

**BHARAT HEAVY ELECTRICALS LIMITED
(BHEL)**

MINISTRY OF HEAVY INDUSTRIES

**COMMITTEE ON PUBLIC UNDERTAKINGS
(2025-26)**

SIXTEENTH REPORT

EIGHTEENTH LOK SABHA



**LOK SABHA SECRETARIAT
NEW DELHI**

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COMMITTEE ON PUBLIC UNDERTAKINGS

(2025-26)

(EIGHTEENTH LOK SABHA)

BHARAT HEAVY ELECTRICALS LIMITED

(BHEL)

MINISTRY OF HEAVY INDUSTRIES

[Action Taken by the Government on the Observations/Recommendations contained in the Second Report of the Committee on Public Undertakings (18th Lok Sabha) on Bharat Heavy Electricals Limited (BHEL)]



Presented to Lok Sabha on 12 August, 2025

Laid in Rajya Sabha on 12 August, 2025

LOK SABHA SECRETARIAT
NEW DELHI
August, 2025/Sravana, 1947 (Saka)

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COMPOSITION OF THE COMMITTEE ON PUBLIC UNDERTAKINGS (2025-26)

Shri Baijayant Panda - Chairperson

Members

LOK SABHA

2. Shri Tariq Anwar
3. Shri Sudip Bandyopadhyay
4. Shri Chandra Prakash Joshi
5. Smt. Kanimozhi Karunanidhi
6. Shri Kaushalendra Kumar
7. Shri Shankar Lalwani
8. Smt. Poonamben Hematbhai Maadam
9. Shri B.Y. Raghavendra
10. Shri Mukesh Rajput
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12. Shri Pratap Chandra Sarangi
13. Shri Kodikunnil Suresh
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RAJYA SABHA

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17. Shri Neeraj Dangi
18. Shri Milind Murli Deora
19. Dr. Bhagwat Karad
20. Shri Surendra Singh Nagar
21. Shri Debashish Samantaray
22. Shri Arun Singh

SECRETARIAT

- | | | | |
|----|---------------------------|---|-----------------------------|
| 1. | Shri Anjani Kumar | - | Joint Secretary |
| 2. | Shri Kulmohan Singh Arora | - | Director |
| 3. | Shri Dhruv | - | Under Secretary |
| 4. | Shri Chandan Kumar | - | Assistant Executive Officer |

INTRODUCTION

I, the Chairperson, Committee on Public Undertakings (2025-26) having been authorized by the Committee to submit the Report on their behalf, present this Sixteenth Report on 'Action Taken by the Government on the Observations/ Recommendations contained in the Second Report (18th Lok Sabha) on 'Bharat Heavy Electricals Limited (BHEL)'.

2. The Second Report (18th Lok Sabha) of the Committee on Public Undertakings was presented to Lok Sabha and laid on the Table of Rajya Sabha on 18 December, 2024. The Action Taken Replies to all the 44 Recommendations contained in the Report were received from the Bharat Heavy Electricals Limited (BHEL) on 19 June, 2025.

3. The Committee considered and adopted the draft Report at their sitting held on 01st August, 2025. The Minutes of the sitting are given in Appendix- I

4. An analysis of the action taken by the Government on the Observations/ Recommendations contained in the Second Report of the Committee (18th Lok Sabha) is given in Appendix -II.

New Delhi:
08 August, 2025
17 Sravana, 1947(S)

BAIJAYANT PANDA
Chairperson,
Committee on Public Undertakings

REPORT

CHAPTER I

This Report of the Committee deals with the action taken by the Government on the Observation/Recommendations contained in the Second Report of the Committee on Public Undertakings on “Bharat Heavy Electricals Limited (BHEL)” which was presented to Lok Sabha on 18 December, 2024. It contained Forty-Four observations/recommendations.

2. Action Taken notes have been received from the Government in respect of all the Forty-Four observations/recommendations contained in the Report. These have been categorized as follows: -

- (i) Observation/Recommendations which have been accepted by the Government:
Sl. Nos. 1, 2, 3, 4, 5, 8, 10, 11, 13, 14, 15, 16, 17, 18-21, 22, 25, 26, 27, 28, 29, 30, 31-33, 36, 37, 38, 39, 40, 41, 42, 43 and 44. (Total: 36)
(Chapter II)
- (ii) Observations/Recommendations which the Committee do not desire to pursue in view of the Government's replies:
Sl. Nos. 34 and 35. (Total: 02)
(Chapter III)
- (iii) Observations/Recommendations in respect of which replies of Government had not been accepted by the Committee and which require reiteration:
Sl. No. 9. (Total: 01)
(Chapter IV)
- (iv) Observations/Recommendations in respect of which the Government has furnished interim replies and final replies are still awaited: (Total: 05)
Sl. Nos. 6, 7, 12, 23 and 24. (Chapter V)

3. The Committee desire the Ministry of Heavy Industries to furnish final Action Taken Notes/Replies in respect of observations/recommendations contained in Chapter I of the Report. They further desire that a final and comprehensive action taken Notes/Replies may also be furnished within 3 months on those Observations/Recommendations contained in Chapter V on which the Government have given interim/incomplete information.

4. The Committee will now deal with the Action Taken by the Government on some of the Observations/Recommendations in succeeding paragraphs.

Filling up of Vacancies in the Board of Directors

Recommendation (Sl. No. 6 and 7)

5. The Committee, in their Second Report, had expressed concern regarding the vacancies on BHEL's Board of Directors:

“The Committee note that the vacancies in various posts in the Board of Directors (BoD) of BHEL is a matter of concern. As of July 6, 2023, the actual strength of the BoD stands at 10 out of a sanctioned strength of 16. Notably, there are significant gaps in the representation of Part-time Non-official (Independent) Directors, which is critical for ensuring corporate governance and independent decision-making. The Committee note that the post of Director ‘Human Resources’ was laying vacant since 1.2.2022. For this post the interview was held on 10.11.2022. The Director joined the Board of Directors on July 2023. During the vacant period for this post the Director was holding additional charge of the post of Director Human Resources. The inordinate delay in filling of the vacancies is a matter of concern. This under-representation of independent directors is a regulatory compliance of SEBI, BSE and NSC. Non-compliance of such regulatory leads to imposition of substantial fines by stock exchanges (BSE and NSE) and SEBI from September 2018 to March 2023. Although the fines have been partially waived by the stock exchanges, they raise questions about adherence to regulatory norms and governance practices. BHEL faced financial penalties amounting to Rs. 17,003,800 over this period due to these violations. The Committee observe that the Company has taken steps to address this issue by inducting independent directors, however, the Committee wish to recommend that BHEL should ensure timely action for the compliances and should give top priority for maintaining governance standards.”

6. The Ministry, in their action taken reply, have stated as follows:

“BHEL had received notices along with fine from Stock Exchanges due to non-compliance with provision of Regulation 17 (1) of the SEBI (LODR) Regulations i.e. Composition of Board due to non-appointment of requisite number of Independent Directors. In this regard, it has been submitted to the Stock Exchanges (SEs) that the Company should not be held liable to pay the fine as the non-compliance with regard to composition of the Board is not due to any negligence / default by the Company as the same is not under the control of the Company. Accordingly, BHEL requested SEs to waive off the fine imposed w.e.f. quarter ending September-2022. It may be appreciated that in earlier instances of non-compliance of similar nature, SEs had already waived fine imposed earlier on BHEL on the similar ground. It is pertinent to mention here that BHEL being a Govt. Company, the power to appoint Directors including Independent Directors, lies with the Govt. of India/Administrative Ministry (Ministry of Heavy Industries) by following the laid down guidelines of the Govt. of India and after obtaining approval of the Appointments Committee of Cabinet (ACC).”

7. The Committee in subsequent recommendation No.7 had recommended the following:

“The Committee are well aware of the fact that vacant positions in the Board can adversely impact the effective functioning of any Company. Therefore, the Committee strongly recommend that the administrative Ministry should take up the matter with DPE for seriously looking into the issue of abnormal delay in appointment of Directors on the Board. The Committee further recommend that the controlling Ministry and DPE should anticipate the future vacancies for various posts in the Board of Directors and initiate the required actions and complete the process of the filling up the vacancies well before the end of the term of the outgoing Directors.”

8. The Ministry, in their action taken reply, have stated as follows:

“As on 01.05.2025, there are 5 vacancies of Independent Directors. As such, BHEL is regularly taking up with the Administrative Ministry requesting for appointment of requisite number of Independent Directors so as to ensure compliance with Corporate Governance norms enunciated under SEBI Listing Regulations as well as the Companies Act. The matter of filling up of these vacancies is under process at the end of Ministry of Heavy Industries, Government of India.

Ministry of Heavy Industries is regularly pursuing the matter of filling the vacant posts of both Functional and Independent Directors. Presently, all the posts of Functional Director on the Board of BHEL have been filled. In March, 2025, based on the recommendation of the DPE Search Committee and approval by the Appointments Committee of the Cabinet (ACC), two (02) nos. Independent Directors have been appointed on the Board of BHEL. Further, MHI is regularly pursuing the matter of filling up of vacant posts of Independent Directors with DPE.”

9. The Committee acknowledge the efforts of the Ministry in filling all posts of Functional Directors and the recent appointment of two Independent Directors. However, the Committee expresses its serious concern that five positions of Independent Directors remain vacant as of May 2025. This non-compliance with SEBI regulations not only undermines the principles of corporate governance but also exposes the ‘Maharatna’ company to financial penalties. The Committee, therefore, considers the reply as interim and strongly reiterates their recommendation that the Ministry must take urgent and time-bound action to fill all vacant Director posts. The Committee desires to be apprised of the complete constitution of the Board in the next Action Taken Report.

Representation of Women in Workforce

Recommendation (Sl. No. 9)

10. The Committee, in their Report, had recommended setting goals to increase the representation of women:

"The Committee note that the strength of female employees of BHEL has declined from 2053 in the year 2019 to 1746 in the year 2023. The Committee note that to enhance the representation of women in the Company is a continuous focus area for which various steps/ initiatives are being taken. The Committee hope that these steps will yield desired results in the coming years and BHEL should will be able to achieve a certain percentage increase in the number of female employees each year and increase the percentage of women in leadership roles, too. The Committee, therefore, strongly recommend that BHEL should set goals, aiming to increase the representation of women within the workforce. This will not only align with global best practices but also enhances creativity and innovation within the organization, contributing the long-term success of Company."

11. The Ministry, in their action taken reply, have stated as follows:

"It is submitted that, BHEL experienced a decline in total manpower strength from 35,471 in 2019 to 27,800 in 2025 and thus a proportionate decline was observed in women employees also i.e. from 2053 in the year 2019 to 1617 in the year 2025. As an engineering and manufacturing organization, BHEL receives a significantly lower number of applications from female candidates for its regular positions, which are primarily in Mechanical, Electrical and Civil Engineering. However, enhancing the representation of women in the Company remains a continuous focus area, and various steps and initiatives are being undertaken to address this, such as reaching out to candidates on Social Media platforms like LinkedIn, Twitter etc. and online portals like Company's own website, National career Service Portal etc.

BHEL's recruitment at key induction levels—such as Engineer Trainees and Supervisor Trainees—is conducted through a highly competitive process with selection based strictly on comparative merit. BHEL's Recruitment Policy is fully aligned with the government's directives on non-discriminatory recruitment practices, ensuring fairness and equal opportunity irrespective of gender, caste, disability, or religion.

BHEL fosters a diverse and inclusive work environment and is an equal opportunity employer. L&D at BHEL holds special focus programs for women to develop their leadership and mentor them to excel in their careers. It is worth mentioning that BHEL is currently having a women functional director in the board of the company. Also, many key portfolios including responsibility of Chief Risk Officer (CRO) and Chief Investment Relations Officer (CIRO) are being held by women executives."

12. The Committee note BHEL's commitment to being an equal opportunity employer and its various initiatives to foster an inclusive work environment. However, the reply of the Ministry does not address the Committee's core

recommendation to set specific, measurable goals for increasing the representation of women, particularly in leadership roles. Simply stating that the decline is proportionate to overall attrition is not a corporate strategy to address the gender imbalance. The Committee are not satisfied with the reply and reiterate its recommendation that BHEL, as a leading 'Maharatna' CPSU, should set tangible year-on-year targets to improve its gender diversity ratio. This is essential for aligning with global best practices and enhancing organizational innovation. The Committee would like to see a concrete action plan in this regard.

Development of Advanced Ultra Super Critical (AUSC) Technology

Recommendation (Sl. No. 12)

13. The Committee, in their Report, had recommended expediting the AUSC technology project:

“The Committee have been apprised that the Power Sector’s Current Thermal Fleet has a significant proportion of older plants. with ~13% of coal-based plants (~28 GW) aged more than 30 years, out of which ~5 GW of plants are aged more than 40 years. Further, ~18 GW plants are expected to cross 30 years of age in the next decade and >130 GW of plants will cross this age by 2047. Notably, most of these plants are subcritical in nature, which have lesser efficiencies (~10% lower) and higher carbon emitter (10-20% higher) than the newer supercritical power plants. The representative of BHEL have acknowledged that it is imperative to have a Policy Driven Mechanism for retirement of these older plants. The Committee applaud the fact that to address the issue of aging power plants, BHEL has initiated the development of Advanced Ultra Super Critical (AUSC) technology, aiming to enhance efficiency and reduce emissions. The Ministry of Heavy Industries, along with other stakeholders, such as BHEL, IGCAR has provided funding and technical support for this project. A Technology Demonstration Plant (TDP) of 1X800 MW capacity based on AUSC technology is planned under the Ministry of Power. A budgetary provision of Rs. 900 crore has been envisioned. A MoU was signed 3 years back but till date the approval is pending. The Committee recommend that BHEL should collaborate with the Government to expedite approvals and render adequate financial support for the development of Advanced Ultra Super Critical (AUSC) Technology which will improve the efficiency and environmental performance of India's thermal power plants. This will boost the orders of BHEL for replacing older thermal power plants with AUSC technology. The Committee may be apprised of the action taken in this direction.”

14. The Ministry, in their action taken reply, have stated as follows:

“With guidance and support from MHI and NITI Aayog, BHEL is making concerted efforts and move ahead in establishment of technology demonstration plant for Advanced Ultra-Super Critical (AUSC) technology. Progress made so far is as below:

- Cabinet Committee on Economic Affairs had earlier approved R&D Project for development of Advanced Ultra Super Critical (AUSC) Technology for Thermal power plants on a mission mode.
- The project was envisaged to be executed in two phases, with Phase-I focusing on technology development while Phase-II targets for setting up the Technology Demonstration Plant (TDP) leading to the establishment of this technology.
- BHEL has successfully completed the R&D phase (i.e. Phase-I) of development of this technology in Dec'20, jointly with NTPC Ltd. and Indira Gandhi Centre for Atomic Research (IGCAR).
- Phase-II: In Union Budget for FY 2024-25, Hon'ble Finance Minister announced that a joint venture between NTPC and BHEL will set up a full scale 800 MW commercial plant using AUSC technology. The government will provide the required fiscal support. Subsequent, to the budget announcement, follow-up meetings were held at NITI Aayog in August' 24 and December' 24. The major actions taken are:
 - Project site has been identified as NTPC Korba, Chhattisgarh for setting up 1x800MW AUSC TDP (Technology Demonstration Plant).
 - The project will be implemented by an existing joint venture company of NTPC and BHEL called NTPC BHEL Power Projects Private Limited (NBPPL).
 - A committee was constituted by NITI Aayog to oversee finalization of total cost estimates of the proposed 800 MW AUSC TDP under the chairmanship of Dr. V.K. Saraswat (Member, NITI Aayog). Meetings of the cost committee held in Feb'25 and March'25
 - Based on the decisions of the Cost Committee meeting held in March'25, draft Public Investment Board (PIB) note for approval of GOI is submitted to MoP by NTPC with project details."

15. The Committee appreciate the concrete steps taken towards the establishment of the 800 MW AUSC Technology Demonstration Plant, including the identification of the project site and implementing Joint Venture, and the submission of the draft Public Investment Board (PIB) note. However, the final approval from the Government is still awaited which is crucial for the project to move forward. The Committee, therefore, consider this an interim reply and urges the Ministry of Heavy Industries to vigorously follow up with the Ministry of Power and other relevant Ministries/Departments to secure the final approval at the earliest. The Committee would like to be informed of the final sanction and the project's commencement timeline in the replies.

Financial Performance and Profitability

Recommendation (Sl. No. 15)

16. The Committee, in their Report, had commented on BHEL's financial turnaround and suggested measures for improvement:

"The Committee observe a fluctuating financial performance for BHEL over the last few years. There was a negative trend with losses of Rs. 1,473 crore in 2019-20 and Rs. 2,717 crore in 2020-21. However, there has been a positive turnaround in the last two years, with a profit after tax of Rs. 448 crore in the recent fiscal year (2022-23). BHEL's financial position in 2022-23 is characterized by total assets of Rs. 59,804 crore and total liabilities of Rs. 32,542 crore, with revenue from operations reaching Rs. 23,365 crore. The Committee further note that BHEL's total assets have shown a declining trend over the years, decreasing from Rs. 63,764 crore in 2017-18 to Rs. 56,708 crore in 2021-22. The Committee are happy to note that BHEL has made a remarkable turnaround from losses in 2019-20 and 2020-21 to a profit after tax of Rs. 448 crore in 2022-23. This recovery is commendable, but Committee are still wary of the fact that profit margin remains relatively modest when compared to total revenue. The Committee, therefore, suggest that BHEL should prioritize strategic sourcing, establish vendor partnerships, explore cost-effective alternatives, collaborate with local suppliers, negotiate bulk discounts, assess its pricing strategy, explore options to improve profit margins, enhance operational efficiency, control overhead costs, adopt lean practices, diversify into higher-margin products/services, explore international markets etc. to mitigate the impact of rising material costs and increasing profit. To improve its financial stability, BHEL should also actively engage with customers to negotiate more balanced payment terms for ensuring a consistent cash flow."

