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Azadi Ka
Amrit Mahotsav

G20
भारत 2023 INDIA



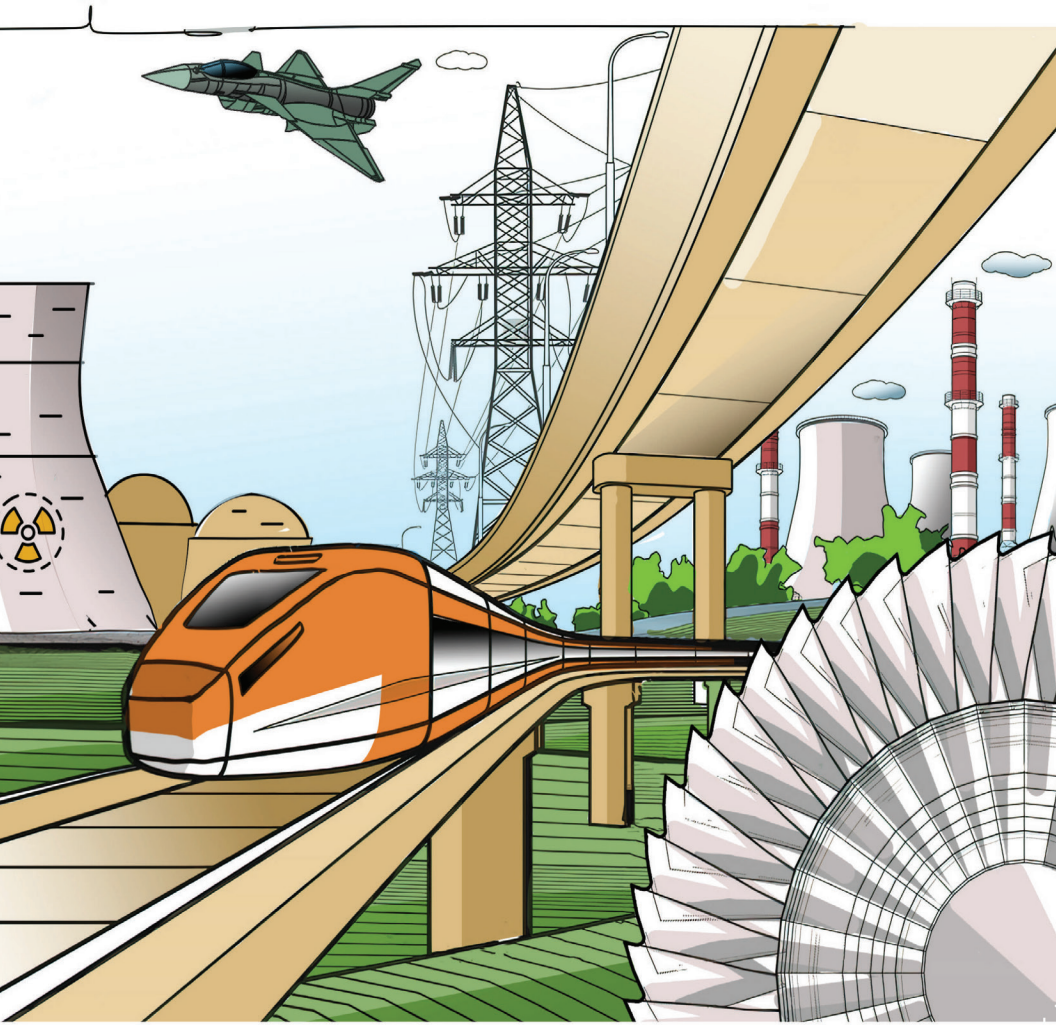
59^{वीं} वार्षिक आम बैठक

59th ANNUAL GENERAL MEETING

Chairman & Managing Director's Address | अध्यक्ष एवं प्रबंध
निदेशक का सम्बोधन

August 24, 2023

अगस्त 24, 2023





Dr. Nalin Shinghal
Chairman & Managing Director

Dear Shareholders,

On behalf of the Board of Directors & employees of BHEL, I welcome you all to the 59th Annual General Meeting of your Company. It is an honour and a privilege for me to present the 59th Annual Report of the company to our valued shareholders.

