality, etc.

In the midst of a continuously challenging business and economic environment, your company has continued to focus on regaining growth. Strengthening the core business, focus on execution, and determined efforts towards diversification including increased business in non-coal areas are critical enablers for long term sustainable growth. For further details, please refer **Annexure-I to the Board's report**.

Corporate Governance

Pursuant to Regulation 34 of the SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015, a report on Corporate Governance (including Board & Committee Meetings details) is given at **Annexure-II to the Board Report** together with the following,

- Certificate of Non-Disqualification of Directors under Schedule V of the SEBI Listing Regulations.
- Auditors certificate on Corporate Governance under SEBI Listing Regulations & Department of Public Enterprises (DPE) guidelines on Corporate Governance.
- Secretarial Audit Report under Section 204 (1) of the Companies Act, 2013.

Declaration of Independence

Declaration under Section 149(6) of the Companies Act, 2013 pertaining to criteria of independence has been given



by the Independent Directors to the Board of Directors. All the Independent Directors have registered themselves on the online database of the Indian Institute of Corporate Affairs (IICA), notified under Section 150 of the Companies Act, 2013. In the opinion of the Board, the Independent Directors possess integrity and necessary expertise & experience.

Compliances

In addition to focus on many other areas, the company continuously reviews and strengthens its compliance of systems and processes.

- The Company considers sound Corporate Governance as one of its core values committing itself to maintaining high degree of transparency in disclosures.
- To strengthen compliance mechanism across various laws, a quarterly legal compliance report on the Applicable laws/ Acts is reviewed by the Board of Directors.
- Being a listed company, compliance with the SEBI – (Listing Obligations and Disclosure Requirement) Regulations, 2015 is ensured. There is no adverse comment from SEBI for the FY 2022-23 on any financial matter.
- The Company has complied with the applicable secretarial standards.
- For preparation of financial statements, the company ensures compliance to the Indian Accounting Standards (Ind AS), Guidance Notes and other authoritative literature issued by the ICAI, Companies Act 2013 and other applicable statutes.

The company endeavours to constantly improve its disclosures and transparency standards in the Financial Statements.

Contribution to the Exchequer

The Company, over the years, has been consistently making significant contribution to the Exchequer, and maintaining high standards of integrity with respect to tax compliances. During the current year, the company's contribution to exchequer stood at over ₹3,831 Crore.

Audit Committee

The Company has in place a Board Level Audit Committee in terms of the requirements of the Companies Act, 2013 read with rules made thereunder and Regulation 18 of the SEBI (Listing Obligations & Disclosure Requirements) Regulations 2015, the details in respect of which are given in the Corporate Governance Report. All the issues are fairly and transparently deliberated in the meetings which are held at regular intervals. The views and suggestions of the Board Level Audit Committee members are taken into account and imbibed into the Company's processes. Further, there has been no instance where the Board of Directors have not accepted the recommendation of the Board Level Audit Committee.

Details of changes in Directors & Key Managerial Personnel Appointment

Ms. Arti Bhatnagar, Additional Secretary & Financial Advisor, Ministry of Commerce & Industry has been appointed as Part-time Official Director w.e.f. February 14, 2023.

Shri Ramesh Patlya Mawaskar has been appointed as Part-time Non-Official (Independent) Director w.e.f. June 8, 2023.

Shri Jai Prakash Srivastava, Director (E, R&D) & Director (Finance) - additional charge has been designated as Chief Financial Officer (CFO) of the Company w.e.f. May 26, 2023.

Shri Krishna Kumar Thakur has been appointed as Whole Time (Functional) Director w.e.f. July 4, 2023 and has taken charge as Director (Human Resources).

In accordance with applicable statutory provisions and Article 67(iv) of the Articles of Association of the Company, Ms. Arti Bhatnagar, Shri Ramesh Patlya Mawaskar and Shri Krishna Kumar Thakur having been appointed as additional directors, shall hold directorship upto the 59th Annual General Meeting of the Company and are eligible for appointment as Directors at the Meeting.

Further, pursuant to Section 152 of the Companies Act, 2013 and Article 67(i) of the Articles of Association of the Company, Shri Upinder Singh Matharu and Shri Jai Prakash Srivastava will retire by rotation at the Annual General Meeting and being eligible, offers themselves for re-appointment.

Cessation

Dr. Raj K. Agarwal, who was appointed as Part-time Non-Official (Independent) Director on November 9, 2021, ceased to be a Director of the Company consequent to his resignation on September 12, 2022 from BHEL's Board of Directors. Dr. Raj K. Agarwal tendered his resignation citing his pre-occupation in personal affairs and inability to devote sufficient time towards discharge of his responsibilities as an Independent Director of the Company. Further, he also confirmed that there are no other reasons other than those provided by him for resignation.

Shri Raj Kamal Bindal and Shri Manish Kapoor, who were appointed as Part-time Non-official (Independent) Directors on January 31, 2020, ceased to be Directors of the Company on completion of their tenure on January 27, 2023.

Shri Shashank Priya, then Special Secretary & Financial Adviser, Ministry of Commerce & Industry who was appointed as Part-time Official Director on October 4, 2019, ceased to be Part-time Official Director on February 14, 2023.

Shri Subodh Gupta who was appointed as Director (Finance) w.e.f. April 18, 2018 ceased to be Director (Finance) w.e.f. April 18, 2023 in terms of Ministry of Heavy Industries' communication dated May 17, 2023. Further, he also ceased to be CFO of BHEL w.e.f. April 18, 2023.

The Board of Directors place on record their deep appreciation for the valuable services rendered as well as advice and guidance provided by Dr. Raj K. Agarwal, Shri Raj

Kamal Bindal, Shri Manish Kapoor, Shri Shashank Priya and Shri Subodh Gupta during their respective tenure on the BHEL Board.

In compliance with Regulation 36(3) of the SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015, brief resume of the Directors proposed for appointment and re-appointment along with the nature of their expertise in specific functional areas and names of companies in which the person holds directorship along with the membership of the Committees of the Board are given in the explanatory statement/ annexure to the Notice.

CEO/ CFO Certificate

CEO/CFO certificate as per Regulation 17(8) of the SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015 is placed at **Annexure- III to the Board's Report**.

Consolidated Financial Statements

The brief on consolidated financial statements prepared pursuant to section 129 (3) of the Companies Act, 2013 and Regulation 34 of the SEBI (Listing Obligations & Disclosure Requirement) Regulations 2015, is given in section 1.8.3 under Management Discussion & Analysis.

Sustainable Development

We, at BHEL, tirelessly endeavour for sustainable operations in our various business processes & activities. Our mission statement – 'Providing sustainable business solutions in the fields of Energy, Industry & Infrastructure' bears testimony to our commitment for contributing towards Sustainable Development and aspires to augment the industrial effort in this direction.

Sustainable development at BHEL addresses all three pillars of sustainability; namely- Environmental, Economic and Social. Being a responsible and sustainable organisation, BHEL strives towards integration of environmental, health, social equity and economic vitality within the organisation and beyond. Manifestation of this vision is evident in our actions apropos greener product development, increased renewable energy generation and usage, efficient water management, enhanced green cover, emission reduction, optimization of natural resources usage and improved energy efficiency and conservation.

The brief of some of these activities that help us move towards a sustainable future are given in **Annexure-IV to the Board's Report**.

Green Company

Climate change has today occupied the centre stage in policy making across the globe and is seriously impacting the way businesses work. At the national level, Govt. of India has adopted 'Panchamrit' to deal with these challenges as well as committed to Net Zero target by 2070. As part of our ethos for sustainable development, the company has now undertaken a major initiative for "Making BHEL a Green

Company". This initiative will further strengthen BHEL's position as a responsible and sustainable organization. In addition to generating goodwill for the company, it is expected to reduce costs and improve availability of borrowings & insurance in the long run and will also help to create a culture of innovation within the company to design, engineer and manufacture environment friendly products.

Business Responsibility and Sustainability Report

In line with the requirement of the listing regulations, Business Responsibility and Sustainability Report providing disclosures in environmental, social and governance perspectives is enclosed at **Annexure-V to the Board's Report**.

Achievements of R&D and Technological Development

BHEL, in line with country's vision towards net zero carbon emissions by 2070 for a sustainable future, has realigned its innovation ecosystem for development of cleaner technologies. The company is working towards development of products and systems in new business areas; such as coal to chemicals, high efficiency thermal plants, rail transportation, defence, aerospace, hydrogen value chain, downstream oil & gas, etc.

In FY 2022-23, BHEL has incurred an expenditure of ₹691 Crore towards R&D activities, which is approx. 3% of the revenue. This includes expenditure incurred on R&D projects taken up for development of new products, processes and systems as well as efforts made for modifications/ improvements in products and designs against customer requirements. During the year, BHEL has filed 503 patents and copyrights applications, enhancing the company's intellectual capital to more than 5400 nos. Approx. 19% of the company's revenue, amounting to ₹4,212 Crore has been achieved from its in-house developed products, systems and services. Further details of major developments have been provided in **Annexure-VI to the Board's Report**.

Implementation of Official Language

Official Language cells and Official Language Implementation Committees have been established in all Units/Divisions/ Offices of BHEL, with Rajbhasha Officers working in all these cells. Additionally, in the last two years, a lot of emphasis has been given on Rajbhasha implementation. More than 100 Rajbhasha Chakras have been formed across the company to motivate the employees to use Hindi in their day to day official work and expedite Rajbhasha implementation which has enhanced the use of Hindi across the Company. Quarterly meetings were held by the committees in all the Units/ Divisions including Corporate Office during the year. Several activities in the form of events, workshops, competitions were organized during the year. Your company is also contributing as a member in the Testing Committee of the Memory Based Translation Software 'Kanthastha 2.0' and its mobile-app version by the Department of Official Language, Ministry of Home Affairs, Government of India. Further details have been provided in **Annexure-VIII to the Board's Report**.

Vigil Mechanism

BHEL advocates the principles of Good Governance, Transparency, Probity and Ethics so as to ensure highest level of integrity in its functioning. The company has in place a full-fledged Vigil Mechanism consisting of Vigilance, Internal Audit, Whistle Blower Policy, Independent External Monitors as well as Board Level Committee.

Vigilance function of BHEL is headed by Chief Vigilance Officer (CVO) who acts as an extended arm of Central Vigilance Commission (CVC) for monitoring the affairs of the Company. Units & Divisions of BHEL have a Vigilance set-up headed by a senior officer reporting to the CVO.

A panel of Independent External Monitors (IEMs) is in place to oversee implementation of Integrity Pact, and address concerns related to the same. The Company also encourages reporting of unfair & unethical practices and has a Whistle Blower Policy which provides adequate safeguard to the complainant against victimization.

The "Board Level Audit Committee" (BLAC) reviews the functioning of the Whistle Blower / Vigil Mechanism, and annual review of the Vigilance function is also done by CMD / Board of Directors through structured meeting(s). Further, details are provided in **Annexure-VIII to the Board's Report**.

Health, Safety & Environment (HSE)

BHEL focusses on developing sustainable practices for ensuring the safety & health of its workforce as well as protecting the planet from various environmental impacts

of its operations. We believe that good health, safety and environmental performance will result in long-term benefits, in terms of enhanced customer loyalty, valuable partnerships & collaborations and sustainable development.

BHEL, in its pursuit of achieving the highest levels of Occupational, Health & Safety and Environmental performance, has got its manufacturing units and Power Sector regions certified under Occupational Health and Safety Certification (ISO 45001:2018) and Environmental Management Systems Certification (ISO 14001:2015). To enhance regular compliance, internal audits of manufacturing units and project sites are also carried out by a team of HSE experts from within the organisation.

Further details are provided in **Annexure-VIII to the Board's Report**.

Data and Cyber Security

In today's hyper connected world, data and cyber security is of paramount importance, especially for the country's foremost engineering organization in heavy engineering sector. In this regard, BHEL has implemented advanced security measures to protect its IT assets and data from cyber threats. These measures include a multi-layered defence system that incorporates the latest technologies such as perimeter security for datacentres, data networks, applications, and end user devices. Further details have been included in Section 1.16 of the Board Report.



Hon'ble Union Minister of Heavy Industries, Dr. Mahendra Nath Pandey, inaugurated the 'Green BHEL' initiative during a visit to the company's Corporate Office at New Delhi

Other disclosures

Information in accordance with the provisions of Section 134(3)(m) of the Companies Act, 2013 read with Companies (Accounts) Rules, 2014 regarding conservation of energy, technology absorption and foreign exchange earnings and outgo is given at **Annexure-VII to the Board's Report**.

As per provisions of section 197 of the Companies Act, 2013 read with the Rule 5 of the Companies (Appointment and Remuneration of Managerial Personnel) Rules, 2014, every listed company is required to disclose the details of the remuneration of the Directors etc. in the Board report. However, as per Notification No. GSR 463(E) dated June 5, 2015 issued by the Ministry of Corporate Affairs, Government Companies are exempted from complying with provisions of section 197 of the Companies Act, 2013. BHEL being a Government Company, such particulars are not included as part of Board's Report.

Statement pursuant to Section 129 of the Companies Act, 2013 (Form AOC-1) relating to subsidiary companies & joint ventures and Form AOC-2 pursuant to section 134(3)(h) of the Companies Act read with Rule 8(2) of the Companies (Accounts) Rules, 2014 is given at **Annexure-IX to the Board's Report**.

Auditors

The Statutory Auditors of your Company are appointed by the Comptroller and Auditor General of India. Three firms of statutory auditors were appointed as joint statutory auditors and four firms were appointed as branch auditors. The names of audit firms appointed for FY 2022-23 are given separately in the Annual Report.

Auditors' Report on the Accounts

The Auditors' Report on Standalone and Consolidated Financial Statements for FY 2022-23 of the Company are given at **Annexure- X** to the Board's Report. There is no qualification in the Auditors report on the Financial Statements of the Company. The Supplementary Audit report under section 143(6) read with section 129(4) of the Companies Act, 2013 issued by the Comptroller & Auditor General of India also forms part of Annexure-X.

Secretarial Audit

In terms of section 204(1) of the Companies Act, 2013, the Company engaged M/s Agarwal S. & Associates, Company Secretaries in whole-time practice, as Secretarial Auditors for conducting Secretarial Audit for FY 2022-23 and their report forms part of Corporate Governance section.

Secretarial Auditor in their Audit Report have observed non-compliance in composition of the Board of Directors as per Regulation 17 (1) (a) & (b) of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, Section 149 (4) of the Companies Act, 2013 and paras 3.1.2 & 3.1.4. of the DPE Guidelines on Corporate Governance on account of (i) resignation of one independent director on 30.05.2022, resulting in the Company not having

requisite number of independent directors on its Board and (ii) completion of tenure of two non-executive directors on 27.01.2023, resulting in the Company not having requisite number of non-executive directors on its Board.

The Management noted the observation and explained that BHEL, being a Government Company, the directors, including the independent directors are appointed by the Government of India. The Company has been in constant communication with the Government for appointment of requisite number of independent directors on its Board so as to ensure compliance with Corporate Governance norms enunciated under the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015, Companies Act, 2013 as well as the DPE Guidelines on Corporate Governance. The matter of filling up of these vacancies is under process at the end of Government.

Cost Auditors

In terms of provisions of Section 148 of the Companies Act, 2013 and as per the Companies (Cost Records and Audit) Rules, 2014 and amendments thereof, the Board, on the recommendation of the Audit Committee, approved the appointment of seven firms of Cost Accountants as Cost Auditors for auditing the cost accounts of your Company for FY 2022-23. Cost accounts and records as specified by the Central Government under sub-section (1) of section 148 of the Companies Act, 2013 have been properly maintained and complied with.

The detail of cost auditors appointed for FY 2022-23 are given separately in the Annual Report. The Cost Audit Report for FY 2021-22 has been filed under XBRL mode on September 02, 2022, well within the due date of filing and there was no qualification in the cost audit report.

Appreciation and Acknowledgements

Your Directors gratefully acknowledge with deep sense of appreciation, the co-operation and guidance received from the Government of India, particularly the Ministry of Heavy Industries in various spheres of the company's operations and strategic initiatives.

We are deeply appreciative of and thankful to various ministries and statutory authorities/ departments of the Government of India for their valuable support and continuous cooperation.

The Directors place on record their sincere appreciation towards the Company's valued customers in India and abroad for their co-operation in addressing various issues faced in complex long gestation construction contracts.

The Directors also express their gratitude to the Comptroller and Auditor General of India, professional bodies, Statutory Auditors, Branch Auditors, Secretarial Auditor and Cost Auditors for their constructive suggestions and continuous cooperation.

The Directors place on record their sincere appreciation towards the company's esteemed shareholders for the support and confidence reposed by them in the management



of the company and look forward to the continuance of in future.

The Directors also wish to place on record their appreciation for the continued cooperation received from all the technology collaborators, suppliers and contractors. The support provided by the financial institutions, bankers and stock exchanges are also acknowledged and appreciated.

Last but not the least, your Directors wish to place on record their sincere appreciation for the diligent efforts, hard work and commitment put in by all BHEL employees, who have worked day and night, to meet the company's commitments.

For and on behalf of the Board of Directors of
BHARAT HEAVY ELECTRICALS LTD.

Dr. Nalin Shinghal
Chairman & Managing Director

Place: New Delhi

Date: July 28, 2023

Annexure-I to the Board's Report Management Discussion and Analysis

1.1 Economic & Business Overview

During FY 2022-23, India was one of the fastest growing economies amidst a slowing global economy. Inflationary trends, both globally and in India, caused central banks to raise policy rates which had some impact on businesses during the period.

In line with India's economic growth of 7.2% in FY 2022-23, demand for energy increased during the year and electricity generation increased by 8.9%. Considering India's Updated Nationally Determined Contribution as well as need for ensuring energy security & affordability through base load generation, CEA's NEP is projecting approx. 254 to 263 GW coal based installed capacity by 2032. This translates to a requirement for cumulative new ordering for coal based power plants of approx. 15-20 GW in next 4-5 years. Moreover, energy security concerns due to adverse geopolitical scenario, rising power demand and intermittency of renewable power sources are making growth in thermal power an imperative for the country.

BHEL re-asserted its leadership position in the thermal power market by winning the order for 2x660 MW NTPC Talcher Thermal Power Project on EPC basis during the year. Significantly, this is the first coal based thermal order placed in the country after a gap of almost three years. Further, there are a number of opportunities in hydro, nuclear, transmission and spares & services. It is expected that coal would play a major role, both as a reliable source of energy and feedstock for chemical industry. The National Coal Gasification Mission (NCGM) launched by the Hon'ble Prime Minister envisages phase-wise implementation for 100 million tonnes of Coal Gasification by 2030. The coal gasification process produces synthetic gas (syngas) which finds its application as a feedstock to production of chemicals like ammonia, methanol, ammonium nitrate, di-methyl-ether etc., which are otherwise imported or produced from imported Natural Gas. Besides this, synthetic gas, can also be used in the production of electricity using IGCC technology. The NCGM is expected to contribute to the AatmaNirbhar Bharat initiative in a major way. This creates enormous opportunities for BHEL for commercialization of its indigenously developed Pressurized Fluidized Bed Gasification (PFBG) technology for generating syngas from high-ash Indian coal. Core sectors of the economy like steel, refineries, cement are upbeat about their expansionary plans, riding on robust economic growth, and receding threat of pandemic. This revival is translating into demand for capital goods. BHEL, as an engineering major, is exploring business in these areas through indigenization of various imported equipment and has already achieved initial successes in indigenously developed equipment for steel & oil sectors.

Indian Railways is taking a number of initiatives to upgrade, modernize and decarbonize railway operations. Both freight and passenger segments are attracting sizable investments

that include electric locomotive for freight, semi high-speed trainsets of different configuration for passenger etc. This is a major target segment for BHEL, for the future.

India has launched the "National Hydrogen Mission" to make it a Global Hub for production, utilization and export of Green Hydrogen and its derivatives. The mission envisages creation of export opportunities for Green Hydrogen, decarbonisation of industry, mobility and energy sectors, reduction in dependence on imported hydrocarbons, development of indigenous manufacturing capabilities, and development of cutting-edge technologies. Under the mission, India's Green Hydrogen production capacity is targeted to reach at least 5 MMT per annum by 2030. This opens up a number of opportunities in the green hydrogen value chain, including electrolyzers and other equipment (like storage cylinders, etc.). BHEL has taken-up work on setting-up of a Centre of Excellence for Electrolysers, Type-IV Hydrogen storage cylinders and National testing facility for Type-IV Hydrogen storage cylinders, paving the way for future scalable businesses in this area.

1.2 Opportunities & Threats

The pick-up in investments post COVID, rejuvenation of thermal power sector, capacity expansion plans in core sectors of economy, and "AatmaNirbhar Bharat Abhiyaan" have resulted in Indian markets bustling with new opportunities. Besides upcoming significant opportunities in thermal, hydro and nuclear segments, transmission area is also expected to offer multiple opportunities in view of the increasing renewable energy generation from remote areas. Spares and Services business is also providing steady and sizable opportunities. In rail transportation, the extensive upgradation program is opening up new business opportunities. Modernisation and indigenisation of Indian armed forces have assumed strategic importance in light of geopolitical tensions, and offer not only significant business opportunities but also opportunity to directly contribute towards safety and security of the nation. Coal to chemicals and hydrogen economy are the upcoming areas, which are expected to bring substantial self-reliance to the nation and bolster business opportunities.

The impact of ongoing geopolitical tensions as well as inflationary trends have adversely affected the pace of global economic growth. The resultant impact on addition of new global capacities weighs heavily on the international business opportunities. Prolonging of current geo political tension, and its cascading effect to new geographies and markets may also have severe impact on supply chains, thereby hurting profitability due to increased input material costs and underutilisation of capacities.

Your company is keeping a watch on both opportunities and threats, and accordingly preparing itself to encash opportunities, and thwart threats by taking proactive measures.

Your company has also prepared a Strategic Plan 2022-27 and a number of initiatives have been taken to address the



immediate challenges of profitability, liquidity, quality, and delayed project execution, etc., apart from strategies for transforming BHEL into a 'Future-Ready Global Engineering Organisation' organization, diversifying into new products & services, making the company self-sufficient in technology, having a skilled and motivated workforce, etc., which are already yielding results.

1.3 Business initiatives

1.3.1 Retaining leadership in Traditional Business

While the focus on renewables will continue, however coal based power plants are expected to remain the mainstay of India's power generating capacity in the coming years, in view of their suitability for continuous & round-the-clock operation, availability of technology and the large domestic reserves of coal. In order to meet the demand for power in the future, especially the baseload of the grid, coal based high-efficiency supercritical power plants are expected to play a crucial role. Though the ordering levels in the thermal sector have remained muted in recent years (with nil ordering for almost three years between Aug'19 to Sep'22), the segment is now seeing revival of orders and good order pipeline of coal-based power plants which are expected to fructify in the near future. BHEL continues to assert leadership in this core business areas and is well placed to capitalize on the opportunities arising in thermal segment. Offering cost competitive solutions as well as improved efficiency parameters resulted in BHEL winning the order for 2x660 MW NTPC Talcher Thermal Power Plant and it is also favorably placed in another major tender for an upcoming thermal power plant.

BHEL's focus on hydro power segment has resulted in a good order booking in the segment. The company has continued its dominance in hydro segment by enhancing customer base and winning key orders for Electro Mechanical works, Renovation, Modernization & Upgradation in FY 2022-23.

BHEL is now looking forward to capitalize on the opportunities arising in thermal sector by offering Advanced Ultra Supercritical (AUSC) technology having best-in-class efficiency, lower rating supercritical plants and indigenously developed clean coal technologies; such as coal gasification.

BHEL is further expanding its Spares & Services business by leveraging its vast existing fleet of thermal, hydro, nuclear and captive sets as well as offering spares & services for non-BHEL sets. Considering BHEL's superior equipment performance and the concerted efforts made during the year, the company achieved highest-ever order booking in FY 2022-23. Long term spares supply as well as service agreements have been signed with a number of customers ensuring quick availability of spares and services to customers. Further, in order to improve delivery cycle and enhance customer satisfaction, BHEL has undertaken an initiative of stocking raw material of fast consuming spares. Your company is also offering a range of IT enabled solutions in this segment.

Flexible operation of thermal power plants is expected to be a key requirement to ensure grid stability in the face of

large scale integration of renewables. To capitalize on this upcoming opportunity, BHEL is offering customized solutions for flexible operation of coal based thermal power plants. With concerted efforts, BHEL has successfully demonstrated its capability for offering flexible operation solution by completing its first order in this area and successful demonstration of performance parameters. Further, four more orders have been received during FY 2022-23. Further, CEA has issued guidelines for implementing Flexibilization in existing thermal sets, which is likely to generate further business in this domain.

1.3.2 Diversification Initiatives

Building and maintaining profitable growth is a key focus area for the company and for this, the company is working towards maintaining leadership in the core business, and diversifying by harnessing opportunities emerging out of Government's focus on infrastructure development and indigenization. Giving top priority to strengthen technology base in existing and new areas, your company is exploring and pursuing range of opportunities in Clean Coal, Transportation, Defence and Aerospace segments.

Concerted efforts over the past year resulted in BHEL receiving the prestigious order in April 2023, for supply of 80 trainsets of "Vande Bharat Express", in manufacturing cum maintenance mode, marking success of a major diversification initiative in the Railway segment. BHEL is gearing up to address the upcoming opportunities in rail transportation, especially the upcoming requirements of semi high speed trainsets as well as higher rating electric locomotives.

Considering the current geopolitical situation and consequent Govt's impetus on indigenisation in Defence Sector, BHEL, with its wide range of design, engineering & manufacturing capabilities, is well placed to play an important role in indigenization of critical national defence requirements. Strong focus on defence and aerospace business in the recent years resulted in the highest order booking for the segment in FY 2022-23. This includes orders for upgraded SRGM, heat exchangers for fighter aircraft and maiden order for 30 Ah Li-ion battery for AMCA (Advanced Medium Combat Aircraft) making BHEL the sole Indian supplier of Li-ion batteries for next generation aircraft, amongst others.

In addition, Coal Gasification and Green Hydrogen are seen as emerging growth areas. BHEL is a pioneer in coal gasification and has already indigenously developed Pressurized Fluidized Bed Gasification (PFBG) technology for gasification of high-ash Indian coals. BHEL has established a 168 TPD Coal gasification plant based on its PFBG technology and another 0.25 TPD Coal to Methanol pilot plant at Hyderabad. To commercialize this technology BHEL has indigenously done the design for upscaling the 0.25 TPD to over 2000 TPD gasifier, which is a unique achievement. The design of the upgraded PFBG gasifiers for high ash Indian coal has been further optimized and got validated by national & international experts, thereby ensuring BHEL's technical readiness for commercialisation of this technology. BHEL has also signed MoUs with Coal India Limited (CIL) and NLC

India Limited (NLCIL) for commercial size coal gasification projects with an aim to set up a coal to ammonium nitrate project with CIL and a lignite-based gasification pilot plant with NLCIL for power generation in line with National Coal Gasification Mission.

Further, Green Hydrogen is seen as a sunshine sector for coming times and is a promising business opportunity for BHEL. In line with National Green Hydrogen Mission, BHEL is gearing-up and exploring areas like electrolyser manufacturing, storage and distribution, fuel cell, etc., in the green hydrogen value chain. Efforts are being made to set up a Centre of Excellence in this area as well as to enter into strategic partnerships with global OEMs to leverage upcoming opportunities in this sector.

Implementation of cross cutting enablers for harnessing these adjacent business areas, include resource augmentation, enabling organization structure, forging partnerships, and technology development.

1.4 Operational excellence

1.4.1 Revamping Project Execution

Your company's change in operational ideology from being "Revenue Centric" to "Project Centric" has led to successful resolution of performance issues, substantially arresting project delays, reduction in damages & rework for material/ equipment lying at sites for long periods and improving quality of material/ equipment available for Erection & Commissioning. As a result of this, liquidation of current year billing stays strong at 86%, similar to FY 2021-22 (up from 59% four years ago). Successful implementation of Integrated Project Management System (IPMS) coupled with ongoing work on Site Data Digitization (SDD) has enabled real time monitoring of project progress as well as quick intervention in case of issues. These efforts reflect in the company's achievements of doubling its erection tonnage at project sites over the past three years, as well as higher project closures and lower number of outstanding punch points, despite decline in thermal ordering by utilities (thermal currently accounts for over 75% of BHEL's turnover).

1.4.2 Cost optimisation

In view of the rising material content, cost optimisation remains a thrust area in the company's operation with Cost Optimisation Cell (COC) as focal point. As part of the Strategic Plan 2022-27, Design to Cost (DTC) exercise has been initiated for selected products/ systems, which is expected to improve BHEL's competitiveness in the coming years.

Analysis of high value purchase orders, reduction in steel procurement cost, increase in vendor base of high value items, rationalisation and standardisation of material specification, effective utilization of surplus material at Units and project sites, focus on indigenisation of components are the major activities which have contained input price increases despite major price increases in steel, copper, cement, etc. These are expected to yield reduction in direct material costs in ongoing projects.

1.4.3 Receivable management

Maintaining liquidity continues to be a top priority for the company. Concerted efforts on quality billing and resolution of long standing issues with customers have resulted in containing Trade Receivables at ₹6,544 Crore in FY 2022-23. However, some major projects under execution by the Company have skewed payment terms in the form of supply payments partly linked to achievement of intermediary milestones and increased proportion of payments linked to completion activities etc., which have resulted in an increase in contract assets.

Despite these constraints, the Company has been making all out efforts to liquidate the old as well as current year outstanding receivables in a timely manner. The outcome of these efforts has resulted in increase in percentage liquidation of Current Year billing to 86% from 59% over the past four years.

Focus on realizing old debts through closure of punch points, completion of performance guarantee tests and settlement of long pending time extension cases is enabling cash flow from commissioned projects.

1.4.4 Quality focus

The "Quality First" initiative, launched earlier, has been implemented in mission mode throughout the organization, yielding remarkable results. To enhance the maturity of our Quality systems, a comprehensive "Quality Management Effectiveness Review (QMER)" model is used for maturity assessment of units. Additionally, Business Excellence Journey has been revitalized in alignment with the European Foundation for Quality Management (EFQM) 2020 framework. To gauge the effectiveness of Quality Systems and Practices, a comprehensive model "QHI (Quality Health Index)" is being implemented. Furthermore, Quality Systems are digitalized to enable Digital Transformation, and Quality Best Practices are shared & absorbed through Quality conversation "Qconverse" platform.

These concerted efforts resulted in BHEL being awarded the CII-EXIM Bank's first-ever 'Special Jury Commendation for Adoption and Nurturance of Business Excellence', underscoring our dedication to fostering and embracing excellence in all aspects of our operations. Additionally, BHEL units HPBP Trichy, HEEP Haridwar, HEP Bhopal, and HPEP Hyderabad have received the prestigious "Platinum" recognition while PEM Noida, EDN Bengaluru, BAP Ranipet and PSNR Noida bagged "Gold Plus" recognition in "CII EXIM Bank award for Business Excellence 2022".

Further details are included in Section 1.11.

1.4.5 Digital Transformation

Recognizing the evolving business landscape, your company has undertaken digital transformation as a key focus area and is integrating digital technologies across its operations. The transformation is leading to streamlined processes, enhanced efficiency and improved customer experience. By leveraging digital solutions, BHEL continues to innovate and adapt to

changing market dynamics, and drive sustainable growth in the digital era.

With the objective of implementing IT enabled Project Management, Integrated Project Management System (IPMS), was initially implemented for 7 nos. thermal sector projects. During FY 2022-23, it has been scaled to cover all new & major customer projects achieving system stability and maturity. With a view to improve real-time monitoring of site related activities with single point capture of data, your company has started implementing the Site Data Digitization initiative. This would enhance productivity and efficiency by reducing data errors and provide comprehensive insights for better decision-making. Also, your company is migrating from traditional MIR based analytics to Self Service Business Intelligence (BI) & Data Analytics backed by Data Warehouse and Data Governance. The skillsets of workforce to use contemporary IT technologies are continuously upgraded for quick adoption and scaling.

Your company has made significant progress in implementation of in-house developed Industry 4.0 solution for machines across manufacturing divisions. The solution allows for collection of real-time data and analyses the same, resulting in reduced downtime and increased productivity of CNC machines. This proprietary solution has market competing features which has been extensively tested and scaled for 70 nos. of machines, across the organization. This flagship solution has been appreciated in several industrial fairs including "Hannover Messe 2023" at Germany.

1.5 Employee Development & Engagement

BHEL acknowledges that the success of any organization is possible only with a dedicated and motivated workforce. As BHEL transitions towards becoming a Future ready Global Engineering Organization, substantial efforts have been devoted to aligning human resources and addressing concerns in order to achieve viable solutions. Another stride in enhancing employee engagement was the implementation of Unit Reach-out Programs by Corporate HR teams during FY 2022-23. These programs aimed to comprehensively comprehend employee-related issues and concerns, raise awareness of organizational goals, elucidate the rationale behind organizational changes, and actively work towards resolving expressed concerns.

Employee development is of paramount importance to BHEL. BHEL has also undertaken a review of its leadership competency model and subsequently identified development interventions, such as Management Development Programs (MDPs) at renowned institutions like IIMs, to develop potential leaders within the organization.

As part of the ongoing comprehensive overhaul of BHEL's performance management system and project management ecosystem, strategic measures have been implemented to align employee performance with role requirements, individual results, and their impact on unit-level and company-level outcomes.



New CNC Hydro Block set-up in Bhopal plant, for augmenting hydro manufacturing capacities

In response to the dynamic business environment, BHEL has implemented various initiatives, including reskilling programs for executives, supervisors, and workers, aimed at thriving amidst continuous changes. Furthermore, BHEL has strengthened internal communication channels, developed e-Modules for continuous online training to meet evolving needs, and bolstered knowledge-sharing processes.

In conclusion, BHEL remains resolute in its commitment to employee development and engagement. By prioritizing these cohesive and formal initiatives, BHEL aims to establish a robust framework that aligns with organizational objectives, fosters skill enhancement, and empowers employees to excel within the evolving business landscape.

1.6 Technology development

Govt. of India's impetus on Make in India and AatmaNirbhar Bharat is expected to offer substantial opportunities for indigenization across various businesses. Over the past few years, BHEL has been focusing on achieving technology leadership and self-sufficiency in its areas of operations, as well as for development of new technologies across its areas of business. The company's efforts for cleaner use of coal resulted in the development & establishment of indigenous coal gasification technology—first in the country—and it is now in the process of commercializing the same. This is another step for the country in *AatmaNirbharta*, to utilize its vast coal reserves for manufacturing chemicals which are currently being imported. The Advanced Ultra Supercritical (AUSC) technology developed in collaboration with NTPC and IGCAR, will further assist in reducing carbon emissions from coal fired power plants. Replacement of old and ageing power plants with AUSC sets will substantially reduce emissions during the life of the project.

BHEL is also implementing initiatives to indigenize critical components, and collaborate with academic and research institutions for joint development. Development of sucker rod

pumps, utilized by upstream oil & gas companies, which are hitherto being imported, is another example of indigenization. Various Flue Gas Desulphurization components have also been indigenized which will help save precious forex for the country. Your company has also received developmental orders for products like 15000 psi Well Head and X-MAS Tree Valves, etc.

Your company is now focusing on technology development in key growth areas; such as rail transportation, defence, aerospace, carbon capture and green hydrogen which are expected to yield positive outcomes in the future. The company is actively working on development of critical technologies including underslung propulsion for trains, high-speed locomotives, urban mobility solutions, strategic defence equipment, fuel cell technology for green power generation, PERC solar cells, electric vehicle chargers, and electrolyzers for hydrogen generation. Further details are included in Annexure VI.

1.7 Profile and Performance of Business Segment

The company has two business segments i.e. Power & Industry. These segments are driven by the three business divisions i.e. Power Sector, Industry Sector, and International Operations.

The Power segment comprises thermal, gas, hydro and nuclear power plant businesses, spares & services business apart from new businesses of coal to chemicals, emission control equipment and spares for Non-BHEL sets. BHEL has been in this business for more than five decades, having commissioned its first coal-based set in 1969.

The Industry segment caters to major equipment supplies and EPC works for a number of industries including transportation, transmission, defence, aerospace, captive power plants, process industries, renewables, downstream oil & gas, and energy storage, among others.

Profile &
Performance of
Business Segments

POWER SECTOR



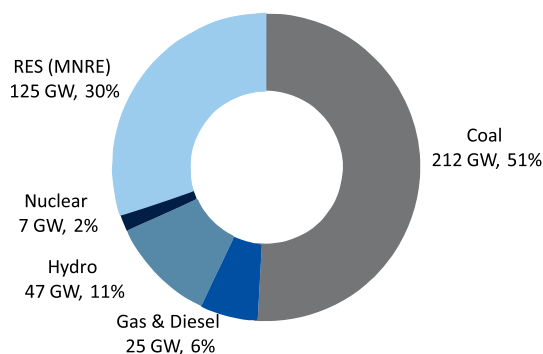
1.7.1 Power Sector

Overview

India has embarked on a strong economic growth journey, and the "AatmaNirbhar Bharat Abhiyaan" along with large scale infrastructure development will play pivotal role in creating the base for the same. The nation's energy sector growth continues to remain strongly correlated with the economic growth of the country. Accordingly, availability of reliable and quality electricity for all at affordable rates becomes vital for sustained economic growth.

India currently possesses an installed capacity base of ~416

Installed Capacity : ~416 GW



As on March 31, 2023

Source: Central Electricity Authority (CEA), Ministry of Power

GW and has an annual electricity generation of ~1,624 Billion Units (BUs) (as on 31st March 2023). Notably, the electricity generation has witnessed a growth rate of 8.9% on year-to-year basis, a trend which is expected to continue in near-to-medium term as well.

The capacity addition from Renewable Energy Sources (excl. Hydro) was ~15 GW in the year, with solar power capacity addition contributing ~13 GW to it, highlighting the marked shift in the country's electricity growth pattern.

Current Business Environment

The Power Sector is in the midst of a major transition, with growing international focus on sustainable development and climate change mitigation. India has also made major commitments towards decarbonisation in the form of the five elements for climate change mitigation, the "Panchamrit".

At the same time, there is continued focus on industrial development and infrastructure creation, with India expected to remain one of the fastest growing economies in the world. The nation is endeavoring to balance these requirements of sustainable development and climate change mitigation with those of economic development & aspirations of our 1.4 billion people.

Recent Government policies have displayed a marked shift towards Renewable Energy Sources (RES) based power. While substantial opportunities are expected to emerge in the renewables, at the same time, hydro and nuclear segments, and coal based power plants are expected to remain the



Unit 1 of 2x660 MW Maitree STPP, Bangladesh—one of the largest coal-fired power plants in Bangladesh, which commenced commercial operation, was inaugurated by Hon'ble Prime Minister of India



mainstay of India's power generating capacity in the coming years, in view of their suitability for continuous & round-the-clock operation, availability of technology and the large domestic reserves of coal. In order to meet the demand for power in the future, especially the baseload of the grid, coal based high-efficiency supercritical & ultra-supercritical power plants are expected to play a crucial role, especially till grid parity is achieved for battery energy storage systems (BESS).

The ordering in the Indian thermal sector have remained muted in recent years (with nil ordering for almost three years between Aug'19 to Sep'22), and now the country is seeing revival in the thermal segment ordering. BHEL won the EPC order for 2x660 MW NTPC Talcher TPP, and is also favorably placed in another major tender for an upcoming thermal power plant. Also, there is a good order pipeline of coal-based power plants (15-20 GW) which are expected to fructify in the next 4-5 years. Further, more than 50 GW of thermal power plants in the country will be more than 30 years old by 2030 which are expected to provide huge opportunities for Renovation & Modernization (R&M) for life extension and performance & efficiency upgradation as well as brownfield development.

As a result of the Government's focus on lower emissions from thermal power plants, opportunities are expected to continue from Emission Control Equipment business and Renovation & Modernization (R&M) Business. Thermal utilities in the country are exploring implementation of government norms for reduction in Suspended Particulate Matter (SPM), NOx & SOx in the coming years. Ordering for emission control equipment saw traction from various utilities like OPGCL, GSECL, TANGEDCO during FY 2022-23 and a number of tenders are in pipeline, both from central and state sector utilities, for retrofitting of emission control equipment in the existing power plants.

Capacity addition of RES based power generating systems also calls for enhancement of hydro-electric capacity, from both conventional (large & small hydro plants) as well as pumped storage generating stations, to meet the grid balancing and stabilization requirements necessitated by the inherent variability of RES based power systems. Around 42 GW (32%) of India's huge hydro power potential of 133 GW (CEA identified Capacity as per Reassessment Study (2017-23)) has been harnessed and 15 GW (11%) has been taken up for construction till date. Future potential of approx. 76 GW (57%) is yet to be tapped. The Hydro policy approved by GOI in Mar'19 and Guidelines to Promote development of Pump Storage Projects (PSP) issued by Ministry of Power and New & Renewable Energy are likely to give impetus to hydropower development in medium term. Further, over 30% of India's hydropower plants have completed 30 - 35 years, providing substantial potential for Renovation & Modernization (R&M) for life extension and performance & efficiency upgrades. Your company is strategically placed to address these upcoming opportunities.

Nuclear power will form an essential part of country's overall power mix as it is globally accepted as a clean fuel technology.

In India, presently Nuclear with about 7.4 GWe installed capacity, contributes about 1.6% of generation capacity and 3% of generation, and saves more than 41 million tonnes of CO₂ emissions annually, compared to the emissions that would be generated by equivalent generation from coal-based power plants. Government of India plans to triple the nuclear generation capacity which will provide multiple opportunities for your company. BHEL is strategically placed to address this market and maintains the distinction of being the sole Indian supplier for nuclear turbine and generators and is associated with all three stages of the country's nuclear power program.

Offerings

BHEL is one of the few companies in the world that manufactures & supplies equipment for the entire range of power plants, with proven capabilities for executing thermal, gas, hydro and nuclear power projects.

In thermal power segment, BHEL has the capability for concept to commissioning of thermal power plants, encompassing steam turbines, generators, boilers and associated auxiliaries up to 1,000 MW ratings. The Company has the experience of executing numerous projects with supercritical thermal sets of 660/700/800 MW ratings on EPC basis.

BHEL offers Gas Turbines and matching Generators upto 299 MW (ISO) rating, tailored to meet specific needs, for both open and combined cycle operation. BHEL also supplies and executes Circulating Fluidized Bed Combustion (CFBC) boilers for thermal plants, suitable for wide range of low-calorific fuels like pet-coke, lignite, etc. Recently, BHEL entered into a technology tie-up with Sumitomo SHI FW Energia Oy, Finland for supercritical and subcritical Circulating Fluidised Bed Combustion (CFBC) Boilers.

In nuclear power segment, BHEL is amongst the few organizations which are associated with all the three stages of nuclear power programme of the country, both on primary and secondary side (220/235/500/540/700 MWe). BHEL's Steam Generators, Turbine & Generator sets comprise a majority of the PHWRs (Pressurized Heavy Water Reactors) forming the base of Indigenous Indian nuclear power programme. BHEL offers equipment in the primary as well as secondary sides of a nuclear power plant, including Steam Generators, Reactor Headers, Turbine Generators Sets, MSRs, Heat Exchangers, Condensers etc. and 'EPC' of TG Island.

In the hydro power segment, BHEL possesses the capability for design, engineering and manufacturing of custom-made conventional hydro turbines of Kaplan types up to 100 MW, Francis and Pelton types up to 400 MW, custom-made Salient Pole Vertical Synchronous Hydro Generator up to 400 MW, Bulb Generator up to 10 MW and Horizontal Generator up to 20 MW along with matching Static Excitation System/ Brushless Excitation Systems, Reversible Pump-Turbines for Pump Storage Plants up to 250 MW, High Capacity Pumps & Motors for Lift Irrigation Schemes (LIS) up to 200 MW, Fixed Speed Generator-Motors for Pump Storage Plants up to 300 MW, Mini/ Micro and small hydro power plants up to 25 MW

rating, Butterfly, Spherical Valves and Auxiliaries for Hydro Stations, Microprocessor-based Digital Governing system for all types of Hydro Power plants, Plant Layout & Mechanical BOPs, Renovation, Modernization and uprating of Hydro power plants and Balance of Plant & System Integration.

In the emission control equipment business, BHEL offers customized equipment for controlling emissions from thermal power plants, and has the capability to provide retrofit solutions of Electro Static Precipitator (ESP), Flue Gas Desulphurization (FGD), and NOx control equipment & furnace modification solutions.

The company has proven expertise in plant performance improvement through renovation, modernization and uprating of a variety of power plant equipment, besides specialized know-how of residual life assessment, diagnostics and life extension of plants. Retrofit packages for ESP and C&I with state-of-the-art technologies are also being offered by BHEL.

With the large scale integration of renewables in the grid, flexible operation of thermal power plants is expected to be a key requirement to ensure grid stability. Recently BHEL has indigenously developed and successfully demonstrated its Flexible operation capability for coal based thermal power projects, and is now well placed to capitalize on opportunities in this domain.

Achievements during the Year

Order Booking

In FY 2022-23, BHEL has secured orders for 2,400 MW in power sector, aggregating to ₹13,353 Crore (excl. taxes), amidst intense competition and limited opportunities. This includes the highest ever order booking for ₹3,800 Crore (excl. taxes) in the Spares and Services Business.

Some of the significant orders booked in FY 2022-23 include

2x660 MW EPC order of NTPC Talcher thermal power plant, 850 MW MEIL Ratle hydropower project and 230 MW Lower Sileru hydropower project for supply of turbines, generators and other auxiliaries, in addition to prominent orders for Heat Rate (Efficiency) Improvement & Life Extension of LMZ Steam Turbines of GSECL Ukai TPS Unit#3 (200 MW) & Unit#5 (210 MW), R&M project and HMI upgradation rate-contract in NTPC projects.

BHEL has maintained its market leadership in the Indian thermal power industry by winning EPC order for 2x660 MW NTPC Talcher Thermal Power Plant (the first EPC order in the country after a span of three years). The company's efforts towards revival of slow moving orders/ orders under hold have also borne fruit with the revival of DVC Raghunathpur TG order.

In the hydro business, BHEL has garnered orders of around 1,000 MW, besides expanding customer portfolio.

BHEL has taken various steps for improving its competitiveness in the spares and services and R&M business segment, and has been able to secure its highest ever orders of over ₹3,800 Crore in this business area. These short-cycle orders will give boost to the cash flows as well as bottom line of the company, in the next couple of years. BHEL has been registered as seller in GeM, which has helped in securing orders from the portal worth ₹419 Crore, during the year (against ₹104 Crore in FY 2021-22 and ₹12 Crore in FY 2020-21).

In Spares & Services Business, BHEL has developed a number of components/ subsystems in-house and has secured maiden orders for:

- o Repair of HP Rotor and IP Rotor of non-BHEL sets
- o Expert services for checking feasibility of co-firing of biomass pellets along with coal
- o Monitoring of performance of boiler during trial co-



BHEL secured EPC order from NTPC for setting up 2x660 MW Talcher Thermal Power Project Stage-III

- firing of biomass straw based torrefied pellets
- Supply and E&C of Coal and Natural Gas Co-Firing along with Gas Leak Detection, Fire Hydrant System and other spares
- Ceramic lined Coal Nozzle Tips
- Implementation of split shaft design Generator Rotor
- Supply of E211 Trim Heater

Such orders showcase BHEL's engineering capabilities, and will be helpful in opening up newer avenues for engineering services in the future.

BHEL has also taken various initiatives for securing business opportunities through Long Term Spares Supply Agreement (LTSSAs) and Long Term Service Agreement (LTSAs) and has 25 such agreements with various customers. These agreements coupled with BHEL's initiative to stock fast moving spares through advance manufacturing actions, has enabled the company to provide shorter delivery times to customers as well as increase the overall basket of offerings thereby positively impacting the Spares & Services order book.

Project Execution

Since its inception in 1964, BHEL has supplied 463 coal based utility sets, 424 hydro utility sets, 103 gas based utility sets and 12 nuclear based utility sets in India upto FY 2022-23. Through its concerted efforts, BHEL achieved a capacity addition of 1,580 MW in FY 2022-23 in utility power projects, which is 100 % of India's total commissioning during the year for Thermal, Hydro and Nuclear Sets. In addition to capacity addition, synchronization has been achieved for projects having limited BHEL scope (viz. SG/ESP/PCP), which aggregate to 1,460 MW. Also, commercial operation for Unit#1 of the prestigious 2x660 MW Maitree Super Thermal Power Project, Bangladesh has been declared in December 2022—one of the biggest coal-fired power plants in Bangladesh. BHEL has installed the Nation's first thermal power plant fitted with Air Cooled Condenser (ACC) at NTPC North Karanpura Super Thermal Power Project Unit-1 in Jan'23, proving once again the engineering prowess of the company. This Unit with ACC has 1/3rd water footprint as compared to typical unit with Water Cooled Condenser (WCC). Additionally, BHEL successfully demonstrated the flexible-operations at 1x600 MW Adani Raigarh thermal power plant and further bagged orders for flexible operations from WBPDCL and other utilities in FY 2022-23.

In the supercritical thermal power segment, BHEL has commissioned 30 sets of supercritical Steam Generators (SGs) and 23 sets of supercritical Turbine Generators (TGs) till March 31, 2023. Achieving a major project execution milestone, BHEL dispatched its 44th Nuclear Steam Generator for Gorakhpur Atomic Power Project, thereby further consolidating its position in the Nuclear Power segment.

Recent focus on resolving long standing customer issues has started bearing fruits and a number of issues are reaching closure, which will assist in release of bank guarantees as well as payments linked to such milestones.



700 MW STPP executed by BHEL at Bellary, Karnataka for KPCL

BHEL maintained its lion's share of 55% in the country's total installed thermal capacity of utility scale power projects, along with 48% of nuclear power generation capacity (secondary side) and 44% of hydro power generation capacity in the country by end of FY 2022-23. Overall at utility scale, including thermal, nuclear and hydro segment, BHEL enjoys 53% share in total installed capacity of the country.

Performance of Equipment

During FY 2022-23, 60.6 % (716.54 BU) of the country's total generation of 1,182.05 BUs from Coal & Lignite based utility sets has been contributed by BHEL supplied sets (as against 59.4% in the previous year).

It is matter of great pride and testament of BHEL's product quality that three subcritical plants of WBPDCL, commissioned by BHEL, have been ranked within the top 5 out of 200 thermal power plants in India in terms of PLF based productivity ranking by CEA. Out of these three subcritical plants, Bakreshwar-2 (210 MW) achieved highest Plant Load Factor (PLF) of 92.38% across all sectors with Operational Availability (OA) of 99.7%.

BHEL supplied Singrauli-1 (200 MW), synchronized on 14 Feb 1982, has successfully completed 41 years of operation with average PLF of more than 87% since inception. BHEL supplied three subcritical units (200 MW) which are more than 39 years old achieved PLF of more than 95% in which Korba-3 STPS (200 MW) has achieved PLF 97.7% and OA of 98.2%. Three BHEL supplied thermal sets clocked uninterrupted operation for more than 365 days, viz., Talcher-4 TPP (466 days), Koderma-1 TPP (394 days) and Trombay-8 TPP (385 days), demonstrating remarkable performance of BHEL supplied sets.

In Nuclear Segment, BHEL supplied two nuclear sets clocked uninterrupted operation for more than 365 days in Kaiga-1 (503 days) and RAPS-3 (407 days) and six BHEL supplied Nuclear sets achieved PLF of more than 90% (Narora U#1&2, Kaiga U#2 and Kakrapar U#1&2).

Power plants with BHEL supplied equipment continue to

exhibit above par performance in respect of high OA & PLF, and low outages, and are testimonial to our robust designs and high quality standards.

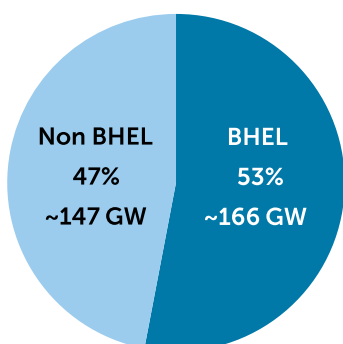
Performance Guarantee Tests:

During the year, focused efforts towards project closure have paid rich dividends to BHEL in completion of Performance Guarantee (PG) Tests & resolution of long pending issues:

- o PG tests of total 69 packages (Power Sector: 52 (incl. R&M) sets, Industry Sector: 17)
- o PG Tests for complete main plant package (Turbine, Boiler, ESP & Mills as applicable) were completed for 13 Units (including R&M).
- o Boiler & Turbine PG test of NTPC Barh Unit 5 and Boiler PG test of NPGCL Nabinagar 1 successfully completed & approved after boiler modifications

Installed Capacity - Utility*

3,13,567 MW (March 31, 2023)

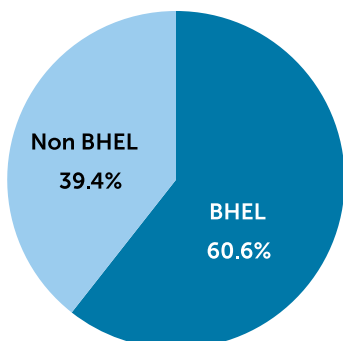


*Includes Thermal, Nuclear & Hydro; Excludes Solar, Wind and Bio-Power; Based on capacity at the time of installation

- o All main plant Pkg. PG Tests of New Neyveli U #1 & U #2 completed. Notably, these are the country's highest rated lignite fired units with once-through tower type boiler.

Generation - Utility (Coal & Lignite)

1,182.05 BU (FY 2022-23)





Korba-3 STPS (200 MW) equipped with BHEL-supplied sets achieved PLF of 97.7% and OA of 98.2%









Renovation & Modernization (R&M)

During the year, BHEL completed Renovation & Modernization of various projects for ESPs, De-NOx System (Combustion Modification), C&I Pkg, BTG R&M, Boiler Duct Replacement and implementation of Flexibilisation solution.

Acknowledgements & Recognition of Excellence

BHEL's efforts for providing higher value to customers through timely project completion, improvement in equipment performance and Service After Sales (SAS) support have been appreciated by various customers and other agencies:

Customer	Appreciated BHEL for
 NTPC and its JVs/ Subsidiaries	<ul style="list-style-type: none"> • Individual team members received appreciation for Boiler Modification Works of Unit-1 of NSTPS within stipulated time. • Successful trial operation & COD of Unit-3 boiler & ESP of NPGC (MW) • Overhauling of Unit-2 of Bongaigaon. • Early completion of maintenance works of Darlipalli 2X800 MW • Completion of Shut down work (Dismantling & Erection of service transformer and associated bus ducts) of Unit-2 of Kahalgaon FGD & ESP R&M
 TANGEDCO	<ul style="list-style-type: none"> • Successful completion of Boiler hydrotest with zero leakage at Udangudi site 2X660 MW • Successful completion of Non Drainable Hydro test and RH Hydro test along with pipe lines without any leakage in North Chennai Stage-III 1X800 MW • Rectification of defects in control valve servo motor (RHS) of Unit-2 of North Chennai Stage-II 2x600 MW

Customer	Appreciated BHEL for
 MAHAGENCO	Complete overhauling of HPT Module & Annual overhaul work of Unit-7 of Chandrapur
 CSPGCL	COH work done in U#1 DSPM Korba site
 WBPDC	Record plant load factor in subcritical units of Bakreshwar, Santaldih and Sagardighi.
 NPCIL	<ul style="list-style-type: none"> Winning Project Safety Runner-up Shield by prestigious customer on occasion of 52st National Safety Day – 2023 Successful mechanical testing along with effort and time savings for rework of erected pipes of TG piping of Kakrapara site
 UPRVUNL	<ul style="list-style-type: none"> Complete overhauling of Generator of Unit-11 of Obra site Services work at Unit-6 of Parichha TPS as well as Unit-3 of Anpara TPS
 DVC	Combustion modification (De-Nox) of Unit-6 of DVC MTPS
 NLCIL	Successful restoration at Unit-1 Neyveli site.
 Adani Power	Implementation of Flexible Operation at REGL, Raigarh (1x600 MW).

Future perspective

The expected economic growth in the coming years, aspirations of 1.4 billion people driving domestic consumption as well as government's push for manufacturing growth is expected to drive the energy demand in the near future. This coupled with requirement of energy security and affordability will drive addition of thermal based power in the near future. Your company is working to capitalise on the same through

efforts in areas like enhancing EPC capabilities, offering emission reduction solutions (FGD, SCR systems as well as AUSC technology based power plants). Increasing spares and services business including customized solutions for R&M of BHEL and non-BHEL sets, and competency building for upcoming areas like coal to chemicals and carbon capture & its utilization and sequestration technologies, are also focus areas for the company.

BHEL has taken proactive steps for increase in spares and services business through long term spares supply and service agreements with customers, coupled with advance procurement & manufacturing action for faster supply of spares, offering Flexibilisation solutions for BHEL and non-BHEL sets for dealing with grid stability issues due to fluctuations in renewable power generation, and in-house manufacture of De-NOx (SCR) systems. BHEL has already successfully executed its first commercial order for implementation of flexible operation and received further orders for the same. Further, BHEL is offering its experience in Renovation & Modernization and Life Extension of power plants to developers to improve the performance of their existing sets.

The Advanced Ultra Super Critical (AUSC) technology developed jointly by BHEL, NTPC and Indira Gandhi Centre for Atomic Research (IGCAR) has a potential to replace old and higher pollution emitting sets, with highest efficiency and lowest emissions thermal power plants. This will further aid in the country's efforts to achieve the Hon'ble Prime Minister's Panchamrit goals.

As larger rating sets become relatively inefficient at partial/ lower/ flexible loads, retirement of older thermal power plants of more than 50 GW (thermal power plants which will be more than 30 years old by 2030) and replacing them with Lower Rating Supercritical Sets is imperative, especially for the range of 110/ 120/ 200 MW /210 MW / 250 MW sets that are completing their economic life of 30 years. Considering the limited availability of land, the demand for these lower rating supercritical sets is expected to increase in future.

Considering the utilities' imperative to install emission control equipment, your company's efforts to indigenize various components in this segment, is expected to give it a competitive edge in the upcoming opportunities in this area. Your company aims to further support the country in reducing green-house emissions through its engineering services offerings for improving plant efficiencies as well as other measures including solutions for biomass co-firing.

Given India's reserves of around 300 billion tonnes of coal and the fact that international technologies are not available for high ash coals, the development of indigenous technology by BHEL for gasification of Indian high ash coal is a major step forward, and is expected to open up major business potential for conversion of coal to chemicals. This technology can also be used for greener electricity production through "Integrated Coal Gasification Combined Cycle" technology. Your company is working to capitalize opportunities in these areas in a time bound and focussed manner.

Nuclear power is likely to play an important role in catering to base loads in the coming decades. Your company continues to remain the only Indian supplier for nuclear steam turbines and generators as well as associated with the country's three stage nuclear programme. The orders received in FY 2021-22, totalling to over ₹12,000 Crore are expected to give BHEL a competitive edge during the next round of bidding for the fleet mode ordering of turbine island EPC packages. Your company is also executing works at Kudankulam 2x1000 MW Units 3&4, being setup with Russian co-operation and further working with various stakeholders to indigenize and increase its offerings in the sector. Small Modular Reactors are expected to be implemented in the medium-long term horizon and your company is working in this direction.

Hydro power will play a key role for management of peak power requirements due to the variability of renewable

energy production. BHEL with an experience of over five decades in this sector, offers customized solutions of various types and sizes of hydro turbines and generators of upto 400 MW. The company has developed efficient runner profiles and has reduced weights of hydro turbines, which is reflected in recent successes in this segment. With its own NABL accredited hydro lab for developing in-house hydro profiles, BHEL is the undisputed market leader in E&M packages for green field hydro projects and is a lead player for R&M of old hydro sets. Your company is the ideal partner of hydropower producers for achieving an efficient upgradation of turbine profiles (for BHEL as well as non-BHEL make), increasing their lifespan as well as reliability. BHEL is a leading player in large size pump-motors required in Lift Irrigation Scheme (LIS) projects.

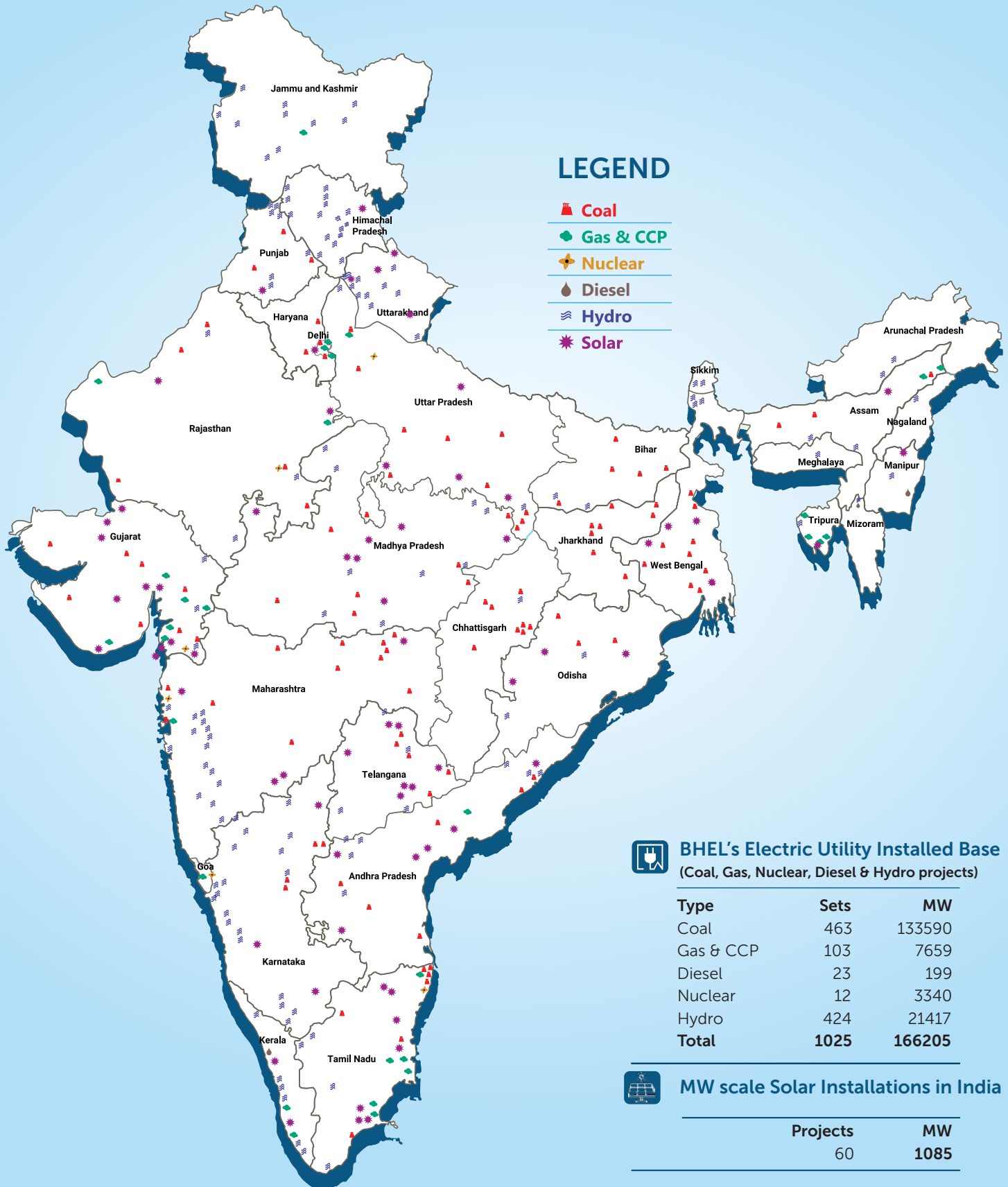


Kaleshwaram LIS, Telangana - BHEL has designed and manufactured one of the largest single-stage centrifugal pump-motor sets of the world







BHEL

Make Electric Utility Installations

Commissioned as on 31.03.2023



LEGEND

-  Coal
-  Gas & CCP
-  Nuclear
-  Diesel
-  Hydro
-  Solar



BHEL's Electric Utility Installed Base (Coal, Gas, Nuclear, Diesel & Hydro projects)

Type	Sets	MW
Coal	463	133590
Gas & CCP	103	7659
Diesel	23	199
Nuclear	12	3340
Hydro	424	21417
Total	1025	166205



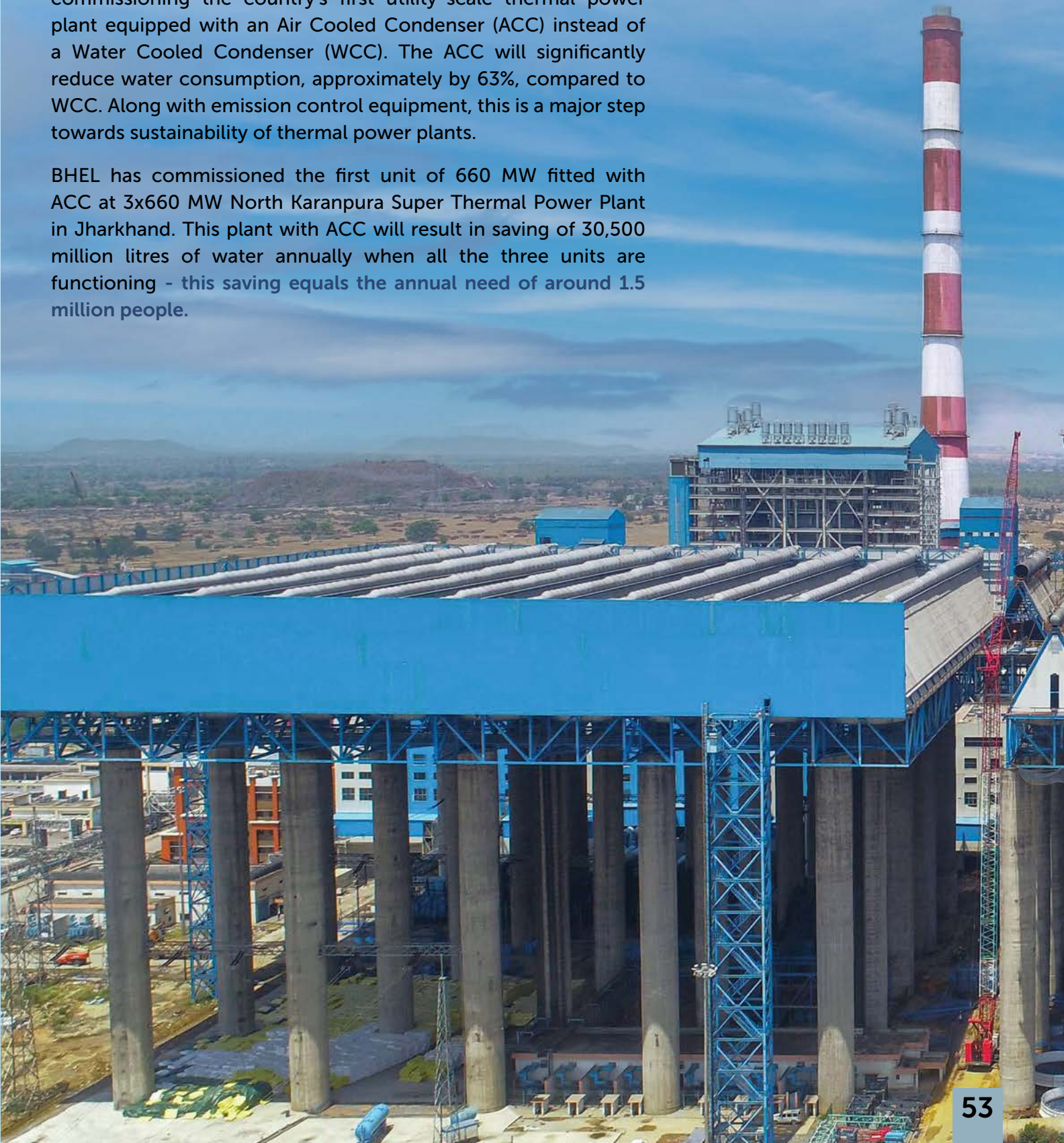
MW scale Solar Installations in India

Projects	MW
60	1085

ACHIEVING SUSTAINABILITY WITH AIR COOLED CONDENSER

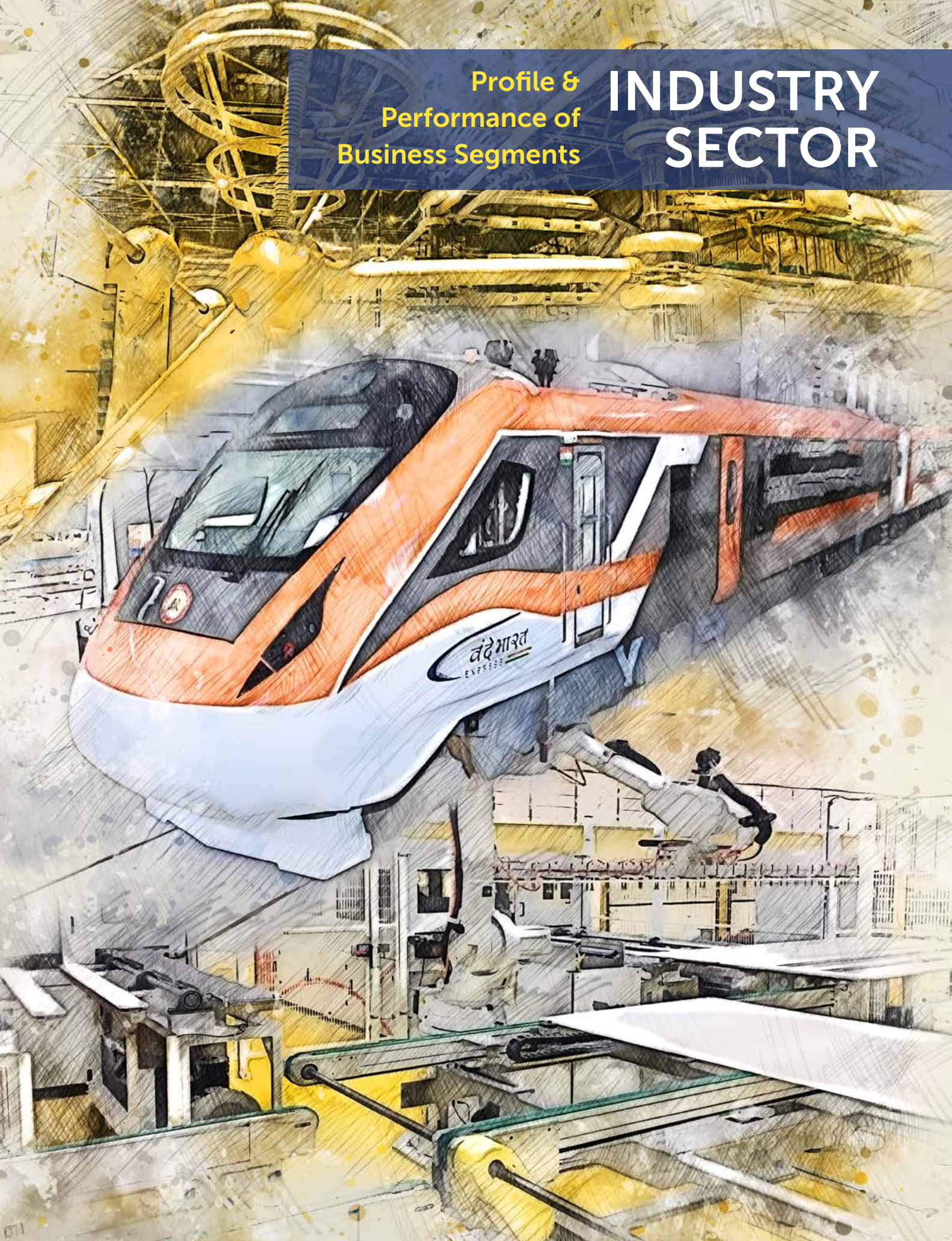
BHEL has achieved another milestone in sustainability by commissioning the country's first utility-scale thermal power plant equipped with an Air Cooled Condenser (ACC) instead of a Water Cooled Condenser (WCC). The ACC will significantly reduce water consumption, approximately by 63%, compared to WCC. Along with emission control equipment, this is a major step towards sustainability of thermal power plants.

BHEL has commissioned the first unit of 660 MW fitted with ACC at 3x660 MW North Karanpura Super Thermal Power Plant in Jharkhand. This plant with ACC will result in saving of 30,500 million litres of water annually when all the three units are functioning - this saving equals the annual need of around 1.5 million people.



Profile &
Performance of
Business Segments

INDUSTRY SECTOR



1.7.2 Industry Sector

Industry Sector offers a broad range of industrial systems and products for the major sectors of the Indian economy. Industry Sector, comprising of market-focused groups, offers comprehensive solutions for Transportation, Defence & Aerospace, Transmission, Renewables, Oil & Gas, Captive Power Plant, Industrial Products, Battery Energy Storage and e-Mobility.

During FY 2022-23, Industry Sector secured orders worth ₹9,537 Crore (excluding taxes) in a challenging business environment. This is the highest order booking by Industry Sector in last 13 years and amounts to 40% in the yearly order booking during the year. In addition, an order for manufacturing and maintenance of 80 sets of "Vande Bharat" trainsets has been secured by BHEL led consortium in April 2023, which is valued at over ₹23,000 Crore excluding taxes (BHEL share at around ₹13,500 Crore).



Hon'ble Union Minister of Heavy Industries, Dr. Mahendra Nath Pandey inspecting Indian naval vessel, INS Chennai, equipped with BHEL-manufactured SRGM

1.7.2.1 Transportation

Being a pioneer in the rail transportation sector, BHEL has played a key role in the growth journey of India's rail transportation segment for the last six decades and has been meeting Indian Railways' rolling stock requirements by offering innovative solutions and "Made in India" systems & equipment.

Govt. of India has envisaged an urgent need for modernization and generational change in India's Rail Transportation to assure better safety, improved productivity & efficiency meeting growth aspirations of the country, and thereby creating significant opportunities for the industry. As a part of this endeavour, Indian Railways is projecting major requirements in the domains of MEMU, EMU & high speed/semi-high speed trainsets, conventional & high power locos, and signaling systems over the next 10 years. In the urban mobility segment, states are pursuing mass rapid

transit projects in cities having a population of over two million and light rail/ monorail solutions are being explored for smaller cities. All these, along with metro/ metrolite announcements in around 50 cities, are expected to offer multiple opportunities in the rail transportation segment in the years to come.

BHEL views this as a major future business segment and is making all out efforts to upgrade technologies, manufacturing as well as services network and processes to meet the future needs of a modernized rail transport system.

Current range of offerings

- **Rolling Stock**
 - Electric locomotives up to 9000 HP
 - Diesel-Electric locomotives up to 3000 HP
 - Semi High Speed ("Vande Bharat") Trainset
 - Track Machines
- **Traction Machines**
 - Traction Motors
 - Traction Alternators
- **Traction Drive System & Controls**
 - Insulated-Gate Bipolar Transistor (IGBT) based Traction and Auxiliary Converter
 - Train Control Management System & Vehicle Control Unit
 - Hotel Load Converter and Composite Converter
 - Control gear equipment for conventional rolling stock
 - Regenerative braking system for conventional rolling stock
- **Traction Transformers**
 - Electric Loco Transformers
 - EMU/Trainset Transformers

Achievements during the year:

- In a major boost to the diversification efforts, BHEL led consortium got favorably placed to secure order for supply and maintenance of 80 nos. "Vande Bharat" Trainsets from Indian Railways. These trains are to be manufactured at ICF, Chennai by the consortium. BHEL has achieved this success in the face of stiff global competition from MNCs and consortium of international players. Consequently, in April 2023, BHEL led consortium secured this order worth ₹23,000 Crore (excluding taxes).
- Maiden order received for 3-Phase metro propulsion from ICF, Chennai for Kolkata Metro (re-entry into metro segment after 15 years).



WAG-9H electric locomotive for Indian Railways supplied by BHEL

- Maiden order received for 6 nos. of 700 HP Diesel Electric Shunting Locomotive with Dual Driver Cabin from JSW Vijayanagar Metallica Works. Dual cab loco eases plant operation with advantages like faster operation and better visibility thereby reducing overall process cycle time and thus improving efficiency and availability.
- Order received for 22 nos. of 6000 HP Electric Locomotives from Indian Railways.
- Supplies against 75 nos. of 6000 HP WAG-9H Electric Locomotives order of Indian Railways completed ahead of delivery schedule.
- 15 nos. MEMU/ EMUs fitted with BHEL's 3-phase propulsion electrics rolled out of RCF Kapurthala / ICF Chennai.
- Supplies of 6 nos. WAG-9 Electric Locomotives completed against order received from NTPC for material handling operation at NTPC Lara site.
- Supplied first ever WAG-7 Regenerative Locomotive to Electric Loco Shed, Jhansi.

Future perspective

Indian Railways (IR) has launched National Rail Plan (NRP) to create capacity and to increase Railways' share in freight traffic. New age rolling stock in the form of High Horse Power Electric locomotives for freight movement and Semi

High Speed "Vande Bharat" Trainsets for passenger traffic are being introduced by IR. Indian Railways has also planned to extend the "Vande Bharat" Trainset model to Urban Mobility segment as "Vande Metro".

Leveraging its design, engineering & manufacturing experience, technological competence and pan India presence, BHEL is working to develop technology self-sufficiency and strengthen in-house capability for design & manufacturing of advanced mechanical and electric systems for all types of rolling stock. Your company is also working with OEMs/ collaborators to address upcoming businesses, especially of high HP locos, Battery/ Hydrogen Fuel Powered Locomotives, High Speed Rail and Signaling (TCAS), Metro/ Metrolite, & Push-Pull locomotives.

The company aims to focus its energies on effective execution of the "Vande Bharat" Project that will reaffirm its position as one of the major rolling stock player in the country. BHEL, with its latest technological advancements and R&D efforts, is fully geared to cater to the growing needs of Indian rail transportation sector.

1.7.2.2 Transmission

As India's power grid makes transition to greener energy which is expected to constitute 50% of the power mix by 2030, the country is expected to see substantive investments in the transmission system. The complexity associated with

building a reliable transmission network increases manifold when the grid handles variable generation by solar and wind power. The recent unveiling of detailed plan of 'Transmission System for integration of over 500 GW of RE capacity by 2030' clearly affirms Gol's intent to create the required transmission infrastructure for evacuation of power from far-off RE sources to load centers.

There is an urgent need for upgradation of the existing transmission networks and addition of new Extra High Voltage (EHV) systems & associated lines. Gas Insulated Substation (GIS) projects shall continue to see robust demand due to optimized land requirements and reduced O&M expenditures. Apart from this, multiple HVDC projects are in various stages of planning for power evacuation from far-flung generation centers.

With the fast-changing market scenario and buoyant demand outlook, BHEL has its presence across the board and offers a wide spectrum of products and systems to cater for the varied need of Power Utilities. BHEL is well-poised to further enhance its presence in the emerging areas like EHV GIS Substation, Digital Substation, HVDC projects, etc.

Current range of offerings

- **Turnkey transmission solutions** including Extra High Voltage Substations (both Air Insulated Substation (AIS) & Gas Insulated Substation (GIS)) up to 765 kV and High Voltage Direct Current (HVDC) converter stations up to +/-800 kV on EPC basis
- **Power Transformers up to 1200 kV & Shunt Reactors upto 765 kV**, Capacitive Voltage Transformers (CVT) up to 1200 kV, Instrument Transformers (CT, PT) up to 400 kV, Traction Power Transformers, Dry Type Transformers, Vacuum Switchgear, Capacitor Banks, Control & Protection equipment, HVDC Converter Transformers up to 800 kV, Thyristor Valves, etc.



DC Hall of ± 800 kV, 6000 MW UHVDC link between the Western Region Grid (Raigarh, Chattisgarh) and the Southern Region Grid (Pugalur, Tamil Nadu) successfully implemented by BHEL

- **Gas Insulated Switchgear (GIS)** up to 420 kV
- **Composite Insulators for upto 765 kV application**
- **Flexible AC Transmission System (FACTS) Solution:** Fixed Series Compensation for 400 kV lines, Controlled Shunt Reactor (CSR) and Phase Shifting Transformer (PST) for controlling and balancing power flow upto 400 kV applications.

Achievements during the year

- Order for Substation package – 400/220 kV substation at Mandsaur and Chhitorgarh.
- Orders for 400 kV GIS substation, 400/220 kV GIS Substation and 400 kV AIS bays Extension
- Orders for 55 nos. of 500 MVA, 765/400 kV Transformers



765/400kV substation commissioned by BHEL at Raichur, Karnataka

- In addition, various other orders of ~ total 51 nos., 7706 MVA for 400 kV and 220 kV Transformers secured from Central/ State Transmission Utilities.
- BHEL equipment enabled record power transmission of 6,000 MW, over the ± 800 kV, 6,000 MW Ultra High Voltage Direct Current (UHVDC) link between the Western Region Grid (Raigarh, Chhattisgarh) and the Southern Region Grid (Pugalur, Tamil Nadu)

Future perspective

The power transmission segment is expected to see a considerable growth due to Power Generation targets of Govt. of India to add 500 GW of RE power by year 2030. With a greater focus on the requirement of Power evacuation and transmission network (HVAC & HVDC) matching with the growth of Power generation, a total of 2.17 Lakh MVA substation capacity is expected to be added by FY 2026-27 and total 4.33 Lakh MVA by 2030 for integration of additional wind and solar capacity. BHEL has a strong foot print in India's Transmission landscape, with capabilities in both projects as well as products, and is well placed to capitalize on the emerging opportunities.

1.7.2.3 Defence and Aerospace

Ministry of Defence (MoD) is focusing on "Make in India" under "Aatmanirbhar Bharat Abhiyan" to achieve self-reliance in Defence Sector and promoting domestic manufacturing. Defence spending and investments are expected to increase as India fast-tracks its military modernization and upgradation, especially considering the current geopolitical developments. MoD has released positive lists for indigenisation of imported Defence equipment by domestic industry in a time bound manner. This reflects the growing confidence of the Government on the capabilities of domestic industry.

Over the years, BHEL has upgraded and augmented its facilities to cover a wide spectrum of design, engineering, precision manufacturing, heavy forging, special purpose welding and advanced CNC machining activities, which are being utilized for manufacturing of Defence equipment and systems. Most of these complex, special purpose machines and equipment are one of their kind in the country and are comparable to the best available in the world. BHEL has also acquired certifications such as Approval of Firms and its Quality Management System (AFQMS), AS9100D & CEMILAC, Self-Certification of Spares under DGQA scheme etc., demonstrating the highest quality standards of the goods and services offered.

BHEL also offers state-of-the-art system design and integration, structural design, engineering analysis like Finite element, Computational Fluid Dynamics, 3D modelling, shock and vibration studies capabilities for a vast range of strategic equipment.

The company is leveraging these capabilities to meet the requirements of the defence sector and is well placed to make a significant contribution in this field.

Current range of offerings and capabilities

- Super Rapid Gun Mount (SRGM) / Upgraded SRGM, including life time product support
- IPMS (Integrated Platform Management System)
- Compact Heat Exchangers & Pump modules for aerospace applications
- Air Cycle Based Liquid Cooling System (LCS) for aerospace applications.
- Precision machining of Titanium based Propellant Tank parts for Satellites



Super Rapid Gun Mount (SRGM) being manufacture at BHEL's Haridwar plant

- Hot forming of Titanium Shell/Domes for space applications
- Space Grade Solar Panels & Batteries for Satellites
- Permanent Magnet based motors, generators and frequency Converters
- Static Bi-directional Converters
- Rotary Frequency Converters
- Rotary Main Motor Generators
- Turbo Alternators and Turbo Alternator Turbines
- Turbines, Condensers, Heat Exchangers & Valves for defence applications
- Design capabilities for a vast range of equipment for strategic requirements including heat exchangers, control systems, Turbines, Permanent Magnet Motor, Frequency Converters, Turbo Alternators, Diesel Alternators, Condensers, Pumps with Drive Turbines, etc.

Achievements during the year

- Achieved highest ever Order Booking in Defence and Aerospace segment. Major orders include Upgraded SRGM for Indian Navy & Spares for SRGM, Water Front Support, IPMS and spares for Indigenous Aircraft Carrier (IAC) for Cochin Shipyard Ltd (CSL)
- Secured first ever order for design and development of Li-ion battery for fighter aircraft. With this order, BHEL will be the sole Indian supplier of Li-ion batteries for next generation aircraft
- Secured order for design and development of Naval Alternator
- Successfully designed, manufactured, and delivered First Indigenous Rotary Main Motor Generator (RMMG)
- BHEL has successfully designed, developed and supplied Air Cycle Based Liquid Cooling System (LCS) for aerospace applications.

Future perspective

BHEL has a five-decade track record of supporting the country's defence forces which began with the indigenization of main turbines for the Leander class frigates in the 1970s. Since then, significant progress and contribution has been made by BHEL in design and development of a wide range of specialized equipment and weapon systems for Defence applications, including the SRGM for warships, wide variety of equipment for the strategic program, Heat Exchangers for Fighter Aircraft, Integrated Platform Management System for naval warships including for the INS Vikrant- Indigenous Aircraft Carrier, Missile Launchers, Pump Modules for aerospace application, Gun Control System, Antenna Control System, amongst others.

The company is now offering upgraded state-of-the-art SRGM and is also augmenting its capacities in line with the requirement of Indian Navy. BHEL has the proven expertise in permanent magnet motor technology and is fully geared up for the indigenous design and development of propulsion systems for vessel and warships. BHEL is also offering solutions in Renovation & Modernization and Life Extension services for various equipment to Indian Navy. BHEL is one of the few select firms in the world having the capability to design and manufacture compact heat exchangers and pump modules for military aircraft/ helicopters and is currently developing variety of compact heat exchangers and pump modules. The company is also working in close coordination for a diverse range of equipment and services with customers such as CASDIC, HAL, ISRO, ADA, etc. BHEL is closely working with ISRO and its centres for business enhancement in aerospace sector and efforts are being made to enhance product portfolio in Launch vehicles, Satellites/ Payloads etc.

In the current international scenario, BHEL with its wide range of design, engineering & manufacturing capabilities is well placed to play a much wider role in indigenization of critical national Defence requirement.

1.7.2.4 Captive Power & Process Plant

BHEL has been serving this business for more than four decades, and most of the metal & mining industry, process industries and petro-chemicals industry in India utilize BHEL supplied equipment for captive power generation and other processes. Historically, in India, these energy intensive industries have been relying on captive power plant for reliable power, and use of exhaust gases for power generation & process steam requirements. The present geo-political scenario has led to huge increase in energy cost for European Nations making manufacturing expensive. This scenario is expected to catalyse growth of Indian industry producing highly energy intensive commodities like Steel and Aluminium. In view of this, BHEL's wide portfolio of in-house manufactured Captive Power Generating Equipment viz. Boilers, Steam Turbines and Gas Turbines is expected to continue to be in demand.

With regard to Oil & Gas segment, BHEL is the only Indian OEM having 230 Gas Turbines successfully operating in the country. Planned capacity expansion of Indian refineries would catalyse the further demand for Gas Turbines. With the execution of the ongoing Sulphur Recovery Unit package at Paradip, Odisha, BHEL is well placed to offer process packages and solutions for the Downstream Oil & Gas Sector.

Current range of offerings

- Standalone Steam Turbine Generator (STG) sets
- Boiler Turbine Generator (BTG) package, Pulverized Fuel (PF), Circulating Fluidized Bed Combustion (CFBC), Atmospheric Fluidized Bed Combustion (AFBC), Utility Boiler(UB) /gas fired boilers
- Gas Turbine based Open, Cogeneration and Combined Cycle Captive Power Plants

- Process packages and equipment of Downstream Oil and Gas Sector (DSOG)

Achievements during the year

- Received orders for seven (07) no. STG (above 40 MW) from existing and new customers
- Technology License Agreement signed with Sumitomo SHI FW, Finland for CFBC Boilers



BHEL enters into Technology License Agreement with Sumitomo SHI FW, Finland for CFBC Boilers

Future perspective

Capex in the Infrastructure Sector in India is under significant augmentation. Further, supply disruption of steel from China and Russia-Ukraine war has led to a sudden surge in demand from domestic steel producers. At present, domestic installed capacity of steel is around 154 MT and in line with the vision to have an installed capacity of 300 MT capacity by 2030, secondary steel industries as well as integrated steel plants are likely to come up with expansion plans, which is likely to translate into demand for captive power.

In line with Gol's plan to enhance India's total oil refining capacity to 450 MMTPA by 2030, petrochemical complex, brownfield and greenfield refinery projects are expected to come up in next 5-6 years.

BHEL with its decades of experience as well as focus on diversification from non-coal areas, is fully geared to capitalize on these upcoming opportunities.

1.7.2.5 Industrial Products (including Oil & Gas and Electrical Machines)

BHEL has been serving this sector for more than five decades and most of the refineries & petro-chemicals industries in India are equipped with BHEL supplied static and rotating equipment.

Downstream Oil & Gas in India is poised for massive expansion from 249 MMTPA to 450 MMTPA by 2030. More than ₹2 lakh crore of investment has been announced in downstream oil & gas segment for implementation in the

next 4-5 years. Expansion projects by several refiners and petrochem customers are also in pipeline.

Business opportunities for Industrial Products such as centrifugal compressors, fired heaters, heat exchangers, valves, high tonnage columns & vessels etc. are expected in these forthcoming projects.

Offerings

- **Oil Rigs** - A variety of on-shore drilling rigs with AC-VFD (Variable Frequency Drive) and AC-SCR (Silicon-Controlled Rectifier) technology for drilling up to depths of 9,000 meters (3000 HP), work-over rigs for servicing up to depths of 6,100 meters (650 HP).
- **Valves** - Well heads and X-mas Trees up to 15,000 psi, Mud Line Suspension System, Choke and Kill manifold, Coalbed methane (CBM) Wellheads, DSPM H- Manifold Assembly, Mud valves, Gate Valve, Globe Valves etc.
- **Centrifugal Compressors** - Multi-stage Centrifugal Compressors as per API 617 Chapter- 1 & 2 up to 3,00,000 m³/hr. for application in Fertilizers, Refineries,



Conventional X-Mas Tree Valve manufactured by BHEL

Petro-chemicals, Pipelines, Gas processing, Steel industries etc.

- **Mechanical Packages** - Fired Heaters, Columns, Reactors, Pressure Vessels, Heat Exchangers and Purge Gas Recovery Units.
- **Electrical Machines**- AC squirrel cage, slip ring, synchronous motors for safe and hazardous area applications, variable speed motors, industrial alternators, special purpose machines and LT VFD.

Achievements during the year

- Orders for 9 nos. Centrifugal Compressors received including largest Heat Pump Compressor Order from IOCL Panipat and largest VFD fed Motor driven Compressor from GAIL
- Order for largest heat duty (26.88 MMKcal/Hr) Fired Heater from GAIL
- Achieved highest ever order booking for legacy products of HPVP Vizag since BHEL's taking over the plant in 2013
- In line with India's "AatmaNirbhar Bharat Mission", BHEL took the onus of developing three models of Sucker Rod Pumps—an artificial oil gathering lift system used by upstream oil & gas companies for ageing wells—which were hitherto imported. The company has successfully completed the field trial and is now fully capable to supply indigenously developed sucker rod pumps.

Future perspective

The future in this business domain looks promising for BHEL with its product and system offerings in various sectors viz. Oil & Gas (Downstream & Upstream), Steel, Fertilizers and Petrochemicals.

BHEL has also taken several measures for indigenisation of items under "Aatmanirbhar Bharat Mission" of GoI which will help increase its offerings. The market for BHEL developed products like Surface Unit of Sucker Rod Pump (SRP), 15000 Psi Wellheads, X-Mas Tree valves, 5000 Psi Mud Pumps and 1150 HP AC Motor for Oil Rig Applications is likely to increase in line with the capex being done in upstream oil & gas sector.

In Steel Sector, BHEL has started manufacturing BOF Converters for Steel making and is ready to offer Axial Blowers & Top Recovery Turbines.

1.7.2.6 New Business Areas and Energy Storage Solutions Electric Mobility

Under the National Electric Mobility Mission Plan (NEMMP), Ministry of Heavy Industries (MHI) launched Faster Adoption and Manufacturing of Electric and Hybrid Vehicles (FAME) scheme in India. After the success of FAME-I scheme, MHI notified FAME-II scheme which has now been extended to March 31, 2024.

The 4W-EV penetration is expected to increase and will necessarily require a pan India network for EV chargers which your company is well placed to address with its own design,

engineering and manufacturing capabilities. MHI under FAME-II scheme is sanctioning EV Charging Stations for cities across States/UTs and along Expressways/ Highways. Further Oil PSUs like BPCL/ HPCL/ IOCL have plans to setup 22,000 EV charging stations at their retail outlets. MHI have allocated 7,432 Public Fast EV Charging Stations to Oil PSU's (IOCL, BPCL & HPCL) with total grant of ₹800 Crore under FAME-II scheme.

Offerings

- Supply of EV Chargers (with/ without solar charging facility) and associated electrical system
- EPC solution for setting up of EV Charging Stations with upstream electrical system

Achievements during the year

- Order for supply, I&C for 70 Nos 50 kW EV chargers from BPCL. This is the first time BHEL make EV charger shall be supplied.
- Prototype for in-house developed 50 kW DC fast EV charger has been accepted by BPCL.

Future perspective

With its commitment to the nation's e-Mobility mission, BHEL has taken up several in-house development initiatives. With successful development and certification of 122 kW charger and certification of 50 kW charger being taken up, BHEL is geared up to address the requirements of EV charging stations by offering EPC solutions in the segment. Also, initiatives to develop and manufacture other ratings of EV chargers are being undertaken.

Battery Energy Storage Systems (BESS)

In the Union Budget in February 2023, GoI has announced viability gap funding for projects of 4000 MWh of BESS capacity. Further, Production Linked Incentive (PLI) scheme on Stationary Storage Battery Cells (SSBC) for grid application is expected in due course of time.

Offerings

- Complete EPC solutions for BESS

Future perspective

BHEL is actively pursuing Battery Energy Storage business opportunities in EPC Mode.

Medical Oxygen Generation Plants

BHEL has manufactured and supplied 16 nos. of Pressure Vacuum Swing adsorption (PVSA) based Oxygen Generation Plants (500 LPM & 1000 LPM) based on CSIR technology. Majority of customers are from healthcare industry.

1.7.2.7 Renewable Energy

India's recently updated NDC (Nationally Determined Contribution) suggests for about 50% cumulative electric

power installed capacity from non-fossil fuel-based energy resources by 2030. The majority of this is expected to be solar capacities.

Current range of offerings

- EPC solutions from concept to commissioning of Solar PV Power Plants, with or without BESS (Battery Energy Storage System)
- Ground mounted, Roof top, Canal top and Floating solar power plants
- Solar Inverters for utility as well as Railway traction applications
- Loose Multi Crystalline Solar PV Cells meeting Domestic Content Requirement (DCR)
- Mono-PERC Solar PV Modules (up to 400 Wp)

Achievements during the year

- With the successful commissioning of total 152 MW of Floating Solar Plants, BHEL has emerged as the leading player in Floating Solar segment in India.
- Hon'ble Prime Minister of India dedicated NTPC Ramagundam, Telangana (100 MW), the largest floating solar power plant in the country and NTPC Kayamkulam (22 MW) to the nation in July 2022.
- BHEL commissioned and synchronized 95 MW of Solar capacity in the FY 2022-23.

- BHEL received the prestigious Award in the category 'Leading EPC - Solar' at 6th edition of Renewable Energy India Awards for its 100 MW Floating Solar PV Plant at Ramagundam, Telangana
- BHEL's designed and developed 1.7 MW Solar project at Bina, M.P. for Indian Railways has received the UIC International Sustainable Railway Award 2022 under the category of 'Best use of Zero Carbon Technology'. The plant is first of its kind in the world as it feeds solar power directly to Railway Traction System.

Future perspective

India's recently updated NDC is expected to give impetus to expansion of solar capacities. In order to achieve the target, MNRE (Ministry of New and Renewable Energy) has issued a roadmap wherein the Government has decided to invite bids for 50 GW of RE (Renewable Energy) Capacity annually for 5 years from FY 2023-24 to FY 2027-28. As an established EPC player in domestic solar energy market with a portfolio of 1.2 GW, indigenous manufacturing assets of solar PV cells (105 MW/annum) and PV modules (226 MW/annum) and imposition of Basic Custom Duty on imported Solar PV cells & modules, BHEL is selectively addressing the upcoming opportunities.

Also, BHEL is working to capitalize on its experience and engineering & execution strength in Floating Solar Power Plants to target various opportunities in the field of Floating Solar.



100 MW Solar PV Plant at NTPC, Ramagundam, Telangana, the largest floating solar power plant in the country, commissioned by BHEL

'AATMANIRBHARTA'

Through Indigenous Technology of Coal Gasification

The process of coal gasification opens up diverse pathways for energy generation as well as high-end chemical production. BHEL has been a pioneer in gasifying high-ash Indian coals since 1985. It has led to world's first proven Pressurized Fluidized Bed Gasification (PFBG) technology for gasification of high-ash Indian coals. BHEL has further completed design and engineering of gasifier for 2,000 TPD Coal to Ammonium Nitrate commercial scale plant.

Showcasing PFBG technology, BHEL has successfully demonstrated India's first indigenously developed 0.25 TPD methanol generation

demonstration plant. The conversion of high ash Indian coal to methanol through the gasification route and utilizing an amine based process is the first of its kind technology demonstration in India. The project received funding from Department of Science and Technology with the support of NITI Aayog.

This indigenous technology fits perfectly with Hon'ble Prime Minister's vision for Coal Gasification, which is being implemented through the National Coal Gasification Mission that aims to achieve gasification of 100 Million Metric Tonnes of Coal by 2030.

Nation takes note of
**India's first indigenous
Coal to Methanol Plant,**
developed by BHEL
(A Govt. of India initiative)

**Padma Bhushan
Dr. Vijay Kumar Saraswat**
Member, NITI Aayog; Chancellor, JNU
Distinguished Scientist

Dr V K Saraswat
@DrVKSaraswat49

Extremely happy to witness India's
First Indigenously developed 0.25
TPD #Coal2Methanol Plant
producing methanol with purity
99.2% at @BHEL_India R&D
Hyderabad. The project was funded
by @IndiaDST on the initiative of
@NITIaayog. @PMOIndia
@CoalMinistry

BHEL developed Coal Gasification
facility at Hyderabad

COAL TO METHANOL CTM PILOT PLANT
INDIAN DEMONSTRATION PLANT
DESIGNED BY IITM
EXECUTION BY BHEL



Profile &
Performance of
Business Segments

INTERNATIONAL OPERATIONS



1.7.3 International Operations

Overview

BHEL has been a reliable designer, manufacturer and supplier of world class power generation, transmission, and industrial equipment across the globe. BHEL offers the flexibility to work as an EPC contractor, and also on various other business partnership models like Supply and Supervision, Supply only, Sub-Contractor, Consortium partner, Contract Manufacturer etc. Our international references span 88 countries across all the six inhabited continents. BHEL's in-house design team is well-versed with international design standards and our solutions are adaptable to the customer requirements. We have so far supplied and installed 12 GW of power-plant equipment internationally and another 5 GW is under installation.

Presently, major projects under execution in the overseas market include (2 x 660 MW) Maitree thermal power project in Bangladesh, (6 x 200 MW) Punatsangchhu-I and (6 x 170 MW) Punatsangchhu-II hydro projects in Bhutan; 8 MW Solar PV project, Mauritius; (4 x 225 MW) Arun-3 hydro project and (2 x 20) MW Rahughat hydro project in Nepal; 26 MW Calabar Gas based power project & 1.3 MW Kaduna Solar Mini grid projects in Nigeria; (2 x 200 MW) Tishreen Thermal project in Syria and a host of orders for spares & services. This includes the largest ever order for spares & services for the 125 MW Sendou Thermal Power Project, Senegal.

Though the world is towards recovery post the pandemic, the Ukraine-Russia conflict is impeding the desired recovery levels globally by disrupting supply chains. BHEL is working to capitalize on its design, engineering & manufacturing capabilities in the context of opportunities arising in this scenario. The company has also participated in the world's largest industrial fair at Hannover, Germany, after a gap of seven years and showcased its capabilities for generation of interest from international customers.

Salient achievements in overseas order booking & project execution

- Single largest ever unit commissioned overseas - BHEL has proven its engineering and manufacturing prowess by synchronization of Unit-1 for the prestigious 2 x 660 MW Maitree STPP, Bangladesh.
The project was jointly unveiled by Hon'ble Prime Minister of India Mr. Narendra Modi and Hon'ble Prime Minister of Bangladesh Ms. Sheikh Hasina.
- Rate contract with OQ Oman for the supply of Gas Turbine capital spares for a period of 5 years for BHEL supplied COGEN Power Plant.
- Order for replacement & restoration of 84 MW Generator Unit-4 of 336 MW Chukha Hydropower Plant, Bhutan.
- Orders for motors, transformers, etc., as well as 58 orders received from 16 countries for after sales support from neighboring countries, African, South East Asian, Latin American countries.
- Secured largest ever order in the overseas after sales segment from Senegal

Recognition

BHEL efforts as an exporter have been appreciated and it has been awarded the 9th Governance Now PSU award in the field of "Increase in Geo-Strategic Reach".