17. The Ministry, in their action taken reply, have stated as follows:

"BHEL acknowledges the committee's feedback on its financial performance and agrees that there were concerns during the difficult years of FY 2019-20 and 2020-21, mainly due to market challenges and project delays. However, BHEL has followed the growth trajectory and registered strong growth in its physical and financial performance. Company's Profit After Tax (PAT) ascended to Rs. 513 Cr. for FY-25 from Rs. 260 Cr. in FY-24 while Revenue from Operations (RFO) soared by 19% to Rs. 28339 Crores in FY-25 vis-à-vis Rs. 23893 Crores in FY-24.

Company has adopted various structural reforms and initiatives for enhancing profitability and financial strength which have started yielding positive results. Company's cash collection in FY-25 stood at Rs. 37,881 crores which is ~37 % increase from FY-24. Material cost has also started to reduce in recent past thereby supporting bottom-line of the company. It is worth mentioning that Material Cost (as % of Gross Turn Over) has witnessed a reduction of 3% from 72% in FY-24 to 69% in FY-25. However, consistent efforts are underway for enhancing cash collection and further reduction in material costs. Some of the prominent strategic initiatives taken by the company aiming at reducing material costs and enhancing profit margins are as below:

1. Efficient sourcing and vendor management:

- Uniformity and standardization in tendering process
 - Focus on vendor enhancement for increasing competitiveness
 - Leveraging benefits of bulk purchasing (bulk discounts), streamlined decision-making, and enhanced efficiency.
 - Focused on rationalizing material specifications and negotiating improved terms and conditions with suppliers.
2. Unified Supplier Development Cell (USDC) - Better Vendor Management:
- Strengthening long-term vendor ties
 - Expanding vendor base including MSMEs to improve delivery times and reduce costs.
 - Tracking the development of new suppliers, particularly for items with limited sources or previously imported, where indigenous development is required.
3. Suvidha Portal – Supplier Dashboard:
- User-friendly, single-point dashboard made available by BHEL for suppliers to seamlessly track the status of their invoices from submission to payment, with detailed visibility into deductions.
 - Provides a grievance lodging mechanism, enabling suppliers to address issues promptly.
4. BHEL SAMVAAD:
- BHEL's flagship initiative for engaging with domestic industry, BHEL SAMVAAD, serves as an interactive platform to drive the indigenization of imported items.
 - During these forums, BHEL's engineering experts share detailed specifications and requirements for such items, enabling potential suppliers to align their development efforts with BHEL's needs.
 - This initiative has been instrumental in expediting the development process and reducing import dependencies. Latest BHEL SAMVAAD 4.0 was held at Bharat Mandapam, New Delhi on 25-11-2024.
5. Improved Pricing and Margins:
- Reviewing pricing strategies for better risk management.
 - Ensuring timely claims and better payments terms in upcoming project.
6. Policy Reforms for Enhanced Competition:

To remain at the forefront of industry standards, BHEL constantly updates its procurement policies in line with the latest Department of Expenditure (DoE) manuals and globally recognized best practices. BHEL has undertaken a comprehensive overhaul of its policies which includes introduction of a Development Policy with several supplier-friendly provisions, like:

- Prioritization of indigenous development.
- Relaxations in tenders for new suppliers.
- Sufficient order quantities for development efforts.
- Exemption from penalties during the development phase.
- Milestone-based payment terms to encourage participation.

7. Stronger Cash Flow and Client Coordination
- Renegotiating payment terms to get funds earlier in the project cycle.
 - Improving billing and follow-up to ensure timely payments.
 - Updating the credit and risk framework to handle delays and strengthen contracts.”

18. The Committee are appreciative of BHEL's remarkable financial turnaround, noting with satisfaction the continued growth in Profit After Tax to ₹513 Crore in FY 2024-25 and the 19% surge in revenue. The proactive measures detailed by the company, such as the Unified Supplier Development Cell (USDC), the 'Suvidha Portal' for suppliers, and the 'BHEL SAMVAAD' initiative, are commendable steps towards reducing costs and enhancing profit margin and also enhancing vendor relationships. The Committee encourage BHEL to continue its rigorous implementation of these strategic initiatives to sustain and further improve its profitability and financial stability.

Challenges Due to Procurement Restrictions

Recommendation (Sl. No. 23 and 24)

19. The Committee, in their Second Report, had urged the Ministry to address procurement restrictions affecting BHEL:

“The Committee find that BHEL is grappling with challenges related to Land Border Sharing and Global Tender Enquiry (GTE) restrictions. These challenges have had a cascading effect on project timelines, causing delays of 5-6 months and, in certain instances, up to 9 months. These delays result in adverse consequences for the Company, including missed business opportunities, postponed deliveries, project setbacks, and the imposition of liquidated damages (LDs) for tardiness. Moreover, due to the constraints on procuring from nations sharing land borders with India, BHEL has incurred significant additional costs for the acquisition of crucial components. BHEL has made multiple appeals to the administrative ministry regarding these concerns who have taken the matter with M/o Finance to have a level playing field for BHEL. However, the Ministry has done nothing substantial yet. Besides, BHEL has organized a series of workshops called BHEL SAMVAAD since December 2020, engaging with the domestic industry to cultivate to mitigate the challenges posed by Land Border Sharing and Global Tender Enquiry (GTE) restrictions. The Committee, therefore desire that MHI should vigorously take up the matter with M/o Finance for removal of restrictions and providing level playing field to BHEL. Further, BHEL should also develop a network of local suppliers which will reduce delays, minimize additional procurement costs, and enhance supply chain resilience.”

20. The Committee in subsequent recommendation No.24 had recommended the following:

"The Committee are surprised to know that these restrictions are applicable only to public sector entities, not the private sector, however, nothing else has been divulged in support of this condition except national security. Therefore, the Committee urge that both the Ministry of Heavy Industries and BHEL should continue with their efforts to advocate for removal or modification of GTE and land border sharing restrictions that adversely affect its operations. The Committee expect that the Ministry of Heavy Industries would take up vigorously the issue with the concerned Government authorities and Ministries which is crucial to address these challenges effectively for providing a level playing field to CPSUs particularly BHEL. Simultaneously, BHEL should keep maintaining open lines of communication and collaboration with the Ministry of Heavy Industries and other relevant Government bodies for the sake of facilitating a better understanding of BHEL's needs and concerns."

21. The Ministry, in their action taken reply, have stated as follows:

"Based on the request of BHEL, MHI has communicated to DoE, Ministry of Finance on 28-08-2024 to provide GTE exemption for BHEL for 95 identified items in the various categories like castings and forgings, Special Steel - Tubes and Pipes, Sheets/Plates, electrical steel, Electric Insulating Materials, Electronic Components, Current insulated, Hybrid, Rivet less and Anti Friction Bearings, etc. While there has been no response from DoE, BHEL is following up with all concerned stakeholders in Govt through MHI viz. MoP, MoS, DPIIT, Cab Sec, etc. for providing relief to BHEL so that deliverables in projects of National importance are not affected.

BHEL has been constantly following up with DPIIT as well as Ministry of Power and Ministry of Steel, through MHI since Sep' 2022, that there are certain items like alloy steel seamless pipes and tubes (required for Boilers), IP outer casings (required for turbines), Gypsum De-watering System, etc. where the sources are predominantly from countries sharing Land Borders with India and it is in interest of the country to bring down the cost to nation. We request suitable directions to DPIIT, Ministry of Power and Ministry of Steel to permit registration of bidders representing countries sharing Land Borders with India especially in materials where no electronic controls are involved.

As regards development of local suppliers, BHEL has intensified the efforts of vendor development by creating USDC (Unified Supplier Development Cell) for proactively scouting industry for capable sources and examining imports for indigenization using provisions of PPP-MII, DoE guidelines, etc.

Furthermore, BHEL organizes its flagship event BHEL SAMVAAD every year wherein suppliers across India are invited to discuss potential business opportunities in the coming years. The details of this initiative have already been mentioned at reply no. 15.

Ministry of Heavy Industries has brought to the notice of the Appropriate Authority in the Government the constraints faced by BHEL. Various initiatives taken by the Government has increased the domestic availability of several goods which were previously imported by BHEL. MHI also facilitates all CPSEs under its administrative control including BHEL, for timely procurement of items that are not domestically available ensuring that they do not lose their competitive edge over its competitors."

22. The Committee acknowledge that the Ministry of Heavy Industries (MHI) has taken up the issue of procurement restrictions with the Department of Expenditure. However, the Committee are concerned to note that there has been no response from the Department of Expenditure, and these restrictions, which BHEL claims apply only to public sector entities, continue to hamper project timelines and competitiveness. This issue of a non-level playing field is a serious impediment. The Committee, therefore, consider this reply as interim and strongly reiterate that MHI must pursue this matter with the Ministry of Finance and other highest levels of Government with greater vigour to find a resolution. The Committee desire to be apprised of a definitive outcome in this matter.

CHAPTER II

OBSERVATION/RECOMMENDATIONS WHICH HAVE BEEN ACCEPTED BY THE GOVERNMENT

BHEL-OVERVIEW

Recommendation (Sl. No.1 to 3)

The Committee note that Bharat Heavy Electricals Limited (BHEL) is a 'Maharatna' public sector undertaking which was established in 1964. It is one of the leading contributors towards building of Atmnirbhar Bharat. During the long and arduous journey, BHEL has been serving in the areas of Power (thermal, hydro, gas, nuclear and solar), Power Transmission, Transportation, Defence, Aerospace including Oil & Gas, e-mobility, energy storage, etc. The 53% share of India's total installed capacity of utility power segment excluding renewables is commanded by BHEL. The worldwide installed base of power generating equipment supplied by BHEL exceeds 1,96,000 MW. The Committee further note that BHEL is primarily involved with coal-based power sector companies and it executes the engineering and manufacturing segment of this sector. The Company earns 75 percent of the revenue from this sector. The Company has set its long- term aspirational targets of 50% of order-book from Non-fossil sector for period financial year 2023-27. The organization has turned its focus towards increasing market share majorly in Transportation and Systems Business, Defence and Aerospace business, Renewable Energy (RE) and Nuclear segment. BHEL has secured the order for supply and maintenance of Vande Bharat express trains. BHEL has been involved in international projects and collaborations in various countries and had executed projects in around 89 countries. The Committee are happy to know that BHEL has played an important role in nation building and serve the nation around six decades.

and

2. The Committee observe that the total assets of the Company are Rs. 59,804 crore and the total liabilities are Rs. 32,542 crore in the year 2022-23. The revenue from operations of the Company are Rs. 23,365 crore for the period. At present Government of India hold the share of 63.17 percent of the Company and rest of the shares are held by others including Banks, Foreign Institutional Investors and Individuals. In 2021-22, BHEL secured orders for 4,700 MW, aggregating to Rs.17,931 crore, amidst intense competition and a limited pipeline of orders.

and

3. The Committee have made a comprehensive examination of the BHEL as an organization and touched upon many issues such as physical performance, financial performance, order book status, subsidiaries, etc. The Committee, after examination of various aspects of the functioning of BHEL, have made observations and recommendations in succeeding paragraphs and are hopeful that these will be implemented by the BHEL and the Government in right perspective so as to bring about needed improvement in the functioning and growth of the Company.

Reply of the Government

The observation of the Committee and suggested measures thereon have been duly noted and have also been communicated across the decision makers within the organization for implementation.

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Vision of BHEL

Recommendation (Sl. No.4 to 5)

4. The Committee note that BHEL is committed to the requirement of changing market dynamics by focusing on profitable growth and diversification of the Company. In this regard, BHEL is emphasizing on strengthening its technology base and exploring opportunities in Rail transportation, Defence & Aerospace, and Oil & Gas sectors demonstrates a proactive approach to leverage emerging trends and Government initiatives. BHEL is also recognizing the need to reduce reliance on coal-based power generation and invest in cleaner energy sources aligns with the global imperative of addressing climate change. The intent of BHEL to form strategic partnerships with global Original Equipment Manufacturers (OEMs) shows its willingness to tap the external expertise and resources.

and

5. The Committee also appreciate the Ministry's assertion that BHEL needs to redefine its strategy in light of environmental shifts and reduce coal-based power business while expanding into new areas. This paradigm shift will be critical for BHEL's relevance and competitiveness, not only in India but also on a global scale. The aspiration for order for Vande Bharat Train Set and efforts in defence, nuclear, and hydrogen sectors reflect a forward-looking vision. The Committee, therefore, desire that the Company should promptly adapt to Industry's trend, make strategic collaborations with due diligence and effectively execute the projects in a time bound manner for sustainability of the Company.

Reply of the Government

The committee's observations reaffirm company's resolve towards enhancing business from non-fossil areas. Though, focusing on evolving market scenario, one of the most significant shifts in the Indian power sector is the revival of thermal business which is also expected to grow in 5-6 years. Positioning itself in line with the Government's announcement of adding 80 GW thermal capacity by 2032, BHEL has secured thermal plant orders of 9.6 GW in FY23-24 and 14.6 GW in FY24-25.

Going forward with a long term organizational and national perspective, BHEL is focused on maintaining profitable growth from its diversified product portfolio by targeting opportunities across wide spectrum of products and services in varied sectors viz. Transportation, Nuclear Power, Defence and Aerospace, Hydro power etc. Recognizing the Government's paradigm shift of focus towards renewables, BHEL has also stressed upon capitalizing the opportunities arising out of the need for greener utilization of coal besides strengthening its technology base and exploring strategic partnerships. Some of the initiatives worth noting include:

1. Coal Gasification: Indigenously developed by BHEL the Pressurized Fluidized Bed Gasification (PFBG) technology is best-suited technology for gasification of high-ash Indian coal and lignite. The Syngas thus produced

from coal gasification can be utilized for producing high-end chemicals like Ammonium Nitrate, Ammonia, etc.

Aiming commercialization of this technology and to harness opportunities emerging out of the National Coal Gasification Mission, BHEL entered into JV agreement with Coal India Limited (CIL) and formed Bharat Coal Gasification and Chemicals Limited (BCGCL) to develop a Coal-to-Ammonium Nitrate Plant.

2. Nuclear Power:

- License and Technology Transfer Agreement (LTTA) for 700 MWe Steam Turbine for PHWR based Nuclear Power Plants with General Electric Technology GmbH, Switzerland.
- Small Modular Reactor (SMR): BHEL and EDF have signed a Memorandum of Cooperation (MoC) in Nov'23 to explore larger collaboration for the European Pressurized Reactors (EPRs) and for the NUWARD SMR (Small Modular Reactor).

3. Transportation: BHEL is focussed on timely execution of the order for 80 Nos Vande Bharat Trainsets. Further, to enhance our footprint in the sector, BHEL is developing indigenous advance signalling system (KAVACH- Train Collision Avoidance System) in collaboration with M/s HIMA, Middle East FZE. BHEL is also exploring partnerships to develop solutions for new age rolling stock like high horsepower locomotives, Hydrogen powered trains/locomotives, battery operated trains, IoT solutions for remote monitoring and maintenance and track machines.

4. Defence: Furthering the contribution in Defence and Aerospace segment, BHEL has extended its agreement with M/s Leonardo, Italy for providing product upgrades for SRGM which has enabled BHEL to secure orders for 38 nos upgraded SRGMs. BHEL has also participated in the RFQ (Request for Quotation) for Air Defence Guns for the Indian Army for which prototype development is underway for participation in 'No-Cost-No-Commitment (NC-NC)' trials. BHEL has also participated in RFP (Request for Proposal) for development of Gas Turbine and Generator (1.25 MW) for Ship Hotel Load for Indian Navy which is under evaluation. Further, BHEL is in discussion with various OEMs for extending product offerings viz Electric Propulsion System, 30mm Naval Surface Guns, Future Ready Combat Vehicle etc. and is also executing development orders from Aeronautical Development Agency (ADA) for Li Ion battery and Heat Exchangers for Advanced Medium Combat Aircraft (AMCA).

5. Gas Turbines: Technical Assistance and License Agreement (TALA) with General Electric (GE) GmbH Switzerland for Gas Turbines.

Thus, the Company remains committed to ensuring its long-term sustainability and contribution to India's self-reliance and growth.

Company is also making concerted efforts for adhering to project timelines and has also taken following initiatives in project execution to support the nation's efforts in energy security:

- Timely appointment of Project Directors fully empowered to make faster decisions.

- Focus on efficient procurement and expansion of vendor base
- Online systems for monitoring of projects
- Policy amendments to enable vendors for faster site execution.

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Human Resources

Recommendation (Sl. No. 8)

6. The Committee observe that the composition and changes in BHEL's workforce over the last five years reveal a noticeable decline in total manpower strength. The total workforce has decreased from 35,471 in the year 2019 to 29,536, in the year 2023. The Committee are aware that the Manpower requirement in the Company is analyzed regularly taking into account factors like business environment new opportunities / future business outlook, new projects, market conditions, attritions, superannuation etc. Due to subdued business environment, the available outstanding order book of the Company has gone down gradually over the years. The Committee further note that BHEL has taken various steps, including induction of high technology production facilities, induction of domain experts and providing skill development and training programs for fresh inductees, aiming to bridge technology gaps and enhance employee capabilities. However, the Committee feel that there is a need of taking further initiatives to improve productivity and increase business through technology adoption and employees training for which adequate number of dedicated employees are required. Further, keeping in mind the business environment, new opportunities and diversifications the Committee hope and desire that the shortage may be fulfilled promptly.

Reply of the Government

To improve productivity and increase business through technology adoption and employee training, BHEL has already initiated steps to strengthen its workforce and address skill gaps. Specifically, BHEL is undertaking the recruitment of:

- 150 Engineer Trainees to infuse fresh talent and technical expertise,
- 250 Supervisor Trainees to enhance operational efficiency,
- 33 Lateral Engineering Professionals to bridge skill gaps in traction equipment, Transportation Systems and strengthen domain-specific capabilities,

This strategic recruitment drive aims to ensure that BHEL has dedicated employees to meet current and future business requirements, drive innovation, and sustain long-term growth.