The report of the Directors and Audited Accounts for the year ending 31st March 2023, with the reports of Auditors and comments of the Comptroller and Auditor General, has already been circulated to the shareholders and with your permission, I shall take them as read.

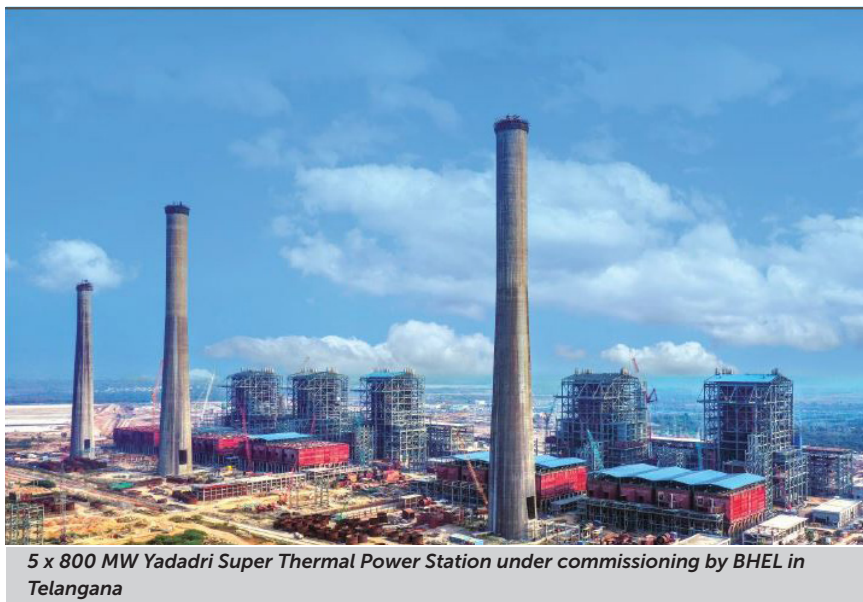


Secured significant order of 80 Vande Bharat trainsets – order includes engineering, manufacturing, testing, commissioning, and supply & 35 year maintenance

The Business scenario in the domestic market has been robust with India being one of the world's fastest- growing major economies, achieving a 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 impact on businesses, the continued expansion by domestic industry coupled with substantial investment in the infrastructure sector, is presenting significant growth opportunities for your company.

The company has been building for the future by putting in place suitable enablers for long term sustainable growth and 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, are showing results.

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, enhanced delegation to project directors, site data digitization, etc. This impetus on project execution has paid off in terms of doubling the erection tonnage at project sites over a period of four years, achieving 5.41 lakh MT in FY 2022-23 (despite a decreasing thermal order book), and attaining Capacity Addition of 1,580 MW in Power Sector, along with Project Synchronisation of around 298 MW in Captive & Solar segment, during FY 2022-23.

Key performance highlights

Some of the key achievements of ‘Team BHEL’ are as follows:

- Your company achieved revenue from operations of ₹23,365 Crore as against ₹21,211 Crore during the previous year, an increase of about 10% and made a profit after tax (PAT) of ₹448 Crore against ₹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 no. of days of Revenue from Operations from 571 days last year to 567 days in current year. The Trade Receivables too in terms of no. of days of Revenue from Operations, have reduced from 107 days last year to 102 days in current year.
- Further, the increase in liquidation against current year billing from 59% in FY 2018-19 to 86% in FY 2021-22 and FY 2022-23 is proof of the quality of execution & billing
- The company secured orders worth ₹23,548 Crore, excluding taxes, which is the highest in the last five years. Industry sector segment order booking at ₹9,537 Crore is the highest in the last 13 years with the highest-ever orders in the defence sector, which also includes the order for 20 upgraded SRGMs, the main guns 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. Recently, the company won the only other thermal plant ordered



2 x 660 MW NTPC Talcher Thermal Power Plant – Bhel won the only project awarded in last four years – reasserting market leadership of BHEL – aerial view of site activity



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

in the country so far, for supply & supervision of BTG for 2x800 MW Supercritical thermal power at Bandhaura, Madhya Pradesh from M/s Mahan Energen Limited.