Future perspective

Globally, conventional energy sector is dealing with energy transition and funding issues. The rising debt level of developing/ African countries, limit the ability of fiscal policymakers to respond to new challenges. The ongoing geo-political tensions, impact on major European economies due to Ukraine-Russia war, continued disruption in supply chains are hampering smooth recovery of the world economy, post the pandemic impact in last two years.

BHEL is focusing on leveraging its world-class design, engineering and manufacturing capabilities for supplying wide range of customized products & turnkey solutions, especially in the energy, oil & gas sectors as well as positioning itself as a viable alternative to the traditional manufacturing destinations. Our focus on neighbouring, Middle East & African countries has enabled BHEL to be favourably placed in some of the upcoming projects. Amidst the slowdown in global capex, your company is also focusing on the opportunities for spares arising from the life extension of existing capacities. The geopolitical situation has created multiple opportunities for supplies emerging from European and Russian states. Such geography specific strategies have enabled BHEL to increase its international business which is further likely to increase multi-fold in the coming years. In nutshell, BHEL has adopted three pronged approach to boost its export business;

1. Export of Products like motors, generators, transformers etc;
2. Increase presence in existing territories like neighbouring countries, Africa, Middle East;
3. Enhance geographical reach into markets like Europe & Latin America.



336 Megawatt (MW) Chukha Hydro Electric Project (HEP) in Bhutan commissioned by BHEL

BHEL Global Footprints



with presence in 
88 countries
 in all six inhabited continents

This graphical representation does not purport to be the physical map of the world

1.8 Comprehensive Analysis of Financial Performance

1.8.1 BHEL Standalone

A. Financial Results

1. Total Income

(₹ Crore)

Particulars	2022-23	2021-22
Revenue from contract with customers	22136	20153
Other operational Income	1229	1058
Other Income	515	368
Total Income	23880	21579

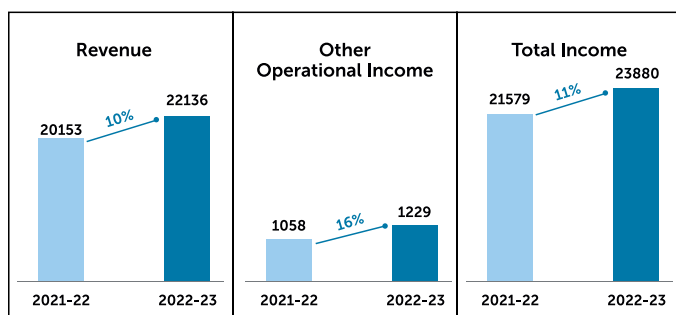
Total income in FY 2022-23 has increased by about 11% as compared to previous financial year. Item wise explanation for each element of total income is given below:

1.1. Revenue from contracts with customers

(₹ Crore)

Particulars	2022-23	2021-22
Revenue from construction and project related activity	16083	14107
Sale of Product & Other Services	6053	6046
Total Revenue from contract with customers (as per Ind AS 115)	22136	20153

The overall growth in Revenue in the FY 2022-23 is about



10% as compared to previous year, with Revenue of ₹22,136 Crore vis-à-vis ₹20,153 Crore for the previous year. The Company continued its focus on project execution, with revenue from construction & project related activity up by 14% over the previous year. These achievements are on the back of the company's efforts to change its ideology towards 'Project Centric' operations.

Also, the growth in topline has been achieved despite several impediments like abnormal volatility in price of the

commodities impacting timely availability of input materials and cost of procurements. The Global supply chain constraints (like local lockdowns and port congestion at Shanghai port-China) affected timely availability of critical raw material for shop production. Further, the shortage of semiconductors hindered the manufacturing of propulsion systems for Indian Railways during the year.

While the slowdown in the global economy and the geopolitical disturbances have had some impact on business in the recent past, the expected large investments in the infrastructure sector will provide major growth opportunities for the company. Demand for new thermal power plants has picked up with new tenders on the anvil. Similarly, the company has been focussing on improving order booking in spares and services business, which resulted in BHEL booking its highest ever orders of over ₹3,800 Crore in this area. Such short-duration orders are also likely to assist in improving the bottom line of the company in the short to medium term.

1.2. Other operational income

(₹ Crore)

Particulars	2022-23	2021-22
Other operational income	1229	1058

The Company has achieved its highest level of other operational income of ₹1,229 Crore during the year.

1.3. Other income

(₹ Crore)

Particulars	2022-23	2021-22
Interest income	421	303
Dividend on investment in joint venture – BGGTS	26	30
Profit on sale of units of Mutual Fund / items of PPE, Govt. grants & others	68	35
Total	515	368

The major component of Other Income during FY 2022-23 has been interest income, which has been bolstered by income tax refunds of earlier years, amounting to ₹106 Crore. Treasury income during FY 2022-23 has also been higher as compared to FY 2021-22, due to higher rate of Interest on Fixed Deposits & other investments as compared to previous year.

Further, with the completion of disinvestment of NINL to Tata Steel Long Products Ltd., BHEL has made a gain of more than ₹25 Cr (original investment of ₹5 Cr made in 1998 was valued at NIL).

2. Expenses

2.1. Material consumption, erection and engineering expenses

(₹ Crore)

Particulars	2022-23	2021-22
Cost of Raw Materials consumed	5875	5062
Purchases of Bought Out Items	4658	4142
Civil, erection & engineering expenses	5421	4793
Sub total	15954	13997
(Accretion)/Decretion in inventories of finished goods, work in progress and scrap	(57)	525
Total	15897	14522
Material cost % of revenue	72%	72%

Metal prices in the past year have seen some corrections, but are still at elevated levels. The continuing disturbances on the Global front have been further impacting the prices of various commodities. Additional cost was incurred due to breaks/ deadlocks arising out of COVID related lockdowns which has also impacted the bottom-line of the company.

Over the past couple of years, the company has been focusing on multiple endeavours like cost optimizations in design, indigenization etc., and is also focusing on orders in areas having higher gross margins. This has helped the company maintain the material cost at 72%, which is equivalent to last year.

2.2. Employee benefits expenses

(₹ Crore)

Particulars	2022-23	2021-22
Employee benefits expenses	5701	5517
No. of Employees	29536	30758

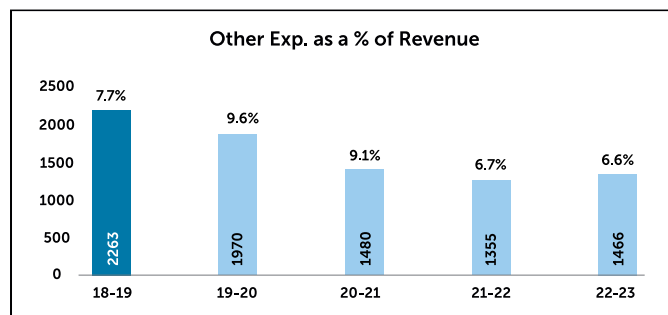
The overall employee benefit expenses are only marginally higher (up 3%) from the previous year due to higher DA rates/ HRA etc. However, there is strict control on the variable expenses. Further, there has also been reduction in manpower by ~4% at the end of FY 2022-23 as compared to the FY 2021-22.

2.3. Other expenses

(₹ Crore)

Particulars	2022-23	2021-22
a) Other expenses of Mfg., Admn., Selling & Distribution	1466	1355
b) Power & Fuel	488	415
c) Provisions (net)	(847)	(1526)
d) Exchange Rate Variations	(460)	(82)
Total	647	162

Strict control mechanism with respect to other expenses such as manufacturing, administrative and sales & distribution (S&D) expenses has resulted in such expenditure (as % of revenue) restricted at even lower levels than FY 2021-22, thereby adding to the bottom line. Higher fuel prices have been a matter of concern during the year, which has negatively impacted the operating margins.



Details of Provisions (net) as under:

(₹ Crore)

Particulars	2022-23	2021-22
Doubtful debts (incl. ECL), liquidated damages, loans, advances & deposits and others	(427)	(1502)
Bad debts, LD, Investment & losses written off	148	350
Contractual obligations	(568)	(374)
Total	(847)	(1526)

The company continues to assign utmost priority to improve the quality of its assets in the balance sheet. Focused approach has resulted in resolution of several issues, which has ensured that there is net withdrawal of provisions, contributing positively to the bottom-line of the company.

3. Finance costs

(₹ Crore)

Particulars	2022-23	2021-22
Discount & other expenses on commercial papers	51	139
Interest expense	309	60
Un- winding of provisions	161	156
Total	521	355

There has been an increase in Finance Cost during FY 2022-23 as compared to the FY 2021-22. Due to higher inflation globally, the central banks have been raising interest rates across the board. The higher interest rates on borrowings and also comparatively higher levels of borrowings have led to increase in overall finance cost. There has also been increase in borrowing, which at the current year end has been ₹5,385 Crore as compared to ₹4,745 Crore as on 31st March 2022.

4. Depreciation & amortization expenses

(₹ Crore)

Particulars	2022-23	2021-22
Depreciation & amortisation expenses	260	314

Depreciation cost varies depending on the capitalization time period & mix of assets class. There is a reduction of about 17% in the depreciation cost as compared to previous financial year.

5. Tax expenses

(₹ Crore)

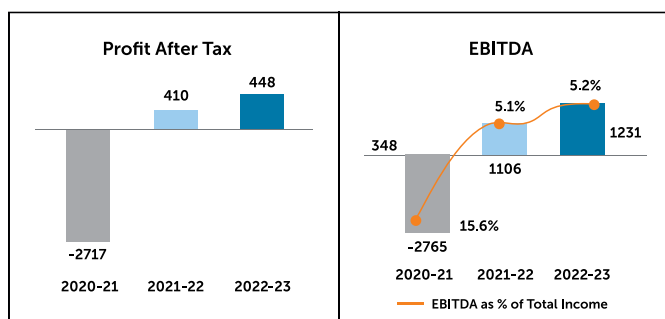
Particulars	2022-23	2021-22
Current tax - current year	48	49
-Earlier years	(159)	(126)
Deferred tax -current year	114	109
-Earlier years	(1)	(5)
Total	2	27

The Current tax expense for the year is lower, mainly due to reversal of tax expense on account of adjustment of Income Tax refunds pertaining to earlier assessment years. Deferred tax liabilities (Net) during the year is mainly on account of set off of brought forward loss.

The company received Income Tax refunds of ₹266 Crore (including interest income of ₹106 Crore) in FY 2022-23, which contributed positively not only to Cash flows but also to profitability.

6. Profitability

The year 2022-23 witnessed an increase of about 10% in the topline, however, material cost continues to be at elevated levels of ~ 72%, similar to FY 2021-22. Though, stringent budgetary controls are being exercised, inflation is putting pressures on maintaining operational budgets. Strenuous efforts have been made during the year through sale of scrap, disposal of non-moving inventory, etc., which has led to Other Operating Income reaching its highest levels.



Profit After Tax stands at ₹448 Crore (FY 2021-22 ₹410 Crore), which is also aided by the efforts made in the taxation area as well as net withdrawal of provisions.

Overall, the company achieved EBITDA of ₹1,231 Crore during FY 2022-23 (FY 2021-22 ₹1,106 Crore), which reflects a growth of more than 11%.

7. Other comprehensive income

(₹ Crore)

Particulars	2022-23	2021-22
Re-measurement of defined employee benefits gain/(loss)	(23)	103
Less: Income tax related to above item	(6)	26
Total	(17)	77

Other Comprehensive income represents re-measurement gain/ (loss) on defined benefit plans such as gratuity, PF, Post-Retirement Medical Benefit (PRMB) etc.

B. Financial position

8. Property, plant and equipment (PPE), intangible assets and capital WIP

(₹ Crore)

Particulars	March 31, 2023			March 31, 2022		
	PPE	Intangible	Total	PPE	Intangible	Total
Gross carrying value	6621	328	6949	6331	309	6640
Less: Accumulated depreciation / amortisation	4212	261	4473	3995	247	4242
Net carrying value (net block)	2409	67	2476	2336	62	2398
CWIP & intangible assets under development	345	9	354	422	9	431
Total			2830			2829

In line with applicable Ind AS, the company annually assesses and modifies the useful life of PPE, and depreciation is calculated accordingly. In case of any change in useful life, the financial impact of change in useful life is disclosed as part of notes to accounts. In FY 2022-23, capital expenditure of ₹262 Crore has been incurred. The company is diversifying into newer business areas, which are likely to require significant capital investments in future.

Properties (i) 2nd Floor office in Chatterjee International Centre, Kolkata (ii) Indora Residential flats, Nagpur – Land & buildings and (iii) Vadodra Township - Land & buildings, having a net block value of ₹1.42 Crore, have been identified for sale under asset monetisation drive, subject to requisite approvals.

9. Equity investments

(₹ Crore)

Particulars	March 31, 2023			March 31, 2022		
	Investment	Impairment / FV adj.	Net	Investment	Impairment / FV adj.	Net
Investment in joint ventures	718	(52)	666	718	(52)	666
Investment in other equity instruments	1	3	4	6	(2)	4
Total	719	(49)	670	724	(54)	670

Investment in joint ventures (JVs) were accounted at cost after considering impairment loss, if any, in line with Ind AS. Investment in other equity are accounted at fair value through profit and loss account and changes in carrying value have been made based on fair value on the reporting date.

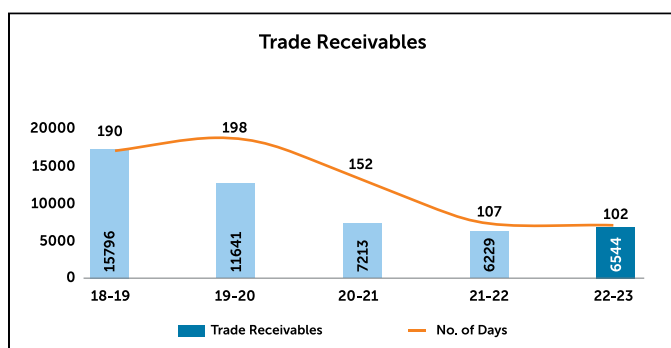
Regarding investment in Neelanchal Ispat Nigam Limited (NINL), the company realized a sum of more than ₹25 Crore, against original investment of ₹5 Crore (valued at NIL in the balance sheet), with the consequent gain being booked in other income.

10. Trade receivables (Net)

(₹ Crore)

Particulars	March 31, 2023			March 31, 2022		
	Non-Current	Current	Total	Non-Current	Current	Total
Gross Receivables	14920	3801	18721	15137	3618	18755
Less: Allowances for Bad & doubtful debts	11504	673	12177	11933	593	12526
Trade receivables (net)	3416	3128	6544	3204	3025	6229

There has been reduction in Trade Receivables (Net) in terms of no. of days of revenue from operations from 107 Days in FY 2021-22 to 102 Days in FY 2022-23.



The same could be achieved through continued focus on liquidation of dues by improving quality of billing, timely collecting the dues, sequential dispatches as per contractual requirements, timely closure of pending issues with customers, taking requisite action in case of slow-paying / non-paying contracts, etc.

11. Cash & cash equivalents and bank balances

(₹ Crore)

Particulars	March 31, 2023	March 31, 2022
Cash & cash equivalents	1561	733
Deposits having maturity more than 3 months but not more than 12 months	4852	6211
Earmarked bank balances & FD against margin money	230	210
Total	6643	7154

The company continued its focus on cash generation & conservation. Due to high investment in contract assets, the

company had some pressures on cash position, however, the company retained its debt free status with closing positive cash & bank balance and have enough leverage to invest in capex and diversification initiatives.

It is also pertinent to mention here that continued focus on liquidation of dues by improving quality of billing, project-centric approach like sequential dispatches, timely collection of dues etc., resulted in significant improvements in CY billing liquidation at 86% (similar as FY 2021-22).

12. Deferred tax assets (net)

(₹ Crore)

Particulars	March 31, 2023	March 31, 2022
Deferred tax assets (net)	3423	3530

Deferred tax asset is created mainly on account of items for which benefit is not available in the current year's taxable income but shall be adjustable against future taxable income on meeting certain conditions in line with the provisions of the Income Tax Act. The reduction in Deferred Tax Assets during the year is mainly on account of set-off of brought forward loss.

13. Other assets

(₹ Crore)

Particulars	March 31, 2023			March 31, 2022		
	Non-Current	Current	Total	Non-Current	Current	Total
Contract assets (Net)	18929	10811	29740	18248	8692	26940
Input tax credit receivable	-	1086	1086	-	964	964
Claim recoverable	300	801	1101	189	755	944
Deposit with tax authorities & others	134	450	584	110	533	643
Advances & others	70	139	209	76	92	168
Less: Provision	133	236	369	96	243	339
Total	19300	13051	32351	18527	10793	29320

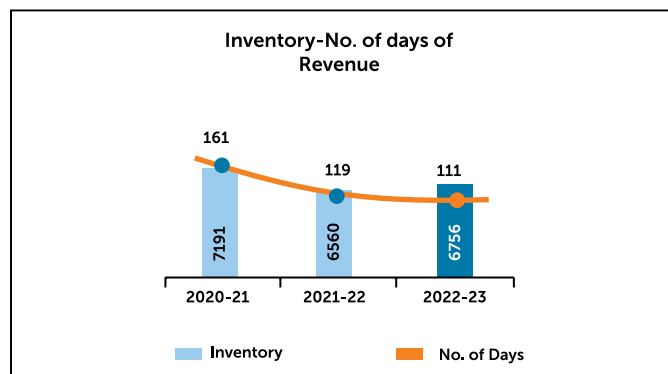
Contract assets represent unbilled revenue not yet due for payment as per contract terms. Thus Contract Assets mainly include event based milestone related payments, payments due on obtaining material receipt certificates, project related finished goods ready for dispatch etc. Contract Assets have increased by ₹2,800 Crore, mainly on account of skewed payment terms of certain projects under execution.

14. Inventories

(₹ Crore)

Particulars	March 31, 2023	March 31, 2022
Raw material & components	3029	2914
WIP	3483	3349
FG	512	608
Stores & spare parts	203	208
Other inventory	273	228
Sub total	7500	7307
Less: Provision for non-moving inventory	744	747
Total	6756	6560

As a measure towards optimized working capital management, due focus has been assigned towards prudent inventory management practices in the recent years, which has led to improvement in inventory levels (in no. of days of revenues). Raw material is being procured, prioritizing production needs and keeping the inventory at optimum levels.



15. Current tax assets /(liabilities) – Net

(₹ Crore)

Particulars	March 31, 2023	March 31, 2022
Current tax assets / (liabilities) -net of provisions	226	119

The amount mainly represents TDS (net of provision for tax), which is due for refund in near future.

16. Share Capital

(₹ Crore)

Particulars	March 31, 2023	March 31, 2022
Authorised share capital	2000	2000
Issued, subscribed & paid up share capital	696	696

There has been no change in the share capital during the current financial year. The shareholding of promoter [GOI] stands unchanged at 63.17%.

17. Other equity

(₹ Crore)

Particulars	March 31, 2023	March 31, 2022
Opening balance	26275	25788
Reinstatement due to change in policies or prior period errors	-	-
Add: Total comprehensive income/(loss) for the year	430	487
Less: Dividend (incl. interim dividend) paid during the year	(139)	-
Closing balance	26566	26275

The other equity includes capital reserve of ₹35 Crore (PY ₹35 Crore) and capital redemption reserve of ₹38 Crore (PY ₹38 Crore)

The change in net worth is due to post tax profit during the year & dividend for FY 2021-22 paid during the year. Dividend @20% for the year 2021-22 was approved by the Shareholders in the AGM held on 29th September 2022 & subsequently paid during the year.

In line with the dividend distribution policy of the company, the Board has recommended 20% dividend for FY 2022-23, subject to approval of shareholders in AGM.

18. Borrowings & Lease Liabilities

(₹ Crore)

Particulars	March 31, 2023			March 31, 2022		
	Non-Current	Current	Total	Non-Current	Current	Total
Borrowings	-	5385	5385	-	4745	4745
Lease Liabilities	34	35	69	35	50	85
Total	34	5420	5454	35	4795	4830

The company resorted to intermittent short term borrowings to bridge the temporary gaps in cash inflows/outflows. Short term borrowings in the form of WCDL, PCFC loan, loan against FD's and commercial paper were availed. Despite the challenges on liquidity front, the company retained its debt free status with closing positive cash & bank balance and has enough leverage to invest in capex and diversification initiatives.

The cash & bank balance (net of short term borrowings) as at 31st March 2023 was ₹1,258 Crore as against ₹2,409 Crore as at 31st March 2022.

The company has continued to ensure repayment of its borrowings on or before the due date.

19. Financial liabilities

(₹ Crore)

Particulars	March 31, 2023			March 31, 2022		
	Non-Current	Current	Total	Non-Current	Current	Total
Trade payables	2194	9896	12090	2132	7750	9882
Other financial liabilities	256	1277	1533	215	1124	1339
Total	2450	11173	13623	2347	8874	11221

The increase in trade payables is in line with the higher scale of operations. A substantial part of the trade payables is due to retention money not due as per contractual terms, and some cases being under litigation /arbitral settlement. The company continued to pro- actively engage with the vendors/sub-contractors and made all out efforts to release timely payments.

20. Provisions

(₹ Crore)

Particulars	March 31, 2023			March 31, 2022		
	Non-Current	Current	Total	Non-Current	Current	Total
Provision for contractual obligation	2990	784	3774	2620	1235	3855
Provision for employee benefits	878	1384	2262	857	1061	1918
Other provisions	233	623	856	293	760	1053
Provision for CSR	-	6	6	2	10	12
Total	4101	2797	6898	3771	3067	6838

The provision for employee benefits is based on actuarial valuation of leave, medical and gratuity benefits. Other provisions mainly include provisions for loss making contracts. The CSR provision of ₹6 Crore represents unspent amount on ongoing projects, balance of amount transferred to a separate bank account last year as per Companies Amendment Rules 2021.

21. Other liabilities

(₹ Crore)

Particulars	March 31, 2023			March 31, 2022		
	Non-Current	Current	Total	Non-Current	Current	Total
Advances from customers (incl. valuation adjustments)	2586	3049	5635	2194	3854	6048
Statutory dues	-	908	908	-	776	776
Govt. grants	20	5	25	19	6	25
Total	2606	3962	6568	2213	4636	6849

Advances from customers get adjusted progressively during execution of the projects. Statutory dues are primarily GST liability, to be discharged on due dates after adjustment of input tax credit disclosed under "other assets" (Refer Sl No. 13 above). The company has been discharging all its GST and other dues in time.

C. Fund Position

22. Fund flow position and liquidity

(₹ Crore)

Particulars	2022-23	2021-22
Cash generated from Operations before working capital changes	254	(341)
Net cash inflow / (outflow) from working capital changes	(1106)	592
Net cash inflow / (outflow) from operating activities	(742)	660
Net cash inflow / (outflow) from investing activities	1480	(1125)
Net cash inflow / (outflow) from financing activities	89	(330)

The company could generate positive cash from operations (before working capital changes) to the extent of ₹254 Crore, as against negative ₹341 Crore previous year. Due to skewed payment terms, there was higher investment in contract assets and consequently working capital, which is expected to get liquidated progressively over the next 2-3 years.

D. Key Financial Ratios

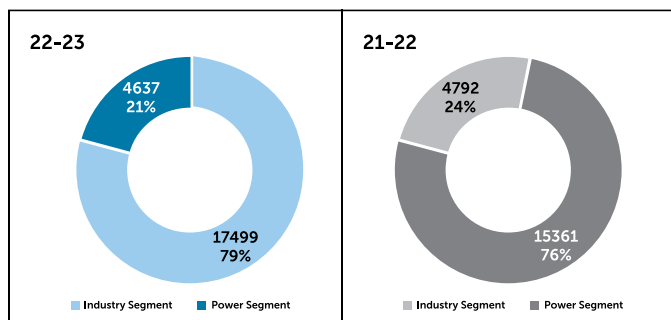
In compliance with the requirement of listing regulations, the key financial ratios along with explanations, wherever required, have been provided in Note[43] of the financial statements.

E. Segment performance

The Company has two operating segments, power and industry. Both the business segments have reported positive bottom line. The performance of segments is given below:

(₹ Crore)

Particulars	2022-23		2021-22	
	Power	Industry	Power	Industry
Segment revenue	17499	4637	15361	4792
Segment results	1400	433	1949	(39)
Segment capital employed	18300	3094	17100	3440



1.8.2 Financial Review of Joint Venture Companies

a. BHEL-GE Gas Turbine Services Private Limited (BGGTS):

BHEL-GE Gas Turbine Services Private Limited (BGGTS) is a Joint Venture Company of BHEL and GE, USA formed to take up repair & servicing of GE designed gas turbines. The financials in brief are as below:

(₹ Crore)

Particulars	2022-23	2021-22
BHEL share (%)	One share less than 50%	One share less than 50%
BHEL's investment in equity	2.38	2.38
Revenue from operations	967.13	801.18
Profit/(loss) after tax	112.56	100.84
Net worth	464.59	403.21

In FY 2022-23, BGGTS paid final dividend of 400% (for FY 2021-22) and interim dividend of 700% on the equity share capital of ₹4.76 Crore.

b. NTPC BHEL Power Projects Private Limited (NBPPL):

NTPC BHEL Power Projects Private Limited (NBPPL) is a Joint Venture Company of BHEL and NTPC Limited, promoted to execute EPC contracts for Power Plants and manufacture power plant equipment. The JVC has a manufacturing facility for Balance of Plant (BoP) equipment at Mannavaram in Andhra Pradesh. The brief financials are tabulated below:

(₹ Crore)

Particulars	2022-23*	2021-22
BHEL share (%)	50%	50%
BHEL's investment in equity	50.00	50.00
Revenue from operations (RPCL)	44.45	54.74
Profit/(Loss) for the year (RPCL)	(5.49)	(19.87)

* based on provisional unaudited figures

In-principle approval for pursuing winding up of NBPPL has been accorded by the Board of Directors in its meeting held on February 8, 2018. Ministry of Power, Government of India vide letter dated 23.08.2019 advised NTPC Ltd. to consider buying out the stake of BHEL and thereafter decide either to continue it as an in-house EPC arm or close it after completion of present work. Further, through letter dt. 28.10.2022, MoP has advised that the process of winding up of NBPPL be taken up by NTPC and BHEL after the completion of balance ongoing works at 1x500 MW Feroze Gandhi Unchahar Thermal Power Plant.

c. Raichur Power Corporation Limited (RPCL):

Raichur Power Corporation Limited (RPCL) is a Joint Venture Company of BHEL and Karnataka Power Corporation Limited (KPCL) promoted for setting up of 800 MW supercritical thermal power plants in Karnataka on build, own and operate basis. The paid-up equity capital as on March 31, 2023 was ₹2,999.76 Crore with contribution of ₹2,335.72 Crore from KPCL and ₹664.04 Crore from BHEL. The financials of the Company are as under:

(₹ Crore)

Particulars	2022-23*	2021-22
BHEL share (%)	22.14%	22.14%
BHEL's investment in equity	664.04	664.04
Revenue from operations	3035.43	3198.68
Profit/(Loss) for the year	(1114.58)	(678.22)

* based on provisional unaudited figures

Though the company had higher losses in FY 2022-23, with improved power demand, the operations of the plant are expected to improve, aiding the bottom-line of the company.

d. Power Plant Performance Improvement Private Limited (PPPIL):

Power plant Performance Improvement Private Limited (PPPIL) is a Joint Venture Company of BHEL and Siemens AG, Germany promoted for performance improvement of old fossil fuel power plants.

Since sufficient business to ensure viability of the Company was not forthcoming, the promoter partners mutually agreed to gradually wind up the Company. All the pending contracts of the JVC were closed and the process of winding up was initiated during FY 2018-19. The JVC is under liquidation.

Investment in PPPIL is ₹2 Crore which has been fully provided for.

1.8.3 Consolidated Financial Statement (CFS)

Consolidated Financial Statements have been prepared in accordance with Ind AS -110 on "Consolidated Financial Statements" and Ind AS 28 "Investments in Associates and Joint Ventures".

In the financial statements, for joint ventures, Equity method is adopted in line with Ind AS. M/s PPPIL was not considered for CFS as it is under liquidation

A summary of the results on financial performance, in line with the afore-mentioned Ind AS are as under

Financial performance

(₹ Crore)

Particulars	For the year ended	
	March 31, 2023	March 31, 2022
Revenue from operations	23365	21211
Profit /(loss) before tax	479	470
Profit /(loss) after tax	477	445
Other comprehensive income/ (loss)	(17)	77
Total comprehensive income / (loss)	461	522

The share of profit in respect of joint venture - BGGTS was ₹56.02 Crore in FY 2022-23 as against profit of ₹50.42 Crore in FY 2021-22. The joint venture companies (NBPPL and RPCL) have incurred losses in FY 2022-23. The accumulated losses equal to the cost of investment in these two JVs have already been recognized in the consolidated financial results, in FY 2018-19.

Financial position

(₹ Crore)

Particulars	March 31, 2023	March 31, 2022
Assets		
Property, plant and equipment, intangible assets and CWIP (net carrying value)	2830	2829
Investment accounted for using equity method	232	202
Non-current financial assets	3503	3294
Deferred tax assets (net)	3423	3530
Non-current other assets	19300	18527
Current assets	30082	27862
Total	59370	56244
Equity and Liabilities		
Equity share capital	696	696
Other equity	26132	25810
Non-current liabilities	9190	8366
Current liabilities	23352	21372
Total	59370	56244

1.9 Capital investment

Continuing the focus toward enhancing productivity and achieving sustainable growth, the company has invested in modernization & upgradation of its existing facilities thereby reinforcing capability in business areas like Defence, Transmission, Nuclear during the year 2022-23 and has incurred a capital expenditure of ₹262 Crore.

Further, augmentation of various testing facilities is also being carried out under the Capital Goods-II scheme of MHI at the company's Hyderabad unit, Bhopal unit and Corp R&D.

1.10 Internal Financial Control System

The Internal Financial Control (IFC) of BHEL is designed in the form of well documented policies and procedures for ensuring orderly and efficient conduct of its business, including adherence to Company's policies, safeguarding of assets, prevention & detection of frauds and errors, accuracy & completeness of the accounting records, and timely preparation of reliable financial information.

The source of implementation and maintenance of IFC are Manuals, Guidelines, Delegation of Powers and IT system & controls, and are effected through well-defined organizational structure i.e. people operating in various departments within the Company at different levels at each stage of the processes.

BHEL has an in-house Internal Audit Department commensurate with its size of operations and nature of its business. In addition to Corporate Internal Audit department, 12 Internal Audit Cells are set up across BHEL to cover internal audit activities at all locations of BHEL. With a view to assess the adequacy and effectiveness of IFC, Internal Audit carries out continuous audit of risk focused areas and critical appraisal of the functioning of the processes and systems designed at respective locations. Based on the report of internal audit function, process owners undertake corrective action(s) in their respective area(s), thereby strengthening controls.

Audit assignments are conducted as per Annual Audit Plan approved by Board Level Audit Committee (BLAC). Results of Internal Audit activities are shared with all Units and Regions. BLAC also reviews major Internal Audit observations and CAG audit findings, and issues directions, wherever required, to strengthen the IFC, keeping in view the dynamic environment in which the Company is operating.

Internal Financial Controls in BHEL has been evaluated at all locations by the Internal Audit during the year by applying test of controls and the controls tested have been found in place, are adequate and operating effectively within the company.

Independent Auditors Report on the Internal Financial controls of the company in terms of Clause (i) of sub-section 3 of section 143 of the Companies Act, 2013 by the Statutory Auditors is placed along with the Financial statements. Statutory Auditors in its report expressed an unmodified opinion on the adequacy and operating effectiveness of the Company's internal financial controls over financial reporting.

1.11 Quality Performance

BHEL is known to have pioneered the Quality movement in the country. The company was the first to introduce Quality Circle concept in India in 1981. Over the past four years, with a view to make quality once again a hallmark of the company's products and services, a company-wide "Quality First" initiative had been taken-up in mission mode. Under the initiative, the company is strengthening the Quality of its products, services and internal systems through implementation of various quality initiatives.

BHEL has taken several steps to enhance the maturity of its quality systems, following the "Quality 360" model. Additionally, the company has strengthened its Business Excellence journey, aligning with the EFQM-2020 framework, and enhanced 5S culture as well as revitalized Quality Health through implementation of the "Quality Health Index (QHI)".

In recognition of its unwavering commitment to excellence, BHEL was honored with the first-ever "Special Jury Commendation for Adoption and Nurturance of Business Excellence" from CII-EXIM Bank. BHEL's HPBP Trichy, HEEP Haridwar, HEP Bhopal and HPEP Hyderabad units were awarded Platinum recognition, while PEM Noida, EDN Bengaluru, BAP Ranipet and PSNR Noida received Gold Plus recognition under the "CII EXIM Bank award for Business Excellence 2022". The company has come a long way from

winning the first CII Exim Bank recognition in 2020, after a gap of 14 years and winning 4 awards in 2021, which reflects the success of the 'Quality First' movement.

BHEL has developed and implemented a comprehensive Quality Roadmap across the organization, focusing on improving People, Process and Process Quality. In our commitment to fostering efficiency in our workplace, BHEL launched the **5S movement** across all BHEL divisions & units in FY 2022-23. The 5S methodology, a lean manufacturing tool, is being implemented to enhance workplace excellence with improvement in productivity, quality, safety etc. As part of this initiative, nine BHEL units/ divisions, viz. HEEP Haridwar, HPBP Trichy, HPEP Hyderabad, EDN Bengaluru, HEP Bhopal, TP Jhansi, BAP Ranipet, PEM Noida and PSNR Khurja site, received 5S certification from M/s Margdarshan for the first time, affirming our commitment to maintain a streamlined and efficient workplace environment.

Integrated **Quality Health Index (QHI)** is being implemented across the organization, considering Quality Performance Indicators, Quality Management System maturity, and overall Business Excellence. Based on the QHI scores for FY 2022-23, HEEP Haridwar, HPEP Hyderabad, and HPBP Trichy emerged as the top three units, with an overall increase of over 4.5% (Year-on-Year) in the QHI across the organization.

Periodic Quality Audits, Quality Management Effectiveness Reviews and Total Quality Management (TQM) assessments by CII/ CQ & BE are being conducted to strengthen the existing quality systems in manufacturing units, engineering centers, and power sector project sites. All BHEL divisions underwent QMER review and TQM assessment as per EFQM 2020 model.

BHEL was the first organization in India to introduce the concept of **Quality Circle (QC)** movement in 1981. There are 993 Quality Circles, each contributing to the culture of continuous improvement in BHEL. In a remarkable achievement, all eight BHEL Quality Circle teams which participated at the 47th International Convention on Quality Control Circles - 2022 (ICQCC) held in Jakarta, Indonesia, bagged the Gold Award (highest Award category).

Conversation on Quality i.e. "Qconverse" has been in practice since FY 2020-21 which encourages units to adapt best & unique practices followed in other BHEL units. Major focus is given to training, in which Quality Management training programs are conducted at different centres of BHEL in addition to trainings conducted by Human Resource Development (HRD) Centres of units for capability building of employees in the field of Quality.

With diversification of BHEL into new areas, major emphasis is being given on establishing robust Quality Management Systems for new products. In FY 2022-23, Directorate General of Aeronautical Quality Assurance (DGAQA) approved HPVP Vizag unit & its Quality Management Systems for the first time with **AFQMS (Approval of Firms and its Quality Management System)**. Additionally, HPVP Vizag and BAP Ranipet units of BHEL adhere to the requirements of Aviation, Space and Defense Organization as per Aerospace Standard (AS 9100). Different products of BHEL are also

certified by agencies such as the Central Boilers Board, India; American Society of Mechanical Engineers (ASME), USA; Bureau of Indian Standards (BIS); American Petroleum Institute (API), USA; and Lloyd's Register, etc.

1.12 Human resource

People are the greatest asset for an engineering organization and BHEL takes pride in its motivated and competent workforce. Substantial efforts have been made to transform BHEL into a 'Project Centric' organization. Unit reach-out programs have been undertaken to comprehensively comprehend employee-related issues and concerns, raise awareness of organizational goals, elucidate the rationale behind organizational changes, and actively work towards resolving expressed concerns.

Over the past few years, alignment of individual goals/ targets with those of the unit/ division as well as organization has been given paramount importance. Rewards and recognition have been linked to achievement of substantive goals to inculcate a sense of accountability & responsibility. Furthermore, BHEL has strengthened its companywide balance scorecard framework to establish core Key Performance Indicators aligned with critical success factors of the organization and a KPI library has also been developed to promote objectivity, measurement, and relevance of KPIs to role holders and functions.

For the long term and continuous development of its human capital, initiatives like training/retraining of the workforce (executives, supervisors as well as workers), use of e-Modules for ensuring continual training, leadership development programs, strengthening of internal communication,

simplifying policies for making them employee centric, etc., were undertaken during the year.

1.12.1 Learning and Development

Continual development of technical and behavioural skills of all its employees, i.e., executives, supervisors and artisans is of paramount importance to BHEL. With the ongoing energy transition as well as diversification initiatives undertaken by the company, the company is focusing on unlearning and relearning to create an agile, adaptive and future ready workforce.

The programs offered by Corporate Learning & Development (CLD) are covered under three broad categories a) Technical and Functional Training b) e-Learning through UNNAYAN portal and c) Managerial and Behavioural Training. Certification programs are provided to employees in the area of Project Management. Apart from that, 98 e-learning modules have been made available to all employees. Special programs in area of cost reduction were also conducted for employees.

The reskilling for the existing trades has been carried out in areas such as FGD, Nuclear Power Plant, Control systems, Power Transformers, Compressors, Pumps, Regenerative Braking System in WAG-7, Turbine and its auxiliaries.

The skilling/upskilling has been carried out in areas such as Coal to Methanol, Coal to Ammonia, Battery Manufacturing and Energy Storage systems, Electrolyzers for Green Hydrogen, Floating Solar Power Plant, Hydrogen economy, AUSC Technology, Additive Manufacturing, Electric Vehicles and Charging Technology, Flexibilisation of Thermal Power Plants, Train Collision Avoidance System (TCAS) & Automatic Train Protections (ATP) System, etc.



Quality Month with the theme of 'Quality First' was observed across BHEL in November 2022

Several programs on developing capabilities of internal faculties in the area of technical/ functional trainings have also been organized. In-house faculties were developed through 'Faculty Development Program' which is expected to have a cascading impact. Safety is an important focus area for the company for which a monthly series has been initiated on 'Safety Induction Training' for employees posted at sites, to help improve their safety aspect.

BHEL engaged 1859 apprentices across its Units in 2022-23, out of which 1390 were Trade (ITI) Apprentices. From the Graduate, Diploma, Vocational or non-technical apprentices, 469 apprentices were engaged. The apprentices were provided on the job learning opportunity on the world class engineering infrastructure to make them ready to face the future with best skills in manufacturing sector.

BHEL's 7th "Learning Week" was celebrated across manufacturing units and regions from 5th to 11th September 2022, with the theme, 'Strategise-Innovate-Implement' to align with the ongoing Strategic Plan 2022-27. Performance and Career Development

1.12.2 Performance and Career Development

Succession Planning has been identified as one of the core intervention areas by HR while chalking out the transformational journey of BHEL. At an organizational level, unique roles are being revisited and critical roles are being identified. Succession planning for these roles are being done by first identifying the key success factors for those roles, and developing and grooming a pool of successors to mitigate any personnel risks.

BHEL revisited its leadership competency model, and its behavioral elements which the leaders of the organization are expected to demonstrate. This exercise involved assessing senior leadership through development centers and subsequently identifying individual development interventions, such as Management Development Programs (MDPs) at renowned institutions like IIMs, to develop potential leaders within the organization.

Special programs are being conducted internally as well as in collaboration with leading management institutes, for developing leadership at various other levels. Focused training programs to develop technical and behavioral skills in sync with the organization needs/ ethos have been designed and implemented.



ज्ञानार्जन सप्ताह 5-11 Sept. 2022 LEARNING WEEK 2022



Employee Satisfaction and Engagement Survey 2021-22

An Employee Satisfaction and Engagement Survey at an organization level is conducted every alternate year. The drivers of engagement and satisfaction are dependent on parameters like learning & development, communication, career & performance management, rewards & recognition and health, safety, environment, compensation and physical work environment. The Employee Satisfaction & Engagement index ESEI for 2021-22 stands at 7.88 (on a scale of 10).

Disclosure under section 134 (3)(p) of the Companies Act

As per Section 134 (3) (p) of the Companies Act 2013, the Board's Report of a listed company shall include a statement indicating the manner of formal annual evaluation of the Board, individual directors etc. Ministry of Corporate Affairs has, vide its notification dated 5th June, 2015, notified the exemptions to Government Companies from the provisions of the Companies Act, 2013 which inter alia provides that Sec. 134(3)(p) regarding statement on formal annual evaluation shall not apply to Government Companies in case the directors are evaluated by the ministry which is administratively in-charge of the company as per its own evaluation methodology. Further, in line with above exemptions, Sub-Sections (2), (3) & (4) of Sec. 178 regarding appointment, performance evaluation and remuneration shall not apply to directors of government companies.

In a CPSE, the MoU signed between the Company and the Govt. of India details out the parameters and initiatives that the company is required to undertake during that financial year. This MoU is evaluated at the end of the year by the Govt. and a performance rating is assigned to BHEL based on its performance on the spelt-out parameters. Further, there is a well laid down procedure for performance evaluation of CMD and Functional Directors. Department of Public Enterprises (DPE) has designed a format and laid down a procedure for evaluation of the Functional Director's performance. The tenure of Functional Directors as spelt out in their Terms and Conditions of Appointment is five years or the date of their superannuation, whichever is earlier.

The terms of reference of Board Level Committees are approved by the Board. The minutes of Board Level Committees are placed before the Board for its perusal.

Appointment of Independent Directors and their tenure (normally three years) is decided by the Government of India. DPE, through BHEL's Administrative Ministry (MHI), has been evaluating/ assessing the performance of independent directors on the Board of the company.

1.12.3 Industrial Relations

All round development through "Participation of All", ensured by way of BHEL's policy of open and continuous communication with all sections of employees, has been the driving mantra of our industrial relations journey. The impetus given to participatory culture by the Management in close collaboration with various employee groups has been instrumental in maintaining and building a congenial harmonious Industrial Relations climate in the organization.

During FY 2022-23, BHEL's manufacturing units, divisions, and offices reported harmonious and peaceful industrial relations. Negligible man-days (0.002%) were lost during the year on account of strike against company policies, which bears testimony to the concerted efforts undertaken by the management as well as the employee groups to work jointly towards the company's goal.

In line with BHEL's commitment to maintaining a participatory culture, one meeting of the apex level bipartite forum namely "the Joint Committee for BHEL" was held during the year. Additionally, at the unit level, 38 meetings of "Plant Councils" and 278 meetings of "Shop Councils" were held at various manufacturing locations. The discussions in these forums revolved around improving the overall performance of the company by increasing productivity, enhancing quality, safety, and delivery to meet customer commitments, and adopting various cost reduction measures to improve the financial health of the company. Through these efforts, BHEL aims to benefit its various stakeholders, including employees, by ensuring sustainable growth, competitiveness and profitability.

1.12.4 Manpower Strength

The Manpower Strength of BHEL as on 31st March 2023 is **29,536** consisting of **10,187** Executives, **4,363** Supervisors and **14,986** Workers.



Dir. (IS&P), BHEL with BHEL engineers during a project review at IOCL Panipat Refinery



CMD, BHEL inspecting punching operations at HEP, Bhopal

1.12.5 Status on Presidential Directives

No Presidential Directives have been received w.r.t (A) Reservation policy for reserved category persons (B) Safeguard of women at workplace during the years 2020-21, 2021-22 and 2022-23.

1.12.5.1 Directives on Reservation Policy for Reserved Category Persons

Presidential Directives on reservation policy issued by Central Government from time to time provide for certain percentages of reservation in direct recruitment as well as promotion in specified posts and for specified reserved category of candidates, i.e SCs, STs, OBCs and Persons with Disabilities (PwD). Besides, the directives also contain provision for certain concessions and relaxations for specified category of employees in direct recruitment and promotion. The Presidential Directives on the subject are being strictly complied with and reservation percentages are ensured through maintenance of Post Based Roster system as prescribed by Govt. However, there is no direct impact of these guidelines on the financial position of the company.

Other relevant information on the subject is furnished below:

i. Representation of SC/ST/OBC/EWS employees

The overall representation of SC/ST/OBC employees in total manpower as on 31 Dec 2022 was 20.73%, 7.56% and 36.92% for SCs, STs and OBCs respectively. During the year 2022, 22 recruitments including 02 SCs and 01 ST took place in Group A and C.

The Annual Statement in the prescribed format showing the representation of SCs, STs, OBCs and EWS as on 31 Dec 2022 and number of appointments made during the calendar year, is given at **Annexure - A**.

ii. Manpower strength of PwD employees as on 31 Dec 2022

Total number of PwD employees as on 31 Dec 2022 was 835. During the year 2022, one lateral recruitment took place in OH Category in Group A. The group wise manpower strength of PwD employees in the Company as on 31 Dec 2022 is given at **Annexure - B**.

1.12.5.2 Safeguard of Women at Workplace

An Act to provide protection against sexual harassment of women at workplace and for the prevention and redressal of complaints of sexual harassment and for matters connected therewith or incidental thereto called "The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013", has come into force from 9th December, 2013 with notification of rules by Government of India, Ministry of Women and Child Development called "The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Rules, 2013".

The provisions of the Act and the rules thereunder are being strictly complied with. In accordance with the Act, Internal Complaints Committee (ICC) has been constituted in all units of BHEL and their constitution and contact details have been hosted on the unit's website. Posters highlighting the

key provisions of the Act, Duties of the Employer, Complaints Redressal Mechanism, Action for Malicious Complaints & various misconceptions about Sexual Harassment have been displayed at conspicuous places in all units in Hindi, English and regional languages. The Act requires companies to conduct orientation sessions or training for the ICC annually. Internal Complaints Committee must have knowledge and sensitivity to redress the grievances of women. This is mandatory not just legally but also for the workplace safety. In line with the Act a workshop for ICC Members was organized on pan BHEL basis. At unit level, 24 Workshops / awareness programmes were conducted on Sexual Harassment Act and Gender Sensitization.

During the year FY 2022-23, no case was reported. 03 carry forward cases of FY 2021-22 were disposed-off. As on 31.03.2023, no case is pending.



International Women's Day celebrated at Corporate Office, New Delhi

Annual Statement showing the representation of SCs, STs, OBCs and EWS as on 31 Dec 2022 and appointments made during the calendar year 2022

Groups	Representation of SCs/STs/OBCs/EWS (As on December 31, 2022)						No. of appointments made during the calendar year 2022											
	Total No. of Employ ees	By Direct Recruitment					By Promotion*				By Deputation/ Absorption				Total	SCs	STs	OBCs
		EWS	SCs	STs	OBCs	Total	EWS	SCs	STs	OBCs	Total	SCs	STs	Total				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
Group A	11229	6	2033	929	3139	13	0	1	0	0	---- NA ----	0	0	0	0	0	0	
Group B	4522	0	917	527	1117	0	0	0	0	0		0	0	0	0	0	0	0
Group C	13905	3	3184	797	6684	9	0	1	1	0		0	0	0	0	0	0	0
Group D (Excl. SW)	151	0	32	3	72	0	0	0	0	0		0	0	0	0	0	0	0
Group D (SW)	19	0	18	0	0	0	0	0	0	0		0	0	0	0	0	0	0
Total	29826	9	6184	2256	11012	22	0	2	1	0	0	0	0	0	0	0	0	

* In BHEL there are no appointments at induction level by promotion

Statement showing number of persons with disabilities appointed during the year 2022

Group	Number Of Employees				Direct Recruitment							Promotion*							
	Total number of employees	VH	HH	OH	No. of vacancies reserved			Total	No. of appointments made			No. of Vacancies reserved			Total	No. of appointments made			
					VH	HH	OH		VH	HH	OH	VH	OH	HH		VH	HH	OH	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
Group A	11229	5	16	288	0	0	5	5	0	0	1	-----NA-----	0	0	0	0	0	0	
Group B	4522	1	7	125	0	0	0	0	0	0	0		0	0	0	0	0	0	0
Group C	13905	16	24	345	0	0	0	0	0	0	0		0	0	0	0	0	0	0
Group D	170	2	4	2	0	0	0	0	0	0	0		0	0	0	0	0	0	0
Total	29826	24	51	760	0	0	5	5	0	0	1		0	0	0	0	0	0	0

Note:

- (i) VH stands for Visually Handicapped (persons suffering from blindness or low vision)
- (ii) HH stands for Hearing Handicapped (persons suffering from hearing impairment)
- (iii) OH stands for Orthopaedically Handicapped (persons suffering from locomotor disability or cerebral palsy)

* In BHEL there are no appointments at induction level by promotion

1.13 Capacity Building for the Country

Your company is setting up a “Common Engineering Facility Centre (CEFC)” for skill development in Welding Technology at WRI Trichy along with its extension centers at Varanasi, Ranipet, Bhopal, Jhansi and Haridwar with MHI’s support. The centres will have the capacity to train ~5000 Trainees annually in basic & advanced welding technologies under the MHI scheme of “Enhancement of Competitiveness in Indian Capital Goods Sector Phase II (CG-II)”. The CEFC at WRI Trichy along with its extension centres at Varanasi, Ranipet, Bhopal, Jhansi and Haridwar are already functional, and have already trained more than 2000 welders by June, 2023.

1.14 Right to Information Act, 2005

In consonance with the provisions of the Right to Information Act, 2005 (the Act), BHEL works towards promoting transparency and accountability. A Central Public Information Officer (CPIO) at corporate office, along with 24 other CPIOs at each of the major administrative units are functioning in the Company. 25 First Appellate Authorities also function in the Company to dispose-off first appeals filed against the orders of the CPIO (s), as provided under the Act.

As a measure to facilitate citizens in filing their RTI applications and first appeals online, BHEL has adopted the online RTI web portal (<https://rtionline.gov.in>) launched by Department of Personnel & Training. Consequently, RTI applications and RTI first appeals filed on the portal are being replied through online mode. Section 4 (1) (b) disclosures have been made available on BHEL’s website. In addition, certain guidelines & proforma(s) indicating procedure for obtaining information and for filing RTI first appeals under the Act have been placed on BHEL’s website.

The CPIOs and other internal stakeholders involved are sensitized about their obligations under the Act through training and workshops.

BHEL being a member of Steering Committee on RTI constituted by Standing Conference of Public Enterprise (SCOPE) actively participates in its meetings and discussions related to RTI matters organized by SCOPE. Quarterly RTI Returns have been timely submitted to the Central Information Commission. During FY 2022-23, 602 applications and 89 appeals were received, and 554 applications and 78 appeals were disposed-off.

1.15 Risks and Concerns

BHEL’s business have exposure to various types of internal and external risks related to financial, operational, sectoral, technological, ESG specific, cyber security and geo-political. Changing business environment, dynamic customer requirements, technology considerations, long duration of contracts, and timely on-site product support requirements in adverse conditions, are some risks specific to the working of BHEL.

Considering the pervasiveness of industry risks, diversity of the company’s business portfolio and geographical locations of operations, BHEL has in place a robust Risk Management

Policy. The process for risk identification is consciously guided by the Company’s objectives, external environment, Industry reports as well as internal and external stakeholders, amongst others.

BHEL has in place a Board approved Risk Management Charter & Policy to implement a structured and comprehensive enterprise risk management system. The charter is intended to establish a common understanding, language and methodology for identifying, assessing, responding, monitoring and reporting risks and to provide assurance to the management that key risks are being properly identified and effectively managed in the company.

The Risk Management framework of BHEL has three tier Structure, with the Board of Directors (BoD), represented by the Board Level Risk Management Committee (BLRMC) at the Apex Level, the Risk Management Steering Committee (RMSC) at the Corporate Level and the Risk Management Committees (RMCs) at the Regions/ Units/ Business Sectors/ Corporate Functions.

The Board Level Risk Management Committee (BLRMC) is assigned the responsibilities, inter alia, to formulate a detailed risk management policy, to ensure that appropriate methodology, processes and systems are in place to monitor and evaluate risks associated with the business of the Company, to monitor and oversee implementation of the risk management policy, to periodically review the risk management policy, to carry out any other function related to the terms of reference of the committee as prescribed under Companies Act, SEBI Regulations and other statutory regulations etc. The Board / BLRMC regularly reviews top risk areas. The BLRMC in its meeting held on 10 January 2023 reviewed the ‘Risk management Charter and Policy’ of BHEL.

Chief Risk Officer (CRO), the convener of BLRMC & RMSC is responsible for periodic reporting on risk management to the Board/ BLRMC. Key risks faced by the company are analysed in detail by the Risk Management Steering Committee, which is responsible for adopting & implementing the risk management framework and leading the risk management initiative across the company.

RMSC revisits risk parameters & their measuring parameters to ensure their relevance and accordingly recommends amendment/ deletion/ addition to the same. In this year, RMSC recommended to include a new risk measurement parameter related to orders booked from non-coal business for the risk statement of ‘Excess domestic manufacturing capacities, Changes in business mix due to policy changes and Increasing Competition leading to lower Order Book’ enabling it to formulate strategies to effectively address the associated risk. Risk management committees at unit level analyse the risks concerned to their respective areas, prepare mitigation plans, ensure their implementation and also inform the top management, if required.

Top six key risks which the company faces and corresponding strategies for mitigation are mentioned in the table below:

Risk Statement	Mitigation Strategies
Excess domestic manufacturing capacities, Changes in business mix due to policy changes and Increasing Competition leading to lower Order Book	<p>The ongoing energy transition has shifted focus from fossil fuel-based power generation to greener ways of electricity production resulting in large unutilised capacities. The company's traditional 'Thermal' business had 'Nil' Main Plant equipment order for about three years (with the order for the 2x660 MW, NTPC Talcher only in Sep'2022) impacting revenue realization in subsequent years. The company is offering Lower rating supercritical plants, indigenous AUSC technology as well as Solutions for Flexible operation of TPP in thermal sector.</p> <p>Besides this there has been focus on orders booked from Clean-Coal and Non- Coal Business through:</p> <ul style="list-style-type: none"> • Thrust on Strategic tie-ups for venturing into emerging new areas viz. "Coal to Chemicals" and "Green Hydrogen" value chain. - Entered into strategic MoUs with CIL & NLCIL for setting up Coal Gasification based plants. BHEL has completed the design and engineering for upscaling of the indigenously developed PFBG technology for gasification of high ash Indian Coal - enabling "National Coal Gasification Mission". - Leading consultant engaged for realizing potential opportunities in Electrolyser manufacturing and Green Hydrogen value chain. • Catering to the opportunities arising out of AatmaNirbhar Bharat, Make in India missions, PLI Schemes and Capital Goods enhancement scheme – II.

Risk Statement	Mitigation Strategies
	<ul style="list-style-type: none"> • Focus on areas like Transportation, Defence and Aerospace, Spares and services and International Operations. • BHEL-TRSL (BHEL-Titagarh Rail System Ltd.) consortium has been awarded a contract for 80 "Vande Bharat" trains. The BHEL-TRSL consortium was the only fully home-grown Indian bidder amongst the five bidders, and is a big step towards achieving the vision of "Aatmanirbhar Bharat".
Delayed delivery of projects leading to LDs, penalties, customer dissatisfaction and impacting company image	<p>Focus on Project centric operations reviews by Senior Management for expeditious execution of Projects through:</p> <ul style="list-style-type: none"> • Successful implementation of Integrated Project Management System (IPMS) coupled with ongoing work on Site Data Digitization (SDD) has enabled real time monitoring of project progress as well as quick intervention in case of issues. • The company has appointed Project Management Consultant (PMC) to assist with execution of NTPC 2x660MW Talcher Thermal Power Project. • Ensured sequential supplies to project sites for enabling continuous erection • Activities like engineering etc., to commence at pre-award stage for faster execution of projects. • 'Project Director' at sites - empowered Project Directors with financial power of Executive Director for faster decision making at site to expedite work execution • Inclusion of 'Bonus clause' to encourage and incentivize contractor's performance.
Rising Debtors	<ul style="list-style-type: none"> • Constitution of Cross Functional Teams for improved efficacy of Cash realisation from every element of debtors against Ongoing as well as Commissioned projects.

Risk Statement	Mitigation Strategies
Rising Debtors	<ul style="list-style-type: none"> Vigorous monitoring of billing / cash collection process through separate focus on liquidation of old bills and current year bills. Constant focus & review of every element of Debtors and Provisions thereof by the management. Expediting completion of various milestones linked to Cash Inflows of the project Seeking support from Ministry/Govt. agencies for liquidation of debtors Action against defaulting customers in line with the Trade Receivables policy of the company including Arbitration/ NCLT/ AMRCD proceedings. Focus on completion of project milestones for conversion of contract assets into trade receivables <p>Significantly, paradigm shift of company's culture to project centric approach coupled with sequential dispatches, timely completion of project activities/ milestones as well as continuous focus on improvement in disciplined billing, timely collection of dues has resulted in quantum jump in liquidation of current year billing from 59% in FY 2018-19 to 86% in FY 2022-23.</p>
Rising direct material cost affecting profitability	<ul style="list-style-type: none"> With a view to reduce material costs, a Cost Optimisation Cell (COC) has been formed for design optimization in line with industry benchmarks. The company is also working towards engineering excellence and judicious procurement right from customer ordering till execution stage, indigenization etc. Further the company is also focusing on orders in areas having higher gross margins viz. spares and services, defence, aerospace, nuclear, etc.

Risk Statement	Mitigation Strategies
	<ul style="list-style-type: none"> Products of same generic type made in more than one-unit design/ manufacturing practices are being unified & optimized. Surplus material identification and its utilization at sites/ units is being done through in-house developed online portal.
Non-availability of technology in core products to meet current/ future market requirements may lead to loss of business	<ul style="list-style-type: none"> Recognising the change in technological landscape and the potential it brings for new business opportunities, the company is addressing the opportunities through a combination of in-house development, collaborations with academia, and Technology Collaboration Agreements (TCA) with established industry players. The Company currently has 13 active TCAs with global engineering & manufacturing leaders and Indian entities (viz. collaboration with General Electric Technology GmbH, Switzerland for Steam Turbine for 700 MW Nuclear Power Projects; with Sumitomo SHI FW (SFW), Finland, for subcritical and supercritical Circulating Fluidised Bed Combustion (CFBC) Boilers, etc.) Development and upgradation of technologies through in-house efforts viz. the company has already indigenously developed Pressurized Fluidized Bed Gasification (PFBG) technology for generating syngas from high-ash Indian coal. Technology collaboration agreement with GE for addressing Gas Turbines and its spares & services business. Some of the major MoUs entered to cater the newer areas include MoU with: <ul style="list-style-type: none"> - CIL and NLCIL for setting up Coal Gasification based plants. - Cummins India Ltd. for prospective collaboration in areas related to hydrogen value chain.

Risk Statement	Mitigation Strategies
<p>Online data & information security breach leading to loss and critical information infrastructure breakdown</p>	<ul style="list-style-type: none"> • Next-Gen Cyber Security Operations Center (Cyber SOC) which is having enhanced features like User and Entity Behavior Analytics (UEBA), Security Orchestration, Automation and Response (SOAR) and Web Application Firewalls (WAFs) has been implemented. Redundancies are built-in to ensure Business Continuity. Also, a DR solution is implemented to take care of a disaster. Threat intel integrated with Security Information and Event Management (SIEM) which ensures that the time window between the actionable item generated and the actual action taken is minimized. • Integration of all the internet routers of BHEL with Cyber Swachhta Kendra (Botnet Cleaning and Malware Analysis Centre of CERT-In, MeitY) • Integration of Information Security Management System (ISMS) across all the ISO 27001 certified BHEL units. • Centralized solution for Endpoint security has been implemented for a holistic view of the company's security posture. The common security policies across the organization have been deployed through the system. Central dashboard is regularly monitored for any suspicious activity and proactive measures are taken to control any malware. • Creating awareness among employees to sensitize them about phishing mail risks, Phishing simulation exercise is conducted at periodic intervals.

1.16 Data and Cyber Security

With a view to safeguard BHEL from cyber threats as well as to protect its IT assets, the company has implemented advanced security measures.

The organization has also deployed a unified and centralized endpoint protection solution with Endpoint Detection and Response (EDR) capabilities across its entire infrastructure.

To enhance the security of the BHEL network and data, two-factor authentication has been introduced for critical IT services. This implementation aims to effectively prevent unauthorized access and ensure the integrity and confidentiality of BHEL's network and data.

Continuous monitoring of the network, IT systems, and end devices is carried out 24/7 to detect and respond to any potential threats or security events. All the logs are collected in a Security Information and Event Management (SIEM) system, which enables correlation and analytics to gain insights into cyber threats. This process takes place in a centralized Cyber Security Operations Centre (C-SOC).

This year, we have completely revamped the C-SOC by implementing various critical features and improvements which not only automate the mitigation process but also ensures BHEL's pro-activeness on the identified threats, some of the significant features include:

- Automation through SOAR (Security Orchestration, Automation & Response) for immediate action against cyber threats based on the inputs received from integrated Global Threat Intelligence and advisories from government bodies like CERT-In & NCIIPC.
- Prepackaged configurations (called content packs) for common security use cases, such as alarms, views, reports, variables, and watchlists
- Predefined dashboards, audit trails, and reports for global regulations and control frameworks
- Ability to collect data from third-party security vendor devices and threat intelligence feeds
- Scalable data architecture that collects and correlates log events from multiple years
- Ability to enrich events with contextual information (such as privacy solutions; threat data and reputation feeds; and identity and access management systems)



- Integrated with Web Application Firewall (WAF) with Secure Application Delivery, preventions of DDoS and other attacks

BHEL not only recognizes the significance of technology in mitigating cyber threats, but also acknowledges the pivotal role employees play in safeguarding the company's IT assets. BHEL conducts various training programmes to educate and upskill its IT experts, as well as raise awareness amongst employees regarding cybercrimes, social engineering attacks, and related risks through simulation exercises, targeted training programmes and widespread communications across the organization.

BHEL has maintained its organization-wide certification of Information Security Management System (ISMS) since 2005.

To align with the latest ISO 27001 standard (ISO 27001:2022), BHEL plans to upgrade its ISMS system during FY 2023-24 which will further strengthen the organization's information security framework.

For and on behalf of the Board of Directors of
BHARAT HEAVY ELECTRICALS LTD.

Dr. Nalin Shinghal
Chairman & Managing Director

Place: New Delhi

Dated: July 28, 2023

Annexure-II to the Board's Report

Corporate Governance

2.1 Our Philosophy on Corporate Governance

BHEL functions within a sound Corporate Governance framework, which underlines its commitment to quality of governance, transparency in disclosures, consistent enhancement of stakeholders' value and corporate social responsibility. BHEL endeavours to transcend beyond the basic and regulatory requirements of corporate governance, focusing consistently on building confidence of its shareholders, customers, employees, suppliers and the society at large. The Company's corporate governance framework rests upon the cornerstones of transparency, disclosure, independent monitoring, and fairness to all, especially minority shareholders.

The following factors strengthen Corporate Governance in BHEL:

- Independence and versatility of the Board
- Integrity and ethical behavior of all employees
- Recognition of obligations towards all stakeholders – shareholders, customers, employees, suppliers and the society
- High degree of disclosure and transparency levels
- Legal and regulatory compliance in all areas in which the Company operates
- Achievement of above goals with compassion for people and environment

The Company believes in conducting its business in compliance with Corporate Governance procedures and Code of Conduct, exemplifies each of the core values, which positions BHEL to deliver long-term returns to the shareholders, favourable outcomes to the customers, attractive opportunities to the employees, opportunity to the suppliers to partner the Company in progress, and enrichment of society.

2.2 Board of Directors

i. Composition & Category of Directors

Pursuant to Section 2(45) of the Companies Act, 2013, BHEL is a 'Government Company' as 63.17% of the total paid-up share capital of the Company is held by the Central Government through the President of India.

The composition of Board of Directors of BHEL has an appropriate mix of Executive Directors represented by Functional Directors including CMD and Non-Executive

Directors represented by Government Nominees & Independent Directors, to maintain independence of the Board and to separate the Board functions of management and control.

The composition of the Board of Directors as on March 31, 2023 is as follows:

Category of Directors	Board Structure	Actual Strength as on March 31, 2023
Chairman & Managing Director	1	1
Whole-time Executive (Functional) Directors	5	4
Part-time Official Directors (Government Nominees) representing the Ministry of Heavy Industries, Government of India	2	2
Part-time Non-official (Independent) Directors	8	2
TOTAL	16	9

As on March 31, 2023, there exists six vacancies of Part-time Non-official (Independent) Directors and one vacancy of Whole-time Executive (Functional) Director i.e. Director (HR), on the Board of BHEL. The matter of filling up of these vacancies is under consideration/process at the end of Government of India.

ii. Attendance of each Director at the Board Meetings held during 2022-23 and the last AGM

Director's Name S/ Shri	No. of Board Meetings		Last AGM (held on 29.09.2022)
	Held	Attended	
Executive Directors			
Dr. Nalin Shinghal, Chairman & Managing Director ^a	11	11	Yes
Subodh Gupta, Director (Finance)	11	11	Yes
Ms. Renuka Gera, Director (IS&P) ^b	11	11	Yes
Upinder Singh Matharu, Director (Power) [#]	11	11	Yes
Jai Prakash Srivastava, Director (E, R&D) (w.e.f. August 12, 2022)	6	6	Yes

Director's Name S/ Shri	No. of Board Meetings		Last AGM (held on 29.09.2022)
	Held	Attended	
Part-Time Official Directors – Govt. Nominees			
Shashank Priya, Special Secretary & Financial Adviser, Ministry of Commerce & Industry (upto February 14, 2023)	10	8	Yes
Ms. Arti Bhatnagar, Additional Secretary & Financial Advisor, Ministry of Commerce & Industry (w.e.f. February 14, 2023)	1	1	*
Vijay Mittal, Joint Secretary, Ministry of Heavy Industries	11	8	Yes
Part-Time Non-Official (Independent) Directors			
Raj Kamal Bindal (upto January 27, 2023)	9	9	Yes
Manish Kapoor (upto January 27, 2023)	9	9	Yes
Dr. Raj K. Agarwal (upto September 12, 2022)	6	6	*
Dr. K. Sivaprasad	11	11	Yes
Dr. Lekhasri Samantsinghar	11	11	Yes
Aditya Prasad Sahu (upto May 30, 2022)	2	2	*

@ Held additional charge of the post of Director (HR) upto April 21, 2022 and thereafter, w.e.f. January 22, 2023 upto March 5, 2023.

\$ Held additional charge of the post of Director (E, R&D) upto August 11, 2022.

Held additional charge of the post of Director (HR) w.e.f. April 22, 2022 upto January 21, 2023 and thereafter, w.e.f. March 6, 2023.

* denotes the respective person was not a Director of BHEL as on last AGM date.

A. Details of Directorships, Committee Memberships and Committee Chairmanship in other companies as on March 31, 2023#

Director's name S/ Shri	Details of Directorships in other Companies	Details of Committee Memberships and Committee Chairmanship in other Companies*
Dr. Nalin Shinghal, Chairman & Managing Director	Heavy Engineering Corporation Ltd.	-NIL-
Subodh Gupta, Director (Finance)	1. Raichur Power Corporation Ltd. 2. BHEL-GE Gas Turbine Services Pvt. Ltd.	-NIL-
Ms. Renuka Gera, Director (IS&P)	Raichur Power Corporation Ltd.	-NIL-
Upinder Singh Matharu, Director (Power)	-NIL-	-NIL-
Jai Prakash Srivastava, Director (E, R&D)	-NIL-	-NIL-
Arti Bhatnagar, Part-time Official Director	1. H.M.T. Ltd. 2. India International Convention & Exhibition Centre Ltd. 3. Invest India 4. MMTC Ltd. 5. The State Trading Corporation of India Ltd. 6. India Trade Promotion Organization	Audit Committee 1. H.M.T. Ltd. (Member) 2. MMTC Ltd. (Member) 3. India Trade Promotion Organization (Chairperson) Stakeholders Relationship Committee 1. H.M.T. Ltd. (Member)
Vijay Mittal, Part-time Official Director	1. Andrew Yule & Co Ltd. 2. Tide Water Oil Co India Ltd. 3. Tumakuru Machine Tool Park 4. Heavy Engineering Corporation Ltd.	-NIL-
Dr. K. Sivaprasad, Independent Director	-NIL-	-NIL-

Director's name S/ Shri	Details of Directorships in other Companies	Details of Committee Memberships and Committee Chairmanship in other Companies*
Dr. Lekhasri Samantsinghar, Independent Director	-NIL-	-NIL-

*Only Chairmanship/ Membership of the Audit Committee and Stakeholders Relationship Committee has been considered.

The Directorships/ Committee Memberships in other companies are based on the latest disclosure received from respective Directors on the Board.

No Director of the Company holds office at the same time as Director in more than twenty (20) companies. No Director of the Company is a member in more than ten (10) Committees or acts as Chairperson of more than five (5) Committees across all listed companies in which he/she is a Director.

Disclosure of relationship between Directors inter-se: NIL

B. Details of Directorships in Listed Entities & Category of Directorship

As on March 31, 2023, the following Directors held Directorship in other listed entities, as under:

Director's name S/ Shri	Name of Listed Entity	Category of Directorship
Arti Bhatnagar, Part-time Official Director	1. H.M.T. Ltd. 2. MMTC Ltd. 3. The State Trading Corporation of India Ltd.	Government Nominee Director
Vijay Mittal, Part-time Official Director	1. Andrew Yule & Co Ltd. 2. Tide Water Oil Co India Ltd.	Government Nominee Director

iii. No. of Board Meetings held, dates on which held

The meetings of the Board are normally held at the Company's Registered Office in New Delhi and are scheduled well in advance. The Company Secretary, in consultation with the Chairman & Managing Director, sends a written notice of each Board meeting to each Director.

The members of the Board have access to all information of the Company and are free to recommend inclusion of any matter for discussion in agenda which is usually sent in advance. The senior management is invited to attend the

Board Meetings to provide additional inputs relating to the items being discussed and/ or to give presentation to the Board, as per requirement. The Board meets at least once in a quarter to review the quarterly results and other items on the agenda. Additional meetings are held, whenever necessary.

During the year under review, the Board met eleven times on the following dates:

(i) April 11, 2022	(ii) May 21, 2022	(iii) June 27, 2022
(iv) August 4, 2022	(v) August 12, 2022	(vi) August 18, 2022
(vii) September 22, 2022	(viii) November 11, 2022	(ix) December 16, 2022
(x) February 10, 2023	(xi) March 25, 2023	

The Board minutes are prepared promptly after every Board meeting and circulated to all Directors for their comments, if any, and approved by the Chairman thereafter. The approved minutes are then circulated to the departments/ groups concerned for initiating appropriate action and implementation.

iv. List of core skills/ expertise/ competence

As BHEL is a Government Company, all Directors on its Board viz., Functional Directors, Government Nominee Directors and Independent Directors are selected and appointed by the Government as per a well laid down process for each category of directors. The requirements of core skills, expertise and competence for the Board to function effectively, in context of business segment BHEL operates in, forms an integral part of the government's process of selection of these directors. Therefore, the Board of BHEL by itself does not identify any such core skills or competence required for the job as well as identification of directors for particular skill/ expertise/ competence.

v. Board's Responsibilities

The Board's mandate is to oversee the Company's strategic direction, review and monitor corporate performance, ensure regulatory compliance and safeguard the interests of the stakeholders.

vi. Independent Directors

The Independent Directors play an important role in deliberations at the Board and Committee meetings and bring to the Company their expertise in the fields of engineering, finance, management, law, public policy etc.

The Independent Directors are part of important Committees constituted by the Board such as the Audit Committee, Nomination & Remuneration Committee, Stakeholders Relationship Committee and CSR Committee. In terms

of Companies Act, 2013 and Listing Regulations, the Audit Committee and the Nomination & Remuneration Committee are chaired by an Independent Director and function within their respective defined terms of references.

Further, in line with DPE OM dated December 28, 2012 on Model Role & Responsibilities of Non-Official Directors for CPSEs, the Board had constituted a Committee of Independent Directors. The said Committee is in compliance with the requirements of Listing Regulations and the Code of Independent Directors under Companies Act, 2013.

Details regarding familiarization programme of Independent Directors are available on the website of the Company www.bhel.com at web link <https://www.bhel.com/familiarization-programme-directors> under the heading 'Familiarization Programme for Directors'.

In the opinion of the Board, the Independent Directors fulfil the conditions specified in the Listing Regulations and are independent of the Management.

Shri Aditya Prasad Sahu, Independent Director, tendered his resignation from BHEL's Board of Directors w.e.f. May 30, 2022 as he was contesting the Rajya Sabha Elections from Jharkhand. Further, Dr. Raj K. Agarwal, Independent Director, tendered his resignation from BHEL's Board of Directors w.e.f. September 12, 2022 citing his pre-occupation in personal affairs & that he shall not be able to devote sufficient time towards discharge of his responsibilities as an Independent Director of the Company. Both Independent Directors had confirmed that there are no other material reasons other than those provided by them for resignation.

vii. Information placed before the Board of Directors

The agenda placed before the Board interalia includes the following: -

- Annual operating plans and budgets and any updates.
- Capital budgets and any updates.
- Significant Capital Investment proposals.
- Short term investment of surplus funds.
- Sale of investments, subsidiaries and assets which are material in nature and not in normal course of business.
- Changes in significant accounting policies & practices and reasons for the same.
- Quarterly results for the Company and its operating divisions or business segments.
- Quarterly details of foreign exchange exposures and the steps taken by management to limit the issues of adverse exchange rate movement, if material.
- Quarterly report on compliance of various laws.

- Status of arbitration cases and major legal disputes.
- Minutes of meetings of Audit Committee and other Committees of the Board.
- The information on recruitment of senior officers just below the Board level.
- Details of any Joint Venture or R&D project or technical collaboration agreement requiring approval of Board of Directors.
- Significant labour problems and their proposed solutions.
- Any significant development in Human Resources/ Industrial Relations front like signing of wage agreement, implementation of Voluntary Retirement Scheme etc.
- Action Taken Report on matters desired by the Board.
- Any contract(s) in which Director(s) are deemed to be interested.
- Disclosure of Interest by Directors about directorships and Committee positions occupied by them in other companies.
- Any other matters required to be presented to the Board either for information or approval under Listing Regulations, DPE guidelines and Secretarial Standard-1 on Meetings of the Board of Directors etc.

The Board has constituted various Committees to facilitate the smooth and efficient flow of decision making process. The minutes of all Board level committees are circulated and discussed in the Board meetings. There was no instance where the Board had not accepted any recommendation of any Committee of the Board which is mandatorily required, during the year under review.

viii. Selection of New Directors

As per Articles of Association of BHEL, the President of India through the Ministry of Heavy Industries, appoints the Chairman & Managing Director and Functional Directors on the Board of BHEL. Two Part-time Official Directors are nominated by the Administrative Ministry on the Board of BHEL. The President of India also appoints Part-time Non-official (Independent) Directors on the Board of BHEL.

The Independent Directors are selected by the Ministry of Heavy Industries in consultation with the Search Committee of the Department of Public Enterprises which maintains a panel of eminent personalities having wide experience in the field of Management, Finance, Engineering, Administration, Industry etc.

ix. Membership Term & Retirement Policy

The appointment of Chairman & Managing Director and Functional Directors is made for a period of five years from

the date of their assumption of charge of the post, or till the date of their superannuation or until further orders, whichever is the earliest. The Part-time Official Directors continue to be on the Board of BHEL at the discretion of the Government of India. The tenure of Part-time Non-official (Independent) Directors is decided by the Administrative Ministry. Normally, an Independent Director is appointed for a period of three years.

x. Code of Conduct

BHEL has in place a Board approved "Code of Business Conduct and Ethics for Board Members and Senior Management Personnel" in line with Clause 49 of the erstwhile Listing Agreement since 2005. The Code is revised from time to time in line with changes in the regulatory framework including changes in the Listing Agreement & business dynamics and to incorporate other relevant provisions to strengthen the Code. The extant Code is also in compliance with the Listing Regulations.

The Code encompasses:

- General Moral Imperatives;
- Specific Professional Responsibilities; and
- Specific Additional Provisions for Board Members and Senior Management Personnel.

A copy of the Code has been placed on the Company's website www.bhel.com.

xi. Charter of the Board of Directors

For the purpose of clearly defining the roles and responsibilities of the Board and individual Directors, the Board has laid down a Charter of the Board of Directors. The Charter also articulates BHEL corporate governance objectives and approach.

In line with the DPE guidelines, listing agreement and with the objective of providing the Directors a) insight into guidelines and procedures for successful discharge of their statutory duties, b) better understanding of the business environment to envision the future and develop strategies and c) need based training to meet the specific requirements of the board members, BHEL Board has approved a policy for Training of Directors. It covers both general and specific trainings more tuned towards Company specific areas.

xii. Certificate by Company Secretary in Practice

The Company has received a certificate from a company secretary in practice that none of the Directors on the Board of the Company have been debarred or disqualified from being appointed or continuing as Director of the Company by SEBI/ Ministry of Corporate Affairs or any such statutory authority. The same is enclosed.

xiii. CEO/ CFO Certification

In terms of Regulation 17(8) of Listing Regulations, the Compliance certificate issued by the CEO and CFO on the financial statements and internal controls relating to financial reporting was placed before the Board.

2.3 Board Level Audit Committee

i. Terms of reference

The terms of reference of the Board Level Audit Committee specified by the Board are in conformity with the requirements of Section 177 of the Companies Act, 2013 as well as Listing Regulations and are as under:

1. 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;
2. Recommendation for appointment, remuneration and terms of appointment of auditors of the company;
3. Approval of payment to statutory auditors for any other services rendered by the statutory auditors;
4. Reviewing, with the management, the annual financial statements and auditor's report thereon before submission to the board for approval, with particular reference to:
 - i. 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;
 - ii. Changes, if any, in accounting policies and practices and reasons for the same;
 - iii. Major accounting entries involving estimates based on the exercise of judgment by management;
 - iv. Significant adjustments made in the financial statements arising out of audit findings;
 - v. Compliance with listing and other legal requirements relating to financial statements;
 - vi. Disclosure of any related party transactions;
 - vii. Qualifications in the draft audit report;
5. Reviewing, with the management, the quarterly financial statements and auditor's report thereon before submission to the board for approval;
6. Reviewing, with the management, the statement of uses/ application of funds raised through an issue (public issue, rights issue, preferential issue, etc.), the statement of funds utilized for purposes other than those stated in

- the offer document/ prospectus/ notice and the report submitted by the monitoring agency monitoring the utilization of proceeds of a public or rights issue and making appropriate recommendations to the Board to take up steps in this matter;
7. Review and monitor the auditor's independence and performance, and effectiveness of audit process;
 8. Approval or any subsequent modification of transactions of the company with related parties;
 9. Scrutiny of inter-corporate loans and investments;
 10. Reviewing the utilization of loans and/ or advances from/investment by the holding company in the subsidiary exceeding ₹ 100 crore or 10% of the asset size of the subsidiary, whichever is lower including existing loans/ advances/ investments existing as on the date of coming into force of this provision;
 11. Valuation of undertakings or assets of the company, wherever it is necessary;
 12. Evaluation of internal financial controls and risk management systems;
 13. Reviewing, with the management, performance of statutory and internal auditors, adequacy of the internal control systems;
 14. 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;
 15. Discussion with internal auditors of any significant findings and follow up there on;
 16. 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;
 17. Discussion with statutory auditors before the audit commences, about the nature and scope of audit as well as post-audit discussion to ascertain any area of concern;
 18. 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;
 19. To review the functioning of the Whistle Blower/ Vigil mechanism;
 20. To review the Audit paras referred to BLAC by the Internal Audit/ Board and/ or Govt. of India and to provide its suggestions/ guidance/ comments on the issues referred to it;
 21. Discussion with Statutory Auditors/ Internal Auditors periodically about internal control systems;
 22. To consider and comment on rationale, cost-benefits and impact of schemes involving merger, demerger, amalgamation etc., on the listed entity and its shareholders;
 23. To seek professional advice from external sources in appropriate cases, wherever required;
 24. The Audit Committee shall also review the following information:
 - i. Management discussion and analysis of financial condition and results of operations;
 - ii. Statement of significant related party transactions;
 - iii. Management letters / letters of internal control weaknesses issued by the statutory auditors; and
 - iv. Internal audit reports relating to internal control weaknesses;
 25. Carrying out any other function related to the terms of reference of the Audit Committee as prescribed under the Companies Act, SEBI Regulations and other statutory regulations.
- ii. Composition of Committee, name of Members & Chairperson**
- The composition of the Audit Committee is in compliance with Listing Regulations and Companies Act, 2013. The Audit Committee is chaired by an Independent Director. The member Directors comprise of professionals of repute and standing with background in commerce, finance, administration and governance.

The Audit Committee was last reconstituted w.e.f. February 14, 2023. The composition of the Audit Committee during the year comprised of the following Directors:

Name of the Director S/ Shri	Position	No. of Meetings	
		Held during their tenure	Attended
Manish Kapoor, Independent Director (upto January 27, 2023)	Chairperson	6	6
Dr. K. Sivaprasad, Independent Director	Chairperson (w.e.f. February 10, 2023)	2	2
	Member (upto February 9, 2023)	6	6
Shashank Priya, Part-time Official Director (upto February 14, 2023)	Member	7	5
Ms. Arti Bhatnagar, AS & FA, M/o Commerce & Industry, Part-time Official Director	Member (w.e.f. February 14, 2023)	1	1
Raj Kamal Bindal, Independent Director (upto January 27, 2023)	Member	6	6
Dr. Raj K. Agarwal, Independent Director (upto September 12, 2022)	Member	3	3
Dr. Lekhasri Samantsinghar, Independent Director	Member (w.e.f. November 11, 2022)	4	4

Director (Finance), Director (IS&P) and Director (E, R&D) are permanent invitees. Company Secretary acts as Secretary to the Committee.

Head of Internal Audit and a representative of the Statutory Auditor may be present as invitees for the meetings of the

Audit Committee. The Auditors of the Company and the Key Managerial Personnel shall have a right to be heard in the meetings of the Audit Committee when it considers the Auditor's Report but shall not have the right to vote.

iii. Meetings and Attendance

The Audit Committee met eight times on May 21, 2022, August 4, 2022, August 18, 2022, September 22, 2022, November 11, 2022, December 16, 2022, February 10, 2023 and March 25, 2023 during the year under review. The details of attendance of each member is given in the previous table.

2.4 Nomination and Remuneration Committee

i. Remuneration Policy

BHEL being a Public Sector Undertaking, the appointment and remuneration of Chairman & Managing Director/ Functional Directors are decided by the Government of India. The terms of appointment of Chairman & Managing Director/ Directors, as approved by the President of India, provide for fixation of certain perks and benefits, as per rules of BHEL. The part-time non-executive directors are not paid any remuneration except sitting fees to Independent Directors for attending meetings of the Board or Committee thereof.

ii. Terms of Reference

In line with the requirements of Section 178 of the Companies Act, 2013 and Clause 49 of the erstwhile Listing Agreement (now Listing Regulations), the Board constituted the Nomination & Remuneration Committee (NRC) w.e.f. March 30, 2015. The terms of reference of the Committee are inline with the requirements of Section 178 of the Companies Act, 2013 as well as the Listing Regulations and are as under:

- To identify persons who are qualified to become directors and who may be appointed in senior management in accordance with the criteria laid down and recommend to the Board for their appointment and removal and shall specify the manner for effective evaluation of performance of Board, its committees and individual directors to be carried out either by the Board, by the Nomination and Remuneration Committee or by an independent external agency and review its implementation and compliance;
- To formulate the criteria for determining qualifications, positive attributes and independence of a director and recommend to the Board a policy, relating to the remuneration of the directors, key managerial personnel and other employees in compliance with the provisions of Act/ Listing Regulations/ DPE guidelines;
- Formulation of criteria for evaluation of Independent Directors and the Board;
- Devising a policy on Board diversity;

5. To recommend to the Board, nomination of BHEL officials in the Boards of its subsidiaries and other government organizations which are required to be approved by the Board of BHEL before further submission to MHI;
6. Oversight of the company's policy on specific remuneration packages, perquisites for Whole-time Directors including pension rights and any compensation payment, which are not fixed by the President of India;
7. Approve certain perquisites for Whole-time Directors which are within the powers of Board. Review of the elements of remuneration package of individual directors summarized under major groups, such as incentives/ benefits, bonus, stock options, pension etc.;
8. Finalization of policies on perks and benefits and other related matters which are not fixed by the President of India but within the powers of Board;
9. Approval of fixed component and performance linked incentives based on the performance criteria;
10. Finalization of the criteria of making payments to Non-Executive Directors;
11. Recommendation of fees/ compensation/ stock options, if any, to be paid/ granted, to non-executive directors, including independent directors, to the Board of Directors/ Shareholders;
12. Recommendation to the board, all remuneration, in whatever form, payable to senior management;
13. To decide the bonus/ variable pay pool and policy for its distribution across the executives and non-unionised supervisors;
14. Carrying out any other function related to the terms of reference of the NRC as prescribed under the Companies Act, SEBI Regulations and other statutory regulations.

MCA vide Notification dated June 5, 2015 provided that Section 178 (2), (3) & (4) of the Companies Act, 2013 with regard to performance evaluation of Directors shall not apply to Government Company.

iii. Composition of Committee, name of Members & Chairperson

The Nomination & Remuneration Committee was last reconstituted w.e.f. February 10, 2023. The composition of the Committee during the year comprised of the following Directors:

Name of the Director S/ Shri	Position	No. of Meetings	
		Held during their tenure	Attended
Manish Kapoor, Independent Director (upto January 27, 2023)	Chairperson	1	1
Dr. Lekhasri Samantsinghar, Independent Director	Chairperson (w.e.f. February 10, 2023)	0	0
	Member (upto February 9, 2023)	1	1
Vijay Mittal, JS, MHI, Part-time Official Director	Member	1	1
Dr. K. Sivaprasad, Independent Director	Member (w.e.f. November 11, 2022)	0	0
Aditya Prasad Sahu, Independent Director (upto May 30, 2022)	Member	0	0

Head (HR), Corporate Office is permanent invitee. Company Secretary acts as Secretary to the Committee.

iv. Meetings and Attendance

The Nomination & Remuneration Committee met once on August 3, 2022 during the year under review. The details of attendance of each member is given in the above table.

v. Details of remuneration of Functional Directors during the year 2022-23 are given below:

(in ₹)

Sl. No.	Name of the Director S/Shri	Salary	Benefits	Other Benefits	Performance Linked Incentives	Total	Service Contract/ Notice Period Severance Fee
1.	Dr. Nalin Shinghal	56,31,608	9,85,870	36,039	-	66,53,516	----
2.	Subodh Gupta	45,30,436	9,08,673	3,30,219	-	57,69,328	Liable to retire by rotation
3.	Ms. Renuka Gera, Director (IS&P)	45,82,728	9,19,193	6,53,976	-	61,55,897	Liable to retire by rotation
4.	Upinder Singh Matharu, Director (Power)	45,53,116	9,11,479	6,52,646	-	61,17,241	Liable to retire by rotation
5.	Jai Prakash Srivastava, Director (E, R&D) (w.e.f. August 12, 2022)	30,96,690	6,03,811	3,48,844	-	40,49,345	Liable to retire by rotation

vi. Details of payments made to Independent Directors during the year 2022-23 are given below: -

(in ₹)

Name of the Independent Directors	Sitting Fees		Total
	Board Meeting	Committee Meeting	
Shri Raj Kamal Bindal	2,70,000/-	2,80,000/-	5,50,000/-
Shri Manish Kapoor	2,70,000/-	2,40,000/-	5,10,000/-
Dr. Raj K. Agarwal	1,80,000/-	1,00,000/-	2,80,000/-
Dr. K. Sivaprasad	3,30,000/-	3,00,000/-	6,30,000/-
Dr. Lekhasri Samantsinghar	3,30,000/-	2,60,000/-	5,90,000/-
Shri Aditya Prasad Sahu	60,000/-	20,000/-	80,000/-

During FY 2022-23, Independent Directors were entitled for sitting fee @ ₹ 30,000/- per Board Meeting and ₹ 20,000/- per Board Level Committee Meeting attended by them. Independent Directors are not entitled to Stock Option.

vii. Equity Shares held by Directors

Except as stated hereunder, none of the Directors hold any equity shares in BHEL (as on March 31, 2023):

Name of the Director	No. of shares held
Dr. Nalin Shinghal (jointly with spouse)	100

The Company has not issued any stock options during the year 2022-23.

2.5 Shareholders Committees

2.5.1 Stakeholders Relationship Committee

i. Terms of Reference

The Board of Directors on May 12, 2014 reconstituted the Shareholders'/ Investors' Grievance Committee as the Stakeholders Relationship Committee (SRC), in line with the requirements of Companies Act, 2013 and erstwhile Listing Agreement (now Listing Regulations). The terms of reference of the Committee are in line with the requirements of Section 178 of the Companies Act, 2013 as well as the Listing Regulations and are as under:

1. Resolution of the grievances of the security holders of the Company including complaints related to transfer/ transmission of shares, non-receipt of annual report, non-receipt of declared dividends, issue of new/ duplicate certificates, general meetings etc.;
2. Reviewing measures taken for effective exercise of voting rights by shareholders;
3. Reviewing adherence to the service standards adopted by the Company in respect of various services being rendered by the Registrar & Share Transfer Agent;
4. Reviewing the various measures and initiatives taken by the Company for reducing the quantum of unclaimed dividends and ensuring timely receipt of dividend warrants/ annual reports/ statutory notices by the shareholders of the company;
5. To look into various aspects of interest of shareholders, debenture holders and other security holders;
6. Carrying out any other function related to the terms of reference of the Committee as prescribed under the Companies Act, SEBI Regulations and other statutory regulations.

ii. Composition of Committee, name of Members & Chairperson

The Stakeholders Relationship Committee was last reconstituted w.e.f. February 14, 2023. The composition of the Committee during the year comprised of the following Directors:

Name of the Director S/ Shri	Position	No. of Meetings	
		Held during their tenure	Attended
Manish Kapoor, Independent Director (upto January 27, 2023)	Chairperson	3	3
Dr. K. Sivaprasad, Independent Director	Chairperson (w.e.f. February 10, 2023)	1	1
	Member (upto February 9, 2023)	3	3
Shashank Priya, Part-time Official Director (upto February 14, 2023)	Member	4	4
Ms. Arti Bhatnagar, AS & FA, M/o Commerce & Industry, Part-time Official Director	Member (w.e.f. February 14, 2023)	0	0
Director (Finance)	Member	4	4
Director (IS&P)	Member	4	4

Chief Investor Relationship Officer (CIRO) is permanent invitee. Company Secretary acts as Secretary to the Committee.

Shri Rajeev Kalra, Company Secretary is the Compliance Officer in terms of the SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015.

iii. Meetings and Attendance

The Committee met four times on May 13, 2022, August 3, 2022, November 11, 2022 and February 10, 2023 during the year under review. The details of attendance of each member is given in the above table.

Detail of shareholders' complaints

As reported by Alankit Assignments Limited (RTA) to SEBI, 13 complaints were received from the shareholders during the year under review and all complaints were redressed up to March 31, 2023. No complaint was pending at the end of the period under report.

2.5.2 Share Transfer Committee

The Share Transfer Committee was constituted by the Board of Directors on March 25, 1992. Subsequently, the Board of Directors revised the terms of reference of the Committee w.e.f. August 1, 2014. The Share Transfer Committee considers and approves share related matters pertaining to transposition, sub-division, consolidation, issue of duplicate share certificate etc., in physical mode. The Share Transfer Committee was last reconstituted w.e.f. February 6, 2021 with Director (Finance) as Chairperson along with Director (E, R&D) and Director (IS&P) as Members.

Meetings during 2022-23

The Share Transfer Committee met seven times during the year. The minutes of the Share Transfer Committee meetings are periodically placed before the Board of Directors.

2.6 Board Level Committee for Corporate Social Responsibility

i. Terms of Reference

Pursuant to the DPE Guidelines on Corporate Social Responsibility for CPSEs, the Board constituted the Board Level Apex Committee for CSR on November 25, 2010 for proper & periodic monitoring of CSR activities. The Committee is presently christened as the Board Level Committee for Corporate Social Responsibility. In line with Section 135 of the Companies Act, 2013, the terms of reference of the Committee are as under:

1. Formulation and recommendation to the Board the Corporate Social Responsibility Policy which shall indicate the activities to be undertaken by the Company in areas or subject, specified in Schedule VII to the Companies Act, 2013;
2. Recommendation of the Projects, Programs and amount of expenditure to be incurred on the activities referred to in clause (1);
3. Monitoring the Corporate Social Responsibility activities of the Company from time to time;
4. Ensuring compliance with guidelines on Corporate Social Responsibility and Sustainable Development issued by the Government of India from time to time.

ii. Composition of Committee, name of Members & Chairperson

The Committee was last reconstituted w.e.f. February 10, 2023. The composition of the Committee during the year comprised of the following Directors:

Name of the Director S/ Shri	Position	No. of Meetings	
		Held during their tenure	Attended
Manish Kapoor, Independent Director (upto January 27, 2023)	Chairperson	1	1
Dr. K. Sivaprasad, Independent Director	Chairperson (w.e.f. February 10, 2023)	0	0
	Member (upto February 9, 2023)	1	1
Aditya Prasad Sahu, Independent Director (upto May 30, 2022)	Member	0	0
Director (Finance)	Member	1	1
Director (HR)	Member (w.e.f. November 11, 2022)	0	0

Head (CSR), Corporate Office is permanent invitee. Company Secretary acts as Secretary to the Committee.

iii. Meetings and Attendance

The Committee met one time on August 3, 2022 during the year under review. The details of attendance of each member is given in the above table.

2.7 HR Committee

i. Terms of Reference

The Board constituted the HR Committee on May 31, 2006 specifically to look into the following matters:

- Review of present policies with respect to promotion and reward/ incentive to the Executives.
- Suggest both short term and long term changes in the policies to prepare BHEL for the changed/ emerging business environment.

ii. Composition of Committee, name of Members & Chairperson

The Committee was last reconstituted w.e.f. February 10, 2023. The composition of the Committee during the year comprised of the following Directors:

Name of the Director S/ Shri	Position
Raj Kamal Bindal, Independent Director (upto January 27, 2023)	Chairperson
Dr. Lekhasri Samantsinghar, Independent Director	Chairperson (w.e.f. February 10, 2023)
	Member (w.e.f. November 11, 2022 upto February 9, 2023)
Director (IS&P)	Member
Director (E,R&D)	Member
Director (HR)	Member (w.e.f. November 11, 2022)

Head (HR), Corporate Office is permanent invitee. Company Secretary acts as Secretary to the Committee.

iii. Meetings and Attendance

No meeting of the HR Committee took place during the year.

2.8 Committee of Independent Directors

i. Terms of Reference

The Board, in line with DPE OM dated December 28, 2012 on Model Role & Responsibilities of Non-Official Directors for CPSEs, constituted a Committee of Independent Directors, which is also in compliance with the requirements of Schedule IV of the Companies Act, 2013 and Listing Regulations.

ii. Composition of Committee, name of Members & Chairperson

The composition of the Committee during the year comprised of the following Directors

Name of the Director S/ Shri	Position	No. of Meetings	
		Held during their tenure	Attended
Raj Kamal Bindal (upto January 27, 2023)	Chairperson & Lead Independent Director	1	1
Dr. K. Sivaprasad, Independent Director	Chairperson & Lead Independent Director (w.e.f. January 28, 2023)	0	0
	Member (upto January 27, 2023)	1	1
Manish Kapoor (upto January 27, 2023)	Member	1	1
Dr. Raj K. Agarwal (upto September 12, 2022)	Member	0	0
Dr. Lekhasri Samantsinghar	Member	1	1
Aditya Prasad Sahu (upto May 30, 2022)	Member	0	0

iii. Meetings and Attendance

The Committee met one time on January 10, 2023 during the year under review. The details of attendance of each member is given in the above table.

2.9 Board Level Risk Management Committee

i. Terms of Reference

In line with erstwhile Listing Agreement (now SEBI Listing Regulations), the Board of Directors on November 14, 2014 constituted the Board Level Risk Management Committee. The terms of reference of the Board Level Risk Management

Committee is in line with the requirements of Listing Regulations and are as under:

- To formulate a detailed risk management policy which shall include (a) A framework for identification of internal and external risks specifically faced by the listed entity, in particular including financial, operational, sectoral, sustainability (particularly, ESG related risks), information, cyber security risks or any other risk as may be determined by the Committee, (b) Measures for risk mitigation including systems and processes for internal control of identified risks, (c) Business continuity plan;
- To ensure that appropriate methodology, processes and systems are in place to monitor and evaluate risks associated with the business of the Company;
- To monitor and oversee implementation of the risk management policy, including evaluating the adequacy of risk management systems;
- To periodically review the risk management policy, at least once in two years, including by considering the changing industry dynamics and evolving complexity;
- To keep the board of directors informed about the nature and content of its discussions, recommendations and actions to be taken;
- The appointment, removal and terms of remuneration of the Chief Risk Officer (if any) shall be subject to review by the Risk Management Committee;
- To seek information from any employees, obtain outside legal or other professional advice and secure attendance of outsiders with relevant expertise, if it considers necessary;
- To coordinate its activities with other committees, in instances where there is any overlap with activities of such committees, as per the framework laid down by the Board of Directors;
- Carrying out any other function related to the terms of reference of the Committee as prescribed under the Companies Act, SEBI Regulations and other statutory regulations.

ii. Composition of Committee, name of Members & Chairperson

The Committee was last reconstituted on February 14, 2023. The composition of the Committee during the year comprised of the following members:

Name of the Director S/ Shri	Position	No. of Meetings	
		Held during their tenure	Attended
Shashank Priya, Part-time Official Director (upto February 14, 2023)	Chairperson	3	3
Ms. Arti Bhatnagar, AS & FA, M/o Commerce & Industry, Part-time Official Director	Chairperson (w.e.f. February 14, 2023)	0	0
Raj Kamal Bindal, Independent Director (upto January 27, 2023)	Member	3	3
Dr. Raj K. Agarwal, Independent Director (upto September 12, 2022)	Member	1	1
Dr. K. Sivaprasad, Independent Director	Member (w.e.f. November 11, 2022)	1	1
Dr. Lekhasri Samantsinghar, Independent Director	Member (w.e.f. November 11, 2022)	1	1
Director (Finance)	Member	3	3
Director (IS&P)#	Member	3	2
Director (Power)*	Member	3	2
Director (E, R&D) #	Member	3	3
Director (HR) *	Member (w.e.f. November 11, 2022)	1	0
Chairman, Risk Management Steering Committee	Member	3	3
Chief Risk Officer	Member & Convener	3	3

During the meeting held on April 23, 2022, Director (IS&P) was holding additional charge of the post of Director (E, R&D)

* During the meeting held on January 10, 2023, Director (Power) was holding additional charge of the post of Director (HR).

iii. Meetings and Attendance

The Committee met three times on April 23, 2022, October 18, 2022 and January 10, 2023 during the year under review. The details of attendance of each member is given in the above table.

2.10 Board Level Project Review Committee

i. Terms of Reference

The terms of reference of the Board Level Project Review Committee is as under:

- The Committee shall review the status of all projects with contract value of ₹ 500 Crore and above;
- The Committee shall review the periodical status of the debtors;
- The Committee may invite such executives, as it considers appropriate to be present at the meetings of the Committee.

ii. Composition of Committee, name of Members & Chairperson

The composition of the Committee during the year comprised of the following Directors:

Name of the Director S/ Shri	Position	No. of Meetings	
		Held during their tenure	Attended
Vijay Mittal, JS, MHI, Part-time Official Director	Chairperson	2	2
Raj Kamal Bindal, Independent Director (upto January 27, 2023)	Member	1	1
Dr. Raj K. Agarwal, Independent Director (upto September 12, 2022)	Member	1	1
Dr. Lekhasri Samantsinghar, Independent Director	Member	2	2
Director (IS&P)	Member	2	2
Director (Power)	Member	2	2

Head (PS-Project Management) & Head (Receivable Management) are Convener of the Committee for the respective agenda. Director (Finance) is invitee to the meetings of the Committee. Heads of respective Business Sectors shall be invited as and when required. Company Secretary shall act as Secretary to the Committee.

iii. Meetings and Attendance

The Committee met two times on May 13, 2022 and February 21, 2023 during the year under review. The details of attendance of each member is given in the above table.