Furthermore, BHEL is intensifying reskilling and cross-skilling initiatives in present business domains for its employees. As a learning initiative, artisans at Haridwar and Bhopal have been given training in trades other than their current area of working for aligning them with future business needs and diversification endeavours.

Through its Learning & Development (L&D) wing, leadership pipeline is also being given competency-based behavioural/managerial inputs at all levels of Executives, Supervisors and Artisans. This shall help them to be future ready and also improve the overall employee engagement. Furthermore, efforts are underway for

integrating digital learning platforms, skill/competency assessments, and simulation-based training to enhance employee efficiency and drive diversification.

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Representation of Women in Workforce

Recommendation (Sl. No. 9)

7. The Committee note that the strength of female employees of BHEL has declined from 2053 in the year 2019 to 1746 in the year 2023. The Committee note that to enhance the representation of women in the Company us a continuous focus area for which various steps/ initiatives are being taken. The Committee hope that these steps will yield desired results in the coming years and BHEL should will be able to achieve a certain percentage increase in the number of female employees each year and increase the percentage of women in leadership roles, too. The Committee, therefore, strongly recommend that BHEL should set goals, aiming to increase the representation of women within the workforce. This will not only align with global best practices but also enhances creativity and innovation within the organization, contributing the long-term success of Company.”

Reply of the Government

It is submitted that, BHEL experienced a decline in total manpower strength from 35,471 in 2019 to 27,800 in 2025 and thus a proportionate decline was observed in women employees also i.e. from 2053 in the year 2019 to 1617 in the year 2025. As an engineering and manufacturing organization, BHEL receives a significantly lower number of applications from female candidates for its regular positions, which are primarily in Mechanical, Electrical and Civil Engineering. However, enhancing the representation of women in the Company remains a continuous focus area, and various steps and initiatives are being undertaken to address this, such as reaching out to candidates on Social Media platforms like LinkedIn, Twitter etc. and online portals like Company’s own website, National career Service Portal etc.

BHEL’s recruitment at key induction levels—such as Engineer Trainees and Supervisor Trainees—is conducted through a highly competitive process with selection based strictly on comparative merit. BHEL’s Recruitment Policy is fully aligned with the government’s directives on non-discriminatory recruitment practices, ensuring fairness and equal opportunity irrespective of gender, caste, disability, or religion.

BHEL fosters a diverse and inclusive work environment and is an equal opportunity employer. L&D at BHEL holds special focus programs for women to develop their leadership and mentor them to excel in their careers. It is worth mentioning that BHEL is currently having a women functional director in the board of the company. Also, many key portfolios including responsibility of Chief Risk Officer (CRO) and Chief Investment Relations Officer (CIRO) are being held by women executives.

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Comments of the Committee

(Please see para 12 of Chapter 1 of the Report)

Physical Performance of the Company

Recommendation (Sl. No. 10)

8. The Committee observe that BHEL operates in two primary business segments: Power and Industry and these segments are fueled by three business sectors: Power Sector, Industry Sector, and International Operations. The Power segment encompasses a wide range of power plant businesses, including thermal, gas, hydro, and nuclear, as well as the spares and services business. The industry segment focuses on supplying major equipment and providing Engineering, Procurement, and Construction (EPC) services for various sectors, such as transportation, transmission, defence, renewables and more. The Committee further note that the power sector in India is characterized by diverse energy sources, including coal, renewable, hydro, gas, and nuclear. BHEL significantly contributes to the generation of electricity in India, particularly through coal and lignite-based utility sets, accounting for 59.4% of the country's total electricity generation. Despite its historical market leadership in thermal power equipment manufacturing, an additional challenge for BHEL is the aging of thermal power plant fleet in India, where a substantial proportion of coal-based plants, approximately 13% (28 GW), are over 30 years old. These older plants have lower efficiencies and higher carbon emissions compared to newer supercritical power plants. Higher Carbon emission are having climatic concern. Besides, there are other factors, like disruption of supply chain from both within and outside the country, low orders inflow for execution, sporadic export market rate manpower shortage and COVID- 19 pandemic contributed to decline in orders to BHEL. The utility power segment witnessed a sharp decline in orders fructifying in the domestic market. BHEL has also been witnessing lower capacity utilization in respect of major products (allocated across various manufacturing units) due to incessant transition in energy sector directly impacting the nature of the product mix of the Company. BHEL is making concerted efforts for enhancing capacity utilization which majorly include:

- In light of ageing of facilities and changes in the product mix, the company is reviewing the production capacity of various equipment at its manufacturing units
- Initiatives are being taken for addressing new opportunities across wide spectrum of products & services viz. Nuclear Power, Defence and Aerospace, Coal Gasification, developing new systems / solutions for Railways, Hydro power, Downstream Oil & Gas, Energy storage, etc.
- Focus on technology leadership and strengthening diversification initiatives.

The Committee trust and hope that these remedial steps will reflect rise in the production graphs of BHEL in the coming years and they may be apprised of the Action Taken Replies. The Committee feel that investing in renewable energy projects may be viable strategies for which BHEL needs to promote research and development (R&D) to produce state-of-the-art equipment for conventional and renewable energy sectors like solar and wind. The Committee desire utmost priorities to R&D which can help address the changing dynamics in the power sector.

The Committee have been informed that our country is not having hydrocarbon and oil gas. India is having coal with high ash content. The Ministry of Heavy Industries is working on 2-3 Projects to deal with the challenges. The Ministry has acknowledged that in order to increase the turn over and increase the economy to 5 trillion US dollar, there is a need to resort to diversifications. In this regard steps have been taken for Shifting from a coal-based initiatives to Railways and defence etc. The Ministry of Heavy Industries has developed a proven technology on coal gasification. Therefore,

the Committee wish to recommend the Ministry to take necessary steps for its wider operationalisation and commercialization.

Reply of the Government

Recognizing India's global environmental commitments and Government's shift of focus towards renewables, BHEL has envisioned to reduce dependence on coal-based power plants. Efforts are underway to capitalize on the opportunities arising out of the need for greener utilization of coal through coal gasification besides diversifying into various sectors like Transportation, Defence and Aerospace, Nuclear power etc. Accordingly, R&D Projects are also being aligned with company's diversification efforts and to address new opportunities emerging with technological advancements and market needs. Some of the R&D initiatives majorly include:

1. Coal Gasification

- Aiming commercialization of indigenously developed Pressurized Fluidized Bed Gasification (PFBG) technology and to harness opportunities emerging out of the National Coal Gasification Mission, BHEL entered into JV agreement with CIL i.e. Bharat Coal Gasification and Chemicals Limited (BCGCL) to develop a Coal-to-Ammonium Nitrate Plant. As per the JV Agreement, the Coal-to-Syngas Island will be executed by BHEL using its in-house developed PFBG technology for coal gasification

2. Transportation

- Development of high-efficiency traction motors and control software for railway applications.
- Electromagnetic design validation, Reliability Availability and Maintainability (RAM), Flow, Thermal, Shock and Modal Analysis of 230kW Traction Motor, is supporting to execute Indian Railways order for supply of 80 Vande Bharat train sets.
- Development and commercialization of ceramic pouring tubes for railway applications

3. Defence and Aerospace Innovations

- Design and development of liquid cooling units, winged reserve propulsion systems, HTSC motor and Axial flux PM motors.
- Development of Wire Arc Additive Manufacturing (WAAM) for critical defence components.

4. Transmission and Digital Substation Technologies

- Implementation of indigenous digital substation automation systems.
- High-voltage direct current (HVDC) solutions and Synchronous condenser for efficient power transmission.
- Design, engineering and evaluation of 420kV gas insulated bus ducts has contributed in executing order for Srisailem left bank power station

5. Solar

- Commissioned the largest floating solar power plant of India with 100 MW capacity at NTPC Ramagundam in Telangana

- BHEL has entered into an MoU with M/s REC Power Development Corporation Limited (RECPDCL – a subsidiary of REC) for exploring development of primarily RE Projects along with other energy source projects

6. RMDS (Remote Monitoring and Diagnostic System)

- Remote Monitoring and Diagnostic System (RMDS) successfully executed in FY 24-25 at an industrial plant – BPCL Mumbai.

Ministry of Heavy Industries extends all out support to BHEL in achieving its diversification efforts.

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Recommendation (Sl. No. 11)

9. The Committee note that BHEL has been able to maintain its market leadership in the conventional Thermal Power Equipment manufacturing business over the years. One of the reasons attributed for loss of orders in case of few gas desulfurizations (FGP) is on account of procurement restrictions in line with Government of India's Guidelines and lack of level playing filled vis-à-vis private players. Analysing Companies performance in supplying spare parts turn over for last five years from the period 2018-2019 till the second quarter of 2022-2023, the Committee observe that the turnover value has been reduced. The production of Boiler, Power Transformer and Traction Machines have been reduced. The Committee are also informed that the overall shop production of major products viz. Boilers, Turbines and Generators was impacted during the Financial Year 2019-2020 and 2020-2021 due to supply chain disruptions. Further the productions were affected by Covid-19 pandemic and low orders inflow for execution resulting from orders not fortifying in the market in general. The Committee further recommend that BHEL should continue expanding its presence on Government e-Marketplace (GeM) for long-term and bulk quantity supplies. BHEL should thoroughly analyze its bidding strategy to identify weaknesses and focus on developing a more competitive strategy that aligns with evolving market dynamics and client expectations. To overcome the inconsistency in orders, BHEL should consider diversifying its product portfolio. Exploring opportunities in emerging technologies like energy storage and electric mobility can be advantageous. BHEL should conduct an in-depth analysis to identify the root causes of the decline in contract success. Following the analysis, BHEL should revamp its bidding and proposal strategies, focusing on improving competitiveness and aligning more closely with market dynamics. Finally, BHEL should establish a system for continuous monitoring of contract success and revise strategies as needed to ensure improved contract acquisition rates.

Reply of the Government

BHEL is proactively transforming its bidding, product, and operational strategies to remain competitive in a rapidly evolving market dynamics and client expectations for improving contract acquisition rates. Leveraging its expertise in the conventional thermal power business, and positioning itself in line with the Government's target of adding 80 GW thermal capacity by 2032, BHEL has secured thermal orders of 9.6 GW in FY24 and 14.6 GW in FY25. With this, the company's total order book at the end of FY 2024–25 stands at Rs.1,96,328 Crore with highest-ever order inflows of Rs. 92,535 Crore in FY25, reflecting a significant boost in

business performance. Targeted efforts which have yielded these positive results, majorly include:

A. Bidding and Proposal Strategy Refinement:

- i. Market Benchmarking: Conducting detailed pricing and technology benchmarking against market trends and recently ordered projects.
- ii. Cost Optimization: Implementing cost control measures (design optimization, reducing CIF import content) to ensure more competitive pricing.
- iii. Lost Order Analysis: Conducting comprehensive evaluations of unsuccessful bids to identify root causes and refine future strategies.

B. In-depth Contract Acquisition Analysis:

BHEL regularly carries out analysis of failure in securing contracts. In order to improve competitiveness and to improve contract acquisition rates, BHEL has taken the following corrective steps:

- Cost Optimization through Project/tender specific layout optimization, Site visits before bid submission.
- Actively pursuing pre-bid tie-ups to offer more competitive bids
- Thrust on vendor development and relationship management for competitive offers.
- Standardization in offerings and strategic partnerships with customers for reducing delivery cycles and optimizing material costs, resulting in repeat orders for projects with identical configurations

C. Diversification of Product Portfolio: Apart from the focus on existing range of products and systems, BHEL is expanding its business in new and emerging areas and is expanding its offerings besides forming strategic alliances to maintain market leadership and explore new business areas:

(i) Defence & Aerospace Business

- Upgraded SRGM: BHEL signed amendment to License Agreement with M/s Leonardo Italy to manufacture Upgraded SRGM. Further, BHEL is undertaking augmentation of gun manufacturing facility. BHEL has also developed expertise to provide indigenous support to Indian Navy for Repair, Maintenance and Overhaul of SRGMs.
- Compact Heat Exchangers for Fighter Aircraft: BHEL with consultancy from Aeronautical Development Agency has indigenously developed 07 types of Compact Heat Exchangers for fighter aircraft TEJAS.
- Lithium Ion Cell: BHEL has established Li Ion Cell manufacturing facility with Transfer of Technology from ISRO. Nickel Cobalt Aluminium chemistry Li Ion Cells of rating 5Ah, 50Ah and 100Ah can be manufactured in this facility. These cells are used by ISRO on Launch vehicles and satellites.
- Air Defence Guns - BHEL has participated in the RFQ for Air Defence Guns for the Indian Army for which prototype development is underway for participation in NC-NC trials.

(ii) Transportation

- BHEL is developing indigenous advance signalling system (KAVACH- Train Collision Avoidance System) in collaboration with M/s HIMA, Middle East FZE for which order in-flow is expected soon after establishment of prototype.

(iii) Transmission

- HVDC Converter Stations: BHEL is addressing the HVDC business opportunities through Strategic Business tie-up with technology

partner/OEM on scope sharing basis. Recently, BHEL has secured two major orders for \pm 800kV 6000MW LCC (Line Commutated Converter) HVDC projects (consortium partner M/s Hitachi Energy)

- a. Khavda KPS2 Nagpur HVDC Project
- b. Bhadla-Fatehpur HVDC Project

- *EHV GIS (up to 400 kV)*: In order to be self-dependent for GIS based sub-stations, BHEL has undertaken development of 400kV GIS (63kA Fault level) equipment.
- *Synchronous Condenser*: BHEL has geared up to offer Synchronous Condenser as a fruitful grid solution under Make in India initiative, which can help mitigate Grid stability issues due to Renewable energy addition. BHEL is in active discussion with CEA, CTU, PGCIL, NRPC for preparation of DPR and has also submitted concept note to CEA for further analysis and demonstration of the technology through a pilot project.

(iv) Flexible Power Plant Operations:

- BHEL has established its presence in Flexiblization domain and is currently executing multiple orders from Central and State Utilities as well as Private Power Producers, having proven its capabilities for both BHEL and non-BHEL sets following the successful execution of the maiden flexiblization project at REGL Adani TPP.

(v) Methanol-fired Gas Turbines:

- A breakthrough order was received for demonstrating methanol firing in Gas Turbine at NTPC Kayamkulam Combined Cycle Power Plant (350 MW), which is the first project of its kind in India. This initiative aims to revive the idle gas turbines that are currently inoperative due to fuel constraints and marks BHEL's entry into an emerging business area.

D. Exploring Emerging Technologies: BHEL is actively exploring beyond conventional business area (i.e., thermal power) and investing in next-generation technologies:

- *Advanced Ultra-Supercritical (AUSC)*: Plans to install a technology demonstration plant based on AUSC technology which offers enhanced efficiency and reduced CO₂ emissions w.r.t. sub-critical and supercritical coal-based power plants.
- Long-term technology transfer agreements with SHI-FW for Circulating Fluidized Bed Combustion (CFBC) Boilers.
- Collaboration with General Electric Technology GmbH, Switzerland, for Gas Turbines.

As regards GeM portal, BHEL has significantly expanded its presence as a key seller on the Government e-Marketplace (GeM), aligning with the Committee's recommendation to leverage this platform for long-term and bulk quantity supplies. Compared to FY 2023-24, where it secured Rs. 1220 Cr. worth of orders, BHEL has secured orders amounting to Rs. 3098 Cr during FY 2024-25.

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Recommendation (Sl. No. 13)

10. The Committee acknowledge the pivotal role played by BHEL in rail transportation sector for the past six decades consistently in fulfilling Indian Railways' rolling stock requirements by delivering 'Made in India' systems. A substantial number of locomotives and EMUs within the Indian Railways fleet feature traction equipment manufactured by BHEL. It is estimated that an expenditure of around Rs. 2.8 Lakh crore will be incurred over the next ten years in meeting the evolving needs of Indian Railways, including approximately 62,000 coaches of various types (such as MEMU, EMU, and Trainsets), 11,000 locomotives, and signalling for roughly 17,000 km of track. Notably, there has been a positive trend in the five-year average order booking for Traction and Signalling Group (TBSG), increasing from Rs. 932 crore during the financial years 2012-17 to Rs. 2,003 crore during the financial years 2017-22. Furthermore, in the semi-high-speed rail segment, BHEL secured its first order for propulsion electrics for the 'Vande Bharat Express' last year, and it has received a Letter of Acceptance (LOA) for the supply and maintenance of 80 units of 'Vande Bharat Express' in March 2023. The Committee appreciate these developments on the part of BHEL and recommends that BHEL should make efforts for having maximum number of orders from Railways and others. Considering their expertise and contributions to the rail transportation sector, BHEL should also make effort for enhancing their collaboration with Railways and others. Collaborative efforts can lead to the development of cutting-edge solutions and equipment aligning the evolving needs of the sector. This will further boost the domestic manufacturing sector and reduce dependence on imports.

Reply of the Government

BHEL has maintained its order book position in conventional railway products through strategic pricing despite increased competition. Company's industrial segment comprising of market-focused groups, offers comprehensive and customised solutions for Rail Transportation, Defence & Aerospace, Transmission, Oil & Gas, Captive Power Plant, Industrial Products, and Renewables business. During, last 2 years (FY24 and FY25) Industry segment secured orders approx. Rs 33000 Crs (excluding taxes), including the largest ever orders in transportation and power transmission businesses. In addition to this, significant efforts have been put in to enhance product portfolio and develop solutions for advancement of Indian Railways. The Vande Bharat trains order is a testament to such efforts.