- The company recorded over 25% growth in the Spares & Services Business, and secured the highest ever order booking in this segment.
- The total outstanding order book as on 31st March 2023 stands at ₹91,336 Crore, net of taxes as against PY ₹90,084 Crore. With the receipt of the prestigious order for 80 "Vande Bharat" trainsets in April 2023, the total outstanding order book has crossed ₹1 Lakh Crore (excluding taxes), which is the highest in the last 4 years.
- Despite two waves of COVID, and numerous border & visa related challenges, the Unit 1 of Maitree Thermal power project in Bangladesh was commissioned in December 2022.
- Unit 1 of North Karanpura 3x660 MW thermal power plant was synchronised in October 2022. This plant is the first utility scale

power plant with Air Cooled Condensers (ACC) for reducing water consumption and will result in saving of about 30 billion litres of water annually when all the three units are functioning. This is equivalent to the annual requirement of around 1.5 million people. The work of commissioning of the ACC was carried out successfully by BHEL engineers in the absence of OEM experts (due to geo-political issues).

Going forward

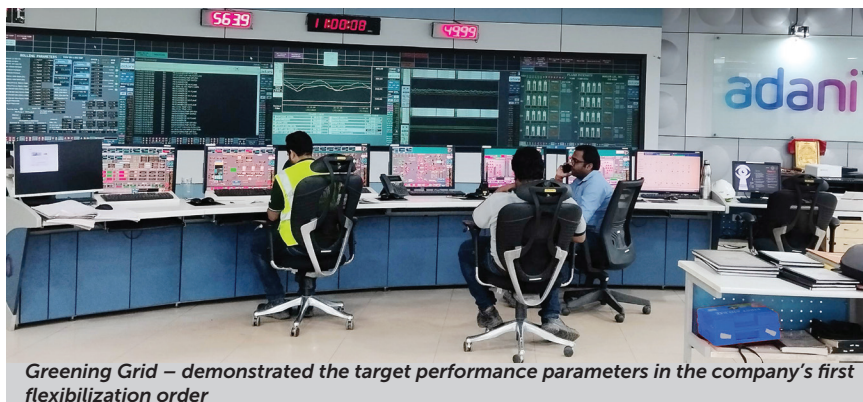
Forward looking initiatives being taken at the national level, especially in area of infrastructure development, are further fuelling the hopes and aspirations of India's 1.4 billion people and creating a range of opportunities in the engineering sectors, for your company. The AatmaNirbhar Bharat initiative launched by our Hon'ble Prime Minister is opening up multiple opportunities and your company has been working relentlessly to capitalise on these emerging opportunities.



BHEL commissioned first unit of 660 MW fitted with ACC at 3x660 MW North Karanpura Super Thermal Power Plant in Jharkhand.

From the perspective of economic growth for meeting the people's aspirations, as well as from an energy security perspective, we are seeing a consensus that coal will continue to be an imperative for the country – with focus on clean coal technologies. This has also brought around a revival in the thermal power sector – albeit for the short to medium term. This is a breather which will give time to your company to establish itself in emerging technology areas. For this, your company is working on a two pronged approach:

- 1) In the conventional business areas, the company has made substantial progress in expanding its business scope including the development and successful demonstration of an in-house solution for flexible operation of coal- fired power plants, which is essential for integrating Renewable Energy in the grid. In the Spares and Services business, the company continues to expand this business area through focus on long term agreements with customers, for supply as well as services, advance procurement action/ stocking to reduce delivery times, and efforts to improve service deliveries as well as providing spares & services for non-BHEL sets. In the past three years, the company has entered into 29 LTSS agreements with a business potential of over ₹900 Crore. These multiple efforts have resulted in the highest-ever order booking of around ₹3,800 Crore (excluding taxes) from spares & services business, last year. With regard to Nuclear



Greening Grid – demonstrated the target performance parameters in the company's first flexibilization order



Contract signing with Indian Railways for 80 nos. Vande Bharat Trainsets. 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

business, an MoU has been signed with NPCIL to jointly pursue business opportunities in the area of Nuclear Power Plants based on Pressurized Heavy Water Reactor (PHWR) technology and developmental efforts have been initiated in the area of Small Modular Reactors. The company continues to maintain its lead position in Hydro power with the capability to design 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 in the country.

- 2) On the diversification front, the company is targeting at least 50% of its business from non-coal segments. The company has achieved some notable successes in this area including receipt of BHEL's largest order for supply and 35 years' maintenance of 80 Vande Bharat trainsets which was received in April 2023 in consortium with M/s Titagarh Rail Systems Ltd (TRSL). This is a landmark success which will open the way for future rail business, where huge expansion and modernisation plans are being



"Chandrayaan-3" liftoff -BHEL contributing to the Nation's self-reliance is the Aerospace sector

rolled out in areas like semi-high speed trainsets, locomotives, signaling, etc. Additionally, the company received its highest-ever orders in defence sector, including orders for upgraded SRGMs, Heat Exchangers for fighter aircraft. Your company has also secured the maiden order for supply of Li- ion batteries for Advanced Medium Combat Aircraft, making BHEL the sole Indian supplier of Li-ion batteries for next generation aircraft. Further, BHEL continues to expand its role as a reliable partner for design, engineering and manufacturing of critical equipment for the strategic sectors with a range of equipment including heat exchangers, control systems, turbines, motors, generators etc.

It is a proud moment for 'Team BHEL' that the recently launched "Chandrayaan- 3" is equipped with BHEL manufactured titanium propellant tank and batteries for the lander module & the propulsion module. In aerospace area, the company is supplying space grade solar panels, space grade lithium-ion batteries and other products.



Yet another successful business initiative has been on the coal gasification front. In the absence of any substantial gas & oil reserves, the need for the country to utilise its vast coal 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 its indigenously developed coal gasification technology, the world's first proven technology for gasification of high ash Indian coals, and completed the design, engineering, optimisation and validation of the gasifier for a 2,000 TPD commercial scale plant. Further process of setting up a JV with Coal India Ltd for establishing 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 have, 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.

In the recent times, your company has entered into some important technology agreements which are expected to create significant business opportunities in the coming years. These include:

- with M/s Sumitomo SHI-FW for subcritical and supercritical Circulating Fluidised Bed Combustion (CFBC) Boilers, capable of firing a wide range of fuels,
- Framework agreement with M/s ABB for underslung propulsion equipment for rail segment, and
- with M/s General Electric Technology GmbH Switzerland for enhanced rights of existing & uprated, and new gas turbines models.



Technology agreement with GE Technology GmbH Switzerland for Gas Turbines

Learning from the past, major efforts are being made in recent years to absorb and indigenize these state-of-the-art technologies to ensure technology self-sufficiency in the long run.

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. Recent successes include development of Sucker Rod Pumps, which is a major requirement of the oil industry, and hitherto largely imported from China. These are in addition to several FGD equipment already indigenized by your company earlier.

However, challenges continue to 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 impact the bottom line in the near future. The company is continuing with strict cost control measures to deal with this situation. Going forward, the company's efforts on improving project management and engagement of PMC for specific projects would further help improve performance. 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 orders obtained in recent years, with continued focus on timely and quality delivery, are expected to substantially aid recovery in coming years.