2.11 Committee on Arbitration & Major Legal Disputes and Alternative Dispute Resolution

i. Terms of Reference

The terms of reference of the Committee is to review the arbitration cases as well as major legal disputes and thereafter apprise the Board accordingly and to act as the Competent Authority for accepting/rejecting the draft settlement agreement under the BHEL Conciliation Scheme, 2018.

ii. Composition of Committee, name of Members & Chairperson

The Committee was last reconstituted w.e.f. February 10, 2023. The composition of the Committee during the year comprised of the following Directors:

Name of the Director S/ Shri	Position	No. of Meetings	
		Held during their tenure	Attended
Raj Kamal Bindal, Independent Director (upto January 27, 2023)	Chairperson	3	3
Dr. Lekhasri Samantsinghar, Independent Director	Chairperson (w.e.f. February 10, 2023)	1	1
	Member (upto February 9, 2023)	3	3
Vijay Mittal, JS, MHI, Part-time Official Director	Member	4	3
Aditya Prasad Sahu, Independent Director (upto May 30, 2022)	Member	1	1
Director (IS&P)*	Member	4	4
Director (Power)#	Member	4	4
Director (E, R&D)*	Member	4	4
Director (HR)#	Member (w.e.f. November 11, 2022)	2	2

During the meetings held on November 18, 2022 and February 21, 2023, Director (Power) was holding additional charge of the post of Director (HR).

* During the meetings held on May 13, 2022 and August 3, 2022, Director (IS&P) was holding additional charge of the post of Director (E, R&D).

Head-Law, Corporate Office is convener of the Committee and furnishes the required information for review by the Committee. Head (HR), Corporate Office is permanent invitee.

iii. Meetings and Attendances

The Committee met four times on May 13, 2022, August 3, 2022, November 18, 2022 and February 21, 2023 during the year under review. The details of attendance of each member is given in the above table.

2.12 General Meetings

i. Location and time of last three AGMs:

Year	Location	Date	Time
FY 2019-20 (56th AGM)	Meeting was held through video-conferencing. Deemed venue was Registered Office of the Company	September 28, 2020	10.00 a.m.
FY 2020-21 (57th AGM)	Meeting was held through video-conferencing. Deemed venue was Registered Office of the Company	September 23, 2021	10.00 a.m.
FY 2021-22 (58th AGM)	Meeting was held through video-conferencing. Deemed venue was Registered Office of the Company	September 29, 2022	10.00 a.m.

ii. Details of Special Resolutions passed in previous three AGMs

In line with the provisions of Regulation 25(2A) of the SEBI Listing Regulations, Special Resolutions were passed in the 58th Annual General Meeting held on September 29, 2022 for appointment of Dr. Raj K. Agarwal, Dr. K. Sivaprasad and Dr. Lekhasri Samantsinghar as Independent Directors.

iii. Postal Ballot

No special resolutions were passed through postal ballot in the previous year. There is no proposal for passing any special resolution through postal ballot during FY 2023-24.

2.13 Disclosures

i. Disclosures on materially significant related party transactions that may have potential conflict with the interests of Company at large

The Company has not entered into any materially significant related party transactions (RPTs) that may have potential conflict with the interests of the Company at large. Nonetheless, transactions with related parties have been disclosed in Notes to the financial statements 2022-23 in the Annual Report.

The Company's policy determining Material Subsidiaries and policy dealing with Related Party Transactions is available at

https://www.bhel.com/sites/default/files/Policy%20on%20RPTs%20wef%2001042022_0.pdf

ii. Non-compliances, penalties & strictures imposed on the Company related to capital markets during the last three years

There were no cases of non-compliance by the Company on any matter related to capital markets during the last three years and no penalties/ strictures were enforced on the Company by Stock Exchanges/ SEBI or any other statutory authority on any matter related to capital market.

However, the Company received notices from NSE as well as BSE imposing fine Q2 and Q3 of FY 2022-23 for non-compliance with the provision of Regulation 17 (1) of the SEBI Listing Regulations regarding composition of Board as number of Independent Directors were less than the minimum numbers prescribed. In response to the notices, the Company clarified to the Exchanges that the shortfall in Independent Directors was not due to any negligence/ default of the Company, as the appointment is not within its control. In view thereof, the Company has requested the Exchanges to waive-off the fine under their carve-out policies. The matter of appointment of Independent Directors is under process with Government of India. During FY 2022-23, the Company also received notices from NSE and BSE imposing fine for non-compliance with Regulation 57(1) of SEBI Listing Regulations regarding delay in filing of intimation about redemption obligation of Commercial Paper during COVID in January, 2021. Based on the representation of the Company seeking waiver of fine considering exceptional COVID times, the Stock Exchanges waived the fine levied.

iii. Vigil Mechanism/Whistle Blower Policy

In pursuance of the DPE Guidelines on Corporate Governance for Central Public Sector Enterprises and Clause 49 of the Listing Agreement between listed Companies & the Stock Exchanges and Section 177 of the Companies Act, 2013, a detailed Whistle Blower Policy was drafted by the Company and it was duly approved by the Board of Directors in its 464th meeting held on August 12, 2014. The policy is also in line with Listing Regulations. Subsequent to this, a Circular notifying the Whistle Blower Policy and informing the contact details of the Competent Authority and of Chairman, Audit Committee was issued for the notice of all employees.

A copy of the Whistle Blower Policy has also been placed on the website of the Company www.bhel.com for wide publicity. Changes in address, contact number(s) and email address of the Competent Authority and Chairman, Audit Committee are being notified from time to time.

The complaints received under the Policy are being processed as per the guidelines in this regard and no employee has been denied access to the Audit Committee.

iv. Compliance with the requirements of DPE Guidelines on Corporate Governance, compliance with mandatory requirements and adoption of the non-mandatory Corporate Governance requirements of Listing Regulations

All mandatory requirements of the DPE Guidelines on Corporate Governance for CPSEs and SEBI (Listing Obligations & Disclosure Requirements), 2015 have been duly complied with by the Company as on March 31, 2023. With regard to non-mandatory requirements under the Listing Regulations, BHEL is already in the regime of financial statements with unmodified audit opinion.

No expenditure has been debited in books of accounts which is not for the purpose of business and no expenses incurred & accounted which are personal in nature and incurred for the Board of Directors & Top Management. The other expenses (including administrative and other miscellaneous expenses) as a percentage of total expenses have been curtailed to 6.26%. The same has been made possible by various cost reduction measures and stringent budgetary controls.

v. Presidential Directives

No Presidential Directive was received during the last three years i.e. 2020-2021, 2021-22 and 2022-23.

vi. Risk Management

In compliance of SEBI Regulations, 2015 & amendments thereof and DPE guidelines on Corporate Governance for CPSEs, BHEL has in place a Board approved Risk Management Charter & Policy, laying down procedures to inform Board members about the risk assessment, minimization and mitigation. An important purpose of the Charter is to implement a structured and comprehensive risk management system across the Company which ensures that the risks are being properly identified and effectively managed. The risk management process includes risk identification, risk assessment, risk evaluation, risk mitigation and regular review & monitoring. Details are in para 1.15 of 'Risks and Concerns'.

vii. Sexual Harassment of Women at Workplace (Prevention, Prohibition & Redressal) Act, 2013

The information on disclosure in relation to Sexual Harassment of Women at Workplace (Prevention, Prohibition & Redressal) Act, 2013 is part of Board's Report and is available as Annexure I to Para 1.12.5.2 'Safeguard of Women at Workplace'.

viii. Utilization of funds raised through preferential allotment or qualified institutions placement as specified under Regulation 32 (7A)

NIL

ix. 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

Total fees for all services paid to the statutory auditors and branch auditors are disclosed in Notes to the financial statements. The auditors of joint venture companies are appointed separately by them and are not same auditors who are conducting audit of financial statements of BHEL.

x. Loans and advances to firms/companies in which directors are interested

NIL

xi. Details of material subsidiaries of the listed entity & statutory auditors thereof

Not Applicable

xii. Compliance Certificate on Corporate Governance

Compliance Certificate on Corporate Governance is enclosed.

2.14 Means of Communication

As required under the Listing Regulations, the Company issues a notice in advance, to the Stock Exchanges, of the Board Meetings in which the unaudited/ audited financial results are due for consideration. Further, the said results are intimated immediately to the Stock Exchanges, after they are taken on record/ approved. These approved financial results are published within 48 hours of conclusion of the Board Meeting in at least one English daily newspaper circulating in the whole or substantially the whole of India and in one daily newspaper published in the language of the region, where the registered office of the Company is situated and also uploaded on the Company's website (www.bhel.com). Other information pertaining to shareholders viz. changes in directorship, details of unpaid dividend, Annual Reports etc., are also displayed on the Company's website. Official news releases including important events like receipt of major orders, major projects commissioned, important collaborations, other material events etc. are posted on the website of the Company and simultaneously sent to the Stock Exchanges. During FY 2022-23, conference calls were held and detailed result documents & supplementary information/ presentations were also uploaded post financial result declaration on the stock exchange websites as well as on Company's website, though BHEL has not made any presentation on financial results to analysts or institutional investors separately. BHEL has also engaged investors via web meetings, face to face interactions and investor conference.

In compliance with Regulation 46 of the SEBI Listing Regulations, the Company disseminates on its website information which interalia contains, details regarding composition of various committees of Board of Directors, code of conduct, policy dealing with RPTs, contact information of the designated officials of the Company responsible for assisting and handling investor grievances etc.

In pursuance of the “Green Initiatives” of the Ministry of Corporate Affairs, Government of India, the Company sends the Annual Report and the Notice convening the Annual General Meeting through email to those shareholders who have registered their email ids with the Depository Participants/ RTA and have not opted for a physical copy of the Annual Report. For continued success of this initiative, shareholders are requested to register their email ids with their Depository Participants/ RTA.

2.15 General Shareholder Information

	AGM Date	Time	Venue
i.	August 24, 2023	10:00 AM	The Company is conducting meeting through VC pursuant to the MCA Circular dated December 28, 2022 read with MCA Circular dated May 5, 2020 and as such deemed venue for the AGM shall be the registered office of the Company. For details please refer to the Notice of this AGM.
ii.	Financial year	April 01, 2022 to March 31, 2023	
iii.	Record Date	Friday, August 11, 2023	
iv.	Dividend payment date	On or before September 22, 2023	

The annual return is available at <https://www.bhel.com/agm-related>

v. Dividend History:

The details of dividend paid by BHEL (and not due for transfer to Investor Education Protection Fund) are summarized as under:

Year	Rate of Dividend	Total Amount of Dividend Paid (₹ in Crore)	Date on which Dividend was Declared
2015-2016 (Final)	20%	97.90	22.09.2016
2016-2017 (Interim)	40%	195.81	07.02.2017*
2016-2017 (Final)	39%	190.92	22.09.2017
2017-2018 (Interim)	40%	293.72	08.02.2018*
2017-2018 (Final)	51%	374.48	19.09.2018
2018-2019 (Interim)	40%	278.57	05.02.2019*
2018-2019 (Final)	60%	417.85	19.09.2019
2021-2022 (Final)	20%	139.28	29.09.2022
2022-2023 (Final)	20%	139.28	**

* Date of meeting of Board of Directors in which interim dividend was declared.

** The Board in its meeting held on May 26, 2023 recommended final dividend for FY 2022-23, subject to approval of shareholders in AGM.

Note:

- During 2017-18, the Company allotted Bonus equity shares to its Shareholders on 03.10.2017 in the ratio of 1:2 i.e. one fully paid up new Bonus equity share of ₹ 2 each for every two fully paid up equity shares. Consequently, the total number of shares increased from 244.76 Crore to 367.14 Crore.
- During 2018-19, the Company made Buy Back of 18,93,36,645 fully paid up equity shares representing 5.16% of the total issued and paid-up equity share capital of the Company from its shareholders as on the record date (i.e. Tuesday, November 06, 2018), on a proportionate basis, through the “Tender Offer” process at a price of ₹ 86 per equity share payable in cash for an aggregate consideration of ₹ 1628.30 Crore. Consequently, the total number of shares have decreased from 367.14 Crore to 348.21 Crore.
- In case a shareholder has not claimed/received dividend for any of the last seven years and the same has not yet been transferred to the Investor Education & Protection

Fund (IEPF), he/ she can claim this unpaid dividend by following the procedure uploaded on the Company's website (www.bhel.com). Unclaimed dividend for the year 2014-15 (Final) has already been transferred to IEPF during the year 2022-23. Further, unclaimed dividends for the year 2015-16 (Final) and 2016-17 (Interim) are due for transfer to IEPF on 24.10.2023 and 08.03.2024 respectively.

- 4) In respect of dividend/shares which have been transferred to IEPF, shareholders can claim the same from IEPF authority by following the procedure prescribed under IEPF Authority (Accounting, Audit, Transfer and Refund) Rules, 2016. These Rules are available on the website of IEPF (www.iepf.gov.in) and company's website (www.bhel.com).

vi. a) Listing on Stock Exchanges and Stock Code

BHEL's equity shares are listed on the following Stock Exchanges for which listing fees for FY 2022-23 has been paid:

Name of the Stock Exchange	Stock Code
1. BSE Limited Phiroze Jeejeebhoy Towers, Dalal Street, Mumbai - 400 001	500103
2 National Stock Exchange of India Limited Exchange Plaza, Plot no. C/1, Block - G, Bandra Kurla Complex, Bandra (East), Mumbai - 400 051	BHEL

In addition, the Commercial Papers issued by the Company are also listed on the BSE & NSE.

b) Payment of Annual Custodian Fee to Depositories

The Annual Custodian fee has been paid to NSDL and CDSL for the financial year 2022-23.

vii. The High, Low, Close & Volume of BHEL shares and market index during each month in the financial year 2022-23 at BSE & NSE are indicated below:

Market Price Data: High, Low, Close during each month in the financial year 2022-23										
Months	BSE				NSE				Market Index (Close)	
	High	Low	Close	Volume	High	Low	Close	Volume	S&P BSE SENSEX	NSE NIFTY
	(in ₹)			(No. of shares in crore)	(in ₹)			(No. of shares in crore)		
Apr-22	58.65	49.50	52.65	4.69	58.65	49.45	52.65	53.10	57060.87	17102.55
May-22	55.80	44.55	51.25	4.99	55.80	44.50	51.20	61.26	55566.41	16584.55
Jun-22	52.80	41.40	45.00	2.88	52.70	41.40	44.95	34.08	53018.94	15780.25
Jul-22	54.75	44.40	53.85	2.76	54.75	44.40	53.85	34.27	57570.25	17158.25
Aug-22	60.65	51.40	58.75	4.83	60.70	51.35	58.80	55.98	59537.07	17759.30
Sep-22	65.05	54.75	59.85	5.21	65.10	54.75	59.90	57.02	57426.92	17094.35
Oct-22	74.70	59.90	74.05	6.08	74.75	59.90	74.05	77.35	60746.59	18012.20
Nov-22	84.85	69.05	83.65	6.24	84.85	69.05	83.70	76.08	63099.65	18758.35
Dec-22	91.45	73.05	79.20	5.54	91.55	73.10	79.20	72.22	60840.74	18105.30
Jan-23	83.50	71.70	78.50	2.67	83.50	71.65	78.40	34.83	59549.90	17662.15
Feb-23	79.65	66.30	69.75	2.10	79.70	66.30	69.80	30.50	58962.12	17303.95
Mar-23	79.90	69.59	70.13	1.85	79.95	69.50	70.05	30.02	58991.52	17359.75

Source: www.bseindia.com / www.nseindia.com

viii. Policy on Insider Trading

BHEL endeavours to preserve the confidentiality of unpublished price sensitive information and to prevent misuse of such information. For this purpose and in line with the SEBI (Prohibition of Insider Trading) Regulations, 1992, the Company had adopted 'Code of Conduct for Prevention of

Insider Trading' on 26th August, 2002 which was subsequently revised w.e.f. 29th January, 2009.

The Board, in its 469th meeting held on 6th April, 2015, approved the 'Code of Conduct for Regulating & Reporting Trading by Insiders and for Fair Disclosure, 2015' in line with SEBI (Prohibition of Insider Trading) Regulations,

2015. In pursuance to SEBI (Prohibition of Insider Trading) (Amendment) Regulations, 2018, the Board had also approved the revised BHEL Code of Conduct for Regulating & Reporting Trading by Designated Persons & their Immediate Relatives and for Fair Disclosure effective from 01.04.2019. The objective of the Code is to regulate, monitor and report trading by Designated Persons and Immediate Relatives of Designated Persons towards achieving compliance with SEBI (Prohibition of Insider Trading) Regulations, 2015. The Code also provides for practices and procedures for fair disclosure of Unpublished Price Sensitive Information. Head-Corporate Strategic Management Department is the Chief Investor Relations Officer of the company under this code.

ix. (A) Registrar & Share Transfer Agent for Equity Shares (RTA)

The Company has appointed M/s Alankit Assignments Limited as its Registrar and Share Transfer Agent (RTA) for handling all matters relating to the equity shares of BHEL (both physical as well as demat mode). All matters relating to the equity shares of the Company such as consolidation, loss of share certificates, transmission, dematerialization, dividend, change of address, etc. and related correspondence and queries may be addressed to: -

M/s Alankit Assignments Limited
 Unit: Bharat Heavy Electricals Limited
 4E/2, Alankit House, Jhandewalan Extension,
 New Delhi-110055
 Tel No.: 011-42541234
 Fax No.: 011-23552001
 Email: rt@alankit.com
 Website: www.alankit.com

(B) Registrar & Share Transfer Agent for Commercial Papers:

M/s KFIN Technologies Limited
 Selenium Building, Tower-B,
 Plot No 31 & 32, Financial District,
 Nanakramguda, Serilingampally,
 Hyderabad, Rangareddy, Telangana - 500 032
 Toll Free No.: 1800 309 4001
 E-mail: einward.ris@kfintech.com
 Website: www.kfintech.com

RTA's performance in servicing shareholders has been satisfactory. All the investor grievances have been promptly attended to.

x. Share Transfer System

All share transfer activities under physical segment like receipt/dispatch of documents and their verification are being carried out by M/s Alankit Assignments Limited. As per SEBI (Listing Obligations and Disclosure Requirements (Fourth Amendment) Regulations, 2018, w.e.f. 01.04.2019, requests for effecting transfer (except in case of transmission or transposition) of securities shall not be processed unless the securities are held in the dematerialized form. In line with Listing Regulations, share certificates are being issued within the timeline prescribed for transmission, transposition, sub-division and consolidation.

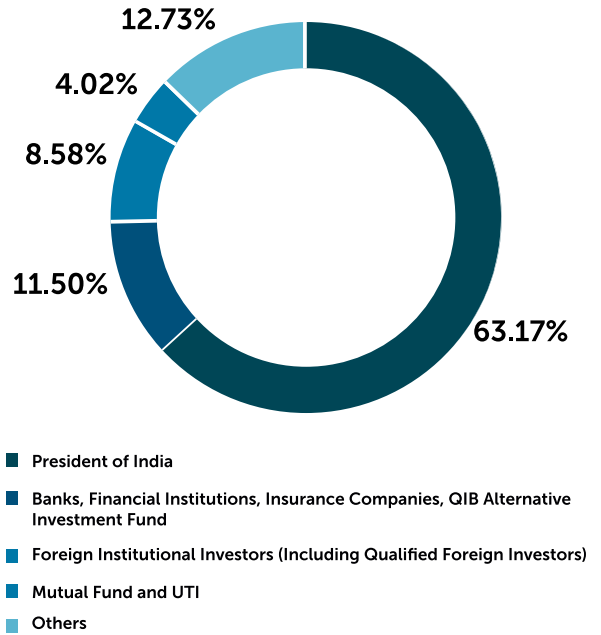
xi. Distribution of Shareholding

a. Distribution of shares according to size of holding as on March 31, 2023

No. of equity share(s) held	No. of Shareholders	% of Shareholders	No. of Shares	% of Shareholding
1 - 500	908986	87.23	93993168	2.70
501 - 1000	67414	6.47	53674161	1.54
1001 - 2000	34834	3.34	52351850	1.50
2001 - 3000	11698	1.12	30228370	0.87
3001 - 4000	4826	0.46	17356850	0.50
4001 - 5000	4153	0.40	19719931	0.57
5001 - 10000	5846	0.56	43475924	1.25
10001 and above	4245	0.41	3171263101	91.07
Total	1042002	100.00	3482063355	100.00

b. Shareholding Pattern as on March 31, 2023

Category	2023		2022	
	Voting strength (%)	No. of Shares held	Voting strength (%)	No. of Shares held
Promoters Holding				
Indian Promoters-				
President of India (POI)	63.17	2199650402	63.17	2199650402
Total Promoter holding	63.17	2199650402	63.17	2199650402
Non-promoters Holding				
Banks, Financial Institutions, Insurance Companies, Qualified Institutional Buyers, Alternative Investment Fund	11.50	400542743	11.09	386286711
Foreign Institutional Investors (including Qualified Foreign Investor)	8.58	298734941	4.00	139407793
Mutual Funds and UTI	4.02	139820242	1.57	54537776
Others				
Individuals, HUF, Employees	11.48	399645637	18.36	639427887
Bodies Corporate	0.65	22462202	0.83	28818539
NRIs & Foreign National/ Entity	0.51	17837995	0.64	22123766
Trust	0.01	300464	0.02	610839
Clearing Members	0.07	2559156	0.31	10754500
IEPF	0.01	494773	0.01	435642
Directors & Relatives	0	300	0	300
State Govt.	0	14500	0	9200
Total Non-promoter holding	36.83	1282412953	36.83	1282412953
Grand Total	100	3482063355	100.00	3482063355

Shareholding Pattern as on 31st March 2023

c. List of shareholders who are holding more than 1% of the shares of the Company as on March 31, 2023

Category & Shareholder's Name	March 31, 2023	
	Voting strength	No. of shares held
Promoters		
President of India	63.17	2199650402
Non-promoters		
Life Insurance Corporation of India	10.07	350767507
Fidelity Emerging Markets Fund	1.08	37638600

xii. Dematerialisation of shares and liquidity

In accordance with the directions of the Securities & Exchange Board of India (SEBI), trading in BHEL shares by all categories of investors in demat form has been made compulsory w.e.f. 5th April, 1999. BHEL has executed agreement with both the depositories of the country i.e. National Securities Depository Limited (NSDL) and Central Depository Services (India) Limited (CDSL) for admission of its securities under demat mode. As

on 31st March, 2023, 99.97% (NSDL: 94.09%, CDSL: 5.88%) of the total equity share capital of BHEL is being held in demat mode by the shareholders. Shares held in physical mode by the shareholders are 0.03%. Shareholding of Hon'ble President of India (being the Promoter of the Company holding 63.17% of the paid-up share capital of the Company) is also held in dematerialized form. The International Securities Identification Number (ISIN) allotted to the Company is INE257A01026.

xiii. Outstanding GDRs/ ADRs/ Warrants or any convertible instruments, conversion date and likely impact on equity

NIL

xiv. List of Credit Ratings received during the current FY 2022-23 is disclosed in the main report of the Board of Directors.

xv. Foreign Exchange risk or Commodity price risk and hedging activities

Hedging activities/transactions during the financial year 2022-23 are in line with the Board approved Foreign Exchange Risk Management Policy.

Exposure of the listed entity to commodity and commodity risks faced by the entity throughout the year:

a) Total exposure of the listed entity to commodities in INR: ₹ 4311 Crore (approx.)

b) Exposure of the listed entity to various commodities:

Commodity Name	Exposure in INR towards the particular commodity (in ₹ Crore) (approx.)	Exposure in Quantity terms towards the particular commodity (in MT) (approx.)	% of such exposure hedged through commodity derivatives				
			Domestic market		International market		Total
			OTC	Exchange	OTC	Exchange	
Steel	3938	422750					-
Copper	566	6386					-
Aluminium	55	1746					-
Nickel	45	205					-
Tin	8	30					-

c) Major Industrial commodities like Steel, Copper, Aluminium etc. are being procured centrally by one of the identified units by bulking the requirements of various BHEL units, to the extent possible, to derive price advantage. To insulate the Company against price fluctuations, Framework Agreements with suitable PVC are finalized periodically.



xvi. Plant locations

BHEL Manufacturing Units	
Bengaluru	1. Electronics Division (EDN)
	2. Electronics Systems Division (ESD)
	3. Solar Business Division (SBD)
Bhopal	4. Heavy Electrical Plant (HEP)
Goindwal	5. Industrial Valves Plant (IVP)
Haridwar	6. Heavy Electrical Equipment Plant (HEEP)
	7. Central Foundry Forge Plant (CFFP)
Hyderabad	8. Heavy Power Equipment Plant (HPEP)
Jagdishpur	9. Fabrication, Stamping & Insulator Plant (FSIP)
Jhansi	10. Transformer Plant (TP)
Rudrapur	11. Component Fabrication Plant (CFP)
Ranipet	12. Boiler Auxiliaries Plant (BAP)
Tiruchirappalli	13. High Pressure Boiler Plant (HPBP)
	14. Seamless Steel Tube Plant (SSTP)
Thirumayam	15. Power Plant Piping Unit (PPPU)
Visakhapatnam	16. Heavy Plates & Vessels Plant (HPVP)
BHEL- Repair Units	
Mumbai	1. Electrical Machine Repair Plant (EMRP)
Varanasi	2. Heavy Equipment Repair Plant (HERP)

xvii. Address for correspondence

Shareholders can send their queries and any other correspondence relating to the shares of the Company either to:

**M/S ALANKIT ASSIGNMENTS LIMITED
UNIT: BHEL**

4E/2, Alankit House Phone: 011-42541234
Jhandewalan Extension Fax: 011-23552001
New Delhi – 110055 Email: rtalankit.com

OR

Shri Rajeev Kalra Phone: 011-26001046
Company Secretary Fax: 011-66337533
Email: shareholderquery@bhel.in

BHEL

Regd. Office: BHEL House,
Siri Fort, New Delhi – 110 049

Note: Shareholders holding shares in electronic mode should address all correspondence to their respective depository participants.

Declaration: Pursuant to Listing Regulations, it is hereby declared that all the Board members and Senior Management

personnel have affirmed compliance with BHEL's "Code of Business Conduct and Ethics" for the financial year 2022-23.

**For and on behalf of the Board of Directors of
BHARAT HEAVY ELECTRICALS LTD.**

Dr. Nalin Shinghal
Chairman & Managing Director

Place: New Delhi
Date: July 28, 2023



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}

The Members,
Bharat Heavy Electricals Limited
BHEL House, Siri Fort,
New Delhi-110049

We have examined the relevant registers, records, forms, returns and disclosures received from the Directors of Bharat Heavy Electricals Limited having CIN: L74899DL1964GOI004281 and having registered office at BHEL House, Siri Fort, New Delhi-110049 (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 clause 10 (i) of the Securities & Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015.

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/representations furnished to us by the Company & its Director/ officers, we hereby certify that none of the Directors on the Board of the Company as stated below for the Financial Year ending on 31st March, 2023 have been debarred or disqualified from being appointed or continuing as Directors of companies by the Securities & Exchange Board of India, Ministry of Corporate Affairs, or any such other Statutory Authority:

Sr. No.	Name of Director (as per DIN)	DIN	Date of appointment in Company
1	Nalin Shinghal	01176857	08-07-2019
2	Arti Bhatnagar	10065528	14-02-2023
3	Vijay Mittal	09548096	25-03-2022
4	Sivaprasad Kodungallur	09392812	09-11-2021
5	Lekhasri Samantsinghar	09392192	09-11-2021
6	Subodh Gupta	08113460	18-04-2018
7	Renuka Gera	08970501	01-12-2020
8	Upinder Singh Matharu	09541886	21-03-2022
9	Jai Prakash Srivastava	09703643	12-08-2022

Ensuring the eligibility of 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.

Place: New Delhi
Date: 30-05-2023



For **P. P. AGARWAL & CO.**
Company Secretaries

(Pramod Prasad Agarwal)
Proprietor
C.P. No. 10566, FCS: 4955
Peer Review no. 1241/2021
UDIN: F004955E000416619



AGARWAL S. & ASSOCIATES
Company Secretaries

D-427, 2nd Floor, Palam Extn., Ramphal Chowk,
Sector 7, Dwarka, New Delhi-110075
Email Id: asacs2022@gmail.com
Phone: 011-45052182;

CERTIFICATE ON COMPLIANCE WITH THE CONDITIONS OF CORPORATE GOVERNANCE

The Members,

Bharat Heavy Electricals Limited

1. We have examined the compliance of conditions of Corporate Governance by **Bharat Heavy Electricals Limited** (CIN: L74899DL1964GOI004281) for the year ended 31st March, 2023, as prescribed in the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 and Guidelines on Corporate Governance for Central Public Sector Enterprises issued by the Department of Public Enterprises (DPE), Government of India.
2. The compliance of conditions of Corporate Governance is the responsibility of the management of the Company. Our examination has been limited to review of procedures and implementations thereof, adopted by the Company for ensuring the compliance of the conditions of Corporate Governance as stipulated in the said Regulations and Guidelines. It is neither an audit nor an expression of opinion on the financial statements of the Company.
3. In our opinion and to the best of our information and according to the explanations given to us, we certify that the Company has complied with all the applicable conditions of Corporate Governance as stipulated in the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 and DPE Guidelines on Corporate Governance during FY 2022-23 except that the composition of the Board of Directors was not in compliance with Regulation 17 (1) (a) & (b) of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 and para 3.1.4 & 3.1.2 of the DPE Guidelines on Corporate Governance on account of (i) resignation of one independent director on 30.05.2022, resulting in the Company not having requisite number of independent directors on its Board and (ii) completion of tenure of two independent directors on 27.01.2023 resulting in the Company not having requisite number of non-executive directors on its Board.

4. The Company has explained that the power to appoint directors, including independent directors in BHEL, being a Government Company, lies with the Government of India by following the laid down guidelines *interalia* including approval of the Appointments Committee of Cabinet. The Company has been in constant communication with the Government of India requesting for appointment of requisite number of independent directors so as to ensure compliance with Corporate Governance norms enunciated under the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 as well as the DPE Guidelines on Corporate Governance. The matter of filling up of these vacancies is under process at the end of Government of India.
5. We further state that such compliance certificate 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 **Agarwal S. & Associates,**
Company Secretaries,
ICSI Unique Code: P2003DE049100
Peer Review Cert. No. 2725/2022

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Garima Grover
Partner
ACS No.: 27100
CP No.: 23626

Date: 31.05.2023
Place: New Delhi
UDIN: A027100E000433418



AGARWAL S. & ASSOCIATES
Company Secretaries

D-427, 2nd Floor, Palam Extn., Ramphal Chowk,
Sector 7, Dwarka, New Delhi-110075
Email Id: asacs2022@gmail.com
Phone: 011-45052182

SECRETARIAL AUDIT REPORT

FOR THE FINANCIAL YEAR ENDED 31st MARCH, 2023

{Pursuant to Section 204(1) of the Companies Act, 2013 and Rule 9 of
the Companies (Appointment and Remuneration of Managerial Personnel) Rules, 2014}

To,
The Members,
Bharat Heavy Electricals Limited

We have conducted the Secretarial Audit of compliance of applicable statutory provisions and adherence to good corporate practices by Bharat Heavy Electricals Limited, CIN: L74899DL1964GOI004281 (hereinafter called 'the Company' or 'BHEL'). The 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 BHEL'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, we hereby report that in our opinion, the Company has, during the audit period covering the financial year ended on 31st March, 2023 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 maintained by BHEL for the financial year ended on 31st March, 2023 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 bye-laws 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;

- (d) The Securities and Exchange Board of India (Employee Stock Option Scheme and Employee Stock Purchase Scheme) Guidelines, 1999;
 - (e) The 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;
 - (g) The Securities and Exchange Board of India (Delisting of Equity Shares) Regulations, 2021; and
 - (h) The Securities and Exchange Board of India (Buyback of Securities) Regulations, 2018;
- (vi) Compliances/ processes/ systems under other specific applicable Laws (as applicable to the industry), including as listed below (being verified on the basis of periodic certificate under internal compliance system submitted to the Board of Directors of the Company):
- 1) Atomic Energy (Radiation Protection) Rules, 2004;
 - 2) Batteries (Management and Handling) Rules, 2001;
 - 3) Factories Act, 1948;
 - 4) The Indian Boilers Act, 1923; and
 - 5) Manufacturing, Storage and Import of Hazardous Chemical Rules, 1989.

We have also examined compliance with the applicable clauses of the following:

- (a) Mandatory Secretarial Standards issued by the Institute of Company Secretaries of India;
- (b) The Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 and Equity Listing Agreements with National Stock Exchange of India Limited & BSE Limited; and
- (c) Guidelines on Corporate Governance for Central Public Sector Enterprises issued by the Department of Public Enterprises, Government of India .

During the period under review, the Company has complied with the provisions of the Act, Rules, Regulations, Guidelines, Standards, etc. mentioned above, subject to the following observation:

The composition of the Board of Directors was not in compliance with Regulation 17 (1) (a) & (b) of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, Section 149 (4) of the Companies Act, 2013 and paras 3.1.2 & 3.1.4. of the DPE Guidelines on Corporate Governance on account of (i) resignation of one independent director on 30.05.2022, resulting in the Company not having requisite number of independent directors on its Board and (ii) completion of tenure of two independent directors on 27.01.2023, resulting in the Company not having requisite number of non-executive directors on its Board.

The Company has explained that BHEL being a Government Company, the power to appoint Directors, including independent directors, lies with the Government of India by following the laid down guidelines inter alia including approval of the Appointments Committee of Cabinet. Further, the Company has been in constant communication with the Government of India requesting for appointment of requisite number of independent directors so as to ensure compliance with

Corporate Governance norms enunciated under the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015, Companies Act, 2013 as well as the DPE Guidelines on Corporate Governance. The matter of filling up of these vacancies is under process at the end of Government of India.

We further report that 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.

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. In case of convening of meeting including sending of agenda at shorter notice, consent of members present in the meeting were taken.

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.

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, no specific events / actions having a major bearing on the Company's affairs in pursuance of the above referred laws, rules, regulations, guidelines, standards, etc. referred to above has occurred in the Company.

For **Agarwal S. & Associates,**
Company Secretaries,
ICSI Unique Code: P2003DE049100
Peer Review Cert. No.: 2725/2022

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Garima Grover
Partner
ACS No.: 27100
C.P No. : 23626
UDIN: A027100E000490585

Date:15.06.2023
Place: New Delhi

This report is to be read with our letter of even date which is annexed as "Annexure A" and forms an integral part of this report.

To,
The Members,
Bharat Heavy Electricals Limited

Our report of even date is to be read along with this letter.

- (i) Maintenance of secretarial records is the responsibility of the management of the Company. Our responsibility is to express an opinion on these secretarial records, based on our inspection of records produced before us for audit.
- (ii) 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 followed, provide a reasonable basis for our opinion.
- (iii) We have not verified the correctness and appropriateness of financial records and Books of Accounts of the Company and our report is not covering observations/comments/weaknesses already pointed out by the other Auditors.
- (iv) Wherever required, we have obtained the management representation about the compliance of laws, rules and regulations and happening of events etc.
- (v) 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 and to give our opinion whether Company has proper Board-processes and Compliance-mechanism in place or not.
- (vi) The Secretarial Audit Report is neither an assurance as to future viability of the Company nor of the efficacy or effectiveness with which the management has conducted the affairs of the Company.

For **Agarwal S. & Associates**,
Company Secretaries,
ICSI Unique Code: P2003DE049100
Peer Review Cert. No.: 2725/2022

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Date: 2023.06.15
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Garima Grover
Partner
ACS No.: 27100
C.P No. : 23626

Date: 15.06.2023
Place: New Delhi



Annexure – III to the Board's Report:

CEO and CFO Certificate

(in terms of Regulation 17(8) of SEBI (LODR) Regulations 2015)

To,

The Board of Directors
Bharat Heavy Electricals Ltd.,
New Delhi.

- a) We have reviewed Financial Statements and the Cash Flow statement of Bharat Heavy Electricals Ltd for the year ended 31st March, 2023 and that to the best of our knowledge and belief:
- These statements do not contain any materially untrue statement or omit any material fact or contain statements that might be misleading;
 - These statements together present a true and fair view of the Company's affairs and are in compliance with the applicable Ind AS, laws and regulations.
- b) There are, to the best of our knowledge and belief, no transactions entered into by the company during the year 2022-23 which are fraudulent, illegal or violative of the Company's Code of Conduct.
- c) We accept responsibility for establishing and maintaining internal controls for financial reporting and that we have evaluated the effectiveness of the internal control systems of the Company pertaining to financial reporting and we have disclosed to the Auditors and the Audit Committee, deficiencies in the design or operation of such 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 Auditors and to the Audit Committee.
- Significant changes, if any, in internal control over financial reporting during the year 2022-23;
 - Significant changes, if any, in the accounting policies during the year 2022-23 and the same have been disclosed in the notes to the financial statements; and
 - 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.

(Jai Prakash Srivastava)

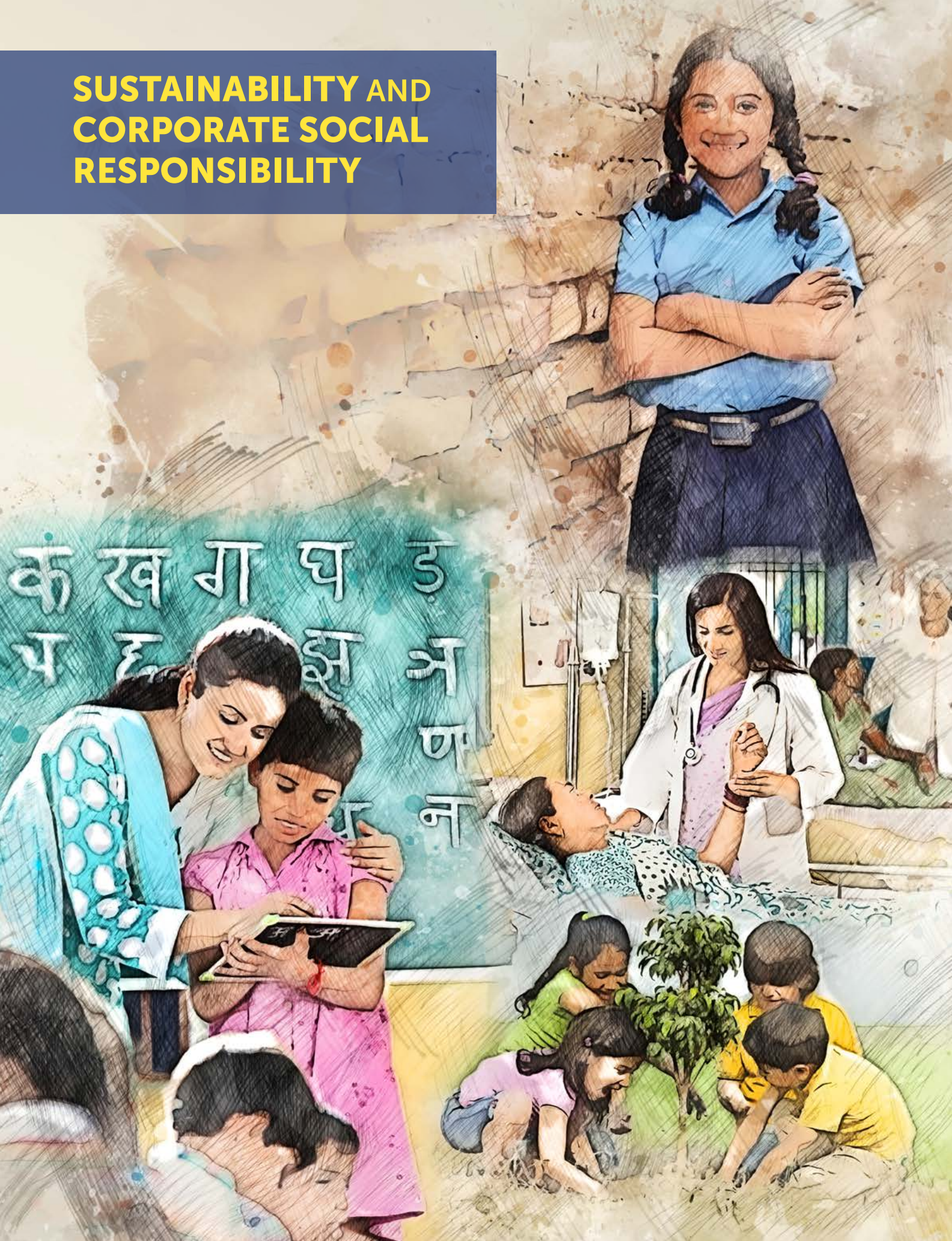
Director (E,R&D) - Additional charge of
Director Finance & CFO

(Dr. Nalin Shinghal)

Chairman & Managing Director

Place: New Delhi
Date: May 26, 2023

SUSTAINABILITY AND CORPORATE SOCIAL RESPONSIBILITY



कं ख गा घ ड
प ह क्ष भ ष ण



CMD, BHEL inaugurated a plantation drive to develop a Miyawaki forest, the first of its kind in the BHEL Tiruchirappalli complex

Annexure – IV to the Board's Report:

Sustainability and CSR

4.1 Sustainability Performance – Environmental

Our Mission Statement “Providing sustainable business solutions in the fields of Energy, Industry & Infrastructure” duly reflects the tenets of sustainability in our decision-making processes and activities emanating out of those decisions.

To address the Environmental Aspects of Sustainability, business activities are carried out taking utmost care of the environment. Responsible material and natural resource management, energy management, water management, biodiversity management, carbon management, waste management are the focus areas in our business processes, and our activities are formulated accordingly.

Within our value chain, development of cleaner & greener products having lesser environmental footprint over the entire life cycle is the core to our R&D activities. Our products are having longer lives spanning into decades, and most of the environmental footprints of these products are from operations. Our efforts in developing cleaner products is helping reduce the environmental footprint of our products through optimum usage of natural resources during their operation phase; viz., emitting fewer gases, requiring lesser water and also capturing emissions in the existing plants

through retrofitting emission control systems. Our constant endeavor to improve performance through R&M as well as life extension services, providing futuristic technologies such as AUSC and coal gasification for reducing emissions, offering state-of-the-art solutions for hydro and nuclear sector as well as retrofitting of FGD and SCR to reduce emissions of existing power plants are steps to ensure efficient and sustainable use of natural resources.

Details of some of these initiatives carried out during FY 2022-23 is given in the sections below.

4.1.1 Responsible Material & Natural Resource Consumption

As a responsible corporate citizen, all the natural resources for production and consumption are being used with utmost frugality to minimise the associated environmental impact. The principles of Reduce-Recycle-Reuse are being applied diligently towards achievement of this goal. During the year 2022-23, nearly 763 MT of waste was recycled/ reused across our premises resulting in avoidance of equivalent amount of new raw material in our processes. BHEL has created an in-house portal—Sadupyog—which enables effective cross-unit utilization of surplus material at manufacturing works as well as project sites and helps in optimizing resources and fostering sustainability.

4.1.2 Energy Management

As a leading company in the field of Power Generation Equipment, we understand the importance of managing energy in our premises and providing energy efficient technologies / equipment to our customers. Taking projects related to Energy efficiency / conservation is a regular feature in our company and in the recent past, lot of efforts have been put to identify the projects and execute these projects in a time bound manner which helped us in demand side management. Our energy intensive units have undergone ISO 50001 certification and this entire journey of obtaining and maintaining our Energy Management System Certification has resulted in significant reduction in electricity demand and consequent savings added to our bottom line.

Some of the major energy efficiency projects completed during the year included:

- Structural revamping, with improved insulation and

operation of various furnaces, upgradation from conventional to regenerative burners-based combustion system, and other projects at CFFP Haridwar are expected to reduce annual electricity demand by 6.63 Million Units per year

- Installation of single screw compressor in place of higher capacity reciprocating type compressor at 500-ton Manual press at FSIP Jagdishpur which is likely to reduce annual electricity demand by 59,000 Units per year
- Execution of various ENCON projects at Trichy unit resulting in expected annual reduction of 3.6 Lakh units of electricity per year

Further, a 5 MW_p Solar Power Plant has been commissioned during FY 2022-23 at Bhopal unit. Overall during the year 2022-23, a total of 29.78 million units of green energy were generated across the organization, taking the overall energy generating by solar systems during last six years to around 160 Million Units.



An initiative for 'Making BHEL a Green Company' undertaken by BHEL – including mass plantation drives, create dense urban forests (Miyawaki forest) in larger BHEL units

4.1.3 Water & Biodiversity Management

Scarce availability of potable water is expected to be a major concern world-over and more so in India. In this context, as a responsible organization, BHEL is trying to reduce the water consumptions in its processes. We are modifying our processes to reduce the water consumption, recycle the water in processes and reuse the treated water for horticulture.

BHEL units have installed a total of 126 Rainwater Harvesting Systems including Rooftop rain water collection pits, groundwater recharging pits/pond/lake/wells which contribute towards recharging of groundwater. Further, we have 22 Effluent Treatment Plants (ETPs) and 16 Sewage Treatment Plants (STPs) to manage our grey water sustainably. 10 manufacturing units of BHEL have been declared as zero liquid discharge entities and remaining are in the process of achieving the same. Treated effluent/ sewage is used for horticulture inside the manufacturing plant & township.

During FY 2022-23, our efforts towards increasing our verdant cover continued, resulting in plantation of 49,200 saplings, also during the last six years, the number of saplings planted stood at more than 2,62,000.

During FY 2023-24, the company has undertaken an initiative for 'Making BHEL a Green Company'. The company has a target to plant 75,000 saplings during 2023-24. In addition to mass plantation drives, it is planned to create dense urban forests (Miyawaki forest) in larger BHEL units. In FY 2022-23, tree plantation in 500 sq. mtr. has been done at Jhansi unit using Miyawaki technique. Also, during FY 2023-24, 3 acres space in Haridwar, 1 acre in Hyderabad and 2.75 acres in Trichy have been identified for plantation using Miyawaki technique. In addition to this, water bodies are also being

created within BHEL premises which will store rain water, thereby acting as rainwater harvesting system. Two large size ponds at Haridwar, one large pond in Bhopal and one pond in R&D Hyderabad have been already created in FY 2023-24, before the onset of monsoon.

4.1.4 Carbon Management

As a part of our focused approach towards making our energy mix sustainable, we are establishing ground mounted solar power plants as well as rooftop solar plants. Now we have a total capacity of around 34.89 MW of Solar PV plants in our premises. During the year 2022-23 itself, we have commissioned a 5 MW_p SPV Plants at our HEP Bhopal Unit. Further, our R&D efforts towards developing renewable energy related products are also helping our customers reduce their environmental footprints associated with electricity generation.

This has helped us in carbon footprint avoidance to the tune of 26,964 MTCO₂-equivalent during FY 2022-23. Further, our well maintained and ever-increasing verdant cover is also contributing towards carbon sequestration in a considerable manner. Our efforts in the area of energy efficiency/ conservation through projects completed has helped us in reducing our Scope-2 emission.

4.1.5 Waste Management

Considering the size and scope of operations of BHEL, substantial opportunities exist for minimising the generation of waste and increasing the recycling/ reuse of waste generated. Waste generated in our factories is segregated at source and stored properly for further processing/ disposal. Almost all our non-hazardous waste generated is either used



As part of Fit India movement, bicycle rally being organised at BHEL's HEEP, Haridwar plant

in-house through recycling/ reuse or sent to authorised recyclers for its suitable use. During the year 2022-23, nearly 27,615 MT of waste was sold to authorised recyclers.

Further, to fight the menace of plastic pollution, a novel initiative was taken by the organization to make our township premises "Single Use Plastic Free" and consequently 14 of our townships have been audited by 3rd party and re-certified as "Single Use Plastic Free" (SUPF) entities.

4.2 Making BHEL a Green Company

Climate change and the need for immediate actions to mitigate, has taken the central stage in today's world. Your company is offering several products and solutions to address these challenges of climate change and is further working on many related emerging technologies. At operation front, your company has always been an environment conscious organization, working relentlessly towards minimizing the environmental footprint. Now, with an objective to contribute actively towards India's agenda on Climate Actions, your company is endeavouring to transform itself into a Green Company. A three-pronged strategy is adopted wherein: (i) Units will be undergoing assessment for Green Company Rating (GreenCo Rating). This will give them recognition for their past achievements and help identify critical areas for further improvement. (ii) Nine focused sustainability initiatives are identified to be implemented across the company during FY 2023-24. These include – mass plantation in BHEL campuses, water audit of manufacturing units to ensure efficient use of water, attaining Zero Liquid Discharge (ZLD) status for all Units, energy audit of manufacturing Units to identify new opportunities for energy conservation and efficient use of energy, creating water bodies within BHEL

campuses to promote biodiversity, establishing more water harvesting systems, solid waste management in BHEL townships to ensure waste segregation at source and composting of biodegradable wastes, steps to ensure use of natural sun light in workshops & buildings during daytime so as to totally eliminate use of electricity for lighting purpose during day time, and installing more Solar PV power plants for captive use to increase use of RE in our operations. (iii) BHEL is further in the process of developing a roadmap for Net Zero.

4.3 Sustainability Performance – Social

BHEL has identified Seven Thrust Areas for carrying out its CSR initiatives. These Seven Thrust Areas are elaborated in BHEL's CSR policy and are in line with activities and areas mentioned in Schedule VII of the Companies Act, 2013. All CSR Allocations & Expenditure are as per the BHEL's CSR Policy, which is compliant with the extant provisions related to CSR in the Companies Act, 2013, Schedule VII to the Companies Act, The Companies (CSR Policy) Rules, 2014 and the extant DPE Guidelines for CPSEs'. BHEL has fully complied with DPE guidelines issued from time to time on CSR expenditure by CPSEs. Brief description of some key interventions during the year are given below:

Clean India (स्वच्छ भारत)

- BHEL continued with its CSR program for constructing Bio-digester toilets in Haridwar & Rishikesh District, Uttarakhand. 23 clusters of these Bio-digester toilets have been completed.



As part of Swachhata Pakhwada, cleaning drive being observed across the company during August 2022



Purification of Telibandha Lake, (RSCL), including Operation & Maintenance undertaken by BHEL

Educated India (शिक्षित भारत)

- Construction of Boys & Girls Hostel buildings at Govt. Polytechnic, District Nizamabad, Telangana.

Healthy India (स्वस्थ भारत)

- Financial Support for "Heal-A-Soul IV"- Providing Anti Haemophilic Factors (AHF) kits to Persons & Children with Hemophilia (P&Cwh) in various Aspirational Districts across India.
- Financial support to "Sulabh International Social Service Organisation" (SISSO) for Construction, Operation and Maintenance of Sulabh Toilet Complexes at 12 places in Varanasi and Chandauli, district of Uttar Pradesh.
- Financial support to "MISSION SMILE" for cleft surgery of 200 cleft patients in District Haridwar, Uttarakhand.
- Financial support to HelpAge India in running Mobile Healthcare Units at Satpura (MP), Bikaner (Rajasthan) & Noida (UP) to provide basic and essential healthcare services to poor & needy senior citizens, and other vulnerable citizens.
- Financial support to NGO - "Cankids KidsCan" for providing medical assistance to 200 children aged between 0-19 suffering from cancer across India (covering Aspirational Districts) and medical equipment for hospitals & Palliative Care Centre for the children and a patient's transport ambulance."
- Financial support for construction of Tin shed & Chowki at Govt. Sr. Secondary School, Janglu, District, Bikaner, Rajasthan.
- Financial support for COVID related activities to underprivileged section of society in Delhi-NCR.



As part of Healthy India campaign, Ayush camp being organised by BHEL



Financial support for "Heal-A-Soul IV" campaign – for providing Anti Haemophilic Factors (AHF) kits to Persons & Children with Hemophilia (P&Cwh) being extended in various aspirational Districts across India

- Financial support to District Collector, Suryapet for setting up 36 Gyms in District Suryapet, Telangana.

Inclusive India (समावेशी भारत)

- Financial support to Municipal Commissioner, Varanasi for installation of Heritage Street Lighting System at Varanasi.
- BHEL continued its Financial support to the "Professional Assistance for Development Action (PRADAN)" for the project: Motivating Agrarian communities of Kandhamal (Odisha) for their Economic Transformation (MARKET) in Aspirational District Kandhamal, Odisha.

Green India (ग्रीन भारत)

- Financial support to District Collector, Tiruvallur District (Tamil Nadu) for Installation of a Pyrolator unit for solid waste management at Tiruvallur, Tamil Nadu.

4.4 Annual report for CSR Activities

(as per the requirement of The Companies (CSR Policy) Rules, 2014)

- Brief outline on CSR Policy of the Company. **(Attached as Annexure-A)**
- Composition of CSR Committee

S. No.	Name of Director	Designation/ Nature of Directorship	Number of meetings of CSR Committee Held during the year	Number of meeting of CSR Committee attended during the year
1	Manish Kapoor, Independent Director (upto January 27, 2023)	Chairperson	1	1
2	Dr. K. Sivaprasad, Independent Director	Chairperson (w.e.f. February 10, 2023)	0	0
		Member (w.e.f. February 09, 2023)	1	1
3	Aditya Prasad Sahu, Independent Director (upto May, 2022)	Member	0	0
4	Director (Finance)	Member	1	1
5	Director (HR)	Member (w.e.f. November 11, 2022)	0	0

Head (CSR), Corporate Office is Permanent Invitee. Company Secretary acts as Secretary to the Committee.

- Provide the web-link(s) where Composition of CSR Committee, CSR Policy and CSR Projects approved by the Board are disclosed on the website of the Company
Web-link : --- <https://www.bhel.com/csr>
- Provide the executive summary along with web-link(s) of Impact Assessment of CSR Projects carried out in pursuance of sub-rule (3) of rule 8, if applicable.
Not applicable
- Average net profit of the company as per sub-section (5) of section 135.
₹ (-) 1,301.61 Crore
 - Two percent of average net profit of the company as per sub-section (5) of section 135.
₹ (-) 26.03 Crore
 - Surplus arising out of the CSR Projects or programmes or activities of the previous financial years. **Nil**
 - Amount required to be set-off for the financial year, if any. **Nil**
 - Total CSR obligation for the financial year [(b) + (c) – (d)]. **Nil**
- Amount spent on CSR Projects (both Ongoing Project and other than Ongoing Project). -- **₹ 571.906 Lakh**
 - Amount spent in Administrative Overheads. -- **₹ 28.595 Lakh**
 - Amount on spent on Impact Assessment, if applicable. **Nil**
 - Total amount spent for the Financial Year [(a) + (b) + (c)]*. -- **₹ 600.50 Lakh**
 - CSR amount spent or unspent for the Financial Year:

Total Amount Spent for the Financial Year (in ₹)	Amount Unspent (in ₹)				
	Total Amount transferred to Unspent CSR Account as per Section (6) of Section 135		Amount transferred to any fund specified under Schedule VII as per second proviso to sub-section (5) of section 135		
	Amount (In ₹ Lakh)	Date of Transfer	Name of the Fund	Amount	Date of Transfer
Nil	Nil	N/A	Nil	Nil	N/A

(f) Excess amount for set off, if any:

S. No.	Particular	Amount (In ₹ Lakh)
(i)	Two percent of average net profit of the company as per section 135 (5)	(-) 2603.00
(ii)	Total amount spent for the Financial Year*	600.50
(iii)	Excess amount spent for the financial year [(ii) – (i)]	Nil
(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)]	Nil

* Unspent CSR amount ₹2,126.95 lakh was transferred in FY 2020-21 to a separate bank A/c as per Companies (CSR Policy) Amendment Rules, 2021. Out of this ₹911.08 Lakh and ₹600.50 Lakh has been spent in FY 2021-22 & FY 2022-23 respectively.

7. (a) Details of Unspent CSR amount for the preceding three financial years:

1	2	3	4	5	6		7	8
S. No.	Preceding Financial Year (s)	Amount Transferred to Unspent CSR Account under Sub-Section (6) of section 135 (in ₹ Lakh)	Balance Amount in Unspent CSR Account Under Sub Section (6) of section 135 (in ₹ Lakh)	Amount Spent in the Financial Year (in Rs. Lakh)	Amount transferred to A Fund as specified under Schedule VII as per second proviso to sub-section (5) of section 135, if any		Amount remaining to be spent in succeeding Financial Years (in ₹ Lakh)	Deficiency, if any
					Amount (in ₹)	Date of Transfer		
1	2019-20	Nil	-	-	N/A	-	1550.94	Nil
2	2020-21	2126.95	2126.95	1441.99	N/A	-	2126.95	Nil
3	2021-22	Nil	2126.95	911.08	N/A	-	1215.87	Nil

8. Whether any capital assets have been created or acquired through Corporate Social Responsibility amount spent in the Financial Year: **No**

If Yes, enter the number of Capital assets created / acquired: **N/A**

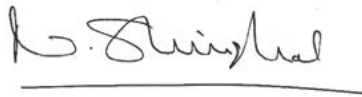
Furnish the details relating to such asset (s) so created or acquired through Corporate Social Responsibility amount spent in the Financial Year: **N/A**

S. No.	Short Particulars of the property or Asset (s) [including complete address and location of the property]	Pincode of the Property or Asset (s)	Date of Creation	Amount of CSR amount spent	Details of entity / Authority / beneficiary of the registered owner		
(1)	(2)	(3)	(4)	(5)	(6)		
					CSR Registration Number, if Applicable	Name	Registered address
-	-	-	-	-	-	-	-

9. Specify the reason(s), if the company has failed to spend two per cent of the average net profit as per sub-section (5) of section 135.

- As per section 135 (5), two percent of average net profit of the company for FY 2022-23 was ₹ (-)26.03 Crore. Therefore, CSR budget for FY 2022-23 was Nil
- CSR spent during FY 2022-23 was out of CSR projects continuing from previous year. As per CSR Policy of BHEL, the unspent committed amount will not lapse and will be used for CSR projects in future.

10. We hereby declare that the implementation and monitoring of CSR Policy is in compliance with CSR objectives and Policy of the company.



Chairman & Managing Director

New Delhi

Date: July 28, 2023



Chairperson

(Board Level Committee for CSR)



Annexure – A

BHEL Corporate Social Responsibility (CSR) Policy Outline

CSR Vision:

To be a responsible corporate citizen working towards a better tomorrow.

CSR Mission:

To sincerely & effectively discharge company's responsibility in the identified CSR thrust areas and other areas listed out in the Companies Act, 2013.

Objectives of the Policy:

- To define CSR projects or programs which BHEL plans to undertake and which fall within the purview of the Companies Act 2013, the Companies (CSR Policy) Rules, 2014 and the prevailing DPE Guidelines.
- Modalities of execution of such CSR projects or programs.
- Monitoring process of such CSR projects or programs.
- To make the stakeholders aware about CSR practices in BHEL.
- To work keeping in mind the larger objective of sustainable development in conduct of business and in pursuit of CSR agenda.

Salient Features of the Policy:

- It covers the requirements stated in the Companies Act-2013, the Companies (CSR Policy) Rules-2014 and DPE Guidelines on CSR & Sustainability;
- It defines the thrust areas for CSR activities, which are based on the activities mentioned in Schedule VII of the Companies Act, 2013.
- It specifies that 2% of average net profit during the three immediately preceding financial years will be allocated for CSR activities.
- The company shall give preference to the local areas for spending at least 75% of the amount earmarked for CSR activities.
- A project having total value equal to or more than ₹ 1 crore will be termed as Mega project and Impact assessment of such projects will be mandatorily got done through an external agency.
- There is a provision to reserve 5% of the annual CSR budget as Emergency Fund to take up relief activities for any disaster/ calamity.+
- It stipulates that 5% of total CSR expenditure for the year shall be kept as a reserve for capacity building including administrative overheads.
- It provides information about organizational structure for CSR in BHEL.

Web-Link to CSR Policy:

BHEL CSR Policy is hosted on www.bhel.com under CSR section and can be accessed through the link

<https://www.bhel.com/csr>

Annexure-V Business Responsibility & Sustainability Report

SECTION A: GENERAL DISCLOSURES

I. Details of the listed entity

1.	Corporate Identity Number (CIN) of the Listed Entity	L74899DL1964GOI004281
2.	Name of the Listed Entity	BHARAT HEAVY ELECTRICALS LIMITED
3.	Year of incorporation	13 November 1964
4.	Registered office address	BHEL House, Siri Fort, New Delhi – 110049
5.	Corporate address	BHEL House, Siri Fort, New Delhi – 110049
6.	E-mail	shareholderquery@bhel.in
7.	Telephone	011-66337598
8.	Website	www.bhel.com
9.	Financial year for which reporting is being done	FY 2022-23
10.	Name of the Stock Exchange(s) where shares are listed	BSE LIMITED (BSE) AND NATIONAL STOCK EXCHANGE OF INDIA LIMITED (NSE)
11.	Paid-up Capital	₹ 696.41 Crore
12.	Name and contact details (telephone, email address) of the person who may be contacted in case of any queries on the BRSR report	Ajay Saxena (AGM – Corporate Strategic Management), email: ajaysaxena@bhel.in , 011-66337390
13.	Reporting boundary - Are the disclosures under this report made on a standalone basis (i.e. only for the entity) or on a consolidated basis (i.e. for the entity and all the entities which form a part of its consolidated financial statements, taken together)	Standalone basis

II. Products/services

14. Details of business activities (accounting for 90% of the turnover):

S. No.	Description of Main Activity	Description of Business Activity	% of Turnover of the entity
1	Manufacturing (C)	Electrical equipment, General Purpose and Special purpose Machinery & equipment, Transport equipment (C10)	100%

15. Products/Services sold by the entity (accounting for 90% of the entity's Turnover):

S. No.	Product/Service	NIC Code	% of total contributed Turnover
1	Construction and maintenance of power plants, other than hydro-electric power plants	45207	31%
2	Manufacture of steam or other vapour generating boilers and hot water boilers other than central heating boilers	28131	26%
3	Manufacture of steam engines and turbines	29111	8%
4	Manufacture of transformers of all sizes and types & rewinding of electric motors	31102	7%

S. No.	Product/Service	NIC Code	% of total contributed Turnover
5	Manufacture of electricity distribution and control apparatus [electrical apparatus for switching or protecting electrical circuits (e.g. switches, fuses, voltage limiters, surge suppressors, junction boxes etc.) for a voltage exceeding 1000 volts; similar apparatus (including relays, sockets etc.) for a voltage not exceeding 1000 volts; boards, panels, consoles, cabinets and other bases equipped with two or more of the above apparatus for electricity control or distribution of electricity including power capacitors.]	31200	7%
6	Manufacture of generators/generating sets	31101	4%
7	Manufacture of electric motors : universal AC/DC motors and DC motors or generators	31103	4%
8	Manufacture of other movers n.e.c. hydraulic turbines, water wheels and their regulatory machinery; gas turbines for marine propulsion or for use as prime movers of electric generators or pumps; boiler-turbine set or a stationary steam engine with integral boiler.	29119	3%

III. Operations

16. Number of locations where plants and/or operations/offices of the entity are situated:

Location	Number of plants	Number of offices	Total
National	16	29	45
International	0	1	1

The company has 16 manufacturing units (or plants), 2 repair units, 4 regional offices, 8 service centres, and 15 regional marketing centres. For plant names, Refer 'Pan India Presence'.

17. Markets served by the entity:

a. Number of locations

Locations	Number
National (No. of States)	28 (states), 8 (Union Territories)
International (No. of Countries)	88

b. What is the contribution of exports as a percentage of the total turnover of the entity?

Exports contribute approx. 4.86% of total turnover.

c. A brief on types of customers

In domestic market, BHEL customers span across Government - owned and private owned entities. While in International market, BHEL customers include from Government ministries or entities, Parastatal agencies, Independent Power Producers (IPP) and Private companies.

IV. Employees

Refer definitions of 'Employee' under Sec 2 (l) of the Industrial Relations Code, 2020 and 'worker' under Sec 2 (zr) of the Industrial Relations Code, 2020 as per the guidelines of BRSR format. Also refer definition of 'permanent employee', 'permanent worker', 'other than permanent employee' and 'other than permanent worker' in the guidelines of BRSR format.

18. Details as at the end of Financial Year:

a. Employees and workers (including differently abled):

S. No.	Particulars	Total (A)	Male		Female	
			No. (B)	% (B/A)	No. (C)	% (C / A)
EMPLOYEES						
1.	Permanent (D)	29536	27790	94.09%	1746	5.91%
2.	Other than Permanent (E)	15705	14495	92.3%	1210	7.7%
3.	Total employees (D + E)	45241	42285	93.47%	2956	6.53%
WORKERS						
4.	Permanent (F)	14986	14592	97.37%	394	2.63%
5.	Other than Permanent (G)*	15639	14430	92.27%	1209	7.73%
6.	Total workers (F + G)	30625	29022	94.77%	1603	5.23%

b. Differently abled Employees and workers:

S. No.	Particulars	Total (A)	Male		Female	
			No. (B)	% (B/A)	No. (C)	% (C / A)
DIFFERENTLY ABLED EMPLOYEES						
1.	Permanent (D)	823	801	97.33%	22	2.67%
2.	Other than Permanent (E)	47	33	70.21%	14	29.79%
3.	Total employees (D + E)	870	834	95.86%	36	4.14%
DIFFERENTLY ABLED WORKERS						
4.	Permanent (F)	401	398	99.25%	3	0.75%
5.	Other than Permanent (G)*	47	33	70.21%	14	29.79%
6.	Total workers (F + G)	448	431	96.21%	17	3.79%

*BHEL awards job/ works contracts to contractors at its various Units/ Divisions/ Departments as per organizational needs. The number of workers with contractors varies from time to time.

19. Participation/ Inclusion/ Representation of women

	Total (A)	No. and percentage of Females	
		No. (B)	% (B/A)
Board of Directors	9	3	33.33%
Key Management Personnel	1	0	0%

Status as on March 31, 2023

20. Turnover rate for permanent employees and workers

	FY 2022-23			FY 2021-22			FY 2020-21		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Permanent employee	4.01%	4.97%	4.15%	5.45%	3.77%	5.29%	4.13%	5.28%	5.17%
Permanent worker	3.21%	7.66%	3.41%	3.71%	6.51%	3.78%	6.71%	4.60%	4.65%

V. Holding, Subsidiary and Associate Companies (including joint ventures)

21. (a) Names of holding / subsidiary / associate companies / joint ventures

S. No.	Name of the holding / subsidiary/ associate companies/ joint ventures (A)	Indicate whether holding/ Subsidiary/ Associate/ Joint Venture	% of shares held by listed entity	Does the entity indicated at column A, participate in the Business Responsibility initiatives of the listed entity? (Yes/No)
1.	BHEL-GE GAS TURBINE SERVICES P. LTD	Joint Venture	49.99%	No
2.	NTPC BHEL POWER PROJECTS PVT LTD	Joint Venture	50.00%	No
3.	RAICHUR POWER CORPORATION LTD	Joint Venture	22.14%	No

Refer Annexure - IX to the Board Report - Form AOC - I

VI. CSR Details

22. CSR details

- (i) Whether CSR is applicable as per section 135 of Companies Act, 2013: **(Yes/No)**
Yes, CSR is applicable for BHEL
- (ii) Turnover: ₹ 22,136 crore
- (iii) Net worth: ₹ 27,262 crore

VII. Transparency and Disclosures Compliances

23. Complaints/Grievances on any of the principles (Principles 1 to 9) under the National Guidelines on Responsible Business Conduct:

Stakeholder group from whom complaint is received	Grievance Redressal Mechanism in Place (Yes/No) (If Yes, then provide web-link for grievance redress policy)	FY 2022-23			FY 2021-22		
		Number of complaints filed during the year	Number of complaints pending resolution at close of the year	Remarks	Number of complaints filed during the year	Number of complaints pending resolution at close of the year	Remarks
Communities	Yes https://pgportal.gov.in/	218	0	-	253	0	-
Investors (other than shareholders)	No	0	0	-	0	0	-
Shareholders	Yes The contact details provided at www.bhel.com	13	0	-	37	0	-
Employees and workers	Yes (Internal system)	196	175	-	55	32	-
Customers*	Yes (Internal system)	466	219	-	509	173	-
Value Chain Partners	Yes https://suvridha.bhel.in/	92	09	-	68	11	-

* System for consolidating customer complaint is under implementation

Refer Annexure – II to Board’s Report, Corporate Governance, Shareholders committee

Refer Annexure – VIII to Board’s Report, Vigil Mechanism

24. Overview of the entity’s material responsible business conduct issues

S. No.	Material issue identified	Indicate whether risk or opportunity (R/O)	Rationale for identifying the risk / opportunity	In case of risk, approach to adapt or mitigate	Financial implications of the risk or opportunity (Indicate positive or negative implications)
1.	Corporate Governance and business ethics	R	Values/ Ethical behavior is acting in ways that are consistent with how the company views moral principles and values. Not adhering can lead to reputational risks arising due to integrity, inter-personnel relationships at workplace, conflict of interest and inverse impact on business. However, BHEL has strong Corporate Governance framework and exhibits the same by strictly adhering to statutory norms and following the best practices.	BHEL believes in conducting its business in compliance with Corporate Governance procedures and code of conduct, exemplifies each of the core values, favourable outcomes to the customers, attractive opportunities to the employees, opportunity to the suppliers to partner the Company in progress and enrichment of the society. BHEL codes/ procedure are in place such as whistleblower policy, fraud prevention policy, CDA rules etc. Refer Principle 1.	Negative implications
2.	Climate change	R	Reduction in demand for capital good products that emit GHG emissions. The reduction in demand is direct consequence to country level policy changes	Diversifying product portfolio with new products.	Negative implications
3.	Sustainable product & services	O	New business opportunities due to energy transition and climate actions by our customers	-	Positive implications
4.	Skilled manpower	R	New products or business or new ways of operating requires new skill set and competencies	Reskilling of workforce and lateral hiring of required skill sets. Refer Principle 3	Negative implications
5.	Customer satisfaction	R	Delayed deliveries of projects and products resulting into customer dissatisfaction and financial liabilities for the company	Improving customer experience is ingrained in core values of BHEL. Company is changing its operational ideology from being “Revenue Centric” to “Project Centric” supported by Integrated Project Management System for project planning and monitoring.	Negative implications
6.	Health and Safety	R	Managing Safety and Health is an integral part of our business. The hazards and risks at the workplace(s), Project site(s), Shop(s) can cause harm to employees, workers and other stakeholders thereby hampering operations.	Regular HSE related training to employee and workers are provided that including at the induction level as well. Frequent Safety Assessment by HSE Team are conducted. Refer Principle 3	Negative implications

24. Overview of the entity's material responsible business conduct issues (Contd.)

S. No.	Material issue identified	Indicate whether risk or opportunity (R/O)	Rationale for identifying the risk / opportunity	In case of risk, approach to adapt or mitigate	Financial implications of the risk or opportunity (Indicate positive or negative implications)
7.	Human Rights & Labour conditions	R	Responsibility to identify and manage Human Rights risks in its operations and supply chain and mitigate from adverse risks and consequential damages.	BHEL policies are in line with the principles of Human Rights, the constitution of India and applicable laws. The company has special provisions for ensuring safeguard of women employees at the workplace. The company is one of the founding member of Global Compact network, India (GCNI) and is a part of initiatives in India. Refer Principle 3 and 5	Negative implications
8.	Carbon Footprint	O	Opportunity to utilize energy efficiently, fuel switching viz. use of renewable energy, enhanced green cover, and improved energy efficiency & conservation to address cost reduction and climate change. Refer Principle 6	-	Positive implications
9.	Water and waste management	O	Reduction in impact on the environment by efficiently managing & recycling/ reusing natural resources like water and waste generated during operations	-	Positive implications
10.	Equal opportunity and inclusion	O	Company is an equal opportunity employer and does not discriminate on the basis of gender, race, caste, religion, linguistic, region etc. in recruitment and employment relationship guided by Gov policies leading to a diverse culture and talent	-	Positive implications
11.	Social engagement & impact	O	CSR plays a crucial role in uplifting societies and communities who are vulnerable & marginalized. It also improve company's brand perception; attractiveness to customers, employees, and investors; talent retention; and overall business success.	-	Positive implications

SECTION B: MANAGEMENT AND PROCESS DISCLOSURES

This section is aimed at helping businesses demonstrate the structures, policies and processes put in place towards adopting the NGRBC Principles and Core Elements.

Disclosure Questions	P1	P2	P3	P4	P5	P6	P7*	P8	P9
Policy and management processes									
1. a. Whether your entity's policy/policies cover each principle and its core elements of the NGRBCs. (Yes/No)	Y	Y	Y	Y	Y	Y	N	Y	Y
b. Has the policy been approved by the Board? (Yes/No)	Y	Y	Y	Y	Y	Y	N	Y	Y
c. Web Link of the Policies, if available	Weblinks have been provided wherever applicable								
2. Whether the entity has translated the policy into procedures. (Yes / No)	Y	Y	Y	Y	Y	Y	N	Y	Y
3. Do the enlisted policies extend to your value chain partners? (Yes/No)	Y	N	N	N	N	N	N	N	N
4. Name of the national and international codes/certifications/labels/ standards (e.g. Forest Stewardship Council, Fairtrade, Rainforest Alliance, Trustea) standards (e.g. SA 8000, OHSAS, ISO, BIS) adopted by your entity and mapped to each principle.	e, f	a, b, c	b, c, e, f	f	e, f	b, d	f	f	a
5. Specific commitments, goals and targets set by the entity with defined timelines, if any.	g	50% order book from non-fossil sectors (FY23-27)	g	NA	g	g	NA	g	NA
6. Performance of the entity against the specific commitments, goals and targets along-with reasons in case the same are not met.	Excellent [^]	42.7% during FY23	100%	NA	100%	100%	NA	100%	NA
Governance, leadership and oversight									
7. Statement by director responsible for the business responsibility report, highlighting ESG related challenges, targets and achievements (listed entity has flexibility regarding the placement of this disclosure)									
8. Details of the highest authority responsible for implementation and oversight of the Business Responsibility policy (ies).	Name: Upinder Singh Matharu# Designation: Director (Power), additional charge (HR) DIN: 0009541886 Telephone: 011- 26001002 Email id: pmgus@bhel.in								
9. Does the entity have a specified Committee of the Board/ Director responsible for decision making on sustainability related issues? (Yes / No). If yes, provide details.	Yes Name: Upinder Singh Matharu# Designation: Director (Power), additional charge (HR) DIN: 0009541886 Telephone: 011- 26001002 Email id: pmgus@bhel.in								

Subject for Review	Indicate whether review was undertaken by Director / Committee of the Board/Any other Committee									Frequency (Annually/ Half yearly/ Quarterly/ Any other – please specify)								
	P1	P2	P3	P4	P5	P6	P7	P8	P9	P1	P2	P3	P4	P5	P6	P7	P8	P9
10. Details of Review of NGRBCs by the Company:																		
Performance against above policies and follow up action	Reviews and frequency are provided in Section C of BRSR wherever applicable.																	
Compliance with statutory requirements of relevance to the principles, and, rectification of any non-compliances	Review and frequency on compliance with statutory requirement are provided in section C of BRSR wherever applicable.																	
11. Has the entity carried out independent assessment/ evaluation of the working of its policies by an external agency? (Yes/No). If yes, provide name of the agency.	Policies and procedures of the organization are subject to audits/ reviews during/ by ISO 9001, ISO 14001, ISO 45001, ISO 27001, CAG, Parliamentary Committees, Administrative Ministry, etc.																	

a. ISO 9001; b. ISO 14001; c. ISO 45001; d. ISO 50001; e. ten principles of UNGC on human rights, labour, environment and anti-corruption; f. DPE guidelines; g. compliance with Govt. and statutory guidelines in this context

12. If answer to question (1) above is “No” i.e. not all Principles are covered by a policy, reasons to be stated:

Questions	P1	P2	P3	P4	P5	P6	P7	P8	P9
The entity does not consider the Principles material to its business (Yes/No)	No	No	No	No	No	No	No	No	No
The entity is not at a stage where it is in a position to formulate and implement the policies on specified principles (Yes/No)	No	No	No	No	No	No	Yes	No	No
The entity does not have the financial or/human and technical resources available for the task (Yes/No)	No	No	No	No	No	No	No	No	No
It is planned to be done in the next financial year (Yes/No)	No	No	No	No	No	No	No	No	No
Any other reason (please specify)	No	No	No	No	No	No	No	No	No

*In respect of Principle 7 referring to Policy Advocacy, although company doesn't have policy but follows established practices based on 'Policy advocacy in responsible manner'

#Held the charge of Director (HR) upto 3rd July 2023. Mr. Krishan Kumar Thakur, Director (HR) is responsible for implementation and oversteer of BRSR w.e.f 4th July 2023.

^Projected rating/grading for FY 2022-23 as per DPE guidelines for Corporate Governance.

SECTION C: PRINCIPLE WISE PERFORMANCE DISCLOSURE

Principle 1: Ethics, Transparency and Accountability

The company has a Board approved 'Code of Business Conduct & Ethics' for all Board Members and senior management personnel in compliance with the requirements of DPE Guidelines on Corporate Governance for CPSEs and SEBI's Listing Regulations.

<https://www.bhel.com/code-business-conduct-ethics-board-members-senior-management-personnel>

The Board has a laid down charter for the Board of Directors which clearly defines the roles and responsibilities of the Board and individual Directors. Further, the company endeavors to preserve the confidentiality of unpublished price sensitive information and prevent abuse of such information. Towards this, a Board approved policy 'BHEL Code of Conduct for Regulating & Reporting Trading by Designated Persons & their Immediate Relatives and for Fair Disclosure' in line with SEBI (Prohibition of Insider Trading) Regulations - 2015 and Listing Regulations directs that Board members and other Designated Employees of the company have a duty to safeguard the confidentiality of all such information obtained in the course of their work at the company. The code also provides for practices and procedures for fair disclosure of unpublished price sensitive information (UPSI).

<https://www.bhel.com/code-conduct-prevention-insider-trading>

For effective implementation of the Insider Trading Code, an internal operating guidelines has been put in place. A structured digital database containing names of all 'Designated Persons' along with details of additional persons with whom UPSI was shared is in place. Details of initial and continual disclosures are being submitted by these Designated Persons within prescribed timelines. In addition, emails notifying the 'Designated Persons' that they are in possession of UPSI and that they must ensure its confidentiality, is sent simultaneously along with the emails intimating Closure of Trading Window. A separate email is also sent to those persons with whom UPSI is shared by the 'Designated Persons'.

In line with the requirements of DPE Guidelines on Corporate Governance and the Listing Regulations, BHEL provides compliance reports on quarterly basis to MHI and stock exchanges. The audit of the Company's compliance with corporate governance requirements as well as secretarial audit of BHEL's compliance with statutory laws is conducted each year and the said reports form part of the Annual Report of the Company and also been informed to the Stock Exchanges. In compliance with the Listing Regulations, all Board members and senior management personnel affirm annually that they have fully complied with the provisions of

the Code of Business Conduct and Ethics during the relevant financial year and an affirmation to this effect is given by the Chairman & Managing Director in the Annual Report of the Company. For the purpose of the 'Code of Conduct for Regulating & Reporting Trading by Insiders and for Fair Disclosure', Director (Finance) is the compliance officer of the Company. In addition, the Chief Investor Relations Officer of the Company ensures compliance of 'Code of Practice and Procedure for Fair Disclosure'.

In addition, as a part of BHEL's persisting endeavor to set a high standard of conduct for its employees (other than those governed by standing orders), 'BHEL Conduct, Discipline and Appeal Rules, 1975' is in place which are updated periodically. This is augmented by Fraud Prevention Policy and Whistle Blower Policy which not only arms the company against unacceptable practices but also acts as a deterrent. The Company is subject to RTI Act 2005, audit by Statutory Auditors and CAG audit under section 139 of the Companies Act, 2013.

<https://www.bhel.com/bhel-fraud-prevention-policy-0>

<https://www.bhel.com/whistle-blower-policy-0>

In the area of business dealings with vendors and customers, BHEL has signed an MoU with Transparency International India (TII) to adopt 'Integrity Pact' to make procurement and contracting more transparent by binding both the parties to ethical conduct. A panel of three Independent External Monitors (IEMs) has been appointed to oversee implementation of Integrity Pact in BHEL, with due approval of Central Vigilance Commission. Within BHEL, accountability is well defined for various functionaries through 'Delegation of Power'. Works Policy, Purchase Policy and other policy documents facilitate transparency in BHEL's working and commitment of highest order of integrity. To enhance transparency, visibility and accountability in procurement further, BHEL has scaled up its procurements through digital platform viz. Government e-Marketplace (GeM) from ₹30 lakh in FY 2018-19 to ₹6,189 Crore in FY 2022-23. In addition, Internal Audit carries out independent audit of purchase/works contracts.

Essential Indicators

1. Percentage coverage by training and awareness programmes on any of the Principles during the financial year:

BHEL conducts several training programmes for its employees and Directors. These training programmes are curated based on the requirement and include several topics (which in some form covers the nine principles) within a program.

Segment	Total number of training and awareness programmes held	Topics / principles covered under the training and its impact	%age of persons in respective category covered by awareness programmes
Board of Directors	4	Specific Roles and Responsibilities of an Independent Director, Effectiveness in Board Meetings, Role of Board Level Committees and Decision Making, Business Familiarization	100%
Key Managerial Personnel (other than Board of directors)	2	The topics covered were Social Audit, POSH & Labour Law, which are part of the legal framework under which the Company operates.	100%
Employees other than BoD and KMPs	1537	Technical, functional, safety, managerial & behavioral topics in line with nine principles	70.6%
Workers	1537		45.9%

2. Details of fines / penalties /punishment/ award/ compounding fees/ settlement amount paid in proceedings (by the entity or by directors / KMPs) with regulators/ law enforcement agencies/ judicial institutions, in the financial year, in the following format (Note: the entity shall make disclosures on the basis of materiality as specified in Regulation 30 of SEBI (Listing Obligations and Disclosure Obligations) Regulations, 2015 and as disclosed on the entity's website):

There were no fines/ penalties/punishment/ award/ compounding fees/ settlement amount of material nature paid in proceedings by the directors/ KMPs to regulators/ law enforcement agencies/ judicial institutions during FY 2022-23.

3. Of the instances disclosed in Question 2 above, details of the Appeal/ Revision preferred in cases where monetary or non-monetary action has been appealed-

Not Applicable

4. Does the entity have an anti-corruption or anti-bribery policy? If yes, provide details in brief and if available, provide a web-link to the policy.

Yes, BHEL has a policy for anti-corruption and anti-bribery. As a part of BHEL's persisting endeavor to set a high standard of conduct for its employees (other than those governed by standing orders), 'BHEL Conduct, Discipline and Appeal Rules, 1975' is in place which are updated periodically. This is augmented by Fraud Prevention Policy and Whistle Blower Policy which not only arm the company against unacceptable

practices but also act as a deterrent. The Company is subject to RTI Act 2005, audit by Statutory Auditors and CAG audit under section 139 of the Companies Act, 2013.

<https://www.bhel.com/bhel-fraud-prevention-policy-0>

<https://www.bhel.com/whistle-blower-policy-0>

In the area of business dealings with vendors and customers, BHEL has signed an MoU with Transparency International India (TII) to adopt 'Integrity Pact' to make procurement and contracting more transparent by binding both the parties to ethical conduct. A panel of three Independent External Monitors (IEMs) has been appointed to oversee implementation of Integrity Pact in BHEL, with due approval of Central Vigilance Commission. Within BHEL, accountability is well defined for various functionaries through 'Delegation of Power'. Works Policy, Purchase Policy and other policy documents facilitate transparency in BHEL's working and commitment of highest order of integrity. In addition, Internal Audit carries out independent audit of purchase/ works contracts.

5. Number of Directors/KMPs/employees/workers against whom disciplinary action was taken by any law enforcement agency for the charges of bribery/ corruption:

	FY 2022-23	FY 2021-22
Directors	0	0
KMPs	0	0
Employees	4	1
Workers	0	0

6. Details of complaints with regard to conflict of interest:

	FY 2022-23		FY 2021-22	
	Number	Remarks	Number	Remarks
Number of complaints received in relation to issues of Conflict of Interest of the Directors	0	--	0	--
Number of complaints received in relation to issues of Conflict of Interest of the KMPs (other than directors)	0	--	0	--

7. Provide details of any corrective action taken or underway on issues related to fines / penalties / action taken by regulators/ law enforcement agencies/ judicial institutions, on cases of corruption and conflicts of interest-

Refer Annexure - VIII to the Board' Report, Vigil Mechanism

Leadership Indicators

1. Awareness programmes conducted for value chain partners on any of the Principles during the financial year:

Total number of awareness programmes held	Topics / principles covered under the training	%age of value chain partners covered (by value of business done with such partners) under the awareness programmes
33	<ol style="list-style-type: none"> Awareness on Public Procurement Policy for Micro and Small Enterprises (MSEs) – Order for MSEs (issued by Ministry of MSME-Gol) Online supplier registration portal Government-e-Marketplace (GeM) BHEL General Conditions of Contract BHEL SAMVAAD with domestic industry to identify local sources 	20%

2. Does the entity have processes in place to avoid/manage conflict of interests involving members of the Board? (Yes/No) If Yes, provide details of the same.

Yes, the Company has a legal framework in place to avoid/manage conflict of interests involving members of the Board.

The Companies Act, 2013 and the SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015 have detailed provisions which require the Directors of the Board to disclose their concern or interest (including their shareholding) in any company (ies)/ bodies corporate/ firms/ other association of individuals, periodically as well as whenever there is any change in the disclosures already made. In this regard, the Directors also submit a certificate to the Board stating that they do not have any conflict of interest with regard to the business of the Company on account of their concern/ interest and whenever any such conflict/ interest arises they shall promptly inform the same to the Board.

Apart from this, the Company's Board has approved a 'Code of Business Conduct & Ethics for all Board Members and Senior Management Personnel'. The Code encompasses (i) General

Moral Imperatives (ii) Specific Professional Responsibilities as well as (iii) Specific Additional Provisions for Board Members and Senior Management Personnel. In addition, for the purpose of clearly defining the roles and responsibilities of the Board and individual Directors and to enable the Board to effectively perform its role, the Board has laid down a Charter of the Board of Directors.

Further to these processes which are in place to avoid/manage conflict of interests involving members of the Board, the Independent Directors on the Board are required to comply with certain additional provisions viz., submission of declaration of their independence (i.e. they meet the criteria of independence & that they are not aware of any circumstance or situation, which exist or may be reasonably anticipated, that could impair or impact their ability to discharge his duties with an objective independent judgment & without any external influence) and compliance with Schedule IV of the Companies Act which inter-alia provides for (i) Guidelines of professional conduct (ii) Role & functions and (iii) Duties for Independent Directors.

Principle 2: Product lifecycle sustainability

BHEL is contributing to a greener environment through development of environment friendly technologies and improvement in efficiency of equipment. Continuous improvement in power cycle efficiency and reduced emissions from coal based power plants have been achieved over the time by evolution of technology from sub-critical to supercritical. Attributes of BHEL supplied power plant equipment such as lower auxiliary power consumption, higher plant efficiency, lower design heat rate and higher operating availability help in attaining lower life cycle cost.

BHEL provides comprehensive solutions for reducing emissions through supply and commissioning of Flue-gas Desulphurization (FGD) systems, Selective Catalytic Reduction (SCR) systems, Solar Photovoltaic plants, Electrostatic Precipitators (ESP). BHEL has developed fully indigenous Pressurized Fluidized Bed Gasification (PFBG) technology for generating syngas from high ash Indian Coal. The syngas further acts as a feed for production of industrial chemicals. There is also conscious effort towards reduction of embodied carbon in products. Company has opted to replace polluting fuels with cleaner ones, e.g., gas is now used as a source of heat energy (instead of coal earlier) during production of products like ceralin, and has also converted furnaces to RLNG from LPG at its manufacturing plants.

Essential Indicators

1. Percentage of R&D and capital expenditure (capex) investments in specific technologies to improve the environmental and social impacts of product and processes to total R&D and capex investments made by the entity, respectively.

	FY 2022-23	FY 2021-22	Details
R&D	3.59%	2.24%	More than 50 developmental projects were taken up
Capex	10%	2%	Major expenditure reported as : 5 MWp Solar Photovoltaic (SPV) Power Plant at BHEL, Regenerative Burner commissioned for bringing in energy savings and expenditure for SCR (Selective catalytic reduction) catalyt technology.

Refer Annexure- VI to Board Report and Annexure-VII to the Board Report

2. a. Does the entity have procedures in place for sustainable sourcing? (Yes/No)
- b. If yes, what percentage of inputs were sourced sustainably?

Yes, BHEL has implemented e-procurement/ GeM as business improvement and sustainable business practice. Also supplier registration is done in online mode only. BHEL sources varied input material and component from several of its value chain partners which are certified and compliant with standards such as ISO 14001, ISO 45001 etc.

100% of our inputs are sourced sustainably.

3. Describe the processes in place to safely reclaim your products for reusing, recycling and disposing at the end of life, for (a) Plastics (including packaging) (b) E-waste (c) Hazardous waste and (d) other waste.

BHEL products fall under capital goods category where product life goes beyond 25 years in majority of cases. The market requirement is for extension of the life of products or systems through process of refurbishments. After end of desired life of capital goods, they become unfit for reuse and hence being disposed as scrap by owner of the capital good products.

4. Whether Extended Producer Responsibility (EPR) is applicable to the entity's activities (Yes / No). If yes, whether the waste collection plan is in line with the Extended Producer Responsibility (EPR) plan submitted to Pollution Control Boards? If not, provide steps taken to address the same.

Extended Producer Responsibility (EPR) is not applicable to BHEL's activities.

Leadership Indicators

1. Has the entity conducted Life Cycle Perspective / Assessments (LCA) for any of its products (for manufacturing industry) or for its services (for service industry)? If yes, provide details in the following format?

No, company has not conducted Life Cycle Assessments for products.

2. If there are any significant social or environmental concerns and/or risks arising from production or disposal of your products / services, as identified in the Life Cycle Perspective / Assessments (LCA) or through any other means, briefly describe the same along-with action taken to mitigate the same.

Not applicable

- Percentage of recycled or reused input material to total material (by value) used in production (for manufacturing industry) or providing services (for service industry).

Company's manufacturing processes generate fair amount of metal scrap, however engineering measures are taken to minimize waste generation. The scrap subsequently undergoes recycling within the company and is reused. For example, Central Foundry Forge Plant (CFFP) in Haridwar manufactures Steel Forgings and Castings for which steel scrap is a major raw material. Reusable material is also used in packaging manufactured goods. Where possible, goods are supplied in specifically designed crates to project sites, where the crate material is reused during construction.

The value of such recycled/reused items is not being captured at the moment.

- Of the products and packaging reclaimed at end of life of products, amount (in metric tonnes) reused, recycled, and safely disposed, as per the following format:

BHEL's business is B2B in nature and products/ systems we supply fall under capital goods category with long lifecycle (25 years and beyond). All the associated packaging material for supplies become the property of our customers that spread across the country and abroad. In this given situation, it is not feasible to reclaim the product (end of life) or packaging material from the customer.

- Reclaimed products and their packaging materials (as percentage of products sold) for each product category.

As explained in point 4 (previous point).

Principle 3: Employees' well-being

BHEL has been a frontrunner in the area of human resource management. The guiding principle for company's Human

Resource Management policy is to ensure availability of competent, motivated and effectively contributing human resources and to facilitate achievement of their full potential at all times to realize organizational goals. Company has documented HRM policies and rules in the form of a 'Personnel Manual' to ensure transparency and uniformity of implementation for regulating employment relationship, career growth/ development and employees' emoluments/ benefits, healthcare and well-being. These policies are further complemented by a grievance redressal mechanism through two schemes – one for workers and other for staff & officers. A grievance for the purpose of the scheme means a grievance relating to any individual employee arising out of the implementation of Company policies/rules or Management Decisions. Both these schemes provide for three-tier resolution. Defined timelines are laid down for resolution of grievance at each stage. Besides, an appellate mechanism is also provided under the scheme, in the case of grievance redressal scheme for staff & officers which an aggrieved employee can approach in case he/she is not satisfied with the resolution of the grievance.

BHEL has a Health, Safety & Environment (HSE) policy which underlies the commitment of the organization to provide safe and healthy work environment to all its employees as well as other stakeholders giving due consideration for the safeguard of environment. The policy conforms to the requirements of ISO 14001 & ISO 45001 management system certification standards and can be accessed through the link <https://www.bhel.com/sites/default/files/HSEPOLICY.pdf>. HSE cells at all units/ divisions implement this policy and Corporate HSE department provides strategic guidance related to HSE matters at organization level. The HSE policy is prominently displayed at all workplaces to create awareness amongst the employees and other stakeholders about the same and is also translated into local language. Periodic audits by internal as well as external agencies are carried out to ensure the effectiveness of ISO 14001 and ISO 45001 management systems implemented at workplaces which

include the working of the policy and its critical elements.

Essential Indicators

1. a. Details of measures for the well-being of employees:

Category	% of employees covered by										
	Total (A)	Health insurance		Accident insurance		Maternity benefits		Paternity Benefits		Day Care facilities	
		Number (B)	% (B / A)	Number (C)	% (C / A)	Number (D)	% (D / A)	Number (E)	% (E / A)	Number (F)	% (F / A)
Permanent employees											
Male	27790	27790	100%	27790	100%	0	0	27790	100%	0	0
Female	1746	1746	100%	1746	100%	1746	100%	0	0	1746	100%
Total	29536	29536	100%	29536	100%	1746	5.91%	27790	94.09%	1746	5.91%
Other than Permanent employees*											
Male	14495	14430	99.55%	14430	99.55%	0	0.00%	0	0.00%	0	0.00%
Female	1210	1209	99.92%	1209	99.92%	1209	99.92%	0	0.00%	167	13.80%
Total	15705	15639	99.58%	15639	99.58%	1209	7.7%	0	0.00%	167	1.06%

BHEL extends medical facility to its employees and their dependents. The facility is extended to its employees/ spouse on superannuation/ death as well. Day care facilities are also extended in several premises including BHEL's manufacturing plants.

*For 'other than permanent employees' BHEL extends reimbursement of premium on Medical Insurance/ Accident Insurance in case of Consultants/ FTA.

b. Details of measures for the well-being of workers:

Category	% of workers covered by										
	Total (A)	Health insurance		Accident insurance		Maternity benefits		Paternity Benefits		Day Care facilities	
		Number (B)	% (B / A)	Number (C)	% (C / A)	Number (D)	% (D / A)	Number (E)	% (E / A)	Number (F)	% (F / A)
Permanent workers											
Male	14592	14592	100%	14592	100%	0	0	14592	100%	0	0
Female	394	394	100%	394	100%	394	100%	0	0	394	100%
Total	14986	14986	100%	14986	100%	394	2.63%	14592	97.37%	394	2.63%
Other than Permanent workers											
Male	14430	14430	100%	14430	100%	0	0.00%	0	0.00%	0	0.00%
Female	1209	1209	100%	1209	100%	1209	100%	0	0.00%	167	13.81%
Total	15639	15639	100%	15639	100%	1209	7.7%	0	0.00%	167	1.07%

BHEL extends medical facility to its employees and their dependents. The facility is extended to its employees/ spouse on superannuation/ death as well. Day care facilities are also extended in several premises including BHEL's manufacturing plants. In case of 'other than permanent workers', insurance is inbuilt in the Works contract.

2. Details of retirement benefits, for Current FY and Previous Financial Year.

Benefits	FY 2022-23			FY 2021-22		
	No. of employees covered as a % of total employees	No. of workers covered as a % of total workers	Deducted and deposited with the authority (Y/N/N.A.)	No. of employees covered as a % of total employees	No. of workers covered as a % of total workers	Deducted and deposited with the authority (Y/N/N.A.)
PF	100%	100%	Y	100%	100%	Y
Gratuity	100%	100%	Y	100%	100%	Y
ESI *	-	-	-	-	-	-
Others (BHEL Pension scheme)	100%	100%	NA	100%	100%	NA

As a retirement benefit apart from PF and Gratuity, all employees and workers are also covered under BHEL pension scheme.

* ESI is not applicable as BHEL extends medical facility scheme to all employees.

3. Accessibility of workplaces

Are the premises / offices of the entity accessible to differently abled employees and workers, as per the requirements of the Rights of Persons with Disabilities Act, 2016? If not, whether any steps are being taken by the entity in this regard.

Yes, BHEL's premises and office are accessible to differently abled employees and workers. The structural modifications and other changes (in policies, etc.) are made in accordance to the requirements of the Rights of Persons with Disabilities Act, 2016.

4. Does the entity have an equal opportunity policy as per the Rights of Persons with Disabilities Act, 2016? If so, provide a web-link to the policy.

Yes, the company takes affirmative action in recruitment and promotion for representation of employees from socio-economically backward sections of society, minorities, disabled personnel and women as mandated by the Govt. of India. The company is an equal opportunity employer and does not discriminate on the basis of gender, race, caste, religion, linguistic, region etc. in recruitment and employment relationship.

In case of an employee made to retire on medical grounds prematurely, provisions of The Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, are kept in consideration. Additionally, Transfer and Job Rotation policy is inline with Government guidelines for the transfers of PwD employees.

5. Return to work and Retention rates of permanent employees and workers that took parental leave.

Gender	Permanent employees		Permanent workers	
	Return to work rate	Retention rate	Return to work rate	Retention rate
Male	100%	100%	100%	100%
Female	100%	100%	100%	100%
Total	100%	100%	100%	100%

6. Is there a mechanism available to receive and redress grievances for the following categories of employees and worker? If yes, give details of the mechanism in brief.

There is a well laid out grievance redressal mechanism through two schemes – one for workers and other for staff & officers. A grievance for the purpose of the scheme means a grievance relating to any individual employee arising out of the implementation of Company policies/rules or Management Decisions. Both these schemes provide for three-tier resolution. Defined timelines are laid down for resolution of grievance at each stage. Besides, an appellate mechanism is also provided under the scheme, in the case of grievance redressal scheme for staff & officers, which an aggrieved employee can approach in case he/she is not

satisfied with the resolution of the grievance. For 'other than permanent employees/ worker' the grievances are settled on case to case basis or through the contractors as the case may be.

	Yes/No (If Yes, then give details of the mechanism in brief)
Permanent Workers	Yes
Other than Permanent Workers	Yes
Permanent Employees	Yes
Other than Permanent Employees	Yes

7. Membership of employees and worker in association(s) or Unions recognised by the listed entity:

Category	FY 2022-23			FY 2021-22		
	Total employees / workers in respective category (A)	No. of employees / workers in respective category, who are part of association(s) Or Union (B)	% (B / A)	Total employees / workers in respective category (C)	No. of employees / workers in respective category, who are part of association(s) or Union (D)	% (D / C)
Total Permanent Employees	29536	29536	100.00%	30758	30758	100.00%
- Male	27790	27790	100.00%	28925	28925	100.00%
- Female	1746	1746	100.00%	1833	1833	100.00%
Total Permanent Workers	14986	14986	100.00%	15720	15720	100.00%
- Male	14592	14592	100.00%	15305	15305	100.00%
- Female	394	394	100.00%	415	415	100.00%

BHEL has 29 participative trade unions represented in the apex level bipartite body, namely the Joint Committee for discussing workers' and Company's interest related issues based on the principle of participative management.

All three categories of employees viz. Executives, Supervisors and Workers are represented by their respective associations/ trade unions. However, since there is no check-off facility to ascertain the exact membership of executive/ supervisor associations and workers' unions, a firm number in respect of the three classes of employees is not available.

8. Details of training given to employees and workers:

Category	FY 2022-23					FY 2021-22				
	Total (A)	On Health and safety measures		On Skill upgradation		Total (D)	On Health and safety measures		On Skill upgradation	
		No. (B)	% (B/A)	No. (C)	% (C/A)		No. (E)	% (E/D)	No. (F)	% (F / D)
Employees										
Male	27790	3869	13.9%	12182	43.8%	28925	2060	7.1%	6884	23.8%
Female	1746	452	25.9%	1029	58.9%	1833	289	15.8%	851	46.4%
Total	29536	4321	14.6%	13211	44.7%	30758	2349	7.6%	7735	25.1%
Workers										
Male	14592	1462	10.0%	4031	27.6%	15305	1461	9.5%	3192	20.9%
Female	394	128	32.5%	168	42.6%	415	40	9.6%	133	32.0%
Total	14986	1590	10.6%	4199	28.0%	15720	1501	9.5%	3325	21.2%

9. Details of performance and career development reviews of employees and worker:

Category	FY 2022-23			FY 2021-22		
	Total (A)	No. (B)	% (B / A)	Total (C)	No. (D)	% (D / C)
Employees						
Male	27990	27990	100%	28925	28925	100%
Female	1746	1746	100%	1833	1833	100%
Total	29736	29736	100%	30758	30758	100%
Workers						
Male	14592	14592	100%	15305	15305	100%
Female	394	394	100%	415	415	100%
Total	14986	14986	100%	15720	15720	100%

10. Health and safety management system:

a. Whether an occupational health and safety management system has been implemented by the entity? (Yes/ No). If yes, the coverage such system?