Following actions initiated to enhance product portfolio and develop solutions for advancement of Indian Railways:

- BHEL is developing Kavach - Train Collision Avoidance System for which we expect order in-flows soon after establishment of prototype.
- BHEL is exploring partnerships to develop solutions for new age rolling stock like Hydrogen powered trains/locomotives, Battery operated trains, IoT solutions for remote monitoring and maintenance and track machines.
- Augmenting engineering teams to catalyse new product development and take advantage of record capacity expansion planned by Indian Railways.
- Pursuing railways for orders of WAG-9 electric locomotives for our dedicated loco facility created at Jhansi unit.
- Discussions are ongoing with Railways for complete O&M of railway sheds for EMU/MEMU and locomotives to capitalise on BHEL's experience.

- Focussing on successful execution of supply of 80 Nos Vande Bharat trainsets.
[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Recommendation (Sl. No. 14)

11. The Committee acknowledge BHEL's extensive global footprint, with a presence in 89 countries worldwide, including countries like Afghanistan, Bangladesh, Bhutan, Nepal, as well as others such as Belarus, Ethiopia, Indonesia, Iraq, Libya, Nigeria, Oman, Rwanda, Senegal, Sudan, and Spain. BHEL has been consistently providing post-sales support to its international clientele through the provision of spare parts and services. Notably, BHEL secured 70 contracts in 2017-18, encompassing various aspects, including spares and services. However, there has been a decrease in contract acquisition, with 37 contracts in 2020-21, and a recent uptick to 62 contracts in 2022-23. The Committee are happy to note that recognizing its core strength as a manufacturing company, BHEL has taken out efforts to focus on products as the core of its international business. Further BHEL has strategies a multi pronged approach focus towards expanding its business in International Market through creation of Product Desk to increase its outreach in the target markets in a focused manner to stripe for quantum jump in product exports. The Committee hope and trust that these steps will yield desires in the coming years. The Committee may be apprised about the achievement made in this regard in the action taken replies.

Reply of the Government

BHEL continues with its focus on product sales and after sales support to expand its global footprints.

It is worthwhile to mention that large orders in the export market are sporadic in nature, for e.g. Maitree project in Bangladesh in the year 2017 and Arun-3 hydro project in Nepal in the year 2018. As regards overcoming challenges, concerted efforts are being made by BHEL to enhance exports order-book, some of which are:

- Adopting a two-pronged approach of: (i) increasing Product-Sales (ii) attempting large orders.
- Focus on Product-Sales segment has started to contribute as BHEL recently secured orders for stand-alone generators for Botswana and Russia.
- BHEL is also targeting large size hydro projects in Nepal and Bhutan.

Orders have been recently secured for products such as Generators, Gas Turbine components, Transformers, Motors, Valves and several spares and services. With these orders, BHEL has also enhanced its footprints in three new countries i.e. Botswana (Generators), Costa Rica (Valves) and Gautemala (Spares) with our global footprints in 92 countries (other than India) as on date.

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Financial Performance

Recommendation (Sl. No. 15)

12. The Committee observe a fluctuating financial performance for BHEL over the last few years. There was a negative trend with losses of Rs. 1,473 crore in 2019-20 and Rs. 2,717 crore in 2020-21. However, there has been a positive turnaround in the last two years, with a profit after tax of Rs. 448 crore in the recent fiscal year (2022-23). BHEL's financial position in 2022-23 is characterized by total assets of Rs. 59,804 crore and total liabilities of Rs. 32,542 crore, with revenue from operations reaching

Rs. 23,365 crore. The Committee further note that BHEL's total assets have shown a declining trend over the years, decreasing from Rs. 63,764 crore in 2017-18 to Rs. 56,708 crore in 2021-22. The Committee are happy to note that BHEL has made a remarkable turnaround from losses in 2019-20 and 2020-21 to a profit after tax of Rs. 448 crore in 2022-23. This recovery is commendable, but Committee are still wary of the fact that profit margin remains relatively modest when compared to total revenue. The Committee, therefore, suggest that BHEL should prioritize strategic sourcing, establish vendor partnerships, explore cost-effective alternatives, collaborate with local suppliers, negotiate bulk discounts, assess its pricing strategy, explore options to improve profit margins, enhance operational efficiency, control overhead costs, adopt lean practices, diversify into higher-margin products/services, explore international markets etc. to mitigate the impact of rising material costs and increasing profit. To improve its financial stability, BHEL should also actively engage with customers to negotiate more balanced payment terms for ensuring a consistent cash flow.

Reply of the Government

BHEL acknowledges the committee's feedback on its financial performance and agrees that there were concerns during the difficult years of FY 2019-20 and 2020-21, mainly due to market challenges and project delays. However, BHEL has followed the growth trajectory and registered strong growth in its physical and financial performance. Company's Profit After Tax (PAT) ascended to Rs. 513 Cr. for FY-25 from Rs. 260 Cr. in FY-24 while Revenue from Operations (RFO) soared by 19% to Rs. 28339 Crores in FY-25 vis-à-vis Rs. 23893 Crores in FY-24.

Company has adopted various structural reforms and initiatives for enhancing profitability and financial strength which have started yielding positive results. Company's cash collection in FY-25 stood at Rs. 37,881 crores which is ~37 % increase from FY-24. Material cost has also started to reduce in recent past thereby supporting bottom-line of the company. It is worth mentioning that Material Cost (as % of Gross Turn Over) has witnessed a reduction of 3% from 72% in FY-24 to 69% in FY-25. However, consistent efforts are underway for enhancing cash collection and further reduction in material costs. Some of the prominent strategic initiatives taken by the company aiming at reducing material costs and enhancing profit margins are as below:

1. *Efficient sourcing and vendor management:*
 - Uniformity and standardization in tendering process
 - Focus on vendor enhancement for increasing competitiveness
 - Leveraging benefits of bulk purchasing (bulk discounts), streamlined decision-making, and enhanced efficiency.
 - Focused on rationalizing material specifications and negotiating improved terms and conditions with suppliers.
2. *Unified Supplier Development Cell (USDC) - Better Vendor Management:*
 - Strengthening long-term vendor ties
 - Expanding vendor base including MSMEs to improve delivery times and reduce costs.
 - Tracking the development of new suppliers, particularly for items with limited sources or previously imported, where indigenous development is required.
3. *Suvidha Portal – Supplier Dashboard:*

- User-friendly, single-point dashboard made available by BHEL for suppliers to seamlessly track the status of their invoices from submission to payment, with detailed visibility into deductions.
 - Provides a grievance lodging mechanism, enabling suppliers to address issues promptly.
4. **BHEL SAMVAAD:**
- BHEL's flagship initiative for engaging with domestic industry, BHEL SAMVAAD, serves as an interactive platform to drive the indigenization of imported items.
 - During these forums, BHEL's engineering experts share detailed specifications and requirements for such items, enabling potential suppliers to align their development efforts with BHEL's needs.
 - This initiative has been instrumental in expediting the development process and reducing import dependencies. Latest BHEL SAMVAAD 4.0 was held at Bharat Mandapam, New Delhi on 25-11-2024.
5. **Improved Pricing and Margins:**
- Reviewing pricing strategies for better risk management.
 - Ensuring timely claims and better payments terms in upcoming project.
6. **Policy Reforms for Enhanced Competition:**
- To remain at the forefront of industry standards, BHEL constantly updates its procurement policies in line with the latest Department of Expenditure (DoE) manuals and globally recognized best practices. BHEL has undertaken a comprehensive overhaul of its policies which includes introduction of a Development Policy with several supplier-friendly provisions, like:
- Prioritization of indigenous development.
 - Relaxations in tenders for new suppliers.
 - Sufficient order quantities for development efforts.
 - Exemption from penalties during the development phase.
 - Milestone-based payment terms to encourage participation.
7. **Stronger Cash Flow and Client Coordination**
- Renegotiating payment terms to get funds earlier in the project cycle.
 - Improving billing and follow-up to ensure timely payments.
 - Updating the credit and risk framework to handle delays and strengthen contracts.

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Comments of the Committee

(Please see para 18 of Chapter 1 of the Report)

Recommendation (Sl. No. 16)

13. The Committee note a decrease in total liabilities from Rs. 31,124 crore in 2017-18 to Rs. 29,737 crore in 2021-22, and thereafter, an increase in total liabilities to Rs. 32,542 crore in 2022-23. Further, financial performance from 2017-18 to 2022-23 shows a fluctuating trend in profit. In 2017-18, BHEL reported a profit of Rs. 807 crore which increased to Rs. 1,209 crore in 2018-19 and thereafter, there was significant losses in 2019-20 and 2020-21, amounting to Rs. 1,473 crore and Rs. 2,717 crore, respectively. However, there is an improvement in reducing the number of days in

liquidating trade receivables, from 192 days in 2019-20 to 102 days in 2022-23. The percentage of trade receivables liquidated out of net billing has also improved from 73% to 86% during the same period which demonstrates better collection efficiency. From the information furnished to the Committee, the decline in profitability has been attributed to several factors, including lower order inflow due to a shift towards renewable energy sources, unexecutable orders, disruptions caused by the COVID-19 pandemic, and rising input/material costs. To recover profitability, BHEL has undertaken various initiatives such as cost reduction, lower operational expenses and improved customer satisfaction following which the Company achieved 23% increase in revenue in 2021-22. The Committee feel that Company can further improve its profitability through automation, stricter credit policies, and proactive follow-up on overdue payments, enhancing cash flow and reducing financial stress besides concentrating on new areas such as coal gasification, rail transportation, and defence etc. The Committee, therefore, recommend that in addition to their existing expertise, BHEL should implement robust financial management practices and explore new areas to reduce its liabilities and increase profitability for overall financial stability.

Reply of the Government

The company acknowledges committee's observations on the trends in liabilities and profitability, including the losses during FY 2019-20 and 2020-21, period affected by disruptions caused by Covid-19 aftermath. However, with adoption of strategic initiatives focussing on enhancing operational efficiency, resource optimisation, cost reduction and faster cash collection, the company's business performance is witnessing significant improvement in terms of revenue and profitability. Noteworthy highlights are as below:

- Revenue from Operations: Soared by 19% to Rs. 28339 Crores in FY-25 vis-à-vis Rs. 23893 Crores in FY-24
- Profit After Tax: Profit ascended to Rs. 513 Cr. for FY-25 from Rs. 260 Cr. in FY-24
- Material Cost (as % of Gross Turn Over) : Witnessed a reduction of 3% from 72% in FY-24 to 69% in FY-25
- Trade Receivables as No of Days of Revenue from Operations has decreased from 198 days in FY 2019-20 to 115 Days in FY 24-25.

Thus, BHEL has been able to register strong growth in its physical and financial performance. This improvement in company's growth trajectory is attributable to adoption of robust financial management practices mentioned below:

- Comprehensive budgeting and variance analysis
- Price forecasting tool being actively utilized to forecast material prices for the upcoming quarter, aiding in price discovery during quarterly tenders
- Efficient treasury operations for liquidity and investment optimization
- Active risk management frameworks
- Regular internal audits to ensure compliance and financial integrity

These measures support our goal of reducing liabilities and ensuring long-term financial stability. Further, BHEL re-affirms the committee for maximizing its efforts for adopting innovative approaches and sustaining profitability.

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Recommendation (Sl. No. 17)

14. The Committee are happy to note that BHEL established a Cost Optimization Cell for the purpose of reducing costs through initiatives like design optimization and design-to-cost. With a view to improve profitability of the Company, the Committee strongly believe that BHEL should maintain a strong focus on cost control and optimization to improve profit margins by meticulously following effective cost control, diversification in sectors beyond thermal power, efficiency improvement by measures that could help in reducing trade receivables besides closely monitoring of market dynamics and plan its business strategy accordingly to meet the requirement of changing industry trends and customer demands. The Committee would like to be apprised of the steps taken by the Company and progress made in implementing these suggestions. The Committee also like to be apprised of the achievements made by the Cost Optimization Cell so far.

Reply of the Government

BHEL concurs with the Committee's recommendation to maintain a strong focus on cost control, diversification beyond thermal power, and operational efficiency to enhance profit margins. In alignment with this, the Company has undertaken several measures:

- Strict budgetary control and continuous variance analysis are being rigorously implemented across all functions to identify and eliminate inefficiencies.
- Reduction in trade receivables remains a high priority. Efforts are ongoing to shorten the collection cycle through systematic follow-up, improved billing practices, and enhanced coordination with customers, thereby strengthening liquidity.

Attributing to the above efforts, Material Cost (as % of Gross Turn Over) has witnessed a reduction of 3% from 72% in FY-24 to 69% in FY-25. Further, consistent efforts are underway for enhancing cash collection and further reduction in material costs.

Furthermore, Cost Optimization Cell (COC) is actively engaged in streamlining material and production costs. Since formation, COC is closely working with Units and Engineering centres for Design Optimization of Products and Systems within the periphery of contractual requirements. Various Cost Optimization initiatives viz. review of Bill of Quantities (BoQ), Layout optimization, enhancing vendor base by taking approvals from customer, Indigenization of items, Utilization of surplus materials etc. have been undertaken which have resulted in cost reduction for components like Boiler Structures, ESP structures, FGD Ducts, Coal Handling Plant and Building Structures, Coal Shed, Boiler Tubes, Compressed Air system etc. Further, the reduced structural quantity has positive impact in terms of BoQ reduction of Civil items like RCC, TMT bar, Structural Steel etc.

The process of identification and implementation of such Cost Optimization initiatives are being carried out in the recently awarded projects also.

As regards diversification initiatives, the same have been mentioned in reply towards point / question no - 11.

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Receivables and Payables
Recommendation (Sl. No. 18 to 21)

15. The Committee note that the trade receivables of BHEL have exhibited a fluctuating pattern over the years. In FY 2018-19, the trade receivables amounted to Rs. 15,796 crore, which decreased to Rs. 11,641 crore in FY 2019-20. However, they saw a significant drop in FY 2020-21, with trade receivables amounting to only Rs. 7,213 crore, followed by a slight increase to Rs. 6,229 crore in FY 2021-22 and Rs. 6,544 crore in FY 2022-23. The Committee have been informed that trade receivables in terms of the number of days of revenue from operations reduced from a level of 192 days in 2017-18 to 107 days in 2021-22 and the number of days was further reduced to 102 days in 2022-23. As regards contract assets, the Committee note that contract assets were on an increasing trend over the years i.e. in FY 2018-19, they were at Rs. 22,819 crore, which further increased to Rs. 23,794 crore in FY 2019-20 and continued to rise to Rs. 26,940 crore in FY 2021-22 and then, as of March 2023, contract assets were reached Rs. 29,740 crore. Similarly, the total debtors (net of provision) also showed fluctuations as in FY 2018-19, the total debtors were Rs. 38,615 crore, which decreased to Rs. 35,435 crore in FY 2019-20, and then further dropped to Rs. 31,292 crore in FY 2020-21. In FY 2021-22, they increased to Rs. 33,168 crore, and as of March 2023, they stand at Rs. 36,284 crore. As far as payables of BHEL, it shows a relatively stable trend such as in FY 2018-19, trade payables were Rs. 12,078 crore, which decreased to Rs. 9,900 crore in FY 2019-20, they increased slightly from Rs. 8,559 crore in FY 2020-21, Rs. 9,882 crore in FY 2021-22, and further increased to Rs. 10,404 crore as of December 2022.

and

16. When analyzed the customer-wise receivable figures, the Committee find that BHEL's top 10 customers account for a significant portion of its receivables, with these customers representing 70% of the total debtors as of September 2022. NTPC is the largest debtor, accounting for 26% of the total, followed by TANGEDCO at 16%. The Committee also found that the majority of BHEL's receivables were historically from State Electricity Boards (SEBs), which accounted for 45% of total receivables in FY 2018-19, 47% in FY 2019-20, 43% in FY 2020-21, 42% in FY 2021-22, and 41% in FY 2022-23. Central PSUs, including Railways and Government departments, also constitute a significant portion of the receivables.

and

17. With a view to minimize the risk of bad debts and overdue receivables, the Committee recommend BHEL to enforce stringent credit policies to assess the credit worthiness of its customers before entering into contracts and develop a robust system for monitoring of the recoverability of outstanding receivables with regular follow-ups, periodic reconciliations, and identifying accounts that are at risk of becoming overdue besides monitoring payment history and patterns of its customers regularly. Wherever realization is not probable in the near future, appropriate provisions should be made in accordance with accounting standards.

and

18. The Committee also recommend that in cases where payments are pending from Government entities including State Electricity Boards, BHEL should escalate its efforts to seek intervention and support from relevant Ministries/Departments/State Governments to expedite outstanding payments, as demonstrated in the case of TANGEDCO which certainly can be effective and, in the cases of chronic non-payment from private sector clients, BHEL should consider taking timely legal actions, such as

arbitration proceedings, to recover dues. The Committee also feel that over reliance on a few major customers can pose significant risks to the Company and, therefore, BHEL should explore opportunities to diversify its customer base and reduce dependence on a small number of clients.

Reply of the Government

The company is persistently focusing towards optimizing and overall reduction of Trade Receivables for which various protectionist measures are being taken for risk mitigation and avoiding long litigation time for recovering dues. These measures have shown encouraging results in the form of ~37 % increase in cash collection which stood at Rs. 37,881 crores in FY-25 vis-a-vis Rs. 27,621 crores FY-24. Also Trade Receivables as Number of Days of Revenue from Operations has decreased from 192 days in FY 2017-18 to 115 Days in FY 24-25. Some of the prominent steps responsible for striking improvement, majorly include:

- Company has an approved Trade Receivables Policy and all receivables are reviewed in line with this Policy
- Periodical review and monitoring of Gross Debtors are being ensured to have better control on overall receivables.
- Wherever the recoverability is doubtful suitable provisions are being made in compliance with applicable accounting standard.
- Timely legal recourse against the non-paying customers (including central and state utilities) to recover outstanding dues as per the Trade Receivable Policy are being initiated to protect company interest.
- Balanced order book mix with enhanced customer base. In thermal sector, company has balanced its order book mix by actively engaging with Independent Power Producers (IPPs) and private utilities to expand its customer base, thus reducing over dependence on central and state utilities.
- Entry into Non-Conventional Power Solutions:
 - In Thermal sector: Approached customers for installing CFBC based power plants where the coal quality is inferior.
 - In hydro sector: Approaching new developers for Pumped Storage Projects.
 - Further, BHEL has forayed into coal gasification and methanol fired gas turbines businesses recently. All these efforts are likely to pave the way to gain new customers and new businesses.