Quality First Initiative

Inculcation of a Quality mindset is a long and painstaking effort, requiring total focus on processes at every level. Over the past four years, a major 'Quality First' initiative has been taken up in mission mode, across the company, with the objective of ensuring that quality becomes a hallmark of the company's products & services.

Under this, numerous initiatives have been taken including launch of 5S movement, adoption of "Quality 360" model, alignment with the EFQM-2020 framework, implementation of the "Quality Health Index", conducting periodic quality audits/ assessments, amongst others. Success of these efforts was reflected in BHEL being awarded the CII-EXIM Bank's first-ever '**Special Jury Commendation for Adoption and Nurturance of Business Excellence**'. 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**". I am also happy to share that all 8 Quality Circle teams, which had participated at the 47th International Convention on Quality Control Circles in Jakarta, have won the Gold awards, which is the highest category of award, vindicating BHELs position as the pioneer of Quality Circle movement in India.



CII-Exim Bank's first-ever Special Jury Commendation for Adoption and Nurturance of Business Excellence. 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



Bagged 8 Gold Awards at the International Convention on Quality Circles 2022 held at Jakarta Indonesia by IQMA (Indonesia Quality Management Association)

Developing a committed workforce and 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 individual development plans prepared. A number of efforts are also being made for enhancing employee engagement through communication initiatives, unit outreach programs, etc. Additionally, in view of the changing business scenario, special emphasis is being given to continuous training for making our workforce agile through unlearning, learning and relearning, focused on upcoming technologies.

Capacity building for the country

Leveraging BHEL's capabilities and infrastructure for supporting the country's commitment towards skill development, your company has established a Common Engineering Facility Centre (CEFC) at Welding Research Institute (WRI), Trichy—the leading Welding Research Institution in the country—with extension centres at Varanasi, Haridwar, Bhopal, Jhansi and Ranipet. This program has been taken-up with support from the Ministry of Heavy Industries (MHI) to train welders in advanced welding technologies. The CEFC has already trained 2,000+ welders in the first year of its inception. This initiative will not only ensure availability of skilled welders for BHEL's own sites & factories, but also contribute to various sectors in the country, where there is currently a shortage of skilled welders. The endeavour has also been appreciated by the Hon'ble Minister of Heavy Industries and the Hon'ble Prime Minister of India.



Dr. Mahendra Nath Pandey Retweeted
 Narendra Modi
 @narendramodi
 प्रशंसनीय पहल! युवाओं के कोशल 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

कोशल व सशक्त भारत की ओर बढ़ते कदम!

प्रधानमंत्री श्री @narendramodi जी के प्रलेख 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 कोशल प्रदान किया जा रहा है।

[Show this thread](#)



Common Engineering Facility Centre at Welding Research Institute, Trichy with extension centres at Varanasi, Haridwar, Bhopal, Jhansi and Ranipet – setup with the support from Ministry of Heavy Industries (MHI)



Mass plantation drives, create dense urban forests (Miyawaki forest) in larger BHEL units

Sustainable Development

Sustainability has, today, become the prime concern for governments as well as businesses, world over. Our country has adopted the 'Panchamrit' goals including commitment to become Net Zero by 2070. Traditionally, BHEL has been at the forefront of addressing such concerns and has been offering the most energy efficient solutions to our customers. Continuing with the ethos of being a caring and responsible organization, your company has taken up a major initiative 'Harit BHEL' for "Making BHEL a Green Company" with the target of achieving Net Zero by the year 2047, which has been launched by the Hon'ble Minister of Heavy Industries on 10 July 2023. A three pronged approach has been adopted to achieve this goal: (i) Units will be undergoing assessment for Green Company Rating (GreenCo Rating) which will give them recognition for their past achievements and help identify critical areas for further improvement, (ii) Nine focused sustainability initiatives have been identified for implementation across the company during FY 2023-24 including mass plantation in BHEL campuses, water audit of manufacturing units, attaining Zero Liquid Discharge (ZLD) status,



5 MW in - house Solar PV installed at BHEL Bhopal for captive power generation

energy audit, creating water bodies, establishing more water harvesting systems, solid waste management in BHEL townships, usage of natural sun light in workshops & buildings during daytime, and installing more Solar PV power plants for captive use, and (iii) Creating a detailed roadmap for achieving Net Zero based on the studies/ assessments as mentioned above.