Yes, OHSMS is implemented across the company. Each and every employee of the company is covered under the Occupational Health and Safety Management System and the system is applicable at all the work places.

b. What are the processes used to identify work-related hazards and assess risks on a routine and non-routine basis by the entity?

Company has strong systems / processes to identify the work-related hazards and assess risks on routine and non-routine basis. A few are listed below:

HIRA (Hazard Identification and Risk Assessment) – All our units are following HIRA for identifying the risks. Respective formats are available and this document is reviewed yearly for any changes required.

JSA (Job Safety Analysis) – JSA is a procedure of analyzing jobs for the specific purpose of finding the hazards in each step in the job and developing the safety precautions to be adopted. This is done at the stage of planning for job / process.

Method Statement – It outlines the safe way of performing a specific job or accomplishing a project and ensure that necessary precautions or control measures are communicated to those involved. A method statement provides evidence that significant health & safety risks have been identified and there are safety systems in place.

c. Whether you have processes for workers to report the work related hazards and to remove themselves from such risks.

(Y/N)

Yes, a process is in place for workers to report work related hazards and to remove themselves from such risks. There is a system to record the Unsafe Act and Unsafe Condition online / offline modes. Workers are trained to observe any of such work-related hazards and inform the same through the mode available at their respective work premises. Further, systems are established to reduce/eliminate all these hazards and risks.

d. Do the employees/ worker of the entity have access to non-occupational medical and healthcare services?

Safety Incident/Number	Category	FY 2022-23	FY 2021-22
Lost Time Injury Frequency Rate (LTIFR) (per one million-person hours worked)	Employees	0	0
	Workers	0	0
Total recordable work-related injuries	Employees	0	0
	Workers	47	46
No. of fatalities	Employees	0	0
	Workers	2	3
High consequence work-related injury or ill-health (excluding fatalities)	Employees	0	0
	Workers	45	43

12. Describe the measures taken by the entity to ensure a safe and healthy work place.

BHEL strongly believes in providing safe work place and safe environment to all its employees and people we work with. It shows our commitment to develop safety and sustainability culture through active leadership and by ensuring availability of required resources.

BHEL conducted HSE Trainings / Expert Talks / Webinars on regular basis for their employees and sub-contractors' employees. In addition to the structured trainings to spread awareness for safe work place, a special campaign was celebrated uniformly across the organization, as "BHEL Safety Fortnight-2023" starting from National Safety Day (4th March - 17th March, 2023). Other HSE campaigns were also organized on large scale i.e. Environment Awareness Month (5th June – 30th June, 2022), Swachhta Pakhwada (16th – 31st August 2022), etc. To involve the higher-level management participation, innovative inter-unit competitions other than other competitions were organized in these campaigns.

BHEL's is taking every effort to increase its safety performance and environmental enrichment. In view of the same, digital HSE systems have been developed. These systems will help to get the data online and increase the efficiency of analysis of the HSE data.

(Yes/ No)

Yes, employees and workers have access to non-occupational medical and healthcare services offered through company operated health care facilities as well as external healthcare facilities which are compensated suitably as per the company policy.

11. Details of safety related incidents, in the following format:

13. Number of Complaints on the following made by employees and workers:

No complaints have been received for 'Working conditions' and 'Health & Safety'. Systems are in place at respective premises of BHEL for registering unsafe conditions related to safety. The same is addressed promptly by concerned departments and it is a continuous ongoing process.

14. Assessments for the year:

	% of your plants and offices that were assessed (by entity or statutory authorities or third parties)
Health and safety practices	100%
Working Conditions	100%

15. Provide details of any corrective action taken or underway to address safety-related (if any) and on significant risks / concerns arising from assessments of health & safety practices and working conditions.

Root Cause Analysis (RCA) are conducted for all the safety-related incidences and suitable corrective actions are taken. Safety inspections and Safety audits are also being done periodically. Corrective actions are being taken for all the observations given by the auditors (internal as well as external).

Leadership Indicators

- Does the entity extend any life insurance or any compensatory package in the event of death of (A) Employees (Y/N) (B) Workers (Y/N).**

Yes, BHEL extends life insurance or compensatory package to employees as well as workers in the event of death.

- Provide the measures undertaken by the entity to ensure that statutory dues have been deducted and deposited by the value chain partners.**

BHEL's value chain partners come under PF act and ESI act which makes them liable to deposit statutory dues. Service contract between BHEL and service provider contains clause on 'payment terms' for necessary statutory payment like PF, ESI etc. While making payments against services rendered, BHEL verifies necessary documents and ensures that deposits of statutory dues like PF, ESI etc. of workers are made by the contractors.

- Provide the number of employees / workers having suffered high consequence work related injury / ill-health / fatalities (as reported in Q11 of Essential Indicators above), who have been are rehabilitated and placed in suitable employment or whose family members have been placed in suitable employment:**

Nil. There are no eligible cases in respect of employees and worker affected by high consequence work related injury/ ill-health/ fatalities during FY 2022-23 and FY 2021-22 presented by BHEL Units or Establishment or from next of kin of the employee, seeking any form of compassionate employment.

	Total no. of affected employees/ workers		No. of employees/ workers that are rehabilitated and placed in suitable employment or whose family members have been placed in suitable employment	
	FY 2022-23	FY 2021-22	FY 2022-23	FY 2021-22
Employees	0	0	0	0
Workers	0	0	0	0

- Does the entity provide transition assistance programs to facilitate continued employability and the management of career endings resulting from retirement or termination of employment? (Yes/ No)**

Yes, BHEL provides transition assistance to facilitate continued employability and the management of career endings resulting from retirement or termination.

- Details on assessment of value chain partners:**

All of the BHEL's value chain partners comes under relevant labour laws and acts. Because of which both central and state labour department conduct periodic inspections in related to Health and Safety practices and working conditions at the premise of value chain partners. Any gaps identified are suitability addressed by the partners.

- Provide details of any corrective actions taken or underway to address significant risks / concerns arising from assessments of health and safety practices and working conditions of value chain partners.**

Refer point 5 (previous point).

Principle 4: Stakeholder engagement

BHEL has identified 'Customers', 'Employees', 'Shareholders', 'Value chain partners' and 'Society' as its stakeholders. Processes are in place to ensure inclusion of stakeholder expectations and concerns. Key issues are identified through stakeholder engagement and addressed by programmes or action plans with clear and measurable targets. BHEL units regularly organize vendor meets specifically for MSEs (including local suppliers) towards capacity and capability building, which also provides opportunities for open communication, mutual benefit and support. Customers are engaged through several modes like customer meets, surveys. Investor community is engaged through meetings, conferences, publications etc and is provided with relevant information pertaining to their investment decisions.

BHEL has identified the disadvantaged, vulnerable & marginalized stakeholders in the vicinity of the BHEL manufacturing units / regions / divisions / sites / offices and their concerns are addressed as per BHEL's CSR Policy which is in compliance with section 135 & Schedule VII of the Companies Act 2013 and rules made thereunder as well as DPE Guidelines on CSR & Sustainability for CPSEs.

https://www.bhel.com/sites/default/files/BHEL_CSR_Policy_2022.pdf

Essential Indicators

- Describe the processes for identifying key stakeholder groups of the entity.**

Stakeholders which directly or indirectly impact BHEL's

revenue earning capability, its ability to share benefits are identified as key stakeholders. As an example, suppliers or value chain partners are stakeholders w.r.t procurement and they are identified against registration process and also through pre-qualification requirements in open tenders.

2. List stakeholder groups identified as key for your entity and the frequency of engagement with each stakeholder group.

Stakeholder Group	Whether identified as Vulnerable & Marginalized Group (Yes/No)	Channels of communication (Email, SMS, Newspaper, Pamphlets, Advertisement, Community, Meetings, Notice Board, Website), Others	Frequency of engagement (Annually/ Half yearly/ Quarterly / others – please specify)	Purpose and scope of engagement including key topics and concerns raised during such engagement
Shareholders	No	Email, Newspaper Advertisement, Disclosure available on Stock Exchanges & BHEL Website	Engagement is done on Quarterly, Half yearly & Annual basis as well as whenever the event occurs	All material events affecting the Company as well as disclosures required under SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015
Suppliers	No	Email, Advertisement, Vendor meets, website etc.	Regular	To make suppliers aware of: <ul style="list-style-type: none"> Public Procurement Policy (Preference to Make in India) MSMED Act Import substitution Participating in tenders issued on GeM portal Lodging and tracking grievances on BHEL's grievance redressal portal, SUVIDHA BHEL's quality objectives
Employees	No	Email, Monthly Newsletter, Notice Boards, Intranet Websites, Shop Floor, Shop Council, Plant Council and Joint Council Meetings	Monthly	Sharing monthly progress of the company and the business verticals, targets, achievements and department/section level concerns etc
Customers	No	Email, Advertisement, telephone calls, meetings, website etc	Regular	Assessment of customer needs, their requirement vis-à-vis existing capital good assets, complaints resolution, business enquiries etc
Communities	Yes	Meetings, local NGOs	Case-to-case basis	Assessing their problems that lead to their vulnerability and which hold back in attaining better standard of living

Leadership Indicators

1. Provide the processes for consultation between stakeholders and the Board on economic, environmental, and social topics or if consultation is delegated, how is feedback from such consultations provided to the Board.

The most important forum for the shareholders of BHEL to have access to the Board of Directors is the Annual General Meeting of the Company. During these meetings, shareholders get opportunity to raise various queries regarding the performance, strategies and outlook of the Company. They share their grievances as well as provide valuable feedback regarding improvements in the Company performance, not only from a business perspective but also on critical economic, environmental and social topics/ areas.

BHEL value chain partners have access to Independent External Monitors (IEMs), who are nominated by CVC for consultation. They also can share their issues with Vigilance function of company during vendor meets etc. The supplier feedback received through such channels are shared during interactions with top management of BHEL.

2. Whether stakeholder consultation is used to support the identification and management of environmental, and social topics (Yes / No). If so, provide details of instances as to how the inputs received from stakeholders on these topics were incorporated into policies and activities of the entity.

Yes. Stakeholders have provided their support to various environmental & social endeavors of BHEL viz., indigenization

Essential Indicators

1. Employees and workers who have been provided training on human rights issues and policy(ies) of the entity, in the following format:

Category	FY 2022-23			FY 2021-22		
	Total (A)	No. of employees / workers covered (B)	% (B / A)	Total (C)	No. of employees workers covered (D)	% (D / C)
Employees						
Permanent	29536	3332	11.3%	30758	686	2.2%
Other than permanent	15638	534	3.41%	15620	0	0%
Total Employees	45174	3866	8.56%	46378	686	1.5%
Workers						
Permanent	14986	1083	7.2%	15720	205	1.3%
Other than permanent	15638	534	3.41%	15620	0	0%
Total Workers	30624	1617	5.3%	31340	205	0.65%

Note: For company policy related program, only HR policy related are considered here

of various items under "AatmaNirbhar Bharat", utilization of solar energy & water harvesting capacity in BHEL's factories & project sites, empowerment of woman employees etc. Supplier feedback received during interactions are taken care like benefits of MSEs through waiver of EMD, purchase preference etc.

3. Provide details of instances of engagement with, and actions taken to, address the concerns of vulnerable/marginalized stakeholder groups.

For underprivileged section of the community, BHEL spend on CSR projects after baseline survey is conducted by local NGOs. These local NGOs during their baseline surveys engage with communities and understand their needs and problems.

Principle 5: Human rights

BHEL policies are in line with the principles of Human Rights, The Constitution of India, and applicable laws. BHEL has special provisions for ensuring safeguard of women employees at the workplace.

BHEL is one of the founding member of Global Compact Network, India (GCNI) and is a part of initiatives in India. The company reports its performance on ten principles of UNGC on annual basis since 2001 through Communication on Progress (CoP) which include BHEL's commitment towards upholding the principles of UNGC. This CoP can be accessed through the webpage:

<https://www.bhel.com/commitment-ungc-programme>

2. Details of minimum wages paid to employees and workers, in the following format:

Category Total (A)	FY 2022-23					FY 2021-22				
	Equal to Minimum Wage		More than Minimum Wage		Total	Equal to Minimum Wage		More than Minimum Wage		
	No. (B)	% (B / A)	No. (C)	% (C / A)	Nos. (D)	No. (E)	% (E / D)	No. (F)	% (F / D)	
Employees										
Permanent	29536	0	0	29536	100%	30758	0	0	30758	100%
Male	27790	0	0	27790	100%	28925	0	0	28925	100%
Female	1746	0	0	1746	100%	1833	0	0	1833	100%
Other than Permanent	15705	6225	39.64%	9480	60.36%	15324	6916	45.13%	8408	54.87%
Male	14495	5778	39.86%	8717	60.14%	13791	6264	45.42%	7527	54.58%
Female	1210	447	36.94%	763	63.06%	1533	652	42.53%	881	57.47%
Workers										
Permanent	14986	0	0	14986	100%	15720	0	0	15720	100%
Male	14592	0	0	14592	100%	15305	0	0	15305	100%
Female	394	0	0	394	100%	415	0	0	415	100%
Other than Permanent	15639	6225	39.80%	9414	60.20%	15260	6916	45.32%	1644	10.77%
Male	14430	5778	40.04%	8652	59.96%	13728	6264	45.63%	7464	54.37%
Female	1209	447	36.97%	762	63.03%	1532	652	42.56%	880	57.44%

3. Details of remuneration/salary/wages, in the following format:

Salary/ wage structure of BHEL employee and workers are set as per the guidelines of DPE.

	Number	Male	Female
		Median remuneration/ salary/ wages of respective category	Median remuneration/ salary/ wages of respective category
Board of Directors (BoD)*^	4	₹ 55,00,000	1
Key Managerial Personnel^	1	₹ 47,00,000	0
Employees other than BoD and KMP^	27785	₹ 14,00,000	1745
Workers^	14592	₹ 11,00,000	394

*Independent Directors are not considered. Total sitting fees paid to Independent Directors was ₹ 26,00,000 in FY 2022-23. Median sitting fees paid to Independent Director was ₹ 5,30,000 in FY 2022-23.

^Payments are excluding PP/SIP/PRP and reimbursements. Data pertains to employees on rolls as on 31 March 2023.

4. Do you have a focal point (Individual/ Committee) responsible for addressing human rights impacts or issues caused or contributed to by the business? (Yes/No)

Yes. Grievance Redressal officers are there in each BHEL premise for addressing human rights issues.

5. Describe the internal mechanisms in place to redress grievances related to human rights issues.

There is a formal well laid out grievance redressal mechanism related to human rights issues. The mechanism provides for three-

tier resolution. First stage with Controlling Officer, second stage with Head of the Department, third stage with Grievance Redressal Committee

6. Number of Complaints on the following made by employees and workers:

	FY 2022-23		FY 2021-22	
	Filed during the year	Pending resolution at the end of year	Filed during the year	Pending resolution at the end of year
Sexual Harassment	0	0	3	3
Discrimination at workplace	0	0	0	0
Child Labour	0	0	0	0
Forced Labour/ Involuntary Labour	0	0	0	0
Wages	0	0	0	0
Other human rights related issues	0	0	0	0

7. Mechanisms to prevent adverse consequences to the complainant in discrimination and harassment cases.

As a preventive step, identity of complainant is known only to Internal Complaints Committee and is protected. All meetings in the Enquiry (Complainant and Respondent) are never done face to face.

8. Do human rights requirements form part of your business agreements and contracts? (Yes/No)

Yes, human rights requirement forms a part of business agreement or contract. The service contracts between BHEL and service provider contain a clause, meeting human rights requirement like child labour, minimum wages etc.

9. Assessments for the year:

All BHEL premises are periodically inspected by central and state labour departments, PF and ESI departments and other government institutions or department for the compliance related to relevant law/ act/ statute and identifying gaps.

10. Provide details of any corrective actions taken or underway to address significant risks / concerns arising from the assessments at Question 9 above.

No significant risk/ concern was identified.

Leadership Indicators

1. Details of a business process being modified / introduced as a result of addressing human rights grievances/complaints.

Upholding of Human Rights is central to the Company's value

system and it strives to support, protect and promote human rights to ensure that fair and ethical business and employment practices are followed. The company is committed to provide a safe inclusive environment for one and all, irrespective of the caste, colour, religion, gender, divyangjan etc. The same is ensured in company's policies, procedures and practices.

2. Details of the scope and coverage of any Human rights due-diligence conducted.

Plants and offices are assessed periodically during the preventive/ statutory audit for ensuring compliance with all the Statutory laws/ Regulatory requirement and rules made thereunder. The company also conduct training programs/ sensitization sessions for its employees and trainees including apprentices on the subject.

3. Is the premise/office of the entity accessible to differently abled visitors, as per the requirements of the Rights of Persons with Disabilities Act, 2016?

Yes. Refer Principle 3, Essential Indicator no. 3.

4. Details on assessment of value chain partners:

Value chain partners of BHEL are assessed on Human Rights criteria by virtue of them coming under labor related laws/ acts/ statutes and these are assessed or inspected by relevant Govt department/ institution.

5. Provide details of any corrective actions taken or underway to address significant risks / concerns arising from the assessments at Question 4 above.

Not applicable

Principle 6: Environment

BHEL has a well-established Environmental Management System (EMS) accredited to ISO 14001. Based on the corporate HSE policy, all manufacturing units and regions have derived their HSE systems in line with the requirement of ISO 14001 'Environmental Management System' standard. The EMS provides an excellent framework to proactively identify and manage the risks related to environment in a systematic manner. HSE cells at all BHEL units as well as Power Sector regions oversee the implementation of HSE policy supported by Corporate HSE department at apex level to provide strategic guidance. Periodic audits are carried out by the certifying body to ensure the compliance to the EMS and requirements of ISO 14001 are met. The company's HSE policy is available on the internet and can be accessed through the web link:

<https://www.bhel.com/sites/default/files/HSEPOLICY.pdf>

BHEL has now undertaken a major initiative for "Making BHEL a Green Company" as a contribution to India's commitment of Net Zero by 2070.

Refer Annexure – VII to the Board's Report, 7.1 Conservation of Energy

Refer Annexure – IV to the Board's Report, 4.2 Making BHEL a Green Company

Essential Indicators

1. Details of total energy consumption (in Joules or multiples) and energy intensity, in the following format:

Parameter	FY 2022-23	FY 2021-22
Total electricity consumption (A) (in Giga Joules)	893815	759595
Total fuel consumption (B) (in Giga Joules)	1758770	1929497
Energy consumption through other sources (C) (in Giga Joules)	107216	97812
Total energy consumption (A+B+C) (in Giga Joules)	2759801	2786904
Energy intensity per rupee of turnover (in kilo Joule per Rs. Of turnover) (Total energy consumption/ turnover in rupees)	12.47	13.855
Energy intensity (optional) – the relevant metric may be selected by the entity	-	-

Rise in electricity consumption is due to increase production activity during FY 2022-23 against FY 2021-22.

Note: Indicate if any independent assessment/ evaluation/ assurance has been carried out by an external agency? (Y/N) If yes, name of the external agency.

No assessment/ evaluation/ assurance has been carried out by any external agency.

2. Does the entity have any sites / facilities identified as designated consumers (DCs) under the Performance, Achieve and Trade (PAT) Scheme of the Government of India? (Y/N) If yes, disclose whether targets set under the PAT scheme have been achieved. In case targets have not been achieved, provide the remedial action taken, if any.

None of the BHEL facilities has been identified as designated consumers (DCs) under the Performance, Achieve and Trade (PAT) Scheme.

Refer Annexure – VII to the Board's Report, 7.1 Conservation of Energy

3. Provide details of the following disclosures related to water, in the following format:

Parameter	FY 2022-23	FY 2021-22
Water withdrawal by source (in kilolitres)		
(i) Surface water	0	0
(ii) Groundwater	5407690	6107432
(iii) Third party water	12961712	13795524
(iv) Seawater / desalinated water	0	0

Parameter	FY 2022-23	FY 2021-22
(v) Others	0	0
Total volume of water withdrawal (in kilolitres) (i + ii + iii + iv + v)	18369402	19902956
Total volume of water consumption (in kilolitres)	18369402	19902956
Water intensity per rupee of turnover (Water consumed / turnover – Litre per Rs.)	0.083	0.098
Water intensity (optional) – the relevant metric may be selected by the entity	--	--

No assessment/ evaluation/ assurance has been carried out by any external agency. Data for FY 2021-22 has been recast.

4. Has the entity implemented a mechanism for Zero Liquid Discharge? If yes, provide details of its coverage and implementation.

Yes. As a responsible corporate citizen, BHEL has set up 16 Sewage Treatment Plants & 22 Effluent treatment Plants to ensure that the water which is discharged from our premises conform to the effluent standards as per the statutory requirement and its quantity is minimized to the extent feasible. In this regard, 10 numbers of our manufacturing units have been declared as zero liquid discharge entities and remaining are in the process of achieving the same. Treated effluent/sewage is used for horticulture inside the manufacturing plant and township.

5. Please provide details of air emissions (other than GHG emissions) by the entity, in the following format:

Parameter	Unit	FY 2022-23	FY 2021-22
NOx	Metric Tonne	136.59	144.50
SOx	Metric Tonne	164.28	160.84
Particulate Matters (PM)	Metric Tonne	344.00	338.91
Persistent organic pollutants (POC)	Metric Tonne	0	0
Volatile organic compounds (VOC)	Metric Tonne	5.17	5.6
Hazardous air pollutants (HAP)	Metric Tonne	9.40	8.45
Others – Carbon Monoxide	Metric Tonne	0.024	0.023

Increase in emission of SOx, PM and HAP is due to increase production activity during FY 2022-23 against FY 2021-22.

Air emissions are assessed by external agencies such as

Advance Environment Testing & Research Lab, Gwalior; Tamil Nadu Pollution Control Board, Vellore; PCRI Haridwar; Hubert Enviro Care System (P) Ltd, Chennai; M/s Evergreen Solutions System Pvt. Ltd., Bengaluru etc. Data for FY 2021-22 has been recast.

6. Provide details of greenhouse gas emissions (Scope 1 and Scope 2 emissions) & its intensity, in the following format:

Parameter	Unit	FY 2022-23	FY 2021-22
Total Scope 1 emissions (Break-up of the GHG into CO ₂ , CH ₄ , N ₂ O, HFCs, PFCs, SF ₆ , NF ₃ , if available)	Metric tonnes of CO ₂ equivalent	115744	126295
Total Scope 2 emissions (Break-up of the GHG into CO ₂ , CH ₄ , N ₂ O, HFCs, PFCs, SF ₆ , NF ₃ , if available)	Metric tonnes of CO ₂ equivalent	233385	198339
Total Scope 1 and Scope 2 emissions per rupee of turnover	g of CO ₂ equivalent per rupee	1.58	1.61
Total Scope 1 and Scope 2 emission intensity (optional) – the relevant metric may be selected by the entity	-	-	-

Rise in scope 2 emission is due to increase production activity during FY 2022-23 against FY 2021-22.

No assessment/ evaluation/ assurance has been carried out by any external agency. Data for FY 2021-22 has been recast.

7. Does the entity have any project related to reducing Green House Gas emission? If Yes, then provide details.

Yes. BHEL has set up nearly 34.895 MWp of capacity of Solar Power plants including rooftop ones which has helped the organization in reducing its electricity consumption. This large-scale solarisation has helped us in carbon footprint avoidance to the tune of 26,964 MTCO₂-equivalent during FY 2022-23.

Energy conservation projects are taken up each year at our units to reduce the energy consumption and thereby reducing the carbon emission associated with electricity consumption.

Refer Annexure – IV to the Board’s Report, 4.1.2 Energy Management

Refer Annexure – IV to the Board’s Report, 4.1.4 Carbon Management

Refer Annexure – VII to the Board’s Report, 7.1 Conservation of Energy

8. Provide details related to waste management by the entity, in the following format:

Parameter	FY 2022-23	FY 2021-22
Total Waste generated (in metric tonnes)		
Plastic waste (A)	68.98	47.36
E-waste (B)	42.17	77.90
Bio-medical waste (C)	6.51	9.13
Construction and demolition waste (D)	0	0
Battery waste (E)	88.10	77.25
Radioactive waste (F)	0	0
Other Hazardous waste. Please specify, if any. (G)	1278.90	1308.82
Other Non-hazardous waste generated (H). Please specify, if any. (Break-up by composition i.e. by materials relevant to the sector)	45944.15	42494.96
Total (A+B + C + D + E + F + G + H)*	47428.81	44015.42
For each category of waste generated, total waste recovered through recycling, re-using or other recovery operations (in metric tonnes)		
Category of waste		
(i) Recycled	94.06	91.14
(ii) Re-used	669.37	797.22
(iii) Other recovery operations	0	0
Total	763.44	886.36
For each category of waste generated, total waste disposed by nature of disposal method (in metric tonnes)		
Category of waste		
(i) Incineration	6.92	1.044
(ii) Landfilling	1359.29	2875.99
(iii) Other disposal operations	27615.08	23745.98
Total	28981.29	26623.01

In the table, Plastic waste, e-waste and battery waste reflects the quantity disposed during the year to authorized agency. Other disposal operations include the data for sale of the scrap through e-auction/ other means to external agencies

for its recycle/reuse/recovery as well. After considerable amount of scrap is accumulated, it is sold to the agency for final disposal. No assessment/ evaluation/ assurance has been carried out by any external agency. Data for FY 2021-22 has been recast.

*Due to increase in production activity, total waste generated during FY2022-23 has gone up.

Refer Annexure – IV to the Board’s Report, 4.1.3 Responsible Material & Natural Consumption

Refer Annexure – IV to the Board’s Report, 4.1.3 Water and Biodiversity Management

Refer Annexure – IV to the Board’s Report, 4.2 Waste Management

9. Briefly describe the waste management practices adopted in your establishments. Describe the strategy adopted by your company to reduce usage of hazardous and toxic chemicals in your products and processes and the practices adopted to manage such wastes.

In our manufacturing activity, reduction of waste generation is taken as a very important activity and our nesting plan for cutting of metal sheet is made in such a way to take care of this aspect. However, once the scrap is generated, it is either used in the local foundry shop for making castings/ forgings or sent to CFFP Haridwar / authorized recycler for melting into the furnace for avoidance of new raw material consumption.

Across BHEL, solid wastes/ scrap having resale value were collected, segregated, stored and sold to authorized recyclers. Some of it not having any resale value is used for filling up low lying areas. Hazardous wastes/ e-waste are disposed of as per the stipulations in the relevant statutes.

The hazardous waste generated at units are disposed as per the regulatory requirement and necessary records for scrutiny of authority is duly maintained. Hazardous waste which can be used outside is sent to authorized recyclers. Rest of the hazardous waste which is to be incinerated or buried in secured landfill is sent to Treatment Storage and Disposal Facility (TSDF) of their respective states for ultimate disposal of such hazardous wastes.

Refer Annexure – IV to the Board’s Report, 4.1.1 Responsible Material & Natural Consumption

Refer Annexure – IV to the Board’s Report, 4.1.3 Water and Biodiversity Management

Refer Annexure – IV to the Board’s Report, 4.1.5 Waste Management

10. If the entity has operations/offices in/around ecologically sensitive areas (such as national parks, wildlife sanctuaries, biosphere reserves, wetlands, biodiversity hotspots, forests, coastal regulation zones etc.) where

environmental approvals / clearances are required, please specify details in the following format:

Not applicable

11. Details of environmental impact assessments of projects undertaken by the entity based on applicable laws, in the current financial year:

Not applicable

12. Is the entity compliant with the applicable environmental law/ regulations/ guidelines in India; such as the Water (Prevention and Control of Pollution) Act, Air (Prevention and Control of Pollution) Act, Environment protection act and rules thereunder (Y/N). If not, provide details of all such non-compliances, in the following format:

Yes, BHEL is compliant with the applicable environmental law/ regulations/ guidelines in India

Leadership Indicators

1. Provide break-up of the total energy consumed (in Joules or multiples) from renewable and non-renewable sources, in the following format:

Parameter	FY 2022-23	FY 2021-22
From renewable sources (in Giga Joules)		
Total electricity consumption (A)	107216	97812
Total fuel consumption (B)	0	0
Energy consumption through other sources (C)	0	0
Total energy consumed from renewable sources (A+B+C)	107216	97812
From non-renewable sources (in Giga Joules)		
Total electricity consumption (D)	893815	759595
Total fuel consumption (E)	1758771	1929497
Energy consumption through other sources (F)	0	0
Total energy consumed from non-renewable sources (D+E+F) (in Giga Joules)	2652586	2689092

No independent assessment/ evaluation/assurance was carried out by an external agency

2. Provide the following details related to water discharged:

There are 16 Sewage Treatment Plants (STP) and 22 Effluent Treatment Plants (ETP) and Oxidation Ponds established

at our manufacturing units which give the desired level of treatment to sewage/ trade effluent generated.

Parameter	FY 2022-23	FY 2021-22
Water discharge by destination and level of treatment (in kilolitres)		
(i) To Surface water	0	0
- No treatment	0	0
- With treatment – please specify level of treatment	0	0
(ii) To Groundwater	0	0
- No treatment	0	0
- With treatment – please specify level of treatment	0	0
(iii) To Seawater	0	0
- No treatment	0	0
- With treatment – please specify level of treatment	0	0
(iv) Sent to third-parties	0	0
- No treatment	0	0
- With treatment – please specify level of treatment	0	0
(v) Others	0	0
- No treatment	0	0
- With treatment – please specify level of treatment	106680	87272
Total water discharged (in kilolitres)*	106680	87272

* Treated effluent discharge increased in FY 2022-23 as one of the insulator unit has increased its production activity and hence associated effluent discharge.

No independent assessment / evaluation / assurance was carried out by an external agency. Data for FY 2021-22 has been recasted.

3. Water withdrawal, consumption and discharge in areas of water stress (in kilolitres):

Not applicable

4. Please provide details of total Scope 3 emissions & its intensity, in the following format:

At many energy intensive manufacturing units, we have switched over from usage of LPG to RLNG which is being supplied through the pipeline. In this way, we are avoiding scope-3 emissions associated with transportation of the fuel to that extent. Our employees are also encouraged to use car pool to save energy and avoid Scope-3 emissions.

These are some of the ways BHEL is trying to reduce Scope-3 emissions. However, it is not quantified at the moment.

No independent assessment/ evaluation/assurance was carried out by an external agency.

5. With respect to the ecologically sensitive areas reported at Question 10 of Essential Indicators above, provide details of significant direct & indirect impact of the entity on biodiversity in such areas along-with prevention and remediation activities.

Not applicable

6. If the entity has undertaken any specific initiatives or used innovative technology or solutions to improve resource efficiency, or reduce impact due to emissions / effluent discharge / waste generated, please provide details of the same as well as outcome of such initiatives, as per the following format:

Sr. No	Initiative undertaken	Details of the initiative (Web-link, if any, may be provided along-with summary)	Outcome of the initiative
1.	Upgradation from conventional to regenerative burners-based combustion system at CFFP Haridwar	Not available	Potential annual electricity savings of 6.63 Million units
2.	Green Construction using Bamboo and bottom ash at project sites of NTPC Kahalgaon FGD and NTPC Talcher	Not available	Significant reduction in cost to the tune of 5-10% in concrete production through reduction of cement content in RMC.

As a responsible global citizen, the organization acknowledges the relation between Green House Gas (GHG) emissions and climate change. To address this global challenge, BHEL has been putting efforts in reducing carbon footprint of its products and services, thereby enabling the customers to generate power in a sustainable manner with



reduced environmental footprints over the life cycle of the plant. In internal operations also, the organization is putting a major thrust in energy efficiency and use of renewable energy sources. The company has established a total of approx. 34.895 MWp of Solar Photo Voltaic (ground mounted and roof-top) plants at various BHEL locations which have helped company in making its energy mix more sustainable. Company's inventory of renewable application also includes solar water heaters, solar street lighting etc. The Company has also taken a number of projects related to water and energy conservation, tree plantation, waste management, resource conservation, etc.

Refer Annexure – IV to the Board's Report, Sustainability Performance – Environment

Refer Annexure – VII to the Board's Report, Conservation of Energy

7. Does the entity have a business continuity and disaster management plan? Give details in 100 words/ web link.

Yes, BHEL has a business continuity and disaster management plan. Same was acted upon during COVID-19 outbreak. Business continuity plan and/ or disaster management plan were not published on internet.

8. Disclose any significant adverse impact to the environment, arising from the value chain of the entity. What mitigation or adaptation measures have been taken by the entity in this regard.

No significant impact came to notice.

Essential Indicators

1. a. Number of affiliations with trade and industry chambers/ associations.

Nine affiliations

b. List the top 10 trade and industry chambers/ associations (determined based on the total members of such body) the entity is a member of/ affiliated to.

S. No.	Name of the trade and industry chambers/ associations	Reach of trade and industry chambers/ associations (State/National)
1	Indian Electrical and Electronics Manufacturers' Association (IEEMA)	National
2	Engineering Export Promotion Council of India (EEPC)	National
3	Project Exports Promotion Council of India (PEPC)	National
4	Confederation of Indian Industry (CII)	National
5	Federation of Indian Chambers of Commerce & Industry (FICCI)	National
6	Associated Chambers of Commerce and Industry of India (ASSOCHAM)	National
7	Standing Conference of Public Enterprises (SCOPE)	National
8	United Nations Global Compact India Network	National
9	PHD Chamber of Commerce and Industry	International

Provide details of corrective action taken or underway on any issues related to anticompetitive conduct by the entity, based

9. Percentage of value chain partners (by value of business done with such partners) that were assessed for environmental impacts.

100% of value chain partners were assessed for environmental impact.

Principle 7: Policy advocacy

BHEL is a member of reputed industrial bodies/ chambers. BHEL uses various mechanisms of interaction with such bodies (e.g. participation in seminars, Council meetings and participation in working groups etc.) for putting forth its views and opinions in matter related to policy. Company's interests are represented via inputs to government queries, knowledge sharing, response to surveys, feedback on industry needs, formulation/ inputs on government policies like Make in India, Atmanirbhar Bharat, Fiscal budget, Foreign trade, Export Promotion etc.

The company's views are also presented in various inter-governmental forums such as Joint Commission Economic Corporation (JCEC), Joint Engineering Committee (JEC), Joint Trade Committee (JTC), Joint Steering Committee (JSC), Joint Working Group (JWG), etc. to facilitate international trade and collaboration. Company also interacts with government bodies like MHI, DPE, DIPP, NITI Aayog and submits inputs/ suggestions towards policy formulation.

on adverse orders from regulatory authorities.

No instance of anti-competitive conduct by BHEL has been raised

Leadership Indicators

1. Details of public policy positions advocated by the entity:

S. No.	Public policy advocated	Method resorted for such advocacy	Whether information available in public domain? (Yes/No)	Frequency of Review by Board (Annually/ Half yearly/ Quarterly/ Others – please specify)	Web Link, if available
1.	To boost (i) Digital Adoption, (ii) PSE@2047, (iii) Model Framework for Green PSEs- Green Manufacturing and approach towards Net Zero carbon, (iv) Ease of Doing Business for PSEs with MSMEs, etc.	Through representations/ Council meetings with Industrial Bodies viz. CII, FICCI, ASSOCHAM, SCOPE etc.	No	--	--
2.	Facilitation of international trade and collaboration	Through representations in various inter-governmental forums such as Joint Commission Economic Corporation (JCEC), Joint Engineering Committee (JEC), Joint Trade Committee (JTC), Joint Steering Committee (JSC), Joint Working Group (JWG), etc.	No	--	--
3.	To boost Capital Goods Sector, Development of Indian Power Sector, Atmanirbhar Bharat initiatives, FTAs etc.	Through interaction with Government Ministries viz. MHI, MoP etc.	No	--	--
4.	Inputs on matters such as Customs, Export promotion & Export incentives	Pre-budget memorandum for Budget 2023-24	No	-	-

Principle 8: Inclusive growth

BHEL has a well-structured organizational set-up, policy & procedures through which various CSR programmes are implemented. The CSR policy has identified several activities from Schedule-VII of the Companies Act, 2013 as its thrust areas. The seven thrust areas defined in CSR Policy are: Clean India, Green India, Healthy India, Heritage India, Inclusive India, Educated India and Responsible India. The policy is hosted on website link https://www.bhel.com/sites/default/files/BHEL_CSR_Policy_2022.pdf and is fully in conformance with requirements of Section 135 of the Companies Act 2013.

The policy is implemented through a three-tier structure at the corporate level (Board level committee on CSR, Level-1 committee & Level-2 Committee for screening and approval of proposals) along with unit level CSR Committee. Company supports numerous social initiatives across the country targeting poor, needy and economically weaker sections of society through specialized agencies such as NGOs, govt. agencies etc. in line with the CSR Policy. BHEL has undertaken several CSR

initiatives in the field of health, education, Swachh Bharat, environment protection, vocational training, skill development programmes, infrastructure development and community development programmes, which ultimately contributed to holistic welfare and inclusive growth of the society. CSR projects are closely monitored and supervised with an objective to provide maximum benefits to the society and to ensure fruitfulness of the initiatives undertaken

In supply chain, BHEL has been supporting Micro and Small Enterprises (MSEs) as they tend to employ a larger share of the vulnerable sectors of the workforce; such as women, youth, and people from poorer households. Company has around 6000 registered MSEs catering to its various Units/ Plants / Divisions. MSEs represent approx. 30% of the supplier base of BHEL. As mandated in the Public Procurement Policy for Micro and Small Enterprises (MSEs) Amendment Order, 2018 (issued by the Ministry of MSME, Government of India), more than 25% of BHEL's total procurement has been made from MSEs in the past few years.

During FY 2022-23, total procurement of goods and services from MSEs stand at 32.6%, from SC/ ST MSEs at 0.06% and from women owned MSEs at 0.41%. Together SC/ ST MSEs and women MSEs constitute less than 2% of total registered suppliers. The low procurement shares of SC/ ST MSEs and women MSEs are due to the fact that participations of these type of entities in BHEL tenders are low and moreover such supplier entities many times do not declare their category status in the tenders/ MSE Certificate despite provision being available in the Udyam Registration Certificate.

Further, BHEL has on-boarded itself on the Trade Receivables Discounting System (TReDS) platform to support MSEs. Programs are in place to encourage MSE suppliers to use TReDS platform wherein they can avail early payments by discounting their bills. During FY 2022-23, the acceptance/ rejection of invoices of Goods & Services by BHEL through TReDS was at 100%.

During the last two years, BHEL has enhanced its procurement through Government e-Marketplace (GeM). During FY 2022-23, 58.94% of company's goods and services have been procured through GeM.

Essential Indicators

1. Details of Social Impact Assessments (SIA) of projects undertaken by the entity based on applicable laws, in the current financial year.

Not applicable

2. Provide information on project(s) for which ongoing Rehabilitation and Resettlement (R&R) is being undertaken by your entity, in the following format:

Not applicable

3. Describe the mechanisms to receive and redress grievances of the community.

Community raises their grievances through Centralised Public Grievance Redress and Monitoring System (CPGRAMS)/ Public Grievance Portal which are then assigned to Public Grievance Officer in BHEL.

4. Percentage of input material (inputs to total inputs by value) sourced from suppliers:

	FY 2022-23	FY 2021-22
Directly sourced from MSMEs/ small producers	32.6%	29%
Sourced directly from within the district and neighbouring districts	10%	10%

Leadership Indicators

1. Provide details of actions taken to mitigate any negative social impacts identified in the Social Impact Assessments (Reference: Question 1 of Essential Indicators above):

Not applicable

2. Provide the following information on CSR projects undertaken by your entity in designated aspirational districts as identified by government bodies:

Amount spent on CSR projects in designated aspirational districts during FY 2022-23 are

S. No.	State	Aspirational District	Amount Spent (in ₹ Lakh)
1	Uttarakhand	Haridwar	33.60
2	Odisha	Kandhamal	25.17
3	Pan India	Pan India	31.28

3. (a) Do you have a preferential procurement policy where you give preference to purchase from suppliers comprising marginalized / vulnerable groups? (Yes/No)

Yes

(b) From which marginalized / vulnerable groups do you procure?

Company has been supporting Micro and Small Enterprises (MSEs) as they tend to employ a larger share of the vulnerable sectors of the workforce, such as women, youth, and people from poorer households. Regular Vendor Meets and Supplier development programs are being organized by BHEL units, specifically for MSEs (including local suppliers) as well as specific to SC/STs, which serve as a platform for identification of needs and formulation of action plan for mutual benefits. Further, preferences as mandated in the Public Procurement Policy for Micro and Small Enterprises (MSEs) Order for MSEs (issued by Ministry of MSME-Gol), are followed.

(c) What percentage of total procurement (by value) does it constitute?

BHEL procured 32.6% of its procurement from MSMEs in FY 2022-23.

4. Details of the benefits derived and shared from the intellectual properties owned or acquired by your entity (in the current financial year) based on traditional knowledge:

Company does not own or acquired intellectual property based on traditional knowledge. However, company has invested in Research & Development in the field of engineering which has yielded intellectual properties owned by BHEL. During FY2022-23, BHEL has filed 503 patent & Copyrights.

The revenue (benefit) earned by BHEL from patents & copyrights cannot be quantified in isolation as these patents & copyrights result out of the processes, technologies & products development. These IPRs result into competitiveness of BHEL products and expand product offerings. It also provides technological edge for long-term benefit and secure the business interests of the company. Approx. 19% of the company’s revenue has been achieved from its in-house developed products, systems and services.

Refer Annexure –VI to the Board’s Report of Annual Report, Research & Development and Technological achievements

5. Details of corrective actions taken or underway, based on any adverse order in intellectual property related disputes where in usage of traditional knowledge is involved.

No dispute related to Intellectual Property rights emerged during FY 2022-23.

6. Details of beneficiaries of CSR Projects:

S. No.	CSR Project	No. of persons benefitted from CSR Projects	% of beneficiaries from vulnerable and marginalized groups
1	“Heal A Soul - IV” - Providing Free Anti Hemophilic Factor (AHF) to Persons & Children with Hemophilia (P & Cwh) across India	160	100%
2	Providing financial support for running three Mobile Health care Unit in Noida, Bikaner, Satpura	40000	100%
3	Construction of Boys & Girls Hostel buildings at Govt. Polytechnic	304	100%
4	Financial support to “MISSION SMILE” for cleft surgery of cleft patients in Haridwar	200	100%
5	“JAN AROGYAM” Community Healthcare Programme in Nuh, Haryana	11000	100%
6	Providing medical assistance for 200 children suffering from cancer across India	500	100%

Principle 9: Customer value

Essential Indicator

1. Describe the mechanisms in place to receive and respond to consumer complaints and feedback.

Customer value is an integral part of BHEL’s culture which is reflected in our Vision, Mission and Values statement. Company is constantly working towards creating value for customers through products and services. Every product offering of BHEL is labelled with detailed product labels/ name plates/ test certificates as per the requirement and terms of contracts with customers besides the mandatory statutory requirements.

Complaints of customers are received through various channels like letters, emails, phone calls and during meetings. The complaints are subsequently escalated for resolution.

All major quality issues reported are being taken up for Root Cause Analysis (RCA) and are being resolved through RCA committees. Apart from complaints, customer feedback is taken through customer satisfaction surveys, customers’ meets, face-to-face interactions, video-conferencing and appreciation letters.

2. Turnover of Products and/services as a percentage of turnover from all products/services that carry information about “Environmental & social parameters relevant to the

product”, “Safe and responsible usage” and “Recycling and/or safe disposal”

BHEL products are capital goods and hence have long operating life of 25 years. The products/ systems are offered to customers with manuals covering safety, operating in environmental friendly manner etc. The same aspects are covered in training of customer personnel by BHEL.

3. Number of consumer complaints in respect of the following:

	FY 2022-23		Remarks	FY 2021-22		Remarks
	Received during the year	Pending resolution end of year		Received during the year	Pending resolution end of year	
Data privacy	0	0	-	0	0	-
Advertising	0	0	-	0	0	-
Cyber-security	0	0	-	0	0	-
Delivery of essential services	Not applicable					
Restrictive Trade Practices	0	0	-	0	0	-
Unfair Trade Practices	0	0	-	0	0	-
Other	-	-	-	-	-	-

4. Details of instances of product recalls on account of safety issues:

There are no instances of product recall that happened on account of safety issues

5. Does the entity have a framework/ policy on cyber security and risks related to data privacy? (Yes/No) If available, provide a web-link of the policy.

Yes. BHEL is in B2B business and does not deal with individual customers. Hence, any individual customer data is not stored.

Refer 'Data and Cyber Security' in Report of the Board of Director

6. Provide details of any corrective actions taken on Underway on issues relating of advertising, and delivery of essential services; cyber security and data privacy of customers; re-occurrence of instances of product recalls; penalty / action taken by regulatory authorities on safety of products / services.

Not applicable

Leadership Indicators

1. Channels / platforms where information on products and services of the entity can be accessed (provide web link, if available).

Information on products and services of BHEL can be accessed from www.bhel.com

2. Steps taken to inform and educate consumers about safe and responsible usage of products and/or services.

Operation Manual and Training on products or systems are provided to customers as per the contractual requirements.

3. Mechanisms in place to inform consumers of any risk of disruption/discontinuation of essential services.

BHEL is in regular touch with its customers and any disruptions (e.g. due to COVID-19 in the recent past) are informed by emails, letter and any other communication means agreed to in the Contract/ Purchase Order. Further, proactive interactions with customers based on Performance Monitoring reports of the installed machines or customer feedback, helps in averting disruption of operations at the customer premise. Periodic communications in form of letters or other digital means are issued to customer about their machines which are due for overhaul or mandatory inspections.

4. Does the entity display product information on the product over and above what is mandated as per local laws? (Yes/No/Not Applicable) If yes, provide details in brief. Did your entity carry out any survey with regard to consumer satisfaction relating to the major products / services of the entity, significant locations of operation of the entity or the entity as a whole? (Yes/No)

Yes. All the required and standard information are displayed/ stenciled on the products dispatched by BHEL.

Yes. BHEL conducts customer satisfaction survey for major products/ services.

5. Provide the following information relating to data breaches:

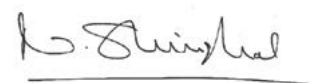
a. Number of instances of data breaches along-with impact

NIL

b. Percentage of data breaches involving personally identifiable information of customers

Nil

**For and on behalf of the Board of Directors of
BHARAT HEAVY ELECTRICALS LTD.**



Dr. Nalin Shinghal
Chairman & Managing Director

Place: New Delhi
Date: July 28, 2023



**RESEARCH &
DEVELOPMENT AND
TECHNOLOGICAL
ACHIEVEMENTS**



Annexure-VI to the Board's Report

Research & Development and Technological Achievements

6.1 R&D Strategy

BHEL has established itself as a leading Research & Development (R&D) and Innovation organization in the heavy engineering sector in the country. In FY 2022-23, a significant 19% of the company's revenues were generated from products, systems, and services developed in-house and has filed 5,443 IPRs till 31st March 2023. This highlights the company's commitment on generating and safeguarding innovative technologies and solutions. With R&D expenditure consistently surpassing 2.5% of revenue over the past years, BHEL ranks among the top spenders on R&D in the engineering & manufacturing industry.

BHEL's R&D programs showcase the company's unwavering commitment to continuous innovation as well as indigenization of the country's capital goods imports. By aligning company efforts with these programs, BHEL ensures that it remains at the forefront of technological advancements, and is responsive to industry demands.

BHEL recognizes the significance of the ongoing energy transition as well as the imperative to utilize coal to fuel economic aspirations of the country, considering the vast available coal reserves. With this in mind, the company is focusing on clean coal technologies such as coal gasification and has also successfully partnered with NTPC and IGCAR

to complete the design of the Advanced Ultra Super Critical (AUSC) technology. This cutting-edge AUSC technology sets new industry standards by offering significantly higher efficiency and lower emissions as compared to supercritical and subcritical technologies.

BHEL has also developed the Low Rating Supercritical Sets as an alternative to replace older and inefficient subcritical thermal power plants in the country that are completing their economic life of 30 years (more than 50 GW by 2030). The requirement for these lower rating supercritical sets (~350 MW) may rise in future, given the land constraints in upcoming expansion projects (replacing lower rating sets with 660/800 MW supercritical sets) and requirement of flexible operation in existing thermal power plants.

Additionally, BHEL has showcased its expertise in clean coal technologies through the indigenous design, installation, and demonstration of a 0.25 TPD Methanol Generation Plant in Hyderabad, using BHEL's in-house developed PFBG technology for gasification of high-ash Indian coal. This plant utilizes high ash Indian coal, emphasizing BHEL's commitment to utilize local resources. The company is now focusing on indigenisation of technology for production of other feedstock chemicals utilising syngas produced from coal gasification, a development that will significantly reduce



Centre of Excellence for Computational Fluid Dynamics (CFD) at Corporate R&D, Hyderabad



Centre of Excellence for Advanced Transmission Systems at Corporate R&D, Hyderabad

the country's dependence on import of chemicals. BHEL also recognizes the importance of carbon capture and its utilization technologies and aspires to be a leading player in this field.

In the transportation sector, BHEL is actively pursuing self-sufficiency and enhancing its in-house capabilities to design and manufacture advanced electric systems for diverse rolling stock applications of Indian Railways. In close collaboration with Indian Railways, BHEL has been successfully delivering customized solutions such as regenerative braking systems for conventional WAG-7 locomotives, IGBT-based propulsion systems for India's first air-conditioned local train and solar photovoltaic plant installed alongside railway tracks to directly power the 25 kV Traction System.

BHEL also plays a vital role in the defence and aerospace sector by working closely with esteemed customers such as Combat Aircraft Systems Development & Integration Centre (CASDIC), Hindustan Aeronautics Limited (HAL), Indian Space Research Organization (ISRO), Aeronautical Development Agency (ADA) and others. Through these collaborations, BHEL contributes to the development and delivery of a diverse range of strategic equipment and services.

In summary, BHEL's commitment towards development of cleaner indigenous technologies, advancements in transportation systems, and its engagement in the defence and aerospace sector exemplify the company's dedication to innovation, self-reliance, and meeting the strategic requirements of various industries in India.

Recognising the change in technological landscape and the potential it brings for new business opportunities, BHEL is addressing the opportunities through a combination of in-house development, collaborations with academia, and Technology Collaboration Agreements (TCA) with established industry players. BHEL currently has 13 active TCAs with global engineering & manufacturing leaders and Indian entities. The

company is dedicated to swiftly absorbing and indigenizing these technologies, meeting the specific requirements of the Indian market, and also exploring export prospects.

Ongoing Technology Collaboration Agreements

Technology Collaboration with global OEMs

Sl. No.	Name of Collaborator	Product
1	Siemens Energy Global GmbH & Co. KG., Germany	Steam Turbines, Generators and Lateral/Axial Condensers
2	General Electric Technology GmbH, Switzerland	Steam Turbine for Nuclear Power Projects
3	Leonardo S.p.A., Italy	76/62 Upgraded Super Rapid Gun Mount
4	Sumitomo SHI FW Energia Oy, Finland	Subcritical and Supercritical Circulating Fluidised Bed Combustion (CFBC) Boilers
5	Valmet Automation Oy., Finland	New Generation C&I Automation (Distributed Control System)
6	Mitsubishi Heavy Industries Ltd, Japan	Flue Gas Desulphurization
7	HLB Power Co., Ltd., Republic of Korea	Gates and Dampers
8	Vogt Power International Inc., USA	Heat Recovery Steam Generators (HRSG)
9	Babcock Power Environmental Inc., USA	SCR System De-NOx applications
10	NANO Co. Ltd., Republic of Korea	SCR Catalyst for De-NOx applications
11	Kawasaki Heavy Industries Limited, Japan	Stainless steel coaches and bogies for metros

Technology Collaboration with Indian Entities

Sl. No.	Name of Collaborator	Product
1.	Indian Space Research Organization (ISRO), India	Space Grade Lithium Ion Cells
2.	CSIR- IIP, Dehradun, India	Pressure Vacuum Swing Adsorption (PVSA) based oxygen Plant

BHEL is committed to establish a robust knowledge ecosystem within the organization as well as continuous reskilling of its engineering workforce. A specific area of focus for BHEL is engineering optimization, achieved through design optimization and streamlining product cycle times. This strategic approach aims at driving cost reduction and improve overall efficiency across BHEL products.

6.2 R&D Structure

Company's Research and Development (R&D) structure is headed by Director (Engineering, Research & Development), responsible for overseeing the overall research and development activities of the company along with providing strategic direction and guidance, supported by Corporate Technology Management (CTM) and Corporate R&D division. CTM is responsible for formulating the company's

technology strategy, while the Corporate R&D division focuses on in-house technology development. To further bolster R&D efforts, BHEL has the dedicated Research & Product Development (RPD) groups within its various product divisions at manufacturing units.

BHEL has established a well-equipped state-of-the-art R&D infrastructure, comprising 14 Centres of Excellence at various locations, including Corporate R&D Hyderabad (Intelligent Machines and Robotics, Machine Dynamics, UHV Laboratory, Computational Fluid Dynamics, Permanent Magnet Machines, etc.), HPBP Tiruchirappalli (Coal Research Centre) and EDN Bengaluru (Power Electronics, IGBT & Controller Technology) etc. Company also has 5 Specialized Research Institutes, namely Pollution Control & Research Institute (PCRI), Haridwar, Welding Research Institute (WRI), Trichy, Ceramic Technological Institute (CTI), Bengaluru, Centre for Electric Transportation (CET), Bhopal and Amorphous Silicon Solar Cell Plant (ASSCP), Gurugram.

Recognizing the importance of industry-academia collaboration, BHEL has partnered with leading academic and research institutions in the country, including IITs, CSIR, ARCI, ARAI and others. These collaborations enable BHEL to conduct research in identified areas and leverage the expertise of academia for successful developments in products and processes.



Creep testing facility for Advanced Materials at Metallurgy Department at Corporate R&D, Hyderabad



Electron Microscope at Welding Research Institute (WRI), Trichy

Furthermore, BHEL has realigned its R&D processes to effectively address emerging business opportunities helping in sustaining growth. This ensures that BHEL remains responsive to evolving market needs, and optimizes its R&D efforts for enhanced competitiveness and continuous innovation.

6.3 Achievement during the year

BHEL's R&D efforts towards development of new/ improved products, processes and systems have resulted in following major developments:

- Designed and developed Electrics for non-AC EMU for ICF Chennai. The development comprising Traction Converter, Auxiliary Converter, Train Control & Management System (TCMS) software and Remote Monitoring System has been introduced as per "Make in India" scheme. Prototype train have been commissioned at Integral Coach Factory (ICF).
- Indigenously developed Passivated Emitter Rear Contact (PERC) mono-crystalline solar cells with benchmark efficiencies of ~22%. Successfully benchmarked the additional process steps that are required for PERC Technology i.e. Single side Etching, Rear Passivation Stack and Laser Contact Opening, along with improvements in the existing process steps specifically texturisation, Diffusion and ARC (Anti Reflection Coating) deposition. Modules fabricated using the in-house developed PERC cells have been tested and installed at BHEL ASSCP, Gurugram for field trials.
- Successfully established and evaluated performance of methanol firing at Liquid Fuel Burning Test Facility (LFBTF). This involved establishing system for low viscous methanol fuel comprising of pressuring system, atomizers, ignitors and flame scanner suitable for methanol and will enable offering of methanol firing system as an alternative to Light Diesel Oil and Heavy Fuel Oils in Thermal Power Plants.
- BHEL has in-house designed and developed Sucker Rod Pumping (SRP) unit (also known as Beam Pumping Unit) widely used in oil fields as an oil extraction machine which are largely imported from China.
- Successfully completed design of Traction Converter panel for 6000 HP locomotive for ease of assembly, reduction in assembly time, reduction in delivery time and ease of maintenance.
- Successfully designed, developed, manufactured and tested 2 kW Air Cycle Machine (ACM) based Liquid Cooling System (LCS) as per stringent military standards (EMI/EMC, Environmental and Power supply tests) for Light Combat Aircraft Mk1.
- Developed 500 MVA, 765/400/33 kV, 1-phase Inter Connecting Transformer (ICT) meeting requirement of fixed I²R Loss, and without On Load Tap Changer (OLTC)

as per CEA Standard specification for Transformers and Reactors.

- Designed & manufactured 1000 kW, 430 V, 6 Pole Main Motor & Generator (MMG) (consists of Synchronous Machine and DC machine on single shaft) for strategic application.
- Successfully completed design, development, manufacturing and type testing of 100 kVA Rotary Frequency Converter (RFC) for upgraded Super Rapid Gun Mount (SRGM) for Defence application.
- BHEL has developed in-house technology for flexible operations of Thermal Power plants and has successfully commissioned the same in one unit and demonstrated the performance parameters.
- Successfully completed indigenization of Integrated Compressor Control System. The development consists of design, manufacturing, testing and validation through software simulation tool of entire gamut of Anti- Surge Controller (ASC) and other related Compressor Control hardware and software packages. The integrated compressor control system has been supplied for Northern Refineries, Baiji Iraq project.
- Successfully completed design and development of AC Micro Grid controller for the Power Conditioning System (PCS) of Battery Energy Storage System (BESS) to operate in both grid connected mode and AC Microgrid mode (i.e. islanded mode) in case of grid failure to meet the critical load demands. It also has Black Start capability i.e. to self-start in islanded mode.
- Successfully indigenized Ceramic Pouring Tube for manufacturing of cast steel wheels at Rail Wheel Factory and completed the development orders of both Rail Wheel Factory, Yelahanka and Rail Wheel Plant, Bela.
- Designed, manufactured & tested largest rating 2000 kW, 6.6 kV, 8 Pole Induction Motor in 630 mm center height frame. This motor is suitable for 50 Hz as well as 60 Hz supply frequency operation.
- Designed, manufactured & tested 4900 kW, 11 kV, 4 Pole Alternator in optimized frame size for Turbine driven generator application.
- Following design automation initiatives have been completed:
 - Complete Hydro Generator (5 - 400 MW, 4 – 64 Poles) – Mechanical, Electrical, ventilation design has been consolidated in a software system which has resulted in cycle time reduction by automatic generation of manufacturing drawings and BOM.
 - Knowledge Based Engineering Project of 400 kV, 3 phase Autotransformer Tank.

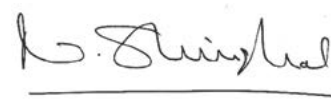
- Vertical Induction Motors (2-6 MW, 10-36 poles)

6.4 Focus areas for R&D and technology development

BHEL's R&D focus for future include:

- Total solutions for rail transportation in areas of three-phase AC drive system for electric locos & Electric Multiple Units (EMU), high powered locomotives and high speed trainsets.
- Post successful development & demonstration of coal gasification technology, specifically for high ash Indian coal, company is working to develop indigenous technology to generate chemicals and green fuels (methanol, hydrogen, etc.) from syngas.
- Products & systems for fuel cell applications.
- Planning to establish CoE for Electrolysers, Traction propulsion systems, Hydrogen storage cylinders -Type IV and National testing facility for Hydrogen Storage Type-IV cylinders.
- Development of Products and systems such as aero structures, Marine Gas Turbines, Li-ion battery system, heat exchangers, etc. for defence and strategic applications.
- Development of Products for downstream oil and gas sector.
- Development of Products and systems for Nuclear power plants.
- Development of solutions for E-mobility ecosystem (including power train, charging stations etc.) and energy storage systems.
- Application of Industry 4.0 with deployment of new technologies including intelligent machines & robotics and Advanced Manufacturing Technologies.
- Products and systems for digital substation and advanced power transmission like ± 800 kV HVDC, 765 kV, 1200 kV transmission systems.

For and on behalf of the Board of Directors of
BHARAT HEAVY ELECTRICALS LTD.



Dr. Nalin Shinghal
Chairman & Managing Director

Place: New Delhi

Date: July 28, 2023

Annexure – VII

7.1 Conservation of Energy

As a leading company in the field of heavy engineering equipment, we understand the importance of managing energy in our premises and providing energy efficient technologies / equipment to our customers. Taking projects related to Energy efficiency / conservation is a regular feature in our company and in the recent past, a lot of efforts have been put to identify the projects and execute these projects in a time bound manner which helped us in demand side management. Our energy intensive units are ISO 50001 certified. Various energy conservation projects are identified in the Energy Audits in Units and implementation of these have resulted in savings in the energy cost.

Some of the major energy efficiency projects completed during the year included:

- Structural revamping, with improved insulation and better damper operation of various furnaces, and upgradation from conventional to regenerative burners-based combustion system at CFFP Haridwar, with potential annual electricity demand reduction of 6.63 Million units.
- Total in-house installed solar capacity of 34.89 MWp helped in energy generation of 29.78 million units and resulted in carbon footprint avoidance to the tune of 26,964 MTCO₂-equivalent during the year.
- Installation of single screw compressor in place of higher capacity Reciprocating Type Compressor at 500-ton Manual press at FSIP Jagdishpur with expected annual electricity demand reduction of nearly 59000 Units.

Reduction in electricity demand per year, accruing out of various energy conservation projects implemented in the year, is around 83 Lakhs units.

7.2 Technology Absorption and Research & Development

Research & Development

1. Specific areas in which R&D carried out by the Company	}	Given in the Board's Report under Annexure-VI "R&D and Technological Achievements"
2. Benefits derived as a result of the above R&D		
3. Future Focus areas		
4. Expenditure on R&D		
Total	--	₹ 690.85 crore
a) Recurring	--	₹ 688.97 crore
b) Capital	--	₹ 1.88 crore
Expenditure as a percentage of revenue	--	3%

Technology Absorption

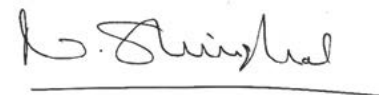
Details of technology imported during the last 5 years:

Technology	Year of import	Absorption status
Gates and Dampers	2018	Technology Absorption completed
Selective Catalytic Reduction (SCR) Catalyst	2018	Technology absorption in progress.
SCR System	2018	
Steam Turbine for Nuclear PHWR application	2018	
New Generation C&I Automation	2020	
Circulating Fluidised Bed Combustion (CFBC) Boilers	2022	

7.3 Foreign Exchange Earnings and Outgoing (₹ Crore)

Particulars	2022-23	2021-22
Foreign Exchange Used	1530	1886
Foreign Exchange Earned	1585	2477

For and on behalf of the Board of Directors of
BHARAT HEAVY ELECTRICALS LTD.



Dr. Nalin Shinghal
Chairman & Managing Director

Place: New Delhi
Date: July 28, 2023

GREENING GRID:

Establishing synergy between Renewable and Coal-based Power

India is making commendable strides towards achieving its Nationally Determined Contribution (NDC) on climate change. In particular, the power sector has witnessed a significant increase in the share of electricity generated from renewable power assets. However, this transition poses challenges for the energy system (power grid), particularly in handling the intermittent nature of power generated from renewable sources such as solar and wind.

For effectively integrating variable RE power with coal-based thermal power, BHEL has successfully demonstrated cost effective flexible operations with required ramp-rates for coal-based power plant. The solution (also known as Flexibilization),

commissioned at 1x600 MW REGL plant, Raigarh of M/s Adani, is a first of its kind in the country, and has received appreciation from the customer. BHEL has specialized & indigenous offerings, customizable for customer needs, for implementation of flexible operation solutions. The company has further received 4 more orders in this domain.

Central Electricity Authority (CEA) of India has mandated all existing thermal utilities to prepare for this new operating flexi regime to achieve the national objective. Utilities have to comply to the requirement of 55% technical minimum load with required ramp rates by Jan 2024. Further, for achieving 40% technical minimum load with defined ramp rates, CEA has defined the age wise phasing plan for various TPPs of respective utilities.



Annexure –VIII to the Board’s Report

8.1 Implementation of Official Language

BHEL is committed towards implementation of our Official Language. Official Language cells have been established in all its Units/Divisions/Offices with Rajbhasha Officers working in all these cells. Official Language Implementation Committees have been constituted in all the Units / Divisions / Offices under the chairmanship of the Head of the Unit / Division / Office. Quarterly meetings were held regularly in all the Units/Divisions, including Corporate Office, during the year. Hindi workshops were organized regularly in BHEL during the year with about 4500 employees participating in them. A total of 17 Hindi magazines are being published across the company. BHEL is also contributing as a member in the Testing Committee of the Memory Based Translation Software ‘Kanthastha 2.0’ and its mobile-app developed by the Department of Official Language, Ministry of Home Affairs, Government of India.

On the occasion of Vishva Hindi Diwas, various competitions / programs were organized in all units / divisions of the company. Under the auspices of Hindi Diwas, Hindi Day/ Week/Fortnight/Month was celebrated in all the Units/ Divisions/Offices including Corporate Office. During these celebrations, various competitions, seminars, cultural

programs and Kavi Sammelan were organized. “Rajbhasha Ullas Parv” was celebrated in all the Delhi-NCR based offices, including the Corporate Office.

In a unique initiative, taking forward the concept of Quality Circles which was launched by BHEL in 1981, BHEL has introduced Rajbhasha Chakras across the company, in the last two years. More than 100 Rajbhasha Chakras have been formed to motivate the employees to use Hindi in their day to day official work which has positively impacted the use of Hindi across the Company. Several competitions/ events were also organized in all the Units/Divisions/Offices of the company to encourage use of Rajbhasha in the company.

During the year, the Hon’ble Committee of Parliament on Official Language inspected 7 Units/Divisions of BHEL and expressed satisfaction and appreciated BHEL’s efforts in this endeavor. BHEL is also playing an active role in the Town Official Language Implementation Committees (TOLICs) located in various cities. Several competitions, seminars, conferences and programs are organized under the aegis of these committees. BHEL is contributing significantly in organizing competitions and other activities of TOLICs in its premises.



Rajbhasha Ullas Parv was celebrated in all the Units/ Divisions/Offices including Corporate Office of BHEL



Vigilance compendium, VISHLESHAN launched on the occasion of Vigilance Awareness Week being observed in BHEL in 2022

8.2 Vigil Mechanism

The principles of Good Governance, Transparency, Probity and Ethics are followed in BHEL so as to ensure highest level of integrity in the functioning of decision makers. The company has in place a full-fledged Vigil Mechanism. Vigilance function of BHEL is headed by Chief Vigilance Officer, who acts as an extended arm of Central Vigilance Commission (CVC) in the Company. Each Manufacturing Unit / Power Sector Region / Industry Sector of BHEL has a Vigilance set-up, headed by a Senior Officer reporting to the CVO.

The Vigilance apparatus in BHEL facilitates an environment for the employees to work with integrity, efficiency, transparently, while upholding highest ethical standards for the Company. Vigilance Department has adopted a multi-pronged strategy and approach to combating corruption.

Preventive Vigilance has been the focus area of BHEL, as proactive vigilance is a better tool to reduce the corruption & other irregularities, as compared to punitive vigilance. The main objective of preventive vigilance is to progressively reduce ambiguity and discretion in the decision making processes by plugging the loopholes in the system, thereby making the process more objective and transparent in furtherance to reducing the scope of malpractices. During the year, inspection of Units / Regions was done by the Corporate Vigilance team to study the various processes being adopted in the units and identify areas that require improvement.

Random checks of the activities in the organization were conducted through surprise checks, system studies, CTE type inspections etc. Based on the findings of these scrutiny, system corrections / improvements are suggested so as to minimize discretionary powers, and for bringing clarity. This in turn will also result in reduction of the scope for misinterpretation of the Policies / guidelines. Annual Property returns of about 2982 employees (about 20% of employee covered under CDA Rules) were scrutinized during FY 2022-23. During the year, 124 number of Training programs/ Workshops on Preventive Vigilance were organized for employees associated with decision making process across the Units/Regions.

During FY 2022-23, 36 cases were taken up for investigation, 58 penalties (16 major and 42 minor) were imposed and 47 warning / advisory letters were also issued. Further, out of 196 complaints (190 received during FY 2022-23) 191 were disposed of and rest are under different stages of disposals. On the advice of Vigilance, recoveries of ₹ 68.91 lakh (approx.) have been made from various agencies, employees, vendors and contractors.

As per directives issued by CVC vide circular no. 20/09/2022 dated 8th September, 2022, the Vigilance Awareness Week was observed from 31st October to 6th November, 2022 with the theme "भ्रष्टाचार मुक्त भारत – विकसित भारत" (Corruption Free India for a developed Nation). The link of 'Integrity Pledge' (<https://pledge.cvc.nic.in>) was provided on BHEL internet,



and all the intranet sites of the various manufacturing Units/ Regions/ Offices and all the stakeholders were encouraged to take the integrity pledge.

In order to spread awareness about vigilance, various programmes i.e. debates, elocutions, panel discussions, essay writing, quiz, slogans/ poster competitions etc., were organised on the theme of Vigilance Awareness Week for the employees, their wards and students of schools & colleges in various cities across India. A total of about 1500 employees participated in these competitions. Messages received from dignitaries and photographs of activities conducted during the VAW-2022 were shared on the social media platforms.

Vigilance Department publishes quarterly e-Newsletter 'DISHA' with a view to create awareness about procurement policy, rules and procedures etc., to disseminate the instructions/ guidelines issued by CVC, and Government of India, from time to time and to share best practices, case studies and articles. Four issues were published during the year and forty issues have so far been published since 2013. The e-newsletter is given wider publicity, and is sent to all employees through e-mail and also hosted on BHEL's units/ Regions Intranet webpage.

8.3 Health, Safety & Environment (HSE)

Employees are the greatest asset for any organization, and their health, safety and well-being are cardinal determinants for the organization to achieve its vision. At BHEL, we make every effort to strive for 'Zero-Harm' in all our activities, especially for our workforce. BHEL have a well-established and easily accessible 'Health, Safety & Environment' (HSE)

policy conforming to the requirements of ISO 14001 & ISO 45001 certification standards. Procedures & techniques like HIRA (Hazard Identification and Risk Assessment), JSA (Job Safety Analysis), Method Statement etc., are widely used for risk management in BHEL.

Periodic audits by internal as well as external agencies are carried out to review and ensure effective implementation of best safety practices. BHEL has also established Safety Parks at major project sites to impart induction level and job specific safety training to the construction workers. All sites have facilities of First Aid boxes and First Aid centers with trained manpower.

In addition to the structured trainings on safety and occupational health, a special campaign was organised across the organization, as "BHEL Safety Fortnight-2023" during 4th – 17th, March 2023, starting from National Safety Day. Other HSE campaigns were also organized on large scale i.e. BHEL Environment Month (5th June – 04th July, 2022), Swachhata Pakhwada (16th – 31st August 2022), etc., to solicit higher participation in safety campaigns. Award Schemes like Longest Accident Free Period, Best Safety Project of the year were initiated to motivate Units/Divisions/ Regions to excel in the safety aspect of their domain area.

BHEL has received many awards as a recognition of these efforts. The awards received during the year include 'Gold Award under Apex India Safety Awards 2022 in Engineering Sector' and 'Golden Peacock Environment Award-2022'.

Above efforts reflect the company's constant endeavour for providing safe and healthy environment for the deployed human resource.

For and on behalf of the Board of Directors of
BHARAT HEAVY ELECTRICALS LTD.

Dr. Nalin Shinghal
Chairman & Managing Director

Place: New Delhi
Date: July 28, 2023

Annexure – IX to the Board Report

Form AOC- I

(Pursuant to first proviso to sub-section (3) of section 129 read with rule 5 of Companies (Accounts) Rules, 2014)

Statement containing salient features of the financial statement of subsidiaries/associate Companies/joint ventures

Part "A": Subsidiaries

(Information in respect of each subsidiary to be presented with amounts in ₹ Crore)

1. Sl. No.	NOT APPLICABLE
2. Name of the subsidiary	
3. The date since when subsidiary was acquired	
4. Reporting period for the subsidiary concerned, if different from the holding company's reporting period	
5. Reporting currency and Exchange rate as on the last date of the relevant Financial year in the case of foreign subsidiaries.	
6. Share capital	
7. Reserves & surplus	
8. Total assets	
9. Total Liabilities	
10. Investments	
11. Turnover	
12. Profit before taxation	
13. Provision for taxation	
14. Profit after taxation	
15. Proposed Dividend	
16. % of shareholding	
1. Names of subsidiaries which are yet to commence operations	NIL
2. Names of 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 related to Associate Companies and Joint Ventures

(₹ Crore)

Name of Joint Ventures	BHEL-GE Gas Turbine Services P. Ltd.	NTPC BHEL Power Projects Pvt Ltd	Raichur Power Corporation Ltd.
1. Latest Audited Balance Sheet Date	31.03.2022	31.03.2022	31.03.2022
2. Date on which Associate or Joint Venture was associated or acquired	5 th May ,1997	28 th April,2008	15 th April, 2009
3. Shares of JVs held by BHEL on the year end			
No.	2379999	50000000	664040000
Amount of investment	2.38	50.00	664.04
Extent of Holding %	50% minus one share	50%	22.14%
4. Description of how there is significant influence	Jointly controlled entities		
5. Reason why the associate/ JV is not consolidated	N.A.	N.A.	N.A.
6. Net worth attributable to Shareholding as per latest audited Balance Sheet	232.29*	NIL	NIL
7. Profit/ Loss for the year	As per equity method		
i. Considered in consolidation	56.02	NIL	NIL
ii. Not considered in Consolidation	-	(2.75)	(246.77)

* At the end of FY 2022-23.


Figures given in brackets are negative. In RPCL,300 shares are held by BHEL in the name of its nominee.

M/s Power Plant Performance Improvement Ltd. is under liquidation and hence not considered in consolidation. The investment in this JV amounting ₹ 2.00 Crore has been fully provided for.

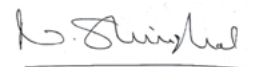


(Rajeev Kalra)
Company Secretary
M. No. 14567

For and on behalf of Board of Directors

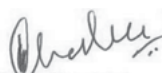


(Jai Prakash Srivastava)
Director (E, R&D)
with additional charge of
Director (Finance) & CFO
DIN: 09703643



(Dr. Nalin Shinghal)
Chairman and Managing Director
DIN: 01176857

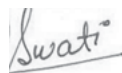
For ABP & Associates
Chartered Accountants
FRN - 315104E



(Bimal Kumar Chanduka)
Partner
M No. 053714

As per our report of even date attached

For PSMG & Associates
Chartered Accountants
FRN - 008567C



(Swati Singh)
Partner
M. No. 404531

For S.L. Chhajed & Co. LLP
Chartered Accountants
FRN - 000709C/C400277



(Vijit Baidmutha)
Partner
M. No. 406044

Place: New Delhi
Date: May 26, 2023

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

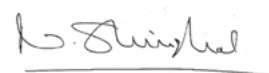
1. Details of contracts or arrangements or transactions not at arm's length basis:

(a) Name(s) of the related party and nature of relationship	:	NIL
(b) Nature of contracts/arrangements/transactions	:	NIL
(c) Duration of the contracts / arrangements/transactions	:	NIL
(d) Salient terms of the contracts or arrangements or transactions including the value, if any	:	NIL
(e) Justification for entering into such contracts or arrangements or transactions	:	NIL
(f) Date(s) of approval by the Board	:	NIL
(g) Amount paid as advances, if any	:	NIL
(h) Date on which the special resolution was passed in general meeting as required under proviso to section 188	:	NIL

2. Details of material contracts or arrangements or transactions at arm's length basis:

(a) Name(s) of the related party and nature of relationship	:	NIL
(b) Nature of contracts/arrangements/transactions	:	NIL
(c) Duration of the contracts / arrangements/transactions	:	NIL
(d) Salient terms of the contracts or arrangements or transactions including the value, if any	:	NIL
(e) Date(s) of approval by the Board, if any	:	NIL
(f) Amount paid as advances, if any:	:	NIL

For and on behalf of Board of Directors of
BHARAT HEAVY ELECTRICALS LTD.



(Dr. Nalin Shinghal)
Chairman & Managing Director

Place: New Delhi
Date: July 28, 2023



Annexure - X to the Board's Report

INDEPENDENT AUDITOR'S REPORT

To the Members of
Bharat Heavy Electricals Limited

Report on the Audit of the Standalone Financial Statements

Opinion

We have audited the accompanying standalone financial statements of **Bharat Heavy Electricals Limited ("the Company")**, which comprise the Balance Sheet as at March 31, 2023, 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 standalone financial statements, including a summary of the significant accounting policies and other explanatory information (hereinafter referred to as "the Standalone financial statements") in which are incorporated the returns for the year ended on that date for 19 branches audited by us and 10 branches audited by the branch auditors of the company.

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid 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 Indian Accounting Standards prescribed under section 133 of the Act read with the Companies (Indian Accounting Standards) Rules 2015, as amended, ("Ind AS") and other accounting principles generally accepted in India, of the state of affairs of the Company as at March 31, 2023, the profit and total comprehensive income, changes in equity and its cash flows for the year ended on that date.

Basis for Opinion

We conducted our audit of the standalone financial statements in accordance with the Standards on Auditing (SAs) specified under section 143 (10) of the Companies Act, 2013. Our responsibilities under those Standards are further described in the *Auditor's Responsibilities for the Audit of the 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 Companies Act, 2013 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 on the standalone financial statements.

Key Audit Matters

Key audit matters are those matters that in our professional judgement 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. We have determined the matters described below to be the key audit matters to be communicated in our report.

Key Audit Matter	Auditor's Response
<p>Accuracy of recognition, measurement, presentation and disclosures of revenues and other related balances in respect of "Revenue from contracts with Customers" under Ind AS 115.</p> <p>The application of this revenue accounting standard involves certain key judgments relating to identification of distinct performance obligations, determination of transaction price of identified performance obligations, the appropriateness of the basis used to measure revenue recognized over a period, and disclosures including presentations of balances in the financial statements.</p> <p>Estimated efforts is a critical estimate to determine revenue, as it requires consideration of progress of the contract, efforts incurred till date, efforts required to complete the remaining performance obligation.</p> <p>Refer Note 40 to the standalone financial statements.</p>	<p>Principal Audit Procedures</p> <p>Our audit approach consisted testing of the design and operating effectiveness of internal controls and procedures as follows:</p> <ul style="list-style-type: none"> • Evaluated the effectiveness of controls over the preparation of information that are designed to ensure the completeness and accuracy. • Selected a sample of existing continuing contracts and new contracts, and tested the operating effectiveness of the internal control, relating to identification of the distinct performance obligations and determination of transaction price. • Tested the relevant information, accounting systems and change relating to contracts and related information used in recording and disclosing revenue in accordance with Ind AS 115. • Reviewed a sample of contracts to identify possible delays in achieving milestones, which require change in estimated efforts to complete the remaining performance obligations. • Performed analytical procedures and test of details for reasonableness and other related material items.
<p>Assessment and recoverability of Trade Receivables and Contract Assets</p> <p>The Company has trade receivables outstanding (net) of ₹ 6,543.89 Crore. and contract assets (net) of ₹ 29,740.03 Crore at the end of March 31, 2023.</p> <p>These balances are related to revenue recognized in line with Ind AS 115 "Revenue from contracts with customers" for ongoing contracts and completed contracts. The assessment of its recoverability is a key audit matters in the audit due to its size, pending balance confirmation of letters sent and high level of management judgment.</p> <p>Refer Notes 6, 9, 40 to the standalone financial statements.</p>	<p>Principal Audit Procedures</p> <p>We have assessed the Company's internal process to recognize the revenue and review mechanism of trade receivables and contract assets. Our audit approach consisted testing of the design and operating effectiveness of internal controls and procedures as follows:</p> <ul style="list-style-type: none"> • Evaluated the process of invoicing with Customers. • Obtained the list of project wise outstanding details and its review mechanism by the management. • Reviewed the guidelines and policies of the Company on impairment of trade receivables and contract assets. • Tested the accuracy of aging of trade receivables and contract assets at the year end on sample basis. • Performed analytical procedures and test of details for reasonableness, recoverability and other related material items.

Key Audit Matter	Auditor's Response
<p>Assessment of Contingent Liability</p> <p>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.</p> <p>We determined the above area as a Key Audit Matter in view of associated uncertainty relating to the outcome of these matters which requires application of judgment in interpretation of law. Accordingly, our audit was focused on analyzing the facts of subject matter under consideration and judgments/ interpretation of law involved.</p> <p>(Refer Note 32 to the standalone financial statements)</p>	<p>Principal Audit Procedures</p> <p>The audit procedures included but were not limited to:</p> <ul style="list-style-type: none"> - Obtaining a detailed understanding processes and controls of the Management with respect to claims or disputes - Performing following procedures on samples selected: <ul style="list-style-type: none"> - Understanding the matters by reading the correspondences, communications, minutes of the management meeting - Making corroborative inquiries with appropriate level of the management personnel including status update, expectation of outcomes with the basis, and the future course of action contemplated by the Company, and perusing legal opinions, if any, obtained by the Management. - Obtaining direct confirmation from the legal attorneys of the company and considering their opinions /probability assessment of the outcomes. - Evaluating the evidence supporting the judgement of the management about possible outcomes and the reasonableness of the estimates. - Evaluating appropriateness of adequate disclosures in accordance with the applicable accounting standards.

Information Other than the Standalone Financial Statements and Auditor's Report Thereon

The Company's Board of Directors is responsible for the preparation of the other information. The other information comprises the information included in Management Discussion and Analysis, Board's Report including Annexures to Board's Report, Business Responsibility & Sustainability Report, Corporate Governance and Shareholder's information, but does not include the standalone financial statements and our auditor's report thereon. These reports are expected to be made available to us after the date of this Auditor's Report.

Our opinion on the 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 standalone financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

When we read such other information when made available to us and if we conclude that there is a material misstatement therein we are required to communicate the matter to those charged with governance.

Management's Responsibility for the Standalone Financial Statements

The Company's Board of Directors is responsible for the matters stated in Section 134(5) of the Companies Act, 2013 ("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 Ind AS and other accounting principles generally accepted in India. 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 of Company 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 the Management of Company either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

The Board of Directors are responsible for overseeing the Company's financial reporting process.

Auditor's Responsibilities for the Audit of the Standalone Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's 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 financial controls relevant to the audit in order to design audit procedures that are appropriate in the circumstances. Under section 143(3)(i) of the Companies Act, 2013, 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 auditor's report to the related disclosures in the 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 auditor's 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.

Materiality is the magnitude of misstatements in the standalone financial statements that, individually or in aggregate, makes it probable that the economic decisions of a reasonably knowledgeable user of the financial statements may be influenced. We consider quantitative materiality and qualitative factors in (i) planning the scope of our audit work and in evaluating the results of our work; and (ii) to evaluate the effect of any identified misstatements in the financial statements.

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 auditor's 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

We did not audit the financial statements/information of 10 **(Ten)** branches included in the standalone financial statements of the Company whose financial statements/financial information reflect total assets of ₹ **35,883 Crore** as at 31st March, 2023 and total revenue of ₹ **12,805 Crore** for

the year ended on that date, as considered in the standalone financial statements. The financial statements/information of these branches have been audited by the branch auditors whose reports have been furnished to us, and our opinion in so far as it relates to the amounts and disclosures included in respect of these branches, is based solely on the report of such branch auditors.

Our opinion is not modified in respect of these matters.

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 sub-section (11) of section 143 of the Act, we give in the "Annexure A" a statement on the matters specified in paragraphs 3 and 4 of the Order, to the extent applicable.
- (2) As required by Section 143 (3) of the Act, based on our audit 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 and proper returns adequate for the purpose of our audit have been received from the branches not visited by us;
 - c. The reports on the accounts of the branch offices of the Company audited under Section 143(8) of the Act by branch auditors have been sent to us and have been properly dealt with by us in preparing this report;
 - d. The Balance Sheet, the Statement of Profit and Loss (including other comprehensive income), Statement of Changes in Equity and the Statement of Cash Flow dealt with by this Report are in agreement with the books of account;
 - e. In our opinion, the aforesaid financial statements comply with the Indian Accounting Standards prescribed under Section 133 of the Act, read with Companies (Indian Accounting Standards) Rules 2015 as amended;
 - f. In terms of Notification no. G.S.R. 463 (E) dt. 05-06-2015 issued by Ministry of Corporate Affairs,

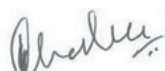
the Provision of Section 164(2) of the Companies Act, 2013 in respect of disqualification of directors are not applicable to the Company, being a Government Company.

- g. With respect to the adequacy of the internal financial controls over financial reporting of the Company and the operating effectiveness of such controls, refer to our separate Report in "Annexure B";
- 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 Auditors) Rules, 2014, 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 32** to the financial statements;
 - ii. The company has made provision, as required under the applicable law or accounting standards, for material foreseeable losses, if any, on long-term contracts including derivative contracts. Refer **Note 39** to the financial statements;
 - iii. There has been no delay in transferring the amount, required to be transferred in accordance with the relevant provisions of the Companies Act, 2013 and the rules made thereunder, to the Investor Education and Protection Fund by the Company.
 - iv. Based on the representation received from Management, no funds have been advanced / received or loaned or invested by the company with the understanding that the intermediary shall lend or invest in other persons or entities identified in any manner whatsoever by or on behalf of the Company / funding partly received by the company.
 - v. As stated on Note 31 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 dividend proposed is in accordance with section 123 of the Act to the extent it applies to the declaration of dividend.

vi. Provision to Rule 3(1) of the Companies (Accounts) Rules, 2014 for maintaining books of account using accounting software which has a feature of recording audit trail (edit log) facility is applicable to the Company with effect from April 1, 2023, and accordingly, reporting under Rule 11(g) of Companies (Audit and Auditors) Rules, 2014 is not applicable for the financial year ended March 31, 2023.

(3) 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 are enclosing our report in terms of Section 143(5) of the Act, on the directions and sub directions issued by the Comptroller and Auditor General of India in "Annexure C".

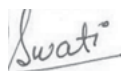
For ABP & Associates
Chartered Accountants
FRN - 315104E



(Bimal Kumar Chanduka)
Partner
M No. 053714

UDIN: 23053714BHAHSS7419

For PSMG & Associates
Chartered Accountants
FRN - 008567C



(Swati Singh)
Partner
M. No. 404531

UDIN: 23404531BGYRDL5376

For S.L. Chhajed & Co. LLP
Chartered Accountants
FRN - 000709C/C400277



(Vijit Baidmutha)
Partner
M. No. 406044

UDIN: 23406044BGUYQK9062

Place: New Delhi
Date: May 26, 2023

Annexure “A” to Independent Auditors’ Report

(Referred to in Paragraph 1 under “Report on Other Legal and Regulatory Requirements” of our report to Member of Bharat Heavy Electricals Limited of even date)

To best of our information and according to the explanation provided to us by the Company and the books of account and records examined by us in the normal course of audit, we state that:

- i) In respect of Company’s Property, Plant and Equipment and Intangible Assets:
- (a) A. The Company has maintained proper records showing full particulars including quantitative details and situation of its Property, Plant & Equipment.
- B. The Company has maintained proper records showing full particulars of Intangible assets.
- (b) The Company has program of verification to cover all the items of Property, Plant & Equipment in a phased manner, over a period of three years, which, in our opinion, is reasonable having regard to the size of the Company and nature of its business. Pursuant to the program, certain Property, Plant and Equipment were physically verified by the management during the year. According to the information and explanation given to us, no material discrepancies were noticed on such verification.
- (c) According to the information and explanation given to us, the records examined by us, the title deeds of immovable properties are held in the name of Company except those disclosed in Additional disclosure of Note 3.1 Property, Plant and Equipment.
- (d) The Company has not revalued its Property, Plant & Equipment (including Right of Use assets) or intangible assets during the year.
- (e) No proceedings have been initiated or pending against the Company for holding any benami property under the Benami Transactions (Prohibition) Act, 1988 (45 of 1988) and rules made thereunder.
- ii) (a) The physical verification of inventory (excluding stocks lying with third parties) has been conducted at reasonable intervals by the Management during the year. In respect of inventory lying with third parties, these have substantially been confirmed by them. In respect of inventories of stores and spares, the Management has a verification programme with appropriate procedures designed to cover the items over a period of three years, which in our opinion, is appropriate. The discrepancies noticed on physical verification of inventory as compared to books record were not material.
- (b) According to the information and explanations given to us, and relevant records produced, the company has been sanctioned working capital limit of ₹60,000 Crore (Fund Based Limit of ₹6000 Crore, Non-Fund Based Limits Letter of Credit(LC) ₹3,000 Crore and Bank Guarantees(BG) ₹51,000), under consortium finance from Banks/ Financial institution against security of current assets. As per records verified by us, in our opinion, the monthly/quarterly returns or statement filed by the company with such Banks/Financial Institution are in agreement with books of accounts of the Company.
- iii) According to the information given to us, the Company has not granted any loans or advances in the nature of loans, secured or unsecured to companies, firms, Limited Liability Partnerships or other parties listed in the register maintained under section 189 of the Companies Act, 2013. Therefore, clauses (iii) (a-A, B), (iii) (b), (iii) (c), (iii) (d), iii) (e) and iii) (f) of Paragraph 3 of the Order are not applicable to the Company.
- iv) According to information and explanations given to us, Section 185 of the Act regarding loans to directors is not applicable to the Company by virtue of Notification No. G.S.R. 463(E) dated 05.06.2015 issued by the Ministry of Corporate Affairs, Govt. of India. In our opinion and according to the information and explanations given to us, the Company has complied with the provisions of Section 186 of the Act with respect to the loans and investments made.
- v) According to the information and explanation given to us and based on our audit procedure, the company has not accepted any deposits within the meaning of section 73 to 76 of the Act or any other relevant provisions of the Companies Act, 2013 and the Companies (Acceptance of Deposit) Rules 2014.
- vi) We have broadly reviewed the books of account and records maintained by the Company pursuant to the Companies (Cost Records and Audit) Rules 2014 prescribed by the Central Government under section 148(1) of the Companies Act, 2013 and are of the opinion

that prima facie the prescribed accounts and records have been made and maintained. However, we are not required to and have not carried out any detailed examination of such accounts and records.

- vii) (a) According to the information and explanations given to us, in our opinion, the Company is generally regular in depositing with appropriate authorities undisputed statutory dues including Goods and Service Tax, Provident Fund, Employees' State Insurance, Income Tax, Sales Tax, Service Tax, duty of Customs, duty of Excise, Value Added Tax, Cess and any other statutory dues as applicable to it.
- (b) There were no undisputed amount payable in respect of Goods and Service Tax, Provident Fund, Employee State Insurance, Income Tax, Sales Tax, Service Tax, duty of Customs, duty of Excise, Value added Tax, Cess and any other Statutory dues as at March 31, 2023 for a period of more than six months from the date they became payable.
- (c) According to the information and explanations given to us, the particulars of Goods and Service Tax, Income Tax, Sales Tax, Service Tax, duty of Customs, duty of Excise, Value Added Tax, which have not been deposited on account of dispute are as under:

(₹ in Crore)

Sl. No.	Name of the Statute	Nature of the Dues	Pending Amount	Amount paid under protest	Amount not deposited	Forum where dispute is pending
1	Central Sales Tax Act, Value Added Tax and Sales Tax Act of various States	Sales Tax, VAT	125.27	12.44	112.83	Assessing Officer
			515.34	105.69	409.65	Dy. Commissioner /Jt. Commissioner/ Commissioner (Appeals)
			231.83	92.36	139.47	Appellate Tribunal
			36.96	1.67	35.29	High Court
			4.84	4.84	-	Supreme Court
2	Central Excise Act, 1944	Excise Duty	43.79	-	43.79	Assessing Officer
			5.60	0.10	5.50	Commissioner (Appeals)
			93.08	5.22	87.86	Appellate Tribunal
			27.49	-	27.49	High Court
3	Service Tax under the Finance Act, 1994	Service Tax	4.59	0.47	4.12	Commissioner (Appeals) / Other Appellate Authority
			524.26	11.87	512.39	Appellate Tribunal
4	Customs Act, 1962	Custom Duty	5.80	5.80	-	High Court
			18.36	0.01	18.35	Commissioner (Appeals) / Other Appellate Authority
5	GST Act	GST	4.14	0.18	3.96	Commissioner (Appeals)
6	Income Tax	Income Tax	0.43	0.43	-	Commissioner (Appeals)
7	Income Tax (Foreign)	Income Tax	13.87	-	13.87	Assessment Authority (Libya)
			10.30	-	10.30	Rawandan Court of Appeals

- viii) According to the records of the Company examined by us and the information and explanations given to us, no transactions have been recorded in the books of accounts which have been surrendered or disclosed as income during the year in the tax assessments under the Income Tax Act, 1961.
- ix) According to the records of the Company examined by us and the information and explanations given to us:
- a) Company has not defaulted in repayment of loans or other borrowings or in the payment of interest thereon to any lender.
- b) Company is not a declared wilful defaulter by any bank or financial institution or other lender.
- c) The Company has not taken any Term Loan during the year and there are no outstanding term loan at the beginning of the year and hence, reporting under clause 3(ix) (c) of Order is not applicable.
- d) According to the information and explanation given to us, and the procedures performed by us, and on overall examination of the financial statement of the company, we report that no funds raised on short-term basis have been used for long-term purposes by the company.

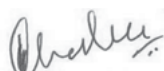
- e) According to the information and explanation given to us, and on an overall examination of the financial statement of the company, we report that the company has not taken any funds from any entity or person on account of or to meet the obligations of its joint ventures.
- f) According to the information and explanation given to us, and procedures applied by us, we report that the company has not raised any loans during the year on the pledge of securities held in its joint ventures.
- x) a) The Company has not raised any monies by way of initial public offer or further public offer (including debt instruments) hence reporting under clause 3(x) (a) of the Order is not applicable.
- b) During the year, the Company has not made any preferential allotment or private placement of shares or debentures (fully or partly or optionally) and hence reporting under clause 3(x) (b) of the Order is not applicable.
- xi) a) During the course of our examination of the books and records of the Company, carried out in accordance with the generally accepted auditing practices in India, and according to the information and explanations given to us, no fraud by the Company or any fraud on the Company by its officers or employees has been noticed or reported during the year, nor we have been informed of such case by the management.
- b) No report under sub-section (12) of section 143 of the Companies Act, has been filed in Form ADT-4 as prescribed under rule 13 of Companies (Audit and Auditors) Rules, 2014 with Central Government.
- c) We have taken into consideration the whistle blower complaints received by the company during the year while determining the nature, timing and extend of audit procedures.
- xii) Since the Company is not a Nidhi Company, provisions of clause no. 3(xii) of the Order is not applicable to the Company.
- xiii) According to the information and explanations, all the transactions with related parties are in compliance with section 177 and 188 of the Companies Act, 2013 where ever applicable and the details have been disclosed in the Financial Statement, as required by the applicable accounting standard.
- xiv) (a) In our opinion and based on examination, the company has an internal audit system commensurate with the size and nature of its business
- (b) We have considered the internal audit report of the company issued till date, for the period under audit.
- xv) According to information and explanation given to us, in our opinion during the year Company has not entered into any non-cash transactions with directors or persons connected with its directors and hence provisions of section 192 of the Companies Act, 2013 are not applicable to the company.
- xvi) (a) In our opinion, Company is not required to be registered under section 45-IA of the Reserve Bank of India Act, 1934. Hence, reporting under clause 3(xvi) (a), (b) and (c) of the Order is not applicable.
- (b) In our opinion, the Company is not Core investment Company and hence reporting under clause 3(xvi) (b) is not applicable.
- xvii) The company has not incurred cash losses in the current and has not incurred cash losses in the immediately preceding financial year.
- xviii) There has been no resignation of the statutory auditors during the year.
- 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) According to the records of the Company examined by us and the information and explanations given to us:

(a) There are no unspent amount towards Corporate Social Responsibility (CSR) on other than ongoing projects requiring a transfer to a Fund specified in schedule VII to the Companies Act in compliance with second proviso to sub section (5) of Section 135 of the said Act. Accordingly, reporting under clause 3(xx) (a) of the Order is not applicable.

(b) In respect of ongoing projects, the Company has transferred unspent Corporate Social Responsibility amount as at the end of previous financial year, to a Special account within a period of 30 days from the end of the said financial year in compliance with the provision of section 135(6) of the Act.

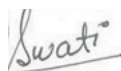
For ABP & Associates
Chartered Accountants
FRN - 315104E



(Bimal Kumar Chanduka)
Partner
M No. 053714

UDIN: 23053714BHAHSS7419

For PSMG & Associates
Chartered Accountants
FRN - 008567C



(Swati Singh)
Partner
M. No. 404531

UDIN: 23404531BGYRDL5376

For S.L. Chhajed & Co. LLP
Chartered Accountants
FRN - 000709C/C400277



(Vijit Baidmutha)
Partner
M. No. 406044

UDIN: 23406044BGUYQK9062

Place: New Delhi
Date: May 26, 2023



“ANNEXURE B” TO THE INDEPENDENT AUDITORS’ REPORT OF EVEN DATE ON THE STANDALONE FINANCIAL STATEMENTS OF BHARAT HEAVY ELECTRICALS LIMITED

Report on the Internal Financial Controls under Clause (i) of Sub-section 3 of Section 143 of the Companies Act, 2013 (“the Act”)

We have audited the internal financial controls over financial reporting of Bharat Heavy Electricals Limited (“the Company”)

as of March 31, 2023 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 control 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. 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 Companies Act, 2013.

Auditors’ Responsibility

Our responsibility is to express an opinion on the Company’s internal financial controls over financial reporting 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 Companies Act, 2013, to the extent applicable to an audit of internal financial controls, both applicable to an audit of Internal Financial Controls and, both issued by the Institute of Chartered Accountants of India. 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 over financial reporting 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 controls system over financial reporting and their operating effectiveness. Our audit of internal financial controls over

financial reporting included obtaining an understanding of internal financial controls over financial reporting, 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 Auditor’s judgment, including the assessment of the risks of material misstatement of the 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 over financial reporting.

Meaning of Internal Financial Controls Over Financial Reporting

A Company’s internal financial control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A Company’s internal financial control over financial reporting 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 financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorisations of management and directors of the Company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorised acquisition, use, or disposition of the Company’s assets that could have a material effect on the financial statements.

Inherent Limitations of Internal Financial Controls Over Financial Reporting

Because of the inherent limitations of internal financial controls over financial reporting, 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 over financial reporting to future periods are subject to the risk that the internal financial control

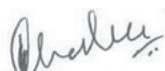
over financial reporting may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Opinion

In our opinion, the Company has, in all material respects, an adequate internal financial controls system over financial reporting and such internal financial controls over financial

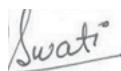
reporting were operating effectively as at March 31, 2023, based on the internal control over financial reporting criteria established by the Company considering the essential components of internal control stated in the Guidance Note on Audit of Internal Financial Controls Over Financial Reporting issued by the Institute of Chartered Accountants of India.

For ABP & Associates
Chartered Accountants
FRN - 315104E



(Bimal Kumar Chanduka)
Partner
M No. 053714
UDIN: 23053714BHAHSS7419

For PSMG & Associates
Chartered Accountants
FRN - 008567C



(Swati Singh)
Partner
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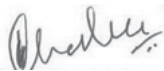
Place: New Delhi
Date: May 26, 2023

"ANNEXURE C" TO INDEPENDENT AUDITOR'S REPORT

Directions issued by the Comptroller & Auditor General of India under Section 143(5) of the Companies Act, 2013 indicating the areas to be examined by the Statutory Auditors during the course of audit of annual accounts of Bharat Heavy Electricals Limited (Standalone) for the year 2022-23

S. No.	Areas Examined	Replies
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.	Yes, the Company has system in place to process all the accounting transactions through IT system at each Branch. However, each Branch is using different accounting Softwares. Based on our Audit & Branch Auditor's Report, wherever the accounting transactions are based on workings outside IT System, no instances of lack of integrity of accounts and financial implications have been noticed/reported.
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 due to the company's inability to repay the loan? If yes, the financial impact may be stated. Whether such cases are properly accounted for? (In case, lender is a government company, then this direction is also applicable for statutory auditor of lender company).	According to the information and explanations given to us and based on our examination of the records of the company, there has been no restructuring/ waiver/ write off of debts/ loans/interest etc. made by a lender due to the company's inability to repay the loan
3	Whether funds (grants/subsidy etc.) received / receivable for specific schemes from Central / State Government or its agencies were properly accounted for /utilized as per its term and conditions? List the cases of deviation.	Fund received / receivable for specific schemes from Central / State agencies were properly accounted for /utilized as per its term and conditions.