Diversification initiatives taken by the company have also been mentioned in reply towards point / question no - 11.

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Cost Cutting

Recommendation (Sl. No. 22)

19. The Committee observe an upward trend in the material costs of various commodities, notably Steel, Copper, Aluminium, Nickel, and others over the past few years. This rise in material costs has occurred simultaneously with a decline in the market, exerting additional pressure on profit margins. Recent global disruptions have further exacerbated the pricing challenges of these commodities. The costs associated with civil construction, structural fabrication, and erection activities have also experienced an increase. The Committee find that BHEL is actively implementing a range of measures aimed at optimizing costs and reducing expenses. These

measures include Design Optimization, Design to Cost, 3D Structural analysis to provide optimal designs to our valued customers, the utilization of surplus materials, the digitization of various processes, real-time project monitoring through IPMS, and a Project-Centric approach, among others. In the light of the rising material costs and market challenges, the Committee advise BHEL to focus on developing a robust system for forecasting cost fluctuations in key commodities, especially Steel, Copper, Aluminum, and Nickel through the price discovery mechanism of Commodity exchanges and others. By analyzing various scenarios and their potential impact on costs of materials, BHEL can proactively adjust its strategies ensuring greater resilience to market fluctuations and enhancing its competitive edge.

Reply of the Government

For adjusting towards market fluctuations with regard to prices of raw material and key commodities, BHEL has taken concerted steps so as to position itself for having a better competitive edge. Some of such steps majorly include:

- Price forecasting tool which is actively being utilized to forecast steel prices for the upcoming quarter, is aiding in price discovery during quarterly tenders. Adoption of this tool has started yielding benefits thereby contributing to estimated savings of ~Rs. 140 Crores during FY 2024-25 compared to item estimates. Encouraged with outcomes, company is expanding implementation of this application to forecast prices for other critical commodities like aluminium, copper, etc., for further strengthening its cost management and driving procurement efficiency.
- Focus on material code rationalisation, enhanced vendor engagement, developing local suppliers, negotiating improved terms and conditions with suppliers, etc. This approach fosters a win-win relationship, strengthening supplier partnerships while achieving significant cost reductions.

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Export

Recommendation (Sl. No. 25 to 26)

20. BHEL has set export performance targets as a percentage of Revenue from Operations (Net) in its Memorandum of Understanding (MoU) with the Ministry of Heavy Industries for the financial years 2018-19, 2019-20, 2020-21, and 2021-22. The Company has consistently achieved these targets as in FY 2018-19, the target was 6%, and BHEL achieved 10.4%, in FY 2019-20, the target was 10%, and BHEL achieved 17.8%, in FY 2020-21, the target was 10%, and BHEL achieved 10.72%, in FY 2021-22, the target was 8%, and BHEL achieved 7.16%. BHEL's physical exports over the last six years have shown variations as in FY 2017-18, BHEL recorded exports worth Rs. 687 crore to countries such as Bangladesh, Brunei, Bhutan, Comoros, Nepal, Nigeria, Oman, Senegal, and Syria, exports increased significantly in FY 2018-19 to Rs. 3,282 crore, FY 2019-20 saw further growth, with exports reaching Rs.3,821 crore. However, in FY 2020-21, exports decreased to Rs.1,855 crore and this declining trend continued in FY 2021-22, with exports at Rs.1,518 crore and as of FY 2022-23, exports stood at Rs. 1,075 crore. BHEL attributes the declining trend in export turnover and profitability in overseas projects to several factors such as a significant impact of COVID-19 pandemic on BHEL's operations, both in terms of

supply chain disruptions and manpower shortages, and slowdown in BHEL production mainly due to low orders inflow for execution.

and

21. Given the sporadic nature of export orders and the impact of external factors like the COVID-19 pandemic, the Committee recommend that BHEL should explore diversification of export markets to reduce dependence on specific regions or countries with a view to mitigate risks associated with market fluctuations. BHEL should further enhance the resilience of its supply chain to cope with disruptions like pandemics or geopolitical challenges by developing alternate sourcing strategies, strategic stockpiling, or contingency plans.

Reply of the Government

To cope with disruptions like pandemics or geopolitical challenges and enhance supply chain resilience, concerted steps are being taken by the company. Some of the major initiatives include:

- For development of local suppliers, BHEL has intensified the efforts of vendor development by creating USDC (Unified Supplier Development Cell) for proactively scouting industry for capable sources and examining imports for indigenization using provisions of PPP-MII, DoE guidelines, etc.
- Under SAMVAAD, BHEL' flagship event, BHEL consistently interacts with all stakeholders in India be it the domestic industry, Academic/ Research Institutes, Customers etc. by fostering collaboration with them, and thereby expediting the development of imported items.
- BHEL has indigenized over 60 items having procurement value of Rs. 500 Cr. per Annum in the last three years.
- BHEL has updated its Development Order procedures which includes supplier-friendly provisions such as prioritization of indigenous development, tender relaxations for new suppliers, sufficient order quantities for development, exemption from penalties during the development phase, and milestone-based payment terms to encourage participation.
- BHEL also continuously updates its procurement policies in line with the latest Department of Expenditure (DoE) manuals and industry best practices, ensuring transparency, efficiency, and competitive engagement.

As regards, diversification of export markets, it has been a key element of BHEL's exports strategy both in terms of geographical regions and product segments. Recently BHEL has achieved success by entering into new countries i.e. Botswana (Generators), Costa Rica (Valves) and Guatemala (Spares) enhancing its diversified geographical footprints. Expanding the scope of BHEL's global offerings, BHEL has recently secured export orders from the railway segment in Sri Lanka and Technical services from Nigeria.

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Order Book of the Company
Recommendation (Sl. No. 27 to 28)

22. BHEL provided data on orders booked in the Power Sector, Industry Sector, and by its International Operations Division for the period between 2015-16 and 2021-22. The data shows a varying trend in the number of orders booked and completed. The Committee note that BHEL's order book for the financial year 2021-22 stood at 4,700 MW, amounting to Rs.17,931 crore which the Company achieved in a competitive environment with a limited pipeline of orders. To enumerate, in the Power Sector, the number of orders booked and completed has fluctuated over the years, with a decline in the number of orders in recent years. Industry Sector has also experienced fluctuations in the number of orders, with a dip during the financial year 2019-20 to 2020-21 attributed to the impact of the COVID-19 pandemic. The Committee observe the reasons for the decline in the order book is primarily attributed to the sharp reduction in orders in the utility power segment, which constitutes a significant portion of BHEL's business. This reduction is notable as (i) orders reduced from over 25 GW per year during 2007-11 to an average of around 5 GW from 2016-17 to 2021-22; (ii) thermal power ordering remained low, around 1.2 GW during the period 2016-2022; and (iii) no major thermal utility power project orders were finalized during 2020-21 and 2021-22. The Committee also observed that the decline is also linked to a global shift towards cleaner and greener energy sources, driven by concerns about climate change and this has led to a decrease in orders for conventional coal-based thermal power plants. Besides, impact of COVID-19 pandemic on the Industry Sector's order book due to disruptions in the economy, the Committee are of the views that delays in project ordering are also a major contributing factor as in the case of ordering for the 2x660 MW Talcher thermal power plant project.

and

23. The Committee have taken note of the various steps taken by BHEL to enhance order book such as (i) focusing on improving cost competitiveness through design optimization, reducing import content, and strategic collaborations with technology partners; (ii) participating in stand-alone Balance of Plant (BOP) packages, forming strategic tie-ups with technology collaborators, and exploring new product areas such as marine gas turbines and heat exchangers; (iii) BHEL is approaching project developers for equity participation to leverage equipment sales; (iv) engagement with the Government and policymakers to advocate for policy amendments that level the playing field with other industry players; (v) long-term spares supply agreements and service agreements with major customers are being pursued by BHEL to ensure a stable source of revenue; (vi) implementing advanced manufacturing actions and stocking spares to ensure quick turnaround of spare orders; (vii) diversifying into other business areas, such as the defense and aerospace sector, transportation, and downstream oil and gas segments aiming at expanding its order book beyond traditional sectors; and (viii) enhancing its vendor base and entering into rate contracts with vendors to become more competitive in the market. The Committee are of the view that BHEL can work towards stabilizing and expanding its order book, ensuring sustainable growth in a rapidly evolving energy sector, only with continuation of its efforts and proactively adjust business strategies accordingly.

Reply of the Government

Taking note of committee's recommendations, BHEL has taken strategic initiatives for not only revival of company's orderbook but also for long term sustainability of orders by expanding its reach in diversified business areas. As a result, BHEL secured its highest-ever order inflows during the year, amounting to Rs. 92,535 Crore. With this, company's total order book at the end of FY 2024–25 stands at Rs.1,96,328 Crore. Out of FY 2024–25 order inflow of Rs. 92,535 Crore, BHEL has booked orders of Rs. 81,349 Cr. in power sector due to renewed focus of Govt. of India on adding thermal power capacity in installed energy mix.

In recently issued National Electricity plan of Generation and Transmission, Renewable energy installation is projected to see an upward trend and thermal ordering is likely to see a downward trend from FY26-27 onwards. The company takes note of the future scenario and market dynamics and is taking concerted steps for maintaining the growth momentum. Envisaging the future markets, BHEL is persistently focussing on the industrial segment. As result, company's industrial segment secured orders approx. Rs 33,000 Cr. (excluding taxes) in last 2 years (FY24 and FY25), including the largest ever orders in transportation and power transmission businesses. This reflects the company's diversified presence across sectors such as transportation, defence, process industries, and industrial equipment.

Diversification initiatives of the company have also been mentioned in reply towards point / question no - 11.

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Recommendation (Sl. No. 29 to 30)

24. The Committee observe that as of December 1, 2022, a total of 13,771 MW of Power Sector projects, Rs. 292 crore worth of Industry Sector projects, and 3 International projects have been categorized as 'On-Hold.' These projects are currently in a state of suspension due to various reasons, including challenges related to environmental clearance, fuel availability, coal linkages, financial constraints faced by customers, alterations in customer requirements, and ongoing arbitration or legal proceedings. The Committee, therefore, recommend that the Ministry of Heavy Industries should take a proactive role in resolving the above challenges obstructing the progress of these projects. Their pivotal role will reinvigorate these 'On-Hold' projects, which, in turn, can contribute to the revitalization of the power and industrial sectors. On the aspect of International Projects on hold, the Committee would recommend BHEL to stay informed about the evolving situations in international projects and work closely with the Ministry of External Affairs (MEA) to assess the feasibility of revival in unstable regions.

and

25. The Committee acknowledge that the timely completion of projects is vital for the industry's growth. Project delays have been primarily attributed to various factors, including delays in the provision of necessary inputs, the impact of events such as the COVID-19 pandemic and changing geopolitical situations (e.g., the Russia-Ukraine conflict), unprecedented increases in steel and commodity prices, procurement restrictions from neighboring countries, and limitations associated with Global Tender Enquiries (GTE) for procurement. In response to these challenges, BHEL has initiated several measures to ensure that projects are completed as per schedule. These measures include shifting from a revenue-centric approach to a project-centric one,

revising work and purchase policies, implementing real-time project monitoring through the Integrated Project Management System (IPMS), and introducing bonus clauses for subcontractors to incentivize early completion. The Committee note that BHEL successfully closed 19 projects in the fiscal year 2021-22, indicating an improvement in its project execution tonnage, which increased from 4,07,323 MT in 2017-18 to 4,58,263 MT in 2021-22. In light of these facts and figures, the Committee strongly recommend to evolve a system for addressing the obstacles hindering the project completion. A system that rewards companies for completing projects on time while imposing penalties for delays may be implemented. This approach will serve to foster a culture of timely project delivery and enhance the efficiency and competitiveness of the industry.

Reply of the Government

For ensuring effective project execution, BHEL is taking concerted steps for persistent improvement through online systems for monitoring of projects besides adoption of best industry practices for timely project delivery. Some of these practices are as mentioned below:

- i. Dedicated project specific Project Management Teams identified to monitor execution of projects.
- ii. Deployment of reputed PMC (Project Management consultant) in EPC Projects
- iii. Policy amendments to enable vendors for faster site execution.
- iv. Penalty in vendor contracts- this acts as a safeguard mechanism against delay in supplies from vendors.
- v. Timely Payment and quick time bound resolution of vendor issues
- vi. Timely availability of fronts at sites – most thermal orders being brownfield

With regard to projects “On Hold”, these are majorly on account of reasons like fund constraints with customer, delay in Govt. clearances etc. Whenever a project goes under hold, all efforts for its revival are made like pursuing with customer’s higher management, offering re-negotiation of terms/prices etc. (while safeguarding BHEL interest). Ministry of Heavy Industries (MHI) periodically reviews the progress of the projects and the performance of all CPSEs under its administrative control including BHEL. MHI brings any challenges faced by BHEL to the attention of the competent authority in the Government for appropriate intervention.

In certain cases, the efforts do not materialize due to issues beyond control of BHEL or customer (grave fund constraints of customer company leading to Insolvency/liquidation, Non-receipt of Govt. Clearances etc.). In such cases, either the projects are cancelled and the cancellation charges are settled with customer, or Legal route is pursued for dispute resolution. However, best efforts are made to ensure that BHEL’s interests are safeguarded.

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Research and Development

Recommendation (Sl. No. 31 to 33)

26. The Committee observe that the value of imports consumed by BHEL varied over the last five years, with the highest being in 2018-19 at Rs.4603.07 crore and the lowest in 2021-22 at Rs.2016.33 crore. To address this issue, the Committee note that

BHEL has consistently invested in research and development (R&D), with R&D expenditure as a percentage of total turnover varying between 2.5% to 4.5% over the last five years. As of September 30, 2022, BHEL has registered 5163 Intellectual Property Rights (IPRs) or patents. This signifies that the Company has a strong commitment to innovation and technological advancement. The Committee also note that BHEL's R&D efforts are extensive and encompass various domains, including:

- Coal gasification technology for coal-to-chemicals production.
- Advanced Ultra Supercritical (AUSC) technology for coal-based power generation with reduced CO₂ emissions.
- Development of gas-insulated switchgear (GIS) and alternative environmentally friendly gas compositions.
- Research in the hydrogen value chain and fuel cell applications.
- Remote monitoring, diagnostics services, and reliability-centric maintenance.
- Development of a Smart Project Management System (SPMS) for project execution efficiency.
- Hardware In Loop and Software In Loop Test facility.
- Solutions for the e-mobility ecosystem.
- Indigenization of industrial products and components.
- Research in flue gas desulfurization, marine gas turbines, and nuclear power segments.

and

27. The Committee further note that BHEL has been taking initiatives to reduce dependency on imports by indigenizing critical components and materials, and the Company has completed several major indigenization activities through R&D, contributing to import substitution. Besides supporting domestic manufacturing and reduce dependency on imports, including Make-in-India, Public Procurement (Preference to Make in India) Orders, Production Linked Incentives (PLI) schemes, and the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME) Scheme, the Ministry of Heavy Industries are also supporting BHEL and also facilitate to get foreign players registered to participate in domestic tenders, ensuring better monitoring and regulation.

and

28. The Committee, having been satisfied with the combined endeavour of the Company and the Ministry of Heavy Industries in R&D, expect that BHEL would continue to allocate a significant portion of the budget for R&D to drive innovation, technology development, and product improvement with maintaining an R&D expenditure of around 2.5% to 4.5% of total turnover is commendable and should be sustained. While stressing upon focusing on areas such as coal gasification and power generation, the Committee urge BHEL to consider diversifying R&D efforts into emerging technologies like hydrogen-based energy systems, advanced materials, and renewable energy solutions to align with changing market trends; to collaborate with leading research institutions, universities, and other industry players to enhance R&D capabilities and leverage external expertise; to focus on commercializing successful R&D projects and technologies, especially those with the potential for significant market impact, such as coal gasification and AUSC technology; to reduce import dependency by indigenizing critical components and materials by identifying key components that can be indigenized and develop strategies for their local production; and on the same time to explore opportunities to export indigenously developed products and technologies to international markets, as the Committee opine,

diversifying the customer base can reduce dependence on the domestic market. The Committee, therefore, suggest for a regular performance assessment on the impact and effectiveness of R&D investments, ensuring that they align with the Company's long-term goals and objectives and to see whether the R&D efforts being taken by the Company are also aligned with environmental sustainability goals, especially in renewable energy and clean technologies, to stay competitive in a rapidly evolving market.