This initiative is further expected to support business performance by reducing costs and improved availability of borrowings & insurances, etc., in the long run. It will also help create a culture of innovation within the company to design, engineer and manufacture more environment friendly products.

Your company has currently established a total of 34.89 MWp of Solar Photo Voltaic (SPV) power plants within BHEL premises, which is expected to increase in the coming years. These have resulted

in generation of 29.78 million units of electricity and carbon footprint avoidance of 26,964 MT CO₂-e in FY 2022-23. To fight plastic pollution, BHEL is continuing efforts to ensure that the premises of our townships stay 'Single Use Plastic Free' and has also obtained third party certification for the same.

On the social front, with a strong commitment of repaying back to the society, your company actively contributes towards socio-economic upliftment of communities located in the vicinity of its manufacturing plants and project sites spread across the country, and has taken various initiatives in thrust areas including education, health, cleanliness, disaster relief and inclusion.



Financial support for "Heal -A- Soul IV" campaign - for providing Anti Haemophilic Factors Kits to Persons & children with Haemophilia



Governance

Your company believes that 'results are important' but it is equally mindful of 'how it achieves these results'. Commitment to this principle is the foundation of your company's Corporate Governance framework, which underlines its commitment towards quality of governance, transparency in disclosures, consistent enhancement of stakeholders' value and corporate social responsibility. The Company's corporate governance framework rests upon the cornerstones of transparency, disclosure, independent monitoring, and fairness to all, especially the minority shareholders.

To bring in more transparency and accountability in the functioning of CPSEs, and to protect the interest of shareholders and other stakeholders, the Government had issued Guidelines on Corporate Governance for CPSEs. I am glad to share that your company has been graded 'Excellent' on the basis of compliance with Guidelines on Corporate Governance of CPSEs for FY 2021-22. The grading



BHEL won CBIP Award 2022 for best contribution in Solar Energy

report for FY 2022-23 is still awaited and your company is anticipating to continue to achieve the Excellent Grading for FY 2022-23 also.

Recognition

Continuing the tradition of securing prestigious national and international recognitions, the organization and its employees have won several awards. Notable awards include the Platinum Award in "Top CPSEs w.r.t. Order Volume in FY22-23" category by GeM, CII-Exim Bank's first-ever Special Jury Commendation for Adoption and Nurturance of Business Excellence; ranked amongst top 50 Innovative Companies in India and awarded CII's Industrial Innovation Award 2022; National Intellectual Property Awards 2021 & 2022; Golden Peacock Award 2022 for inclusive CSR program; amongst many others.



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, R&D
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 Heavy Industries



Shri Vijay Mittal
Joint Secretary
Ministry of Heavy Industries

Independent Directors



Dr. K Sivaprasad
Independent Director



**Dr. Lekhasri
Samantsinghar**
Independent Director



**Shri Ramesh Patlya
Mawaskar**
Independent Director

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 faith 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 embarked on a journey to establish itself as a future-ready global engineering and manufacturing enterprise contributing to national efforts & initiatives, and I am confident that with your support and cooperation, we will continue to succeed in our endeavours.

Thank you.

With best wishes,



New Delhi
August 24, 2023

(Dr. Nalin Shinghal)
Chairman & Managing Director



Bharat Heavy Electricals Limited

Registered Office : BHEL House, Siri Fort, New Delhi - 110049, India

Corporate Identity Number : L74899DL1964GOI004281

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