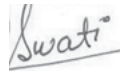
For ABP & Associates
Chartered Accountants
FRN - 315104E



(Bimal Kumar Chanduka)
Partner
M No. 053714

UDIN: 23053714BHAHSS7419

For PSMG & Associates
Chartered Accountants
FRN - 008567C



(Swati Singh)
Partner
M. No. 404531

UDIN: 23404531BGYRDL5376

For S.L. Chhajer & Co. LLP
Chartered Accountants
FRN - 000709C/C400277



(Vijit Baidmutha)
Partner
M. No. 406044

UDIN: 23406044BGUYQK9062

Place: New Delhi
Date: May 26, 2023



CGA(E)/REP/01-89/ACS/BHEL/SPS/2023-24/131.

भारतीय लेखापरीक्षा और लेखा विभाग
कार्यालय महा निदेशक लेखापरीक्षा (ऊर्जा)
नई दिल्ली



INDIAN AUDIT & ACCOUNTS DEPARTMENT
Office of the Director General of Audit (Energy)
New Delhi

Dated: 27/7/23.

सेवा में,

अध्यक्ष एवं प्रबंध निदेशक,
भारत हेवी इलेक्ट्रिकल्स लिमिटेड,
नई दिल्ली

विषय:- 31 मार्च 2023 को समाप्त वर्ष के लिए भारत हेवी इलेक्ट्रिकल्स लिमिटेड, नई दिल्ली के लेखाओं पर कम्पनी अधिनियम 2013 की धारा 143(6)(b) के अंतर्गत भारत के नियंत्रक एवं महालेखापरीक्षक की टिप्पणियाँ।

महोदय,

मैं भारत हेवी इलेक्ट्रिकल्स लिमिटेड, नई दिल्ली के 31 मार्च 2023 को समाप्त वर्ष के लेखाओं पर कम्पनी अधिनियम 2013 की धारा 143(6)(b) के अंतर्गत भारत के नियंत्रक एवं महालेखापरीक्षक की टिप्पणियाँ अश्रेष्ठित कर रहा हूँ।

कृपया इस पत्र की संलग्नकों सहित प्राप्ति की पावती भेजी जाए।

भवदीय,

संलग्नक:- यथोपरि।

संजय कुमार
(संजय कु. झा)
महानिदेशक

COMMENTS OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA UNDER SECTION 143(6) (b) OF THE COMPANIES ACT, 2013 ON THE FINANCIAL STATEMENTS OF BHARAT HEAVY ELECTRICALS LIMITED FOR THE YEAR ENDED 31 MARCH 2023

The preparation of financial statements of Bharat Heavy Electricals Limited for the year ended 31 March 2023 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 26 May 2023.

I, on behalf of the Comptroller and Auditor General of India, have conducted a supplementary audit of the financial statements of Bharat Heavy Electricals Limited for the year ended 31 March 2023 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

A handwritten signature in blue ink, appearing to read 'Sanjay K. Jha', is positioned above the printed name.

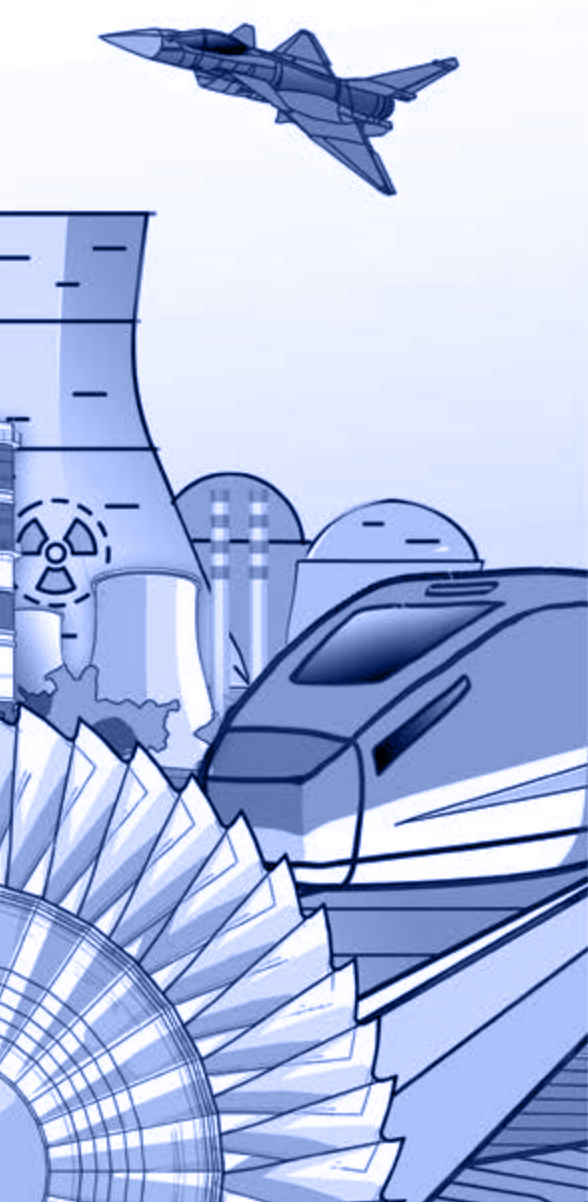
(Sanjay K. Jha)
Director General of Audit (Energy)

Place: New Delhi
Dated: 27 July 2023



Financial Statements

Standalone Financial Statements 190



Standalone Balance Sheet as at March 31, 2023

(₹ in Crore)

Particulars	Note	Page	As at March 31, 2023		As at March 31, 2022	
A. ASSETS						
1. Non-current assets						
(a) Property, plant and equipment	3a	203		2408.74		2336.34
(b) Capital work-in-progress	3b	203		344.59		422.32
(c) Intangible assets	4a	204		67.24		62.12
(d) Intangible assets under development	4b	204		9.26		8.66
(e) Financial assets						
(i) Investments	5	212	669.54		669.71	
(ii) Trade receivables	6	213	3415.54		3203.84	
(iii) Other financial assets	7	215	83.96	4169.04	86.73	3960.28
(f) Deferred tax assets (net of liabilities)	8	216		3422.62		3530.08
(g) Other non-current assets	9	217		19300.14		18526.54
Total non-current assets				29721.63		28846.34
2. Current assets						
(a) Inventories	10	218		6755.90		6560.21
(b) Financial assets						
(i) Trade receivables	6	213	3128.35		3024.75	
(ii) Cash and cash equivalents	11	219	1560.52		732.62	
(iii) Bank balances other than cash and cash equivalents	12	219	5082.06		6421.07	
(iv) Other financial assets	7	215	278.23	10049.16	211.56	10390.00
(c) Current tax assets (net)	13	219		226.38		119.24
(d) Other current assets	9	217		13050.84		10792.53
Total current assets				30082.28		27861.98
TOTAL ASSETS				59803.91		56708.32
B. EQUITY AND LIABILITIES:						
3. Equity						
(a) Equity share capital	14	220		696.41		696.41
(b) Other equity	15	221		26565.75		26274.75
Total equity				27262.16		26971.16
4. Liabilities						
4.1 Non-current liabilities						
(a) Financial liabilities						
(i) Lease Liabilities	16	221	33.75		35.12	
(ii) Trade payables	17	222				
(i) Total outstanding dues of micro enterprises and small enterprises			128.11		127.45	
(ii) Total outstanding dues of creditors other than micro enterprises and small enterprises			2065.92		2004.48	
(iii) Other financial liabilities	18	224	255.70	2483.48	215.10	2382.15
(b) Provisions	19	224		4101.02		3771.21
(c) Other non-current liabilities	20	224		2605.81		2212.65
Total non-current liabilities				9190.31		8366.01

Standalone Balance Sheet as at March 31, 2023

(₹ in Crore)

Particulars	Note	Page	As at March 31, 2023		As at March 31, 2022	
4.2. Current liabilities						
(a) Financial liabilities						
(i) Borrowings	21	225	5385.00		4745.00	
(ia) Lease Liabilities	16	221	34.76		49.81	
(ii) Trade payables	17	222				
(i) Total outstanding dues of micro enterprises and small enterprises			1211.53		745.82	
(ii) Total outstanding dues of creditors other than micro enterprises and small enterprises			8684.30		7003.77	
(iii) Other financial liabilities	18	224	1276.93	16592.52	1124.09	13668.49
(b) Provisions	19	224		2796.63		3066.70
(c) Other current liabilities	20	224		3962.29		4635.96
Total current liabilities				23351.44		21371.15
Total liabilities				32541.75		29737.16
TOTAL EQUITY AND LIABILITIES				59803.91		56708.32

Basis of preparation, measurement and significant accounting policies 2 198

The accompanying notes [1-57] are an integral part of these financial statements

For and on behalf of Board of Directors



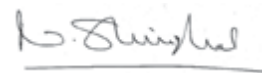
(Rajeev Kalra)

Company Secretary
M. No. 14567



(Jai Prakash Srivastava)

Director (E, R&D)
with additional charge of
Director (Finance) & CFO
DIN: 09703643

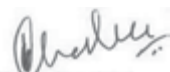


(Dr. Nalin Shinghal)

Chairman and Managing Director
DIN: 01176857

As per our report of even date

For ABP & Associates
Chartered Accountants
FRN - 315104E

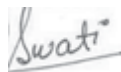


(Bimal Kumar Chanduka)

Partner

M. No. 053714

For PSMG & Associates
Chartered Accountants
FRN - 008567C



(Swati Singh)

Partner

M. No. 404531

For S.L. Chhajer & Co. LLP
Chartered Accountants
FRN - 000709C/C400277



(Vijit Baidmutha)

Partner

M. No. 406044

Place: New Delhi
Date: May 26, 2023

Standalone Statement of Profit and Loss

For the year ended March 31, 2023

(₹ in Crore)

Particulars	Note	Page	For the year ended March 31, 2023	For the year ended March 31, 2022
INCOME				
Revenue from operations	22	226	23364.94	21211.09
Other income	23	227	514.81	367.81
TOTAL INCOME			23879.75	21578.90
EXPENSES				
Cost of raw materials consumed			5875.28	5062.40
Purchases of Bought out items			4657.33	4141.75
Civil, erection and engineering expenses			5421.08	4792.61
Consumption of stores & spares			404.18	271.44
"Changes in inventories of finished goods, work in progress and Scrap"	24	227	(57.15)	525.64
Employee benefits expense	25	228	5700.63	5516.84
Other Expenses	26	228	647.03	162.49
Finance costs	27	231	521.43	354.72
Depreciation & amortisation expense	3.1 4.1	206 211	260.34	314.06
TOTAL EXPENSES			23430.15	21141.95
PROFIT BEFORE TAX			449.60	436.95
Tax expenses	28	232		
a) Current tax			(111.22)	(77.13)
b) Deferred tax			113.27	103.84
PROFIT FOR THE YEAR (A)			447.55	410.24

Standalone Statement of Profit and Loss

For the year ended March 31, 2023

(₹ in Crore)

Particulars	Note	Page	For the year ended March 31, 2023	For the year ended March 31, 2022
OTHER COMPREHENSIVE INCOME	29	232		
Items that will not be reclassified to profit or loss (net of tax)				
-Remeasurement of defined employee benefits			(17.27)	76.87
OTHER COMPREHENSIVE INCOME FOR THE YEAR (B)			(17.27)	76.87
TOTAL COMPREHENSIVE INCOME FOR THE YEAR (A+B)			430.28	487.11
Earnings per equity share	30	233		
(1) Basic [Face value of ₹ 2 each]			1.29	1.18
(2) Diluted [Face value of ₹ 2 each]			1.29	1.18

Basis of preparation, measurement and significant accounting policies

2

198

The accompanying notes [1-57] are an integral part of these financial statements

For and on behalf of Board of Directors



(Rajeev Kalra)

Company Secretary
M. No. 14567



(Jai Prakash Srivastava)

Director (E, R&D)
with additional charge of
Director (Finance) & CFO
DIN: 09703643




(Dr. Nalin Shinghal)

Chairman and Managing Director
DIN: 01176857

As per our report of even date

For ABP & Associates

Chartered Accountants
FRN - 315104E



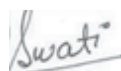
(Bimal Kumar Chanduka)

Partner

M No. 053714

For PSMG & Associates

Chartered Accountants
FRN - 008567C



(Swati Singh)

Partner

M. No. 404531

For S.L. Chhajed & Co. LLP

Chartered Accountants
FRN - 000709C/C400277



(Vijit Baidmutha)

Partner

M. No. 406044

Place: New Delhi

Date: May 26, 2023

Standalone Statement of Changes in Equity

For the year ended March 31, 2023

A. Equity Share Capital

(₹ in Crore)

Equity shares of INR 2 each issued, subscribed and fully paid	Number of shares		Amount	
	2022-23	2021-22	2022-23	2021-22
Balance at the beginning of the year	3482063355	3482063355	696.41	696.41
Changes in equity share capital during the year	-	-	-	-
Balance at the end of the year	3482063355	3482063355	696.41	696.41

B. Other equity

For the year ended March 31, 2023

(₹ in Crore)

Description	Reserves and surplus				Other items of other comprehensive income	Total other Equity
	Capital Reserves	Capital Redemption Reserves	General Reserves	Retained Earnings		
Balance as at April 01, 2022	35.18	37.87	30,476.66	(3956.70)	(318.26)	26,274.75
Changes in accounting policy or prior period errors	-	-	-	-	-	-
Reinstated balance as at April 01, 2022	35.18	37.87	30,476.66	(3956.70)	(318.26)	26,274.75
Add: Total comprehensive Income for the year				447.55	(17.27)	430.28
Less: Final dividend [Note 31]				(139.28)		(139.28)
Balance as at March 31, 2023	35.18	37.87	30,476.66	(3648.43)	(335.53)	26,565.75

Standalone Statement of Changes in Equity

For the year ended March 31, 2022

(₹ in Crore)

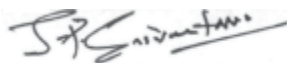
Description	Reserves and surplus				Other items of other comprehensive income	Total other Equity
	Capital Reserves	Capital Redemption Reserves	General Reserves	Retained Earnings		
Balance as at April 01, 2021	35.18	37.87	30,476.66	(4366.94)	(395.13)	25,787.64
Changes in accounting policy or prior period errors	-	-	-	-	-	-
Reinstated balance as at April 01, 2021	35.18	37.87	30,476.66	(4366.94)	(395.13)	25,787.64
Add: Total Comprehensive Income for the year				410.24	76.87	487.11
Balance as at March 31, 2022	35.18	37.87	30,476.66	(3956.70)	(318.26)	26,274.75



(Rajeev Kalra)

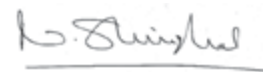
Company Secretary
M. No. 14567

For and on behalf of Board of Directors



(Jai Prakash Srivastava)

Director (E, R&D)
with additional charge of
Director (Finance) & CFO
DIN: 09703643



(Dr. Nalin Shinghal)

Chairman and Managing Director
DIN: 01176857

For ABP & Associates
Chartered Accountants
FRN - 315104E



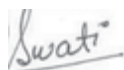
(Bimal Kumar Chanduka)

Partner

M. No. 053714

As per our report of even date

For PSMG & Associates
Chartered Accountants
FRN - 008567C



(Swati Singh)

Partner

M. No. 404531

For S.L. Chhajed & Co. LLP
Chartered Accountants
FRN - 000709C/C400277



(Vijit Baidmutha)

Partner

M. No. 406044

Place: New Delhi
Date: May 26, 2023

Standalone Statement of Cash Flows

For the year ended March 31, 2023

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
A. CASH FLOW FROM OPERATING ACTIVITIES		
Profit /(Loss) before tax	449.60	436.95
Adjustments for :		
Provision and write off	(86.31)	(1120.06)
Depreciation and amortisation	260.34	314.06
Finance cost (including unwinding of interest)	521.43	354.72
Interest & dividend income	(447.30)	(333.14)
Unrealised Foreign Exchange loss/(gain)	(401.85)	19.26
Amortisation of Government Grant	(8.90)	(6.20)
Others	(33.02)	(6.61)
Cash generated / (used) in operations before working capital changes	253.99	(341.02)
Adjustment for changes in working capital:		
Trade Receivables	92.04	1881.12
Contract Assets	(2370.65)	(2594.15)
Inventories	(192.40)	603.40
Loans, advances & other assets	(262.28)	143.49
Sub total	(2733.29)	33.86
Trade payable	2103.68	1300.85
Advances from customers, deposits and others	(167.84)	(383.70)
Provisions	(308.48)	(358.60)
Sub total	1627.36	558.55
Net cash (used in) / from working capital	(1105.93)	592.41
Cash generated / (used) in operations	(851.94)	251.39
Income Tax paid	(155.54)	(258.00)
Refund of income taxes	265.96	666.88
Net cash (used in) / from operating activities	(741.52)	660.27
B. CASH FLOW FROM INVESTING ACTIVITIES		
Redemption / maturity of bank deposits (having original maturity of more than 3 months)	1358.78	(1251.12)
Interest received	250.72	257.93
Sale proceeds from Investment	25.42	0.00
Dividend received from joint ventures	26.18	30.35
Sale of property, plant and equipment & Intangible Assets	7.76	6.90
Purchase of property, plant and equipment & Intangible Assets (Net)	(188.40)	(169.39)
Net cash (used in) / from investing activities	1480.46	(1125.33)

Standalone Statement of Cash Flows

For the year ended March 31, 2023

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
C. CASH FLOW FROM FINANCING ACTIVITIES		
Proceeds from short term borrowings	640.00	(88.78)
Proceeds / (repayment) of lease obligation (Principal)	(49.77)	(48.79)
Proceeds / (repayment) of lease obligation (Interest)	(7.27)	(9.57)
Dividend paid	(139.18)	(0.30)
Interest paid	(354.82)	(182.06)
Net cash (used in) / from financing activities (refer point 4)	88.96	(329.50)
D. Net increase/(decrease) in cash and cash equivalents	827.90	(794.56)
Opening balance of cash and cash equivalents	732.62	1527.18
Closing balance of cash and cash equivalents [Refer Note 11]	1560.52	732.62

- (1) Statement of cash flow has been prepared under the indirect method as set out in the Ind AS 7 - Statement of Cash flow.
- (2) Previous year's figures have been regrouped/reclassified wherever applicable
- (3) Closing balance of Cash & Cash Equivalents includes exchange variation loss of ₹ Nil Cr (Previous year ₹ 0.15 cr).
- (4) Changes in liabilities arising from financing activities are available at Note [21 vi] and Note 36 b)
- (5) During the year the company has accounted for income tax refund amounting to ₹ 266 Cr, including interest income of ₹ 106 Cr.



(Rajeev Kalra)
Company Secretary
M. No. 14567

For and on behalf of Board of Directors

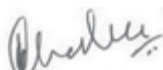


(Jai Prakash Srivastava)
Director (E, R&D)
with additional charge of
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DIN: 09703643



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Chairman and Managing Director
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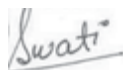
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For S.L. Chhajer & Co. LLP
Chartered Accountants
FRN - 000709C/C400277



(Vijit Baidmutha)
Partner
M. No. 406044

Place: New Delhi
Date: May 26, 2023



Notes to the financial statements for the year ended March 31, 2023

Note [1] – Company Information

Bharat Heavy Electricals Limited (“BHEL or “the Company”) is a public limited company domiciled in India and has its registered office at BHEL House, Siri Fort, New Delhi -110049

The Company is an integrated power plant equipment manufacturer and is engaged in design, engineering, manufacture, construction, testing, commissioning and servicing of a wide range of products and services for the core sectors of the economy, viz, Power, Transmission, Industry, Transportation, Renewable Energy, Water, Oil & Gas and Defence & Aerospace.

Note [2] - Significant accounting policies

1. Basis of preparation of Financial Statements

a) Statement of Compliance

The financial statements have been prepared in accordance with Indian Accounting Standards (Ind-AS) as notified by Ministry of Corporate Affairs under the Companies (Indian Accounting Standards) Rules, 2015 and subsequent amendments thereof as well as with the additional requirements applicable to financial statements as set forth in Companies Act, 2013 and amended thereof.

b) Basis of measurement

The financial statements have been prepared on a going concern basis and on an accrual method of accounting. Historical cost is used in preparation of the financial statements except as otherwise mentioned in the policy.

c) Functional and presentation currency

The financial statements are prepared in INR, which is the Company’s functional currency.

d) Use of Estimates and Judgments

The preparation of the financial statements in conformity with Ind AS requires management to make judgements, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates. Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised prospectively.

Critical estimates and judgements in applying accounting policies

Estimates and judgements made in applying accounting policies that have significant effect on the amounts recognized in the financial statements are as follows:

i) Revenue

The Company uses input method based on cost approach in accounting for the revenue in respect of construction contracts. Use of input method requires the Company to estimate its costs relative to the total expected costs in the satisfaction of its performance obligation. The estimates are assessed continually during the term of the contract and the company re-measures its progress towards complete satisfaction of its performance obligations satisfied over time at the end of each reporting period.

Company updates its estimated transaction price at each reporting period, to represent faithfully the circumstances present at the end of the reporting period and the changes in circumstances during the reporting period.

ii) Property, plant and equipment

The charge in respect of periodic depreciation is derived after estimating the asset’s expected useful life and the expected residual value at the end of its life. The depreciation method, useful lives and residual values of Company’s assets are estimated by management at the time the asset is acquired and reviewed during each financial year.

iii) Employee Benefit Plans

Employee defined benefit plans and long term benefit plans are measured on the basis of actuarial assumptions. However, any changes in these assumptions may have impact on the reported amount of obligation and expenses.

iv) Provisions and contingencies

Assessments undertaken in recognising provisions and contingencies have been made as per the best judgement of the management based on the current available information.

2. Property Plant & Equipment (PPE)

Property, plant and equipment are carried at cost less accumulated depreciation and accumulated impairment losses, if any.

Depreciation on property, plant and equipment (other than those used abroad under contract) is charged on straight-line method as per the useful life prescribed in Schedule II of the Companies Act, 2013, except in the following items where estimated useful life is based on technically assessed estimated useful life :-

Asset Category	(Years)
Plant & equipment	15-30
Buildings	5-60
Electricals installations & equipments	10-30
Erection equipment, Capital tools & tackles	5
Drainage, sewerage & water supply	30
Servers and networks	5
Solar Power Generation Plant	25

Depreciation methods, useful lives and residual values are reviewed in each financial year and changes, if any, are accounted for prospectively. Right-of-use assets are amortised over the shorter of the lease term and their useful lives unless it is reasonably certain that the Company will obtain ownership by the end of the lease term

Property Plant & Equipment costing ₹ 10,000/- or less and those whose written down value as at the beginning of the year is ₹ 10,000/- or less, are depreciated fully.

At erection/project sites: The cost of roads, bridges and culverts is fully amortized over the tenure of the contract, while sheds, railway sidings, electrical installations and other similar enabling works (other than temporary structures) are depreciated over the tenure of the contract after retaining residual value, if any.

Assets used outside India pursuant to long term contracts are depreciated over the duration of the initial contract.

Temporary structures are fully depreciated in the year of construction.

Significant components with different useful lives are accounted for and depreciated separately

3. Leases

At the inception of an arrangement, the Company determines whether such an arrangement is or contains a lease.

Upon initial recognition, assets taken on lease are capitalized under right-of-use assets at cost which comprises initial measurement of lease liability at present value, initial lease payments less incentives, initial direct costs and estimated cost of dismantling and removing the underlying assets, if any.

Lease payments made under leases are apportioned between the finance expense and the reduction of the outstanding lease liability. The finance expense is allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability.

For assets given on finance lease, the Company recognizes finance income over the lease term using

effective interest rate method. Initial direct costs incurred are included in the initial measurement of the finance lease receivable and reduce the amount of income recognized over the lease term.

Lease income arising from operating lease is recognized as income over the lease period on a straight line basis except where the periodic increase in lease rentals is in line with expected general inflation.

4. Intangible assets

Intangible items costing more than ₹ 10000/- are evaluated for capitalization and are carried at cost less accumulated amortization and accumulated impairment, if any.

Intangible assets are amortised in Statement of Profit and Loss on a straight-line method over the estimated useful lives from the date that they are available for use. The estimated useful lives for the intangible assets are as follows:

Software 3 years

Others 10 years.

Intangible assets having WDV ₹ 10000/- or less at the beginning of the year are amortized fully.

Amortization period and amortization methods are reviewed in each financial year and changes, if any, are accounted for prospectively.

Expenditure on research activities is recognized in statement of profit and loss as incurred. 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 and has sufficient resources to complete development and to use or sell the asset. The expenditure capitalized includes the cost of materials, direct labour, overhead costs that are directly attributable to preparing the asset for its intended use, and borrowing costs, if any.

Assets acquired for purposes of research and development are capitalized.

5. Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, are added to the cost of such assets.

An asset that necessarily takes a substantial period of time, considered as more than twelve months, to get ready for its intended use or sale is a qualifying asset for the purpose.

All other borrowing costs are recognized in the statement of profit and loss in the period in which they are incurred.

6. Investments in Subsidiaries & Joint ventures

Investments in subsidiaries and joint ventures are accounted at cost less impairment losses, if any.

If the intention of the management is to dispose the investment in near future, it is classified as held for sale and measured at lower of its carrying amount and fair value less costs to sell.

7. Inventories

Inventory is valued at cost or net realizable value, whichever is lower. In respect of valuation of finished goods and work-in-progress, cost means factory cost. In respect of raw material, components, loose tools, stores and spares cost means weighted average cost.

8. Revenue Recognition

Revenue is recognized to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services.

In relation to construction and long term service contracts, the company transfers control of goods or services to the customer and recognizes revenue over the time. Revenue is recognized using input method based on the cost approach. Progress towards complete satisfaction of performance obligation satisfied over time is remeasured at reporting period end.

Revenue from sale of goods and services is recognized on the transfer of control to the customer and upon the satisfaction of performance obligations under the contract.

Other Income

Dividend income is recognized in statement of profit and loss on the date on which the Company's right to receive payment is established.

Interest Income is recognized using effective interest rate method.

Claims for export incentives/ duty drawbacks, duty refunds and insurance are accounted for on accrual basis.

9. Foreign currency Translation/Transaction

Transaction in foreign currencies are recorded at the exchange rate prevailing on the date of the transaction.

Foreign currency denominated monetary assets and liabilities are translated into the functional currency at exchange rates in effect at the end of each reporting period. Foreign exchange gains or losses arising from settlement and translations are recognized in the statement of profit and loss.

Non-monetary assets and non-monetary liabilities denominated in a foreign currency and measured at historical cost are translated at the exchange rate prevailing at the date of transaction.

10. Employee Benefits

Defined contribution plans

The Company's contribution to Pension fund including Family Pension Fund for the employees is covered under defined contribution plan and is recognized as employee benefit expense in statement of profit and loss in the periods during which services are rendered by employees.

Defined benefit plans

The Company's gratuity scheme, provident fund scheme, travel claims on retirement and post-retirement medical facility scheme are in the nature of defined benefit plans.

The liability recognized in the balance sheet in respect of these defined benefit plan is the present value of the defined benefit obligation at the end of the reporting period less the fair value of plan assets, if any. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using an appropriate government bond rate that have terms to maturity approximating to the terms of the related liability.

Remeasurements comprising actuarial gains and losses as well as the difference between the return on plan assets and the amounts included in net interest on the net defined benefits liability (asset) are recognized in other comprehensive income (net of income tax).

Other expenses related to defined benefit plans are recognized in statement of profit and loss.

Long term Leave Liability

The Company measures the expected cost of accumulating compensated absences as the additional amount expected to be paid as a result of the unused entitlement that has accumulated at the end of the reporting period. Expense on non-accumulating compensated absences is recognized in the period in

which the absences occur. The Company records a liability for accumulated balance based on actuarial valuation determined using projected unit credit method. Remeasurements and other expenses related to long term benefit plans are recognized in statement of profit and loss.

11. Provisions

- (i) Claims for liquidated damages against the Company are recognized in the financial statements based on the management's assessment of the probable outcome with reference to the available information supplemented by experience of similar transactions.
- (ii) The Company provides for anticipated costs for warranties when it recognizes revenues on the related products or contracts and maintain the same throughout the warranty period. The provision is based on historical experience / technical assessment.
- (iii) When it is probable that total contract costs will exceed total contract revenue, the expected loss is recognised immediately.
- (iv) Other provisions are 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.

However, where the effect of time value of money is material, provisions are determined and maintained by discounting the expected future cash flows, wherever applicable.

12. Government Grants

Government grants are recognized only when there is reasonable assurance that the conditions attached to them shall be complied with, and the grants will be received. Non-monetary grants are accounted at Fair Value of assets and are treated as deferred income. Deferred income is recognized in the statement of profit and loss on a systematic and rational basis over the useful life of the asset. Government grants related to revenue are recognized on a systematic basis in the statement of profit and loss over the periods necessary to match them with the related costs which they are intended to compensate.

13. Income Taxes

Income tax expense comprises current tax and deferred tax. Income tax expense is recognized in statement of profit and loss except to the extent that it relates to items recognized in other comprehensive income or directly in equity.

Current tax is the expected tax payable on the taxable income for the year, using tax rates (tax laws) enacted or substantively enacted by the end of the reporting period and includes adjustment on account of tax in respect of previous years.

Deferred tax is recognized using the balance sheet method, providing for temporary difference between the carrying amount of an asset or liability in the balance sheet and its tax base.

Deferred tax is measured at the tax rates that are expected to apply when the temporary differences are either realised or settled, based on the laws that have been enacted or substantively enacted by the end of reporting period.

A deferred tax asset is recognized to the extent that it is probable that future taxable profit will be available against which the temporary difference can be utilized.

The carrying amount of Deferred tax assets are reviewed at each reporting period and are reduced to the extent that it is no longer probable that the related tax benefit will be realized.

Additional Income tax that arise from the distribution of dividends are recognized at the same time when the liability to pay the related dividend is recognized.

14. Impairment of Assets

Impairment of financial assets

The loss allowance in respect of trade receivables and lease receivables are measured at an amount equal to lifetime expected credit losses.

The loss allowance in respect of all other financial assets, which are required to be impaired, are measured at an amount equal to lifetime expected credit losses if the credit risk on that financial instrument has increased significantly since initial recognition. However, if, at the reporting date, the credit risk on a financial instrument has not increased significantly since initial recognition, the loss allowance is measured at an amount equal to 12-month expected credit losses.

Impairment of Non- Financial Assets

The carrying amount of cash generating units is reviewed at each reporting date where there is any indication of impairment. An impairment loss is recognized in the statement of profit and loss where the carrying amount exceeds the recoverable amount of the cash generating units. Impairment losses recognised 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 depreciation or amortisation, if no impairment loss had been recognised.

15. Segment Reporting

Revenue and expenses are identified to segments on the basis of their relationship to the operating activities of the segment. Revenue, expenses, assets and liabilities which are not allocable to segments on a reasonable basis, are included under "Unallocated revenue/ expenses/ assets/ liabilities".

16. Financial Instruments

i) Non-derivative financial instruments

Non derivative financial instruments are classified as :

- Financial assets, measured at (a) amortized cost and (b) fair value through Profit and Loss ("FVTPL").
- Financial liabilities carried at amortized cost.

Initially, all financial instruments are recognized at their fair value. Transaction costs are included in determining the carrying amount, if the financial instruments are not measured at FVTPL. Financial assets are derecognized when substantial risks and rewards of ownership of the financial asset have been transferred. In cases where substantial risks and rewards of ownership of the financial assets are neither transferred nor retained, financial assets are derecognized only when the Company has not retained control over the financial asset. Financial liabilities are derecognized when contractual obligations are discharged or cancelled or expired.

Non-derivative financial assets are subsequently measured as below:

A. Amortized cost –

"Financial Instruments at amortized cost" 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.

B. FVTPL Category –

Financial instruments classified in this category are subsequently carried at fair value with changes recorded in the statement of profit and loss. Directly attributable transaction costs are recognised in statement of profit and loss as incurred.

Non-derivative financial liabilities are subsequently measured as below:

Subsequent to initial recognition, non – derivative financial liabilities are measured at amortised cost using the effective interest method.

ii) Derivative financial instruments

Embedded derivatives, if any, having material impact, are separated from the host contract and accounted for separately if the economic characteristics and risks of the host contract and the embedded derivative are not closely related, a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative, and the combined instrument is not measured at fair value through profit and loss.

Derivatives are recognized and measured initially at fair value. Attributable transaction cost are recognized in statement of profit and loss as cost. Subsequent to initial recognition, derivatives are measured at fair value through profit and loss.

17. Cash and Cash Equivalent

Cash and cash equivalents comprise cash at bank and on hand. It includes term deposits and other short-term money market deposits with original maturities of three months or less that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.

Note [3a] - Non current assets

Property, plant and equipment

Refer point 2 of Note [2] for accounting policy on property, plant and equipment (PPE)

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Gross block	6620.97	6330.89
Less: Accumulated depreciation	4212.23	3994.55
Net block (details refer to note 3.1)	2408.74	2336.34

The Net block includes ₹ 155.26 Cr (Previous Year ₹ 154.83 Cr) in respect of RoU assets.

Company had opted for exemption under IndAS 101, and accordingly carrying value as on 31.03.2015 was considered as deemed cost on IndAS transition date.

Note [3b] - Non current assets

Capital work in progress

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Plant & machinery and other equipments:		
Under Erection/ Fabrication/awaiting erection	82.41	131.43
In transit	6.95	9.37
Construction work-in-progress -Civil	253.96	280.12
Construction stores (including in transit)	1.27	1.40
Total	344.59	422.32

CWIP Ageing schedule - As at March 31, 2023

(₹ in Crore)

Particulars	Amount in CWIP for a period of				
	Less than 1 Year	1-2 Years	2-3 Years	More than 3 Years	Total
Projects in progress	115.98	53.36	73.56	89.13	332.03
Projects temporarily suspended	-	0.59	-	11.97	12.56

CWIP Completion Schedule (CWIP which are overdue or has exceeded its cost compared to its original plan) - As at March 31, 2023

(₹ in Crore)

Particulars	To be completed in				
	Less than 1 Year	1-2 Years	2-3 Years	More than 3 Years	Total
Projects in progress					
New Building - Noida	224.76	-	-	-	224.76
Transformer Double bottlenecking	10.27	-	-	-	10.27
Other Projects less than ₹ 10 Crore (Total Nos - 18)	16.99	0.09	-	0.34	17.42
Projects temporarily suspended					
Equipment Fabrication Plant - Bhandara	-	-	-	7.74	7.74
Other Projects less than ₹ 1 Crore (Total Nos - 4)	-	0.28	-	1.60	1.88



CWIP Ageing schedule - As at March 31, 2022

(₹ in Crore)

Particulars	Amount in CWIP for a period of				
	Less than 1 Year	1-2 Years	2-3 Years	More than 3 Years	Total
Projects in progress	115.39	127.88	115.41	51.31	409.99
Projects temporarily suspended	0.59	0.07	2.36	9.31	12.33

CWIP Completion Schedule (CWIP which are overdue or has exceeded its cost compared to its original plan) - As at March 31, 2022

(₹ in Crore)

Particulars	To be completed in				
	Less than 1 Year	1-2 Years	2-3 Years	More than 3 Years	Total
Projects in progress					
New Building - Noida	217.38	-	-	-	217.38
Selective Catalyst Reduction Plant - Bengaluru	62.12	-	-	-	62.12
Other Projects less than ₹ 10 Crore (Total Nos - 25)	37.83	-	-	-	37.83
Projects temporarily suspended					
Equipment Fabrication Plant - Bhandara	-	-	-	7.74	7.74
Other Projects less than ₹ 1 Crore (Total Nos - 4)	0.07	-	-	1.58	1.65

Note [4a] - Non current assets

Intangible assets

Refer point 4 of Note [2] for accounting policy on intangible assets

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Gross block	327.88	308.92
Less: Accumulated amortisation	260.64	246.80
Net block (details refer to note 4.1)	67.24	62.12

Company had opted for exemption under IndAS 101, and accordingly carrying value as on 31.03.2015 was considered as deemed cost on IndAS transition date.

Note [4b] - Non current assets

Intangible assets under development

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Intangible assets under development	9.26	8.66
Total	9.26	8.66

Intangible Assets under development ageing schedule - As at March 31, 2023

(₹ in Crore)

Particulars	Amount of Intangible Asset under development for a period of				
	Less than 1 Year	1-2 Years	2-3 Years	More than 3 Years	Total
Projects in progress	5.67	1.05	-	2.54	9.26
Projects temporarily suspended	-	-	-	-	-

Intangible Assets under development Completion schedule (which are overdue or has exceeded its cost compared to its original plan) - As at March 31, 2023

(₹ in Crore)

Particulars	To be completed in				
	Less than 1 Year	1-2 Years	2-3 Years	More than 3 Years	Total
Projects in progress	-	-	-	-	-
Projects temporarily suspended	-	-	-	-	-

Intangible Assets under development ageing schedule - As at March 31, 2022

(₹ in Crore)

Particulars	Amount of Intangible Asset under development for a period of				
	Less than 1 Year	1-2 Years	2-3 Years	More than 3 Years	Total
Projects in progress	1.39	-	1.18	6.09	8.66
Projects temporarily suspended	-	-	-	-	-

Intangible Assets under development Completion schedule (which are overdue or has exceeded its cost compared to its original plan) - As at March 31, 2022

(₹ in Crore)

Particulars	To be completed in				
	Less than 1 Year	1-2 Years	2-3 Years	More than 3 Years	Total
Projects in progress					
SCR Project Know how (overdue)	4.71	-	-	-	4.71
Projects temporarily suspended	-	-	-	-	-

NOTE 3.1 - Details of Property, Plant & Equipment

(₹ in Crore)

Description	Gross Block				Depreciation/ Amortization				Net Block	
	Opening Balance as at 01.04.2022	Additions/ Adjustments	Deductions/ Adjustments	Closing Balance as at 31.03.2023	Accumulated Depreciation as at 01.04.2022	Depreciation/ Amortisation for the year	Depreciation Adjustments	Accumulated Depreciation as at 31.03.2023	Net Block as at 31.03.2023	Net Block as at 31.03.2022
Land - Freehold land (including development expenses)	27.71	0.02	0.00	27.73	0.00	0.00	0.00	0.00	27.73	27.71
Buildings - Freehold Buildings	1743.65	86.92	(6.49)	1824.08	669.59	56.04	(5.48)	720.15	1103.93	1074.06
Roads, bridges & culverts	15.85	0.25	0.00	16.10	14.16	0.60	0.00	14.76	1.34	1.69
Drainage, Sewerage & water supply	31.49	4.73	(0.01)	36.21	8.21	1.17	(0.01)	9.37	26.84	23.28
Plant & Equipment	3209.81	121.78	(5.96)	3325.63	2390.20	117.15	(2.96)	2504.39	821.24	819.61
Railway Siding	8.85	0.00	0.00	8.85	5.31	0.44	0.00	5.75	3.10	3.54
Locomotives & Wagons	28.33	0.00	0.00	28.33	17.57	1.66	0.00	19.23	9.10	10.76
Furniture & fixtures	62.09	9.03	(1.11)	70.01	44.08	4.60	(0.86)	47.82	22.19	18.01
Vehicles	14.33	0.57	(0.00)	14.90	10.24	1.21	(0.00)	11.45	3.45	4.09
Office and Other equipments	141.10	7.72	(1.46)	147.36	120.11	9.69	(1.23)	128.57	18.79	20.99
Electronic Data Processing Equipment	152.83	2.55	9.87	165.25	141.97	8.50	9.89	160.36	4.89	10.86
Electrical Installations	251.67	30.57	4.04	286.28	180.44	4.31	3.31	188.06	98.22	71.23
Construction Equipment	71.85	0.25	(0.21)	71.89	69.22	1.23	(0.21)	70.24	1.65	2.63
Fixed Assets costing upto ₹ 10,000/-	22.05	1.78	(0.91)	22.92	22.05	1.78	(0.91)	22.92	-	-
Solar power generation	119.54	19.84	4.08	143.46	26.48	4.87	1.10	32.45	111.01	93.06
Right-of-use Assets	429.75	33.59	(31.37)	431.97	274.92	33.00	(31.21)	276.71	155.26	154.83
Total	6330.90	319.60	(29.53)	6620.97	3994.55	246.25	(28.57)	4212.23	2408.74	2336.35
Previous Year	6172.41	208.19	(49.71)	6330.89	3746.26	295.79	(47.50)	3994.55	2336.34	2426.15

Notes:

Gross Block (as per earlier IGAAP) as at 31.03.2023 ₹ 13756.12 Crore and as at 31.03.2022 ₹ 13507.29 Crore

Gross Block as at 31.03.2023 includes assets condemned and retired from active use ₹ 14.90 crore (Previous year ₹ 7.11 crore)

Net Block as at 31.03.2023 includes assets condemned and retired from active use ₹ 0.12 Crore (Previous year ₹ 0.12 Crore)

Gross Block excludes cost of assets purchased out of grant received from Govt of India for research as executing agency since the property does not vest with the Company ₹ 237.42 crore (Previous year ₹ 259.64 crore)

There is no impairment loss during the year.

Table 3.1(a): Right-of-use assets includes:

(₹ in Crore)

Description	Gross Block				Depreciation / Amortization				Net Block	
	Opening Balance as at 01.04.2022	Additions/ Adjustments	Deductions/ Adjustments	Closing Balance as at 31.03.2023	Accumulated Depreciation as at 01.04.2022	Depreciation/ Amortisation for the year	Depreciation Adjustments	Accumulated Depreciation as at 31.03.2023	Net Block as at 31.03.2023	Net Block as at 31.03.2022
Land (including development expenses)	118.86	0.98	0.00	119.84	14.13	3.38	(0.00)	17.51	102.33	104.73
Buildings	1.63	0.00	0.00	1.63	0.36	0.05	0.00	0.41	1.22	1.27
Plant & Equipment	37.81	8.46	(6.26)	40.01	23.10	10.62	(6.26)	27.46	12.55	14.71
Office & other equipment	16.84	0.00	(0.33)	16.51	15.02	0.42	(0.31)	15.13	1.38	1.82
EDP Equipment	229.51	15.38	(19.13)	225.76	208.73	13.46	(19.13)	203.06	22.70	20.78
Vehicle	5.50	3.80	(2.87)	6.42	3.08	1.34	(2.74)	1.68	4.74	2.42
Others	19.61	4.97	(2.78)	21.80	10.51	3.73	(2.77)	11.46	10.34	9.10
Total	429.75	33.59	(31.37)	431.97	274.92	33.00	(31.21)	276.71	155.26	154.83
Previous Year	455.37	33.18	(58.80)	429.75	291.18	42.35	(58.61)	274.92	154.83	164.19

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Additional disclosure of Note [3.1] details of property, plant and equipment

1. (A) Title deeds of Immovable Property not held in the name of BHEL (As on 31/03/2023)

Description of item of property (under the line item of B/S)	Gross Carrying value (₹ in Crore)	Lease/ 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
PPE:-					
Land- Freehold	1.64	State Govt. of Tamil Nadu	No	24-11-2010	Patta (Title Deed) is yet to be obtained
Land- Freehold	1.24	State Govt. of Tamil Nadu	No	Various dates between 13.01.1981 to 17.02.1986	Land transfer documents (Handing over by state govt and taken over by BHEL) are available indicating area and Survey Numbers. Assignment deed is yet to be issued by State Government in favour of BHEL .
Land- Freehold	0.52	State Govt of Telangana	No	1974 onwards	Transfer of title deed in progress, matter taken up with state govt. through TSIIC
Land- Freehold	0.18	State Govt. of Madhya Pradesh	No	Since 1957	Land provided through gazette of Government of India, title deed not available in the name of BHEL.
Land- Freehold	0.11	State Govt of Telangana	No	30-01-1961	Gazette Notification issued for acquisition of Land for setting up of Heavy Electrical Plant (Ref No:171,192,92-A,61,202 in the year 1961 &63
Land- Freehold	0.08	Bachha Lal S/O Late Ram Kishore	No	08-06-1983	Due to dispute in enhanced compensation Matter is sub judice in Hon'ble High court at Allahabad. Appeal no. 659 of 1995
Land- Freehold	0.0022	B Saroja Devi	No	01-04-1965	There is a dispute between Mrs. B Saroja Devi and M/s BHEL in supreme court. The Supreme Court has referred the case back to High Court for disposal and the same is pending.
Land- Leasehold (Right-of-use of assets)	68.38	464.8287 Acres in the name of Maharashtra Industrial Development Corporation 9.0688 Acres in the name of State Govt. of Maharashtra 2.7676 Acres in the name of Private owners of Land	No	20-03-2013	Full acquisition of proposed land not yet completed.
Building - Freehold	0.11	JB Construction (Builder)	No	34 YEARS	Title in respect of 4 Flats are in dispute between builder & Land Owner
Building - Freehold	0.05	Maharashtra Cooperative Society	No	34 YEARS	6 Flats in name of Cooperative Society. There is no dispute.
Building - Leasehold (Right-of-use of assets)	2.56	State Govt. of Maharashtra	No	01-02-1991	Maharashtra Govt. has not executed the lease of land with MVIRDC, thus MVIRDC can not execute the lease deed for 2 Floors with BHEL.

Additional disclosure of Note [3.1] details of property, plant and equipment

1. (A) Title deeds of Immovable Property not held in the name of BHEL (As on 31/03/2022)

Description of item of property (under the line item of B/S)	Gross Carrying value (₹ in Crore)	Lease/ 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
PPE:-					
Land- Freehold	1.64	State Govt. of Tamil Nadu	No	24-11-2010	Assignment deed is yet to be issued by Land Administration Authorities
Land- Freehold	1.24	State Govt. of Tamil Nadu	No	Various dates between 13.01.1981 to 17.02.1986	Land transfer documents (Handing over by state govt and taken over by BHEL) are available indicating area and Survey Numbers. Assignment deed is yet to be issued by State Government in favour of BHEL .
Land- Freehold	0.52	State Govt of Telangana	No	1974 onwards	Transfer of title deed in progress, matter taken up with state govt. through TSIIIC
Land- Freehold	0.18	State Govt. of Madhya Pradesh	No	Since 1957	Land provided through gazette of Government of India, title deed not available in the name of BHEL.
Land- Freehold	0.11	State Govt of Telangana	No	30-01-1961	Gazette Notification issued for acquisition of Land for setting up of Heavy Electrical Plant (Ref No:171,192,92-A,61,202 in the year 1961 & 63
Land- Freehold	0.08	Bachha Lal S/O Late Ram Kishore	No	08-06-1983	Due to dispute in enhanced compensation Matter is sub judice in Hon'ble High court at Allahabad. Appeal no. 659 of 1995
Land- Freehold	0.0022	B Saroja Devi	No	01-04-1965	There is a dispute between Mrs. B Saroja Devi and M/s BHEL in supreme court. The Supreme Court has referred the case back to High Court for disposal and the same is pending.
Land- Leasehold (Right-of-use of assets)	68.38	464.8287 Acres in the name of Maharashtra Industrial Development Corporation 9.0688 Acres in the name of State Govt. of Maharashtra 2.7676 Acres in the name of Private owners of Land	No	20-03-2013	Full acquisition of proposed land not yet completed.
Building - Freehold	0.11	JB Construction (Builder)	No	33 YEARS	Title in respect of 4 Flats are in dispute between builder & Land Owner
Building - Freehold	0.05	Maharashtra Cooperative Society	No	33 YEARS	6 Flats in name of Cooperative Society. There is no dispute.
Building - Leasehold (Right-of-use of assets)	2.56	State Govt. of Maharashtra	No	01-02-1991	Maharashtra Govt. has not executed the lease of land with MVIRDC, thus MVIRDC can not execute the lease deed for 2 Floors with BHEL.

Additional disclosure of Note [3.1] details of property, plant and equipment

Particulars	As at Mar 31, 2023	As at Mar 31, 2022
2. Land and buildings includes		
a i) Acres of land for which formal transfer/lease deed have not been executed (in acres)	8421.02	8421.02
Net Block (₹ in Crore)	64.96	65.68
ii) Number of flats for which formal transfer/lease deed have not been executed (in nos)	12	12
Net Block (₹ in Crore)	1.01	1.06
iii) Acres of land for which the cost paid is provisional; (in acres) [registration charges and stamp duty, (net of provision) would be] accounted for on payment.	480.04	480.04
Net Block (₹ in Crore)	61.26	61.98
b. Acres of land leased to Ministry of Defence, Govt. of India Departments & others (in acres)	20.47	29.78
c. Acres of land is under adverse possession/encroachment. (in acres)	873.48	883.66
d. 1297.86 acres (PY 1297.86 acres) of land pending mutation at Haridwar plant for which legal action is in process. It includes land measuring 934 acres (PY 934 acres) which is in BHEL's possession but has been wrongly got mutated in the name of SIDCUL Government of Uttarakhand in the year 2004 & 2007.		
e. Further at Haridwar plant, 8 Acres of land is pending transfer to IOCL /State Government under office memorandum dated 01.12.2003 of Uttarakhand Government.		
(Cost of land of (b to e) mentioned above is not material)		

Particulars	As at Mar 31, 2023	As at Mar 31, 2022
3. i) Total Area of Land in acres	16660.72	16660.72
ii) Free hold land (Sale Deed) / Possessory Rights/license out of 3(i) in acres	15987.38	15987.38
iii) Leasehold land out of 3(i) in acres	673.34	673.34

4. The company provides 100% depreciation on an item of PPE having cost / opening net block up to ₹ 10000/- each. The impact of providing 100% depreciation on an item of PPE on profit, without considering the impact of earlier years is as under :

(₹ in Crore)

Particulars	As at Mar 31, 2023	As at Mar 31, 2022
100% depreciation on PPE upto ₹ 10,000/- charged off	7.21	6.50
Less: Normal depreciation on above.	(4.39)	(3.53)
Excess amount charged to depreciation for the year	2.82	2.97

5. Properties (i) 2nd Floor office in Chatterjee International Centre, Kolkata (ii) Indora Residential flats, Nagpur – Land & buildings and (iii) Vadodra Township - Land & buildings, having a net block value of ₹ 1.42 Crore, have been identified for sale under asset monetisation drive, subject to requisite approvals.

6. Summary Status of capital expenditure:

(₹ in Crore)

Particulars	2022-23	2021-22
Addition to PPE & Intangible Assets	338.82	226.44
Increase/ (Decrease) in CWIP	(77.73)	19.11
Increase/ (Decrease) in Intangible Assets under development	0.60	(7.69)
Increase/ (Decrease) in Capital Advance	0.25	(6.77)
Total	261.94	231.09

NOTE 4.1 - Detail of intangible assets

(₹ in Crore)

Description	Gross block				Depreciation / Amortization				Net block	
	Opening Balance as at 01.04.2022	Additions/ Adjustments	Deductions/ Adjustments	Closing Balance as at 31.03.2023	Accumulated Depreciation as at 01.04.2022	Depreciation/ Amortisation for the year	Depreciation Adjustments	Accumulated Depreciation as at 31.03.2023	Net Block as at 31.03.2023	Net Block as at 31.03.2022
Internally Developed										
- Others	71.02	0.44	0.00	71.46	66.66	2.59	0.00	69.25	2.21	4.37
Other than Internally Developed										
- Software	53.05	3.46	(0.25)	56.26	50.52	1.76	(0.25)	52.03	4.23	2.52
- Technical Know-how	184.85	15.31	0.00	200.16	129.62	9.74	0.00	139.36	60.80	55.23
Total	308.92	19.21	(0.25)	327.88	246.80	14.09	(0.25)	260.64	67.24	62.12
Previous Year	290.83	18.25	(0.15)	308.92	228.67	18.27	(0.14)	246.80	62.12	62.16

Gross Block (as per earlier IGAAP) as at 31.03.2023 ₹ 598.12 Crore and as at 31.03.2022 ₹ 584.11 Crore

There is no impairment loss during the year.



Note [5] - Non-current assets Financial assets - Investment

Refer point 6 of Note [2] for accounting policy on investment in joint ventures & point 16 i (B) of Note [2] on Financial Instruments (₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
	No. of Shares (Face value in ₹)	Amount	No. of Shares (Face value in ₹)	Amount
I Quoted equity instruments		-		-
II Unquoted equity instruments (fully paid up shares)				
(a) Investment in joint ventures (at cost)				
(i) Raichur Power Corporation Ltd.	664040000 (10)	664.04	664040000 (10)	664.04
(ii) BHEL-GE Gas Turbine Services Pvt. Ltd.	2379999 (10)	2.38	2379999 (10)	2.38
(iii) NTPC-BHEL Power Projects Pvt. Ltd.	50000000 (10)	50.00	50000000 (10)	50.00
Less: Provision for impairment		50.00	50.00	-
(iv) Powerplant Performance Improvement Ltd.	1999999 (10)	2.00	1999999 (10)	2.00
Less: Provision for impairment		2.00	2.00	-
		666.42		666.42
(b) Investment in equity instruments fully paid up (at FVTPL)				
(i) Neelachal Ispat Nigam Ltd		-	5000000 (10)	5.00
Add / (Less) : Fair Value Adjustment		-		(5.00)
(ii) AP Gas Power Corporation Ltd.	728960 (10)	0.91	728960 (10)	0.91
Add / (Less) : Fair Value Adjustment		2.22		2.38
(iii) Engineering Projects (India) Ltd.	1892 (10)	*	1892 (10)	*
Share in Co-operative Societies #				
Total		669.54		669.71
*Value of less than INR 1 lakh				
Aggregate amount of unquoted investment		719.33		724.33
Aggregate amount of impairment in value of investments		49.79		54.62

Equity shares held in various employees cooperatives societies, valuing less than ₹ 1 lakh/-

Information about joint ventures and subsidiary

Particulars (A) Name of the joint ventures (JVC)	Country of incorporation	As at March 31, 2023	As at March 31, 2022
		Proportion (%) of ownership	
BHEL-GE Gas Turbine Services Private Limited (BGGTS)	India	One share less than 50%	One share less than 50%
NTPC-BHEL Power Projects Private Limited (NBPPL)		50%	50%
Raichur Power Corporation Limited (RPCL)		22.14%	22.14%
Power Plant Performance Improvement Limited (PPIL)		One share less than 50%	One share less than 50%

- (i) The provision for impairment in value of investment in NTPC-BHEL Power Projects Private Limited has been made to the extent of ₹ 50.00 crore (upto previous year ₹ 50.00 crore) based on the net financial position. The Board of Directors in its meeting held on February 08, 2018 has accorded in-principle approval for pursuing the winding up of NBPPL. Ministry of Power (MoP) has advised NTPC to consider buying out the stake of BHEL and decide either to continue it as an in-house EPC arm or close it after completion of present work. This advise was noted by NBBPL Board in its meeting held on 29.08.2019.
- (ii) The provision for impairment in value of investment in Powerplant Performance Improvement Limited amounting to ₹ 2.00 crore (previous year ₹ 2.00 crore) has been made since the JVC is under liquidation and the amount paid as equity is not recoverable.
- (iii) Investment in Neelachal Ispat Nigam Limited has been disposed and sale proceeds of ₹ 25.39 Crore received during the year.

Note [6] - Financial assets - Trade receivables

Refer point 14 of Note [2] for accounting policy on impairment of financial assets

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current
Unsecured, considered good	3743.94	3433.95	3538.39	3340.61
Credit impaired (included in allowances for B&D debts)	11176.04	367.08	11599.09	277.54
	14919.98	3801.03	15137.48	3618.15
Less: Allowances for bad and doubtful debts	11504.44	672.68	11933.64	593.40
Total Trade Recievable (Net)	3415.54	3128.35	3203.84	3024.75

Simplified approach is followed for impairment of trade receivables, the classification is done in line with Ind AS 109.

Trade receivables includes:

(a) Due from Directors	-	-	-	-
(b) Due from Officers	-	-	-	-

Non current Trade receivable ageing schedule - As at March 31, 2023

(₹ in Crore)

Particulars	Outstanding for following periods from due date of payment					Unbilled Dues	Not Yet due for 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	50.85	100.34	116.08	78.12	1410.59	-	-	1755.98
II) Undisputed Trade receivables - credit impaired	-	-	-	-	-	-	-	-
III) Disputed Trade receivables - considered good	1.72	0.01	3.56	21.61	1961.06	-	-	1987.96
IV) Disputed Trade receivables - credit Impaired	95.54	91.62	283.17	340.39	10365.32	-	-	11176.04

Current Trade receivable ageing schedule - As at March 31, 2023

(₹ in Crore)

Particulars	Outstanding for following periods from due date of payment					Unbilled Dues	Not Yet due for 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	2395.97	331.70	281.11	107.69	317.48	-	-	3433.95
II) Undisputed Trade receivables - credit impaired	-	-	-	-	-	-	-	-
III) Disputed Trade receivables - considered good	-	-	-	-	-	-	-	-
IV) Disputed Trade receivables - credit Impaired	2.72	0.81	23.33	14.67	325.55	-	-	367.08

Non current Trade receivable ageing schedule - As at March 31, 2022

(₹ in Crore)

Particulars	Outstanding for following periods from due date of payment					Unbilled Dues	Not Yet due for 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	39.02	38.13	172.50	288.06	1063.63	-	-	1601.34
II) Undisputed Trade receivables - credit impaired	-	-	-	-	-	-	-	-
III) Disputed Trade receivables - considered good	0.89	5.28	16.95	66.50	1847.41	-	-	1937.03
IV) Disputed Trade receivables - credit Impaired	95.20	100.67	395.44	630.60	10377.20	-	-	11599.11

Current Trade receivable ageing schedule - As at March 31, 2022

(₹ in Crore)

Particulars	Outstanding for following periods from due date of payment					Unbilled Dues	Not Yet due for 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	2214.21	237.21	337.62	197.02	354.55	-	-	3340.61
II) Undisputed Trade receivables - credit impaired	-	-	-	-	-	-	-	-
III) Disputed Trade receivables - considered good	-	-	-	-	-	-	-	-
IV) Disputed Trade receivables - credit Impaired	11.23	0.88	35.77	35.58	194.08	-	-	277.54

Note [7] - Financial assets - Others

Refer point 14 of Note [2] for accounting policy on impairment of financial assets

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current
Security deposits				
Deposits with SEBs, port trust & others				
Unsecured, considered good	83.96	116.98*	81.80	112.86*
Credit impaired	3.59	11.32	2.87	11.69
	<u>87.55</u>	<u>128.30</u>	<u>84.67</u>	<u>124.55</u>
Less: Allowances for bad & doubtful deposits	3.59	11.32	2.87	11.69
	<u>83.96</u>	<u>116.98</u>	<u>81.80</u>	<u>112.86</u>
Bank deposits with more than 12 months maturity	-	-	4.93	-
Interest accrued on banks deposits	-	140.68	-	76.62
Advance to Employees	-	20.61	-	22.19
Less: Allowance for bad and doubtful advances	-	0.04	-	0.11
		<u>20.57</u>		<u>22.08</u>
Total	83.96	278.23	86.73	211.56
*includes amount deposited with courts of ₹ 88.79 crore (previous year ₹ 81.77 crore)				
Includes:				
Due from Directors	-	-	-	-
Dues from Officers	-	0.01	-	0.01

Note [8] - Non current assets

Deferred tax assets (net of liabilities)

Refer point 13 of Note [2] for accounting policy on Income Tax

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Deferred tax assets		
Provisions	1654.02	1629.68
Dues allowed on payment basis	549.35	440.00
Depreciation (PP&E and Intangible assets)	12.13	46.04
On account of taxable loss	1105.79	1311.74
Others	101.33	102.62
Sub-Total	3422.62	3530.08
Less : Deferred tax liabilities	-	-
Deferred tax assets (net of liabilities)	3422.62	3530.08

Movement of deferred tax balances

(₹ in Crore)

Particulars	Balance as at April 01, 2022	Recognized in retained earnings	Recognized in statement of profit & loss a/c	Recognized in OCI	Balance as at March 31, 2023
Deferred tax assets					
Provisions	1629.68	-	24.34	-	1654.02
Dues allowed on payment basis	440.00	-	103.54	5.81	549.35
Depreciation (PP&E and Intangible assets)	46.04	-	(33.91)	-	12.13
On account of taxable loss	1311.74	-	(205.95)	-	1105.79
Others	102.62	-	(1.29)	-	101.33
Subtotal	3530.08		(113.27)	5.81	3422.62
Less: Deferred tax liabilities		-	-	-	-
Deferred tax assets (net of liabilities)	3530.08		(113.27)	5.81	3422.62

Note [9] - Other Assets

Refer point 14 of Note [2] for accounting policy on impairment

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current
Contract assets (including unbilled revenue)				
Unsecured, considered good	18928.58	10811.45	18248.24	8691.63
Credit impaired	2773.38	584.87	2768.53	663.72
	21701.96	11396.32	21016.77	9355.35
Less: Allowances for bad and doubtful debts	2773.38	584.87	2768.53	663.72
Sub-total (A)	18928.58	10811.45	18248.24	8691.63
Security deposits				
Deposits with tax authorities and others				
Unsecured, considered good	103.09	378.58	79.96	443.32
Unsecured, considered doubtful	31.19	71.19	30.45	89.74
	134.28	449.77	110.41	533.06
Less: Provision for bad & doubtful deposits	31.19	71.19	30.45	89.74
Sub-total (B)	103.09	378.58	79.96	443.32
Loans & advances				
Unsecured, considered good				
Advances towards purchases (Vendors & sub - Contractors)	41.14	128.69	41.54	56.42
Input Tax credit receivable	-	1079.97		958.31
Claims recoverable and others	210.04	652.15	139.76	642.85
Capital advances	17.29	-	17.04	-
Unsecured, considered doubtful				
Advances towards purchases (Vendors & sub - Contractors)	11.92	9.65	11.50	35.69
Input Tax credit receivable	-	6.44		5.38
Claims recoverable and others	90.29	149.02	49.67	111.92
Capital advances	-	-	4.69	-
	370.68	2025.92	264.20	1810.57
Less: Provision for bad & doubtful loans & advances	102.21	165.11	65.86	152.99
Sub-total (C)	268.47	1860.81	198.34	1657.58
Total (A+B+C)	19300.14	13050.84	18526.54	10792.53

Particulars	As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current
I) Undisputed Contract Assets - considered good	15020.29	10811.45	13874.67	8691.63
II) Undisputed Contract Assets - credit impaired	-	-	-	-
III) Disputed Contract Assets - considered good	3908.29	-	4373.57	-
IV) Disputed Contract Assets - credit Impaired	2773.38	584.87	2768.53	663.72
Total	21701.96	11396.32	21016.77	9355.35
Loan & advances includes :				
(a) Due from Directors	-	-	-	-
(b) Due from Officers	-	-	-	-

Note [10] - Current assets

Inventories

Refer point 7 of Note [2] for accounting policy on valuation of inventories.

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
Raw material & components	2900.92		2784.94	
Material-in-transit	127.98	3028.90	<u>129.30</u>	2914.24
Work-in-progress (including items with sub-contractors)		3482.75		3349.47
Finished goods	422.57		518.09	
Inter - division transfers in transit	89.20	511.77	<u>89.85</u>	607.94
Stores & spare parts				
Production	149.68		151.94	
Fuel stores	6.14		5.70	
Miscellaneous	47.37	203.19	<u>50.32</u>	207.96
Other Inventory				
Materials with fabricators/contractors	85.43		60.10	
Loose tools	24.35		24.32	
Scrap (at estimated realisable value)	163.30	273.08	<u>143.26</u>	<u>227.68</u>
		7499.69		7307.29
Less: Provision for non-moving inventory		743.79		747.08
Total		6755.90		6560.21
Note :				
Write down of inventories		59.72		76.77
Less : reversal thereof		63.01		49.15
Net		(3.29)		27.62

Note [11] - Current assets

Financial assets - Cash & cash equivalents

Refer point 17 of Note [2] for accounting policy on cash and cash equivalent.

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
Balances with banks				
EEFC a/c	226.21		28.20	
Current / cash credit a/c *	1205.22	1431.43	687.82	716.02
Cheques, demand drafts on hand		128.99		13.06
Cash & stamps on hand		0.08		0.08
Remittances in transit		0.02		3.46
Total		1560.52		732.62

* Includes ₹ 112.23 Cr in escrow account for specified projects.

Note [12] - Current assets

Financial assets - Bank balances

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
Fixed deposits having maturity more than 3 months but not more than 12 months		4852.34		6211.12
Fixed deposits against margin money for BG issued		213.43		202.65
Balances with banks (earmarked):				
Charging station project	7.06		3.94	
Unclaimed dividend a/c	1.91		1.81	
CEFC A/c	6.92		-	
Non-repatriable a/c	0.37		1.52	
Sale proceeds of fractional shares on bonus issue	0.03	16.29	0.03	7.30
Total		5082.06		6421.07
Total Cash and Bank Balances [11 + 12]		6642.58		7153.69

Note [13] - Current assets

Current tax assets / liabilities (net)

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
Advance tax & TDS		285.80		180.71
Less: Provisions for taxation		59.42		61.47
Total		226.38		119.24

Note [14] - Equity

Equity share capital

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
	No. of Shares (Face value in ₹)	Amount	No. of Shares (Face value in ₹)	Amount
A Equity share capital				
Authorised	10000000000 (2)	2000.00	10000000000 (2)	2000.00
Issued, subscribed and fully paid up	3482063355 (2)	696.41	3482063355 (2)	696.41
a) The reconciliation of the number of equity shares outstanding				
Balance as at the beginning of the year	3482063355	696.41	3482063355	696.41
Add/(Less): Changes during the year	-	-	-	-
Balance as at the end of the year	3482063355	696.41	3482063355	696.41
b) Details of shares held by shareholders holding more than 5% of shares at the end of the year				
President of India (Promoter)	2199650402	63.17%	2199650402	63.17%
Percentage change of Promoter holding during the year		Nil		Nil
Life Insurance Corporation of India	350770257	10.07%	350769757	10.07%
Face value per share in (₹)		2.00		2.00

c) Terms / rights attached to the equity shares

The company has only one class of equity shares having par value of ₹ 2 per share (previous year ₹ 2 per share). Each holder of the equity shares is entitled to one vote per share.

d) Issue of bonus share (In immediately preceding five years ended March 31, 2023)

The Company allotted bonus share on October 03, 2017 in the ratio of 1:2 i.e. one equity share for two existing fully paid-up equity shares. Consequently, the paid-up capital was increased from ₹ 489.52 crore in FY 2016-17 to ₹ 734.28 crore in FY 2017-18 by capitalization of reserves.

e) Share buyback (In immediately preceding five years ended March 31, 2023)

The Company vide its Board approval dated October 25, 2018, bought back its 18,93,36,645 fully paid-up equity shares of the face value of ₹ 2 each representing 5.16% of the total issued and paid-up equity share capital from the eligible equity shareholders of the Company for an amount of ₹ 16,28,29,51,470 at a price of ₹ 86 per equity share in FY 2018-19. Consequently, the paid-up share capital was reduced from ₹ 734.28 crore in FY 2017-18 to ₹ 696.41 crore in FY 2018-19.

Note [15] - Other Equity

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current
Capital reserve		35.18		35.18
Capital redemption reserve		37.87		37.87
General reserves		30476.66		30476.66
Retained earnings		(3648.43)		(3956.70)
OCI (Re-measurements of defined benefit plans)		(335.53)		(318.26)
Total		26565.75		26274.75

For additions and deduction under each of the above specific heads, SOCIE (Statement of Changes in Equity) may be referred.

Nature and purpose of reserves:

- Capital reserve** : It represents mainly the excess of net assets taken, over the cost of consideration paid during amalgamation of the then subsidiary company (HPVP) with the BHEL.
- Capital redemption reserve**: The Company has recognised Capital Redemption Reserve on buy back of equity shares from its general reserve. The amount in capital redemption reserve is equal to nominal amount of equity shares bought back.
- General reserve**: This represents accumulation of profits retained by Company to meet future (known/unknown) obligations.
- Retained earnings**: Retained earnings are profits that Company has earned till date, less transfer to general reserve, dividends or other distributions to shareholders.
- Re-measurement of net defined benefit plans**: Differences between the interest income on plan assets and the return actually achieved, and any changes in the liabilities over the year due to changes in actuarial assumption or experience adjustments within the plans, are recognised in 'Other comprehensive income' and these are subsequently not to be reclassified to the Statement of Profit and Loss.

Note [16] - Financial liabilities - Lease Liabilities

Refer point 3 of Note [2] for accounting policy on lease.

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current
Lease Liabilities	33.75	34.76	35.12	49.81
Total	33.75	34.76	35.12	49.81

Further disclosures available at Note [39] on lease

Note [17] - Financial liabilities -Trade payables

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current
Trade payables				
(i) Total outstanding dues of micro enterprises and small enterprises	128.11	1211.53	127.45	745.82
(ii) Total outstanding dues of creditors other than micro enterprises and small enterprises	2065.92	8558.03	2004.48	6881.11
(iii) Acceptances	-	126.27	-	122.66
Total	2194.03	9895.83	2131.93	7749.59

Micro and small enterprises disclosure

(i) The principal amount remaining unpaid to supplier as at the end of the accounting year *	1359.41	886.81
(ii) The interest due thereon remaining unpaid, to supplier as at the end of accounting year.	-	-
(iii) The amount of interest paid in terms of section 16, along with the amounts of the payment made to the supplier beyond appointed day during the year.	-	-
(iv) The 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 interest specified under this Act.	-	-
(v) The amount of interest accrued during the year and remaining unpaid at the end of year.	-	-
(vi) The 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 disallowance as a deductible expenditure.	-	-

*The amount shown here as outstanding includes amount shown in Note 17 & 18 to Micro and Small enterprises. The amount shown here is not due for payment contractually as on March 31, 2023.

Non current Trade Payable Ageing schedule - As at March 31, 2023

(₹ in Crore)

Particulars	Outstanding for following periods from due date of payment				Unbilled Dues	Not Yet due for payment \$	Total
	Less than 1 Year	1-2 Years	2-3 Years	More than 3 Years			
I) MSME	-	-	-	-	-	125.82	125.82
II) Others	-	-	-	-	0.36	1710.97	1711.33
III) Disputed dues - MSME	-	-	-	2.29	-	-	2.29
IV) Disputed dues - Others *	1.51	59.06	9.86	271.70	0.09	12.37	354.59

Current Trade Payable Ageing schedule - As at March 31, 2023

(₹ in Crore)

Particulars	Outstanding for following periods from due date of payment				Unbilled Dues	Not Yet due for payment \$	Total
	Less than 1 Year	1-2 Years	2-3 Years	More than 3 Years			
I) MSME	0.02	-	-	-	196.38	1010.60	1207.00
II) Others	581.83	0.58	0.27	2.10	1534.73	6455.49	8575.00
III) Disputed dues - MSME	-	-	-	-	-	4.53	4.53
IV) Disputed dues - Others *	-	-	-	6.98	-	102.32	109.30

Non current Trade Payable Ageing schedule - As at March 31, 2022

(₹ in Crore)

Particulars	Outstanding for following periods from due date of payment				Unbilled Dues	Not Yet due for payment \$	Total
	Less than 1 Year	1-2 Years	2-3 Years	More than 3 Years			
I) MSME	-	-	-	-	0.04	125.96	126.00
II) Others	-	-	-	-	0.21	1637.95	1638.16
III) Disputed dues - MSME	-	-	-	0.50	-	0.95	1.45
IV) Disputed dues - Others *	0.32	59.58	27.22	261.62	0.09	17.49	366.32

Current Trade Payable Ageing schedule - As at March 31, 2022

(₹ in Crore)

Particulars	Outstanding for following periods from due date of payment				Unbilled Dues	Not Yet due for payment \$	Total
	Less than 1 Year	1-2 Years	2-3 Years	More than 3 Years			
I) MSME	-	-	-	-	166.16	579.66	745.82
II) Others	2.41	-	-	-	1497.22	5488.49	6988.12
III) Disputed dues - MSME	-	-	-	-	-	-	-
IV) Disputed dues - Others *	0.04	0.97	0.51	13.10	-	1.03	15.65

\$ Not yet due represents contractually retained amounts subject to settlement on achievement of milestones.

* Break up of outstanding is given based on contractually due date but these will be paid only if resolution of dispute occurs in their favour.

Note [18] - Financial liabilities- Others

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current
Deposits from contractors & others	247.10	416.66	206.45	431.36
Liabilities :				
- Employee dues	-	384.33	-	214.05
- Capital Expenditure ~	8.60	111.50	8.65	80.83
- Others*	-	354.33	-	386.92
Unpaid Dividend**	-	1.91	-	1.81
Interest accrued on borrowings	-	8.20	-	9.12
Total	255.70	1276.93	215.10	1124.09

* Other Includes Rs 0.03 Cr for sales proceeds of fractional shares arising out of bonus shares.

~ includes MSME Rs 19.77 Cr for FY 2022-23 & Rs 13.54 Cr for FY 2021-22

**No amount is due and outstanding to be transferred to Investor Education & Protection Fund at the year end.

Note [19] - Provisions

Refer point 10 & 11 of Note [2] for accounting policy on employee benefits and provisions.

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current
Contractual obligation	2990.16	784.26	2620.03	1235.45
Provision for employee benefits*	878.37	1383.68	856.82	1060.62
Provision others	232.49	622.54	292.69	760.14
Corporate social responsibility**	-	6.15	1.67	10.49
Total	4101.02	2796.63	3771.21	3066.70

*[Further disclosure available at note (25) on employee benefits].

** (Disclosure as per point vii of Note 26 (vii) on CSR expense)

Note [20] - Other liabilities

Refer point 12 of Note [2] for accounting policy on Government grants

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current
"Contract liabilities (Advances received from customers incl.excess of billing over revenue)"	2585.67	3049.34	2193.43	3854.33
Liabilities towards statutory dues	-	908.32	-	775.55
Deferred income- Govt. grant #	20.14	4.63	19.22	6.08
Total	2605.81	3962.29	2212.65	4635.96

#Govt. grant is received for setting up of solar PV plant and manufacturing of modules , CEFC (Common Engineering Facility Centre) scheme

Note [21] - Current Financial liabilities - Borrowings

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Secured		
Loans from banks (secured by fixed deposits)	1115.00	-
Loans from banks (secured by hypothecation of raw materials, components, work-in-progress, finished goods & stores)	4270.00	4745.00
Sub-total (A)	5385.00	4745.00
Unsecured		
Sub-total (B)	-	-
Total borrowings (A+B)	5385.00	4745.00

(i) Details of sanctioned limits

Description	Sanctioned Limit	Utilization			
		As at March 31, 2023		As at March 31, 2022	
		Value (₹ / Cr)	% Utilisation	Value (₹ / Cr)	% Utilisation
Non Fund Based Limits	54000	33602	62.23%	33936	62.84%
Bank Guarantees#	51000	30853	60.50%	31369	61.51%
Letter of Credit (inc. Buyer's Credit)	3000	2749	91.63%	2567	85.57%
Fund Based Limits	6000	4270	71.17%	4745	79.08%
WCDL		4270		4745	
PCFC		NIL		NIL	
Commercial Paper	5000	NIL		NIL	

"Total Consortium limit (fund based + non fund based) of ₹ 60000 Cr secured by first charge by way of hypothecation of raw materials, components, work in progress, finished goods, stores, trade receivables and other current assets both present and future.

Company has been in discussion with Consortium Banks on reallocation of Banks limit (Fund Base ₹ 9000 Crore and Non Fund ₹ 51000 crore) keeping overall limits unchanged at ₹ 60000 crore."

Commercial Papers are in the nature of unsecured short term borrowings.

Outstanding Bank Guarantees include ₹ 4 Crore (P.Y. ₹ 439 Cr.) on a/c of BGs already replaced but pending vacation as on March 31, 2023. Excluding this, the outstanding BGs as on 31.03.2023 is ₹ 30849 Cr. (Previous Year 30930 Cr.)

- (ii) Loan from Banks ₹ 4270 Cr in FY 2022-23 represents WCDL (Working Capital Demand Loan) & ₹ 1115 Cr Loans against Fixed Deposits. For Previous Year, ₹ 4745 Cr Loans represents WCDL.
- (iii) The company has not been declared wilful defaulter by any Bank / Financial Institution.
- (iv) The quarterly returns or statements of current assets filed by the Company with Banks or Financial Institutions are in agreement with Books of accounts.
- (v) Corporate Guarantees given for own obligations outstanding as on 31.03.2023 is ₹ 403 crore (previous year ₹ 1165 crore).

(vi) Change in Borrowings arising from Financing activities

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Opening Balance (excl. cash credit)	4745.00	4833.78
Cash Flow during the year	640.00	(88.78)
Closing Balance (excl. cash credit)	5385.00	4745.00

For changes in lease liability arising from financing activities, refer note no [b] of Note 36

Note [22]

Revenue from operations

Refer point 8 of Note [2] for accounting policy on revenue recognition.

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Revenue from contracts with customers		
Revenue from Construction and Project related activity	16083.09	14107.10
Sale of Product & Other services	6053.21	6046.28
Total (A)	22136.30	20153.38
Other operational income		
Freight & insurance	187.84	129.35
Scrap sales	299.90	273.63
Recoveries from suppliers	131.33	113.98
Liabilities written back	406.22	239.95
Insurance claims	47.94	76.51
Export incentives	19.63	50.50
Others	135.78	173.79
Total (B)	1228.64	1057.71
Revenue from operations (A + B)	23364.94	21211.09
Revenue from Operations excludes Goods and service tax :	3566.00	2970.00

Note [23]

Other income

Refer point 8 of Note [2] for accounting policy on revenue recognition.

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Interest income *		
From banks	302.35	246.75
Others	118.77	56.04
Sub-total (A)	421.12	302.79
Dividend income		
Dividend on investment in joint ventures (long term trade)	26.18	30.35
Sub-total (B)	26.18	30.35
Other income		
Profit on sale of Investment - NINL	25.42	-
Government grants on Solar PV Plant for captive use / CEFC	8.90	6.20
Profit from sale of PPE & capital stores (Net)	7.76	6.90
Others	25.43	21.57
Sub-total (C)	67.51	34.67
Total other income	514.81	367.81
*Includes TDS	13.44	18.92

Note [24]

Changes in inventories of finished goods, work in progress and Scrap (Accretion) / Decretion

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Work -in -progress		
Closing balance	3482.75	3349.47
Opening balance	3349.47	3786.38
Finished goods		
Closing balance	422.57	518.09
Opening balance	518.09	628.72
Scrap		
Closing balance	163.30	143.26
Opening balance	143.26	147.46
Inter-division transfer in transit	0.65	(26.10)
(Accretion) / Decretion	(57.15)	525.64

Note [25]

Employee benefits expense

Refer point 10 of Note [2] for accounting policy on employee benefits.

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Salaries, wages, bonus, allowances & other benefits	4859.69	4710.99
Contribution to provident and other funds	473.56	460.01
Staff welfare expenses	244.69	239.89
Contribution to gratuity fund	114.14	95.78
Group insurance	8.55	10.17
Total	5700.63	5516.84

Note [26]

Other Expenses

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Power & fuel	487.67	415.08
Expenditure on other sub contracts	243.91	243.72
Carriage outward	249.55	241.23
Payment to security agencies	153.97	148.93
Repairs & maintenance:		
Buildings	33.00	27.32
Plant & machinery	32.41	26.44
Others	77.55	74.05
Insurance	108.03	95.88
Travelling & conveyance	110.59	84.89
Bank charges	90.76	92.17
R&D expense	12.81	12.10
Hire charges	51.01	48.22
Expenditure on collaborations & royalty	54.61	45.21
Rates & taxes	36.62	23.04
Office expense	29.32	27.32
Expenditure on skill development	11.47	12.83
Legal, audit & certification expense	47.67	32.45
EDP, software & lease line expense	17.61	17.40
Water charges	22.83	20.50
Rent non-residential	9.85	12.77
Expenditure in connection with exports	8.64	8.01

Note [26]

Other Expenses (Contd.)

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Entertainment & courtesy expenses	3.14	2.73
Environmental protection	5.14	4.59
Seminar, development and training expense	2.90	1.28
Unrealised loss in investment of equity share	0.16	0.29
Publicity & public relation expense	3.62	1.94
Miscellaneous expense	49.29	49.97
Exchange variation [Net (gain) / loss]	(459.93)	(81.62)
Provision and Write off (Details at point no vi below)	(847.17)	(1526.25)
Total	647.03	162.49

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Further Details		
(i) Legal, audit & certification expense includes :		
Payment to Statutory Auditors:		
Audit fees	1.01	0.97
Tax audit	0.22	0.21
Quarterly limited review & others	0.60	0.60
Audit expense	0.12	0.08
Payment to Cost Auditors fees:	0.16	0.15
(ii) Director's fees	0.26	0.25
(iii) Expenditure on departmental repair & maintenance:		
Plant & machinery	175.59	159.08
Buildings	31.41	33.06
Others	33.34	33.09
(iv) Expenditure on research & development	128.49	122.83
(v) Expenditure on foreign travel		
No. of tours	302	127
Expenditure	5.57	1.92

(vi) Provisions and write off

(Refer Point 11 & 14 of Note 2 on provision and impairment of assets)

(₹ in Crore)

Particulars	For the year ended March 31, 2023		For the year ended March 31, 2022	
Doubtful debts, liquidated damages and loans, advances & deposits				
Created during the year	885.10		729.55	
Less: withdrawal during the year	1112.29	(227.19)	2209.16	(1479.61)
Contractual obligations				
Created during the year	313.68		151.95	
Less: withdrawal during the year	881.27	(567.59)	526.44	(374.49)
Other Provisions				
Created during the year	171.95		367.26	
Less: withdrawal during the year	372.24	(200.29)	389.38	(22.12)
Investment written off				5.36
Bad debts written off		30.62		98.34
Liquidated damages & contractual charges charged off		113.55		233.59
Losses written off		3.73		12.68
Total Provisions and Write off		(847.17)		(1526.25)

(vii) Corporate social responsibility

As per section 135 of the Companies Act, 2013 read with guidelines issued by DPE, the Company is required to spend, in every financial year, at least two percent 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 expense for the year are as under: (₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
A. Amount required to be spent during the year	-	-
B. Amount available from previous year	12.16	21.27
C. Total (A+B)	12.16	21.27
D. Amount spent during the year on-		
'(i) Construction/ acquisition of any asset	-	-
'(ii) On purposes other than (i) above	6.01	9.11
Total	6.01	9.11
Amount carried forward:		
Current	6.15	12.16
Non-current	-	10.49
		1.67

(₹ in Crore)

Particulars	For the year ended March 31, 2023		For the year ended March 31, 2022	
	In Cash	Yet to be paid in Cash	In Cash	Yet to be paid in Cash
(i) Construction / acquisition of any asset	-	-	-	-
(ii) On purposes other than (i) above	4.69	1.32	6.14	2.97
Total	4.69	1.32	6.14	2.97
Type of CSR activities	Health, Cleanliness, Education, Responsibility & Inclusivity, Disaster Relief , Water, Biodiversity, Carbon and Waste Management			

Unspent amount on ongoing projects ₹ 21.27 Cr. was transferred in 2020-21 year to a separate bank account as per Companies (CSR policy) Amendment Rules.2021 and being used for the purpose.

Note [27]

Finance costs

Refer point 5 & 11 of Note [2] for accounting policy on borrowing costs and provisions.

(₹ in Crore)

Particulars	For the year ended March 31, 2023		For the year ended March 31, 2022	
Discount on commercial papers		51.17		137.41
Unwinding of provisions		160.50		156.01
Interest cost:				
Banks / Financial Institutions	296.55		46.65	
Foreign Financial Institutions	1.45		0.74	
On lease obligation	7.03		8.50	
Others	4.24	309.27	4.01	59.90
Other expenses on issuance of Commercial paper		0.49		1.40
Sub-total		521.43		354.72
Less: Borrowing cost capitalised		-		-
Total		521.43		354.72

Note [28]

Tax expenses

Refer point 13 of Note [2] for accounting policy on income taxes.

(₹ in Crore)

Particulars	For the year ended March 31, 2023		For the year ended March 31, 2022	
Current tax				
For current year	47.88		48.86	
For earlier years	(159.10)	(111.22)	(125.99)	(77.13)
Deferred tax				
For current year	114.02		108.96	
For earlier years	(0.75)	113.27	(5.12)	103.84
Total		2.05		26.71

Note [29]

Other comprehensive income / expenditure

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Income / (expenditure)		
Re measurement of defined employee benefits	(23.08)	102.72
Less: Income tax related to above items *	(5.81)	25.85
Total	(17.27)	76.87
* Includes		
Current tax	-	-
Deferred tax	(5.81)	25.85

Reconciliation of Income tax expense and accounting profit (TCI) multiplied by income tax rate

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Total Comprehensive Income / Loss (TCI) before tax (A)	426.52	539.67
Statutory income tax rate (B)	25.168%	25.168%
Tax expense C = (AXB)	107.35	135.82
Difference due to: (D)		
Expenses not deductible for tax purposes	48.74	48.61
Difference in tax due to Income chargeable to tax at special rate	-	(0.76)
Change in tax expense - earlier years	(159.85)	(131.11)
Subtotal (D)	(111.11)	(83.26)
Net Tax Expense E = (C+D)	(3.76)	52.56

Note [30]

Earnings per share

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Profit / (loss) attributable to equity shareholders	447.55	410.24
Weighted average number of equity shares	348.21	348.21
Basic and diluted earnings per share of INR 2 each	1.29	1.18

Basic earnings per equity share is computed by dividing the net profit attributable to the equity shareholders of the Company by the weightage average number of equity shares outstanding during the period. Diluted earnings per share is computed by dividing the net profit attributable to the equity shareholders of the Company by the weightage average number of equity shares considered for deriving basic earnings per equity share and also the weightage average number of equity shares that could have been issued upon conversion of all dilutive potential equity shares.

Note [31]

Dividend per share

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Proposed dividend on equity shares not recognised as liability		
Proposed final dividend of ₹ 0.40 per share for FY 2022-23 (FY 2021-22 ₹ 0.40 per share).	139.28	139.28

Proposed dividend on equity shares is subject to the approval of the shareholders of the Company at the Annual General Meeting and not recognised as liability as at the Balance Sheet date.

Note [32] Contingent liabilities and commitments

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
A. Contingent liabilities		
Claims against the company not acknowledged as debt :		
(a) Sales tax matters	1227.09	1279.61
(b) Service tax matters	606.56	920.46
(c) Court & arbitration matters	711.81	592.77
(d) Excise duty matters	166.39	162.18
(e) Customs duty and others	934.51	880.06
(f) Goods & Service Tax	4.14	-
(g) Other matters (incl. disputed staff cases)	59.69	48.37
(h) Claim towards Liquidated damages (LD)	3596.61	2872.25
Total	7306.80	6755.70

- (i) In view of various court cases, litigations and claims disputed by the Company, the outflow of resources is not ascertainable at this stage. Generally, contingent Liability in respect of court & arbitration cases are shown on award/court judgement and also reviewed on a case to case basis for its reporting in contingent liability.
- (ii) It is not practicable for the Company to estimate the timing of actual cash outflows in respect of items (a) to (g) , if any, due to pending resolution of the respective proceedings. However, the chances of cash outflow are contingent.
- (iii) Liquidated damages represents likely claims or amount withheld by customer on account of delay in execution of projects which will be settled after commissioning and trial operation of project based on delay analysis and is being disclosed in line with Ind AS -37.

(iv) Movement in contingent liabilities

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Balance at the beginning of the year	6755.70	6045.49
Less: Reduction out of opening balance	727.70	129.84
Add: Additions (net) during the year	1278.81	840.05
Balance at the end of the year	7306.80	6755.70

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
B. Commitments		
(a) Estimated amount of contracts, net of advances, remaining to be executed on capital account and not provided for.	282.05	209.20
-- (The above includes related to acquisition of intangible assets)	32.71	7.56
(b) Investment in the Joint Venture entity (NBPPL) for which the company has restrictions for their disposal for five years from the date of incorporation /commercial operation of the project/first unit of the project/completion of first EPC contract, as the case may be. This investment has been fully provided for.	50.00	50.00

(c) In view of the nature of business, being long term construction contracts there may be other commitments for purchase of material etc., which has been considered as normal business process.

Note [33]

Current Financial liabilities includes a sum of ₹ Nil (previous year ₹ 100.51 Crore) towards guarantee fee demanded by the Government of India in respect of foreign currency loans taken by the Company at the instance of the Government upto 1990-91. Since there was no stipulation for payment of such guarantee fee at the time the loans (guaranteed by Government) were taken by the company, the same is reversed after review.

Note [34]

The Company had taken over Amorphous Silicon Solar Cell Plant (ASSCP), Gurgaon on April 1, 1999 from Ministry of New and Renewable Energy (MNRE) on lease for a period of 30 years. The formal lease agreement with the Ministry of New and Renewable Energy (MNRE) is yet to be finalised.

Note [35]

Balance shown under Trade receivables, Trade payables, contractors' advances, deposits and stock / materials lying with sub-contractors/ fabricators are subject to confirmation, reconciliation & consequential adjustment, if any. The Company is in the business of long term construction contracts, bills are raised on the customers as per contract in line with billing schedule approved by the customer and the reconciliation is carried out on ongoing basis & provisions made, wherever considered necessary. Final reconciliation with customer is done on completion of project (Trial Operation and PG Test completed). Trade Receivable of Completed Projects stand at ₹ 7963 Cr (Previous Year 7593 Cr.). Out of completed contracts, the projects reconciled with customers have outstanding trade receivables of ₹ 6185 Cr. (previous year ₹ 6376 crore).

Note [36]

Disclosure on Leases - Ind AS 116

Lease Commitments - Company as Lessee

The company's significant leasing agreements are in respect of land, building and EDP equipments. The company has entered into a rate contract for lease arrangement for computer items, printers, video conferencing equipments and peripherals. Assets taken on lease are capitalised and disclosed separately as Right-of-use assets in the property, plant and equipment. The lease rentals are allocated between interest, maintenance and principal value. The interest and maintenance charges are charged to Statement of Profit and Loss and principal amount is adjusted to lease obligations.

The company has applied the following available practical expedients :

- (i) The short-term leases exemptions to leases with lease term less than 12 months
- (ii) The low value lease exemption to leases where underlying asset is of low value (assets of less than ₹ 50000 in value).

a) Age-wise analysis of Lease Liabilities are as follows

(₹ in Crore)

Particulars	Future minimum lease payments		Interest		Present value [PV] of minimum lease payments	
	As at		As at		As at	
	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022
Not later than 1 year #	36.62	54.51	3.52	6.60	33.10	47.91
Later than 1 year and not later than 5 years	34.60	40.52	2.78	5.40	31.82	35.12
Later than 5 years	2.14	-	0.21	-	1.93	-

The amount of future minimum lease payments in respect of leases where remaining lease term as at the end of March 31,2023 is less than 12 months is ₹ 16.70 cr (Previous year ₹ 7.56 cr).

b) Movement in lease liabilities during the FY year 2022-2023

(₹ in Crore)

Particulars	As at	
	March 31, 2023	March 31, 2022
Lease Liabilities As at April 1*	84.93	101.61
Add: Additions	33.58	33.18
Add: Accretion of interest	7.03	8.50
Less : Payments/Adjustment	57.04	58.36
Lease Liabilities as at March 31*	68.50	84.93

* includes interest accrued of ₹ 1.66 crore (PY ₹ 1.90 crore) & ₹ 1.90 crore (PY ₹ 2.96 crore) as at March 31,2023 & March 31,2022 respectively

c) Amounts recognised in profit or loss:

(₹ in Crore)

Particulars	For the year ended	
	March 31, 2023	March 31, 2022
Expense relating to Short-term leases	4.91	2.27
Expense relating to low value assets leases	1.26	1.23
Depreciation charge of right-of-use assets	33.00	42.35
Interest expense (included in finance cost)	7.03	8.50

d) The company has various lease contracts that have not yet commenced . The future lease payments for these non-cancellable lease contracts are as follows:

(₹ in Crore)

Particulars	As at	
	March 31, 2023	March 31, 2022
Not later than 1 year	0.04	-
Later than 1 year and not later than 5 years	0.06	-
Later than 5 years	-	-

Note [37] - Disclosure on 'Employee benefits' - Ind AS 19

A. The Company has following Schemes in the nature of Defined Benefits plans :

- i) Gratuity Scheme
- ii) Post Retirement Medical Scheme
- iii) Provident Fund Scheme
- iv) Travel claim on Retirement

(i) Gratuity (Funded Plan)

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 limit of ₹ 20 Lakhs. The gratuity liability arises on account of future payments, which are required to be made in the event of retirement, death in service or withdrawal. The liability has been assessed using projected unit credit actuarial method.

Movement in net defined benefit (asset)/liability on Gratuity plan

(₹ in Crore)

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset) liability	
	As at March, 31					
	2023	2022	2023	2022	2023	2022
Opening balance	1933.60	2005.26	1581.44	1697.44	352.16	307.82
Included in Profit for the Year :						
Current Service Cost	89.49	95.78	-	-	89.49	95.78
Past Service Cost	-	-	-	-	-	-
Interest cost /(income)	135.35	135.35	110.70	135.35	24.65	-
Total amount recognised in Profit for the Year	224.84	231.13	110.70	135.35	114.14	95.78
Included in Other Comprehensive income (OCI) :						
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Change in Demographic Assumption	(19.36)	-	-	-	(19.36)	-
Change in Financial Assumption	(74.88)	(47.57)	-	-	(74.88)	(47.57)
Experience Adjustment	23.95	(19.22)	(0.73)	(15.35)	24.68	(3.87)
Total amount recognised in other comprehensive income	(70.29)	(66.79)	(0.73)	(15.35)	(69.56)	(51.44)
Others						
Contributions paid by the Employer	-	-	-	-	-	-
Benefits paid	(237.93)	(236.00)	(237.93)	(236.00)	-	-
Unpaid Benefits paid						
Closing balance	1850.22	1933.60	1453.48	1581.44	396.74	352.16

Details of Plan assets

Particulars	As at March 31, 2023	As at March 31, 2022
Funds managed by Insurer*	79.03%	76.96%
High quality Corporate bonds (quoted)	16.52%	19.55%
State Government securities (quoted)	3.00%	2.80%
Bank Balance	1.45%	0.69%
Total	100.00%	100.00%

*Insurer is Life Insurance Corporation of India

Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date.

Particulars	As at March 31, 2023	As at March 31, 2022
Economic assumptions:		
Discount rate	7.40%	7.00%
Salary escalation rate	6.50% P.A. for 1st 4 yrs. & then 6% P.A. thereafter	6.50% P.A. for 1st 4 yrs. & then 6% P.A. thereafter
Demographic assumptions:		
Retirement age	60	60
Mortality table	100% of IALM (2012-14)	100% of IALM (2012-14)
Withdrawal rate % (All ages)		
Upto 30 Years	3%	3%
From 31 to 44 years	1%	2%
Above 44 years	1%	1%

Sensitivity analysis

The sensitivity of the defined benefit obligation to changes in the significant principal assumptions is:

(₹ in Crore)

Particulars	Gratuity			
	As at March 31, 2023		As at March 31, 2022	
	Increase	Decrease	Increase	Decrease
Change in Discount rate (0.50% movement)	(91.64)	99.80	(91.26)	99.51
Change in Salary escalation rate (0.50% movement)	36.56	(42.09)	43.70	(47.40)

Sensitivities due to mortality and withdrawals are not material and hence impact of change due to these are not calculated.

Sensitivities as rate of increase of pensions in payment, rate of increase of pensions before retirement & life expectancy are not applicable.

The sensitivity analysis above has 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.

Expected maturity analysis of the gratuity plan in future years

(₹ in Crore)

Particulars	Gratuity	
	As at March 31, 2023	As at March 31, 2022
Less than 1 year	160.65	213.13
Between 1-2 years	135.51	149.43
Between 2-3 years	113.15	134.26
Between 3-4 years	100.52	112.14
Between 4-5 years	88.94	98.80
Between 5-6 years	80.57	87.74
Over 6 years	1170.88	1138.10
Total	1850.22	1933.60

Expected contributions to gratuity plans for the year ending 31 March 2024 are ₹ 102.96 crore

The weighted average duration of the gratuity defined benefit plan obligation at the end of the reporting period is 14.60 years (31 March 2022: 14.81 years.)

Risk Exposures

Valuations are based on certain assumptions, which are dynamic in nature and vary over time. As such, company is exposed to various risks such as increase in salary, investment risk, discount rate, mortality, disability and withdrawals.

(ii) Post Retirement Medical Benefits (Funded Plan)

The Company has Post-Retirement Medical benefit (PRMB), under which the retired employees and their spouses are provided medical facilities in the Company hospitals/empanelled hospitals subject to company medical rules. 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.

Movement in net defined benefit (asset)/liability on Post retirement Medical Benefit Plan

(₹ in Crore)

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset) liability	
	As at March, 31					
	2023	2022	2023	2022	2023	2022
Opening balance	2210.85	2255.85	1919.34	1948.34	291.51	307.51
Included in Profit for the Year :						
Current service cost	40.29	39.26	-	-	40.29	39.26
Past service Cost	-	-	-	-	-	-
Interest cost / (income)	154.76	152.27	134.36	152.27	20.40	-
Total amount recognised in Profit for the Year	195.05	191.53	134.36	152.27	60.69	39.26
Included in Other Comprehensive Income (OCI):						
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	18.72	-	-	-	18.72	-
Financial assumptions	(96.85)	(54.57)	-	-	(96.85)	(54.57)
Experience adjustment	109.13	(16.96)	(34.48)	(16.27)	143.61	(0.69)
Total amount recognised in other comprehensive income	31.00	(71.53)	(34.48)	(16.27)	65.48	(55.26)
Others						
Contributions paid by the employer						
Benefits paid	(187.30)	(165.00)	(187.30)	(165.00)	-	-
Closing balance	2249.60	2210.85	1831.92	1919.34	417.68	291.51

The plan assets of the Company are managed by Life Insurance Corporation of India through a trust managed by the Company in terms of an insurance policy taken to fund obligations of the Company

Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date.

Particulars	As at March 31, 2023	As at March 31, 2022
Economic assumptions:		
Discount rate	7.40%	7.00%
Salary escalation rate	6.50% P.A. for 1st 4 yrs. & then 6% P.A. thereafter	6.50% P.A. for 1st 4 yrs. & then 6% P.A. thereafter
Demographic assumptions:		
Retirement age	60	60
Mortality table	100% of IALM (2012-14)	100% of IALM (2012-14)
Withdrawal rate (All ages)		
Upto 30 Years	3%	3%
From 31 to 44 years	1%	2%
Above 44 years	1%	1%

Sensitivity analysis

The sensitivity of the defined benefit obligation to changes in the significant principal assumptions is:

(₹ in Crore)

Particulars	Post Retirement Medical Benefit			
	As at March 31, 2023		As at March 31, 2022	
	Increase	Decrease	Increase	Decrease
Change in Discount rate (0.50% movement)	(105.76)	104.84	(100.44)	101.60
Change in cost (0.50% movement)	106.07	(104.21)	101.79	(100.97)

Sensitivity due to mortality and withdrawals are not material and hence impact of change not calculated.

The sensitivity analysis above has 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.

Expected maturity analysis of the Post retirement medical Benefit plan in future years

(₹ in Crore)

Particulars	Post Retirement Medical Benefit	
	As at March 31, 2023	As at March 31, 2022
Less than 1 year	183.29	133.39
Between 1-2 years	198.87	140.73
Between 2-3 years	203.84	149.11
Between 3-4 years	210.98	158.65
Between 4-5 years	220.47	169.44
Between 5-6 years	228.18	181.98
Over 6 years	1003.97	1277.55
Total	2249.60	2210.85

Expected contributions to Post retirement medical benefit plan for the year ending 31 March 2024 are ₹ 49.81 crore.

The weighted average duration of the post retirement medical benefit plan obligation at the end of the reporting period is 12.34 years (31 March 2022: 12.78 years)

Risk Exposure

Valuations are based on certain assumptions, which are dynamic in nature and vary over time. As such company is exposed to various risks such as increase in medical cost, investment risk, discount rate, mortality, disability and withdrawals.

(iii) 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. Wherever as per the actuarial valuation certificate liability for likely interest shortfall arises, the same has been provided in the accounts.