Reply of the Government

R&D initiatives in BHEL are aligned with company's business requirements, addressing new opportunities, emerging technological advancements and long-term sustainability goals while remaining competitive in the market. Some of the R&D Projects contributing in commercialization/ tap emerging business opportunities majorly include:

- Coal Gasification Technology: The development of Pressurised Bed Gasification (PFBG) and Syngas Cleanup System (Coal to Methanol Technology) is enabling business for a 2000 TPD Coal to Ammonium Nitrate plant with M/s Bharat Coal Gasification & Chemicals Ltd (BCGCL) – A JV between CIL and BHEL.
- Power Transmission: Design, engineering and evaluation of 420kV gas insulated bus ducts has contributed in executing a commercial order of 420kV gas insulated bus ducts for Srisailem Left bank power station
- Railway Infrastructure: Development and commercialization of Ceramic pouring tubes for Indian Railways application.
- Development of IGBT-based 3-Phase Traction Drive Control Software (Kolkata Metro) is facilitating the execution of commercial order from Indian Railways for four metro rakes.
- Electromagnetic design validation, Reliability Availability and Maintainability (RAM), Flow, Thermal, Shock and Modal Analysis of 230kW Traction Motor, is supporting to execute commercial order from Indian Railways for supply of 80 Vande Bharat sleeper train sets
- Avenues are being explored for commercialization of Top Pressure Recovery Turbine (TRT)
- Digital Substation Automation System is progressing towards commercial adoption.
- Remote Monitoring and Diagnostic System (RMDS) is successfully executed in FY 24-25 at an industrial plant – BPCL Mumbai.
- Avenues are being explored for the commercialization of the 200 kW HTSC Motor

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Joint Ventures

Recommendation (Sl. No. 36)

29. The Committee note that BHEL has four Joint Venture Companies (JVCs), namely BHEL-GE Gas Turbine Services Private Ltd. (BGGTS), Raichur Power Corporation Ltd. (RPCL), NTPC-BHEL Power Projects Private Ltd. (NBPPL), and

Powerplant Performance Improvement Pvt. Ltd. (PPIL). Among these, BGGTS is the sole profitable venture, reporting a profit of Rs. 100.84 crore in the fiscal year 2021-22, while both RPCL and NBPPL have incurred significant losses of Rs. 565.00 crore and Rs. 40.52 crore in the same period respectively. The Committee also note that PPIL is already under liquidation and the Board in its meeting held on 8 February, 2018 had accorded in principle approval for pursuing winding up of NBPPL also. Notably, the Government's increasing emphasis on renewable energy sources has led to a challenging environment for the thermal power sector, resulting in adverse effects on these JVCs due to escalating expenses and fixed costs. The Committee, therefore, recommend that unprofitable joint ventures should either be wound up expeditiously or adapt their business models to align with the current market dynamics.

Reply of the Government

BHEL notes recommendations of the committee and is poised to take strategic measures for its JVs accordingly. Considerable steps have been taken by BHEL with regard to unprofitable joint ventures. The status is as mentioned below:

PPIL: Powerplant Performance Improvement Private Ltd. (PPIL) is already under liquidation and the Liquidator has submitted final report for dissolution of PPIL to Hon'ble NCLT in January 2025.

NBPPL: Due to consistent losses and bleak future outlook, BHEL Board of Directors in Feb 2018 had approved winding up of NBPPL. However, in view of announcement in Union Budget for FY 2024-25, BHEL Board of Directors in January 2025 accorded in-principle approval for taking up the implementation of 1x800 MW AUSC (Advanced Ultra Super Critical) Technology Demonstration Plant (TDP) by NBPPL. As a result, the business model of NBPPL will shift from EPC and manufacturing of power plant equipment to setting up and operating AUSC technology based TDP.

RPCL: BHEL's equity investment in RPCL has been evaluated by a Financial Institution in 2024. As per the analysis, RPCL is expected to generate profits in future.

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Environmental Matters

Recommendation (Sl. No. 37)

30. The Committee note that BHEL is inherently a low carbon-emitting Company, with its carbon emission intensity reducing from 19.9 metric tonnes in 2020-21 to 16.1 metric tonnes in 2021-22. The Committee observe that BHEL is diligently monitoring its Scope-1 and Scope-2 emissions and maintaining a comprehensive record of its carbon footprint. The Company is unwavering in its commitment to decarbonization, demonstrated through a new initiative called "Harit BHEL," aimed at transitioning into an environmentally responsible corporation. The Committee further note that BHEL's commitment to achieving net-zero carbon emissions aligns with the Government's environmental objectives. The Committee are of the opinion that BHEL should prioritize the development and deployment of AUSC technology and low-rating supercritical sets, making them accessible for new coal-based power plants. BHEL should also explore opportunities in the coal-to-chemicals sector and bolster its presence in the nuclear power field. With the target of becoming a Net Zero Company

by 2047, the Committee anticipate that BHEL will continue its resolute efforts in the pursuit of Net Zero decarbonization.

Reply of the Government

In the backdrop of India's commitments in COP26 for attaining Net Zero by 2070, BHEL has initiated the हरित बीएचईएल (HARIT BHEL) initiative for making BHEL a "Green Company" and a model "Green PSU" with a target to become Net Zero with respect to Scope-1 and Scope-2 Emissions by 2047. This initiative broadly encompasses three pivotal components, which are:

- a) *Targeting Net Zero Emissions by 2047:* BHEL has pledged to attain Net Zero status for Scope-1 and Scope-2 emissions by 2047.
- b) *Green Company Rating for Manufacturing Units: Seeking GreenCo ratings by CII-Sohrabji Godrej Green Business Centre for the BHEL Manufacturing Units.*
- c) *Focused Sustainability Initiatives:* Nine focused sustainability initiatives were identified for implementation across BHEL viz. Plantation, Increasing Rainwater Harvesting systems, Creating Water Bodies, Water Audit, Zero Liquid Discharge (ZLD) status for Units, Solid Waste Management, Energy Audit, Augmenting Solar PV capacity in units, Increased Use of Daylight.

Besides above, company is taking concerted steps towards supporting the nation for achieving sustainable development with the adoption of clean coal technologies, nuclear power etc.

- i. **Advanced Ultra Supercritical (AUSC) technology:** Cabinet Committee on Economic Affairs (CCEA) approved the R&D Project for development of Advanced Ultra Super Critical (AUSC) Technology for Thermal power plants on a mission mode. The project was envisaged to be executed in two phases, with Phase-I focusing on technology development while Phase-II targets for setting up the Technology Demonstration Plant (TDP) leading to the establishment of this technology.

In Phase-I, the indigenous development of AUSC technology was jointly undertaken by BHEL, NTPC and IGCAR as a part of the 9th National Mission on Clean Coal Technologies, under the aegis of National Action Plan on Climate Change (NAPCC), with a project funding of Rs. 905 Crores.

Phase-II: In Union Budget 2024-25, Hon'ble Finance Minister announced that a joint venture between NTPC and BHEL will set up a full scale 800 MW commercial plant using AUSC technology. The government will provide the required fiscal support.

- ii. **Coal Gasification Technology:** BHEL has indigenously developed the Pressurized Fluidized Bed Gasification (PFBG) technology, which is the best-suited technology for gasification of high-ash Indian coal and lignite.

Aiming commercialization of this technology and to harness opportunities emerging out of the National Coal Gasification Mission, BHEL entered into JV agreement with CIL i.e. Bharat Coal Gasification and Chemicals Limited

(BCGCL) to develop a Coal-to-Ammonium Nitrate Plant. As per the JV Agreement, the Coal-to-Syngas island will be executed by BHEL using its in-house developed PFBG technology for coal gasification

- iii. **Flexible Operation:** With the large-scale influx of RES (Renewable Energy Sources) based power systems, low load flexibilization and two-shift operation solutions for thermal power plants will be needed which may have to work in consonance with the gas and hydro based projects.
- iv. **Low Rating Supercritical technology:** BHEL has a design variant ready for the lower rating supercritical sets and would be offered to customers for installation on need basis. The requirement for these lower rating supercritical sets may also arise in future, given the land constraints in upcoming expansion projects.
- v. **Nuclear Sector:**
 - Currently assisting CEA, DAE and Niti Aayog in deliberations for future plans regarding Nuclear Segment in India.
 - BHEL has entered into a Memorandum of Cooperation with EDF for the Jaitapur Nuclear Power Plant, European Pressurized Reactors (EPRs) and the Nuward SMR.
 - BHEL has long standing Association with Arabelle Solutions, an EDF group Company (Erstwhile GE, Alstom) for 700 MWe NPPs being set up in India and is continuously upgrading its technology base.
- vi. BHEL has installed several Solar power plants at its manufacturing units, spread across the country, totalling to around 41+ MW.
- vii. Usage of LED lighting in place of conventional lighting systems
- viii. Switching to greener fuel such as LPG/PNG/RLNG in place of LDO/HSD/FO for operational use

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Waste Management

Recommendation (Sl. No. 38 to 39)

31. The Committee note that BHEL has implemented a Waste Management System founded on the "3R" approach, emphasizing on the reduction, reuse, and recycling of resources. The Company's commitment to minimizing raw material consumption aligns with its core objectives, with impressive results in waste management. In the case of non-hazardous waste, BHEL generated 52,696 metric tonnes, recycling or reusing the same amount. For hazardous waste, the Company generated 1,528 metric tonnes and successfully recycled or reused 1,225 metric tonnes in 2020-21. The Committee appreciate the efforts and desire the Company to continue its current waste management approach while also enhancing efforts to reuse and reduce its hazardous waste.

and

32. Furthermore, the Committee recognize that BHEL effectively sold scrap materials amounting to Rs. 274 crore in the fiscal year 2021-22. The proactive utilization of surplus and unused materials on-site is a commendable practice. This endeavour has notably contributed to the Company's operational income, which reached a peak of Rs. 1,058 crore in the same financial year, thereby directly benefiting the Company's overall financial performance. The Committee appreciate the efforts and encourages the Company to persist in its efforts to make effective and gainful use of surplus materials.

Reply of the Government

BHEL thanks committee for appreciating company's waste management approach and reaffirm that continued efforts will be made for Resource conservation and waste reduction in all its activities / processes of designing, planning, production, and operations for optimizing raw material consumption. Aiming to contribute to Company's operational income significantly, efforts are underway for proactive utilization of surplus and unused materials. In this direction, a Policy for Disposal of Scrap/Unusable Surplus (PDSS) was issued to further streamline and institutionalize the process.

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Corporate Social Responsibility

Recommendation (Sl. No. 40)

33. The Committee note that BHEL has consistently allocated a portion of its annual profit for CSR activities, complying with the requirements under the Companies Act, 2013. While the allocated funds have been substantial, there have been variations in utilisation. In 2021-22, BHEL allocated a CSR budget of Rs. 22.16 crore. The Company demonstrated its commitment to various CSR activities in sectors like Clean India, Educated India, Green India, Healthy India, Inclusive India, Responsible India, and more. BHEL has taken an all-encompassing approach in line with the Companies Act, 2013, and the Companies (CSR Policy) Rules, 2014. Notably, the CSR fund in BHEL is non-lapsable, and any unspent or unallocated amounts are carried forward to subsequent years, allowing for flexibility in project execution, especially for long-term projects with multiple stakeholders. The Committee recommend that BHEL should continue its commitment to Corporate Social Responsibility (CSR) activities, ensuring effective and timely utilization of allocated funds.

Reply of the Government

In its endeavour as a responsible corporate citizen, BHEL has always aimed its Corporate Social Responsibility (CSR) related activities towards working for the welfare of the society in identified focus areas like infrastructure development, programs on health care / sanitation / hygiene, environment & sustainability, empowerment of communities, environment protection, development of backward regions, women empowerment, upliftment of the under-privileged sections of the society etc.

BHEL has consistently allocated a portion of its annual profit for CSR activities, complying with the requirements under the Companies Act, 2013. We affirm that BHEL

has continued its commitment to CSR and will continue to do so, for ensuring effective timely utilization of allocated funds.

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Cases in ARBITRATION, AMRCD and CVC

Recommendation (Sl. No. 41)

34. The Committee note from the information provided by BHEL, indicating that as of December 31, 2022, there were approximately 118 cases stemming from commercial contracts with financial implications exceeding Rs. 10 crore that remained unresolved in arbitration. Besides, there were five cases pending in the AMRCD. As of March 31, 2023, claims against BHEL was amounted to Rs. 3,843.89 crore, with counterclaims by BHEL totaling Rs. 2,622 crore within arbitration proceedings. On the same date, BHEL asserted claims amounting to Rs. 12,944.29 crore, while counterclaims against BHEL reached Rs. 24,721.18 crore in arbitration cases. The Committee recommend that the Company should expeditiously resolve these cases, collaborating with the administrative Ministry wherever necessary, and explore alternative dispute resolution methods, too. The cases under AMRCD may be resolved with priority.

Reply of the Government

As on March 31, 2025, in on-going arbitration matters, claims and counterclaims against BHEL stood at Rs. 3,557 crore and Rs. 21,210 crore respectively showing a noticeable reduction in the amounts involved in arbitration cases. This reduction has been achieved through efforts made towards ensuring early and timely disposal of disputes, settlement of disputes at the initial stages of proceedings, etc.

Company has 'BHEL Arbitration Guidelines, 2018' in place which provides that it is open to parties to explore possibilities for amicable settlement of the disputes even during pendency of arbitral proceedings. As per BHEL Arbitration Guidelines, proposals for assignment of disputes and appointment of arbitrator(s) and/ or reference of dispute to AMRCD are examined by Corporate Law and approval of top management is obtained. Thereby such proposals are scrutinized at highest level.

Also, with a view to ensure that disputes are not routinely referred for arbitration or award challenged mechanically, a high-level standing committee named as "Dispute and Arbitration Award Evaluation Committee" (DAAEC) have been constituted in all the Units/Divisions/ Regions/ Business Groups across BHEL. Legal/ Arbitration proceedings before initiation are examined by DAAEC consisting of Heads of Engineering/ MM/ Contracts, Finance, Law and the concerned department to which the dispute belongs. The recommendation of DAAEC is acted upon after approval of concerned Unit Head.

It may be highlighted that in the event an amicable settlement cannot be reached on the dispute, then only action can be initiated under BHEL Arbitration Guidelines for assigning dispute for arbitration and appointment of arbitrator. In all the proposals for referring the dispute to arbitration and/or appointment of arbitrator(s), the efforts made to settle the dispute amicably are to be mentioned. Communications has been issued by the Higher Management directing that before the proposal for referring the dispute to arbitration is initiated, efforts at amicable resolution, if any, including

referring dispute to conciliation under BHEL's Conciliation Scheme be made and only after exhaustion of all possible avenues such proposal are to be initiated.

BHEL also has BHEL Conciliation Scheme in place which enables settlement of dispute through conciliation (alternative dispute resolution method). Once Mediation Act comes into effect, the same will also be resorted to.

With regard to on-going disputes under AMRCD all out efforts are being made to get the disputes resolved expeditiously and all the directions of the Committee of Secretaries are complied. In 2023 and 2024 two disputes with NIACL and NTPC have been settled after referring to AMRCD.

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Recommendation (Sl. No. 42)

35. The Committee take note of two pending cases with the Central Vigilance Commission. In one instance, involving Shri R. Anbarasu, GM (Retd.), BHEL, PS-SR, Uppur Site, an inquiry was completed on October 22, 2022, and vigilance comments were submitted to the Disciplinary Authority on November 22, 2022, with further action currently underway. In the second case, CVC conducted an Intensive Examination of BHEL Tower, Sector-16A, NOIDA, which resulted in the resolution of 14 out of 19 raised issues, based on BHEL's inputs. The CVC has also advised on system improvements and investigations for the remaining five issues, which are presently in progress. The Committee urge the Company to take appropriate actions in these cases in a time bound manner so as to prevent similar occurrences in the future.

Reply of the Government

Case-1: With reference to above, it is mentioned that vide penalty order dated 03.03.2023 Disciplinary Authority imposed penalty on Shri R Anbarasu. After imposition of penalty on Shri R Anbarasu the case stands closed.

Case-2: Post resolution of 14 out of 19 paras CVC vide OM reference no. 022/HVI/004/531430 dated 25.11.2022 advised BHEL as mentioned below against balance paras:

1. To fix responsibility and seek first stage advice on the points as described in the letter.
2. Issuance of suitable advisory regarding more precautions and detailing during preparation of estimate.

Regarding S. No.1, report was submitted to CVC on 22.02.2023. CVC vide OM reference no. 022/HVI/004/543610 dated 31.03.2023 advised initiation of minor penalty against the following 02 employees which was intimated to Director (Power and HR -additional charge) for further necessary action (copy enclosed **Annexure - B**):

- a) Shri Rajan Yadav, the then DGM (Adm.) now SDGM (Adm. -NBP), Noida
- b) Shri B. K. Singh, the then AGM (Adm.), Corp. Office (retd.)

The minor penalty was initiated against the two of the employees.

Regarding Sl. no. 2, note reference no. AA: VIG:3080 dated 23 December 2022 (attached as **Annexure B-1**) was sent to Director (Power and HR -additional charge) by CVO for issuance of suitable advisory. In compliance of it, a circular was issued by ED (HR), Corporate Office reference no. AA/HR/IR/481 dated 16 January 2023 for

compliance with regard to provisions of Purchase/Works Policy (attached as **Annexure B-2**).

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

C&AG Audit Paragraphs

Recommendation (Sl. No. 43)

36. BHEL apprised the Committee about the eight pending Audit Paras from the C&AG, each highlighting specific issues. The Committee observe for each Audit Para, as under:

- (i) Audit Para 5.1 (Year: 2020-21) - Avoidable Loss: BHEL suffered a loss of Rs. 13.69 crore due to laxity in supplying complete sets of Alternate Current Electrical Multiple Units. The matter was sub-judice before the Hon'ble High Court of Kolkata. The issue was under consideration with MAB-Delhi.
- (ii) Audit Para 5.2 (Year: 2020-21) - Non-safeguarding of Financial Interest: Electronics Division, Bengaluru unit of BHEL incurred an additional liability of Rs. 11.58 crore towards payment of Safeguard Duty for clearing imports due to not taking cognizance of proposed changes in tax structure and delivery schedules. The issue was reported to be under consideration with MAB-Hyderabad.
- (iii) Audit Para 6.1 (Year: 2019-20) - Loss Due to Non-Performance: BHEL suffered a loss of Euro 3.83 million (Rs. 28.35 crore) due to failure to deliver performance as per the contractual provisions, resulting in the invocation of Bank Guarantee by the client (Keban). The issue was reported to be under consideration with MAB-Delhi.
- (iv) Audit Para 4.1 (Year: 2018-19) - Undue Benefit to Employees: BHEL extended undue benefits to its employees towards Late Night Snacks Allowance, amounting to Rs. 16.69 crore, in violation of guidelines. The issue was reported to be under consideration with MAB-Hyderabad.
- (v) Audit Para 6.1 (Year: 2017-18) - Avoidable Payment of Customs Duty and Safeguard Duty: BHEL, Trichy unit, made avoidable payments of customs duty (including safeguard duty) amounting to Rs. 5.71 crore due to not obtaining amendments to advance authorization for import of seamless carbon steel tubes in time. Final ATNs were submitted to MHI on 14.07.2022.
- (vi) Audit Para 13.1 (Year: 2014-15) - Irregular Payment Towards Leave Encashment: BHEL deviated from DPE guidelines and made irregular payments of Rs. 36.86 crore towards HPL/SL/EL encashment on superannuation over and above the ceiling of 300 days. Final ATNs were submitted to MHI on 01.09.2021.
- (vii) Audit Para 13.2 (Year: 2014-15) - Irregular Payment Towards Performance Related Pay (PRP): BHEL made a payment of Rs. 15 crore due to non-adherence to DPE guidelines on PRP. The issue was reported to be under consideration with MAB-Delhi.
- (viii) Audit Para 14.3 (Year: 2010-11) - Compliance of DPE Guidelines on Perquisites and Allowances: BHEL incurred an excess expenditure of Rs. 359.55 crore due to non-compliance with DPE guidelines on perquisites and allowances. Last replies were submitted to MHI on 21.12.2020.