Details of interest shortfall in PF Trust

(₹ in Crore)

Particulars	For the year ended	
	2022-23	2021-22
Excess / (Shortfall) in PF interest liability based on actuarial valuation for the year	(14.90)	1.26
Accumulated provision for shortfall in PF interest liability based on actuarial valuation	28.10	13.20
Remeasurement gain/(loss) recognised through other comprehensive income statement	(24.20)	(1.39)
Interest shortfall / (surplus) accounted through Statement of Profit & Loss	(9.30)	(2.65)

The Company has PF trusts located at various places covering the employees of the Company and managed separately, the details of plan assets and obligations are as follows :

(₹ in Crore)

Location	Defined benefit obligation		Fair value of plan assets		Surplus / (Shortfall)	
	As at					
	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022
BHEL EPF Trust,Ranipur,Hardwar	1764.84	1664.32	1776.01	1680.03	11.17	15.71
BHEL Employee Provident Fund-Trichy	916.65	935.88	906.77	929.35	(9.88)	(6.53)
BHEL Employee Provident Fund Bhopal	1493.84	1394.81	1487.41	1395.61	(6.43)	0.80
BHEL New Delhi Employees Provident Fund Trust	1433.99	1375.80	1433.50	1386.09	(0.49)	10.29
BHEL Employee Provident Fund-Hyderabad	843.58	823.06	871.94	853.42	28.36	30.36
BHEL PPD EPF Trust,Chennai	907.95	854.23	896.65	847.56	(11.30)	(6.67)
BHEL Employee Provident Fund-Bengaluru	614.87	620.46	626.89	627.07	12.02	6.61
BHEL (BAP Unit) EPF Trust,Ranipet	332.24	357.05	332.46	359.84	0.22	2.79
BHEL Employee Provident Fund Trust Jhansi	476.99	455.36	491.52	468.66	14.53	13.30
Bharat Heavy Plates & Vesseles Limited Employee Contributory Provident Fund-Vizag	148.74	145.91	186.84	179.46	38.10	33.55
Total	8933.69	8626.88	9009.99	8727.09	76.30	100.21

Movement in net defined benefit (asset)/liability on Provident Fund

(₹ in Crore)

Particulars	BHEL Employees Provident Fund Trust (Consolidated)			
	Defined benefit obligation		Fair value of plan assets	
	As at March 31, 2023	As at March 31, 2022	As at March 31, 2023	As at March 31, 2022
Opening balance	8626.88	8395.04	8727.09	8465.86
Included in Profit for the Year :				
Current service cost	353.89	337.15	-	-
Interest cost / (income)	683.04	657.45	683.04	657.45
Total amount recognised in Profit for the Year	1,036.93	994.60	683.04	657.45
Included in Other Comprehensive Income (OCI):				
Remeasurement loss (gain):				
Actuarial loss (gain) arising from:				
Demographic assumptions				
Financial assumptions	(1.22)	(1.65)		-
Experience adjustment	(4.04)	3.54	(29.15)	31.28
Total amount recognised in other comprehensive income	(5.26)	1.89	(29.15)	31.28
Others				
Contributions paid by the employer	-		353.89	337.15
Employee Contribution	717.79	725.84	717.79	725.84
Benefits paid	(1862.90)	(1904.95)	(1862.90)	(1904.95)
Settlements/Transfer-in	420.24	414.46	420.24	414.46
Closing balance	8933.68	8626.88	9009.99	8727.09

Note: Interest shortfall in respect of PF trusts having deficit have been accounted during the year through statement of profit and loss account and other comprehensive income statement.

In addition to the above, diminution in PF Trust Investment is also cumulatively provided totalling to ₹ 68.47 Cr. based on the best possible assessment of recovery.

Details of Plan assets

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Govt. of India securities [Quoted]	905.49	1026.09
State Government securities [Quoted]	4451.33	4061.08
Corporate bonds [Quoted]	3017.93	3062.28
Special Deposit [Unquoted]	364.71	384.27
Liquid Fund [Quoted]	17.19	14.25
Short term deposit [Unquoted]	33.46	13.07
Mutual Fund & Equity shares[Quoted]	219.88	166.05
Total	9009.99	8727.09

Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date.

Particulars	As at March 31, 2023	As at March 31, 2022
Economic assumptions:		
Discount rate	7.40%	7.00%
Expected statutory interest rate on the ledger balance	8.15%	8.10%
Expected short fall in interest earnings on the fund	0.05%	0.05%
Demographic assumptions:		
Mortality table	100% of IALM (2012-14)	100% of IALM (2012-14)
Withdrawal rate % (All ages)		
Upto 30 Years	3.00%	3.00%
From 31 to 44 years	1.00%	2.00%
Above 44 years	1.00%	1.00%

Sensitivity analysis

The sensitivity of the defined benefit obligation to changes in the significant principal assumptions is:

(₹ in Crore)

Particulars	BHEL Employees Provident Fund Trust			
	As at March 31, 2023		As at March 31, 2022	
	Increase	Decrease	Increase	Decrease
Change in Discount rate (0.50% movement)	(1.67)	1.83	(1.30)	1.38

Sensitivity due to mortality and withdrawals are not material and hence impact of change not calculated.

Expected maturity analysis in future years

(₹ in Crore)

Particulars	Provident Fund	
	As at March 31, 2023	As at March 31, 2022
Within the next 12 months	860.93	916.15
Between 2-5 years	1706.54	1681.13
Between 5-10 years	1396.90	2150.37
Beyond 10 years	4969.31	3879.23
Total	8933.68	8626.88

Risk Exposure

Valuations are based on certain assumptions, which are dynamic in nature and vary over time. As such company is exposed to various risks such as increase in investment risk, discount rate, mortality, disability and withdrawals.

(iv) Travel claim on retirement- (Settlement Allowance - Unfunded Plan)

The settlement allowance is the expenditure reimbursed to an employee towards travel and shifting of baggage for proceeding to home town or any place in India where he or she intends to settle after retirement or death in service for self (including members of his/her family).

Movement in Settlement Allowance liability

(₹ in Crore)

Particulars	Settlement Allowance liability	
	As at March 31, 2023	As at March 31, 2022
Opening balance	11.63	10.30
Current service cost	0.81	0.69
Interest cost / income	0.81	0.69
Included in Profit for the Year :	1.62	1.38
Actuarial loss / (gain)	2.97	2.60
Total amount recognised in TCI for the Year	4.59	3.98
Others		
Contributions paid by the employer	-	-
Benefits paid	(2.79)	(2.65)
Closing balance	13.43	11.63

Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date.

Particulars	Settlement Allowance	
	As at March 31, 2023	As at March 31, 2022
Economic assumptions:		
Discount rate	7.40%	7.00%
Salary escalation rate	6.50% P.A. for 1st 4 yrs. & then 6% P.A. thereafter	6.50% P.A. for 1st 4 yrs. & then 6% P.A. thereafter
Demographic assumptions:		
Retirement age	60	60
Mortality table	100% of IALM (2012-14)	100% of IALM (2012-14)
Withdrawal rates (All ages)		
Upto 30 Years	3%	3%
From 31 to 44 years	1%	2%
Above 44 years	1%	1%

B. Long term Leave Liability (Encashable Leave -EL /Half Pay Leave-HPL) - (Unfunded Plan)

The company provides for earned leave benefit and half pay leave to the employees of the company which accrue half yearly at 15 days (maximum) and 10 days respectively. The earned leave is encashable while in service subject to fulfilment of certain conditions. On retirement/superannuation, earned leave & half pay leave put together upto a maximum of 300 days is encashable subject to company policies & leave encashment rules. The leave liability has been treated as other long term benefits and has been assessed using projected unit credit actuarial method.

Movement in long term leave liability

(₹ in Crore)

Particulars	Long Term Leave Liability	
	As at March 31, 2023	As at March 31, 2022
Opening balance	1030.72	1241.74
Included in Profit for the Year :		
Current service cost	130.91	142.00
Interest cost (income)	72.15	83.82
Actuarial loss (gain)	(61.60)	(181.51)
Total amount recognised in Profit for the Year	141.46	44.31
Benefits paid	135.00	255.33
Closing balance	1037.18	1030.72

Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date.

Particulars	Long Term Leave Liability	
	As at March 31, 2023	As at March 31, 2022
Economic assumptions:		
Discount rate	7.40%	7.00%
Salary escalation rate	6.50% P.A. for 1st 4 yrs. & then 6% P.A. thereafter	6.50% P.A. for 1st 4 yrs. & then 6% P.A. thereafter
Demographic assumptions:		
Retirement age	60	60
Mortality table	100% of IALM (2012-14)	100% of IALM (2012-14)
Withdrawal rates (All ages)		
Upto 30 Years	3%	3%
From 31 to 44 years	1%	2%
Above 44 years	1%	1%

C. Pension Fund

The Company has recognised ₹ 247 cr [PY ₹ 254 cr] as contribution in respect of pension scheme [defined contribution plan] for the FY 2022-23

Note [38] - Disclosure as per Ind AS 24 - Related Parties

A. List of related parties

(i)		BHEL-GE Gas Turbine Services Pvt. Ltd. (BGGTS)
	Joint venture companies	NTPC-BHEL Power Projects Pvt. Ltd. (NBPPL)
		Raichur Power Corporation Ltd. (RPCL)
		Powerplant Performance Improvement Ltd. (PPIL)
	Post employment benefit plans	Provident fund trusts
		Gratuity trust
		PRMB Trust
		Pension Trust
	Others	Central Government controlled entities

The company is a central Public Sector undertaking under the administrative control of Ministry of Heavy Industries and majority of its stake is held by Government of India. The significant transactions are with other PSUs, State owned utilities, Railways etc. which are also controlled by Govt. of India directly or indirectly. The transactions with such entities are normal, based on market driven rates at arms length price.

ii) Other related parties:

a. Key Management Personnel [KMP]

Particulars	Designation	Position Held [w.e.f /upto]
Functional Directors		
Shri [Dr.] Nalin Shinghal	Chairman & Managing Director	
Shri Subodh Gupta	Director (Finance) & CFO	
Ms. Renuka Gera	Director (IS & P)	
Shri Upinder Singh Matharu	Director (Power)	
Shri. Jai Prakash Srivastava	Director (E, R&D)	w.e.f. August 12, 2022
Company Secretary		
Shri Rajeev Kalra	Company Secretary	

(₹ in Crore)

Particulars	For the year ended	
	March 31,2023	March 31,2022
Compensation to Key management personnel		
- Short term employee benefits	2.85	3.15
- Post employment benefits	0.50	0.36
- Other long term benefits	-	-
- Termination benefits	-	-
- Share based payment	-	-
Total	3.35	3.51

b. Government Director/Independent Director

Name	Government/Independent	Held [w.e.f /upto]
Shri Shashank Priya	Government Director	upto 14.02.2023
Shri Vijay Mittal	Government Director	
Smt. Arti Bhatnagar	Government Director	w.e.f. 14.02.2023
Shri Raj Kamal Bindal	Independent Director	upto 27.01.2023
Shri Manish Kapoor	Independent Director	upto 27.01.2023
Shri (Dr.) Raj K. Agarwal	Independent Director	upto 12.09.2022
Shri (Dr.) K. Sivaprasad	Independent Director	
Smt.(Dr.) Lekhasri Samantsinghar	Independent Director	
Shri Aditya Prasad Sahu	Independent Director	upto 30.05.2022

(₹ in Crore)

Particulars	For the year ended	
	March 31, 2023	March 31, 2022
Sitting Fees -- Independent Directors	0.26	0.25

B Transactions with Post Employment Benefit Plans managed through separate trust

(₹ in Crore)

Name of the Trust	Post Employment benefit plan	Contribution by employer	
		For the year ended March 31	
		2023	2022
PRMB Trust	Post Retirement medical scheme	-	-
Gratuity Trust	Gratuity	-	-
Employees Superannuation Fund	Pension Fund	246.95	115.00
BHEL EPF Trust,Ranipur,Hardwar	Provident Fund	57.81	55.13
BHEL Employee Provident Fund-Trichy	Provident Fund	56.00	53.43
BHEL Employee Provident Fund Bhopal	Provident Fund	56.25	53.03
BHEL New Delhi Employees Provident Fund Trust	Provident Fund	44.01	41.46
BHEL Employee Provident Fund-Hyderabad	Provident Fund	42.45	40.56
BHEL PPD EPF Trust,Chennai	Provident Fund	30.67	28.21
BHEL Employee Provident Fund-Bengaluru	Provident Fund	28.60	27.75
BHEL (BAP Unit) EPF Trust,Ranipet	Provident Fund	17.83	18.58
BHEL Employee Provident Fund Trust Jhansi	Provident Fund	13.77	13.19
Bharat Heavy Plates & Vesseles Limited Employee Contributory Provident Fund-Vizag	Provident Fund	6.50	5.81



C) Details of Transactions with Joint Ventures and Balances

(₹ in Crore)

Particulars	For the year ended	
	March 31,2023	March 31,2022
Sales of Goods & Services		
BGGTS	239.24	281.48
RPCL	9.42	3.27
NBPPL	2.21	3.83
Dividend income		
BGGTS	26.18	30.35
Royalty income		
BGGTS	1.85	1.80
Purchase of Goods and Services		
BGGTS	0.87	1.04
NBPPL	-	1.52
Amounts due to BHEL at the end of the year		
BGGTS	112.07	143.55
RPCL	636.90	550.90
NBPPL	225.17	263.89
Amounts due from BHEL (incl. advances) at the end of the year		
BGGTS	0.44	0.11
RPCL	20.90	20.95
NBPPL	23.58	67.95
Provision for Doubtful debts & advances		
BGGTS	10.27	-
RPCL	20.81	20.17
NBPPL	190.15	188.70

Note: refer note [5] for provision for dimunition in value of investments

Note [39] - Disclosure [Movement in provisions] - Ind AS - 37

(₹ in Crore)

a. Liquidated Damages	As at	
	March 31,2023	March 31,2022
Opening Balance	8559.20	9511.80
Add: Additions	259.62	152.07
Less: Usage/ Write off/payment	86.73	111.76
Less: Withdrawal/adjustments	497.42	992.91
Closing Balance	8234.67	8559.20

Liquidated damages are provided in line with the Accounting Policy of the Company and the same is dealt suitably in the accounts on settlement or otherwise. Contingent liability relating to liquidated damages is shown in Para A(h) of Note 32.

(₹ in Crore)

b. Contractual Obligation	As at	
	March 31,2023	March 31,2022
Opening Balance		
As disclosed in Note (19)	3855.48	3992.45
As disclosed in Note (6)	708.05	723.45
As disclosed in Note (9)	632.23	699.86
Add: Borrowing Cost	160.11	155.78
Add: Additions	409.04	277.50
Less: PV Adjustment	94.65	107.45
Less: Usage/ Write off/payment	192.24	88.78
Less: Withdrawal/adjustments	688.44	438.94
Add/(Less): Change in estimate and rates	(0.71)	(18.11)
Closing Balance		
As disclosed in Note (19)	3774.42	3855.48
As disclosed in Note (6)	552.05	708.05
As disclosed in Note (9)	462.40	632.23
	4788.87	5195.76

The provision for contractual obligation is made considering the effect of time value of money in line with significant Accounting Policy No. 11 to meet the warranty obligations as per the terms and conditions of the contract. The same is retained till the completion of the warranty obligations of the contract. The actual expenses on warranty obligation may vary from contract to contract and on year to year depending upon the terms and conditions of the respective contract. Contractual obligation, pertaining to dues from projects fully provided for, disclosed in Non Current Allowances for B&D Debts in Note 6 and 9.

Note [40] - Disclosure - Revenue from Contracts with Customers - Ind AS-115

a. Movement in impairment provisions

(₹ in Crore)

Particulars	2022-23		2021-22	
	Trade receivables	Contract assets	Trade receivables	Contract assets
Opening balance	4314.79	1190.54	4887.12	1142.25
Add: Additions	279.02	271.45	344.18	146.78
Less: Write off	57.46	-	216.42	-
Less: Reversal*	213.90	83.34	700.09	98.49
Closing balance	4322.46	1378.65	4314.79	1190.54

b. Disaggregation of revenue from contracts with customers

(₹ in Crore)

Particulars	Power		Industry		Total
	Within India	Outside India	Within India	Outside India	

2022-23

Revenue from customers

Timing of revenue recognition

(a) At a point in time (product/services)	2640.50	32.82	3335.32	44.57	6053.21
(b) Over time (projects)	13903.36	922.29	1181.90	75.54	16083.09

2021-22

Revenue from customers

Timing of revenue recognition

(a) At a point in time (product/services)	2035.30	22.46	3952.87	35.65	6046.28
(b) Over time (projects)	11844.60	1458.89	802.88	0.73	14107.10

(₹ in Crore)

Particulars	2022-23		2021-22	
	Power	Industry	Power	Industry
Revenue from customers				
CPSUs	5581.63	1639.38	3807.92	1405.00
TSGENCO	1874.88	-	2644.40	-
TANGEDCO	3112.02	-	1669.85	-
BIFPCL [Bangladesh]	831.59	-	1381.44	-

c. Contract Balances (net of provisions)

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Trade Receivables	6543.89	6228.59
Contract assets (incl. unbilled revenue)	29740.03	26939.87
Contract liabilities	5635.01	6047.76

d. Contract revenue recognised

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Revenue recognised against contract liabilities (adjustment of customer advances and valuation adjustment during the year)	3024.72	3592.89
Revenue recognised against performance obligation satisfied in previous year (impact due to change in contract revenue)	892.15	94.41

Construction of power projects is a long cycle business, where the contracts received by the company are either EPC contracts (Engineering, Procurement & Construction) or BTG Packages (i.e. Boiler, Turbine and Generator packages). Power projects are long gestation period projects with normal execution period of contract ranging between 3 to 5 years. BHEL scope of services includes supply of equipment, erection, commissioning, synchronizing the plant to the grid, completing the trial operation and providing the guaranteed parameters.

Although there are several components to the overall scope, such projects are generally considered one performance obligation. The control transfers simultaneously over the execution period as the entity performs rather than at discrete points in time and hence revenue is recognized over the period of time based on measure of progress (input cost method)

Note [41] - Disclosure pursuant to Ind AS-107 [Financial Instruments - Accounting Classifications and Fair value measurements]

The Fair value of cash and cash equivalents, bank balances, loans, trade receivables, trade payables, security deposit and others reasonably approximates their carrying amount. Trade receivables are evaluated after taking into consideration for Expected Credit Losses. Company uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation technique.

Fair value hierarchy

The fair value of financial instruments have been classified in following categories depending on the inputs used in the valuation technique.

Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e., as prices) or indirectly (i.e., derived from prices)

Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs)

(₹ in Crore)

Financial assets and liabilities measured at fair value- recurring fair value measurements	Level 3 Heirarchy	
	As at March 31,2023	As at March 31,2022
Financial assets:		
Investment in unquoted equity instruments	3.13	3.29



b Valuation Techniques used to determine fair value

Fair value of unquoted equity instruments is determined using Level 3 inputs which include inputs from the financial statements of the investee Company based on Net asset value per share.

Reconciliation of fair value measurement of unquoted equity shares classified as FVTPL assets

(₹ in Crore)

As at March 31, 2022	3.29
Changes in fair value	(0.16)
As at March 31, 2023	3.13

Financial Risk Management

Objectives and Policies

"The company's activities are exposed to different financial risks arising out of natural business exposures to any company operating in the sector. The management of financial risk has always been an integral part of the company's business strategies and policies. The company reviews and aligns its policies and guidelines from time to time to address the financial risks in line with the needs and expectations of its various stakeholders. Exposure risk from the use of financial instruments can be categorized as under:

- 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, and management of Company's capital. Further quantitative disclosures are included throughout these financial statements.

Risk management framework

BHEL has in place a Board approved Risk Management Charter & Policy which provides overall framework for Risk Management in the company. The objective of the charter is to ensure that the risks are being properly identified, assessed and effectively managed by adopting suitable risk mitigation measures. The company has 3-layer risk management framework. At the first level, the Board Level Risk Management Committee (BLRMC) of the company is assigned with responsibility of reviewing the company's Risk Governance structure, Risk Assessment & Risk Management framework, Guidelines, Policies and Processes thereof. Risk Management Steering Committee (RMSC) at the second level is responsible for adopting & implementing the risk management framework and leading the risk management initiative across the company. Chief Risk Officer (CRO) being the convener of BLRMC & RMSC is responsible for periodic reporting on risk management to Board/ BLRMC. Key risks being faced by the company are analysed starting from Unit level for their respective areas to prepare risk mitigation plans and to ensure implementation.

a. Management of Credit Risk

Credit risk is considered as an integral part of risk reward balance of doing business. BHEL is involved in setting up of power projects pertaining to Government sector (State utilities, PSU's, Railways and other govt. departments etc.) and private sectors in India and abroad. The projects are generally funded by Financial Institutions/ banks or payments are covered by Letter of Credit (LC). The project duration ranges from 3 to 5 years and payments are generally realised in stages as per the terms of the contract including advance, progress payments, milestone (including intermediate) payments and also retentions which are released on completion of such projects. Since majority customers' profile pertains to Government sector, constituting 80% of total receivables coupled with the fact that the company itself is a CPSE, credit risk is relatively low. In respect of private sector customers, the payment terms are mainly through LC. The company has well established review mechanism for receivables at various levels within organisation to ensure proper attention and focus for realisation in line with the company policies, procedures and guidelines. The company uses expected credit loss model to assess the impairment loss or gain and the disclosure of the same is made elsewhere. Further, adequate provisions are maintained to address any eventuality.

(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:

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Financial assets for which loss allowance is measured using 12 months Expected Credit Losses (ECL)		
Cash and cash equivalents	1560.52	732.62
Other bank balances	5082.06	6421.07
Other financial assets	362.19	298.29
Financial assets for which loss allowance is measured using Life time Expected Credit Losses (ECL) including impairment loss		
Trade receivables	6543.89	6228.59

Concentration of credit risk- Geographical	Percentage of total receivable	
	As at March 31, 2023	As at March 31, 2022
Within India	94%	93%
Outside India	6%	7%
Total	100%	100%

The company's exposure to credit risk for trade receivables, contract assets and other receivables by type of counterparty are as follows

Note	Percentage of total trade receivables	
	As at March 31, 2023	As at March 31, 2022
Central Public Sector Undertakings incl Railways and Govt Deptt	39%	37%
State Electricity Boards	41%	42%
Private Customers and others	14%	14%
Exports	6%	7%
Total	100%	100%

(ii) Impairment 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.

The movement in the allowance for impairment in respect of loans during the year was as follows:

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Balance as at April 1	14.56	31.95
Impairment loss recognised / write off/ withdrawal	0.35	(17.39)
Balance as at March 31	14.91	14.56

(b) Reconciliation of impairment loss provisions

The movement in the allowance for impairment in respect of trade receivables and contract assets during the year was as follows:

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Balance as at April 1	5505.33	6029.37
Impairment loss recognised	550.47	490.97
Amounts written off/ withdrawal	(354.69)	(1015.01)
Balance as at March 31	5701.11	5505.33

The company makes investments out of surplus funds as per policy of the company duly approved by the Board and in line with the DPE guidelines. Credit risk on cash and cash equivalents and term deposits is very limited as the company generally invests in deposits with financially strong banks and financial institutions.

b. Management of Liquidity risk

The Company manages liquidity risk by maintaining sufficient cash and cash equivalents including term deposits and the availability of Funding through an adequate amount of credit facilities to meet obligations as and when due. Robust cash management system and regular monitoring of cash flows enables management to plan and maintain adequate sources to finance its funds requirement throughout the year. Besides adequate cash and bank balances, company enjoys credit facilities. The company is able to meet all its fund requirements from internal resources i.e. the funds generated from operations and also through short-term borrowings for better treasury management operations.

The following are the contractual maturities of non-derivative financial liabilities, based on contractual cash flows:

(₹ in Crore)

Financial Liabilities	As at March 31, 2023		As at March 31, 2022	
	Within 1 year	exceeding 1 year	Within 1 year	exceeding 1 year
Non-derivative financial liabilities				
Trade payables	9895.83	2194.03	7749.59	2131.93
Deposits from contractors and others	416.66	247.10	431.36	206.45
Lease Liabilities	34.76	33.75	49.81	35.12
Other Payables/liabilities				
Employee dues	384.33		214.05	
Other dues	364.44		397.85	
Capex dues	111.50	8.60	80.83	8.65
Short term borrowings	5385.00		4745.00	
Total	16592.52	2483.48	13668.49	2382.15

c Management of Market risk

The Company is exposed to certain currency, commodity, interest rate risks arising from its operations. The company has foreign exchange risk management policy to cover the foreign exchange risks. To insulate the company against major commodity price fluctuation, framework agreements including price pass through claims are being entered regularly with supply chain partners including suppliers and customers. Surplus funds generated from operation are kept invested in short term deposits with PSU Banks or large sized private banks only and in debt based schemes of public sector mutual funds, thereby minimizing any chance of risk.

Foreign currency risk exposure -: The company's exposure to foreign currency risk at the end of reporting period, are as follows:

- (i) The derivative instruments that are hedged and outstanding as on 31.03.2023 is NIL (previous year Nil)
- (ii) The foreign currency exposures that are not hedged by a derivative instrument or otherwise are as under:

FC' in Million
(₹ in Crore)

Particulars	As at		As at		As at	
	March 31, 2023		March 31, 2022		March 31, 2023	March 31, 2022
Assets	Euro	Equivalent INR	Euro	Equivalent INR	Others INR	Others INR
Trade receivable	55.50	496.43	61.72	520.18	3.44	3.16
Contract assets	332.04	2959.08	327.57	2753.33	11.92	35.27
Other assets	1.24	10.29	0.93	7.56	75.49	21.98
Sub Total (A)	388.78	3465.80	390.22	3281.07	90.84	60.41
Liabilities						
Advances from customer	36.15	240.84	36.42	242.50	22.65	39.47
Trade payables and others	34.70	315.32	101.40	869.73	579.03	131.99
Sub Total (B)	70.85	556.15	137.82	1112.23	601.68	171.46
Assets (Net of Liabilities)	317.93	2909.64	252.40	2,168.84	(510.83)	(111.05)

Assets	USD	Equivalent INR	USD	Equivalent INR
Trade receivable	70.72	579.07	64.88	489.70
Contract assets	322.62	2640.15	333.77	2517.59
Other assets	0.36	2.41	6.08	45.30
Sub Total (A)	393.70	3221.63	404.73	3052.59
Liabilities				
Advances from customer	58.00	326.40	78.92	457.24
Trade payables and others	97.39	806.03	161.30	1231.18
Short term borrowings	-	-	-	-
Sub Total (B)	155.40	1132.43	240.22	1,688.42
Assets (Net of Liabilities)	238.31	2,089.21	164.51	1,364.17

The above figures are net of provisions, if any



Sensitivity analysis

The impact of strengthening/weakening of the Indian Rupee vis a vis USD,EURO and others as at year end on profit or loss is as shown below. This analysis is based on foreign currency exchange rate variances that the company considered to be reasonably possible at the end of the reporting period. The analysis is performed on the same basis for previous year, albeit that the reasonably possible foreign exchange rate variances were different, as indicated below.

(₹ in Crore)

Particulars	As at		As at	
	March 31, 2023		March 31, 2022	
Effect on Profit/(loss)	Strengthening	Weakening	Strengthening	Weakening
1% movement				
Euro	29.10	(29.10)	21.69	(21.69)
USD	20.89	(20.89)	13.64	(13.64)
Others	(5.11)	5.11	(1.11)	1.11

Capital Management

The company's objective, while managing capital is to continue business as a going concern, safeguard, preserve and enhance its capital to provide maximum return to shareholders, benefits to other stakeholders and to maintain an optimal capital structure to reduce the cost of capital. The Board of Directors also monitors the level of dividends to equity shareholders. The Company monitors capital, using a medium term view and long term view, on the basis of a number of financial ratios generally used by industry as well as by the rating agencies. The Company is not subject to externally imposed capital requirements. The Company's capital structure is managed against the various financial ratios as required to maintain highest credit ratings.

Note [42] - Operating Segment

The Segments have been identified as 'Power' and 'Industry', based on the orders booked by the respective business sectors. These segments are driven by the three business sectors i.e. Power Sector, Industry sector, International Operations.

The Power segment comprises mainly thermal, gas, hydro and nuclear power plant businesses, related spares & services business apart from new businesses of coal to chemicals, emission control equipment and spares for Non-BHEL sets.

The Industry segment caters to major equipment supplies and EPC works for a variety of sectors including transportation, transmission, defence & aerospace, captive power, renewables, downstream oil & gas, energy storage, and electric mobility, among others.

The order booked by International operation group is taken to Power or Industry as the case may be.

The Company's Committee of functional Directors has been identified as Chief Operating Decision maker (CODM).

(₹ in Crore)

Particulars	For the year ended 31.3.2023			For the year ended 31.3.2022		
	Power	Industry	Total	Power	Industry	Total
I. SEGMENT REVENUE						
Operating Revenue-External	17498.98	4637.32	22136.30	15361.25	4792.13	20153.38
II. SEGMENT RESULTS						
a. Segment Results	1400.32	432.53	1832.85	1949.24	(39.02)	1910.22
b. Unallocated expenses (Net of income)			861.82			1118.55
c. Profit before finance cost & Incometax (a) - (b)			971.03			791.67
d. Finance cost (Includes unwinding of Interest)			521.43			354.72
e. Net Profit before Income Tax (c) - (d)			449.60			436.95
f. Income Tax			2.05			26.71
g. Net Profit/(loss) after Income Tax (e)-(f)			447.55			410.24
III ASSETS & LIABILITIES						
a. Segment Assets	40666.48	8234.70	48901.18	37196.23	8194.28	45390.51
b. Common Assets			10902.73			11317.81
c. Total Assets			59803.91			56708.32
d. Segment Liabilities	22366.53	5140.86	27507.39	20096.06	4754.42	24850.48
e. Common Liabilities			5034.36			4886.68
f. Total Liabilities			32541.75			29737.16
IV OTHER INFORMATION						
a. Capital Expenditure	121.75	80.26		140.56	55.40	
b. Depreciation & Amortization	167.99	63.96		209.45	71.29	
c. Non Cash Expenses (other than depreciation & amortization)	(507.61)	(296.77)		(1241.57)	(62.11)	

GEOGRAPHICAL SEGMENTS	Within India	Outside India	Total	Within India	Outside India	Total
1 Net Sales / Revenue from Operations	21061.08	1075.22	22136.30	18635.65	1517.73	20153.38
2 Non- Current Assets (PPE & Intangible Assets)	2826.69	3.14	2829.83	2812.21	17.23	2829.44
3 Capital Expenditure	261.79	0.15	261.94	225.32	5.77	231.09

Major Customer- Details of Revenue from Single Customer exceeding 10% of total revenue of the BHEL

Particulars	Power	Industry	Total	Power	Industry	Total
CPSUs	5581.63	1639.38	7221.01	3807.92	1405.00	5212.92
TANGEDCO	3112.02	-	3112.02	1,669.85	-	1669.85
TSGENCO	1874.88	-	1874.88	2644.40	-	2644.40

Note [43] - Ratios

Particulars	Numerator	Denominator	2022-23	2021-22	% Variance	Reason for variance
(a) Current ratio	Total Current Assets	Total Current Liabilities	1.29	1.30	1.19	
(b) Debt-equity ratio	The company does not have any long term debt and hence these ratios are not applicable.					
(c) Debt service coverage ratio						
(d) Long term Debt to Working Capital						
(e) Interest service coverage ratio						
(f) Total Debt to Total Assets ratio						
(g) Inventory turnover ratio	Revenue from contracts with customers	Average Inventory (Net)	3.32	2.93	13.43	
(h) Trade receivables turnover ratio	Revenue from contracts with customers	Average Trade receivable (net)	3.47	3.00	15.60	
(i) Bad debts to accounts receivable ratio	Bad debts written off	Gross Trade Receivables	0.003	0.012	-73.83	Insignificant change in absolute terms
(j) Current Liability Ratio	Current Liabilities	Total Liabilities	0.718	0.719	-0.15	
(k) Trade payables turnover ratio	Purchases and Subcontracting	Average Trade Payables	1.50	1.54	-2.59	
(l) Net capital turnover ratio	Revenue from contracts with customers	Total Current Assets - Total Current Liabilities	3.29	3.10	5.92	
(m) Return on equity ratio	Profit for the year (PAT)	Average Total Equity - OCI	1.63%	1.51%	7.67	Due to higher volume of operations and income tax refunds, also aided by exchange rate gains
(n) Operating profit ratio	Profit Before Interest, Depreciation & Tax - Other Income	Revenue from operations	3.07%	3.48%	-11.85	
(o) Net profit ratio	Profit for the year (PAT)	Revenue from operations	1.92%	1.93%	-0.96	
(p) Return on capital employed	Earning before interest and taxes	Capital Employed = Total Equity - CWIP - Intangible assets under development - Deferred tax assets	4.13%	3.44%	20.17	Due to higher volume of operations and income tax refunds, also aided by exchange rate gains
(q) Return on investment	NA					
(r) Net worth (Rs. / Cr.)	Share Capital + Reserve and Surplus		27262.16	26971.16	1.08	
(s) Profit After Tax (Rs. / Cr.)	Profit after Tax		447.55	410.24	9.09	Due to higher volume of operations and income tax refunds, also aided by exchange rate gains
(t) Earning Per Share (Rs.)	Profit for the year (PAT)	Weighted average no. of shares	1.29	1.18	9.09	
(u) Capital redemption reserve (Rs. / Cr.)			37.87	37.87	0.00	

Note [44] - ADDITIONAL DISCLOSURES

(₹ in Crore)

A. Category of Imports	For the Year Ended	
	2022-2023	2021-2022
Imports on CIF basis		
Raw materials	734.51	620.73
Components and spare parts	674.48	1182.34
Capital goods	6.21	4.75
Total Imports	1415.20	1807.82

(₹ in Crore)

B. Types of Expenditure (incurred in foreign currency)	For the Year Ended	
	2022-2023	2021-2022
i) Royalty	51.36	38.19
ii) Know-how	13.72	6.57
iii) Professional consultation fee	17.83	3.48
iv) Interest and others (incl. on foreign sites)	31.68	30.06

(₹ in Crore)

C. Classification of Consumption [raw materials, components, stores & spare parts]	For the Year Ended	
	2022-2023	2021-2022
i) Imported (including custom duty)	1609.95	2016.33
ii) Indigenous	9326.84	7459.26
iii) Percentage of total consumption		
Imported	14.72	21.28
Indigenous	85.28	78.72

(₹ in Crore)

D. Earnings in foreign exchange	For the Year Ended	
	2022-2023	2021-2022
Physical Export of goods (FOB basis)	395.58	775.33
Erection & other services	596.38	608.29
Foreign exchange on deemed exports (incl. domestic contracts and SEZ export)	592.61	1093.21
Total	1584.57	2476.83

E. Statement for raw materials and components consumed	For the Year Ended	
	2022-2023	2021-2022
Raw Materials		
i) Ferrous materials	2575.80	1875.60
ii) Non-ferrous materials	476.47	260.50
iii) Insulating materials	136.75	106.15
iv) Insulated cables and Magnet wires	6.34	4.46
v) Other Components	2533.30	2450.89
vi) Others	146.62	364.80
Total	5875.28	5062.40
Bought Out Materials		
i) Ferrous materials	38.39	30.14
ii) Non-ferrous materials	43.10	24.02
iii) Insulating materials	105.15	764.49
iv) Insulated cables and Magnet wires	31.47	20.99
v) Other Components	3190.16	2484.56
vi) Others	1249.06	817.55
Total	4657.33	4141.75

Note [45]

As per SEBI (Listing obligations & Disclosure Requirements) Regulations, 2015, the requisite details of loans and advances in the nature of loans, given by the Company are given below:

- i) No loans have been given (other than loans to employees), wherein there is no repayment schedule or repayment is beyond seven years; and
- ii) There are no loans and advances in the nature of loans, to firms/companies, in which directors are interested.

Note [46]

Assets and Liabilities are classified between Current and Non-current considering 12 months period as operating Cycle.

Note [47]

The Company has no transactions with companies struck off under section 248 of the Companies Act, 2013 or section 560 of the Companies Act, 1956.

Note [48]

There were no charges or satisfaction yet to be registered with Registrar of Companies beyond the statutory period.

Note [49]

The Company is complying with the number of layers prescribed under clause(87) of section 2 of the Act read with Companies(restriction on number of layers) Rules, 2017.

Note [50]

No Scheme of Arrangements has been approved by the Competent Authority in terms of sections 230 to 237 of the Companies Act, 2013.

Note [51]

The Company has no transactions that has been surrendered or disclosed as income during the year in the tax assessments under the Income Tax Act,1961 which is unrecorded in the books of accounts .

Note [52]

The Company has not traded or invested in Crypto currency or Virtual currency during the financial year.

Note [53]

Prior period errors which are material are corrected retrospectively by restating the comparative amount for the prior periods presented in which such error occurred. For the error occurred before the earliest period presented, the opening balances of assets, liabilities and equity for the earliest period presented are restated.

Note [54]

Figures have been rounded off nearest to ₹' in crore with two decimal.

Note [55]

Previous year's figures have been regrouped/ rearranged wherever considered necessary.

Note [56]

Ministry of Corporate Affairs ("MCA") notifies new standard or amendments to the existing standards under Companies (Indian Accounting Standards) Rules as issued from time to time. On March 31, 2023, MCA amended the Companies (Indian Accounting Standards) Rules, 2015 by issuing the Companies (Indian Accounting Standards) Amendment Rules, 2023, applicable from April 1, 2023, as below:

Ind AS 1 – Presentation of Financial Statements

The amendments require companies to disclose their material accounting policies rather than their significant accounting policies. Accounting policy information, together with other information, is material when it can reasonably be expected to influence decisions of primary users of general purpose financial statements. The Company does not expect the amendment to have any significant impact in its financial statements.

Ind AS 12 – Income Taxes

The amendments clarify how companies account for deferred tax on transactions such as leases and decommissioning obligations. The amendments narrowed the scope of the recognition exemption in paragraphs 15 and 24 of Ind AS 12 (recognition exemption) so that it no longer applies to transactions that, on initial recognition, give rise to equal taxable and deductible temporary differences. The Company does not expect the amendment to have any significant impact in its financial statements.

Ind AS 8 – Accounting Policies, Changes in Accounting Estimates and Errors

The amendments will help entities to distinguish between accounting policies and accounting estimates. The definition of a change in accounting estimates has been replaced with a definition of accounting estimates. Under the new definition, accounting estimates are “monetary amounts in financial statements that are subject to measurement uncertainty”. Entities develop accounting estimates if accounting policies require items in financial statements to be measured in a way that involves measurement uncertainty. The Company does not expect the amendment to have any significant impact in its financial statements.


Note [57]

The Board of Directors has authorised to issue the Financial Statements 2022-23 in its meeting held on May 26, 2023

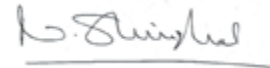


(Rajeev Kalra)
Company Secretary
M. No. 14567

For and on behalf of Board of Directors

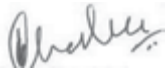


(Jai Prakash Srivastava)
Director (E, R&D)
with additional charge of
Director (Finance) & CFO
DIN: 09703643



(Dr. Nalin Shinghal)
Chairman and Managing Director
DIN: 01176857

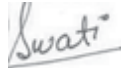
For ABP & Associates
Chartered Accountants
FRN - 315104E



(Bimal Kumar Chanduka)
Partner
M No. 053714

As per our report of even date

For PSMG & Associates
Chartered Accountants
FRN - 008567C



(Swati Singh)
Partner
M. No. 404531

For S.L. Chhajed & Co. LLP
Chartered Accountants
FRN - 000709C/C400277



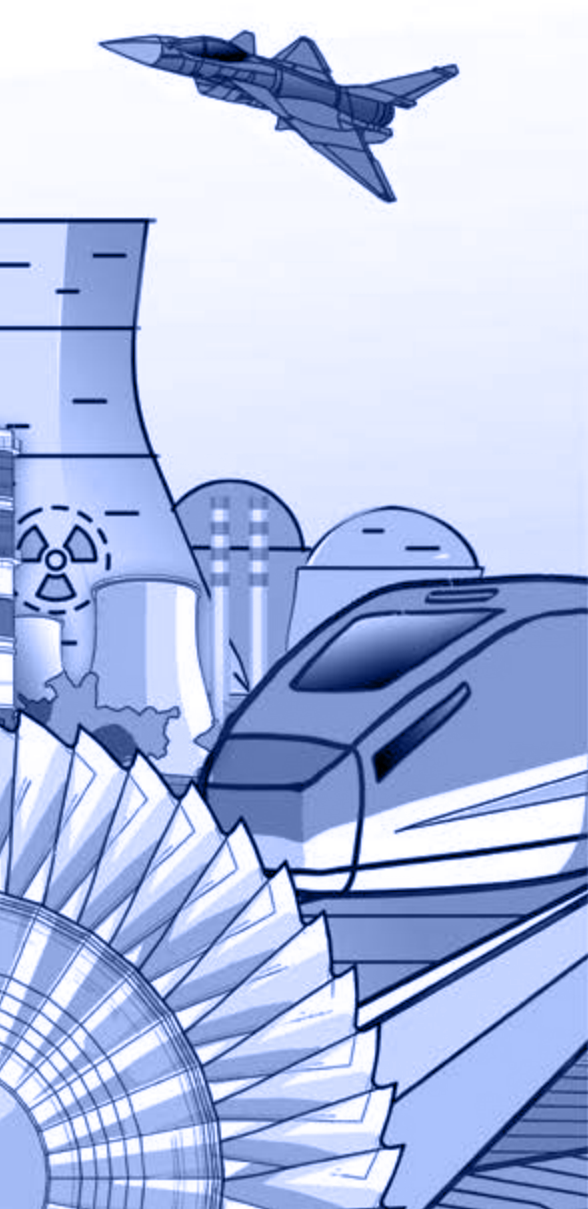
(Vijit Baidmutha)
Partner
M. No. 406044

Place: New Delhi
Date: May 26, 2023



Financial Statements

Consolidated Financial Statements 264





INDEPENDENT AUDITOR'S REPORT

To the Members of

Bharat Heavy Electricals Limited

Report on the Audit of the Consolidated Financial Statements

Opinion

We have audited the accompanying consolidated financial statements of **BHARAT HEAVY ELECTRICALS LIMITED** hereinafter referred to as "the holding company" and three jointly controlled entities, comprising of the consolidated balance sheet as at 31st March, 2023, the consolidated statement of profit and loss (including other comprehensive income), the consolidated statement of changes in equity and the consolidated cash flow statement for the year then ended, and a summary of the significant accounting policies and other explanatory information (hereinafter referred to as "the consolidated financial statements").

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid 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 Indian Accounting Standards prescribed under section 133 of the Act read with the Companies (Indian Accounting Standards) Rules 2015, as amended, ("Ind AS") and other accounting principles generally accepted in India, of the state of affairs of the Company as at March 31, 2023, the consolidated profit and total consolidated comprehensive income, consolidated statement of change in equity and its consolidated cash flow statement 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 Companies Act,

2013. Our responsibilities under those Standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated 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 consolidated financial statements under the provisions of the Companies Act, 2013 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 on the consolidated financial statements.

Key Audit Matters

Key audit matters are those matters that in our professional judgement 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. We have determined the matters described below to be the key audit matters to be communicated in our report.

Key Audit Matter	Auditor's Response
<p>Accuracy of recognition, measurement, presentation and disclosures of revenues and other related balances in respect of "Revenue from contracts with Customers" under Ind AS 115.</p> <p>The application of this revenue accounting standard involves certain key judgments relating to identification of distinct performance obligations, determination of transaction price of identified performance obligations, the appropriateness of the basis used to measure revenue recognized over a period, and disclosures including presentations of balances in the financial statements.</p> <p>Estimated efforts is a critical estimate to determine revenue, as it requires consideration of progress of the contract, efforts incurred till date, efforts required to complete the remaining performance obligation.</p> <p>Refer Note 43 to the consolidated financial statements.</p>	<p><u>Principal Audit Procedures</u></p> <p>Our audit approach consisted testing of the design and operating effectiveness of internal controls and procedures as follows:</p> <ul style="list-style-type: none"> • Evaluated the effectiveness of controls over the preparation of information that are designed to ensure the completeness and accuracy. • Selected a sample of existing continuing contracts and new contracts, and tested the operating effectiveness of the internal control, relating to identification of the distinct performance obligations and determination of transaction price. • Tested the relevant information, accounting systems and change relating to contracts and related information used in recording and disclosing revenue in accordance with Ind AS 115. • Reviewed a sample of contracts to identify possible delays in achieving milestones, which require change in estimated efforts to complete the remaining performance obligations. • Performed analytical procedures and test of details for reasonableness and other related material items.
<p>Assessment and recoverability of Trade Receivables and Contract Assets</p> <p>The Company has trade receivables outstanding (net) of ₹ 6,543.89 Crore and contract assets (net) of ₹ 29,740.03 Crore at the end of March 31, 2023</p> <p>These balances are related to revenue recognized in line with Ind AS 115 "Revenue from contracts with customers" for ongoing contracts and completed contracts. The assessment of its recoverability is a key audit matters in the audit due to its size, pending balance confirmation of letters sent and high level of management judgment</p> <p>Refer Notes 6, 9, 43 to the consolidated financial statements.</p>	<p><u>Principal Audit Procedures</u></p> <p>We have assessed the Company's internal process to recognize the revenue and review mechanism of trade receivables and contract assets. Our audit approach consisted testing of the design and operating effectiveness of internal controls and procedures as follows:</p> <ul style="list-style-type: none"> • Evaluated the process of invoicing with customers. • Obtained the list of project wise outstanding details and its review mechanism by the management. • Reviewed the guidelines and policies of the Company on impairment of trade receivables and contract assets. • Tested the accuracy of aging of trade receivables and contract assets at the year end on sample basis. • Performed analytical procedures and test of details for reasonableness, recoverability and other related material items.

Key Audit Matter	Auditor's Response
<p>Assessment of Contingent Liability</p> <p>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.</p> <p>We determined the above area as a Key Audit Matter in view of associated uncertainty relating to the outcome of these matters which requires application of judgment in interpretation of law. Accordingly, our audit was focused on analysing the facts of subject matter under consideration and judgments/ interpretation of law involved.</p> <p>(Refer Note 33 to the Consolidated statements)</p>	<p>Principal Audit Procedures</p> <p>The audit procedures included but were not limited to:</p> <ul style="list-style-type: none"> - Obtaining a detailed understanding processes and controls of the Management with respect to claims or disputes - Performing following procedures on samples selected: <ul style="list-style-type: none"> - Understanding the matters by reading the correspondences, communications, minutes of the management meeting - Making corroborative inquiries with appropriate level of the management personnel including status update, expectation of outcomes with the basis, and the future course of action contemplated by the Company, and perusing legal opinions, if any, obtained by the Management. - Obtaining direct confirmation from the legal attorneys of the company and considering their opinions /probability assessment of the outcomes. - Evaluating the evidence supporting the judgement of the management about possible outcomes and the reasonableness of the estimates. - Evaluating appropriateness of adequate disclosures in accordance with the applicable accounting standards.

Information Other than the Consolidated Financial Statements and Auditor's Report Thereon

The Company's Board of Directors is responsible for the preparation of the other information. The other information comprises the information included in Management Discussion and Analysis, Board's Report including Annexures to Board's Report, Business Responsibility Report, Corporate Governance and Shareholder's information, but does not include the consolidated financial statements and our auditor's report thereon. These reports are expected to be made available to us after the date of this Auditor's 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 in the audit or otherwise appears to be materially misstated.

When we read such other information when made available to us and if we conclude that there is a material misstatement therein we are required to communicate the matter to those charged with governance.

Management's Responsibility for the Consolidated Financial Statements

The Company's Board of Directors is responsible for the matters stated in Section 134(5) of the Companies Act, 2013 ("the Act") with respect to the preparation of the consolidated financial statements that give a true and fair view of the consolidated financial position, consolidated financial performance, consolidated total comprehensive income, consolidated statement of change in equity and consolidated cash flow statement of the Group in accordance with the Ind AS and other accounting principles generally accepted in India. 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 financial statements that give a true and fair view and are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the Board of Directors of the companies included in the Group are responsible for assessing the Group'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 the Management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The respective Board of Directors of the company included in the group are responsible for overseeing the Group's financial reporting process.

Auditor's Responsibilities 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 auditor's 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 financial controls relevant to the audit in order to design audit procedures that are appropriate in the circumstances. Under section 143(3)(i) of the Companies Act, 2013, we are also responsible for expressing our opinion on whether the companies have 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 Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the 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 auditor's report. However, future events or conditions may cause the Group 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 within the group 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. We remain solely responsible for our audit opinion. Our responsibilities in this regard are further described in para 1 to para 4 of the section titled "Other Matters" in this Audit report.

Materiality is the magnitude of misstatements in the consolidated financial statements that, individually or in aggregate, makes it probable that the economic decisions of a reasonably knowledgeable user of the financial statements may be influenced. We consider quantitative materiality and qualitative factors in (i) planning the scope of our audit work and in evaluating the results of our work; and (ii) to evaluate the effect of any identified misstatements in the financial statements.

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 consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's 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

1. We did not audit the financial statements of one BHEL-GE Gas Turbine Services Pvt. Ltd. (jointly controlled entity). The accompanying statements include the unaudited financial results/statements of this associate whose financial statements/results reflect the group's share of net profit of ₹ **56.28 Crore** and other comprehensive income of ₹ **0.59 Crore** for the year ended 31st March, 2023 as considered in the consolidated financial statements in respect of this jointly controlled entity. Our opinion on the consolidated financial statements, in so far as it relates to the amounts and disclosures included in respect of this jointly controlled entity, and our report in terms of sub-sections (3) and (11) of Section 143 of the Act, insofar as it relates to the aforesaid jointly controlled entity, is based solely on such unaudited financial statements.
2. We did not audit the financial statements of Raichur Power Corporation Ltd. & NTPC-BHEL Power Projects Pvt. Ltd. (jointly controlled entities). The consolidated financial statements does not include the group's share of net loss and other comprehensive loss of these jointly controlled entities as the Group has already recognised accumulated losses equal to the cost of investment in its financial statements in respect of these jointly controlled entities. These financial statements are unaudited and have been furnished to us by the management and our opinion on the consolidated financial statements, in so far as it relates to the amounts and disclosures included in respect of these jointly controlled entities, and our report in terms of sub-sections (3) and (11) of Section 143 of the Act in so far as it relates to the aforesaid jointly controlled entities, is based solely on such unaudited financial statements. These financial statements are not material to the group.
3. The accounts of Power Plant Performance Improvements Ltd., a Joint Venture of BHEL have not been consolidated as the said company is under liquidation and full amount of equity investment has been provided.

Our opinion on the consolidated financial statements, and our report on other legal and regulatory requirements below, is not modified in respect of the above matters with respect to our reliance on the unaudited financial statements certified by the management.

Report on Other Legal and Regulatory Requirements

1. As required by Section 143 (3) of the Act based on our audit and on the consideration of unaudited financial statements certified by the management of jointly controlled entities as referred in "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 management certified financials;
 - (c) The consolidated balance sheet, the consolidated statement of profit and loss (including other comprehensive income), consolidated statement of changes in equity and the consolidated cash flow statement 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, and other accounting principles generally accepted in India;
 - (e) In terms Notification no. G.S.R. 463(E) dtd. 05-06-2015 issued by the Ministry of Corporate Affairs, the provision of Section 164(2) of the Companies Act, 2013 in respect of disqualification of directors are not applicable to the Company;
 - (f) With respect to the adequacy of the internal financial controls over financial reporting of the holding company and jointly controlled entities incorporated in India and the operating effectiveness of such controls, refer to our separate Report in "**Annexure A**";
 - (g) With respect to the other matters to be included in the Auditor's Report in accordance with Rule

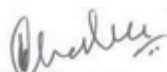
11 of the Companies (Audit and Auditor's) Rules, 2014 to the extent applicable, in our opinion and to the best of our information and according to the explanations given to us and based on the consideration of the management certified financial statements including the other financial information of jointly controlled entities, as noted in "Other Matters" paragraph:

- i. The consolidated financial statements disclose the impact of pending litigations on the consolidated financial position of the Group and jointly controlled entities– Refer Note 33 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, if any, on

long-term contracts – Refer Note 42 to the consolidated financial statements in respect of such items as it relates to the Group and jointly controlled entities and

- iii. There has been no delay in transferring amounts, required to be transferred, to the Investor Education and Protection Fund by the holding company and jointly controlled companies incorporated in India.
2. With respect to the matter of paras 3 (xxi) and 4 of the Companies (Auditor's Report) Order 2020, and three joint entities remains unaudited as mentioned in the section titled "Other Matters" and no CARO report has been issued by the Auditors of such entities as on the date of issue of this report. Based on the CARO report issued by us for the company for the year ended 31st March 2023, we report that there are no qualification or adverse remarks in the CARO report.

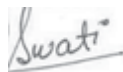
For ABP & Associates
Chartered Accountants
FRN - 315104E



(Bimal Kumar Chanduka)
Partner
M No. 053714

UDIN: 23053714BHAHST5648

For PSMG & Associates
Chartered Accountants
FRN - 008567C



(Swati Singh)
Partner
M. No. 404531

UDIN: 23404531BGYRDM2430

For S.L. Chhajer & Co. LLP
Chartered Accountants
FRN - 000709C/C400277



(Vijit Baidmutha)
Partner
M. No. 406044

UDIN: 23406044BGUYQJ8011

Place: New Delhi
Date: May 26, 2023



ANNEXURE "A" TO THE INDEPENDENT AUDITOR'S REPORT OF EVEN DATE ON THE CONSOLIDATED IND AS FINANCIAL STATEMENTS OF BHARAT HEAVY ELECTRICALS LIMITED

Report on the Internal Financial Controls 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 Ind AS financial statements of the Company as of and for the year ended March 31, 2023, we have audited the internal financial controls over financial reporting of Bharat Heavy Electricals Limited (hereinafter

referred to as "the Holding Company") as of that date. We did not audit the financial statements of three Jointly Control Entities out of which all three Jointly Control Entities are unaudited.

Management's Responsibility for Internal Financial Controls

The respective Board of Directors of the Holding company and jointly controlled companies, which are companies incorporated in India, are responsible for establishing and maintaining internal financial controls based on the internal control 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 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 Companies Act, 2013.

Auditor's Responsibility

Our responsibility is to express an opinion on the Company's internal financial controls over financial reporting 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") issued by the ICAI and the Standards on Auditing, issued by ICAI and deemed to be prescribed under section 143(10) of the Companies Act, 2013, to the extent applicable to an audit of internal financial controls, both issued by the Institute of Chartered Accountants of India. 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 over financial reporting 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 controls system over financial reporting and their operating effectiveness. Our audit of internal financial controls over financial reporting included obtaining an understanding of internal financial controls over financial reporting, 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 auditor's judgement, including the assessment of the risks of material misstatement of the 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 over financial reporting.

Meaning of Internal Financial Controls Over Financial Reporting

A company's internal financial control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal financial control over financial reporting 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 financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorisations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorised acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Inherent Limitations of Internal Financial Controls Over Financial Reporting

Because of the inherent limitations of internal financial controls over financial reporting, 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 over financial reporting to future periods are subject to the risk that the internal financial control over financial reporting may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Other Matters

Our aforesaid reports under Section 143(3)(i) of the Act on the adequacy and operating effectiveness of the internal financial controls over financial reporting in so far as it relates three jointly controlled entities, which are companies incorporated in India, is based on the corresponding management certificate of these three jointly controlled entities incorporated in India.

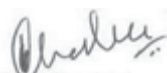
Opinion

In our opinion, the Holding Company and three jointly controlled entities, which are entities incorporated in India, have, in all material respects, an adequate internal financial controls system over financial reporting and such internal financial controls over financial reporting were operating effectively as at March 31, 2023, based on the internal control 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.

For ABP & Associates

Chartered Accountants

FRN - 315104E



(Bimal Kumar Chanduka)

Partner

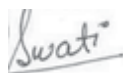
M No. 053714

UDIN: 23053714BHAHST5648

For PSMG & Associates

Chartered Accountants

FRN - 008567C



(Swati Singh)

Partner

M. No. 404531

UDIN: 23404531BGYRDM2430

For S.L. Chhajed & Co. LLP

Chartered Accountants

FRN - 000709C/C400277



(Vijit Baidmutha)

Partner

M. No. 406044

UDIN: 23406044BGUYQJ8011

Place: New Delhi

Date: May 26, 2023

DG(AE)/REP/01-93/AC-BHEL/CP/2023-24/138



भारतीय लेखापरीक्षा और लेखा विभाग
कार्यालय महा निदेशक लेखापरीक्षा (ऊर्जा)
नई दिल्ली

INDIAN AUDIT & ACCOUNTS DEPARTMENT
Office of the Director General of Audit (Energy)
New Delhi

75
आज़ादी का
अमृत महोत्सव

Dated: 27/7/23.

सेवा में,

अध्यक्ष एवं प्रबंध-निदेशक,
भारत हेवी इलेक्ट्रिकल्स लिमिटेड,
नई दिल्ली

विषय:- 31 मार्च 2023 को समाप्त वर्ष के लिए भारत हेवी इलेक्ट्रिकल्स लिमिटेड, नई दिल्ली के समेकित वित्तीय विवरण (Consolidated Financial Statement) पर कम्पनी अधिनियम 2013 की धारा 143(6)(b) एवं धारा 129(4) के अंतर्गत भारत के नियंत्रक एवं महालेखापरीक्षक की टिप्पणियाँ।

महोदय,

मैं भारत हेवी इलेक्ट्रिकल्स लिमिटेड, नई दिल्ली के 31 मार्च 2023 को समाप्त वर्ष के समेकित वित्तीय विवरण (Consolidated Financial Statement) पर कम्पनी अधिनियम 2013 की धारा 143(6)(b) एवं धारा 129(4) के अंतर्गत भारत के नियंत्रक एवं महालेखापरीक्षक की टिप्पणियाँ अग्रेषित कर रहा हूँ।

कृपया इस पत्र की संलग्नकों सहित प्राप्ति की पावती भेजी जाए।

संलग्नक:- यथोपरि।

भवदीय,

संजय कुमार झा
(संजय कु. झा)
महानिदेशक

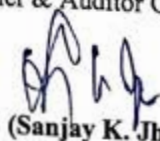
COMMENTS OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA UNDER SECTION 143(6)(b) READ WITH SECTION 129(4) OF THE COMPANIES ACT, 2013 ON THE CONSOLIDATED FINANCIAL STATEMENTS OF BHARAT HEAVY ELECTRICALS LIMITED FOR THE YEAR ENDED 31 MARCH 2023

The preparation of consolidated financial statements of Bharat Heavy Electricals Limited for the year ended 31 March 2023 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 26 May 2023.

I, on behalf of the Comptroller and Auditor General of India, have conducted a supplementary audit of the consolidated financial statements of Bharat Heavy Electricals Limited for the year ended 31 March 2023 under Section 143(6)(a) read with section 129(4) of the Act. We conducted a supplementary audit of the financial statements of Bharat Heavy Electricals Limited but did not conduct supplementary audit of the financial statements of NTPC-BHEL Power Projects Private Limited and Raichur Power Corporation Limited for the year ended on that date. Further, Section 139(5) and 143(6)(a) of the Act are not applicable to the BHEL-GE Gas Turbine Services Private Limited, being private entity, for appointment of their Statutory Auditor(s) and for conduct of supplementary audit. Accordingly, Comptroller & Auditor General of India has neither appointed the Statutory Auditor(s) nor conducted the supplementary audit of this company. 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



(Sanjay K. Jha)
Director General of Audit (Energy)

Place: New Delhi
Dated: 27 July 2023

Consolidated Balance Sheet

as at March 31, 2023

(₹ in Crore)

Particulars	Note	Page	As at March 31, 2023		As at March 31, 2022	
A. ASSETS						
1. Non-current assets						
(a) Property, plant and equipment	3a	288	2408.74		2336.34	
(b) Capital work-in-progress	3b	288	344.59		422.32	
(c) Intangible assets	4a	289	67.24		62.12	
(d) Intangible assets under development	4b	289	9.26		8.66	
(e) Investment accounted for using equity method	5	294	232.29		201.86	
(f) Financial assets						
(i) Investments	5a	295	3.13		3.29	
(ii) Trade receivables	6	296	3415.54		3203.84	
(iii) Other financial assets	7	298	83.96	3502.63	86.73	3293.86
(g) Deferred tax assets (net of liabilities)	8	298	3422.62		3530.08	
(h) Other non-current assets	9	299	19300.14		18526.54	
Total non-current assets			29287.51		28381.78	
2. Current assets						
(a) Inventories	10	300	6755.90		6560.21	
(b) Financial assets						
(i) Trade receivables	6	296	3128.35		3024.75	
(ii) Cash and cash equivalents	11	301	1560.52		732.62	
(iii) Bank balances other than cash and cash equivalents	12	301	5082.06		6421.07	
(iv) Other financial assets	7	298	278.23	10049.16	211.56	10390.00
(c) Current tax assets (net)	13	302	226.38		119.24	
(d) Other current assets	9	299	13050.84		10792.53	
Total current assets			30082.28		27861.98	
TOTAL ASSETS			59369.79		56243.76	
B. EQUITY AND LIABILITIES:						
3. Equity						
(a) Equity share capital	14	302	696.41		696.41	
(b) Other equity	15	303	26131.62		25810.19	
Total equity			26828.03		26506.60	
4. Liabilities						
4.1 Non-current liabilities						
(a) Financial liabilities						
(i) Lease Liabilities	16	303	33.75		35.12	
(ii) Trade payables	17	304				
(i) Total outstanding dues of micro enterprises and small enterprises			128.11		127.45	
(ii) Total outstanding dues of creditors other than micro enterprises and small enterprises			2065.92		2004.48	
(iii) Other financial liabilities	18	305	255.70	2483.48	215.10	2382.15
(b) Provisions	19	305	4101.02		3771.21	
(c) Other non-current liabilities	20	305	2605.81		2212.65	
Total non-current liabilities			9190.31		8366.01	

Consolidated Balance Sheet as at March 31, 2023

(₹ in Crore)

Particulars	Note	Page	As at March 31, 2023		As at March 31, 2022	
4.2. Current liabilities						
(a) Financial liabilities						
(i) Borrowings	21	306	5385.00		4745.00	
(ia) Lease Liabilities	16	303	34.76		49.81	
(ii) Trade payables	17	304				
(i) Total outstanding dues of micro enterprises and small enterprises			1211.53		745.82	
(ii) Total outstanding dues of creditors other than micro enterprises and small enterprises			8684.30		7003.77	
(iii) Other financial liabilities	18	305	1276.93	16592.52	1124.09	13668.49
(b) Provisions	19	305		2796.63		3066.70
(c) Other current liabilities	20	305		3962.29		4635.96
Total current liabilities			23351.44		21371.15	
Total liabilities			32541.75		29737.16	
TOTAL EQUITY AND LIABILITIES			59369.79		56243.76	

Basis of preparation, measurement and significant accounting policies 2 282

The accompanying notes [1-57] are an integral part of these financial statements

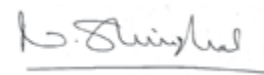
For and on behalf of Board of Directors



(Rajeev Kalra)
Company Secretary
M. No. 14567



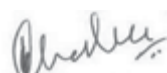
(Jai Prakash Srivastava)
Director (E, R&D)
with additional charge of
Director (Finance) & CFO
DIN: 09703643



(Dr. Nalin Shinghal)
Chairman and Managing Director
DIN: 01176857

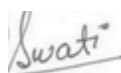
As per our report of even date

For ABP & Associates
Chartered Accountants
FRN - 315104E



(Bimal Kumar Chanduka)
Partner
M No. 053714

For PSMG & Associates
Chartered Accountants
FRN - 008567C



(Swati Singh)
Partner
M. No. 404531

For S.L. Chhajed & Co. LLP
Chartered Accountants
FRN - 000709C/C400277



(Vijit Baidmutha)
Partner
M. No. 406044

Place: New Delhi
Date: May 26, 2023



Consolidated Statement of Profit and Loss

For the year ended March 31, 2023

(₹ in Crore)

Particulars	Note	Page	For the year ended March 31, 2023	For the year ended March 31, 2022
INCOME				
Revenue from operations	22	307	23364.94	21211.09
Other income	23	308	488.63	354.54
TOTAL INCOME			23853.57	21565.63
EXPENSES				
Cost of raw materials consumed			5875.28	5062.40
Purchases of Bought out items			4657.33	4141.75
Civil, erection and engineering expenses			5421.08	4792.61
Consumption of stores & spares			404.18	271.44
Changes in inventories of finished goods, work in progress and Scrap	24	308	(57.15)	525.64
Employee benefits expense	25	308	5700.63	5519.05
Other Expenses	26	309	647.03	162.62
Finance costs	27	311	521.43	355.96
Depreciation & amortisation expense	3.1/4.1	291/293	260.34	314.12
TOTAL EXPENSES			23430.15	21145.59
Profit / (loss) before share of net profits / loss of investments accounted for using equity method and tax			423.42	420.04
Share of net profit / (loss) of joint venture accounted for using equity method			56.02	50.42
PROFIT BEFORE TAX			479.44	470.46
Tax expenses	28	311		
a) Current tax			(111.22)	(77.13)
b) Deferred tax			113.27	2.05
			102.88	25.75
PROFIT FOR THE YEAR (A)			477.39	444.71
OTHER COMPREHENSIVE INCOME	29	312		
Items that will not be reclassified to profit or loss (net of tax)				
-Remeasurement of defined employee benefits			(17.27)	76.87
-Share of OCI of JV accounted using equity method			0.59	0.03
OTHER COMPREHENSIVE INCOME FOR THE YEAR (B)			(16.68)	76.90
TOTAL COMPREHENSIVE INCOME FOR THE YEAR (A+B)			460.71	521.61
Attributable to:				
Equity holders of the parent			460.71	522.93
Non Controlling interest			-	(1.32)
TOTAL			460.71	521.61

Consolidated Statement of Profit and Loss

For the year ended March 31, 2023

(₹ in Crore)

Particulars	Note	Page	For the year ended March 31, 2023	For the year ended March 31, 2022
TOTAL OTHER COMPREHENSIVE INCOME FOR THE YEAR				
Attributable to:				
Equity holders of the parent			(16.68)	76.90
Non Controlling interest			-	-
TOTAL			(16.68)	76.90
TOTAL PROFIT FOR THE YEAR				
Attributable to:				
Equity holders of the parent			477.39	446.03
Non Controlling interest			-	(1.32)
TOTAL			477.39	444.71
Earnings per equity share	30	312		
(1) Basic [Face value of ₹ 2 each]			1.37	1.28
(2) Diluted [Face value of ₹ 2 each]			1.37	1.28

Basis of preparation, measurement and significant accounting policies

2

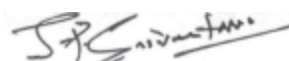
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The accompanying notes [1-57] are an integral part of these financial statements



(Rajeev Kalra)
Company Secretary
M. No. 14567

For and on behalf of Board of Directors

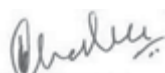


(Jai Prakash Srivastava)
Director (E, R&D)
with additional charge of
Director (Finance) & CFO
DIN: 09703643



(Dr. Nalin Shinghal)
Chairman and Managing Director
DIN: 01176857

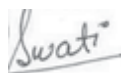
For ABP & Associates
Chartered Accountants
FRN - 315104E



(Bimal Kumar Chanduka)
Partner
M No. 053714

As per our report of even date

For PSMG & Associates
Chartered Accountants
FRN - 008567C



(Swati Singh)
Partner
M. No. 404531

For S.L. Chhajed & Co. LLP
Chartered Accountants
FRN - 000709C/C400277



(Vijit Baidmutha)
Partner
M. No. 406044

Place: New Delhi
Date: May 26, 2023

Consolidated Statement of Changes in Equity

For the year ended March 31, 2023

A. Equity Share Capital

(₹ in Crore)

Equity shares of INR 2 each issued, subscribed and fully paid	Number of shares		Amount	
	2022-23	2021-22	2022-23	2021-22
Balance at the beginning of the year	3482063355	3482063355	696.41	696.41
Changes in equity share capital during the year	-	-	-	-
Balance at the end of the year	3482063355	3482063355	696.41	696.41

B. Other Equity

For the year ended March 31, 2023

(₹ in Crore)

Description	Reserves and surplus				Other items of other comprehensive income	Total other Equity*	Non controlling interest
	Capital Reserves	Capital Redemption Reserves	General Reserves	Retained Earnings			
Balance as at April 01, 2022	35.18	37.87	30476.66	(4421.45)	(318.08)	25810.19	0.00
Changes in accounting policy or prior period errors						-	-
Reinstated balance as at April 01, 2022	35.18	37.87	30476.66	(4421.45)	(318.08)	25810.19	0.00
Add: Total comprehensive Income for the year				477.39	(16.68)	460.71	0.00
Less: Final dividend [Note 31]				(139.28)		(139.28)	0.00
Balance as at March 31, 2023	35.18	37.87	30476.66	(4083.33)	(334.76)	26131.62	0.00

Consolidated Statement of Changes in Equity

For the year ended March 31, 2022

(₹ in Crore)

Description	Reserves and surplus				Other items of other comprehensive income	Total other Equity*	Non controlling interest
	Capital Reserves	Capital Redemption Reserves	General Reserves	Retained Earnings			
Balance as at April 01, 2021	35.18	37.87	30476.66	(4867.48)	(394.98)	25287.26	(11.66)
Changes in accounting policy or prior period errors						-	-
Reinstated balance as at April 01, 2021	35.18	37.87	30476.66	(4867.48)	(394.98)	25287.26	(11.66)
Add: Total Comprehensive Income for the year				428.95	76.90	505.85	(1.32)
Less: Liquidation of Subsidiary Equity & Minority interest				(17.08)		(17.08)	(12.98)
Balance as at March 31, 2022	35.18	37.87	30476.66	(4421.45)	(318.08)	25810.19	0.00

* Total other equity represents owners of the parent



(Rajeev Kalra)

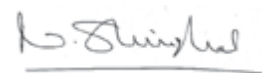
Company Secretary
M. No. 14567

For and on behalf of Board of Directors



(Jai Prakash Srivastava)

Director (E, R&D)
with additional charge of
Director (Finance) & CFO
DIN: 09703643




(Dr. Nalin Shinghal)

Chairman and Managing Director
DIN: 01176857

As per our report of even date

For ABP & Associates
Chartered Accountants
FRN - 315104E

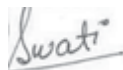


(Bimal Kumar Chanduka)

Partner

M No. 053714

For PSMG & Associates
Chartered Accountants
FRN - 008567C



(Swati Singh)

Partner

M. No. 404531

For S.L. Chhajed & Co. LLP
Chartered Accountants
FRN - 000709C/C400277



(Vijit Baidmutha)

Partner

M. No. 406044

Place: New Delhi
Date: May 26, 2023

Consolidated Statement of Cash Flows

For the year ended March 31, 2023

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
A. CASH FLOW FROM OPERATING ACTIVITIES		
Profit /(Loss) before tax	479.44	470.46
Adjustments for :		
Provision and write off	(86.31)	(1120.06)
Depreciation and amortisation	260.34	314.12
Finance cost (including unwinding of interest)	521.43	355.96
Interest & dividend income	(421.12)	(302.79)
Share of loss /(profit) in joint venture	(56.02)	(50.42)
Divestment of stake in subsidiary	0.00	(17.08)
Unrealised Foreign Exchange loss/(gain)	(401.85)	19.26
Amortisation of Government Grant	(8.90)	(6.20)
Others	(33.02)	(6.61)
Cash generated / (used) in operations before working capital changes	253.99	(343.36)
Adjustment for changes in working capital:		
Trade Receivables	92.04	1881.12
Contract Assets	(2370.65)	(2594.15)
Inventories	(192.40)	603.40
Loans, advances & other assets	(262.28)	143.49
Sub total	(2733.29)	33.86
Trade payable	2103.68	1300.96
Advances from customers, deposits and others	(167.84)	(381.49)
Provisions	(308.48)	(358.60)
Sub total	1627.36	560.87
Net cash (used in) / from working capital	(1105.93)	594.73
Cash generated / (used) in operations	(851.94)	251.37
Income taxes paid	(155.54)	(258.00)
Refund of income taxes	265.96	666.88
Net cash (used in) / from operating activities	(741.52)	660.25
B. CASH FLOW FROM INVESTING ACTIVITIES		
Redemption / maturity of bank deposits (having original maturity of more than 3 months)	1358.78	(1251.12)
Interest received	250.72	257.93
Sale proceeds from Investment	25.42	0.00
Dividend received from joint ventures	26.18	30.35
Sale of property, plant and equipment & Intangible Assets	7.76	6.90
Purchase of property, plant and equipment & Intangible Assets	(188.40)	(169.38)
Net cash (used in) / from investing activities	1480.46	(1125.32)

Consolidated Statement of Cash Flows

For the year ended March 31, 2023

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
C. CASH FLOW FROM FINANCING ACTIVITIES		
Proceeds from short term borrowings	640.00	(87.53)
Proceeds / (repayment) of lease obligation (Principal)	(49.77)	(48.79)
Proceeds / (repayment) of lease obligation (Interest)	(7.27)	(9.57)
Dividend paid	(139.18)	(0.30)
Interest paid	(354.82)	(183.30)
Net cash (used in) / from financing activities (refer point 4)	88.96	(329.49)
D. Net increase/(decrease) in cash and cash equivalents	827.90	(794.56)
Opening balance of cash and cash equivalents (excluding cash credit of subsidiary)	732.62	1519.90
Adjustment of Cash credit of subsidiary - BHEL EML from opening balance	0.00	7.28
Closing balance of cash and cash equivalents [Refer Note 11]	1560.52	732.62

(1) Statement of cash flow has been prepared under the indirect method as set out in the Ind AS 7 - Statement of Cash flow.

(2) Previous year's figures have been regrouped/reclassified wherever applicable

(3) Closing balance of Cash & Cash Equivalents includes exchange variation loss of ₹ Nil (Previous year ₹ 0.15 cr).

(4) Changes in liabilities arising from financing activities are available at Note [21(vi)] and Note [39 b]

(5) During the year the company has accounted for income tax refund amounting to ₹ 266 Cr, including interest income of ₹ 106 Cr.



(Rajeev Kalra)
Company Secretary
M. No. 14567

For and on behalf of Board of Directors



(Jai Prakash Srivastava)
Director (E, R&D)
with additional charge of
Director (Finance) & CFO
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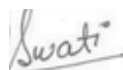
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For S.L. Chhajed & Co. LLP
Chartered Accountants
FRN - 000709C/C400277



(Vijit Baidmutha)
Partner
M. No. 406044

Place: New Delhi
Date: May 26, 2023



Notes to the Consolidated financial statements for the year ended March 31, 2023

Note [1] Company Information

Bharat Heavy Electricals Limited ("BHEL" or "the Company") is a public limited company domiciled in India and has its registered office at BHEL House, Siri fort, New Delhi-110049

The Company is an integrated power plant equipment manufacturer engaged in design, engineering, manufacture, erection, testing, commissioning and servicing of a wide range of products and services for the core sectors of the economy, viz. Power, transmission, Industry, Transportation, renewable Energy, Oil & Gas and Defence.

The Company has Joint Venture Companies namely, BHEL-GE Gas Turbine Services Ltd., NTPC-BHEL Power Projects Pvt. Ltd., Raichur Power Corporation Ltd and Power Plant Performance Improvement Ltd.

Note [2] Basis of preparation, measurement and significant accounting policies (Consolidated Financial Statement)

1. Basis of preparation of Financial Statements

a) Statement of Compliance

The financial statements have been prepared in accordance with Indian Accounting Standards (Ind-AS) as notified by Ministry of Corporate Affairs under the Companies (Indian Accounting Standards) Rules, 2015 and subsequent amendments thereof as well as with the additional requirements applicable to financial statements as set forth in Companies Act, 2013 and amended thereof.

b) Basis of measurement

The financial statements have been prepared on a going concern basis and on an accrual method of accounting. Historical cost is used in preparation of the financial statements except as otherwise mentioned in the policy.

c) Functional and presentation currency

The financial statements are prepared in INR, which is the Company's functional currency.

d) Use of Estimates and Judgments

The preparation of the financial statements in conformity with Ind AS requires management to make judgements, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates. Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised prospectively.

Critical estimates and judgements in applying accounting policies

Estimates and judgements made in applying accounting policies that have significant effect on the amounts recognized in the financial statements are as follows:

i) Revenue

The Company uses input method based on cost approach in accounting for the revenue in respect of construction contracts. Use of input method requires the Company to estimate its costs relative to the total expected costs in the satisfaction of its performance obligation. The estimates are assessed continually during the term of the contract and the company re-measures its progress towards complete satisfaction of its performance obligations satisfied over time at the end of each reporting period.

Company updates its estimated transaction price at each reporting period, to represent faithfully the circumstances present at the end of the reporting period and the changes in circumstances during the reporting period.

ii) Property, plant and equipment

The charge in respect of periodic depreciation is derived after estimating the asset's expected useful life and the expected residual value at the end of its life. The depreciation method, useful lives and residual values of Company's assets are estimated by management at the time the asset is acquired and reviewed during each financial year.

iii) Employee Benefit Plans

Employee defined benefit plans and long term benefit plans are measured on the basis of actuarial assumptions. However, any changes in these assumptions may have impact on the reported amount of obligation and expenses.

iv) Provisions and contingencies

Assessments undertaken in recognising provisions and contingencies have been made as per the best judgement of the management based on the current available information.

2. Property Plant & Equipment (PPE)

Property, plant and equipment are carried at cost less accumulated depreciation and accumulated impairment losses, if any.

Depreciation on property, plant and equipment (other than those used abroad under contract) is charged on straightline method as per the useful life prescribed in

Schedule II of the Companies Act, 2013, except in the following items where estimated useful life is based on technically assessed estimated useful life :-

Particulars	(Years)
Plant & equipment	15-30
Buildings	5-60
Electricals installations & equipments	10-30
Erection equipment, Capital tools & tackles	5
Drainage, sewerage & water supply	30
Servers and networks	5
Solar Power Generation Plant	25

Depreciation methods, useful lives and residual values are reviewed in each financial year and changes, if any, are accounted for prospectively. Right-of-use assets are amortised over the shorter of the lease term and their useful lives unless it is reasonably certain that the Company will obtain ownership by the end of the lease term.

Property Plant & Equipment costing ₹10,000/- or less and those whose written down value as at the beginning of the year is ₹10,000/- or less, are depreciated fully.

At erection/project sites: The cost of roads, bridges and culverts is fully amortized over the tenure of the contract, while sheds, railway sidings, electrical installations and other similar enabling works (other than temporary structures) are depreciated over the tenure of the contract after retaining residual value, if any.

Assets used outside India pursuant to long term contracts are depreciated over the duration of the initial contract.

Temporary structures are fully depreciated in the year of construction.

Significant components with different useful lives are accounted for and depreciated separately

In the case of BHEL-GE Gas Turbine Services Pvt. Ltd.

Depreciation is provided on the straight line method over the estimated useful life of the assets, which are equal/ lower than the rates prescribed under Schedule II of the Companies Act, 2013. In order to reflect the actual usage of assets, the estimated useful lives of the assets is based on a technical evaluation.

Asset category	Estimated useful life (Years)
Plant and machinery	2-25
Electrical installations	2-10
Furniture and fixtures	3-10
Computers	2-5
Office equipment	2-10

The right-of-use asset is depreciated using the straight-line method from the commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term.

In the case of Raichur Power Corporation Limited

Depreciation is provided on straight line method at the rates specified in the CERC/KERC Regulation 2009.

Assets are depreciated to the extent of 90% of the cost and 10% is retained as residual value.

Depreciation on additions to assets is provided on a pro-rata basis i.e. from /upto the date of the assets are available for its intended use(disposed off). Individual assets costing up to ₹ 5000 are fully depreciated in the year in which they are put to use.

In the case of NTPC-BHEL Power Projects Pvt. Ltd.

Depreciation on Property, Plant and Equipment is charged on straight line method as per the useful life prescribed in Schedule-II of the Companies Act, 2013.

3. Leases

At the inception of an arrangement, the Company determines whether such an arrangement is or contains a lease.

Upon initial recognition, assets taken on lease are capitalized under right-of-use assets at cost which comprises initial measurement of lease liability at present value, initial lease payments less incentives, initial direct costs and estimated cost of dismantling and removing the underlying assets, if any.

Lease payments made under leases are apportioned between the finance expense and the reduction of the outstanding lease liability. The finance expense is allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability.

For assets given on finance lease, the Company recognizes finance income over the lease term using effective interest rate method. Initial direct costs incurred are included in the initial measurement of the finance lease receivable and reduce the amount of income recognized over the lease term.

Lease income arising from operating lease is recognized as income over the lease period on a straight line basis except where the periodic increase in lease rentals is in line with expected general inflation.

4. Intangible assets

Intangible items costing more than ₹ 10000/- are evaluated for capitalization and are carried at cost less

accumulated amortization and accumulated impairment, if any.

Intangible assets are amortised in Statement of Profit and Loss on a straight-line method over the estimated useful lives from the date that they are available for use. The estimated useful lives for the intangible assets are as follows:

Software	3 years
Others	10 years

Intangible assets having WDV ₹ 10000/- or less at the beginning of the year are amortized fully.

Amortization period and amortization methods are reviewed in each financial year and changes, if any, are accounted for prospectively.

Expenditure on research activities is recognized in statement of profit and loss as incurred. 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 and has sufficient resources to complete development and to use or sell the asset. The expenditure capitalized includes the cost of materials, direct labour, overhead costs that are directly attributable to preparing the asset for its intended use, and borrowing costs, if any.

Assets acquired for purposes of research and development are capitalized.

5. Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, are added to the cost of such assets.

An asset that necessarily takes a substantial period of time, considered as more than twelve months, to get ready for its intended use or sale is a qualifying asset for the purpose.

All other borrowing costs are recognized in the statement of profit and loss in the period in which they are incurred.

6. Inventories

Inventory is valued at cost or net realizable value, whichever is lower. In respect of valuation of finished goods and work-in-progress, cost means factory cost. In respect of raw material, components, loose tools, stores and spares cost means weighted average cost.

7. Revenue Recognition

Revenue is recognized to depict the transfer of promised goods or services to customers in an amount that reflects

the consideration to which the entity expects to be entitled in exchange for those goods or services.

In relation to construction and long term service contracts, the company transfers control of goods or services to the customer and recognizes revenue over the time. Revenue is recognized using input method based on the cost approach. Progress towards complete satisfaction of performance obligation satisfied over time is re-measured at reporting period end.

Revenue from sale of goods and services is recognized on the transfer of control to the customer and upon the satisfaction of performance obligations under the contract.

Other Income

- Dividend income is recognized in statement of profit and loss on the date on which the Company's right to receive payment is established.
- Interest Income is recognized using effective interest rate method.
- Claims for export incentives/ duty drawbacks, duty refunds and insurance are accounted for on accrual basis.

In the case of BHEL-GE Gas Turbine Services Pvt. Ltd.

Sales of Parts

Revenue from sale of gas turbine parts in the course of ordinary activities is measured at fair value of the consideration received or receivable, net of sales tax and sales return. Revenue is recognized upon transfer of control of promised products or services to customers in an amount that reflects the consideration we expect to receive in exchange for those products or services.

Engineering services

Revenue from fixed-price, fixed-timeframe engineering and supply contracts, where the performance obligations are satisfied over time and where there is no uncertainty as to measurement or collectability of consideration, is recognized as per the percentage-of-completion method.

Repair services

In case of repair services, revenue is recognized as per the terms of the contract with customer. Sale of replacement parts supplied under repair service contract is recognized upon transfer of significant risk and rewards of ownership to the customer and is net of sales tax and sales returns.

In the case of Raichur Power Corporation Ltd. (RPCL)

- Income from contractors arising out of interest on works advance given to contractors is accounted on realization / acceptance basis.

- Revenue from Sale of infirm energy and other miscellaneous receipts is accounted by reducing the same against the Capital Cost as per CERC/KERC guidelines.

Revenue from Sale of energy is recognised as per the guidelines in the CERC / KERC (Terms and conditions for determination of Generation tariff) Regulations 2014.

8. Foreign currency Translation/Transaction

Transaction in foreign currencies are recorded at the exchange rate prevailing on the date of the transaction.

Foreign currency denominated monetary assets and liabilities are translated into the functional currency at exchange rates in effect at the end of each reporting period. Foreign exchange gains or losses arising from settlement and translations are recognized in the statement of profit and loss.

Non-monetary assets and non-monetary liabilities denominated in a foreign currency and measured at historical cost are translated at the exchange rate prevailing at the date of transaction.

9. Employee Benefits

Defined contribution plans

The Company's contribution to Pension fund including Family Pension Fund for the employees is covered under defined contribution plan and is recognized as employee benefit expense in statement of profit and loss in the periods during which services are rendered by employees.

Defined benefit plans

The Company's gratuity scheme, provident fund scheme, travel claims on retirement and post-retirement medical facility scheme are in the nature of defined benefit plans.

The liability recognized in the balance sheet in respect of these defined benefit plan is the present value of the defined benefit obligation at the end of the reporting period less the fair value of plan assets, if any. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using an appropriate government bond rate that have terms to maturity approximating to the terms of the related liability.

Remeasurements comprising actuarial gains and losses as well as the difference between the return on plan assets and the amounts included in net interest on the net defined benefits liability (asset) are recognized in other comprehensive income (net of income tax).

Other expenses related to defined benefit plans are recognized in statement of profit and loss.

Long term Leave Liability

The Company measures the expected cost of accumulating compensated absences as the additional amount expected to be paid as a result of the unused entitlement that has accumulated at the end of the reporting period. Expense on non-accumulating compensated absences is recognized in the period in which the absences occur. The Company records a liability for accumulated balance based on actuarial valuation determined using projected unit credit method. Remeasurements and other expenses related to long term benefit plans are recognized in statement of profit and loss.

10. Provisions

- (i) Claims for liquidated damages against the Company are recognized in the financial statements based on the management's assessment of the probable outcome with reference to the available information supplemented by experience of similar transactions.
- (ii) The Company provides for anticipated costs for warranties when it recognizes revenues on the related products or contracts and maintain the same throughout the warranty period. The provision is based on historical experience / technical assessment.
- (iii) When it is probable that total contract costs will exceed total contract revenue, the expected loss is recognised immediately.
- (iv) Other provisions are 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.

However, where the effect of time value of money is material, provisions are determined and maintained by discounting the expected future cash flows, wherever applicable.

11. Government Grants

Government grants are recognized only when there is reasonable assurance that the conditions attached to them shall be complied with, and the grants will be received. Non monetary grants are accounted at Fair Value of assets and are treated as deferred income. Deferred income is recognized in the statement of profit and loss on a systematic and rational basis over the useful life of the asset. Government grants related to revenue are recognized on a systematic basis in the statement of profit and loss over the periods necessary to match them with the related costs which they are intended to compensate.

12. Income Taxes

Income tax expense comprises current tax and deferred tax. Income tax expense is recognized in statement of profit and loss except to the extent that it relates to items recognized in other comprehensive income or directly in equity.

Current tax is the expected tax payable on the taxable income for the year, using tax rates (tax laws) enacted or substantively enacted by the end of the reporting period and includes adjustment on account of tax in respect of previous years.

Deferred tax is recognized using the balance sheet method, providing for temporary difference between the carrying amount of an asset or liability in the balance sheet and its tax base.

Deferred tax is measured at the tax rates that are expected to apply when the temporary differences are either realised or settled, based on the laws that have been enacted or substantively enacted by the end of reporting period.

A deferred tax asset is recognized to the extent that it is probable that future taxable profit will be available against which the temporary difference can be utilized.

The carrying amount of Deferred tax assets are reviewed at each reporting period and are reduced to the extent that it is no longer probable that the related tax benefit will be realized.

Additional Income tax that arise from the distribution of dividends are recognized at the same time when the liability to pay the related dividend is recognized.

13. Impairment of Assets

Impairment of financial assets

The loss allowance in respect of trade receivables and lease receivables are measured at an amount equal to lifetime expected credit losses.

The loss allowance in respect of all other financial assets, which are required to be impaired, are measured at an amount equal to lifetime expected credit losses if the credit risk on that financial instrument has increased significantly since initial recognition. However, if, at the reporting date, the credit risk on a financial instrument has not increased significantly since initial recognition, the loss allowance is measured at an amount equal to 12-month expected credit losses.

Impairment of Non- Financial Assets

The carrying amount of cash generating units is reviewed at each reporting date where there is any indication of impairment. An impairment loss is recognized in the statement of profit and loss where the carrying amount

exceeds the recoverable amount of the cash generating units. Impairment losses recognised 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 depreciation or amortisation, if no impairment loss had been recognised.

14. Segment Reporting

Revenue and expenses are identified to segments on the basis of their relationship to the operating activities of the segment. Revenue, expenses, assets and liabilities which are not allocable to segments on a reasonable basis, are included under "Unallocated revenue/ expenses/ assets/ liabilities".

15. Financial Instruments

i) Non-derivative financial instruments

Non derivative financial instruments are classified as :

- Financial assets, measured at (a) amortized cost and (b) fair value through Profit and Loss ("FVTPL").
- Financial liabilities carried at amortized cost.

Initially, all financial instruments are recognized at their fair value. Transaction costs are included in determining the carrying amount, if the financial instruments are not measured at FVTPL. Financial assets are derecognized when substantial risks and rewards of ownership of the financial asset have been transferred. In cases where substantial risks and rewards of ownership of the financial assets are neither transferred nor retained, financial assets are derecognized only when the Company has not retained control over the financial asset. Financial liabilities are derecognized when contractual obligations are discharged or cancelled or expired.

Non-derivative financial assets are subsequently measured as below:

A. Amortized cost –

"Financial Instruments at amortized cost" 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 recognized in the profit and loss. The losses arising from impairment are recognized in the statement of profit and loss.

B. FVTPL Category –

Financial instruments classified in this category are subsequently carried at fair value with changes recorded in the statement of profit and loss. Directly attributable transaction costs are recognised in statement of Profit and Loss as incurred.

Non-derivative financial liabilities are subsequently measured as below:

Subsequent to initial recognition, non – derivative financial liabilities are measured at amortised cost using the effective interest method.

ii) Derivative financial instruments

Embedded derivatives, if any, having material impact, are separated from the host contract and accounted for separately if the economic characteristics and risks of the host contract and the embedded derivative are not closely

related, a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative, and the combined instrument is not measured at fair value through profit and loss.

Derivatives are recognized and measured initially at fair value. Attributable transaction cost are recognized in statement of profit and loss as cost. Subsequent to initial recognition, derivatives are measured at fair value through profit and loss.

16. Cash and Cash Equivalent

Cash and cash equivalents comprise cash at bank and on hand. It includes term deposits and other short-term money market deposits with original maturities of three months or less that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.

Note [3a] - Non current assets

Property, plant and equipment

Refer point 2 of Note [2] for accounting policy on property, plant and equipment (PPE)

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Gross block	6620.97	6330.89
Less: Accumulated depreciation	4212.23	3994.55
Net block (details refer to note 3.1)	2408.74	2336.34

The Net Block includes ₹ 155.26 Cr (Previous Year ₹ 154.83 Cr) in respect of RoU assets.

Company had opted for exemption under IndAS 101, and accordingly carrying value as on 31.03.2015 was considered as deemed cost on IndAS transition date.

Note [3b] - Non current assets

Capital work in progress

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Plant & machinery and other equipments:		
Under Erection/ Fabrication/awaiting erection	82.41	131.43
In transit	6.95	9.37
Construction work-in-progress -Civil	253.96	280.12
Construction stores (including in transit)	1.27	1.40
Total	344.59	422.32

CWIP Ageing schedule - As at March 31, 2023

(₹ in Crore)

Particulars	Amount in CWIP for a period of				
	Less than 1 Year	1-2 Years	2-3 Years	More than 3 Years	Total
Projects in progress	115.98	53.36	73.56	89.13	332.03
Projects temporarily suspended	-	0.59	-	-	0.59

CWIP Completion Schedule (CWIP which are overdue or has exceeded its cost compared to its original plan) - As at March 31, 2023

(₹ in Crore)

Particulars	To be completed in				
	Less than 1 Year	1-2 Years	2-3 Years	More than 3 Years	Total
Projects in progress					
New Building - Noida	227.76	-	-	-	227.76
Transformer Double bottlenecking	10.27	-	-	-	10.27
Other Projects less than ₹ 10 Crore (Total Nos - 18)	16.99	0.09	-	0.34	17.42
Projects temporarily suspended					
Equipment Fabrication Plant - Bhandara	-	-	-	7.74	7.74
Other Projects less than ₹ 1 Crore (Total Nos - 4)	-	0.280	-	1.60	1.88

CWIP Ageing schedule - As at March 31, 2022

(₹ in Crore)

Particulars	Amount in CWIP for a period of				
	Less than 1 Year	1-2 Years	2-3 Years	More than 3 Years	Total
Projects in progress	115.39	127.88	115.41	51.31	409.99
Projects temporarily suspended	0.59	0.07	2.36	9.31	12.33

CWIP Completion Schedule (CWIP which are overdue or has exceeded its cost compared to its original plan) - As at March 31, 2022

(₹ in Crore)

Particulars	To be completed in				
	Less than 1 Year	1-2 Years	2-3 Years	More than 3 Years	Total
Projects in progress					
New Building - Noida	217.38	-	-	-	217.38
Selective Catalyst Reduction Plant - Bengaluru	62.12	-	-	-	62.12
Other Projects less than ₹ 10 Crore (Total Nos - 25)	37.83	-	-	-	37.83
Projects temporarily suspended					
Equipment Fabrication Plant - Bhandara	-	-	-	7.74	7.74
Other Projects less than ₹ 1 Crore (Total Nos - 4)	0.07	-	-	1.58	1.65

Note [4a] - Non current assets

Intangible assets

Refer point 4 of Note [2] for accounting policy on intangible assets

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Gross block	327.88	308.92
Less: Accumulated amortisation	260.64	246.80
Net block (details refer to note 4.1)	67.24	62.12

Company had opted for exemption under IndAS 101, and accordingly carrying value as on 31.03.2015 was considered as deemed cost on IndAS transition date.

Note [4b] - Non current assets

Intangible assets under development

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Intangible assets under development	9.26	8.66
	9.26	8.66

Intangible Assets under development ageing schedule - As at March 31, 2023

(₹ in Crore)

Particulars	Amount of Intangible Asset under development for a period of				
	Less than 1 Year	1-2 Years	2-3 Years	More than 3 Years	Total
Projects in progress	5.67	1.05	-	2.54	9.26
Projects temporarily suspended	-	-	-	-	-

Intangible Assets under development Completion schedule (which are overdue or has exceeded its cost compared to its original plan) - As at March 31, 2023

(₹ in Crore)

Particulars	To be completed in				
	Less than 1 Year	1-2 Years	2-3 Years	More than 3 Years	Total
Projects in progress	-	-	-	-	-
Projects temporarily suspended	-	-	-	-	-

Intangible Assets under development ageing schedule - As at March 31, 2022

(₹ in Crore)

Particulars	Amount of Intangible Asset under development for a period of				
	Less than 1 Year	1-2 Years	2-3 Years	More than 3 Years	Total
Projects in progress	1.39	-	1.18	6.09	8.66
Projects temporarily suspended	-	-	-	-	-

Intangible Assets under development Completion schedule (which are overdue or has exceeded its cost compared to its original plan) - As at March 31, 2022

(₹ in Crore)

Particulars	To be completed in				
	Less than 1 Year	1-2 Years	2-3 Years	More than 3 Years	Total
Projects in progress					
SCR Project Know how	4.71	-	-	-	4.71
Projects temporarily suspended					
	-	-	-	-	-

Note 3.1 - Details of Property, Plant & Equipment

(₹ in Crore)

Description	Gross Block				Depreciation/ Amortization				Net Block	
	Opening Balance as on 01.04.2022	Additions/ Adjustments	Deductions/ Adjustments	Closing Balance as on 31.03.2023	Accumulated Depreciation as at 01.04.2022	Depreciation/ Amortisation for the year	Depreciation Adjustments	Accumulated Depreciation as at 31.03.2023	Net Block as at 31.03.2023	Net Block as at 31.03.2022
Land - Freehold land (including development expenses)	27.71	0.02	0.00	27.73	0.00	0.00	0.00	0.00	27.73	27.71
Buildings - Freehold Buildings	1743.65	86.92	(6.49)	1824.08	669.59	56.04	(5.48)	720.15	1103.93	1074.06
Roads, bridges & culverts	15.85	0.25	0.00	16.10	14.16	0.60	0.00	14.76	1.34	1.69
Drainage, Sewerage & water supply	31.49	4.73	(0.01)	36.21	8.21	1.17	(0.01)	9.37	26.84	23.28
Plant & Equipment	3209.81	121.78	(5.96)	3325.63	2390.20	117.15	(2.96)	2504.39	821.24	819.61
Railway Siding	8.85	0.00	0.00	8.85	5.31	0.44	0.00	5.75	3.10	3.54
Locomotives & Wagons	28.33	0.00	0.00	28.33	17.57	1.66	0.00	19.23	9.10	10.76
Furniture & fixtures	62.09	9.03	(1.11)	70.01	44.08	4.60	(0.86)	47.82	22.19	18.01
Vehicles	14.33	0.57	(0.00)	14.90	10.24	1.21	(0.00)	11.45	3.45	4.09
Office and Other equipments	141.10	7.72	(1.46)	147.36	120.11	9.69	(1.23)	128.57	18.79	20.99
Electronic Data Processing Equipment	152.83	2.55	9.87	165.25	141.97	8.50	9.89	160.36	4.89	10.86
Electrical Installations	251.67	30.57	4.04	286.28	180.44	4.31	3.31	188.06	98.22	71.23
Construction Equipment	71.85	0.25	(0.21)	71.89	69.22	1.23	(0.21)	70.24	1.65	2.63
Fixed Assets costing upto ₹ 10,000/-	22.05	1.78	(0.91)	22.92	22.05	1.78	(0.91)	22.92	-	-
Solar power generation	119.54	19.84	4.08	143.46	26.48	4.87	1.10	32.45	111.01	93.06
Right-of-use Assets	429.75	33.59	(31.37)	431.97	274.92	33.00	(31.21)	276.71	155.26	154.83
TOTAL	6330.90	319.60	(29.53)	6620.97	3994.55	246.25	(28.57)	4212.23	2408.74	2336.35
Previous Year	6172.41	208.19	(49.71)	6330.89	3746.26	295.79	(47.50)	3994.55	2336.34	2426.15

Notes:

Gross Block (as per earlier IGAAP) as at 31.03.2023 ₹ 13756.12 Crore and as at 31.03.2022 ₹ 13507.29 Crore

Gross Block as at 31.03.2023 includes assets condemned and retired from active use ₹ 14.90 crore (Previous year ₹ 7.11 crore)

Net Block as at 31.03.2023 includes assets condemned and retired from active use ₹ 0.12 Crore (Previous year ₹ 0.12 Crore)

Gross Block excludes cost of assets purchased out of grant received from Govt of India for research as executing agency since the property does not vest with the Company ₹ 237.42 crore (Previous year ₹ 259.64 crore)

There is no impairment loss during the year.

Table 3.1(a): Right-of-use of assets includes:

(₹ in Crore)

Description	Gross Block				Depreciation/ Amortization				Net Block	
	Opening Balance as on 01.04.2022	Additions/ Adjustments	Deductions/ Adjustments	Closing Balance as on 31.03.2023	Accumulated Depreciation as at 01.04.2022	Depreciation/ Amortisation for the year	Depreciation Adjustments	Accumulated Depreciation as at 31.03.2023	Net Block as at 31.03.2023	Net Block as at 31.03.2022
Land (including development expenses)	118.86	0.98	0.00	119.84	14.13	3.38	(0.00)	17.51	102.33	104.73
Buildings	1.63	0.00	0.00	1.63	0.36	0.05	0.00	0.41	1.22	1.27
Plant & Equipment	37.81	8.46	(6.26)	40.01	23.10	10.62	(6.26)	27.46	12.55	14.71
Office & other equipment	16.84	0.00	(0.33)	16.51	15.02	0.42	(0.31)	15.13	1.38	1.82
EDP Equipment	229.51	15.38	(19.13)	225.76	208.73	13.46	(19.13)	203.06	22.70	20.78
Vehicle	5.50	3.80	(2.87)	6.42	3.08	1.34	(2.74)	1.68	4.74	2.42
Others	19.61	4.97	(2.78)	21.80	10.51	3.73	(2.77)	11.46	10.34	9.10
TOTAL	429.75	33.59	(31.37)	431.97	274.92	33.00	(31.21)	276.71	155.26	154.83
Previous Year	455.37	33.18	(58.80)	429.75	291.18	42.35	(58.61)	274.92	154.83	164.19

Additional disclosure of Note [3.1] details of property, plant and equipment

Particulars	As at March 31, 2023	As at March 31, 2022
1. Land and buildings includes		
a i) Acres of land for which formal transfer/lease deed have not been executed (in acres)	8421.02	8421.02
Net Block (₹ in Crore)	64.96	65.68
ii) Number of flats for which formal transfer/lease deed have not been executed (in Nos.)	12	12
Net Block (₹ in Crore)	1.01	1.06
iii) Acres of land for which the cost paid is provisional (in acres)	480.04	480.04
[registration charges and stamp duty, (net of provision) would be accounted for on payment.		
Net Block (₹ in Crore)	61.26	61.98
b. Acres of land leased to Ministry of Defence, Govt. of India Departments & others (in acres)	20.47	29.78
c. Acres of land is under adverse possession/encroachment. (in acres)	873.48	883.66
d. 1297.86 acres (PY 1297.86 acres) of land pending mutation at Haridwar plant for which legal action is in process. It includes land measuring 934 acres (PY 934 acres) which is in BHEL's possession but has been wrongly got mutated in the name of SIDCUL Government of Uttarakhand in the year 2004 & 2007.		
e. Further at Haridwar plant, 8 Acres of land is pending transfer to IOCL /State Government under office memorandum dated 01.12.2003 of Uttarakhand Government.		
(Cost of land of (b to e) mentioned above is not material)		

Additional disclosure of Note [3.1] details of property, plant and equipment

Particulars	As at March 31, 2023	As at March 31, 2022
2. i) Total Area of Land in acres	16660.72	16660.72
ii) Free hold land (Sale Deed) / Possessory Rights/license out of 3(i) in acres	15987.38	15987.38
iii) Leasehold land out of 3(i) in acres	673.34	673.34

3. The company provides 100% depreciation on an item of PPE having cost / opening net block up to ₹ 10000/- each. The impact of providing 100% depreciation on an item of PPE on profit, without considering the impact of earlier years is as under :

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
100% depreciation on PPE upto ₹ 10,000/- charged off	7.21	6.50
Less: Normal depreciation on above.	(4.39)	(3.53)
Excess amount charged to depreciation for the year	2.82	2.97

4. Properties (i) 2nd Floor office in Chatterjee International Centre, Kolkata (ii) Indora Residential flats, Nagpur – Land & buildings and (iii) Vadodra Township - Land & buildings, having a net block value of ₹ 1.42 Crore, have been identified for sale under asset monetisation drive, subject to requisite approvals.