Reply of the Government

Updated Status of BHEL Printed paras are enclosed at **Annexure 'C'**.

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Recommendation (Sl. No. 44)

37. In connection with resolution of pending audit matters, the Committee are of the view that BHEL should actively engage with the concerned *i.e.* Ministry of Heavy Industries, C&AG, MAB-Delhi & Hyderabad, for speeding resolution of pending Audit Paragraphs. Regarding this, the Committee suggest for strengthening BHEL's internal controls and processes to prevent avoidable losses and irregular payments in the future. The Committee also desire that a robust online monitoring mechanism should be established to track and report compliance with guidelines on each Audit Para, reducing the likelihood of similar issues arising in the future. The suggested mechanism, if established, would facilitate a real time regular updates to the authorities concerned on the progress and timely resolution of pending Audit Paras with transparency and accountability.

Reply of the Government

In view of the Committee's valuable observations and recommendations on the resolution of pending audit matters, BHEL continues to make dedicated efforts to actively engage with the concerned authorities, including the Ministry of Heavy Industries, the Comptroller and Auditor General (C&AG), and the MAB offices at Delhi and Hyderabad, to expedite the closure of outstanding Audit Paragraphs. Notably, the printed para titled "Non-safeguarding of financial interest resulting in additional burden towards payment of Safeguard Duty" has been resolved during the current period.

In line with the C&AG observations and the Action Taken Notes (ATNs) submitted, BHEL is proactively strengthening its internal controls and processes to prevent avoidable financial losses and irregular payments. Additionally, advisories/guidelines are issued as and when required, and uploaded in the intranet system to ensure compliance and effective control across the organization, thereby significantly reducing the likelihood of recurrence of similar issues.

Recognising the importance of transparency and accountability, BHEL has developed an Online Para System for real-time monitoring of Government audit observations across the organisation. This digital platform serves as a centralised repository for all CAG Paras and observations, enabling the tracking of action taken, and ensuring timely compliance and reporting. The system will also facilitate a transparent and accountable resolution process for pending Audit Paras.

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CHAPTER III

OBSERVATIONS/RECOMMENDATIONS WHICH THE COMMITTEE DO NOT DESIRE TO PURSUE IN VIEW OF THE GOVERNMENT'S REPLIES

Diversification in Manufacturing Segment

Recommendation (Sl. No. 34 to 35)

The Committee observe that Bharat Heavy Electricals Limited (BHEL) is undergoing a transformation from being primarily focused on thermal power equipment and engineering services to becoming a versatile "Engineering Company" that offers a broad range of products and services across various sectors of the economy. In pursuit of this transformation, BHEL has taken diversification initiatives in several key areas. These are: -

Solar Energy: BHEL is actively involved in solar energy by manufacturing essential equipment like solar PV cells, modules, power conditioning units, transformers, and supervisory control and data acquisition (SCADA) systems. While some items are imported, BHEL is one of the few domestic manufacturers with production capabilities for solar PV cells and modules and is exploring collaborations with other public sector units and industry partners to expand manufacturing.

Defence & Aerospace: BHEL has a strong presence in the defence sector, with a focus on innovation and technology. It is working on projects such as Super Rapid Gun Mount (SRGM), Integrated Platform Management System (IPMS), Compact Heat Exchangers, strategic equipment for the Indian Navy, space-grade solar panels, and lithium-ion batteries. BHEL's enhanced offerings, certifications, and extensive research and development efforts enable it to compete with existing players in the defence industry.

E-Mobility and Battery Energy Storage Systems (BESS): BHEL is actively involved in the supply of electric vehicle (EV) chargers and associated electrical systems. The Company offers engineering, procurement, and construction (EPC) solutions for EV charging stations. BHEL has set up a dedicated group for Battery Energy Storage Systems (BESS) and has secured orders for the installation of BESS units.

Captive Power & Process Plant (CPPP) and Industrial Products for Oil & Gas Sector: BHEL's successful execution of projects like the IOCL Paradip Sulphur Recovery Unit (SRU) positions it to address various other downstream oil and gas engineering, procurement, and construction (EPC) packages. The Company is also working on the indigenization of items required for centrifugal compressor packages.

Hydrogen Mission: BHEL is actively participating in India's National Green Hydrogen Mission, with a focus on electrolyzer and type-IV cylinders. The Company has initiated partnerships with research organizations and is working on developing technology for hydrogen generation, storage, and transportation.

Coal Gasification and Chemical: BHEL has developed Pressurized Fluidized Bed Gasification (PFBG) technology, which is unique for gasifying high ash Indian coal. This technology has significant potential in the National Coal Gasification Mission of India, which aims to gasify 100 million metric tons of coal by 2030.

and

2. The Committee recognize that BHEL is actively engaged in various critical sectors such as Hydro Power, Nuclear Power, Defence, Space, Renewable Energy, and International Operations. BHEL plays a significant role in supporting the value chain of these vital sectors within the country. The Committee feel that as India steadily asserts its position as a global leader, towards which safeguarding its strategic interests becomes imperative and BHEL has the potential to make substantial contributions under these circumstances. Therefore, the Committee strongly recommend that the Government should consider bestowing upon BHEL the status of a 'Strategic' Public Sector Undertaking (PSU).

Reply of the Government

BHEL has become one of the key pillars for nation making and thus proves its worth for status of a '*Strategic*' Public Sector Undertaking (PSU).

As one of the leading contributors towards building of *AatmaNirbhar* Bharat, company provides a comprehensive portfolio of products, systems and services in the areas of Power (thermal, hydro, gas, nuclear and solar photo-voltaic), Power Transmission, Transportation, Defence & Aerospace, Oil & Gas and other core sectors of the country, and also abroad. BHEL commands 53% share in India's total installed capacity of utility power segment (excluding renewables) besides its crucial contributions in other strategic sectors including defence, transportation, nuclear etc. This stands as testimony to its valuable contribution towards nation building. BHEL has also established references in 92 countries in all the 6 inhabited continents, with equipment supplied for about 13,000 MW of power generating capacity in overseas markets.

In *Nuclear power* segment, BHEL is the only company to be part of all the 3 stages of India's nuclear program and is the sole indigenous supplier of Nuclear Turbines and Generators. Approx. 60% of the India's installed nuclear power capacity consists of BHEL supplied equipment.

Defence is another strategic area, where BHEL has made its presence felt over the past five decades. By being the exclusive trusted supplier of frontline weapon system for naval warships of the Indian Navy, BHEL has a proven long track-record of supporting the Defence Forces. Through design and development of some of the most complex equipment and weapon systems, including critical strategic equipment, BHEL has been in the forefront for achievement of indigenous capability to achieve self-sufficiency in the field of Defence.

For *Indian Air force*, BHEL has indigenously designed, developed and manufactured Compact Heat Exchangers for Light Combat Aircraft – Tejas LCA and Su-30MkI aircraft, Advanced Light Helicopters and Advanced Medium Combat Aircraft. Also, BHEL is developing Li-ion battery system for next generation aircraft (i.e. AMCA) for the first time in the country, a testimony to BHEL's capability to serve the defence sector. BHEL has also developed Liquid Cooling System for Light Combat Aircraft (LCA) Tejas. Further, BHEL is also developing pump module for Su-30Mki Aircraft and Liquid Cooling System for Jaguar Aircraft.

Majority of *ISRO satellites* including Chandrayaan and Mangalyaan are equipped with BHEL supplied space-grade solar panels and Li-ion batteries, which reaffirms BHEL's contribution in Space sector.

In the *Rail transportation* segment, significant share of Indian Railways rolling stock is equipped with BHEL's propulsion equipment. BHEL led consortium is (only fully Indian consortium) executing order for supply and maintenance of 80 nos. sleeper version of "Vande Bharat" Trainsets in Manufacturing-cum-Maintenance Agreement (MCMA) model for 35 years.

In the Transmission segment, BHEL has executed 6 out of 9 nos. LCC HVDC projects in India. BHEL had partnership with Global OEMs in HVDC and has established manufacturing facilities for HVDC products up to 800 kV, including HVDC converter transformers and thyristor valves

In Solar segment, BHEL provides complete EPC solutions of Solar Photo Voltaic (SPV) Power Plants including Grid Interactive systems with and without BESS (Battery Energy Storage System), Floating Solar Power Plants, Standalone Systems, Erection, commissioning, O&M and consultancy services.

In view of the above facts and with BHEL being an integral part of the value chain of these strategic sectors, BHEL should be considered as 'strategic' public sector undertaking.

MHI vide its OM dated 15.05.2023 has informed DIPAM that BHEL is an integral part of the value chain of the strategic sectors and therefore it should be considered as strategic PSE and needs to continue as a Public Sector company.

Note: Major contributions of BHEL which proves it's worth for consideration as Strategic PSU is placed at **Annexure - A**

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CHAPTER IV

OBSERVATIONS/RECOMMENDATIONS IN RESPECT OF WHICH REPLIES OF GOVERNMENT HAD NOT BEEN ACCEPTED BY THE COMMITTEE AND WHICH REQUIRE REITERATION

Human Resources

Recommendation (Sl. No. 9)

The Committee note that the strength of female employees of BHEL has declined from 2053 in the year 2019 to 1746 in the year 2023. The Committee note that to enhance the representation of women in the Company as a continuous focus area for which various steps/ initiatives are being taken. The Committee hope that these steps will yield desired results in the coming years and BHEL should will be able to achieve a certain percentage increase in the number of female employees each year and increase the percentage of women in leadership roles, too. The Committee, therefore, strongly recommend that BHEL should set goals, aiming to increase the representation of women within the workforce. This will not only align with global best practices but also enhances creativity and innovation within the organization, contributing the long-term success of Company.

Reply of the Government

It is submitted that, BHEL experienced a decline in total manpower strength from 35,471 in 2019 to 27,800 in 2025 and thus a proportionate decline was observed in women employees also i.e. from 2053 in the year 2019 to 1617 in the year 2025. As an engineering and manufacturing organization, BHEL receives a significantly lower number of applications from female candidates for its regular positions, which are primarily in Mechanical, Electrical and Civil Engineering. However, enhancing the representation of women in the Company remains a continuous focus area, and various steps and initiatives are being undertaken to address this, such as reaching out to candidates on Social Media platforms like LinkedIn, Twitter etc. and online portals like Company's own website, National career Service Portal etc.

BHEL's recruitment at key induction levels—such as Engineer Trainees and Supervisor Trainees—is conducted through a highly competitive process with selection based strictly on comparative merit. BHEL's Recruitment Policy is fully aligned with the government's directives on non-discriminatory recruitment practices, ensuring fairness and equal opportunity irrespective of gender, caste, disability, or religion.

BHEL fosters a diverse and inclusive work environment and is an equal opportunity employer. L&D at BHEL holds special focus programs for women to develop their leadership and mentor them to excel in their careers. It is worth mentioning that BHEL is currently having a women functional director in the board of the company. Also, many key portfolios including responsibility of Chief Risk Officer (CRO) and Chief Investment Relations Officer (CIRO) are being held by women executives.

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

CHAPTER V

OBSERVATIONS/RECOMMENDATIONS IN RESPECT OF WHICH THE GOVERNMENT HAS FURNISHED INTERIM REPLIES AND FINAL REPLIES ARE STILL AWAITED

Board of Directors of BHEL

Recommendation (Sl. No. 6 to 7)

The Committee note that the vacancies in various posts in the Board of Directors (BoD) of BHEL is a matter of concern. As of July 6, 2023, the actual strength of the BoD stands at 10 out of a sanctioned strength of 16. Notably, there are significant gaps in the representation of Part-time Non-official (Independent) Directors, which is critical for ensuring corporate governance and independent decision-making. The Committee note that the post of Director 'Human Resources' was laying vacant since 1.2.2022. For this post the interview was held on 10.11.2022. The Director joined the Board of Directors on July 2023. During the vacant period for this post the Director was holding additional charge of the post of Director Human Resources. The inordinate delay in filling of the vacancies is a matter of concern. This under-representation of independent directors is a regulatory compliance of SEBI, BSE and NSC. Non-compliance of such regulatory leads to imposition of substantial fines by stock exchanges (BSE and NSE) and SEBI from September 2018 to March 2023. Although the fines have been partially waived by the stock exchanges, they raise questions about adherence to regulatory norms and governance practices. BHEL faced financial penalties amounting to Rs. 17,003,800 over this period due to these violations. The Committee observe that the Company has taken steps to address this issue by inducting independent directors, however, the Committee wish to recommend that BHEL should ensure timely action for the compliances and should give top priority for maintaining governance standards.

and

2. The Committee are well aware of the fact that vacant positions in the Board can adversely impact the effective functioning of any Company. Therefore, the Committee strongly recommend that the administrative Ministry should take up the matter with DPE for seriously looking into the issue of abnormal delay in appointment of Directors on the Board. The Committee further recommend that the controlling Ministry and DPE should anticipate the future vacancies for various posts in the Board of Directors and initiate the required actions and complete the process of the filling up the vacancies well before the end of the term of the outgoing Directors.

Reply of the Government

BHEL had received notices along with fine from Stock Exchanges due to non-compliance with provision of Regulation 17 (1) of the SEBI (LODR) Regulations i.e. Composition of Board due to non-appointment of requisite number of Independent Directors. In this regard, it has been submitted to the Stock Exchanges (SEs) that the Company should not be held liable to pay the fine as the non-compliance with regard to composition of the Board is not due to any negligence / default by the Company as the same is not under the control of the Company. Accordingly, BHEL requested SEs to waive off the fine imposed w.e.f. quarter ending September-2022. It may be appreciated that in earlier instances of non-compliance of similar nature, SEs had

already waived fine imposed earlier on BHEL on the similar ground. It is pertinent to mention here that BHEL being a Govt. Company, the power to appoint Directors including Independent Directors, lies with the Govt. of India/Administrative Ministry (Ministry of Heavy Industries) by following the laid down guidelines of the Govt. of India and after obtaining approval of the Appointments Committee of Cabinet (ACC).

As on 01.05.2025, there are 5 vacancies of Independent Directors. As such, BHEL is regularly taking up with the Administrative Ministry requesting for appointment of requisite number of Independent Directors so as to ensure compliance with Corporate Governance norms enunciated under SEBI Listing Regulations as well as the Companies Act. The matter of filling up of these vacancies is under process at the end of Ministry of Heavy Industries, Government of India.

Ministry of Heavy Industries is regularly pursuing the matter of filling the vacant posts of both Functional and Independent Directors. Presently, all the posts of Functional Director on the Board of BHEL have been filled. In March, 2025, based on the recommendation of the DPE Search Committee and approval by the Appointments Committee of the Cabinet (ACC), two (02) nos. Independent Directors have been appointed on the Board of BHEL. Further, MHI is regularly pursuing the matter of filling up of vacant posts of Independent Directors with DPE.

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Comments of the Committee

(Please see para 9 of Chapter 1 of the Report)

Development of Advanced Ultra Super Critical (AUSC) Technology

Recommendation (Sl. No. 12)

3. The Committee have been apprised that the Power Sectors Current Thermal Fleet has a significant proportion of older plants. with ~13% of coal-based plants (~28 GW) aged more than 30 years, out of which ~5 GW of plants are aged more than 40 years. Further, ~18 GW plants are expected to cross 30 years of age in the next decade and >130 GW of plants will cross this age by 2047. Notably, most of these plants are subcritical in nature, which have lesser efficiencies (~10% lower) and higher carbon emitter (10-20% higher) than the newer supercritical power plants. The representative of BHEL have acknowledged that it is imperative to have a Policy Driven Mechanism for retirement of these older plants. The Committee applaud the fact that to address the issue of aging power plants, BHEL has initiated the development of Advanced Ultra Super Critical (AUSC) technology, aiming to enhance efficiency and reduce emissions. The Ministry of Heavy Industries, along with other stakeholders, such as BHEL, IGCAR has provided funding and technical support for this project. A Technology Demonstration Plant (TDP) of 1X800 MW capacity based on AUSC technology is planned under the Ministry of Power. A budgetary provision of Rs. 900 crore has been envisioned. A MoU was signed 3 years back but till date the approval is pending. The Committee recommend that BHEL should collaborate with the Government to expedite approvals and render adequate financial support for the development of Advanced Ultra Super Critical (AUSC) Technology which will improve the efficiency and environmental performance of India's thermal power plants. This will

boost the orders of BHEL for replacing older thermal power plants with AUSC technology. The Committee may be apprised of the action taken in this direction.”