Note 4.1 - Details of Intangible Assets

(₹ in Crore)

Description	Gross Block				Depreciation/ Amortization				Net Block	
	Opening Balance as on 01.04.2022	Additions/ Adjustments	Deductions/ Adjustments	Closing Balance as on 31.03.2023	Accumulated Depreciation as at 01.04.2022	Depreciation/ Amortisation for the year	Depreciation Adjustments	Accumulated Depreciation as at 31.03.2023	Net Block as at 31.03.2023	Net Block as at 31.03.2022
Internally Developed										
-Others	71.02	0.44	0.00	71.46	66.66	2.59	0.00	69.25	2.21	4.37
Other than Internally Developed										
-Software	53.05	3.46	(0.25)	56.26	50.52	1.76	(0.25)	52.03	4.23	2.52
-Technical Know-how	184.85	15.31	0.00	200.16	129.62	9.74	0.00	139.36	60.80	55.23
Total	308.92	19.21	(0.25)	327.88	246.80	14.09	(0.25)	260.64	67.24	62.12
Previous Year	290.83	18.25	(0.15)	308.92	228.67	18.27	(0.14)	246.80	62.12	62.16

Gross Block (as per earlier IGAAP) as at 31.03.2023 ₹ 598.12 Crore and as at 31.03.2022 ₹ 584.11 Crore

There is no impairment loss during the year.

Note [5] - Non current assets

Investment (Accounted for using equity method)

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
BHEL Gas Turbine Services Private Limited		
Opening net assets	201.86	181.76
Profit / (Loss) for the year	56.02	50.42
Other Comprehensive income	0.59	0.03
Less: Dividend paid	26.18	30.35
Closing net assets	232.29	201.86

- (i) RPCL (joint venture company) has incurred losses due to which the group has recognised accumulated losses equal to the cost of investment as at March 31, 2019. The group has unrecognised share of losses amounting to ₹ 1152 Crore as per their unaudited financial statement for the year ended March 31, 2023.
- (ii) NBPPL (joint venture company) has incurred losses due to which the group has recognised accumulated losses equal to the cost of investment as at March 31, 2019. The group has unrecognised share of losses amounting to ₹ 92 Crore as per their unaudited financial statement for the year ended March 31, 2023.

Note [5a] -Non current assets
Financial assets - Investment

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
	No. of Shares (Face value in INR)	Amount	No. of Shares (Face value in INR)	Amount
I Quoted equity instruments		-		-
II Unquoted equity instruments (fully paid up shares)				
(a) Investment in joint ventures (at cost)				
(i) Powerplant Performance Improvement Ltd.	1999999 (10)	2.00	1999999 (10)	2.00
Less: Provision for impairment		<u>2.00</u>		<u>2.00</u>
(b) Investment in equity instruments fully paid up (at FVTPL)				
(i) Neelachal Ispat Nigam Ltd			5000000 (10)	5.00
Add / (less) Fair Value Adjustment				<u>(5.00)</u>
(ii) AP Gas Power Corporation Ltd.	728960 (10)	0.91	728960 (10)	0.91
Add / (less) Fair Value Adjustment		<u>2.22</u>		<u>2.38</u>
(iii) Engineering Projects (India) Ltd.	1892 (10)	*	1892 (10)	*
Share in Co-operative Societies #				
Total		3.13		3.29
*Value of less than INR 1 lakh				
Aggregate amount of unquoted investment		2.91		7.19
Aggregate amount of impairment in value of investments		(0.22)		4.62

Equity shares held in various employees cooperatives societies, valuing less than INR 1 lakh/-

Information about joint ventures

Particulars	Country of incorporation	As at March 31, 2023	As at March 31, 2022
		Proportion (%) of ownership	
Name of the joint ventures (JVC)			
BHEL-GE Gas Turbine Services Private Limited (BGGTS)		One share less than 50%	One share less than 50%
NTPC-BHEL Power Projects Private Limited (NBPPL)		50%	50%
Raichur Power Corporation Limited (RPCL)	India	22.14%	22.14%
		-	-
Power Plant Performance Improvement Limited (PPIL)		One share less than 50%	One share less than 50%

(i) The provision for impairment in value of investment in NTPC-BHEL Power Projects Private Limited has been made to the extent of ₹ 50.00 crore (upto previous year ₹ 50.00 crore) based on the net financial position. The Board of Directors in its meeting held on February 08, 2018 has accorded in-principle approval for pursuing the winding up of NBPPL. Ministry of Power (MoP) has advised NTPC to consider buying out the stake of BHEL and decide either to continue it as an in-house EPC arm or close it after completion of present work. This advise was noted by NBBPL Board in its meeting held on 29.08.2019.

(ii) The provision for impairment in value of investment in Powerplant Performance Improvement Limited amounting to ₹ 2.00 crore (previous year ₹ 2.00 crore) has been made since the JVC is under liquidation and the amount paid as equity is not recoverable.

(iii) Investment in Neelachal Ispat Nigam Limited has been disposed and sale proceeds of ₹ 25.39 Crore received during the year.

Note [6] - Financial assets - Trade receivables

Refer point 13 of Note [2] for accounting policy on impairment of financial assets

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current
Unsecured, considered good	3743.94	3433.95	3538.39	3340.61
Credit impaired (included in allowances for B&D debts)	11176.04	367.08	11599.09	277.54
	14919.98	3801.03	15137.48	3618.15
Less: Allowances for bad and doubtful debts	11504.44	672.68	11933.64	593.40
Total Trade Receivables (Net)	3415.54	3128.35	3203.84	3024.75

Simplified approach is followed for impairment of trade receivables, the classification is done in line with Ind AS 109.

Trade receivables includes:

(a) Due from Directors	-	-	-	-
(b) Due from Officers	-	-	-	-

Non current Trade receivable ageing schedule - As at March 31, 2023

(₹ in Crore)

Particulars	Outstanding for following periods from due date of payment					Unbilled Dues	Not Yet due for 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 goods	50.85	100.34	116.08	78.12	1410.59	-	-	1755.98
II) Undisputed Trade receivables - credit impaired	-	-	-	-	-	-	-	-
III) Disputed Trade receivables - considered good	1.72	0.01	3.56	21.61	1961.06	-	-	1987.96
IV) Disputed Trade receivables - credit Impaired	95.54	91.62	283.17	340.39	10365.32	-	-	11176.04

Current Trade receivable ageing schedule - As at March 31, 2023

(₹ in Crore)

Particulars	Outstanding for following periods from due date of payment					Unbilled Dues	Not Yet due for 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 goods	2395.97	331.70	281.11	107.69	317.48	-	-	3433.95
II) Undisputed Trade receivables - credit impaired	-	-	-	-	-	-	-	-
III) Disputed Trade receivables - considered good	-	-	-	-	-	-	-	-
IV) Disputed Trade receivables - credit Impaired	2.72	0.81	23.33	14.67	325.55	-	-	367.08

Non current Trade receivable ageing schedule - As at March 31, 2022

(₹ in Crore)

Particulars	Outstanding for following periods from due date of payment					Unbilled Dues	Not Yet due for 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 goods	39.02	38.13	172.50	288.06	1063.63	-	-	1601.34
II) Undisputed Trade receivables - credit impaired	-	-	-	-	-	-	-	-
III) Disputed Trade receivables - considered good	0.89	5.28	16.95	66.50	1847.41	-	-	1937.03
IV) Disputed Trade receivables - credit Impaired	95.20	100.67	395.44	630.60	10377.20	-	-	11599.11

Current Trade receivable ageing schedule - As at March 31, 2022

(₹ in Crore)

Particulars	Outstanding for following periods from due date of payment					Unbilled Dues	Not Yet due for 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 goods	2214.21	237.21	337.62	197.02	354.55	-	-	3340.61
II) Undisputed Trade receivables - credit impaired	-	-	-	-	-	-	-	-
III) Disputed Trade receivables - considered good	-	-	-	-	-	-	-	-
IV) Disputed Trade receivables - credit Impaired	11.23	0.88	35.77	35.58	194.08	-	-	277.54

Note [7] - Financial assets - Others

Refer point 13 of Note [2] for accounting policy on impairment of financial assets

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current
Security deposits				
Deposits with SEBs, port trust & others				
Unsecured, considered good	83.96	116.98*	81.80	112.86*
Credit impaired	3.59	11.32	2.87	11.69
	87.55	128.30	84.67	124.55
Less: Allowances for bad & doubtful deposits	3.59	11.32	2.87	11.69
	83.96	116.98	81.80	112.86
Bank deposits with more than 12 months maturity	-	-	4.93	-
Interest accrued on banks deposits	-	140.68		76.62
Advance to Employees	-	20.61	-	22.19
Less: Allowance for bad and doubtful advances	-	0.04	-	0.11
	-	20.57	-	22.08
Total	83.96	278.23	86.73	211.56
*includes amount deposited with courts of ₹ 88.79 crore (previous year ₹ 81.77 crore)				
Security Deposits Includes:				
Due from Directors	-	-	-	-
Dues from Officers	-	0.01	-	0.01

Note [8] - Non current assets

Deferred tax assets (net of liabilities)

Refer point 12 of Note [2] for accounting policy on income taxes.

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Deferred tax assets		
Provisions	1654.02	1629.68
Dues allowed on payment basis	549.35	440.00
Depreciation (PP&E and Intangible assets)	12.13	46.04
On account of taxable loss	1105.79	1311.74
Others	101.33	102.62
Sub Total	3422.62	3530.08
Less : Deferred tax liabilities	-	-
Deferred tax assets (net of liabilities)	3422.62	3530.08

Note [9] - Other Assets

Refer point 13 of Note [2] for accounting policy on impairment of financial assets.

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current
Contract assets (including unbilled revenue)				
Unsecured, considered good	18928.58	10811.45	18248.24	8691.63
Credit impaired	2773.38	584.87	2768.53	663.72
	21701.96	11396.32	21016.77	9355.35
Less: Allowances for bad and doubtful debts	2773.38	584.87	2768.53	663.72
Sub Total (A)	18928.58	10811.45	18248.24	8691.63
Security deposits				
Deposits with tax authorities and others				
Unsecured, considered good	103.09	378.58	79.96	443.32
Unsecured, considered doubtful	31.19	71.19	30.45	89.74
	134.28	449.77	110.41	533.06
Less: Provision for bad & doubtful deposits	31.19	71.19	30.45	89.74
Sub Total (B)	103.09	378.58	79.96	443.32
Loans & advances				
Unsecured, considered good				
Advances towards purchases (Vendors & sub - Contractors)	41.14	128.69	41.54	56.42
Input Tax credit receivable	-	1079.97	-	958.31
Claims recoverable and others	210.04	652.15	139.76	642.85
Capital advances	17.29	-	17.04	-
Unsecured, considered doubtful				
Advances towards purchases (Vendors & sub - Contractors)	11.92	9.65	11.50	35.69
Input Tax credit receivable	-	6.44	-	5.38
Claims recoverable and others	90.29	149.02	49.67	111.92
Capital advances	-	-	4.69	-
	370.68	2025.92	264.20	1810.57
Less: Provision for bad & doubtful loans & advances	102.21	165.11	65.86	152.99
Sub Total (C)	268.47	1860.81	198.34	1657.58
Total (A+B+C)	19300.14	13050.84	18526.54	10792.53

Particulars	As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current
I) Undisputed Contract Assets - considered goods	15020.29	10811.45	13874.67	8691.63
II) Undisputed Contract Assets - credit impaired	-	-	-	-
III) Disputed Contract Assets - considered good	3908.29	-	4373.57	-
IV) Disputed Contract Assets - credit Impaired	2773.38	584.87	2768.53	663.72
Total	21701.96	11396.32	21016.77	9355.35
Loan & advances includes :				
(a) Due from Directors	-	-	-	-
(b) Due from Officers	-	-	-	-

Note [10] - Current assets

Inventories

Refer point 6 of Note [2] for accounting policy on valuation of inventories.

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
Raw material & components	2900.92		2784.94	
Material-in-transit	127.98	3028.90	129.30	2914.24
Work-in-progress (including items with sub-contractors)		3482.75		3349.47
Finished goods	422.57		518.09	
Inter - division transfers in transit	89.20	511.77	89.85	607.94
Stores & spare parts				
Production	149.68		151.94	
Fuel stores	6.14		5.70	
Miscellaneous	47.37	203.19	50.32	207.96
Other Inventory				
Materials with fabricators/contractors	85.43		60.10	
Loose tools	24.35		24.32	
Scrap (at estimated realisable value)	163.30	273.08	143.26	227.68
		7499.69		7307.29
Less: Provision for non-moving inventory		743.79		747.08
Total		6755.90		6560.21
Note :				
Write down of inventories		59.72		76.77
Less : reversal thereof		63.01		49.21
Net		(3.29)		27.56

Note [11] - Current assets

Financial assets - Cash & cash equivalents

Refer point 16 of Note [2] for accounting policy on cash and cash equivalent.

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
Balances with banks				
EEFC a/c	226.21		28.20	
Current / cash credit a/c *	1205.22	1431.43	687.82	716.02
Cheques, demand drafts on hand		128.99		13.06
Cash & stamps on hand		0.08		0.08
Remittances in transit		0.02		3.46
Total		1560.52		732.62

* Includes ₹ 112.23 Cr in escrow account for specified projects.

Note [12] - Current assets

Financial assets - Bank balances

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
Fixed deposits having maturity more than 3 months but not more than 12 months		4852.34		6211.12
Fixed deposits against margin money for BG issued		213.43		202.65
Balances with banks (earmarked):				
Charging station project	7.06		3.94	
Unclaimed dividend a/c	1.91		1.81	
CEFC A/c	6.92		-	
Non-repatriable a/c	0.37		1.52	
Sale proceeds of fractional shares on bonus issue	0.03	16.29	0.03	7.30
Total		5082.06		6421.07
Total Cash and Bank Balances [11 + 12]		6642.58		7153.69

Note [13] - Current assets

Current tax assets / liabilities (net)

Refer point 12 of [Note 2] for accounting policy on income taxes.

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Advance tax & TDS	285.80	180.71
Less: Provisions for taxation	59.42	61.47
Total	226.38	119.24

Note [14] - Equity

Equity share capital

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
	No. of Shares (Face value in ₹)	Amount	No. of Shares (Face value in ₹)	Amount
A Equity share capital				
Authorised	10000000000 (2)	2000.00	10000000000 (2)	2000.00
Issued, subscribed and fully paid up	3482063355 (2)	696.41	3482063355 (2)	696.41
a) The reconciliation of the number of equity shares outstanding				
Balance as at the beginning of the year	3482063355	696.41	3482063355	696.41
Add/(Less): Changes during the year	-	-	-	-
Balance as at the end of the year	3482063355	696.41	3482063355	696.41
b) Details of shares held by shareholders holding more than 5% of shares at the end of the year				
President of India (Promoter)	2199650402	63.17%	2199650402	63.17%
Percentage change of Promoter holding during the year		Nil		Nil
Life Insurance Corporation of India	350770257	10.07%	350769757	10.07%
Face value per share in (₹)		2.00		2.00

c) Terms / rights attached to the equity shares

The company has only one class of equity shares having par value of ₹ 2 per share (previous year ₹ 2 per share). Each holder of the equity shares is entitled to one vote per share.

d) Issue of bonus share (in immediately preceding five years ended March 31, 2023)

The Company allotted bonus share on October 03, 2017 in the ratio of 1:2 i.e. one equity share for two existing fully paid-up equity shares. Consequently, the paid-up capital was increased from ₹ 489.52 crore in FY 2016-17 to ₹ 734.28 crore in FY 2017-18 by capitalization of reserves.

e) Share buyback (in immediately preceding five years ended March 31, 2023)

The Company vide its Board approval dated October 25, 2018, bought back its 18,93,36,645 fully paid-up equity shares of the face value of ₹ 2 each representing 5.16% of the total issued and paid-up equity share capital from the eligible equity shareholders of the Company for an amount of ₹ 1628,29,51,470 at a price of ₹ 86 per equity share in FY 2018-19. Consequently, the paid-up share capital was reduced from ₹ 734.28 crore in FY 2017-18 to ₹ 696.41 crore in FY 2018-19.

Note [15] - Other Equity

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Capital reserve	35.18	35.18
Capital redemption reserve	37.87	37.87
General reserves	30476.66	30476.66
Retained earnings	(4083.33)	(4421.45)
OCI (Re-measurements of defined benefit plans)	(334.76)	(318.08)
Total	26131.62	25810.19

For additions and deduction under each of the above specific heads, SOCIE (Statement of Changes in Equity) may be referred.

Nature and purpose of reserves:

- Capital reserve** : It represents mainly the excess of net assets taken, over the cost of consideration paid during amalgamation of the then subsidiary company (HPVP) with the BHEL.
- Capital redemption reserve**: The Company has recognised Capital Redemption Reserve on buy back of equity shares from its general reserve. The amount in capital redemption reserve is equal to nominal amount of equity shares bought back.
- General reserve**: This represents accumulation of profits retained by Company to meet future (known/unknown) obligations.
- Retained earnings**: Retained earnings are profits that Company has earned till date, less transfer to general reserve, dividends or other distributions to shareholders.
- Re-measurement of net defined benefit plans**: Differences between the interest income on plan assets and the return actually achieved, and any changes in the liabilities over the year due to changes in actuarial assumption or experience adjustments within the plans, are recognised in 'Other comprehensive income' and these are subsequently not to be reclassified to the Statement of Profit and Loss.

Note [16] - Financial liabilities - Lease Liabilities

Refer point 3 of Note [2] for accounting policy on lease.

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current
Lease Liabilities	33.75	34.76	35.12	49.81
Total	33.75	34.76	35.12	49.81

Further disclosures available at Note [39] on lease

Note [17] - Financial liabilities -Trade payables

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current
Trade payables				
(i) Total outstanding dues of micro enterprises and small enterprises	128.11	1211.53	127.45	745.82
(ii) Total outstanding dues of creditors other than micro enterprises and small enterprises	2065.92	8558.03	2004.48	6881.11
(iii) Acceptances	-	126.27	-	122.66
Total	2194.03	9895.83	2131.93	7749.59

Non current Trade Payable Ageing schedule - As at March 31, 2023

(₹ in Crore)

Particulars	Outstanding for following periods from due date of payment					Not Yet due for payment \$	Total
	Less than 1 Year	1-2 Years	2-3 Years	More than 3 Years	Unbilled Dues		
I) MSME	-	-	-	-	-	125.82	125.82
II) Others	-	-	-	-	0.36	1710.97	1711.33
III) Disputed dues - MSME	-	-	-	2.29	-	-	2.29
IV) Disputed dues - Others *	1.51	59.06	9.86	271.70	0.09	12.37	354.59

Current Trade Payable Ageing schedule - As at March 31, 2023

(₹ in Crore)

Particulars	Outstanding for following periods from due date of payment					Not Yet due for payment \$	Total
	Less than 1 Year	1-2 Years	2-3 Years	More than 3 Years	Unbilled Dues		
I) MSME	0.02	-	-	-	196.38	1010.60	1207.00
II) Others	581.83	0.58	0.27	2.10	1534.73	6455.49	8575.00
III) Disputed dues - MSME	-	-	-	-	-	4.53	4.53
IV) Disputed dues - Others *	-	-	-	6.98	-	102.32	109.30

Non current Trade Payable Ageing schedule - As at March 31, 2022

(₹ in Crore)

Particulars	Outstanding for following periods from due date of payment					Not Yet due for payment \$	Total
	Less than 1 Year	1-2 Years	2-3 Years	More than 3 Years	Unbilled Dues		
I) MSME	-	-	-	-	0.04	125.96	126.00
II) Others	-	-	-	-	0.21	1637.95	1638.16
III) Disputed dues - MSME	-	-	-	0.50	-	0.95	1.45
IV) Disputed dues - Others *	0.32	59.58	27.22	261.62	0.09	17.49	366.32

Current Trade Payable Ageing schedule - As at March 31, 2022

(₹ in Crore)

Particulars	Outstanding for following periods from due date of payment					Not Yet due for payment \$	Total
	Less than 1 Year	1-2 Years	2-3 Years	More than 3 Years	Unbilled Dues		
I) MSME	-	-	-	-	166.16	579.66	745.82
II) Others	2.41	-	-	-	1497.22	5488.49	6988.12
III) Disputed dues - MSME	-	-	-	-	-	-	-
IV) Disputed dues - Others *	0.04	0.97	0.51	13.10	-	1.03	15.65

\$ Not yet due represents contractually retained amounts subject to settlement on achievement of milestones.

* Break up of outstanding is given based on contractually due date but these will be paid only if resolution of dispute occurs in their favour.

Note [18] - Financial liabilities- Others

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current
Deposits from contractors & others	247.10	416.66	206.45	431.36
Liabilities :				
- Employee dues	-	384.33	-	214.05
- Capital Expenditure	8.60	111.50	8.65	80.83
- Others*	-	354.33	-	386.92
Unpaid Dividend**	-	1.91	-	1.81
Interest accrued on borrowings	-	8.20	-	9.12
Total	255.70	1276.93	215.10	1124.09

* Other Includes ₹ 0.03 Cr for sales proceeds of fractional shares arising out of bonus shares.

**No amount is due and outstanding to be transferred to Investor Education & Protection Fund at the year end.

Note [19] - Provisions

Refer point 9 & 10 of Note [2] for accounting policy on employee benefits and provisions.

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current
Contractual obligation	2990.16	784.26	2620.03	1235.45
Provision for employee benefits*	878.37	1383.68	856.82	1060.62
Provision others	232.49	622.54	292.69	760.14
Corporate social responsibility	-	6.15	1.67	10.49
Total	4101.02	2796.63	3771.21	3066.70

*[Further disclosure available at note (25) on employee benefits].

Note [20] - Other liabilities

Refer point 11 of Note [2] for accounting policy on Government grants

(₹ in Crore)

Particulars	As at March 31, 2023		As at March 31, 2022	
	Non Current	Current	Non Current	Current
Contract liabilities (Advances received from customers incl.excess of billing over revenue)	2585.67	3049.34	2193.43	3854.33
Liabilities towards statutory dues	-	908.32	-	775.55
Deferred income- Govt. grant #	20.14	4.63	19.22	6.08
Total	2605.81	3962.29	2212.65	4635.96

#Govt. grant is received for setting up of solar PV plant and manufacturing of modules , CEFC (Common Engineering Facility Centre) scheme

Note [21] - Current Financial liabilities - Borrowings

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Secured		
Loans from banks (secured by fixed deposits)	1115.00	-
Loans from banks (secured by hypothecation of raw materials, components, work-in-progress, finished goods & stores)	4270.00	4745.00
Sub-total (A)	5385.00	4745.00
Unsecured		
Sub-total (B)	-	-
Total borrowings (A+B)	5385.00	4745.00

(i) Details of sanctioned limits

Description	Sanctioned Limit	Utilization			
		As at March 31, 2023		As at March 31, 2022	
		Value (₹ / Cr)	% Utilisation	Value (₹ / Cr)	% Utilisation
Non Fund Based Limits	54000	33602	62.23%	33936	62.84%
Bank Guarantees#	51000	30853	60.50%	31369	61.51%
Letter of Credit (inc. Buyer's Credit)	3000	2749	91.63%	2567	85.57%
Fund Based Limits	6000	4270	71.17%	4745	79.08%
WCDL		4270		4745	
PCFC		NIL		NIL	
Commercial Paper	5000	NIL		NIL	

Total Consortium limit (fund based + non fund based) of ₹ 60000 Cr secured by first charge by way of hypothecation of raw materials, components, work in progress, finished goods, stores, trade receivables and other current assets both present and future.

Company has been in discussion with Consortium Banks on reallocation of Banks limit (Fund Base ₹ 9000 Crore and Non Fund ₹ 51000 crore) keeping overall limits unchanged at ₹ 60000 crore.

Commercial Papers are in the nature of unsecured short term borrowings.

Outstanding Bank Guarantees include ₹ 4 Crore (P.Y. ₹ 439 Cr.) on a/c of BGs already replaced but pending vacation as on March 31, 2023. Excluding this, the outstanding BGs as on 31.03.2023 is ₹ 30849 Cr. (Previous Year 30930 Cr.)

(ii) Loan from Banks ₹ 4270 Cr in FY 2022-23 represents WCDL (Working Capital Demand Loan) & ₹ 1115 Cr Loans against Fixed Deposits. For Previous Year, ₹ 4745 Cr Loans represents WCDL.

(iii) The company has not been declared wilful defaulter by any Bank / Financial Institution.

(iv) The quarterly returns or statements of current assets filed by the Company with Banks or Financial Institutions are in agreement with Books of accounts.

(v) Corporate Guarantees given for own obligations outstanding as on 31.03.2023 is ₹ 403 crore (previous year ₹ 1165 crore).

(vi) Change in Borrowings arising from Financing activities

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Opening Balance (excl cash credit)	4745.00	4841.99
Less : Adj of Unsecured loan by BHEL EML consequent to divestment	-	8.21
Cash Flow during the year	640.00	(88.78)
Closing Balance (excl cash credit)	5385.00	4745.00

For changes in lease liability arising from financing activities, refer note no [b] of Note 39.

Note [22]**Revenue from operations**

Refer point 7 of Note [2] for accounting policy on revenue recognition.

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Revenue from contracts with customers		
Revenue from Construction and Project related activity	16083.09	14107.10
Sale of Product & Other services	6053.21	6046.28
Total (A)	22136.30	20153.38
Other operational income		
Freight & insurance	187.84	129.35
Scrap sales	299.90	273.63
Recoveries from suppliers	131.33	113.98
Liabilities written back	406.22	239.95
Insurance claims	47.94	76.51
Export incentives	19.63	50.50
Others	135.78	173.79
Total (B)	1228.64	1057.71
Revenue from operations (A + B)	23364.94	21211.09
Revenue from Operations excludes Goods and service tax :	3566.00	2970.00

Note [23]

Other income

Refer point 7 of Note [2] for accounting policy on revenue recognition.

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Interest income *		
From banks	302.35	246.75
Others	118.77	56.04
Total (A)	421.12	302.79
Other income		
Profit on sale of Investment - NINL	25.42	-
Government grants on Solar PV Plant for captive use / CEFC	8.90	6.20
Profit from sale of PPE & capital stores (Net)	7.76	6.90
Others	25.43	38.65
Total (B)	67.51	51.75
Total other income (A+B)	488.63	354.54
*Includes TDS	13.44	18.92

Note [24]

Changes in inventories of finished goods, work in progress and Scrap (Accretion) / Decretion

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Work -in -progress		
Closing balance	3482.75	3349.47
Opening balance	3349.47	3786.38
	(133.28)	436.91
Finished goods		
Closing balance	422.57	518.09
Opening balance	518.09	628.72
	95.52	110.63
Scrap		
Closing balance	163.30	143.26
Opening balance	143.26	147.46
	(20.04)	4.20
Inter-division transfer in transit	0.65	(26.10)
(Accretion) / Decretion	(57.15)	525.64

Note [25]

Employee benefits expense

Refer point 9 of Note [2] for accounting policy on employee benefits.

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Salaries, wages, bonus, allowances & other benefits	4859.69	4713.20
Contribution to provident and other funds	473.56	460.01
Staff welfare expenses	244.69	239.89
Contribution to gratuity fund	114.14	95.78
Group insurance	8.55	10.17
Total	5700.63	5519.05

Note [26]

Other Expenses

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Power & fuel	487.67	415.08
Expenditure on other sub contracts	243.91	243.72
Carriage outward	249.55	241.23
Payment to security agencies	153.97	148.93
Repairs & maintenance:		
Buildings	33.00	27.32
Plant & machinery	32.41	26.44
Others	77.55	74.05
Insurance	108.03	95.88
Travelling & conveyance	110.59	84.89
Bank charges	90.76	92.17
R&D expense	12.81	12.10
Hire charges	51.01	48.22
Expenditure on collaborations & royalty	54.61	45.21
Rates & taxes	36.62	23.04
Office expense	29.32	27.32
Expenditure on skill development	11.47	12.83
Legal, audit & certification expense	47.67	32.45
EDP, software & lease line expense	17.61	17.40
Water charges	22.83	20.50
Expenditure in connection with exports	8.64	8.01
Rent non-residential	9.85	12.77
Entertainment & courtesy expenses	3.14	2.73
Environmental protection	5.14	4.59
Seminar, development and training expense	2.90	1.28
Unrealised loss in investment of equity share	0.16	0.29
Publicity & public relation expense	3.62	1.94
Miscellaneous expense	49.29	50.10
Exchange variation [Net (gain) / loss]	(459.93)	(81.62)
Provision and Write off (Details at point no vi below)	(847.17)	(1526.25)
Total	647.03	162.62

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Further Details		
(i) Director's fees	0.26	0.25
(ii) Expenditure on departmental repair & maintenance:		
Plant & machinery	175.59	159.08
Buildings	31.41	33.06
Others	33.34	33.09
(iii) Expenditure on research & development	128.49	122.83
(iv) Expenditure on foreign travel		
No. of tours	302	127
Expenditure	5.57	1.92

(v) Provisions and write off

(Refer Point 10,13 of Note [2] for accounting policy on provision and impairment of assets.)

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Doubtful debts, liquidated damages and loans, advances & deposits		
Created during the year	885.10	729.55
Less: withdrawal during the year	1112.29	(227.19)
		2209.16
		(1479.61)
Contractual obligations		
Created during the year	313.68	151.95
Less: withdrawal during the year	881.27	(567.59)
		526.44
		(374.49)
Other Provisions		
Created during the year	171.95	367.26
Less: withdrawal during the year	372.24	(200.29)
		389.38
Investment written off		5.36
Bad debts written off	30.62	98.34
Liquidated damages & contractual charges charged off	113.55	233.59
Losses written off	3.73	12.68
Total	(847.17)	(1526.25)

Note [27]

Finance costs

Refer point 5 & 10 of Note [2] for accounting policy on borrowing costs and provisions.

(₹ in Crore)

Particulars	For the year ended March 31, 2023		For the year ended March 31, 2022	
Discount on commercial papers		51.17		137.41
Unwinding of provisions		160.50		156.01
Interest cost:				
Banks / Financial Institutions	296.55		47.89	
Foreign Financial Institutions	1.45		0.74	
On lease obligation	7.03		8.50	
Others	4.24	309.27	4.01	61.14
Other expenses on issuance of Commercial paper		0.49		1.40
Sub-total		521.43		355.96
Less: Borrowing cost capitalised		-		-
Total		521.43		355.96

Note [28]

Tax expenses

Refer point 12 of Note [2] for accounting policy on income taxes.

(₹ in Crore)

Particulars	For the year ended March 31, 2023		For the year ended March 31, 2022	
Current tax				
For current year	47.88		48.86	
For earlier years	(159.10)	(111.22)	(125.99)	(77.13)
Deferred tax				
For current year	114.02		108.00	
For earlier years	(0.75)	113.27	(5.12)	102.88
Total		2.05		25.75

Note [29]

Other comprehensive income / expenditure

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Income / (expenditure)		
Re measurement of defined employee benefits	(23.08)	102.72
Less: Income tax related to above items *	(5.81)	25.85
Total	(17.27)	76.87
* Includes		
Current tax	-	-
Deferred tax	(5.81)	25.85

Reconciliation of Income tax expense and accounting profit (TCI) multiplied by income tax rate

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Total Comprehensive Income / Loss (TCI) before tax (A)	456.95	573.21
Statutory income tax rate (B)	25.168%	25.168%
Tax expense C = (AXB)	115.01	144.27
Difference due to: (D)		
Expenses not deductible for tax purposes	55.33	51.90
Difference in tax due to income chargeable to tax at special rate		(0.76)
Tax effect on share of JVs Profit / Loss	(14.25)	(12.70)
Change in tax expense - earlier years	(159.85)	(131.11)
Subtotal (D)	(118.77)	(92.67)
Net Tax Expense E = (C+D)	(3.76)	51.60

Note [30]

Earnings per share

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Profit / (loss) attributable to equity shareholders	477.39	446.03
Weighted average number of equity shares	348.21	348.21
Basic and diluted earnings per share of INR 2 each	1.37	1.28

Basic earnings per equity share is computed by dividing the net profit attributable to the equity shareholders of the Company by the weightage average number of equity shares outstanding during the period. Diluted earnings per share is computed by dividing the net profit attributable to the equity shareholders of the Company by the weightage average number of equity shares considered for deriving basic earnings per equity share and also the weightage average number of equity shares that could have been issued upon conversion of all dilutive potential equity shares.

Note [31]

Dividend per share

(₹ in Crore)

Particulars	For the year ended March 31, 2023	For the year ended March 31, 2022
Proposed dividend on equity shares not recognised as liability		
Proposed final dividend of ₹ 0.40 per share for FY 2022-23 (FY 2021-22 ₹ 0.40 per share).	139.28	139.28

Proposed dividend on equity shares is subject to the approval of the shareholders of the Company at the Annual General Meeting and not recognised as liability as at the Balance Sheet date.

Note [32]

Notes to Accounts

The Consolidated financial statements relate to Bharat Heavy Electricals Limited (the Company), its interest in Joint venture entities. The Consolidated financial statements have been prepared on the following basis-

Basis of Accounting

- The financial Statements of joint ventures in the consolidation are upto the same reporting date as of the parent company respectively.
- The consolidated financial statements have been prepared in accordance with Ind AS 110 on Consolidated Financial Statements" and Ind AS-28 "Investment in Associates and Joint Ventures".

Basis of Consolidation

- The Company's interest in equity-accounted investees' comprise interests in joint venture. A joint venture is an arrangement in which the Company has joint control, whereby the Company has rights to the net assets of the arrangement, rather than rights to its assets and obligations for its liabilities. Interests in the joint venture are accounted for using the equity method. They are initially recognized at cost, which includes transaction costs. Subsequent to initial recognitions, the consolidated financials include the Company's share of profit or loss and OCI of equity-accounted investees, until the date on which significant influence or joint control ceases.

When the Group's share of losses of a joint venture exceeds the Group's interest in that joint venture, the Group discontinues recognising its share of further losses. Additional losses are recognized only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the joint venture.

- The consolidated financial statements have been prepared using uniform accounting policies for like transactions and other events in similar circumstances and are presented to the extent possible.

The Consolidated Financial statements include the results of the following entities-

Particulars	Principal place of business	Proportion of ownership	
		2022-23	2021-22
Joint Venture Companies (accounted for using equity method)			
BHEL-GE Gas Turbine Services Private Limited	India	One share less than 50%	One share less than 50%
NTPC-BHEL Power Projects Private Limited	India	50%	50%
Raichur Power Corporation Limited	India	22.14%	22.14%

- a) Interest in Joint Ventures in respect of BHEL-GE Gas Turbine Services Ltd. is considered based on unaudited financial statements for the year ended on 31.03.2023.
- b) Interest in Joint Ventures in respect of NTPC-BHEL Power Projects Pvt. Ltd, and Raichur Power Corporation Ltd. are considered based on unaudited financial statements for the year ended on 31.03.2023.
- c) Interest in joint Ventures in respect of Power Plant Performance Improvement Ltd. (PPIL) have not been considered in preparation of Consolidated Financial Statements as the company is under liquidation. Full amount of equity investment of ₹ 2 crore has been provided for as impairment.

Note [33]

Contingent liabilities and commitments

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
A. Contingent liabilities		
Claims against the company not acknowledged as debt :		
(a) Sales tax matters	1227.09	1279.61
(b) Service tax matters	606.56	920.46
(c) Court & arbitration matters	711.81	592.77
(d) Excise duty matters	166.39	162.18
(e) Customs duty and others	934.51	880.06
(f) Goods & Service Tax	4.14	-
(g) Other matters (incl. disputed staff cases)	59.69	48.37
(h) Claim towards Liquidated damages (LD)	3596.61	2872.25
Total	7306.80	6755.70

- (i) In view of various court cases, litigations and claims disputed by the Company, the outflow of resources is not ascertainable at this stage. Generally, contingent Liability in respect of court & arbitration cases are shown on award/court judgement and also reviewed on a case to case basis for its reporting in contingent liability.
- (ii) It is not practicable for the Company to estimate the timing of actual cash outflows in respect of items (a) to (g) , if any, due to pending resolution of the respective proceedings. However, the chances of cash outflow are contingent.
- (iii) Liquidated damages represents likely claims or amount withheld by customer on account of delay in execution of projects which will be settled after commissioning and trial operation of project based on delay analysis and is being disclosed in line with Ind AS -37.

(iv) Movement in contingent liabilities

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Balance at the beginning of the year	6755.70	6045.49
Less: Reduction out of opening balance	727.70	129.84
Add: Additions (net) during the year	1278.81	840.05
Balance at the end of the year	7306.80	6755.70

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
B. Commitments		
(a) Estimated amount of contracts, net of advances, remaining to be executed on capital account and not provided for.	282.05	209.20
-- (The above includes related to acquisition of intangible assets)	32.71	7.56
(b) Investment in the Joint Venture entity (NBPPL) for which the company has restrictions for their disposal for five years from the date of incorporation /commercial operation of the project/first unit of the project/completion of first EPC contract, as the case may be. This investment has been fully provided for.	50.00	50.00
(c) In view of the nature of business, being long term construction contracts there may be other commitments for purchase of material etc., which has been considered as normal business process.		

Note [34]

Current Financial liabilities includes a sum of ₹ Nil (previous year ₹ 100.51 Crore) towards guarantee fee demanded by the Government of India in respect of foreign currency loans taken by the Company at the instance of the Government upto 1990-91. Since there was no stipulation for payment of such guarantee fee at the time the loans (guaranteed by Government) were taken by the company, the same is reversed after review.

Note [35]

The Company had taken over Amorphous Silicon Solar Cell Plant (ASSCP), Gurgaon on April 1, 1999 from Ministry of New and Renewable Energy (MNRE) on lease for a period of 30 years. The formal lease agreement with the Ministry of New and Renewable Energy (MNRE) is yet to be finalised.

Note [36]

Balance shown under Trade receivables, Trade payables, contractors' advances, deposits and stock / materials lying with sub-contractors/ fabricators are subject to confirmation, reconciliation & consequential adjustment, if any. The Company is in the business of long term construction contracts, bills are raised on the customers as per contract in line with billing schedule approved by the customer and the reconciliation is carried out on ongoing basis & provisions made, wherever considered necessary. Final reconciliation with customer is done on completion of project (Trial Operation and PG Test completed). Trade Receivable of Completed Projects stand at ₹ 7963 Cr (Previous Year 7593 Cr.). Out of completed contracts, the projects reconciled with customers have outstanding trade receivables of ₹ 6185 Cr. (previous year ₹ 6376 crore).

Note [37] - SUBSIDIARY

(a) Name of subsidiary	Principal place of business	Proportion of ownership interest held by the Company		Proportion of ownership interest held by the Non Controlling Interest	
		As at		As at	
		March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022
BHEL Electrical Machines Limited	India	-	-	-	-

BHEL has transferred its stake in BHEL EML to Govt. of Kerala on August 11th, 2021.

(b) Summarized financial information of Subsidiary Company is as follows. The amounts disclosed for subsidiary are before inter- company eliminations:-

(₹ in Crore)

Summarized Balance Sheet	As at	
	March 31, 2023	March 31, 2022
Non-current assets	-	-
Current assets	-	-
Total Assets	-	-
Non-current liabilities	-	-
Current liabilities	-	-
Total Liabilities	-	-
Net Assets	-	-
Accumulated Non Controlling Interest (NCI)	-	-

(₹ in Crore)

Summarized statement of profit and loss	For the Year	
	2022-23	2021-22
Revenue	-	-
Profit/ (loss) for the year	-	(2.69)
Other Comprehensive Income	-	-
Total Comprehensive Income	-	(2.69)
Profit/ (loss) attributable to NCI	-	(1.32)

(₹ in Crore)

Summarized Cash flows	For the Year	
	2022-23	2021-22
Cash flows from operating activities	-	(0.02)
Cash flows from investing activities	-	-
Cash flows from financing activities	-	-
Net increase/ (decrease) in cash and cash equivalents	-	(0.02)

BHEL has transferred its stake in BHEL EML to Govt. of Kerala on August 11th, 2021.

Note [38] - JOINTLY CONTROLLED ENTITIES

A. Summarized financial information of the joint venture, based on its Ind-AS financial statements, and reconciliation with the carrying amount of the investment in financial statements are set out below:

(₹ in Crore)

a) Name of the joint ventures (accounted for at equity method)	Principal place of business	Proportion of ownership		Carrying Amount	
		As at March 31		As at March 31	
		2023	2022	2023	2022
BHEL-GE Gas Turbine Services Private Limited (BGGTS)	India	50% minus 1 share	50% minus 1 share	2.38	2.38
NTPC-BHEL Power Projects Private Limited (NBPPL)	India	50.00%	50.00%	-	-
Raichur Power Corporation Limited (RPCL)	India	22.14%	22.14%	664.04	664.04

(a) BGGTS is a Joint Venture Company of BHEL and GE, USA formed to take up repair & servicing of GE designed Gas Turbines.

(b) BHEL along with NTPC Limited promoted a joint venture company "NTPC- BHEL Power Projects Private Limited" for carrying out EPC contracts for Power Plants and other infrastructure Projects in India and abroad.

The Board of Directors in its meeting held on February 08, 2018 has accorded in-principle approval for pursuing the winding up of NBPPL. Ministry of Power (MoP) has advised NTPC to consider buying out the stake of BHEL and decide either to continue it as an in-house EPC arm or close it after completion of present work. This advise was noted by NBBPL Board in its meeting held on 29.08.2019.

(c) Raichur Power Corporation Limited, a joint venture company of BHEL & Karnataka Power Corporation Ltd(KPCL), has been promoted for setting up of a 2x800 MW supercritical thermal power plant at Yeramarus, Raichur, Karnataka and 1x800 MW supercritical thermal power plant at Edlapur, Raichur, Karnataka on build, own and operate basis. COD of Unit I and Unit II of Yeramarus TPP achieved in March 2017 and April 2017 respectively.

(d) The provision for impairment in value of investment in Powerplant Performance Improvement Limited amounting to ₹ 2 crore (previous year ₹ 2 crore) has been made since the Company is under liquidation and the amount paid as equity is not recoverable.

B. Summarized financial information of Joint Ventures companies of Group are as follows:-

The table below summarises financial information of Joint Venture Companies of the group accounted for at equity method. The information is as per the financial statements of the relevant Joint venture Companies and not the group's share of these amounts.

BHEL-GE Gas Turbine Services Pvt. Ltd

(₹ in Crore)

Balance Sheet	As at	
	March 31, 2023	March 31, 2022
Non-current assets	63.28	126.30
Current assets	813.49	626.37
Cash and Cash Equivalent (incl.bank balances) included in Current assets	50.02	41.97
Non-current liabilities	9.24	12.77
Non-Current financial liabilities (excluding Trade Payables)	9.24	12.77
Current liabilities	402.94	336.69
Current financial liabilities (excluding Trade Payables)	73.76	67.62

(₹ in Crore)

Statement of Profit and Loss	For the year ended	
	March 31, 2023	March 31, 2022
Revenue from operations	967.13	801.18
Interest Income	18.32	15.79
Depreciation and Amortization	8.91	9.65
Interest Expense	0.87	1.08
Income tax Expense	38.54	34.27
Profit / loss for the year	112.56	100.84
Other Comprehensive Income	(1.18)	(0.06)
Total Comprehensive Income	113.75	100.90

Raichur Power Corporation Ltd.

(₹ in Crore)

Balance Sheet	As at	
	March 31, 2023	March 31, 2022
Non-current assets	9252.93	9802.61
Current assets	3694.36	2860.89
Cash and Cash Equivalent included in Current assets	17.10	11.11
Non-current liabilities	14529.74	12856.52
Non-Current financial liabilities (excluding Trade Payables)	-	-
Current liabilities	3620.84	3895.70
Current financial liabilities (excluding Trade Payables)	3402.93	3452.34

(₹ in Crore)

Statement of Profit and Loss	For the year	
	March 31, 2023	March 31, 2022
Revenue from operations	3035.43	3198.68
Depreciation and Amortization	658.37	659.11
Interest Expense	1524.73	1704.64
Income tax Expense	-	-
Profit / (loss) for the year	(1114.58)	(678.22)
Total Comprehensive Income	(1114.58)	(678.22)

NTPC-BHEL Power Projects Pvt. Ltd.

(₹ in Crore)

Balance Sheet	As at	
	March 31, 2023	March 31, 2022
Non-current assets	198.89	223.91
Current assets	404.19	390.93
Cash and Cash Equivalent [incl. bank balances] included in Current assets	6.90	6.67
Non-current liabilities	84.48	112.86
Current liabilities	702.05	679.96
Current financial liabilities (excluding Trade Payables)	367.38	371.74

(₹ in Crore)

Statement of Profit and Loss	For the year ended	
	March 31, 2023	March 31, 2022
Revenue from operations	44.45	54.74
Depreciation and Amortization	5.79	5.81
Interest Expense	0.17	0.71
Income tax Expense	3.69	(12.86)
Profit / (loss) for the year	(5.49)	(19.87)
Total Comprehensive Income	(5.49)	(19.73)

Note [39]

Disclosure on Leases - Ind AS 116

Lease Commitments - Company as Lessee

The company's significant leasing agreements are in respect of land, building and EDP equipments. The company has entered into a rate contract for lease arrangement for computer items, printers, video conferencing equipments and peripherals. Assets taken on lease are capitalised and disclosed separately as Right-of-use assets in the property, plant and equipment. The lease rentals are allocated between interest, maintenance and principal value. The interest and maintenance charges are charged to Statement of Profit and Loss and principal amount is adjusted to lease obligations.

The company has applied the following available practical expedients :

- The short-term leases exemptions to leases with lease term less than 12 months
- The low value lease exemption to leases where underlying asset is of low value (assets of less than ₹ 50,000 in value).

a. Age-wise analysis of Lease Liabilities are as follows

(₹ in Crore)

Particulars	Future minimum lease payments		Interest		Present value [PV] of minimum lease payments	
	As at		As at		As at	
	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022	March 31, 2023	March 31, 2022
Not later than 1 year	36.62	54.51	3.52	6.60	33.10	47.91
#						
Later than 1 year and not later than 5 years	34.60	40.52	2.78	5.40	31.82	35.12
Later than 5 years	2.14	-	0.21	-	1.93	-

The amount of future minimum lease payments in respect of leases where remaining lease term as at the end of March 31,2023 is less than 12 months is ₹ 16.70 cr (Previous year ₹ 7.56 cr).

b. Movement in lease liabilities during the FY year 2022-2023

(₹ in Crore)

Particulars	As at	
	March 31, 2023	March 31, 2022
Lease Liabilities As at April 1*	84.93	101.61
Add: Additions	33.58	33.18
Add: Accretion of interest	7.03	8.50
Less : Payments/Adjustment	57.04	58.36
Lease Liabilities as at March 31*	68.50	84.93

* includes interest accrued of ₹ 1.66 crore (PY ₹ 1.90 crore) & ₹ 1.90 crore (PY ₹ 2.96 crore) as at March 31,2023 & March 31,2022 respectively

c Amounts recognised in profit or loss:

(₹ in Crore)

Particulars	For the year ended	
	March 31, 2023	March 31, 2022
Expense relating to Short-term leases	4.91	2.27
Expense relating to low value assets leases	1.26	1.23
Depreciation charge of right-of-use assets	33.00	42.35
Interest expense (included in finance cost)	7.03	8.5

d The company has various lease contracts that have not yet commenced . The future lease payments for these non-cancellable lease contracts are as follows:

(₹ in Crore)

Particulars	As at	
	March 31, 2023	March 31, 2022
Not later than 1 year	0.04	-
Later than 1 year and not later than 5 years	0.06	-
Later than 5 years	-	-

Note [40] - Disclosure on 'Employee benefits' - Ind AS 19

A. The Company has following Schemes in the nature of Defined Benefits plans :

- i) Gratuity Scheme
- ii) Post Retirement Medical Scheme
- iii) Provident Fund Scheme
- iv) Travel claim on Retirement

(i) Gratuity (Funded Plan)

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 limit of ₹ 20 Lakhs. The gratuity liability arises on account of future payments, which are required to be made in the event of retirement, death in service or withdrawal. The liability has been assessed using projected unit credit actuarial method.

Movement in net defined benefit (asset)/liability on Gratuity plan

(₹ in Crore)

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset) liability	
	As at March, 31					
	2023	2022	2023	2022	2023	2022
Opening balance	1933.60	2011.42	1581.44	1697.44	352.16	313.98
Add/(less) Adjustment on sale of stake in subsidiary	-	(6.16)	-	-	-	(6.16)
Included in Profit for the Year :						
Current Service Cost	89.49	95.78	-	-	89.49	95.78
Past Service Cost	-	-	-	-	-	-
Interest cost /(income)	135.35	135.35	110.70	135.35	24.65	-
Total amount recognised in Profit for the Year	224.84	231.13	110.70	135.35	114.14	95.78

Movement in net defined benefit (asset)/liability on Gratuity plan

(₹ in Crore)

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset) liability	
	As at March, 31					
	2023	2022	2023	2022	2023	2022
Included in Other Comprehensive income (OCI) :						
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Change in Demographic Assumption	(19.36)	-	-	-	(19.36)	-
Change in Financial Assumption	(74.88)	(47.57)	-	-	(74.88)	(47.57)
Experience Adjustment	23.95	(19.22)	(0.73)	(15.35)	24.68	(3.87)
Total amount recognised in other comprehensive income	(70.29)	(66.79)	(0.73)	(15.35)	(69.56)	(51.44)
Others						
Contributions paid by the Employer	-	-	-	-	-	-
Benefits paid	(237.93)	(236.00)	(237.93)	(236.00)	-	-
Unpaid Benefits paid						
Closing balance	1850.22	1933.60	1453.48	1581.44	396.74	352.16

Details of Plan assets

Particulars	As at March 31, 2023	As at March 31, 2022
Funds managed by Insurer	79.03%	76.96%
High quality Corporate bonds (quoted)	16.52%	19.55%
State Government securities (quoted)	3.00%	2.80%
Bank Balance	1.45%	0.69%
Total	100.00%	100.00%

Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date.

Particulars	As at March 31, 2023	As at March 31, 2022
Economic assumptions:		
Discount rate	7.40%	7.00%
Salary escalation rate	6.50% P.A. for 1st 4 yrs. & then 6% P.A. thereafter	6.50% P.A. for 1st 4 yrs. & then 6% P.A. thereafter
Demographic assumptions:		
Retirement age	60	60
Mortality table	100% of IALM (2012-14)	100% of IALM (2012-14)
Withdrawal rate % (All ages)		
Upto 30 Years	3%	3%
From 31 to 44 years	1%	2%
Above 44 years	1%	1%

Sensitivity analysis

The sensitivity of the defined benefit obligation to changes in the significant principal assumptions is:

(₹ in Crore)

Particulars	Gratuity			
	As at March 31, 2023		As at March 31, 2022	
	Increase	Decrease	Increase	Decrease
Change in Discount rate (0.50% movement)	(91.64)	99.80	(91.26)	99.51
Change in Salary escalation rate (0.50% movement)	36.56	(42.09)	43.70	(47.40)

Sensitivities due to mortality and withdrawals are not material and hence impact of change due to these are not calculated.

Sensitivities as rate of increase of pensions in payment, rate of increase of pensions before retirement & life expectancy are not applicable.

The sensitivity analysis above has 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.

Expected maturity analysis of the gratuity plan in future years

(₹ in Crore)

Particulars	Gratuity	
	As at March 31, 2023	As at March 31, 2022
Less than 1 year	160.65	213.13
Between 1-2 years	135.51	149.43
Between 2-3 years	113.15	134.26
Between 3-4 years	100.52	112.14
Between 4-5 years	88.94	98.80
Between 5-6 years	80.57	87.74
Over 6 years	1170.88	1138.10
Total	1850.22	1933.60

Expected contributions to gratuity plans for the year ending 31 March 2024 are ₹ 102.96 crore

The weighted average duration of the gratuity defined benefit plan obligation at the end of the reporting period is 14.60 years (31 March 2022: 14.81 years.)

Risk Exposures

Valuations are based on certain assumptions, which are dynamic in nature and vary over time. As such, company is exposed to various risks such as increase in salary, investment risk, discount rate, mortality, disability and withdrawals.

(ii) Post Retirement Medical Benefits (Funded Plan)

The Company has Post-Retirement Medical benefit (PRMB), under which the retired employees and their spouses are provided medical facilities in the Company hospitals/empanelled hospitals subject to company medical rules. 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.

Movement in net defined benefit (asset)/liability on Post retirement Medical Benefit Plan

(₹ in Crore)

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset) liability	
	As at March, 31					
	2023	2022	2023	2022	2023	2022
Opening balance	2210.85	2255.85	1919.34	1948.72	291.51	307.13
Add/(less) Adjustment on sale of stake in subsidiary	-	-	-	-0.38	-	0.38
Included in Profit for the Year :						
Current service cost	40.29	39.26	-	-	40.29	39.26
Past service Cost	-	-	-	-	-	-
Interest cost / (income)	154.76	152.27	134.36	152.27	20.40	-
Total amount recognised in Profit for the Year	195.05	191.53	134.36	152.27	60.69	39.64
Included in Other Comprehensive Income (OCI):						
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	18.72	-	-	-	18.72	-
Financial assumptions	(96.85)	(54.57)	-	-	(96.85)	(54.57)
Experience adjustment	109.13	(16.96)	(34.48)	(16.27)	143.61	(0.69)
Total amount recognised in other comprehensive income	31.00	(71.53)	(34.48)	(16.27)	65.48	(55.26)
Others						
Contributions paid by the employer						
Benefits paid	(187.30)	(165.00)	(187.30)	(165.00)	-	-
Closing balance	2249.60	2210.85	1831.92	1919.34	417.68	291.51

The plan assets of the Company are managed by Life Insurance Corporation of India through a trust managed by the Company in terms of an insurance policy taken to fund obligations of the Company

Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date.

Particulars	As at March 31, 2023	As at March 31, 2022
Economic assumptions:		
Discount rate	7.40%	7.00%
Salary escalation rate	6.50% P.A. for 1st 4 yrs. & then 6% P.A. thereafter	6.50% P.A. for 1st 4 yrs. & then 6% P.A. thereafter
Demographic assumptions:		
Retirement age	60	60
Mortality table	100% of IALM (2012-14)	100% of IALM (2012-14)
Withdrawal rate (All ages)		
Upto 30 Years	3%	3%
From 31 to 44 years	1%	2%
Above 44 years	1%	1%

Sensitivity analysis

The sensitivity of the defined benefit obligation to changes in the significant principal assumptions is:

(₹ in Crore)

Particulars	Post Retirement Medical Benefit			
	As at March 31, 2023		As at March 31, 2022	
	Increase	Decrease	Increase	Decrease
Change in Discount rate (0.50% movement)	(105.76)	104.84	(100.44)	101.60
Change in cost (0.50% movement)	106.07	(104.21)	101.79	(100.97)

Sensitivity due to mortality and withdrawals are not material and hence impact of change not calculated.

The sensitivity analysis above has 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.

Expected maturity analysis of the Post retirement medical Benefit plan in future years

(₹ in Crore)

Particulars	Post Retirement Medical Benefit	
	As at March 31, 2023	As at March 31, 2022
Less than 1 year	183.29	133.39
Between 1-2 years	198.87	140.73
Between 2-3 years	203.84	149.11
Between 3-4 years	210.98	158.65
Between 4-5 years	220.47	169.44
Between 5-6 years	228.18	181.98
Over 6 years	1003.97	1277.55
Total	2249.60	2210.85

Expected contributions to Post retirement medical benefit plan for the year ending 31 March 2024 are ₹ 49.81 crore.

The weighted average duration of the post retirement medical benefit plan obligation at the end of the reporting period is 12.34 years (31 March 2022: 12.78 years)

Risk Exposure

Valuations are based on certain assumptions, which are dynamic in nature and vary over time. As such company is exposed to various risks such as increase in medical cost, investment risk, discount rate, mortality, disability and withdrawals.

(iii) 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. Wherever as per the actuarial valuation certificate liability for likely interest shortfall arises, the same has been provided in the accounts.

Details of interest shortfall in PF Trust

(₹ in Crore)

Particulars	For the year ended	
	2022-23	2021-22
Excess / (Shortfall) in PF interest liability based on actuarial valuation for the year	(14.90)	1.26
Accumulated provision for shortfall in PF interest liability based on actuarial valuation	28.10	13.20
Remeasurement gain/(loss) recognised through other comprehensive income statement	(24.20)	(1.39)
Interest shortfall / (surplus) accounted through Statement of Profit & Loss	(9.30)	(2.65)

The Company has PF trusts located at various places covering the employees of the Company and managed separately, the details of plan assets and obligations are as follows :

(₹ in Crore)

Location	Defined benefit obligation		Fair value of plan assets		Surplus / (Shortfall)	
	As at March, 31					
	2023	2022	2023	2022	2023	2022
BHEL EPF Trust,Ranipur,Hardwar	1764.84	1664.32	1776.01	1680.03	11.17	15.71
BHEL Employee Provident Fund-Trichy	916.65	935.88	906.77	929.35	(9.88)	(6.53)
BHEL Employee Provident Fund Bhopal	1493.84	1394.81	1487.41	1395.61	(6.43)	0.80
BHEL New Delhi Employees Provident Fund Trust	1433.99	1375.80	1433.50	1386.09	(0.49)	10.29
BHEL Employee Provident Fund-Hyderabad	843.58	823.06	871.94	853.42	28.36	30.36
BHEL PPD EPF Trust,Chennai	907.95	854.23	896.65	847.56	(11.30)	(6.67)
BHEL Employee Provident Fund-Bengaluru	614.87	620.46	626.89	627.07	12.02	6.61
BHEL (BAP Unit) EPF Trust,Ranipet	332.24	357.05	332.46	359.84	0.22	2.79
BHEL Employee Provident Fund Trust Jhansi	476.99	455.36	491.52	468.66	14.53	13.30
Bharat Heavy Plates & Vesseles Limited Employee Contributory Provident Fund-Vizag	148.74	145.91	186.84	179.46	38.10	33.55
Total	8933.69	8626.88	9009.99	8727.09	76.30	100.21

Movement in net defined benefit (asset)/liability on Provident Fund

(₹ in Crore)

Particulars	BHEL Employees Provident Fund Trust (Consolidated)			
	Defined benefit obligation		Fair value of plan assets	
	As at March 31, 2023	As at March 31, 2022	As at March 31, 2023	As at March 31, 2022
Opening balance	8626.88	8395.04	8727.09	8465.86
Included in Profit for the Year :				
Current service cost	353.89	337.15	-	-
Interest cost / (income)	683.04	657.45	683.04	657.45
Total amount recognised in Profit for the Year	1,036.93	994.60	683.04	657.45
Included in Other Comprehensive Income (OCI):				
Remeasurement loss (gain):				
Actuarial loss (gain) arising from:				
Demographic assumptions				
Financial assumptions	(1.22)	(1.65)	-	-
Experience adjustment	(4.04)	3.54	(29.15)	31.28
Total amount recognised in other comprehensive income	(5.26)	1.89	(29.15)	31.28
Others				
Contributions paid by the employer	-		353.89	337.15
Employee Contribution	717.79	725.84	717.79	725.84
Benefits paid	(1862.90)	(1904.95)	(1862.90)	(1904.95)
Settlements/Transfer-in	420.24	414.46	420.24	414.46
Closing balance	8933.68	8626.88	9009.99	8727.09

Note: Intrest shortfall in respect of PF trusts having deficit have been accounted during the year through statement of profit and loss account and other comprehensive income statement.

In addition to the above, diminution in PF Trust Investment is also cumulatively provided totalling to ₹ 68.47 Cr. based on the best possible assessment of recovery.

Details of Plan assets

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Govt. of India securities [Quoted]	905.49	1026.09
State Government securities [Quoted]	4451.33	4061.08
Corporate bonds [Quoted]	3017.93	3062.28
Special Deposit [Unquoted]	364.71	384.27
Liquid Fund [Quoted]	17.19	14.25
Short term deposit [Unquoted]	33.46	13.07
Mutual Fund & Equity shares[Quoted]	219.88	166.05
Total	9009.99	8727.09

Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date.

Particulars	As at March 31, 2023	As at March 31, 2022
Economic assumptions:		
Discount rate	7.40%	7.00%
Expected statutory interest rate on the ledger balance	8.15%	8.10%
Expected short fall in interest earnings on the fund	0.05%	0.05%
Demographic assumptions:		
Mortality table	100% of IALM (2012-14)	100% of IALM (2012-14)
Withdrawal rate % (All ages)		
Upto 30 Years	3.00%	3.00%
From 31 to 44 years	1.00%	2.00%
Above 44 years	1.00%	1.00%

Sensitivity analysis

The sensitivity of the defined benefit obligation to changes in the significant principal assumptions is:

(₹ in Crore)

Particulars	BHEL Employees Provident Fund Trust			
	As at March 31, 2023		As at March 31, 2022	
	Increase	Decrease	Increase	Decrease
Change in Discount rate (0.50% movement)	(1.67)	1.83	(1.30)	1.38

Expected maturity analysis in future years

(₹ in Crore)

Particulars	Provident Fund	
	As at March 31, 2023	As at March 31, 2022
Within the next 12 months	860.93	916.15
Between 2-5 years	1706.54	1681.13
Between 5-10 years	1396.90	2150.37
Beyond 10 years	4969.31	3879.23
Total	8933.68	8626.88

(iv) Travel claim on retirement- (Settlement Allowance - Unfunded Plan)

The settlement allowance is the expenditure reimbursed to an employee towards travel and shifting of baggage for proceeding to home town or any place in India where he or she intends to settle after retirement or death in service for self (including members of his/her family).

Movement in Settlement Allowance liability

(₹ in Crore)

Particulars	Settlement Allowance liability	
	As at March 31, 2023	As at March 31, 2022
Opening balance	11.63	10.30
Current service cost	0.81	0.69
Interest cost / income	0.81	0.69
Included in Profit for the Year :	1.62	1.38
Actuarial loss / (gain)	2.97	2.60
Total amount recognised in TCI for the Year	4.59	3.98
Others		
Contributions paid by the employer	-	-
Benefits paid	(2.79)	(2.65)
Closing balance	13.43	11.63

Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date.

Particulars	Settlement Allowance	
	As at March 31, 2023	As at March 31, 2022
Economic assumptions:		
Discount rate	7.40%	7.00%
Salary escalation rate	6.50% P.A. for 1st 4 yrs. & then 6% P.A. thereafter	6.50% P.A. for 1st 4 yrs. & then 6% P.A. thereafter
Demographic assumptions:		
Retirement age	60	60
Mortality table	100% of IALM (2012-14)	
Withdrawal rates (All ages)		
Upto 30 Years	3%	3%
From 31 to 44 years	1%	2%
Above 44 years	1%	1%

B. Long term Leave Liability (Encashable Leave -EL /Half Pay Leave-HPL) - (Unfunded Plan)

The company provides for earned leave benefit and half pay leave to the employees of the company which accrue half yearly at 15 days (maximum) and 10 days respectively. The earned leave is encashable while in service subject to fulfilment of certain conditions. On retirement/superannuation, earned leave & half pay leave put together upto a maximum of 300 days is encashable subject to company policies & leave encashment rules. The leave liability has been treated as other long term benefits and has been assessed using projected unit credit actuarial method.

Movement in long term leave liability

(₹ in Crore)

Particulars	Long Term Leave Liability	
	As at March 31, 2023	As at March 31, 2022
Opening balance	1030.72	1242.08
Add/(less) Adjustment of sale of stake in subsidiary	-	(0.34)
Included in Profit for the Year :		
Current service cost	130.91	142.00
Interest cost (income)	72.15	83.82
Actuarial loss (gain)	(61.60)	(181.51)
Total amount recognised in Profit for the Year	141.46	44.31
Benefits paid	135.00	255.33
Closing balance	1037.18	1030.72

Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date.

Particulars	Long Term Leave Liability	
	As at March 31, 2023	As at March 31, 2022
Economic assumptions:		
Discount rate	7.40%	7.00%
Salary escalation rate	6.50% P.A. for 1st 4 yrs. & then 6% P.A. thereafter	6.50% P.A. for 1st 4 yrs. & then 6% P.A. thereafter
Demographic assumptions:		
Retirement age	60	60
Mortality table	100% of IALM (2012-14)	
Withdrawal rates (All ages)		
Upto 30 Years	3%	3%
From 31 to 44 years	1%	2%
Above 44 years	1%	1%

C. Pension Fund

The Company has recognised ₹ 247 cr [PY ₹ 254 cr] as contribution in respect of pension scheme [defined contribution plan] for the FY 2022-23

Note [41] - Disclosure as per Ind AS 24 - Related Parties

A. List of related parties

(i)		BHEL-GE Gas Turbine Services Pvt. Ltd. (BGTS)
Joint venture companies		NTPC-BHEL Power Projects Pvt. Ltd. (NBPPL) Raichur Power Corporation Ltd. (RPCL) Powerplant Performance Improvement Ltd. (PPIL)
Post employment benefit plans		Provident fund trusts Gratuity trust PRMB Trust Pension Trust
Others		Central Government controlled entities

The company is a central Public Sector undertaking under the administrative control of Ministry of Heavy Industries and majority of its stake is held by Government of India. The significant transactions are with other PSUs, State owned utilities, Railways etc. which are also controlled by Govt. of India directly or indirectly. The transactions with such entities are normal, based on market driven rates at arms length price.

ii) Other related parties:

a. Key Management Personnel [KMP]

Particulars	Designation	Position Held [w.e.f /upto]
Functional Directors		
Shri [Dr.] Nalin Shinghal	Chairman & Managing Director	
Shri Subodh Gupta	Director (Finance) & CFO	
Ms. Renuka Gera	Director (IS & P)	
Shri Upinder Singh Matharu	Director (Power)	
Shri. Jai Prakash Srivastava	Director (E, R&D)	w.e.f. August 12, 2022
Company Secretary		
Shri Rajeev Kalra	Company Secretary	

(₹ in Crore)

Particulars	For the year ended	
	March 31,2023	March 31,2022
Compensation to Key management personnel		
- Short term employee benefits	2.85	3.29
- Post employment benefits	0.50	0.38
- Other long term benefits	-	-
- Termination benefits	-	-
- Share based payment	-	-
Total	3.35	3.67

b. Government Director/Independent Director

Name	Government/Independent	Held [w.e.f /upto]
Shri Shashank Priya	Government Director	upto 14.02.2023
Shri Vijay Mittal	Government Director	
Smt. Arti Bhatnagar	Government Director	w.e.f. 14.02.2023
Shri Raj Kamal Bindal	Independent Director	upto 27.01.2023
Shri Manish Kapoor	Independent Director	upto 27.01.2023
Shri (Dr.) Raj K. Agarwal	Independent Director	upto 12.09.2022
Shri (Dr.) K. Sivaprasad	Independent Director	
Smt.(Dr.) Lekhasri Samantsinghar	Independent Director	
Shri Aditya Prasad Sahu	Independent Director	upto 30.05.2022

(₹ in Crore)

Particulars	For the year ended	
	March 31, 2023	March 31, 2022
Sitting Fees -- Independent Directors	0.26	0.25

B Transactions with Post Employment Benefit Plans managed through separate trust

(₹ in Crore)

Name of the Trust	Post Employment benefit plan	Contribution by employer	
		For the year ended March 31	
		2023	2022
PRMB Trust	Post Retirement medical scheme	-	-
Gratuity Trust	Gratuity	-	-
Employees Superannuation Fund	Pension Fund	246.95	115.00
BHEL EPF Trust,Ranipur,Hardwar	Provident Fund	57.81	55.13
BHEL Employee Provident Fund-Trichy	Provident Fund	56.00	53.43
BHEL Employee Provident Fund Bhopal	Provident Fund	56.25	53.03
BHEL New Delhi Employees Provident Fund Trust	Provident Fund	44.01	41.46
BHEL Employee Provident Fund-Hyderabad	Provident Fund	42.45	40.56
BHEL PPD EPF Trust,Chennai	Provident Fund	30.67	28.21
BHEL Employee Provident Fund-Bengaluru	Provident Fund	28.60	27.75
BHEL (BAP Unit) EPF Trust,Ranipet	Provident Fund	17.83	18.58
BHEL Employee Provident Fund Trust Jhansi	Provident Fund	13.77	13.19
Bharat Heavy Plates & Vesseles Limited Employee Contributory Provident Fund-Vizag	Provident Fund	6.50	5.81



C) Details of Transactions with Joint Ventures and Balances

Consolidated

(₹ in Crore)

Particulars	For the year ended	
	March 31,2023	March 31,2022
Sale of Goods & Services		
BGGTS	239.24	281.48
RPCL	9.42	3.27
NBPPL	2.21	3.83
Dividend income		
BGGTS	26.18	30.35
Royalty income		
BGGTS	1.85	1.80
Purchase of Goods and Services		
BGGTS	0.87	1.04
NBPPL	-	1.52
Amounts due to BHEL at the end of the year		
BGGTS	112.07	143.55
RPCL	636.90	550.90
NBPPL	225.17	263.89
Amounts due from BHEL (incl. advances) at the end of the year		
BGGTS	0.44	0.11
RPCL	20.90	20.95
NBPPL	23.58	67.95
Provision for Doubtful debts & advances		
BGGTS	10.27	-
RPCL	20.81	20.17
NBPPL	190.15	188.70

Note: refer note[5a] for provision for dimunition in value of investments

Note [42] - Disclosure [Movement in provisions] - Ind AS - 37

(₹ in Crore)

a. Liquidated Damages	As at	
	March 31,2023	March 31,2022
Opening Balance	8559.20	9511.80
Add: Additions	259.62	152.07
Less: Usage/ Write off/payment	86.73	111.76
Less: Withdrawal/adjustments	497.42	992.91
Closing Balance	8234.67	8559.20

Liquidated damages are provided in line with the Accounting Policy of the Company and the same is dealt suitably in the accounts on settlement or otherwise. Contingent liability relating to liquidated damages is shown in Para A(h) of Note 33.

(₹ in Crore)

b. Contractual Obligation	As at	
	March 31,2023	March 31,2022
Opening Balance		
As disclosed in Note (19)	3855.48	3992.45
As disclosed in Note (6)	708.05	723.45
As disclosed in Note (9)	632.23	699.86
Add: Borrowing Cost	160.11	155.78
Add: Additions	409.04	277.50
Less: PV Adjustment	94.65	107.45
Less: Usage/ Write off/payment	192.24	88.78
Less: Withdrawal/adjustments	688.44	438.94
Add/(Less): Change in estimate and rates	(0.71)	(18.11)
Closing Balance		
As disclosed in Note (19)	3774.42	3855.48
As disclosed in Note (6)	552.05	708.05
As disclosed in Note (9)	462.40	632.23

The provision for contractual obligation is made considering the effect of time value of money in line with significant Accounting Policy No. 10 to meet the warranty obligations as per the terms and conditions of the contract. The same is retained till the completion of the warranty obligations of the contract. The actual expenses on warranty obligation may vary from contract to contract and on year to year depending upon the terms and conditions of the respective contract. Contractual obligation, pertaining to dues from projects fully provided for, disclosed in Non Current Allowances for B&D Debts in Note 6 and 9.

Note [43] - Disclosure - Revenue from Contracts with Customers - Ind AS-115

a. Movement in impairment provisions

(₹ in Crore)

Particulars	2022-23		2021-22	
	Trade receivables	Contract assets	Trade receivables	Contract assets
Opening balance	4314.79	1190.54	4890.48	1,142.25
Add: Additions	279.02	271.45	344.18	146.78
Less: Write off	57.46	-	216.42	-
Less: Reversal*	213.90	83.34	703.45	98.49
Closing balance	4322.46	1378.65	4314.79	1190.54

*incl. adjustment on sale of stake in subsidiary ₹ (3.36 cr)

b. Disaggregation of revenue from contracts with customers

(₹ in Crore)

Particulars	Power		Industry		Total
	Within India	Outside India	Within India	Outside India	

2022-23

Revenue from customers

Timing of revenue recognition

(a) At a point in time (product/services)	2640.50	32.82	3335.32	44.57	6053.21
(b) Over time (projects)	13903.36	922.29	1181.90	75.54	16083.09

2021-22

Revenue from customers

Timing of revenue recognition

(a) At a point in time (product/services)	2035.30	22.46	3952.87	35.65	6046.28
(b) Over time (projects)	11844.60	1458.89	802.88	0.73	14107.10

(₹ in Crore)

Particulars	2022-23		2021-22	
	Power	Industry	Power	Industry
Revenue from customers				
CPSUs	5581.63	1639.38	3807.92	1405.00
TSGENCO	1874.88	-	2644.40	-
TANGEDCO	3112.02	-	1669.85	-
BIFPCL [Bangladesh]	831.59	-	1381.44	-

c. Contract Balances (net of provisions)

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Trade Receivables	6543.89	6228.59
Contract assets (incl. unbilled revenue)	29740.03	26939.87
Contract liabilities	5635.01	6047.76

d. Contract revenue recognised

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Revenue recognised against contract liabilities (adjustment of customer advances and valuation adjustment during the year)	3024.72	3592.89
Revenue recognised against performance obligation satisfied in previous year (impact due to change in contract revenue)	892.15	94.41

Construction of power projects is a long cycle business, where the contracts received by the company are either EPC contracts (Engineering, Procurement & Construction) or BTG Packages (i.e. Boiler, Turbine and Generator packages). Power projects are long gestation period projects with normal execution period of contract ranging between 3 to 5 years. BHEL scope of services includes supply of equipment, erection, commissioning, synchronizing the plant to the grid, completing the trial operation and providing the guaranteed parameters.

Although there are several components to the overall scope, such projects are generally considered one performance obligation. The control transfers simultaneously over the execution period as the entity performs rather than at discrete points in time and hence revenue is recognized over the period of time based on measure of progress (input cost method)

Note [44] - Disclosure pursuant to Ind AS-107 [Financial Instruments - Accounting Classifications and Fair value measurements]

a. The Fair value of cash and cash equivalents, bank balances, loans, trade receivables, trade payables, security deposit and others reasonably approximates their carrying amount. Trade receivables are evaluated after taking into consideration for Expected Credit Losses. Company uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation technique.

Fair value hierarchy

The fair value of financial instruments have been classified in following categories depending on the inputs used in the valuation technique.

Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e., as prices) or indirectly (i.e., derived from prices)

Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs)

(₹ in Crore)

Financial assets and liabilities measured at fair value- recurring fair value measurements	Level 3 Hierarchy	
	As at March 31, 2023	As at March 31, 2022
Financial assets:		
Investment in unquoted equity instruments	3.13	3.29

b. Valuation Techniques used to determine fair value

Fair value of unquoted equity instruments is determined using Level 3 inputs which include inputs from the financial statements of the investee Company based on Net asset value per share.

Reconciliation of fair value measurement of unquoted equity shares classified as FVTPL assets

(₹ in Crore)

As at March 31, 2022	3.29
Changes in fair value	(0.16)
As at March 31, 2023	3.13

Financial Risk Management

Objectives and Policies

The company's activities are exposed to different financial risks arising out of natural business exposures to any company operating in the sector. The management of financial risk has always been an integral part of the company's business strategies and policies. The company reviews and aligns its policies and guidelines from time to time to address the financial risks in line with the needs and expectations of its various stakeholders. Exposure risk from the use of financial instruments can be categorized as under:

- a. Credit risk
- b. Liquidity risk
- c. 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, and management of Company's capital. Further quantitative disclosures are included throughout these financial statements.

Risk management framework

BHEL has in place a Board approved Risk Management Charter & Policy which provides overall framework for Risk Management in the company. The objective of the charter is to ensure that the risks are being properly identified, assessed and effectively managed by adopting suitable risk mitigation measures. The company has 3-layer risk management framework. At the first level, the Board Level Risk Management Committee (BLRMC) of the company is assigned with responsibility of reviewing the company's Risk Governance structure, Risk Assessment & Risk Management framework, Guidelines, Policies and Processes thereof. Risk Management Steering Committee (RMSC) at the second level is responsible for adopting & implementing the risk management framework and leading the risk management initiative across the company. Chief Risk Officer (CRO) being the convener of BLRMC & RMSC is responsible for periodic reporting on risk management to Board/ BLRMC. Key risks being faced by the company are analysed starting from Unit level for their respective areas to prepare risk mitigation plans and to ensure implementation.

a) Management of Credit Risk

Credit risk is considered as an integral part of risk reward balance of doing business. BHEL is involved in setting up of power projects pertaining to Government sector (State utilities, PSU's, Railways and other govt. departments etc.) and private sectors in India and abroad. The projects are generally funded by Financial Institutions/ banks or payments are covered by Letter of Credit (LC). The project duration ranges from 3 to 5 years and payments are generally realised in stages as per the terms of the contract including advance, progress payments, milestone (including intermediate) payments and also retentions which are released on completion of such projects. Since majority customers' profile pertains to Government sector, constituting 80% of total receivables coupled with the fact that the company itself is a CPSE, credit risk is relatively low. In respect of private sector customers, the payment terms are mainly through LC. The company has well established review mechanism for receivables at various levels within organisation to ensure proper attention and focus for realisation in line with the company policies, procedures and guidelines. The company uses expected credit loss model to assess the impairment loss or gain and the disclosure of the same is made elsewhere. Further, adequate provisions are maintained to address any eventuality.

(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:

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Financial assets for which loss allowance is measured using 12 months Expected Credit Losses (ECL)		
Cash and cash equivalents	1560.52	732.62
Other bank balances	5082.06	6421.07
Other financial assets	362.19	298.29
Financial assets for which loss allowance is measured using Life time Expected Credit Losses (ECL) including impairment loss		
Trade receivables	6543.89	6228.59

Concentration of credit risk- Geographical	Percentage of total receivable	
	As at March 31, 2023	As at March 31, 2022
Within India	94%	93%
Outside India	6%	7%
Total	100%	100%

The company's exposure to credit risk for trade receivables, contract assets and other receivables by type of counterparty are as follows:

Note	Percentage of total trade receivables	
	As at March 31, 2023	As at March 31, 2022
Central Public Sector Undertakings incl Railways and Govt Deptt	39%	37%
State Electricity Boards	41%	42%
Private Customers and others	14%	14%
Exports	6%	7%
Total	100%	100%

(ii) Impairment 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.

The movement in the allowance for impairment in respect of loans during the year was as follows:

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Balance as at April 1	14.56	31.95
Impairment loss recognised / write off/ withdrawal	0.35	(17.39)
Balance as at March 31	14.91	14.56

(b) Reconciliation of impairment loss provisions

The movement in the allowance for impairment in respect of trade receivables and contract assets during the year was as follows:

(₹ in Crore)

Particulars	As at March 31, 2023	As at March 31, 2022
Balance as at April 1	5505.33	6032.73
Impairment loss recognised	550.47	490.97
Amounts written off/ withdrawal (incl adj)	(354.69)	(1018.37)
Balance as at March 31	5701.11	5505.33

The company makes investments out of surplus funds as per policy of the company duly approved by the Board and in line with the DPE guidelines. Credit risk on cash and cash equivalents and term deposits is very limited as the company generally invests in deposits with financially strong banks and financial institutions with high credit ratings assigned by credit rating agencies.

(b) Management of Liquidity risk

The Company manages liquidity risk by maintaining sufficient cash and cash equivalents including term deposits and the availability of Funding through an adequate amount of credit facilities to meet obligations as and when due. Robust cash management system and regular monitoring of cash flows enables management to plan and maintain adequate sources to finance its funds requirement throughout the year. Besides adequate cash and bank balances, company enjoys credit facilities. The company is able to meet all its fund requirements from internal resources i.e. the funds generated from operations and also through short-term borrowings for better treasury management operations.

The following are the contractual maturities of non-derivative financial liabilities, based on contractual cash flows:

(₹ in Crore)

Financial Liabilities	As at March 31,2023		As at March 31,2022	
	Within 1 year	exceeding 1 year	Within 1 year	exceeding 1 year
Non-derivative financial liabilities				
Trade payables	9895.83	2194.03	7749.59	2131.93
Deposits from contractors and others	416.66	247.10	431.36	206.45
Finance Lease Obligation	34.76	33.75	49.81	35.12
Other Payables/liabilities				
Employee dues	384.33		214.05	
Other dues	364.44		397.85	
Capex dues	111.50	8.60	80.83	8.65
Short term borrowings	5385.00		4745.00	
Total	16592.52	2483.48	13668.49	2382.15

c Management of Market risk

The Company is exposed to certain currency, commodity, interest rate risks arising from its operations. The company has foreign exchange risk management policy to cover the foreign exchange risks. To insulate the company against major commodity price fluctuation, framework agreements including price pass through claims are being entered regularly with supply chain partners including suppliers and customers. Surplus funds generated from operation are kept invested in short term deposits with PSU Banks or large sized private banks only and in debt based schemes of public sector mutual funds, thereby minimizing any chance of risk.

Foreign currency risk exposure -: The company's exposure to foreign currency risk at the end of reporting period, are as follows:

- (i) The derivative instruments that are hedged and outstanding as on 31.03.2023 is NIL (previous year Nil)
(ii) The foreign currency exposures that are not hedged by a derivative instrument or otherwise are as under:

FC ' in Million
(₹ in Crore)

Particulars	As at		As at		As at	
	March 31, 2023		March 31, 2022		March 31, 2023	March 31, 2022
Assets	Euro	Equivalent INR	Euro	Equivalent INR	Others INR	Others (INR)
Trade receivable	55.50	496.43	61.72	520.18	3.44	3.16
Contract assets	332.04	2959.08	327.57	2753.33	11.92	35.27
Other assets	1.24	10.29	0.93	7.56	75.49	21.98
Sub Total (A)	388.78	3465.80	390.22	3281.07	90.84	60.41
Liabilities						
Advances from customer	36.15	240.84	36.42	242.50	22.65	39.47
Trade payables and others	34.70	315.32	101.40	869.73	579.03	131.99
Sub Total (B)	70.85	556.15	137.82	1112.23	601.68	171.46
Assets (Net of Liabilities)	317.93	2909.64	252.40	2,168.84	(510.83)	(111.05)

Assets	USD	Equivalent INR	USD	Equivalent INR
Trade receivable	70.72	579.07	64.88	489.70
Contract assets	322.62	2640.15	333.77	2517.59
Other assets	0.36	2.41	6.08	45.30
Sub Total (A)	393.70	3221.63	404.73	3052.59
Liabilities				
Advances from customer	58.00	326.40	78.92	457.24
Trade payables and others	97.39	806.03	161.30	1231.18
Short term borrowings	-	-	-	-
Sub Total (B)	155.40	1132.43	240.22	1,688.42
Assets (Net of Liabilities)	238.31	2,089.21	164.51	1,364.17

The above figures are net of provisions, if any



Sensitivity analysis

The impact of strengthening/weakening of the Indian Rupee vis a vis USD,EURO and others as at year end on profit or loss is as shown below. This analysis is based on foreign currency exchange rate variances that the company considered to be reasonably possible at the end of the reporting period. The analysis is performed on the same basis for previous year, albeit that the reasonably possible foreign exchange rate variances were different, as indicated below.

(₹ in Crore)

Particulars	As at		As at	
	March 31, 2023		March 31, 2022	
Effect on Profit/(loss)	Strengthening	Weakening	Strengthening	Weakening
1% movement				
Euro	29.10	(29.10)	21.69	(21.69)
USD	20.89	(20.89)	13.64	(13.64)
Others	(5.11)	5.11	(1.11)	1.11

Capital Management

The company's objective, while managing capital is to continue business as a going concern, safeguard, preserve and enhance its capital to provide maximum return to shareholders, benefits to other stakeholders and to maintain an optimal capital structure to reduce the cost of capital. The Board of Directors also monitors the level of dividends to equity shareholders. The Company monitors capital, using a medium term view and long term view, on the basis of a number of financial ratios generally used by industry as well as by the rating agencies. The Company is not subject to externally imposed capital requirements. The Company's capital structure is managed against the various financial ratios as required to maintain highest credit ratings.

Note [45] - Consolidated Operating Segment

The Segments have been identified as 'Power' and 'Industry', based on the orders booked by the respective business sectors. These segments are driven by the three business sectors i.e. Power Sector, Industry sector, International Operations.

The Power segment comprises mainly thermal, gas, hydro and nuclear power plant businesses, related spares & services business apart from new businesses of coal to chemicals, emission control equipment and spares for Non-BHEL sets.

The Industry segment caters to major equipment supplies and EPC works for a variety of sectors including transportation, transmission, defence & aerospace, captive power, renewables, downstream oil & gas, energy storage, and electric mobility, among others.

The order booked by International operation group is taken to Power or Industry as the case may be.

The Company's Committee of functional Directors has been identified as Chief Operating Decision maker (CODM).

(₹ in Crore)

Particulars	For the year ended 31.3.2023			For the year ended 31.3.2022		
	Power	Industry	Total	Power	Industry	Total
I. SEGMENT REVENUE						
Operating Revenue-External	17498.98	4637.32	22136.30	15361.25	4792.13	20153.38
II. SEGMENT RESULTS						
a. Segment Results	1400.32	432.53	1832.85	1949.24	(41.42)	1907.82
b. Unallocated expenses (Net of income)			831.98			1081.40
c. Profit before finance cost & Incometax (a) - (b)			1000.87			826.42
d. Finance cost (Includes unwinding of Interest)			521.43			355.96
e. Net Profit before Income Tax (c) - (d)			479.44			470.46
f. Income Tax			2.05			25.75
g. Net Profit/(loss) after Income Tax (e)-(f)			477.39			444.71
III ASSETS & LIABILITIES						
a. Segment Assets	40666.48	8234.70	48901.18	37196.23	8194.28	45390.51
b. Common Assets			10468.61			10853.25
c. Total Assets			59369.79			56243.76
d. Segment Liabilities	22366.53	5140.86	27507.39	20096.06	4754.42	24850.48
e. Common Liabilities			5034.36			4886.68
f. Total Liabilities			32541.75			29737.16
IV OTHER INFORMATION						
a. Capital Expenditure	121.75	80.26		140.56	55.40	
b. Depreciation & Amortization	167.99	63.96		209.45	71.29	
c. Non Cash Expenses (other than depreciation & amortization)	(507.61)	(296.77)		(1241.57)	(62.11)	

GEOGRAPHICAL SEGMENTS		Within India	Outside India	Total	Within India	Outside India	Total
1	Net Sales / Revenue from Operations	21061.08	1075.22	22136.30	18635.65	1517.73	20153.38
2	Non- Current Assets (PPE & Intangible Assets)	2826.69	3.14	2829.83	2812.21	17.23	2829.44
3	Capital Expenditure	261.79	0.15	261.94	225.32	5.77	231.09

Major Customer- Details of Revenue from Single Customer exceeding 10% of total revenue of the BHEL

Particulars	Power	Industry	Total	Power	Industry	Total
CPSUs	5581.63	1639.38	7221.01	3807.92	1405.00	5212.92
TANGEDCO	3112.02	-	3112.02	1,669.85	-	1669.85
TSGENCO	1874.88	-	1874.88	2644.40	-	2644.40



Note [46] - ADDITIONAL INFORMATION

(₹ in Crore)

Name of the entity in the Group	Financial Year	Net Assets, i.e., total assets minus total Liabilities		Share in profit or loss		Share in other Comprehensive Income		Share in total Comprehensive Income	
		As % of Consolidated Net results	Amount	As % of Consolidated Profit or loss	Amount	As % of Total Other Comprehensive Income	Amount	As % of Total Comprehensive Income	Amount
BHEL	2022-23	99.13	26595.74	88.27	421.37	103.54	(17.27)	87.71	404.10
	2021-22	99.24	26304.74	89.27	396.98	99.96	76.87	90.84	473.85
Subsidiary									
BHEL Electrical Machines Limited (BHEL EML)	2022-23	-	-	-	-	-	-	-	-
	2021-22	-	-	(0.31)	(1.37)	-	-	(0.26)	(1.37)
Non-controlling Interests in BHEL EML	2022-23	-	-	-	-	-	-	-	-
	2021-22	-	-	(0.30)	(1.32)	0.00	0.00	0.25	(1.32)
Joint Ventures (investment as per the equity method)-									
BHEL-GE Gas Turbine Services Private Limited	2022-23	0.87	232.29	11.73	56.02	(3.54)	0.59	12.29	56.61
	2021-22	0.76	201.86	11.34	50.42	(0.18)	0.03	9.67	50.45
NTPC-BHEL Power Projects Private Limited	2022-23	-	-	-	-	-	-	-	-
	2021-22	-	-	-	-	-	-	-	-
Raichur Power Corporation limited	2022-23	-	-	-	-	-	-	-	-
	2021-22	-	-	-	-	-	-	-	-
Total	2022-23	100.00	26828.03	100.00	477.39	100.00	(16.68)	100.00	460.71
	2021-22	100.00	26506.60	100.00	444.71	100.00	76.90	100.00	521.61

Note [47]

Assets and Liabilities are classified between Current and Non-current considering 12 months period as operating Cycle.

Note [48]

The Company has no transactions with companies struck off under section 248 of the Companies Act, 2013 or section 560 of the Companies Act, 1956.

Note [49]

The Company is complying with the number of layers prescribed under clause(87) of section 2 of the Act read with Companies (restriction on number of layers) Rules, 2017.

Note [50]

No Scheme of Arrangements has been approved by the the Competent Authority in terms of sections 230 to 237 of the Companies Act,2013.

Note [51]

The Company has no transactions that has been surrendered or disclosed as income during the year in the tax assessments under the Income Tax Act,1961 which is unrecorded in the books of accounts.

Note [52]

The Company has not traded or invested in Crypto currency or Virtual currency during the financial year.

Note [53]

Prior period errors which are material are corrected retrospectively by restating the comparative amount for the prior periods presented in which such error occurred. For the error occurred before the earliest period presented, the opening balances of assets, liabilities and equity for the earliest period presented are restated.

Note [54]

Figures have been rounded off nearest to ₹ in crore with two decimal.

Note [55]

Previous year's figures have been regrouped/ rearranged wherever considered necessary.

Note [56]

Ministry of Corporate Affairs ("MCA") notifies new standard or amendments to the existing standards under Companies (Indian Accounting Standards) Rules as issued from time to time. On March 31, 2023, MCA amended the Companies (Indian Accounting Standards) Rules, 2015 by issuing the Companies (Indian Accounting Standards) Amendment Rules, 2023, applicable from April 1, 2023, as below:

Ind AS 1 – Presentation of Financial Statements

The amendments require companies to disclose their material accounting policies rather than their significant accounting policies. Accounting policy information, together with other information, is material when it can reasonably be expected to influence decisions of primary users of general purpose financial statements. The Company does not expect the amendment to have any significant impact in its financial statements.

Ind AS 12 – Income Taxes

The amendments clarify how companies account for deferred tax on transactions such as leases and decommissioning obligations. The amendments narrowed the scope of the recognition exemption in paragraphs 15 and 24 of Ind AS 12 (recognition exemption) so that it no longer applies to transactions that, on initial recognition, give rise to equal taxable and deductible temporary differences. The Company does not expect the amendment to have any significant impact in its financial statements.

Ind AS 8 – Accounting Policies, Changes in Accounting Estimates and Errors

The amendments will help entities to distinguish between accounting policies and accounting estimates. The definition of a change in accounting estimates has been replaced with a definition of accounting estimates. Under the new definition, accounting estimates are “monetary amounts in financial statements that are subject to measurement uncertainty”. Entities develop accounting estimates if accounting policies require items in financial statements to be measured in a way that involves measurement uncertainty. The Company does not expect the amendment to have any significant impact in its financial statements.

Note [57]

The Board of Directors has authorised to issue the Financial Statements 2022-23 in its meeting held on May 26 , 2023

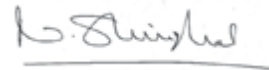


(Rajeev Kalra)
Company Secretary
M. No. 14567

For and on behalf of Board of Directors

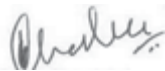


(Jai Prakash Srivastava)
Director (E, R&D)
with additional charge of
Director (Finance) & CFO
DIN: 09703643



(Dr. Nalin Shinghal)
Chairman and Managing Director
DIN: 01176857

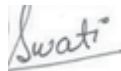
For ABP & Associates
Chartered Accountants
FRN - 315104E



(Bimal Kumar Chanduka)
Partner
M No. 053714

As per our report of even date

For PSMG & Associates
Chartered Accountants
FRN - 008567C



(Swati Singh)
Partner
M. No. 404531

For S.L. Chhajed & Co. LLP
Chartered Accountants
FRN - 000709C/C400277



(Vijit Baidmutha)
Partner
M. No. 406044

Place: New Delhi
Date: May 26, 2023



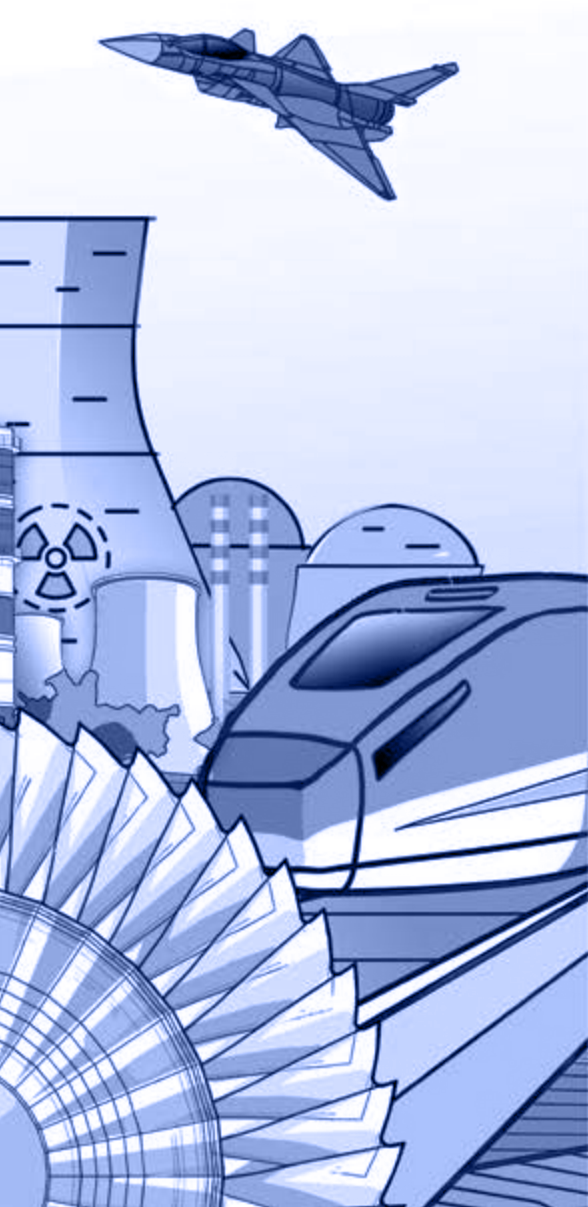
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Financial Performance Trend

Sl. No.	Particulars		2022-23	2021-22	2020-21	2019-20	2018-19
	Order Book (Excluding Taxes)						
	Order Received	₹ in crore	23548	20379	11470	20200	19995
	Orders Outstanding	₹ in crore	91336	90084	89813	95687	96082
A.	Operating Results						
I	Total Income						
	Revenue	₹ in crore	22136	20153	16296	20491	29423
	Other operational income	₹ in crore	1229	1058	1013	969	1000
	Revenue from operations (a)	₹ in crore	23365	21211	17308	21459	30423
	Other income (b)	₹ in crore	515	368	370	581	678
	Total (I= a+b)	₹ in crore	23880	21579	17678	22040	31101
II	Operating expenses						
	Material consumption, Bought Out items, Civil, Erection and engg. expenses	₹ in crore	15954	13997	11071	14727	18837
	Consumption of stores & spares	₹ in crore	404	271	289	353	412
	Changes in inventories of FG, WIP & scrap	₹ in crore	(57)	526	511	(1042)	(991)
	Employee benefits expenses	₹ in crore	5701	5517	5372	5427	5502
	Power & Fuel	₹ in crore	488	415	319	459	497
	Other expenses of Mfg, Admn. & S&D	₹ in crore	1466	1355	1480	1970	2263
	Exchange variation (gain) / loss (net)	₹ in crore	(460)	(82)	(66)	(435)	(67)
	Provisions	₹ in crore	(847)	(1526)	1467	233	1837
	Depreciation & amortisation expenses	₹ in crore	260	314	473	503	475
	Finance costs	₹ in crore	521	355	373	507	287
	Total (II)	₹ in crore	23430	21142	21290	22702	29053
III	Operating Profit/(loss) (a-II)	₹ in crore	(65)	69	(3982)	(1243)	1370
IV	Profit / (Loss) before tax (I-II)	₹ in crore	450	437	(3612)	(662)	2048
	Tax expense (Net)	₹ in crore	2	27	(894)	811	839
V	Profit / (Loss) after tax	₹ in crore	448	410	(2717)	(1473)	1209
	Other Comprehensive Income	₹ in crore	(17)	77	20	(274)	(120)
VI	Total comprehensive income	₹ in crore	430	487	(2697)	(1747)	1089
	Dividend payout	₹ in crore	139	139	-	-	696
	Dividend distribution tax	₹ in crore	-	-	-	-	143
	EBIT	₹ in crore	971	792	(3239)	(155)	2335
	EBITDA	₹ in crore	1231	1106	(2765)	348	2810
	Cash Flow:						
	From Operating Activities	₹ in crore	(742)	660	560	(2892)	(3856)
	From Investing Activities	₹ in crore	1480	(1125)	(43)	1877	1915
	From Financing Activities	₹ in crore	89	(330)	(393)	1622	(32)

Sl. No.	Particulars		2022-23	2021-22	2020-21	2019-20	2018-19
B.	Financial Position (Assets, Equity & Liabilities)						
VII	Assets						
	Property, plant & equipment and intangible assets	₹ in crore	2476	2398	2488	2814	2967
	Capital WIP and intangible assets under development	₹ in crore	354	431	420	314	235
	Non-current investments	₹ in crore	670	670	670	670	669
	Other non current assets	₹ in crore	456	365	365	321	362
	Trade Receivables (Net)	₹ in crore	6544	6229	7213	11641	15796
	Contract Assets (Net)	₹ in crore	29740	26940	24079	23794	22819
	Cash & Bank Balances	₹ in crore	6643	7154	6701	6419	7503
	Inventory	₹ in crore	6756	6560	7191	8905	7797
	Deferred tax assets(Net)	₹ in crore	3423	3530	3660	2756	3497
	Other Current assets	₹ in crore	2744	2432	2913	2601	2784
	Total Assets	₹ in crore	59804	56708	55701	60236	64431
VIII	Equity						
	Equity share capital	₹ in crore	696	696	696	696	696
	Other equity	₹ in crore	26566	26275	25788	28485	30735
	Total Equity	₹ in crore	27262	26971	26484	29181	31432
IX	Liabilities						
	Borrowings	₹ in crore	5385	4745	4834	4933	2432
	Trade Payables	₹ in crore	12090	9882	8559	9900	12078
	Contract Liabilities	₹ in crore	5635	6048	6864	6718	6839
	Other Non current liabilities	₹ in crore	310	269	295	266	225
	Non current provisions	₹ in crore	4101	3771	3913	4212	5463
	Other Current liabilities	₹ in crore	2225	1956	1589	1943	3477
	Current provisions	₹ in crore	2797	3067	3164	3082	2486
	Total liabilities	₹ in crore	32542	29737	29217	31054	32999
X	Total Equity & Liabilities (VIII+IX)	₹ in crore	59804	56708	55701	60236	64431
	Equity shares (Face Value of ₹ 2 each) Nos.		348	348	348	348	348
	Market Capitalisation as at year end	₹ in crore	24420	17184	16975	7243	26081
	Net worth	₹ in crore	27262	26971	26484	29181	31432
	Net worth (excl. OCI & Capital Reserve)	₹ in crore	27563	27254	26844	29561	31538
	Capital employed	₹ in crore	23486	23010	22405	26111	27699
XI	Human Resources	Nos	29536	30758	32131	33752	35471
	Executives	Nos	10187	10280	9742	10075	10400
	Non Executives	Nos	19349	20478	22389	23677	25071

Sl. No.	Particulars		2022-23	2021-22	2020-21	2019-20	2018-19
XII	Financial Performance Ratios						
1	Return on Net worth	%	1.63	1.52	(9.63)	(4.82)	3.77
2	Return on capital Employed	%	4.13	3.44	(14.45)	(0.59)	8.43
3	EBITDA margin	%	5.16	5.12	(15.64)	1.58	9.04
4	Operating Profit margin	%	(0.28)	0.33	(23.01)	(5.79)	4.50
5	Revenue per employee	₹ in lakhs	75	66	51	61	83
6	Revenue per rupee of employee benefit expenses	₹	3.88	3.65	3.03	3.78	5.35
XIII	Balance Sheet Ratios						
1	Current ratio	Ratio	1.29	1.30	1.39	1.45	1.67
2	% liquidation of current year net billing	%	86	86	82	73	59
3	Trade receivable (no. of days)	Days	102	107	152	198	190
4	Inventory (no. of days)	Days	111	119	161	159	97
5	Assets Turnover	Times	0.40	0.38	0.32	0.37	0.48
XIV	Per Share data						
1	Earning per share	(₹)	1.29	1.18	(7.80)	(4.23)	3.33
2	Net worth per share	(₹)	78.29	77.46	76.06	83.80	90.27
3	Market Price per share (BSE) as at year end	(₹)	70.13	49.35	48.75	20.80	74.90
4	Market Price to Book Value	Ratio	0.90	0.64	0.64	0.25	0.83
XV	Segment Revenue						
	Power Segment	₹ in crore	17499	15361	11386	14960	23474
	Industry Segment	₹ in crore	4637	4792	4910	5530	5949
	Total	₹ in crore	22136	20153	16296	20491	29423
	Segment Share						
	Power Segment	%	79	76	70	73	80
	Industry Segment	%	21	24	30	27	20

I Previous year's figures have been regrouped / rearranged, wherever considered necessary.

II Figures in () represent negative values.

III Dividend payout is interim dividend and proposed final dividend for the year.

IV Equity share capital at the end of FY 2018-19 is post buyback in January 2019.

Notes:

1 EBIT = PBT+Finance cost

2 EBITDA = EBIT+Depreciation & Amortisation

3 Capital employed=Net Worth-capital WIP & Intangible Assets under development -Deferred tax

4 Return on Net worth = (PAT/Average Net Worth exclud. OCI & Capital reserve)*100

5 Return on capital Employed = EBIT/Capital Employed*100

6 EBITDA Margin % = EBITDA/Total Income *100

7 Operating Profit Margin = Operating profit/Revenue from operations *100

8 Current ratio = Current Assets/Current liabilities

9 Trade receivable (no. of days) = Trade receivable *365/Revenue from operations.

10 Inventory (no. of days) = Inventory *365/Revenue

11 Assets Turnover = Total Revenue/Total Assets

BHEL's Product and Service Profile includes design, manufacturing and installation in the following major segments:

Thermal Power Plants

- Complete EPC solutions including state-of-the-art emission control equipment for Thermal Power Plants
- Steam Generators, Steam Turbines, Turbo Generators (TG) along with regenerative feed cycle upto 1000 MW unit rating, including 660/700/800 MW unit rating sets based on supercritical technology and upto 600 MW unit rating sets based on subcritical technology
- Water and air cooled Condensers, Condensate Extraction Pumps, Boiler Feed Pumps, Duplex Heaters, Valves and Heat Exchangers – meeting requirement of TG Sets upto 1000 MW
- Combined cycle plants upto 350 MW with higher plant efficiencies
- Residual Life Assessment (RLA) studies and Life Extension of old thermal power plants, plant performance improvement through renovation, modernization and uprating of power plant equipment including solution towards flexible operations

Nuclear Power Plants

- Reactor side components like Steam Generators, Reactor Headers, End Shields, special purpose Heat Exchangers, Pressure Vessels, Motors etc. for Nuclear Power plants
- TG island equipment of PHWRs (Pressurized Heavy Water Reactors), FBRs (Fast Breeder Reactors) and AHWRs (Advanced Heavy Water Reactors) including 'EPC' solutions covering Steam Turbine, Turbo Generators, MSRs (Moisture Separator Reheaters), other heat exchangers and pumps

Gas-Based Power Plants

- Gas turbines and matching generators ranging from 25 MW to 299 MW (ISO) rating with following features:
 - Gas turbine based co-generation and combined-cycle systems for industry and utility applications

- Capability to burn a variety of fuels (both gaseous and liquid) along with mixed firing in different combinations of fuels
- Low exhaust emission levels upto 15ppm of NOx with Dry Low NOx (DLN) combustors & noise reduction.

Hydro Power Plants

- Capability for engineering and manufacturing of custom made conventional Hydro Turbines of Kaplan types up to 100 MW, Francis and Pelton types up to 400 MW.
- Reversible Pump-Turbines for Pump Storage Plants up to 250 MW
- High capacity pumps for Lift Irrigation Schemes (LIS) up to 200 MW
- Butterfly, Spherical Valves and Auxiliaries for Hydro Stations
- Microprocessor based Digital Governing System for all types of Hydro Power Plants
- Plant Layout & Mechanical Balance of Plant (BOP)
- Capability for engineering, manufacturing, installation and commissioning of custom-made Salient Pole Vertical Synchronous Hydro Generator up to 400 MW.
- LIS motor up to 200 MW
- Fixed Speed Generator-Motors for Pump Storage Plants up to 300 MW
- Bulb turbines with matching generators up to 10 MW and horizontal generator up to 20 MW along with matching Static Excitation System/ Brushless Excitation Systems
- Mini, Micro and Small Hydro Power Plants up to 25 MW rating
- Renovation, Modernization and uprating of Hydro Power Plants
- Balance of Plant (BOP) & System Integration

Solar Power System

- EPC solutions of Solar PV Power Plants:
 - Grid Interactive systems with & without BESS (Battery Energy Storage System)
 - Floating Solar Power Plants
 - Standalone systems
 - Roof Top systems
 - Hybrid systems
 - Canal Top Systems
 - Solar based water pumping systems

Desalination and Water Treatment Plants

- Complete Water Management Solutions for Power Plants, Industrial applications and Municipal applications with different treatment technologies:
 - Pre Treatment Plants (PT)
 - Desalination Plants
 - Demineralization Plants (DM)
 - Membrane Based Treatment Systems
 - Electro Deionization plants
 - Effluent Treatment Plants (ETP)
 - Sewage Treatment Plants (STP)
 - Zero Liquid Discharge (ZLD) System
 - Cooling Water Treatment Plants
 - Tertiary Treatment Plants

Systems and Services

- Power Generation Systems
 - Turnkey power stations/ EPC contracts
 - Combined-cycle power plants
 - Cogeneration systems
 - Captive power plants
 - Modernization and renovation of power stations and RLA studies.
 - Flexible Operation solution of fossil fuel power plants
 - Software packages including simulators for utilities
 - Erection, commissioning, support services, spares management and consultancy services for all the above systems

Industrial Systems

- Coal Handling Plant and Ash Handling Plant including Civil & Structural, Mechanical, Electrical works and Automation systems
- Mine Winder systems
- Electrics, Drives, Controls & Automation Systems for Processing & Compacting of Raw Materials, Iron Making, Primary & Secondary Steel Making, Casters & steel finishing like mills & Process Lines for both long products & flat products
- Raw Material Handling System including Civil & Structural, Mechanical, Electrical and Automation systems for Steel and other industries

- Electrics & Automation Systems for High Current Rectifiers of Smelters and Processing Mills for Aluminum Plants
- Automated Storage & Retrieval Systems (ASRS)

Detailed Product Profile is as follows:

Steam Generators

- Steam generators for utilities, ranging from 30 to 1000 MW capacity, using coal, lignite, oil, natural gas or a combination of these fuels; capability to manufacture boilers with ultra-supercritical parameters upto 1000 MW unit size
- Steam generators for utilities, with Advanced Ultra Supercritical (AUSC) parameters of 310 ata and 710°C / 720 °C.
- Circulating Fluidized Bed Combustion (CFBC) steam generators, with supercritical parameters upto 660 MW unit size for utilities
- Fuel Flexible boilers capable of all combination of blending / co-firing diverse qualities of imported/ Indian coals, blending of lignite, petcoke, etc.
- Capability for manufacturing and supply of Steam Generators and Reactor Headers for Nuclear Power Plant as per ASME Sec.-III NB Class-1 requirements
- Steam generators for industrial applications of the following types ranging from 40 T/hr to 450T/Hr capacity, using coal, natural gas, industrial gases, biomass, lignite, oil, petcoke, bagasse or a combination thereof
 - Pulverized coal / lignite fired boilers
 - Stoker fired boilers
 - Bubbling Fluidized Bed Combustion (BFBC) boilers
 - Circulating Fluidized Bed Combustion (CFBC) boilers
 - Heat-Recovery Steam Generators (HRSG)
 - Chemical recovery boilers for paper industry, ranging from capacity of 100 to 1000 T/Day of dry solids
- Expertise and capability in implementing the Biomass co-firing with coal in boilers
- Complete solutions for flexible operation of boilers

Steam Generator Auxiliaries

- Air Preheaters
 - Tubular Air Preheaters

- Rotary regenerative Air-Preheaters (different types like Bisector, Tri Sector and Quad Sector)
- Particulate Emission Control
 - Electrostatic precipitators with outlet emission as low as 15 mg/Nm³ (efficiency up to 99.97%)
 - Bag Filters for utility and industrial applications
 - Mechanical Dust Collector
 - Ammonia Flue Gas Conditioning System
- Fans
 - Axial reaction fans of single stage and double stage for clean air application and dust laden hot gases applications up to 200°C, with capacity ranging from 40 to 1300 m³/s and pressure ranging from 400 to 1,500 mmwc
 - Axial impulse fans for both clean air and flue gas applications up to 200°C, with capacity ranging from 25 to 600m³/s and pressure from 300 to 700 mmwc
 - Single and double-suction radial fans (plate aerofoil bladed) for clean air and dust-laden hot gases applications up to 400°C, with capacity ranging from 4 to 660m³/s and pressure ranging from 200 to 3000 mmwc
- Pulverizers
 - Bowl Mills of slow and medium speed (for both pressurized & suction environment) with capacity from 10 T /Hr. to 120 T/ Hr.
 - Ball Tube Mills from 30 T/ Hr. to 110 T/ Hr.
 - Wet Ball Mills (upto 50 T/Hr.) for FGD Applications
- Guillotine Gates & Dampers
 - Guillotine gates with electric/ pneumatic actuator. 100% leak proof with seal air (Maximum Width/ Height): Type 1: 7m/14.5m, Type 2: 14.6m/4.5 m, Type 3: 11.5m/6.5m
 - Bi-plane dampers with electric/ pneumatic actuator. 100% leak proof with seal air (Maximum Width/ Height): Type-1: 7m/14.5m, Type-2: 12m/10.5 m
 - Louver dampers (open close/ regulating) with electric/ pneumatic actuator (Maximum Width/ Height): Type-1: 6.5m/14.5 m, Type-2: 12m/10.5m
 - Control dampers (regulating) with electric/ pneumatic actuator (Maximum Width/ Height): Type- 1:6.5m/14.5m, Type-2: 12m/10.5m
- Steel Chimneys
 - Steel Chimneys for flue gas exhaust applications with maximum height of 80m and Inner Diameter up to 6.5m
- Flue Gas Desulphurization (FGD) systems
 - Wet Limestone & Seawater based FGD systems

- Absorber – DCFS Technology (Double Contact Flow Scrubber)
- Wet Limestone FGD – Single & Twin Tower Absorber
- Seawater FGD – Grid Tower Absorber
- Absorber with & without Gas to Gas Heater
- FGD with SO₂ efficiency of 99.9%
- Selective Catalytic Reduction (SCR) systems
 - SCR System (Honeycomb & Plate type) with anhydrous Ammonia/ Aqueous Ammonia/ Urea reagent for NOx emission control
 - SCR Plate Type Catalyst for NOx emission control
- Air Quality Control Systems
 - De NOx
 - In furnace combustion control solutions
 - Selective Catalytic Reduction (SCR) systems

Soot Blowers

- Long Retractable Soot Blowers (LRSB) for travel upto 12.2m
- Furnace Temperature Probe (FTP) for travel length up to 10m
- Long Retractable Non-Rotating (LRNR) soot blowers with forward blowing for Air Pre heaters
- Rotary Soot Blowers
- Rack type Long Retractable Soot Blowers
- Ash discharge valve for CFBC boiler application
- Soot Blowers with sequential PLC, control panel and integral starter

Valves

- High and Low-pressure Turbines Bypass Valves & hydraulic system for utilities and industrial application
- High and medium-pressure Valves, Cast and Forged Steel Valves of Gate, Globe, Non- Return (Swing- Check and Piston Lift-Check) types for steam, oil and gas duties upto 950 mm diameter, maximum pressure class 4500 (791 kg/cm²) and 650 °C temperature
- Hot reheat and cold reheat Isolating Devices upto 900 mm pipe size class 1500 and steam temp upto 650°C
- High capacity Spring Loaded Safety Valves for set pressure upto 372 kg/cm² and temperature upto 630°C
- Automatic electrically operated pressure relief valves for set pressure upto 320 kg/cm² and temperature upto 610°C
- Safety relief valves for set pressure up to 421 kg/cm² and temperature upto 537°C

- Reactive cum absorptive type Vent Silencers maximum diameter of 2700 mm
- Direct Water Level Gauges
- Angle Drain Valves - Single & Multi Stage for Turbine Drain Application
- Severe Service Control Valves for Re-Heater & Super Heater Spray Lines
- Quick Closing Non return Valves for Extraction lines and Power Assisted Non Return valves, upto 900mm diameter, 158 kg/cm² pressure and 540°C temperature
- Knife edge gate valve of size 1300 mm & 1400 mm diameter for FGD applications

Piping Systems

- Power cycle piping, Constant load Hangers, Variable spring Hangers, Hanger components, Low Pressure piping including circulating water piping for power stations upto 1000 MW capacity including Super Critical sets
- Piping systems for Nuclear Power Stations, Combined Cycle Power Plants & Industrial boilers and process industries
- Prefabricated piping/ duct spools to cater to refinery segment complying with National Association of Corrosion Engineers (NACE) requirements

Seamless Steel Tubes

- Hot-finished and cold-drawn seamless steel tubes with a range varying from outer diameter of 21 to 133 mm and wall thickness of 2 to 12.5 mm, in carbon steel and low-alloy steels to suit ASTM/ASME and other international specifications
- Rifled tubes (ribbed) with a range varying from tube outer diameter of 38.1 to 63.5 mm and wall thickness of 5.6mm to 7.1mm, in carbon steel and low-alloy steels to suit ASME and other international specifications
- Spiral finned Tubes with a range varying from tube outer diameter of 31.8 to 114.3 mm and wall thickness of 2.4mm to 9.5mm and with fin height of 12.5mm to 21mm and fin density ranges from 40 to 240 fins per meter, in carbon steel and alloy steels to suit ASME standards

Pressurized Fluidized Bed Gasifier (PFBG) (Coal to Chemicals)

- High-Pressure Oxy-blown coal gasifier of single unit

capacity upto 2500 Tonnes per day, capable to produce syngas, to meet the following applications:

- Hydrogen/ Ammonia/ Ammonium Nitrate
- Methanol/Dimethyl ether
- Direct reduction of Iron ore
- Power through IGCC
- Synthetic Natural gas
- PFBG technology is suitable for the gasification of high and low-rank coals including lignite

Steam Turbines

- Steam Turbines upto 1000 MW rating for thermal sets and upto 700MWe ratings for Nuclear Power Plants
- 15000 HP Turbines for Marine Propulsion

Turbogenerators

- Turbogenerators of higher rating upto 1000 MW for Thermal/Gas Power Plants
- Generators for CCPP applications
- Generators upto 731MWe for Nuclear Power Plants
- Generator Cooling System: Air, Hydrogen, Water
- Excitation System: Brushless / Static Type
- Auxiliary Systems: Primary Water System, Seal Oil System, Gas System, etc.

Industrial Sets

- Steam Turbine based Captive Power Plants
 - Steam Turbine-Generator (STG)/ Boiler-Boiler-Turbine-Generator (BTG)/ Engineering-Procurement-Construction (EPC): Unit rating up to 200 MW
 - Non Reheat upto 120 MW unit rating
 - Reheat from 70 MW to 200 MW unit rating
- Steam Turbine to Mechanical drives like Compressors, Pump, Blowers etc.
- Gas Turbine based Captive Power Plants GTG/ HRSG/ EPC: 26 MW (Fr-5) to 126 MW (Fr-9E)

Castings And Forgings

- Heavy castings and forgings of creep resistant alloy steels, stainless steel and other grades of alloy steels meeting stringent international specifications for components of sub critical, supercritical and Ultra-super critical technology

Condenser and Heat Exchangers

- Surface Condenser
 - For thermal power plants up to 1000 MW
 - For Nuclear power plants up to 700 MWe
 - 12.5 MW Marine applications
 - Industrial Condensers
- Air Cooled Condenser for 660 and 800 MW thermal power plants
- Feed Water Heaters (HP Heaters, LP Heaters, Drain Coolers, Duplex Heater, De-Super Heaters, etc.)
 - Thermal: 7 to 600 MW (sub-critical) & 350- 1000 MW (super critical with single stream)
 - Nuclear: 236 MWe, 500 MWe & 700 MWe
- Moisture Separator & Reheater (MSR)
 - Nuclear: 236 MWe, 500 MWe & 700 MWe
- Live Steam Reheater (LSR)
 - 500 MW Fast Breeder Reactor (FBR) Nuclear sets
- D₂O and Moderator Heat Exchangers for Nuclear primary cycle
- Auxiliary Heat Exchangers for Turbo and Hydro Generators
 - Air Coolers (Frame & Tube Type)
 - Oil Coolers (Shell & Tube Type and Plug in Type)
 - Hydrogen Coolers (Frame & Tube Type)
- Oil Coolers (Shell & Tube Type Single Tube or Concentric Double Tube Type) (Frame & Tube Type) for Transformers
- Auxiliary Heat Exchangers (Shell & Tube Type) for general application
- Butterfly Valves & Rubber Expansion joints for water application from 400NB to 2800NB
- Flash Tanks & Misc. Tanks for oil & water storage
- Auxiliary Heat Exchangers for Transformers
 - Oil Coolers (Shell & Tube Type Single Tube or Concentric Double Tube Type) (Frame & Tube Type)
- Auxiliary Heat Exchangers for general application
 - Water - Water Coolers (Shell & Tube Type)
- Gland steam condensers
 - Industrial applications upto 7 MW to 150 MW
 - Thermal Plants upto 1000 MW
 - Nuclear Plants upto 700 MWe
- Air-cooled heat exchangers for GTG up to 126 MW (Fr-9E), and Compressor applications of all ratings
 - Steam jet air ejectors for condensers up to 150 MW
 - Deaerators from 7 MW to 1000 MW
 - Gas coolers for compressor applications

- Oil coolers- STG upto 150 MW, GTG upto 126 MW (Fr-9E)
- Generator Air coolers upto 150 MW STG and GTG up to 250 MW (9 FA)

Pumps

- Pumps for various utility power plant applications up to a capacity of 1000 MW:
 - Boiler feed pumps (motor or steam turbine driven) and Boiler feed booster pumps.
 - Condensate extraction pumps including Drip Pumps
 - Circulating water pumps (Cooling Water Pumps)
 - Concrete Volute Cooling Water Pumps
 - Pumps for Secondary Side of Nuclear Power Plants
 - Slurry Recirculation Pumps for FGD Applications upto 500 MW

Compressors

- Complete range of Centrifugal compressors (driven by Steam Turbine, Electric Motor and Gas Turbine) along with auxiliary systems for all major compression applications in various industries like Refineries, Fertilizers, Petrochemicals, Oil & Gas, Steel, Power and Natural Gas Transportation sectors
- Compressor packages for capacity up to 3,00,000 m³/Hr for various gases like Air, CO₂, Syngas, N₂, H₂, NH₃, Natural Gas, Wet Gas, Propylene and other services
- Horizontally split type up to 40 bar design pressure
- Vertically split type up to 350 bar design pressure
- Oxidation Blowers for FGD Applications

Solar Photovoltaics

- Multi/ Mono Crystalline Solar cells
- Multi Crystalline/ Mono-PERC PV Modules (upto 400 Wp)
- Solar Inverter for utility and railway traction application
- Power Transformers (15 MVA and above)
- Passive Solar Tracking System
- Space grade solar panels

Automation and Control Systems

- Automation and Control Systems for
 - Steam Generator/ Boiler Controls including Boiler Protection

- Steam Turbine Controls
- Boiler Feed Pump (BFP) Drive Turbine Control
- Station Control and Instrumentation/ DCS
- Offsite /Off base controls/ Balance of Plant Controls
 - Ash Handling Plant (AHP)
 - Coal Handling Plant(CHP)
 - Water System for power plant
 - Mill Reject System (MRS)
 - Condensate On-Load Tube Cleaning system (COLTCS)
 - Gas Booster Compressor (GBC)
 - Condensate Polishing Unit (CPU)
 - Heating, Ventilation & Air conditioning (HVAC)
 - Fuel Oil Unloading System (FOUS)
- Hydro Power Plant Control System
- Gas Turbine Control System
- Nuclear Power Plant Primary Cycle Control Centre Instrumentation Package (CCIP)
- Nuclear Power Plant Turbine & Secondary Cycle control system
- Power block of solar thermal power plant
- Industrial Automation
- Sub-Station Automation (SAS)
- Non-FST HVDC control panels
- Electrical Control System (ECS) for Refineries
- Energy Management System (EMS) for Power Plant
- Electrical Interface System for MV/LV Switchgear

Transmission Systems

- EHV & UHV Sub-stations/switchyards both AIS & GIS type ranging from 33 kV to 765 kV
- HVDC transmission systems
- Flexible AC Transmission System (FACTS) solutions
 - Fixed Series Compensation (FSC)
 - STATCOM
 - Controlled Shunt Reactor (CSR)
 - Phase Shifting Transformer (PST)
- Power System Studies

Software System Solution

- Performance Analysis, Diagnostics & Optimization (PADO) for Thermal Utilities
- Performance Calculation & Optimization system and Real Time Performance Data Monitoring system

- Open Platform Communications (OPC) connectivity from DCS to third party systems
- Enterprise Asset Management System (EAMS)
- Operator Training Simulator
- Remote Monitoring & Diagnostic System (RMDS)

Switchgear

- Medium Voltage Vacuum Switchgear for indoor and outdoor applications for voltage ratings upto 36 kV and Gas Insulated Switchgears upto 420 kV
 - Indoor switchgears
 - Upto 12 kV, 50 kA, 4000 Amp for thermal, nuclear, hydro and combined cycle Power Plant Projects
 - Upto 36 kV, 31.5 kA, 2500 Amp for Industries, solar power plants and refineries
 - Compact switchgear 12 kV, 25 kA, 1250 Amp for distribution system
 - Outdoor Vacuum circuit breakers
 - 12 kV, 26.3 kA, 1250 Amp for distribution segment
 - 36 kV, 26.3 kA, 1600 Amp for distribution segment
 - 25 kV (52kV class), 20 kA, 1600 Amp for track side railway application
 - Gas insulated switchgears
 - 36 kV, 40kA, 2500 Amp for Refineries, Urban Distribution & Industries (Single Busbar & Double Busbar Designs)
 - 420kV, 40kA, 3150 Amp for transmission sector (hydro station/ thermal power plant/ other substations)
 - 420 kV Gas Insulated Bus ducts

On Load Tap Changers (OLTC)

- On Load Tap Changer upto 765 kV class Transformer & Off Circuit Tap Switch upto 765 kV, 500MVA class Transformer for various application like Power Transformer, Furnace Transformer, Station Transformer, Rectifier Transformer etc.

L T Switchgear & Bus Ducts

- Bus-ducts with associated equipment to suit generator power output of utilities of upto 800 MW capacity
- 415 V LT Switchgear for Thermal Power Plant, Hydro, Nuclear, Captive Power Plant (CPP) & Steel industry

Transformers & Reactors

- Power transformers for voltage upto 1200 kV
 - Generator transformers (upto 600 MVA, 420 kV, 3 Ph / 400 MVA, 765 kV, 1 Ph/500 MVA, 420 kV,1 Ph)
 - Autotransformers (upto 1000 MVA, 400 kV, 3 Ph / 600 MVA, 400 kV, 1 Ph / 500 MVA, 765 kV, 1 Ph / 1000 MVA, 1200 kV, 1 Ph)
- Converter Transformers / Smoothing Reactors (upto 600 MVA, ± 800 kV) / (upto 254 MVA, ± 500 kV) for HVDC transmission
- Shunt Reactors (upto 150 MVA, 420 kV, 3 Ph / 110MVA, 765 kV, 1 Ph)
- Controlled Shunt Reactors (up to 200 MVA, 420 kV, 3 Ph/ 200 MVA, 420 kV, 1 Ph / 200 MVA, 765 kV, 1 Ph) for Flexible AC Transmission system applications
- Phase Shifting Transformers (upto 500 MVA, 400 kV, 3 Ph/ Upto 500 MVA 400 kV 1 Ph) for transmission lines
- Instrument transformers
 - Current transformers upto 400 kV
 - Electro-magnetic voltage transformers upto 220 kV
 - Capacitor voltage transformers (33K V to 1200 kV)
 - 24kV PR class Current Transformer for HVDC Projects
- Special Transformers
 - Rectifier transformer (upto 120 kA, 132 kV)
 - Furnace transformer (upto 33 kV, 100 MVA)
- ESP transformers up to 95 kVp, 1600 mA
- Dry type transformers upto 15 MVA 36 kV
- Composite Monitoring System for Power Transformers

Capacitors

- H.T. Capacitors
 - Shunt, Series & Static VAR Compensation (SVC), Harmonic filter & HVDC applications (3.3 kV to 500 kV, 1 Ph/ 3 Ph capacitor banks)
- Capacitor Divider for CVT (33kV to 1200kV)
- Coupling Capacitor (33kV to 800 kV, 4400pF to 13200 pF) for transmission lines
- Surge Capacitor for protection of Generators & Transformers (11kV to 40 kV)

Bushings

- Oil Impregnated Paper (OIP) condenser bushings 52 to 500 kV for transformer applications

- 25 kV Locomotive bushings
- Wall bushings upto 245 kV

Control Gear

- Electronic controllers for ESPs in industries/ power plants
- Digital Static Excitation control system (2000 A, 400 V DC with redundant thyristor stacks & DC field breaker)
- Large current rectifiers with PLC Based digital controls
- Control & Protection Panels (upto 400 kV) For EHV Transmission projects
- SCAP, Thyristor, RAPCON and STATCON Panels.

Insulators and Ceramics

- Porcelain Insulators.
 - Hollow insulators upto 765 kV for Transformers and SF6 circuit breakers.
 - Solid core insulators upto 400 kV for Bus Post & Isolators for substation applications.
- Composite Long Rod Insulators
 - Upto ± 800 kV, 420kN for HVDC application
 - Upto 765kV, 210kN for HVAC application.
 - Traction Insulators Stay arm, Bracket and 9 Ton Insulators for Indian railways.
- Ceramic Lining (CERALIN) wear resistant material for Thermal Power Plant & Ash Slurry Application.
- Industrial and Special Ceramics
 - EWLI –Electronic Water Level Indicators used in Boiler Drum Water Level Monitoring (BHELVISION system)
 - Ceramic and Tungsten Carbide Flow Beans for Christmas tree valves.
 - Grinding Media for Pulverizing in Thermal Power Plant.

Electrical Machines

- AC Machines for Safe Area Application
 - Squirrel cage induction motors -150 kW to 22000 kW
 - Slip ring induction motors - 150 kW to 10000 kW
 - Synchronous machines - 1000 kW to 25000 kW
 - Variable speed Motors- 150 kW to 22000 kW (Squirrel cage motors)
 - Variable speed Motors - 1000 kW to 15000 kW (Synchronous motors)

- AC Machines for Hazardous Area Application (Fixed speed or with VFD)
 - Flame-proof squirrel cage Induction motors (Ex 'd') (150 kW to 1300kW)
 - Non-sparking squirrel cage Induction motors (Ex 'n') (150 kW to 22000 kW)
 - Increased safety squirrel cage Induction motors (Ex 'e') (150 kW to 4000 kW)
 - Pressurized Squirrel cage Induction motors (Ex 'p') (150 kW to 22000 kW)
 - Pressurized Synchronous machines (Ex 'p') (1000 kW to 25000 kW)
- Industrial Alternators (Steam turbine, Gas turbine and Diesel engine driven) (3000 kVA to 25000 kVA)
- Vertical Motors for Primary Coolant Pumps for nuclear power plants
- Induction Generators (300 kVA to 6000 kVA) for mini/micro hydro plant.
- 2 Pole Air cooled Steam/ Gas Turbine driven Generators (3 MW to 160 MW)
- 4 Pole Air cooled Steam/ Gas Turbine driven Generators (3 MW to 40 MW)
- 2 Pole Hydrogen cooled Steam/ Gas Turbine driven Generators (36 MW to 270 MW)
- 200kW HTSC Motor for Marine applications
- Permanent Magnet Based Generators upto 5 MW
- Gas Turbine generators upto 270MW
- Alternators for industrial applications with single bearing upto 2 MW

Rail Transportation

Transportation Systems

- AC Electric Locomotives (upto 9000 HP, 25 kV AC)
- AC-DC Dual Voltage Electric Locomotives
- AC EMU (Electric Multiple Units) Coaches
- Metro Coaches
- Traction Propulsion Systems for:
 - 6000 HP and 9000 HP IGBT based AC Locomotive
 - 3-phase IGBT based AC Electric Multiple Unit (EMU) and Mainline Electric Multiple Unit (MEMU)
 - Air-conditioned Electric Multiple Units (ACEMU)
 - ACEMU electrics for DC drives
 - Semi High Speed Trainset (Vande Bharat)
 - 1600 HP IGBT based DEMU (Diesel Electric Multiple Unit)

- Metro train
- 1600HP Multi-Genset Locomotive
- WAG7 Locomotive with Regenerative Braking System
- Diesel Electric Tower Car
- Diesel-Electric Shunting Locomotives (upto 3250 HP)
- OHE recording-cum-test car
- Dynamic track stabilizers
- Rail cum Road vehicle
- TCMS (Train Control & Monitoring System) Panels

Transportation Equipment

- Traction Converter & Auxiliary Converter
- Vehicle Control Electronics
- Hotel Load Converter
- Composite Converter Comprising Traction Converter and Hotel Load Converter
- Motorized bogies for mainline Locos
- Traction Transformer
 - Upto 5400 kVA for conventional locomotives
 - Upto 9000 KVA for 3 phase drive locomotives.
 - Upto 1200 KVA conventional AC EMU/ MEMUs
 - Upto 1578 kVA for 3 phase EMU
- 3- phase AC Traction Motors (axle hung/fully suspended type) (upto 1200 kW) for Locomotives & EMUs
- DC Traction Motors (upto 630 kW) for Locomotives & EMUs
- Traction Alternators (upto 3860 kW) for Diesel Electric Locomotives
- Traction Generators upto 2000 kW
- DC Blower motors (upto 50kW) for dynamic braking system
- Motor Generator sets (upto 25 kW) for auxiliary requirements
- Eddy Current Clutch
- Traction gears and pinions for Locomotives & EMUs
- Specialized Wagons (upto 28 axle, 296 Ton)
- Railway Track Electrification
- Wheel and Axle machining

Defence and Aerospace

- Super Rapid Gun Mount (SRGM) 76/62 for naval ships
- Integrated Platform Management system (IPMS) for naval ships
- Integrated Bridge System (IBS)

- Static Main Motor Generator (SMMG)
- Rotary Main Motor Generator with Controls (RMMG)
- Permanent Magnet (PM) based reserve propulsion motor and drive.
- Frequency converters (PM based and conventional motor based) with drive controls
- Training Simulator for Vehicles, platforms, radars, weapons, missiles and Computer Based Training (CBT) for all defence and para-military forces
- Thermopressed Components for Tank Armor including Turret Casting for T-72 Tanks
- 2 kW Liquid Cooling System for Jammer which comprises four modules namely ACM Module, Pump Module, PCM Module and Electronic Control Unit
- Casting and Forgings for ships
- Onboard Compact Heat Exchangers for various fighter aircraft platforms
- Fuel Tanks and other components for Launch Vehicles and Satellites
- Reserve Propulsion motor with drive unit
- Compact Brushless Alternators
- Space grade Batteries
- Solar Panels for Satellites
- Li-ion cells for Launch Vehicles
- Li-ion batteries for Aircraft applications

Energy Storage System & E- Mobility

- Charging Infrastructure for Electric Vehicles
- Battery Energy Storage Solutions

Oil Field Equipment

- Oil Rigs – On-shore drilling rigs with AC- VFD and AC-SCR technology for drilling upto depths of 9,000 meters, work-over rigs for servicing upto depths of 6,100 meters, mobile rigs for drilling upto depths of 3,000 meters, complete with matching draw-works and hoisting equipment including:
 - Mast and Substructure
 - Rotating Equipment: Draw works; Rotary; Swivels; Travelling Blocks
 - Independent Rotary Drive (IRD) Unit
 - Dead Line Anchor
 - Mud System including pumps
 - Triplex Mud pumps 5000 psi Working Pressure
 - Mud processing equipment: Degasser, Desander
 - Sucker Rod Pump (Beam Pump Structure & Pumping Unit Gear Reducer)

- Refurbishment and upgradation of Oil Rigs
- 3-phase Oil Rig motor up to 1150 HP (for Draw works, Mud Pump, Drilling)
- Oil Rig motors upto 1000 HP (Draw works, mud pump, drilling)
- Oil Rig alternators upto 1750 kVA (for AC Power Pack)
- AC/ DC Power Control Room for E760, E1400, E2000 & E3000 Rig
- AC Power Pack upto 1430 kVA for DG sets
- AC Control Module
- DC Control Module
- Driller's Console upto 3 mud pumps, IRD & draw work control & monitoring, load rating (0-1800 A, 0-1000 V)
- Mobile Lighting Tower, Rig Lighting Tower
- AC- VFD Controls for AC Rigs
- STATCOM for power factor improvement in AC SCR Rigs
- Well heads and X-mas Trees upto 15,000 psi, Mud Line Suspension, Choke and Kill Manifold, CBM Wellheads, DSPM H- Manifold Assembly, Mud valves

Fabricated Equipment and Mechanical Packages

- Cryogenic storage tanks, Mounded storage systems and storage spheres
- Pressure Vessels, Columns, Reactors/ Separators, Heat Exchangers
- Fired Heaters
- Purge Gas Recovery Unit
- Pressure Vacuum Swing Adsorption (PVSA) Oxygen System (MO₂) for medical applications
- Gear Box
 - Accessory & Load Gear Box for Gas Turbine Application
 - Gearbox for Steam Turbine Application
 - Gearbox for Boiler Feed Pump Drive Turbine (BFP DT) Application
 - Gearbox for Air Cooled Condenser (ACC) fan Application
 - Gearboxes for Sucker Rod Pump (SRP) Application
 - Gearbox for Independent Rotary Drive (IRD)
 - Gearbox for AC Draw works
 - Gearboxes for Super Rapid Gun Mount (SRGM) Application

Glossary

ACC	Air Cooled Condenser	IR	Indian Railway
AFQMS	Approval of Firms and its Quality Management System	ISMS	Information Security Management System
ARAI	Automotive Research Association of India	ISO	International Organization for Standardization
AUSC	Advanced Ultra Super Critical	ISRO	Indian Space Research Organisation
BESS	Battery Energy Storage System	KPCL	Karnataka Power Corporation Limited
BPCL	Bharat Petroleum Corporation Limited	LCA	Light Combat Aircraft
BSE	Bombay Stock Exchange	LIS	Lift Irrigation Scheme
BTG	Boiler Turbine Generator	MEIL	Megha Engineering & Infrastructures Limited
C&I	Control & Instrumentation	MEMU	Mainline Electric Multiple Unit
CASIDC	Combat Aircraft Systems Development & Integration Centre	MoU	Memorandum of Understanding
CEA	Central Electricity Authority	MSME	Micro, Small and Medium Enterprises
CEMILAC	Centre for Military Airworthiness and Certification	MSR	Moisture Separator & Reheater
CFBC	Circulating Fluidised Bed Combustion	NEP	National Electricity Plan
CIL	Coal India Ltd	NLCIL	NLC India Limited
CPIO	Central Public Information Officer	NPCIL	Nuclear Power Corporation of India Limited
CPSE	Central Public Sector Enterprise	NSE	National Stock Exchange
CSIR	Council of Scientific & Industrial Research	OEM	Original Equipment Manufacturer
CSPGCL	Chhattisgarh State Power Generation Company	PCP	Power Cycle Piping
CSR	Corporate Social Responsibility	PFBG	Pressurized Fluidized Bed Gasification
CVC	Central Vigilance Commission	R&D	Research & Development
DPE	Department of Public Enterprises	R&M	Renovation & Modernisation
ED	Executive Director	RPCL	Raichur Power Company Limited
EHV	Extra High Voltage	SCOPE	Standing Conference of Public Enterprises
EMU	Electric Multiple Unit	SCR	Selective Catalytic Reduction
EPC	Engineering, Procurement & Construction	SEBI	Securities and Exchange Board of India
ESP	Electrostatic Precipitator	SG	Steam Generator
EV	Electric Vehicle	SPV	Solar Photo Voltaic
FACTS	Flexible Alternating Current Transmission System	SRGM	Super Rapid Gun Mount
FGD	Flue Gas Desulphurization	STG	Steam Turbine Generator
GeM	Government e-Marketplace	STPP	Super Thermal Power Plant
GIS	Gas Insulated Substation	TANGEDCO	Tamil Nadu Generation and Distribution Corporation
GSECL	Gujarat State Electricity Corporation Limited	TCA	Technology Collaboration Agreements
HAL	Hindustan Aeronautics Ltd	TCMS	Train Control & Management System
HVDC	High Voltage Direct Current	TG	Turbine & Generator
ICAI	The Institute of Chartered Accountants of India	TPD	Tonnes Per Day
ICF	Integral Coach Factory	TPP	Thermal Power Plant
IGBT	Insulated-Gate Bipolar Transistor	TPS	Thermal Power Station
IGCAR	Indira Gandhi Centre for Atomic Research	TRSL	Titagarh Rail Systems Ltd
IIT	Indian Institute of Technology	UB	Utility Boiler
IOCL	Indian Oil Corporation Ltd	UHV	Ultra High Voltage
IPM	Integrated Platform Management System	VFD	Variable Frequency Drive
IPR	Intellectual Property Right	WAG	W (broad gauge), A (AC traction), G (goods duty)
		WBPDCL	West Bengal Power Development Corporation Limited

Glossary (Financial Terms)

Accounting policies: Accounting policies are the specific accounting principles and the method of applying those principles adopted by the company in preparation and presentation of the financial statements.

Accrual: Financial statement is prepared on mercantile system. The effects of transaction and other events are recognised when they occur and they are recorded in the accounting records and reported in the financial statement of that period to which they relate.

Amortization: Amortisation is the systematic allocation of the depreciable amount of an intangible asset over its useful life.

Balance sheet: A balance sheet is a statement of the financial position of an entity which states the assets, liabilities, and owners' equity at a particular point of time

Bonus shares: Bonus shares are additional shares given to the shareholders without any additional cost out of free reserves, based upon the number of shares that a shareholder owns.

Book value: The amount at which an item appears in the books of account or in financial statements.

Buy back of shares: A buyback, also known as a share repurchase, is when a company buys its own outstanding shares to reduce the number of shares available in the open market.

Capital employed is calculated by subtracting Capital WIP, Intangible assets under development and Deferred tax assets from the entity's net worth.

Capital reserve: A reserve of an entity which is not available for distribution as dividend.

Capital redemption reserve: The Company has recognised Capital Redemption Reserve on buy back of equity shares from its general reserve. The amount in capital redemption reserve is equal to nominal amount of equity shares bought back.

Cash & cash equivalent: Cash comprises cash in hand and demand deposits. Cash equivalents are short term, highly liquid investments that are readily convertible to known amount of cash and which are subject to an insignificant risk of change in value.

Contract assets: Contract assets (deferred debts and unbilled revenue) represent the amount not yet due for payment as per contract terms / agreed schedule with customers. The same will be contractually due on completion of related activities / milestones.

Contract liability: An entity's obligation to transfer goods or services to a customer for which the entity has received consideration (or the amount is due) from the customer.

Contingent liability is:

- (a) possible obligation that arises 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 entity; or
- (b) a present obligation that arises from past events but is not recognised because:
 - (i) it is not probable that an outflow of resources embodying economic benefits will be required to settle the obligation; or
 - (ii) the amount of the obligation cannot be measured with sufficient reliability.

Consolidated financial statements (CFS): Consolidated financial statements - are the "Financial statements of a group in which the assets, liabilities, equity, income, expenses and cash flows of the parent company and its subsidiaries are presented as those of a single economic entity.

Credit risk: The risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation.

Current ratio: The current ratio is a liquidity ratio that measure ability to pay short term obligation or dues within one year. It is calculated by dividing current assets to current liabilities.

Current asset: An asset shall be classified as current when:

- a) it is expected to realise the asset, or intended to sell or consume it, in its normal operating cycle;
- b) it is held primarily for the purpose of trading;
- c) it is expected to realise the asset within twelve months after the reporting period; or
- d) the asset is cash or a cash equivalent unless the asset is restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

Current liability: A liability shall be classified as current when:

- a) it is expected to settle the liability in its normal operating cycle;
- b) it is held primarily for the purpose of trading;
- c) the liability is due to be settled within twelve months after the reporting period; or
- d) it does not have an unconditional right to defer settlement of the liability for at least twelve months after the reporting period.

Current tax expense: Current tax is the amount of income taxes payable (recoverable) in respect of the taxable profit (tax loss) for a period.

Deferred debts: Deferred debts are those debts which will become payable on completion of identified milestone like trial operation, PG test, etc. in terms of the contract.

Deferred tax: Deferred tax is calculated using the rates and tax laws that have been enacted or substantively enacted by the balance sheet date.

Deferred tax asset: Deferred tax assets are the amounts of income taxes recoverable in future periods in respect of deductible temporary differences, the carry forward of unused tax losses and the carry forward of unused tax credits.

Deferred tax liability: Deferred tax liabilities are the amounts of income taxes payable in future periods in respect of taxable temporary differences.

Defined benefits plans: Defined benefit plans are postemployment benefit plans other than defined contribution plans. Defined contribution plans are post-employment benefit plans under which an entity pays fixed contributions into a separate entity (a fund) and will have no legal or constructive obligation to pay further contributions if the fund does not hold sufficient assets to pay all employee benefits relating to employee service in the current and prior periods.

Dividend per share: It is calculated by dividing the total dividend (excl. dividend distribution tax) for the year to total number of outstanding equity shares.

Depreciation: Depreciation is the systematic allocation of the depreciable amount of an asset over its useful life.

Dividend distribution tax: This is an additional income tax paid by the company on any amount declared, distributed or paid by the company by way of dividends.

EBITDA means Earnings before interest, taxes, depreciation and amortization. Operational EBITDA is determined after excluding other income from EBITDA.

Earnings per share (EPS): It represent profit earned during the year to each share, calculated by dividing profit after tax to total number of outstanding equity shares.

Equity method: The equity method of accounting is used to determine the net income generated from the joint venture in proportion to the size of a company's investment in the venture.

The equity method is a method of accounting whereby the investment is initially recognised at cost and adjusted thereafter for the post-acquisition change in the investor's share of the investee's net assets.

Expected credit loss: The difference between all contractual cash flows that are due to an entity in accordance with the contract and all the cash flows that the entity expects to receive, discounted at the original effective interest rate.

Fair value: 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.

Financial asset: Any asset that is (a) cash, (b) equity instrument of another entity, (c) a contractual right to receive cash or another financial asset from another entity or to exchange financial assets or financial liability with another entity (d) a contract that will or may be settled in the entity's own equity instruments.

Financial liability: Any liability that is (a) contractual obligation to deliver cash or another financial asset to another entity or exchange financial assets or financial liabilities with another entity or (b) a contract that will or may be settled in the entity's own equity instruments.

Financial instrument: Any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity.

Financing activities: Activities that result in changes in the size and composition of the contributed equity and borrowings of the entity.

General reserves: General reserves are the retained earnings of a company which are kept aside out of company's profits to meet future (known or unknown) obligations.

Going concern: It means that entity has no intention for discontinuing the operation in foreseeable future.

Holding company: "holding company", in relation to one or more other companies, means a company of which such companies are subsidiary companies.

Impairment loss: An impairment loss is the amount by which the carrying amount of an asset or a cash-generating unit exceeds its recoverable amount. The recoverable amount of an asset or a cash-generating unit is the higher of its fair value less costs of disposal and its value in use.

Indian Accounting Standard (abbreviated as Ind-AS): Ind AS is the applicable accounting standard for preparation of financial statements as notified by Ministry of Corporate Affairs.

Intangible assets: An intangible asset is an identifiable nonmonetary asset without physical substance.

Inventory in number of days: It is calculated by dividing inventory to revenue multiplying by number of days in a year.

Investing activities: Investing activities are the acquisition and disposal of long-term assets & Investments.

Joint venture: A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement.

Liquidity risk: The risks that an entity may encounter in meeting obligation associated with financial liabilities.

Market risk: The risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risk comprises three types of risk: currency risk, interest rate risk and other price risk.

Net profit/(loss) margin (%): It represents profit generated as a percentage to revenue from operations, calculated by dividing profit after tax (PAT) to revenue operations.

Net realisable value: Net realisable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale.

Net worth: The excess of the book value of total assets of an entity over its liabilities. This is also referred to as shareholders' funds.

Net worth per share: Net worth per share is calculated by dividing net worth with total number of outstanding equity shares.

Non-controlling interest (NCI): is the portion of equity ownership in a subsidiary not attributable to the parent company, who has a controlling interest (greater than 50% but less than 100%) and consolidates the subsidiary's financial results with its own.

Non-current asset: A non-current asset is an asset that is not likely to turn to unrestricted cash within one year of the balance sheet date.

Non-current liability: Non-current liabilities are those obligations not due for settlement within one year.

Other comprehensive income (OCI): Other comprehensive income comprises items of income and expense (including

reclassification adjustments) that are not recognised in profit or loss as required or permitted by other Ind ASs.

Operating activities: Operating activities are the principal revenue producing activities of the entity and other activities that are not investing or financing activities.

Operating profit margin (%): Profitability performance ratio used to calculate the percentage of profit generated by Company from its operations. It is calculated by dividing earnings before tax (PBT) excluding other income to revenue from operations.

Property, plant and equipment (PPE): Property, plant and equipment are tangible items that:

- (a) are held for use in the production or supply of goods or services, for rental to others, or for administrative purposes; and
- (b) are expected to be used during more than one period.

Revenue from operations: Gross inflow of economic benefits during the period arising in the course of ordinary activities of an entity when those inflows result in increases in equity, other than increases relating to contributions from equity participants.

Return on net worth (%): Return on net worth is a measure of profitability of a Company, calculated by dividing net profit to average net worth (excl. OCI & Capital reserves).

Right of Use Assets: An asset that represents a lessee's right to use an underlying asset for the lease term.

Trade receivables: A receivable is an entity's right to consideration that is unconditional. A right to consideration is unconditional if only the passage of time is required before payment of that consideration is due.

Cautionary Statement

Statement in the Annual Report, describing the Company objective, expectation or estimates are forward looking within the meaning of applicable laws and regulations. Actual result may differ materially from those expressed or implied, depending upon economic development, government policies and other incidental factors.



Bharat Heavy Electricals Limited

(CIN: L74899DL1964GOI004281)

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Phone: 011-66337000, Fax: 011-66337428

Website: www.bhel.com, E-mail: shareholderquery@bhel.in

NOTICE

Notice is hereby given that the 59th Annual General Meeting of the Members of BHARAT HEAVY ELECTRICALS LIMITED will be held on Thursday, August 24, 2023 at 10 A.M. IST through Video Conferencing/ Other Audio-Visual Means (VC), to transact the following businesses: -

ORDINARY BUSINESS

1. To receive, consider and adopt the Audited Standalone and Consolidated Financial Statements of the Company for the Financial Year ended 31st March, 2023 together with the Directors' Report and Auditors' Report thereon.
2. To declare dividend for the financial year 2022-23.
3. To appoint a Director in place of Shri Upinder Singh Matharu (DIN: 09541886), who retires by rotation and being eligible, offers himself for re-appointment.
4. To appoint a Director in place of Shri Jai Prakash Srivastava (DIN: 09703643), who retires by rotation and being eligible, offers himself for re-appointment.
5. To authorize the Board of Directors to fix the remuneration of the Auditors for the year 2023-24.

SPECIAL BUSINESS

6. To consider and, if thought fit, to pass with or without modification, the following resolution as an **Ordinary Resolution**:

"RESOLVED THAT pursuant to the provisions of Section 148 and other applicable provisions of the Companies Act, 2013 read with the Companies (Audit and Auditors) Rules, 2014 (including any statutory modification(s) or re-enactment thereof, for the time being in force), the remuneration of the 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 ending on 31st March, 2024 as set out in the statement annexed to the Notice convening this Meeting, be and is hereby ratified by the shareholders of the Company."

"RESOLVED FURTHER THAT the Board of Directors of the Company be and is hereby authorized to do all such acts, deeds and things as may be necessary, proper or expedient to give effect to this resolution."

7. To consider and, if thought fit, to pass with or without modification, the following resolution as an **Ordinary Resolution**:

"RESOLVED THAT Ms. Arti Bhatnagar (DIN: 10065528), who was appointed as an Additional Director pursuant to Article 67(iv) of the Articles of Association of the Company read with Section 161 (1) of the Companies Act, 2013 w.e.f. 14.02.2023 to hold Office upto the date of this Annual General Meeting and in respect of whom, the Company has received a notice in writing, from the Director herself pursuant to the provisions of Section 160 (1) of the Companies Act, 2013, be and is hereby appointed as a Director of the Company in line with applicable statutory provisions, liable to retire by rotation."

8. To consider and, if thought fit, to pass with or without modification, the following resolution as a **Special Resolution**:

"RESOLVED THAT Shri Ramesh Patlya Mawaskar (DIN: 10194932), who was appointed as an Additional Director pursuant to Article 67(iv) of the Articles of Association of the Company read with Sections 149 and 161 (1) of the Companies Act, 2013 w.e.f. 08.06.2023 to hold Office upto the date of this Annual General Meeting and in respect of whom, the Company has received a notice in writing, from the Director himself pursuant to the provisions of Section 160 (1) of the Companies Act, 2013, be and is hereby appointed as an Independent Director of the Company in line with applicable statutory provisions."

9. To consider and, if thought fit, to pass with or without modification, the following resolution as an **Ordinary Resolution**:

“RESOLVED THAT Shri Krishna Kumar Thakur (DIN: 10172666), who was appointed as an Additional Director pursuant to Article 67(iv) of the Articles of Association of the Company read with Section 161 (1) of the Companies Act, 2013 w.e.f. 04.07.2023 to hold Office upto the date of this Annual General Meeting and in respect of whom, the Company has received a notice in writing, from the Director himself pursuant to the provisions of Section 160 (1) of the Companies Act, 2013, be and is

hereby appointed as a Director of the Company in line with applicable statutory provisions, liable to retire by rotation.”

By Order of the Board of Directors



(Rajeev Kalra)
Company Secretary

Place: New Delhi
Dated: July 28, 2023

NOTES: -

1. The Ministry of Corporate Affairs (MCA) has vide its Circular dated 28.12.2022 read together with Circulars dated 08.04.2020, 13.04.2020 and 05.05.2020 (collectively referred to as "MCA Circulars") allowed convening the Annual General Meeting (AGM) through Video Conferencing or Other Audio-Visual Means (VC), without the physical presence of the Members at a common venue. In accordance with the MCA Circulars, provisions of the Companies Act, 2013 and the Securities and Exchange Board of India (Listing Obligations & Disclosure Requirements) Regulations, 2015 (SEBI Listing Regulations), the AGM of the Company is being held through VC. The deemed venue for the AGM shall be the registered office of the Company.
2. In compliance with the aforementioned MCA Circulars and SEBI Circular dated 05.01.2023 read together with SEBI Circular dated 13.05.2022, Notice of the AGM along with the Annual Report 2022-23 is being sent only through electronic mode to those Members whose email addresses are registered with the Company/ Depositories. Members may note that the Notice and Annual Report 2022-23 will also be available on the websites of the Company (www.bhel.com), BSE Limited (www.bseindia.com), National Stock Exchange of India Limited (www.nseindia.com) and on the website of the e-voting agency, National Securities Depository Limited (NSDL) at www.evoting.nsdl.com. Physical copy of the AGM Notice along with the Annual Report shall be sent to those Members who request/ have requested for the same.
3. For receiving all communication (Notice, Annual Report and the e-voting instructions along with the User ID & Password) from the Company electronically, please refer to the instructions annexed to the Notice.
4. Pursuant to the provisions of the Companies Act, 2013, a Member entitled to attend and vote at the AGM is entitled to appoint a proxy to attend and vote on his/ her behalf and the proxy need not be a Member of the Company. Since this AGM is being held through VC 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 the AGM and hence, the Proxy Form and Attendance Slip are not annexed to this Notice.
5. Since the AGM will be held through VC, the route map of the venue of the Meeting is not annexed hereto.
6. Participation of Members through VC will be reckoned for the purpose of quorum for the AGM as per Section 103 of the Companies Act, 2013.
7. Corporate/ Institutional Members (i.e. other than Individuals, HUF, NRI, etc.) are required to send scanned certified true copy (PDF Format) of the Board Resolution/ Authority Letter, etc. together with attested specimen signature(s) of the duly authorized representative(s), to the Scrutinizer at ashugupta.cs@gmail.com with a copy marked to evoting@nsdl.co.in.
8. Members of the Company under the category of Institutional Investors are encouraged to attend and vote at the AGM.
9. Relevant Explanatory Statement pursuant to Section 102(1) of the Companies Act, 2013, in respect of Special Business, as set out above is annexed hereto.
10. S/ shri Upinder Singh Matharu and Jai Prakash Srivastava, Directors, retire by rotation and being eligible, offer themselves for re-appointment. However, as per the terms of their appointment, the tenures of Shri Matharu and Shri Srivastava will expire on their superannuation i.e. on 31.08.2023 and 31.12.2024 respectively. Brief resume of S/ shri Upinder Singh Matharu and Jai Prakash Srivastava is given at Annexure to the Notice.
11. Pursuant to Section 124 read with Section 125 of the Companies Act, 2013, the dividend amounts which remain unpaid/ unclaimed for a period of 7 years, are required to be transferred to the Investor Education and Protection Fund constituted by the Central Government. Accordingly, the final dividend for the financial year 2015-16 and interim dividend for the financial year 2016-17 which remains unclaimed, are proposed to be transferred to the said account on 24.10.2023 and 08.03.2024 respectively.

Members who have not claimed/ encashed their dividend so far for the financial year ended on 31.03.2016 or any subsequent financial year(s) may approach the Company for obtaining payments thereof before expiry of the stipulated 7 years period.
12. The Board of Directors of the Company has recommended a final dividend of 20% (Rs. 0.40 per share of Rs. 2/- each) on the Paid-up Equity Share Capital of the Company for FY 2022-23. This final dividend, if approved by the shareholders at AGM, will be payable within 30 days from the date of declaration of dividend i.e. on or before September 22, 2023 to the Members whose names appear in the Register of Members/ list of Beneficial Owners of the Company as on the Record Date i.e. Friday, August 11, 2023.

Dividend income is taxable in the hands of the shareholders and the Company is required to deduct tax at source (TDS) from dividend paid to the Members at prescribed rates in the Income Tax Act, 1961 (IT Act).

- In order to enable compliance with TDS requirements in respect of dividends declared by the Company in future, members are requested to submit Form 15G/15H on annual basis and update details about their residential status, PAN & Category as per the IT Act with their Depository Participants or in case of shares held in physical form, with the Company/ Registrar & Transfer Agent, so that tax at source, if any, as per applicable rates may be deducted in respect of dividend payments made by the Company in future.
13. Pursuant to SEBI Listing Regulations, all listed companies shall use any of the electronic modes of payment facility approved by RBI such as ECS/ NECS/ Direct Credit etc., for payment of dividend. Members are advised to submit their National Electronic Clearing Service/ Electronic Clearing Service (NECS/ ECS) mandate in the form (given in the Annual Report) duly filled in and signed, to enable the Company to make remittance by means of NECS/ ECS.
 14. Members are requested to notify immediately any change of address and other relevant correspondence including NECS/ ECS details and submission of Permanent Account Number (PAN): -
 - i. to their Depository Participants in respect of their demat share accounts; and
 - ii. to the Company at its registered office or the Registrar & Transfer Agent, M/s Alankit Assignments Limited (4E/2, Alankit House, Jhandewalan Extension, New Delhi-110055) in respect of their physical shares, in the prescribed forms available at www.bhel.com/shareholders-information.
 15. Members may avail facility of nomination in terms of Section 72 of the Companies Act, 2013, by nominating any person to whom their shares in the Company shall vest in the event of their death.
 16. Pursuant to Section 139 (5) read with Section 142 (1) of the Companies Act, 2013, the Auditors of a Government Company are appointed by the Comptroller and Auditor General of India and their remuneration is fixed by the Company in the Annual General Meeting. The shareholders may authorize the Board to fix up an appropriate remuneration for Auditors for the year 2023-24 as may be deemed fit by the Board.
 17. The Register of Directors and Key Managerial Personnel and their shareholding maintained under Section 170 of the Companies Act, 2013, the Register of Contracts or Arrangements in which the directors are interested maintained under Section 189 of the Companies Act, 2013 and the relevant documents referred to in the Notice will be available electronically for inspection by the Members during the AGM.
 18. 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 up to the date of AGM. Members seeking to inspect such documents can send an email to shareholderquery@bhel.in.
 19. In compliance with Section 108 of the Companies Act, 2013 read with Rule 20 of the Companies (Management & Administration) Rules, 2014 and Regulation 44 of the SEBI Listing Regulations, the Company is providing its Members the facility to exercise their right to vote on resolutions proposed to be passed at the AGM by electronic means (remote e-voting) through NSDL. Members whose names appear in the Register of Members/ list of Beneficial Owners as on Thursday, August 17, 2023 (Cut-off Date) will be eligible to vote for the purpose of e-voting/ AGM and a person who is not a Member as on the cut-off date should treat this notice for information purposes only. The e-voting period will commence from Monday, August 21, 2023 at 9.00 A.M. and will end on Wednesday, August 23, 2023 at 5.00 P.M. The e-voting module will be blocked on August 23, 2023 at 5.00 P.M. Once the vote on a resolution is cast by the shareholder, the shareholder shall not be allowed to change it subsequently. The voting right of shareholders shall be in proportion to their share in the paid up equity share capital of the Company as on the Cut-off Date i.e. August 17, 2023.
 20. Members who have cast their vote by remote e-voting prior to the AGM may also attend the meeting by VC but shall not be entitled to cast their vote again.
 21. The facility for voting through electronic voting system will also be made available at the AGM and Members attending the AGM who have not cast their vote by remote e-voting will be able to vote at the Meeting through this electronic voting system.
 22. The Company has appointed Ms. Ashu Gupta, Company Secretary (FCS no. 4123, Certificate of Practice no. 6646) of M/s Ashu Gupta & Co., Practising Company Secretaries, to act as a Scrutinizer, to scrutinize the process of remote e-voting and electronic voting at the AGM, in a fair and transparent manner. The Scrutinizer shall, immediately after the conclusion of voting at the AGM, scrutinize the votes cast at the Meeting and votes cast through remote e-voting, make a consolidated Scrutinizer's Report of the total votes cast in favour or against, if any, and submit the same to the Chairman. The results along with the Scrutinizer's Report will be



declared within two working days of the conclusion of the Meeting and the same shall be available on the Company's website (www.bhel.com) and on the website of the e-voting agency (www.evoting.nsdl.com) immediately after the declaration of result by the Chairman/ person authorized by him in writing. The results shall also be immediately forwarded to the Stock Exchanges.

23. The procedures for joining the AGM through VC, remote e-voting and voting at the AGM along with the contact

details for addressing the grievances in this regard are provided in the instructions annexed to the Notice.

By order of the Board of Directors

(Rajeev Kalra)
Company Secretary

Place: New Delhi
Dated: July 28, 2023

ANNEXURE TO THE NOTICE

EXPLANATORY STATEMENT PURSUANT TO SECTION 102(1) OF THE COMPANIES ACT, 2013

The following explanatory statement sets out the material facts relating to the business mentioned in Item Nos. 6 to 9 of the accompanying Notice dated July 28, 2023.

ITEM NO. 6

Section 148 of the Companies Act, 2013 read with the Companies (Audit and Auditors) Rules, 2014 requires remuneration of the cost auditors as approved by the Board to be ratified by the shareholders subsequently.

Based on the recommendation of the Audit Committee, the Board of Directors in its meeting held on July 13, 2023 has approved the names of seven Cost Accountants/ Firms for appointment for a total remuneration of Rs. 15.76 Lakhs as detailed under:

Rs./Lakhs

Sl. No.	Name of the Cost Auditors	Unit	Remuneration for FY 2023-24
1	M/s Vijender Sharma & Co., Delhi	Consolidation	1.01
		HEEP Haridwar	2.01
		CFFP Haridwar	0.40
2	M/s R.M. Bansal & Co., Kanpur	HEP Bhopal	2.01
		TP Jhansi	0.81
		HERP Varanasi	0.40
3	M/s Narasimha Murthy & Co., Hyderabad	HPEP Hyderabad	2.01
4	M/s Subramanian Rajagopal & Associates, Tiruchirapalli	HPBP Trichy	2.67
		BAP Ranipet	1.33
5	M/s Murthy & Co. LLP, Bengaluru	SBD Bengaluru	0.53
		EDN Bengaluru	0.67
6	M/s Paliwal & Associates, Lucknow	CFP Rudrapur	0.40
		FSIP Jagdishpur	0.61
		IVP Goindwal	0.40
7	M/s SSPGR & Associates LLP, Visakhapatnam	HPVP Visakhapatnam	0.53
	Total		15.76

The above fees is exclusive of applicable taxes & out of pocket expenses which are payable extra.

Accordingly, Members are requested to ratify the remuneration payable to the Cost Auditors for the Financial Year ending on 31st March, 2024.

None of the Directors or Key Managerial Personnel of the Company or their relatives is in any way, concerned or interested, financially or otherwise, in the resolution set out at item no. 6.

The Board of Directors commends the resolution for approval of the Shareholders.

ITEM NO. 7

Ms. Arti Bhatnagar (DIN: 10065528), aged 57 years, was inducted as Part-time Official Director on the Board of BHEL w.e.f. February 14, 2023.

Ms. Bhatnagar has a post graduate degree in Economics and M. Phil in Defence Strategic Studies from Madras University. Ms. Bhatnagar is an alumnus of the National Defence College.

She is a Civil Servant of the Indian Defence Accounts Service of the 1990 batch. She is presently working as Additional Secretary & Financial Adviser, Ministry of Commerce & Industry, Ministry of Heavy Industry and Ministry of MSME.

With about 25 years of experience in dealing with Finance, Accounts and Audit of the Defence Forces, her expertise is in handling defence acquisition and procurement contracts. Ms. Bhatnagar has worked as Joint Secretary (Security), Cabinet Secretariat handling SPG for five years. She has also worked as a Chief Vigilance Officer for Air India, Pawan Hans Limited and Airport Authority of India.

Ms. Arti Bhatnagar holds the position of Part-time Official Director on the Boards of H.M.T. Limited, India International Convention & Exhibition Centre Limited, Invest India, MMTC Limited, The State Trading Corporation of India Limited and India Trade Promotion Organization. Further, she is Chairperson of the Audit Committee of India Trade Promotion Organization, Member of the Audit Committees of H.M.T. Limited & MMTC Limited and Member of the Stakeholder Relationship Committee of H.M.T. Limited.

Being a Government of India nominee on the Board of BHEL, Ms. Arti Bhatnagar does not receive any remuneration from BHEL.

Ms. Arti Bhatnagar does not hold any shares in BHEL and she does not have any relationship with other Directors/ Manager/ Key Managerial Personnel of the Company.

Ms. Arti Bhatnagar has attended one Board Meeting which was held during her tenure in FY 2022-23.



In line with applicable statutory provisions read with Article 67(iv) of the Articles of Association of the Company, Ms. Arti Bhatnagar holds office till the date of ensuing Annual General Meeting and is eligible for appointment. As per requirement of Section 160 of the Companies Act, 2013, the Company has received a Notice in writing, proposing candidature of Ms. Arti Bhatnagar for the Office of Director of the Company.

Except Ms. Arti Bhatnagar, being an appointee, none of the Directors or Key Managerial Personnel of the Company or their relatives is in any way, concerned or interested, financially or otherwise, in the resolution set out at item no. 7.

The Board of Directors commends the resolution for approval of the Shareholders.

ITEM NO. 8

Shri Ramesh Patlya Mawaskar (DIN: 10194932), aged 53 years, was inducted as an Independent Director on the Board of BHEL w.e.f. June 8, 2023.

Shri Ramesh Patlya Mawaskar is a Commerce graduate from Amravati University and has also done M.A. (Public Admin.) from K.K.S.V. Ramtek University.

Shri Mawaskar's area of specialization includes Management and Administration. He started his career at very young age with Government of Maharashtra and held various positions at different level. He had an extensive experience of more than 29 years in public services viz., controlling of Public Distribution System (PDS), Inspection & Supervision of all Government food warehouse and PDS at various divisions. He took voluntary retirement from the position of Dy. Commissioner in Food and Civil Supply Department.

Shri Mawaskar has varied & diverse experience in area of public administration. He has a great dedication and assiduous approach to achieve goals of socio-economic development. He has a keen interest in social service and also involved in various social activities especially pertaining towards upliftment and socio-economic development of tribal people.

Appointment of Shri Ramesh Patlya Mawaskar is upto 01.06.2026 or until further orders, whichever is earlier. As an Independent Director, he is entitled to sitting fee for Board Meetings and Board Level Committee Meetings attended by him.

Shri Ramesh Patlya Mawaskar does not hold any shares in BHEL and he does not have any relationship with other Directors/ Manager/ Key Managerial Personnel of the Company.

Since Shri Ramesh Patlya Mawaskar was appointed as Director on 08.06.2023, he did not attend any Board Meeting during FY 2022-23.

In line with applicable statutory provisions read with Article 67(iv) of the Articles of Association of the Company, Shri Ramesh Patlya Mawaskar holds office till the date of ensuing Annual General Meeting and is eligible for appointment. As per requirement of Section 160 of the Companies Act, 2013, the Company has received a Notice in writing, proposing candidature of Shri Ramesh Patlya Mawaskar for the Office of Independent Director of the Company.

The Company has received a declaration from Shri Ramesh Patlya Mawaskar that he meets the criteria of independence as prescribed both under Section 149(6) of the Companies Act, 2013 and Regulation 16 of the SEBI Listing Regulations. Keeping in view his vast expertise and knowledge, it will be in the interest of the Company that Shri Ramesh Patlya Mawaskar is appointed as an Independent Director and he has the skills & capabilities required for the role. In the opinion of the Board, Shri Ramesh Patlya Mawaskar fulfills the conditions specified in the Companies Act, 2013 and Rules made thereunder for his appointment as an Independent Director of the Company and is independent of the Management

Except Shri Ramesh Patlya Mawaskar, being an appointee, none of the Directors or Key Managerial Personnel of the Company or their relatives is in any way, concerned or interested, financially or otherwise, in the resolution set out at item no. 8.

The Board of Directors commends the resolution for approval of the Shareholders.

ITEM NO. 9

Shri Krishna Kumar Thakur (DIN: 10172666), aged 49 years, was inducted as Director (Human Resources) on the Board of BHEL w.e.f. July 4, 2023.

Shri Krishna Kumar Thakur is a 1998 batch officer of Indian Railway Personnel Service (IRPS). He is a Post-Graduate in Literature from Tilka Manjhi University, Bhagalpur and also holds a degree of Post-Graduate Diploma in Management with specialisation in Human Resource (PGDM-HR) from Tata Institute of Social Sciences (TISS).

He has a diverse and versatile experience of 25 years of glorious service in Indian Railways and CPSUs with fine handling of HR matters and administration. During his career, he has headed HR department of three important Railway divisions i.e. Solapur, Bhopal & Mumbai, included therein all HR matters of thirty five thousand personnel of Mumbai Division. He has always been exceptional in timely and transparent handling of HR matters for serving and retired employees. Employee welfare has always been his topmost priority. As Chairman, Railway Recruitment Cell, Western Railway, he has successfully completed recruitment of approximately twelve thousand employees. While working on secondment with RITES, he had served in a foreign project

of Train Operation at Saudi Arabia and his contribution was critical on the matter of two hundred work visa (IQAMA), procurement of human capital and efficient management of resources meeting client's satisfaction in a time bound manner. He had also headed HR department of Konkan Railway Corporation Limited (KRCL) wherein he played an important role in developing and streamlining HR policy and procedures of KRCL.

As a fine HR professional, he has rendered yeoman's service in dealing with unions/ associations, which has also been his area of strength. In all his assignments, his proactive, progressive and transparent handling of personnel matters had helped the organisations in maintaining cordial industrial relations and fulfilling corporate responsibilities. A visionary, he is credited with long-term systemic improvements for efficient and effective management of key ingredients of corporate and government functioning in overall organisational perspectives.

Appointment of Shri Krishna Kumar Thakur is upto 03.07.2028 or until further orders, whichever is earlier, in the pay scale of Rs. 1,80,000 – Rs. 3,40,000 p.m. on terms and conditions approved by the Government of India.

Shri Thakur does not hold any shares in BHEL and he does not have any relationship with other Directors/ Manager/ Key Managerial Personnel of the Company.

Since Shri Krishna Kumar Thakur was appointed as Director on 04.07.2023, he did not attend any Board Meeting during FY 2022-23.

In line with applicable statutory provisions read with Article 67(iv) of the Articles of Association of the Company, Shri Krishna Kumar Thakur holds office till the date of ensuing Annual General Meeting and is eligible for appointment. As per requirement of Section 160 of the Companies Act, 2013, the Company has received a Notice in writing, proposing candidature of Shri Krishna Kumar Thakur for the Office of Director of the Company.

Except Shri Krishna Kumar Thakur, being an appointee, none of the Directors or Key Managerial Personnel of the Company or their relatives is in any way, concerned or interested, financially or otherwise, in the resolution set out at item no. 9.

The Board of Directors commends the resolution for approval of the Shareholders.

By Order of the Board of Directors



(Rajeev Kalra)
Company Secretary

Place: New Delhi
Dated: July 28, 2023



DETAILS OF DIRECTORS PROPOSED FOR RE-APPOINTMENT

SHRI UPINDER SINGH MATHARU

Shri Upinder Singh Matharu (DIN: 09541886), aged 59 years, was inducted as Director (Power) on the Board of BHEL w.e.f. March 21, 2022.

Shri Matharu is a 1984 batch Mechanical Engineering graduate from Thapar Institute of Engineering & Technology, Patiala. He holds post graduate degree in Business Administration (Marketing) besides being a Govt. certified Energy Manager and Auditor from Bureau of Energy Efficiency (BEE).

Shri Matharu joined BHEL in 1985 at Industrial Valves Plant (IVP), Goindwal when the plant was being set up. He has had a diverse and versatile experience spanning almost 38 years, working initially in manufacturing units at IVP and HPBP Tiruchirappalli and then in BHEL's Power Sector divisions including in Project Management function. Subsequently he headed Power Sector Eastern Region (PSER).

As Head of Project Management Group, Shri Matharu was responsible for execution of more than 25,000 MW of thermal power projects in the Country and as Head of PSER, he oversaw execution of more than 8000 MW of thermal, hydro power projects in India and overseas besides FGD projects. During his tenure in Project Management, he was instrumental in developing and evolving various project management practices and systems of the Company, besides making significant contributions to the power sector capacity addition. During his stint in manufacturing units, he gained hands on experience in variegated functions including Sub-Contracting, Materials Management, Operation Planning & Control, Management Services, and was also actively involved from the inception of the manufacturing unit of IVP, Goindwal.

A soft-spoken person, he is widely known as a trustworthy professional having in-depth knowledge and experience of power sector ecosystem for speedy implementation of projects. His extensive experience in manufacturing units and corporate functions have enabled him to assess the prospective changes in the business environment and contribute effectively in formulation of strategies for the growth of the Company.

Appointment of Shri Upinder Singh Matharu is upto 31.08.2023 or until further orders, whichever event occurs earlier, in the pay scale of Rs. 1,80,000 – Rs. 3,40,000 p.m. on terms and conditions approved by the Government of India.

Shri Upinder Singh Matharu does not hold any shares in BHEL and he does not have any relationship with other Directors/ Manager/ Key Managerial Personnel of the Company.

Shri Upinder Singh Matharu has attended all the Board Meetings (eleven) held in FY 2022-23.

SHRI JAI PRAKASH SRIVASTAVA

Shri Jai Prakash Srivastava (DIN: 09703643), aged 58 years, was inducted as Director (Engineering, Research & Development) on the Board of BHEL w.e.f. August 12, 2022. He also holds the additional charge of Director (Finance) and is the Chief Financial Officer, BHEL.

Shri Srivastava is a 1985 batch Mechanical Engineering graduate from IIT Roorkee (erstwhile University of Roorkee) with a post graduate degree in Business Administration. Shri Srivastava has subsequently also undergone an Advanced Management Programme from IIM, Calcutta.

Shri Srivastava joined BHEL in 1985 as Engineer Trainee. He has about 38 years of diverse and extensive experience in almost all product lines of BHEL across all major functions viz. Planning & Development, Marketing & Business Development, Technology Management, Project Management, Project Finance & Control, Capital & Revenue Budgeting, Receivables Management, Financial Forecasting & Planning, Treasury Management, Manufacturing Operations, Procurements, Quality, Engineering, R&D, Cost Optimization, Human Resource Management, Industrial Relations, Legal, Digitalization, Strategic Management and handling Stakeholders communications and strengthening Investor relations in various capacities across entire BHEL value chain while overseeing financial operations of units and Business sectors including over two-years stint in the Apex office as Strategic Adviser to CMD, BHEL. He has acquired all the requisite competencies related to apex level responsibilities associated with Board Report, Financial Reporting, Disclosure & Compliances, Management Discussion and Analysis, Directors Responsibilities Statement, CEO/CFO Certification, Effectiveness of Internal Financial Controls, Financial Risk Management, Adequacy and effectiveness of Financial Systems & Procedures, Structural frameworks for Liquidation of Receivables, Strategic Cost Management, Inventory Optimization, Procurement Efficiencies, Liquidity Management, Achievement of financial parameters of MoU, etc.

Previously as Executive Director & Head of Unit – Industry sector, he had been instrumental in driving financial performance of several Industry sector businesses with his focused approach of cash-centric project execution to achieve record collections. Also, earlier as Head of one of the Manufacturing Units of BHEL, his extensive

efforts in maximizing financial performance through strict budgetary controls, improved turnover realization and profit maximization, resulted into achievement of Best-in-Last-5 years' Financial results for the unit.

Shri Srivastava, as Director (E, R&D) & Director (Finance) – additional charge, has been leading company-wide capability building initiatives in new growth areas such as Defence & Aerospace, Railway Transportation, Hydrogen economy, Coal to Chemicals, Advanced Propulsion, etc. as well as establishment of National facilities and Centres of Excellence. He is also driving innovative revenue models across the company leveraging company's USPs for catalyzing growth trajectory of the company. As the Chief Financial Officer of the Company, he is providing financial perspective to the business strategies and maintaining effectiveness of financial risk management to protect stakeholders' interest. He is laying emphasis on evolving systemic frameworks and recalibrating policies, to enable orderly and efficient conduct of business operations. Shri Srivastava, under the prevailing and unprecedented challenges, has taken up maximization of financial performance in mission mode and devising prudent operating, investing and financing strategies to drive liquidity and profitability in operations. He is focusing on fostering a culture of operational excellence through digital integration, wherever possible, while ensuring compliance, transparency and financial propriety in operations.

He has been responsible for various initiatives resulting into "Many Firsts Achievements" throughout his career history. His wide exposure across BHEL operations has enriched him with a strong acumen to analyze market trends & develop market-ready capabilities and has enabled him to contribute effectively in formulation & implementation of strategies in the changing business environment & put BHEL on the path of sustainable growth.

Shri Jai Prakash Srivastava holds the position of Non-Executive Chairperson on the Board of BHEL - GE Gas Turbine Services Private Limited and Non-Executive Director on the Board of Raichur Power Corporation Limited.

Appointment of Shri Jai Prakash Srivastava is upto 31.12.2024 or until further orders, whichever event occurs earlier, in the pay scale of Rs. 1,80,000 – Rs. 3,40,000 p.m. on terms and conditions approved by the Government of India.

Shri Jai Prakash Srivastava does not hold any shares in BHEL and he does not have any relationship with other Directors/ Manager/ Key Managerial Personnel of the Company.

Shri Jai Prakash Srivastava has attended all the Board Meetings (six) held during his tenure in FY 2022-23.

By Order of the Board of Directors



(Rajeev Kalra)
Company Secretary

Place: New Delhi
Dated: July 28, 2023

PROCEDURES FOR JOINING THE AGM THROUGH VC, REMOTE E-VOTING AND VOTING AT THE AGM

In compliance with the provisions of Section 108 of the Act, read with Rule 20 of the Companies (Management and Administration) Rules, 2014, as amended from time to time, Regulation 44 of the SEBI Listing Regulations and in terms of SEBI Circular no. SEBI/HO/CFD/CMD/CIR/P/2020/242 dated December 9, 2020 in relation to e-voting facility provided by listed entities, the Members are provided with the facility to cast their vote electronically, through the e-voting facility provided by NSDL, on all the resolutions set forth in this Notice. The instructions for e-voting are given herein below.

The remote e-voting period will be as under: -

Commencement of remote e-voting:	9:00 A.M. on Monday, August 21, 2023
End of remote e-voting:	5:00 P.M. on Wednesday, August 23, 2023

Members holding shares either in physical form or in dematerialized form, as on Thursday, August 17, 2023 i.e., Cut-off date, may cast their vote electronically during the above period. The e-voting module shall be disabled by NSDL for voting thereafter. Members have the option to cast their vote on any of the resolutions using the remote e-voting facility either during the period commencing from August 21, 2023 and ending on August 23, 2023 or e-voting during the AGM. Members who have cast their vote by remote e-voting prior to the AGM may attend/participate in the AGM through VC but shall not be entitled to cast their vote on such resolution again.

The Board of Directors of the Company have appointed Ms. Ashu Gupta of M/s Ashu Gupta & Co., Practicing Company Secretary as Scrutinizer to scrutinize the process of remote e-voting and electronic voting at the AGM in a fair and transparent manner.

The voting rights of Members shall be in proportion to their shares in the paid-up equity share capital of the Company as on the Cut-off date.

The Scrutinizer will, after the conclusion of e-voting at the Meeting, scrutinize the votes cast at the Meeting and votes cast through remote e-voting, make a consolidated Scrutinizer's Report and submit the same to the Chairman. The result of e-voting will be declared within two working days of the conclusion of the Meeting and the same, along with the consolidated Scrutinizer's Report, will be placed on the website of the Company (www.bhel.com) and on the website of the e-voting agency (www.evoting.nsdl.com).

The result will simultaneously be communicated to the stock exchanges.

Subject to receipt of requisite number of votes, the Resolutions proposed in the Notice shall be deemed to be passed on the date of the Meeting, i.e., on August 24, 2023.

INSTRUCTIONS FOR VOTING THROUGH ELECTRONIC MEANS AND JOINING VIRTUAL MEETING





A. Process and manner for remote e-voting, and voting during the AGM are explained below:

Step-1: Access to the NSDL e-voting system and casting vote electronically on NSDL e-voting system

A.1) Login method for Individual shareholders holding securities in demat mode

In terms of the SEBI Circular dated December 9, 2020 on the e-voting facility provided by listed companies and as part of increasing the efficiency of the voting process, e-voting process has been enabled for all individual shareholders holding securities in demat mode to vote through their demat account maintained with depositories / websites of depositories / depository participants. Shareholders are advised to update their mobile number and email-id in their demat accounts in order to access e-voting facility.

Type of shareholders	Login Method
Individual Shareholders holding securities in demat mode with NSDL.	<p>1. NSDL IDeAS Facility:</p> <ul style="list-style-type: none"> If you are already registered for the NSDL IDeAS facility: <ol style="list-style-type: none"> 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 mobile phone Once the homepage of e-services is launched, click on the 'Beneficial Owner' icon under 'Login', available under the '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 the e-voting page. Click on Company name or e-voting service provider – NSDL and you will be re-directed to the NSDL e-voting website for casting your vote during the remote e-voting period or voting during the meeting.

	<ul style="list-style-type: none"> • If you are not registered for IDEAS e-Services: <ol style="list-style-type: none"> 1. The option to register is available at https://eservices.nsdl.com 2. Select 'Register Online for IDEAS Portal' or click on https://eservices.nsdl.com/SecureWeb/IdeasDirectReg.jsp 3. Upon successful registration, please follow steps given in points 1 - 5 above <p>II. E-voting website of NSDL:</p> <ol style="list-style-type: none"> 1. 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 mobile phone. 2. Once the homepage of e-voting system is launched, click on the 'Login' icon, available under the 'Shareholder / Member' section. 3. A new screen will open. You will have to enter your User ID (i.e. your 16-digit demat account number held with NSDL), password / OTP and a verification code as shown on the screen. 4. After successful authentication, you will be redirected to the NSDL Depository site wherein you can see the e-voting page. Click on Company name or e-voting service provider – NSDL and you will be redirected to the e-voting website of NSDL for casting your vote during the remote e-voting period or voting during the meeting. <p>III. Shareholders/Members can also download NSDL Mobile App 'NSDL Speed-e' facility by scanning the QR code mentioned below for seamless voting experience.</p> <p style="text-align: center;">NSDL Mobile App is available on</p> <div style="display: flex; justify-content: center; gap: 20px;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <div style="display: flex; justify-content: center; gap: 20px; margin-top: 10px;">   </div>
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Individual Shareholders holding securities in demat mode with CDSL	<ol style="list-style-type: none"> 1. Existing users who have opted for Easi / Easiest, they can login through their User ID and password. The option to reach e-voting page will be made available without any further authentication. The URL for users to login to Easi / Easiest are https://web.cdslindia.com/myeasi/home/login or www.cdslindia.com and click on 'New System Myeasi'. 2. After successful login of Easi/Easiest, you will be also able to see the E Voting Menu. The Menu will have links of e-voting service provider (ESP) i.e. NSDL portal. Click on NSDL to cast your vote. 3. If you are not registered for Easi/Easiest, the option to register is available at https://web.cdslindia.com/myeasi/Registration/EasiRegistration 4. Alternatively, you can directly access e-voting page by providing demat Account Number and PAN from a link in 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 provided links for the respective ESP i.e. NSDL where the e-voting is in progress.
Individual Shareholders (holding securities in demat mode) login through their depository participants	<ol style="list-style-type: none"> 1. You can also log in using the login credentials of your demat account through your depository participant registered with NSDL / CDSL for the e-voting facility. 2. Once logged in, you will be able to see the e-voting option. Once you click on the e-voting option, you will be redirected to the NSDL / CDSL depository site after successful authentication, wherein you can see e-voting feature. 3. Click on Company name or e-voting service provider-NSDL and you will be redirected to the e-voting website of NSDL for casting your vote during the remote e-voting period or voting during the meeting.

Important note: Members who are unable to retrieve User ID/ Password are advised to use Forgot User ID and Forgot 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. NSDL and CDSL

Login type	Helpdesk details
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 022 - 4886 7000 and 022 - 2499 7000
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

A.2) Login Method for shareholders, other than Individual shareholders holding securities in demat mode and shareholders holding securities in physical mode

1. 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.
2. Once the home page of e-voting system is launched, click on the icon 'Login' which is available under 'Shareholder/Member' section.
3. A new screen will open. You will have to enter your User ID, your Password/OTP and a Verification Code as shown on the screen.
4. Alternatively, if you are registered for NSDL e-Services i.e. IDeAS, you can login at <https://eservices.nsdl.com/> with your existing IDeAS login. Once you login to NSDL e-Services after using your login credentials, click on e-voting and you can proceed to Step 2 i.e. Cast your vote electronically on NSDL e-voting system.
5. Your User ID details are given below:

Manner of holding shares i.e. Demat (NSDL or CDSL) or Physical	Your User ID is:
a) For Members who hold shares in demat account with NSDL.	8-Character DP ID followed by 8-Digit Client ID For example if your DP ID is IN300*** and Client ID is 12***** then your user ID is IN300***12*****.
b) For Members who hold shares in demat account with CDSL.	16- Digit Beneficiary ID For example if your Beneficiary ID is 12***** then your user ID is 12*****.

c) For Members holding shares in Physical Form.	EVEN Number followed by Folio Number registered with the Company For example if folio number is 001*** and EVEN is 124661 then user ID is 124661001***
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6. Password details for shareholders other than Individual shareholders are given below:
 - a) If you are already registered for e-voting, then you can use your existing password to login and cast your vote.
 - b) If you are using NSDL e-voting system for the first time, you will need to retrieve the 'initial password' which was communicated to you. Once you retrieve your 'initial password', you need to enter the 'initial password' and the system will prompt you to change your password.
 - c) How to retrieve your 'initial password'?
 - (i) If your email ID is registered in your demat account or with the Company, your 'initial password' is communicated to you on your email ID. Trace the email sent to you from NSDL from your mailbox. Open the email and open the attachment i.e. a .pdf file. Open the .pdf file. The password to open the .pdf file is your 8 digit client ID for NSDL account, last 8 digits of client ID for CDSL account or folio number for shares held in physical form. The .pdf file contains your 'User ID' and your 'initial password'.
 - (ii) If your email ID is not registered, please follow steps mentioned below in 'General Guidelines for shareholders'.
7. If you are unable to retrieve or have not received the 'initial password' or have forgotten your password:
 - a) Click on 'Forgot User Details/Password?' (If you are holding shares in your demat account with NSDL or CDSL) option available on www.evoting.nsdl.com.
 - b) Click on 'Physical User Reset Password?' (If you are holding shares in physical mode) option available on www.evoting.nsdl.com.
 - c) If you are still unable to get the password by aforesaid two options, you can send a request at evoting@nsdl.co.in mentioning your demat account number/folio number, your PAN, your name and your registered address etc.

- d) Members can also use the OTP (One Time Password) based login for casting the votes on the e-voting system of NSDL.
8. After entering your password, tick on **'Agree to Terms and Conditions'** by selecting on the check box.
9. Now, you will have to click on **'Login'** button.
10. After you click on the **'Login'** button, Home page of e-voting will open.

Step 2: Cast your vote electronically and join General Meeting on NSDL e-voting system

1. After successful login at Step 1, you will be able to see all the companies **'EVEN'** in which you are holding shares and whose voting cycle is in active status.
2. Select **'EVEN 124661'** of Company to cast your vote during the remote e-voting period and casting your vote during the General Meeting. For joining virtual meeting, you need to click on **'VC/OAVM' link placed under 'Join Meeting'**.
3. Now you are ready for e-voting as the Voting page opens.
4. Cast your vote by selecting appropriate options i.e. assent or dissent, verify/modify the number of shares for which you wish to cast your vote and click on **'Submit'** and also **'Confirm'** when prompted.
5. Upon confirmation, the message **'Vote cast successfully'** will be displayed
6. You can also take the printout of the votes cast by you by clicking on the print option on the confirmation page.
7. Once you confirm your vote on the resolution, you will not be allowed to modify your vote.

B. Instructions for Members for attending the AGM through VC & Voting on the day of AGM:

1. Members will be provided with the facility to attend the AGM through VC through the NSDL e-voting system. Members may access the same by following the steps mentioned above for **'Access to NSDL e-voting system'**. After successful login, Members should click **'VC/OAVM link'** placed under **'Join meeting'** menu against Company name. The link for VC/OAVM will be available in Shareholder/Member login where the EVEN of Company will be displayed.
2. The members who do not have the User ID and Password for e-voting or have forgotten the User ID and Password may retrieve the same by following the remote e-voting instructions mentioned elsewhere in the Notice.
3. Members are encouraged to join the Meeting through Laptops for better experience. Further, Members will be

required to allow Camera and use Internet with a good speed to avoid any disturbance during the meeting.

4. 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.
5. Members who need assistance before or during the AGM, can contact NSDL on evoting@nsdl.co.in / 022 - 4886 7000 and 022 - 2499 7000 or contact Ms. Pallavi Mhatre - NSDL at evoting@nsdl.co.in .
6. Members who would like to express their views or ask questions during the AGM may register themselves as a speaker by sending their request from their registered e-mail address mentioning their name, DP ID and Client ID / folio number, PAN, mobile number & prospective questions (if any) at shareholderquery@bhel.in from August 16, 2023 (9:00 a.m. IST) to August 19, 2023 (5:00 p.m. IST). Those Members who have registered themselves as a speaker will only be allowed to express their views / ask questions during the AGM. The Company reserves the right to restrict the number of questions and number of speakers, subject to availability of sufficient time for smooth conduct of the AGM.
7. Members may also ask questions in writing by sending mail in advance at shareholderquery@bhel.in, mentioning their name, demat account number/folio number, email id, mobile number and the requisite views/ questions. The same will be replied by the Company suitably.
8. Facility to join the meeting shall be opened 15 minutes before the scheduled time of the AGM and shall be kept open throughout the proceedings of the AGM.
9. The procedure for e-voting on the day of the AGM is same as the instructions mentioned above for remote e-voting.
10. Only those Members/ shareholders, who will be present in the AGM through VC facility and have 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 in the AGM.
11. Members who have voted through remote e-voting will be eligible to attend the AGM. However, they will not be eligible to vote at the AGM.

C. General Guidelines for shareholders

1. Institutional Members (i.e. other than Individuals, HUF, NRI, etc.) are required to send scanned certified true copy (PDF Format) of the Board Resolution/ Authority

- Letter, etc. together with attested specimen signature(s) of the duly authorized representative(s), to the Scrutinizer at ashugupta.cs@gmail.com with a copy marked to evoting@nsdl.co.in. Institutional shareholders (i.e. other than individuals, HUF, NRI etc.) can also upload their Board Resolution / Power of Attorney / Authority Letter etc. by clicking on "Upload Board Resolution / Authority Letter" displayed under "e-Voting" tab in their login.
2. It is strongly recommended not to share your password with any other person and take utmost care to keep your password confidential. Login to the e-voting website will be disabled upon five unsuccessful attempts to key in the correct password. In such an event, you will need to go through the '**Forgot User Details/Password?**' or '**Physical User Reset Password?**' option available on www.evoting.nsdl.com to reset the password.
 3. Any person holding shares in physical form and non-individual shareholders, who acquires shares of the Company and becomes a Member of the Company after sending of the Notice and holding shares as on the Cut-off date, may obtain the login ID and password by sending a request at evoting@nsdl.co.in. However, if he / she is already registered with NSDL for remote e-voting then he /she can use his / her existing User ID and password for casting the vote. In case of Individual Shareholders holding securities in demat mode and who acquires shares of the Company and becomes a Member of the Company after sending of the Notice and holding shares as on the Cut-off date may follow steps mentioned above under '**Login method for Individual shareholders holding securities in demat mode**'.
 4. In case of any queries, you may refer the Frequently Asked Questions (FAQs) for Shareholders and e-voting user manual for Shareholders available at the download section of www.evoting.nsdl.com or call on toll free no.: 022 - 4886 7000 and 022 - 2499 7000 or send a request to Ms. Pallavi Mhatre- NSDL at evoting@nsdl.co.in.
 5. Members whose email IDs are not registered with the depositories / Company may send a request to evoting@nsdl.co.in for procuring user id and password for e-voting:
 - i) In case shares are held in physical mode please provide Folio No., Name of shareholder, scanned copy of the share certificate (front and back), PAN (Self-attested Scanned copy of PAN card), AADHAR (Self-attested Scanned copy of Aadhar Card).
 - ii) In case shares are held in demat mode, please provide DPID-CLID (16 digit DPID + CLID or 16 digit beneficiary ID), Name, client master or copy of Consolidated Account statement, PAN (self-attested scanned copy of PAN card), AADHAR (self-attested scanned copy of Aadhar Card).
 - iii) If you are an Individual shareholder holding securities in demat mode, you are requested to refer to the login method explained at (point no. A.1) i.e., Login method for Individual shareholders holding securities in demat mode.
 - iv) In terms of SEBI circular dated December 9, 2020 on e-voting facility provided by Listed Companies, Individual shareholders holding securities in demat mode are allowed to vote through their demat account maintained with Depositories and Depository Participants. Shareholders are required to update their mobile number and email ID correctly in their demat account in order to access e-Voting facility.
 6. To register/ update your email address with the Company permanently and to keep receiving all communication (Notice, Annual Report and the e-voting instructions along with the User ID & Password) electronically in future, please follow the below process:
 - a) Members holding shares in physical mode may send an e-mail request addressed to shareholderquery@bhel.in or to M/s Alankit Assignments Limited, Registrar & Share Transfer Agent of the company at rta@alankit.com alongwith scanned copy of the request letter duly signed by the first shareholder, providing the email address, Mobile No., self-attested copy of PAN and a copy of the share certificate to enable RTA to register their e-mail address.
 - b) Members holding shares in dematerialized mode are requested to register/ update their email addresses with their respective Depository Participant.
 - c) In case of queries in the matter, members are requested to write to rta@alankit.com or call at 011-42541234.



BHARAT HEAVY ELECTRICALS LIMITED
 (CIN: L74899DL1964GOI004281)
 Regd. Office: BHEL House, Siri Fort, New Delhi-110049
 Phone: 011-66337000, Fax: 011-66337428
 Website: www.bhel.com, Email: shareholderquery@bhel.in

Dear Shareholder(s),

Re: Payment of dividend through National Electronic Clearing Services (NECS)/ Electronic Clearing Services (ECS)

Pursuant to SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015, all listed companies shall use any of the electronic modes of payment facility approved by RBI such as ECS/ NECS/Direct Credit etc. for payment of dividend.

In case you have not already sent the NECS/ ECS/ Bank Account particulars to our Registrar, viz. M/s Alankit Assignments Limited or to your Depository Participant (DP) (in case of demat holding), we would request you to provide the said particulars in the format given below to facilitate prompt, safe & correct payment of dividend as and when declared by the Company.

Please ensure that the details submitted by you to the Registrars/ Depository Participant are correct as any error therein could result in the dividend amount being credited to wrong account.

Kindly help us in this endeavour to serve you better.

Yours faithfully

(Rajeev Kalra)

Company Secretary

P.S. In case you are holding shares in demat form, kindly advise your Depository Participant to take note of your Bank account particulars/ NECS/ ECS/ Direct Credit mandate.

FORM FOR NECS/ ECS MANDATE/ BANK ACCOUNT PARTICULARS

I / We..... do hereby authorise BHEL/ my Depository Participant to

- Print the following details on my/ our dividend warrant
- Credit my dividend amount to my Bank account by NECS/ ECS/ Direct Credit
 (Strike out whichever is not applicable)

My/ our Folio No or DP ID No Client A/c No

Particulars of Bank Account:

- A. Bank Name :
- B. Branch Name :
 (Address for Mandate only)
- C. 9 digit code number of the bank & branch as :
 appearing on the MICR cheque :
- D. IFSC Code :
- E. Account Type (Saving/ Current) :
- F. Account No as appearing on the cheque book :
- G. STD code & Telephone No. of Shareholder :

I / we shall not hold the Company responsible if the NECS/ ECS could not be implemented or the Bank discontinues the NECS/ ECS, for any reason.



M/s Alankit Assignments Limited
 UNIT: BHEL
 4E/2, Alankit House, Jhandewalan Extension,
 New Delhi-110055

.....
 Signature of the Shareholder

Please attach (i) photocopy of a cheque or a blank cancelled cheque issued by your bank relating to your above account for verifying the accuracy of the 9 digit code number AND (ii) a copy of your PAN card with this form.



Bankers, Auditors & Share Transfer Agent

Bankers	Auditors
Axis Bank Ltd.	M/s ABP & Associates, New Delhi
Bank of Baroda	M/s PSMG & Associates, New Delhi
Canara Bank	M/s S. L Chhajer & Co LLP, Bhopal
Export-Import Bank of India	M/s SRN & Associates, Trichy
HDFC Bank Limited	M/s Chandran & Raman, Bengaluru
ICICI Bank Limited	M/s M. Anandam & Co, Hyderabad
IDBI Bank	M/s Gopalaier and Subramanian, Chennai
Indian Bank	
Indian Overseas Bank	Cost Auditors
Indusind Bank	M/s Shome & Banerjee, Delhi
Kotak Mahindra Bank	M/s Vijender Sharma & Co., Delhi
Punjab National Bank	M/s KRJ & Associates, Hyderabad
RBL Bank Ltd.	M/s Subramanian Rajagopal & Associates, Tiruchirapalli
State Bank of India	M/s Murthy & Co. LLP., Bengaluru
The Federal Bank Limited	M/s Paliwal And Associates, Lucknow
The Hongkong and Shanghai Banking Corporation Limited	M/s Uppalapati & Associates, Visakhapatnam
Union Bank of India	
Yes Bank Limited	
	Share Transfer Agent
	Alankit Assignments Limited
	Alankit House, 4E/2, Jhandewalan Extension, New Delhi-110055
	Tel : 011-4254 1234
	Fax : 011-2355 2001

Registered Office

BHEL House, Siri Fort, New Delhi-110049 (India)

CIN: L74899DL1964GOI004281

Phone: 011-66337000, Fax: 011-66337428

Website : www.bhel.com E-mail: shareholderquery@bhel.in

NOTES



NOTES



NUCLEAR POWER ELECTRICITY: Building Reliable and Sustainable base-load solution

Bharat Heavy Electricals Limited (BHEL) dispatched 44th Nuclear Steam Generator from Trichy Plant and retained its position as the prime indigenous supplier of Nuclear Steam Generators for India's Nuclear Power Programme. The Steam Generator was dispatched for 700 MWe unit at NPCIL's Gorakhpur Site in Haryana.

BHEL has been catering to the nation's Nuclear Programme since 1976 by way of engineering, manufacturing, testing and supply of critical nuclear components like Reactor Headers, Steam Generators, Steam Turbine Generators, Heat Exchangers and Pressure Vessels.

Notably BHEL is the only Indian supplier of Nuclear steam turbines and generators, and the only Indian company associated with all the three stages of the Indian Nuclear Power Programme – the first stage as Pressurised Heavy Water Reactors (PHWR), the second stage as Fast Breeder Reactor (FBR) and the third stage

as Advanced Heavy Water Reactor (AHWR), and has been a partner for five decades in the development of the indigenous Nuclear Power Programme.

The first stage of the indigenous nuclear power programme of the country has attained maturity with 18 operating PHWRs. Out of these, 12 PHWRs of the Indigenous Nuclear Power capacity are equipped with BHEL-supplied Steam Turbine Generator sets (10 units of 220 MW each and 2 units of 540 MW).

BHEL has dedicated infrastructure and skilled manpower to address the special design, manufacturing and testing requirements, complying with international codes and standards for various components/equipment of Nuclear power plants. BHEL has proven its capability for both primary (reactor headers, end shields, etc.) and secondary (turbine, generator, heat exchangers, etc.) side equipment for Nuclear power projects.



BHEL is proud to be associated with **ISRO (Indian Space Research Organisation)** since **TWO DECADES** for powering India's space aspirations



Chandrayaan 3 is equipped with BHEL manufactured **Batteries for Lander Module & Propulsion Module and Titanium Propellant Tank**

DID YOU KNOW

Majority of satellites launched by ISRO are equipped with BHEL - supplied space grade solar panels and space grade lithium-ion batteries



BHEL - Contributing to the Nation's self-reliance in the Aerospace sector



Bharat Heavy Electricals Limited

Registered Office : BHEL House, Siri Fort, New Delhi - 110049, India

Corporate Identity Number : L74899DL1964GOI004281

www.bhel.com

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