Reply of the Government

“With guidance and support from MHI and NITI Aayog, BHEL is making concerted efforts and move ahead in establishment of technology demonstration plant for Advanced Ultra-Super Critical (AUSC) technology. Progress made so far is as below:

- Cabinet Committee on Economic Affairs had earlier approved R&D Project for development of Advanced Ultra Super Critical (AUSC) Technology for Thermal power plants on a mission mode.
- The project was envisaged to be executed in two phases, with Phase-I focusing on technology development while Phase-II targets for setting up the Technology Demonstration Plant (TDP) leading to the establishment of this technology.
- BHEL has successfully completed the R&D phase (i.e. Phase-I) of development of this technology in Dec’20, jointly with NTPC Ltd. and Indira Gandhi Centre for Atomic Research (IGCAR).
- Phase-II: In Union Budget for FY 2024-25, Hon’ble Finance Minister announced that a joint venture between NTPC and BHEL will set up a full scale 800 MW commercial plant using AUSC technology. The government will provide the required fiscal support. Subsequent, to the budget announcement, follow-up meetings were held at NITI Aayog in August’ 24 and December’ 24. The major actions taken are:
 - Project site has been identified as NTPC Korba, Chhattisgarh for setting up 1x800MW AUSC TDP (Technology Demonstration Plant).
 - The project will be implemented by an existing joint venture company of NTPC and BHEL called NTPC BHEL Power Projects Private Limited (NBPPL).
 - A committee was constituted by NITI Aayog to oversee finalization of total cost estimates of the proposed 800 MW AUSC TDP under the chairmanship of Dr. V.K. Saraswat (Member, NITI Aayog). Meetings of the cost committee held in Feb’25 and March’25
 - Based on the decisions of the Cost Committee meeting held in March’25, draft Public Investment Board (PIB) note for approval of GOI is submitted to MoP by NTPC with project details.

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Comments of the Committee

(Please see para 15 of Chapter 1 of the Report)

Challenges Due to Procurement Restrictions

Recommendation (Sl. No. 23 and 24)

4. The Committee find that BHEL is grappling with challenges related to Land Border Sharing and Global Tender Enquiry (GTE) restrictions. These challenges have had a cascading effect on project timelines, causing delays of 5-6 months and, in certain instances, up to 9 months. These delays result in adverse consequences for the Company, including missed business opportunities, postponed deliveries, project

setbacks, and the imposition of liquidated damages (LDs) for tardiness. Moreover, due to the constraints on procuring from nations sharing land borders with India, BHEL has incurred significant additional costs for the acquisition of crucial components. BHEL has made multiple appeals to the administrative ministry regarding these concerns who have taken the matter with M/o Finance to have a level playing field for BHEL. However, the Ministry has done nothing substantial yet. Besides, BHEL has organized a series of workshops called BHEL SAMVAAD since December 2020, engaging with the domestic industry to cultivate to mitigate the challenges posed by Land Border Sharing and Global Tender Enquiry (GTE) restrictions. The Committee, therefore desire that MHI should vigorously take up the matter with M/o Finance for removal of restrictions and providing level playing field to BHEL. Further, BHEL should also develop a network of local suppliers which will reduce delays, minimize additional procurement costs, and enhance supply chain resilience.”

and

5. The Committee are surprised to know that these restrictions are applicable only to public sector entities, not the private sector, however, nothing else has been divulge in support of this condition except national security. Therefore, the Committee urge that both the Ministry of Heavy Industries and BHEL should continue with their efforts to advocate for removal or modification of GTE and land border sharing restrictions that adversely affect its operations. The Committee expect that the Ministry of Heavy Industries would take up vigorously the issue with the concerned Government authorities and Ministries which is crucial to address these challenges effectively for providing a level playing field to CPSUs particularly BHEL. Simultaneously, BHEL should keep maintaining open lines of communication and collaboration with the Ministry of Heavy Industries and other relevant Government bodies for the sake of facilitating a better understanding of BHEL’s needs and concerns.”

Reply of the Government

Based on the request of BHEL, MHI has communicated to DoE, Ministry of Finance on 28-08-2024 to provide GTE exemption for BHEL for 95 identified items in the various categories like castings and forgings, Special Steel - Tubes and Pipes, Sheets/ Plates, electrical steel, Electric Insulating Materials, Electronic Components, Current insulated, Hybrid, Rivetless and Anti Friction Bearings, etc. While there has been no response from DoE, BHEL is following up with all concerned stakeholders in Gol through MHI viz. MoP, MoS, DPIIT, Cab Sec, etc. for providing relief to BHEL so that deliverables in projects of National importance are not affected.

BHEL has been constantly following up with DPIIT as well as Ministry of Power and Ministry of Steel, through MHI since Sep’ 2022, that there are certain items like alloy steel seamless pipes and tubes (required for Boilers), IP outer casings (required for turbines), Gypsum De-watering System, etc. where the sources are predominantly from countries sharing Land Borders with India and it is in interest of the country to bring down the cost to nation. We request suitable directions to DPIIT, Ministry of Power and Ministry of Steel to permit registration of bidders representing countries sharing Land Borders with India especially in materials where no electronic controls are involved.

As regards development of local suppliers, BHEL has intensified the efforts of vendor development by creating USDC (Unified Supplier Development Cell) for proactively

scouting industry for capable sources and examining imports for indigenization using provisions of PPP-MII, DoE guidelines, etc.

Furthermore, BHEL organizes its flagship event BHEL SAMVAAD every year wherein suppliers across India are invited to discuss potential business opportunities in the coming years. The details of this initiative have already been mentioned at reply no. 15.

Ministry of Heavy Industries has brought to the notice of the Appropriate Authority in the Government the constraints faced by BHEL. Various initiatives taken by the Government has increased the domestic availability of several goods which were previously imported by BHEL. MHI also facilitates all CPSEs under its administrative control including BHEL, for timely procurement of items that are not domestically available ensuring that they do not lose their competitive edge over its competitors.

[Ministry of Heavy Industries, OM No. 16(3)/2025-PE-XI/CPSE.1 Dated 19th June 2025]

Comments of the Committee

(Please see para 22 of Chapter 1 of the Report)

New Delhi:

08 August, 2025

17 Sravana, 1947(S)

BAIJAYANT PANDA

Chairperson,

Committee on Public Undertakings

ANNEXURE-A

Major Contributions of BHEL in Strategic Sectors are as below:

A. Power Sector:

- One of the few EPC players left in country for handling the upcoming orders for thermal power plants and ensuring the energy security for the nation. Presently executing around 90% of the main thermal plant orders which are under construction and are likely to contribute to electricity needs by 2030-32.
- *Hydro power* - BHEL would play a significant role in supporting the value chain of Pumped Storage Projects (PSP) within the country, which offers benefits of grid stability and energy transition strategies. However, BHEL is actively pursuing to gain support from policymaking bodies like CEA to qualify BHEL for enabling participation in Electro-Mechanical works of Pumped Storage Projects.

B. Non-conventional areas of power sector:

- *Coal Gasification*: BHEL's indigenous pressurized fluidized bed Coal Gasification allows the conversion of India's abundant high ash coal reserves into syngas (a mixture of hydrogen, carbon monoxide, and methane), which can be used to produce electricity, chemicals, hydrogen and other synthetic fuels. The production of chemicals from syngas can reduce the net imports of the nation.
- BHEL entered into JV agreement with Coal India Limited (CIL) and formed Bharat Coal Gasification and Chemicals Limited (BCGCL) to develop a Coal-to-Ammonium Nitrate Plant.
- *Methanol fired gas turbine segment*: BHEL has established a new business segment - methanol fired gas turbine segment, which would pave the way for reviving unutilized gas turbine sets in the country that are inoperative due to unavailability of natural gas and naphtha.

C. Nuclear Power:

- BHEL has been associated with India's nuclear power programme since 5 decades.
- BHEL is the only Indian company associated with all the three stages of the Indian Nuclear Power Programme –

1st Stage (Pressurised Heavy Water Reactors (PHWR):

- Supply of Primary Side Equipment such as Steam Generators (45 nos.), Reactor Headers (96 nos.), End Shields (4 nos.), Other Heat Exchangers on Primary/ Reactor Side.
- Supply of 15 nos. Turbine Generator Sets of rating 220 MWe, 540 MWe and 700 MWe.

2nd Stage (Fast Breeder Reactors):

- Supply and E&C of Entire TG Island for 500 MWe along with supply of secondary side equipment such as Thermal Baffle and Inner Vessel.

3rd Stage (Advance Heavy Water Reactor):

- Development of design of Secondary Side Power Cycle for 300 MWe AHWRs

- 15 out of 21 PHWRs operating in India are equipped with BHEL supplied Turbine Generator sets.
- Foreign Cooperation Projects (Kudankulam NPP)
 - Erection of TG island for Unit 1&2. Units 3&4 (Under implementation)
 - Erection of Reactor side equipment for 2x1000 MWe Unit 3&4 (Under implementation).
- BHEL and EDF have also signed a Memorandum of Cooperation (MoC) in Nov'23 to explore larger collaboration for the European Pressurized Reactors (EPRs) and for the NUWARD SMR (Small Modular Reactor).
- The development of SMR technology is in a nascent stage and leading OEMs in the SMR field like Rosatom, Electricité de France S.A., France (EDF) and Hyundai Engineering & construction (HEC) have approached BHEL for potential collaboration in the field of SMRs.
- BHEL's design and manufacturing capabilities can be leveraged as indigenous designer of SMR for this envisaged energy transition. BHEL, with its existing facilities, is capable to support the indigenous design and development of SMRs and manufacture all mechanical components of SMR along with complete Turbine Island.

D. Defence and Aerospace:

D.1) Indian Navy:

- 48 Naval Guns – SRGM supplied to Indian Navy. (Frontline weapon on board Indian Naval Warships)
- Providing product life cycle support for SRGM
- Integrated Platform Management System - INS Vikrant
- Design, Development, Manufacturing and Supply of Strategic Equipment and Systems for naval applications

D.2) Indian Army:

- Turret Castings for T72 Tanks
- Thermo-pressed components for T-72 and T-90 tanks

D.3) Aerospace:

- Compact Heat Exchanger for Light Combat Aircrafts (LCA) – Tejas and Su-30MKi aircraft.
- Liquid Cooling system and Pump Module for LCA Tejas
- Li-ion Batteries for Fighter Aircraft (AMCA)
- Space Grade Solar Panels for Satellites
- Li-ion Batteries and cells for Space applications.
- BHEL manufactured batteries for lander and propulsion module, Titanium propellant tank and friction welded bimetallic adaptors were part of the Chandrayaan-3 launched in July 2023

E. Transportation:

- In the Rail transportation segment, significant share of Indian Railway's rolling stock is equipped with BHEL's propulsion equipment.
- BHEL led consortium (only fully Indian consortium) executing order for supply and maintenance of 80 nos. sleeper version of "Vande Bharat" Trainsets in Manufacturing-cum-Maintenance Agreement (MCMA) model for 35 years.

F. Transmission

- BHEL undertakes turnkey projects from concept to commissioning for EHV (Extra High Voltage) Substations, HVDC Converter Stations and is one of the largest manufacturers of HV transformers in the country
- In the Transmission segment, BHEL has executed 6 out of 9 nos. LCC HVDC projects in India. BHEL had partnership with Global OEMs in HVDC and has established manufacturing facilities for HVDC products up to 800 kV, including HVDC converter transformers and thyristor valves.
- Above capability and competency is essential to achieve the national mission to meet the targeted RE (Renewable Energy) capacity of 500GW by 2030



CONFIDENTIAL



केन्द्रीय सतर्कता आयोग
CENTRAL VIGILANCE COMMISSION

सतर्कता भवन, जी.पी.ओ. कॉम्प्लेक्स,
ब्लॉक-ए, आई.एन.ए., नई दिल्ली-110023
Satarkta Bhawan, G.P.O. Complex,
Block A, INA, New Delhi-110023

सं./No. 022/HV/004/543610

दिनांक / Dated 31.03.2023

Office Memorandum

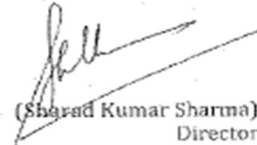
Sub: Intensive Examination on "Work Order for the Civil & Structural work for BHEL Tower (Package-1) at Plot No. 25, Sec 16A, Noida (UP)".

CVO, BHEL may refer to their letter No. AA:VIG:3080 dated 23.02.2023 on the subject cited above.

2. The Commission has perused the proposal to fix the responsibility of the concerned officials and submitting the case for FSA alongwith the comments of administrative authority thereon. Considering the facts of the case, the Commission in agreement with Disciplinary Authority and CVO, BHEL advises initiation of minor penalty proceedings against two Officials.

- I) Sh. Ranjan Yadav, the then DGM now SDGM.
- II) Sh. B.K. Singh, the then AGM now GM, PS-PEM.

3. Further, the Commission advises 'No Action' against Ms. Meenakshi Singh, Sr. Engg., the then Engineer (HR-GAX).


(Sharad Kumar Sharma)
Director

Bharat Heavy Electricals Ltd.
(Sh. Shiv Pal Singh, CVO)
Bhel House, Siri Fort,
New Delhi, 110049

ANNEXURE-B



CORPORATE VIGILANCE DEPARTMENT

No.: AA:VIG:3080
Dated: 11th April, 2023

Subject: Intensive Examination on "Work Order for Civil & Structural work for BHEL Tower (Package-1) at Plot No. 25, Sector-16A, Noida (UP)"

Ref.: Noting dated 18.02.2023 providing comments of DA in the subject case

The Commission vide OM No. 022/HVI/004/543610 dated 31.03.2023 rendered the first stage advice of initiation of **minor penalty proceedings** against the following two officials:

- (i) Shri Rajan Yadav, Staff No. 3787184, SDGM, the then DGM (HR-GAX & ISMG)
- (ii) Shri BK Singh, Staff No. 1264192, presently, GM, HEP, Bhopal [the then AGM/Corp-Admin.]

A copy of CVC advice is enclosed for further necessary action.

Shw
(Shiv Pal Singh, IFS)
Chief Vigilance Officer

Encl: As above

Director (Power & HR-Addl. Charge)

221975/2022/CO-VIG

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CORPORATE VIGILANCE DEPARTMENT

No: AA:VIG:3080

Dated: 23rd December, 2022

Subject: Intensive Examination of Civil & Structural work of BHEL Tower (Package -1) at Plot No. 25, Sector-16 A, NOIDA

CTE Wing of Central Vigilance Commission conducted an intensive examination of Civil & Structural work of BHEL Tower during 22-29.10.2020 and raised 19 paras in its report. Based on the inputs provided by the Management, reply of all the paras were submitted to the Commission. The Commission settled 12 paras and advised detailed investigation against 07 paras.

2.0 A detailed investigation in the matter was conducted through a Committee consisting civil experts and officers from vigilance. Committee vide its report dated 05.08.2022 concluded that out of a total of 135 items in the BOQ (Rs.129.72 Crs), 37 items were based on Market Rate (MR) analysis amounting to 50.41% of total estimate. The MR analysis was done either on the basis of a single quote or without any quote. Adequate documentation (i.e., more than one quote, proper rate analysis etc.) is not available in tender file.

3.0 Detailed report on the findings of the committee in respect of 7 paras was shared with the Commission. The Commission vide letter dated 24th / 30th November 2022 (copy enclosed) forwarded its observations that the rate analysis in estimate was not done with due care and there was oversight / laxity in preparation of estimate. The Commission further advised issuance of suitable advisory for more precautions and detailing during preparation of estimates.

4.0 In view of the above, it is advised that instructions, in the form of a circular, that estimates should be prepared keeping in view the elements mentioned under Purchase Policy / Works Policy etc. with proper documentation, may be issued.

A copy of circular issued in this regard may be forwarded to Corporate Vigilance so that the same may be submitted to the Commission.

Shiv Pal Singh
(Shiv Pal Singh)
Chief Vigilance Officer

Director (Power) & Director (HR)- additional charge



भारत हेवी इलेक्ट्रिकल्स लिमिटेड Bharat Heavy Electricals Limited

From : Executive Director (HR), BHEL, Corporate Office, New Delhi

To : Heads of Units,
BHEL, HEP-Bhopal/ TP-Jhansi/ (HEEP & CFFP)-Haridwar/ HPBP-Tiruchy/
BAP-Ranipet/ HPEP-Hyderabad/ Corporate R&D, Hyderabad/ EDN-
Bangalore/ SBD-Bangalore/ ISG-Bangalore/ HERP-Varanasi/ HPVP-
Visakhapatnam/ FSIP-Jagdishpur/ CFP-Rudrapur/ IVP-Goindwal/ PPPU-
Thirumayam/ EMRP-Mumbai/ Industry Sector & International Operations /
ROD (HQ)/ TBG/ Power Sector (HQ, PSBG-I & PSBG-II)/ PS-SSBG & TS,
Noida/ PS-PEM, Noida / PS-NR, Noida / PS-SR, Chennai/ PS-ER, Kolkata/
PS-WR, Nagpur/ Corporate Office

Ref. No. : AA/HR/IR/481

Date: January 16, 2023

CORPORATE HUMAN RESOURCE CIRCULAR NO. 002/IRX/2023

Sub: Compliance with regard to provisions of Purchase/Works Policy

Instances have been brought to our notice in respect of tenders issued by different departments, especially with regard to Civil & Structural works specifying that while estimating the tender value, market rate analysis is not being done properly and estimates are prepared based on single quote or without any quote.

It is reported that adequate documentation is not available in tender files and due care and diligence has not been exercised while doing the rate analysis for the estimates.

In view of the above, it is advised that estimates in tenders should be prepared bearing in mind the elements mentioned under Purchase/ Works Policy along with proper documentation and detailing, so as to avoid lapses and adverse observations from various agencies.

This may please be brought to the notice of all concerned.

[Signature]
16/1/2023

(M Isadore)

Distribution:

1. All Heads of HR
2. GM (SS & P)
3. GM & Head (SS & P)

पंजीकृत कार्यालय : बीएचईएल हाउस, सीरी फोर्ट, नई दिल्ली-110049, भारत फोन : 66337000, फैक्स : 011-26493021
Regd. Office : BHEL House, Siri Fort, New Delhi-110049, INDIA. Phone : 66337000, Fax : 011-26493021

ANNEXURE-C

PENDING CAG AUDIT PARA

S. No.	Gist of the Audit Para pending
1	<p>Loss of revenue to the tune of 6.36 crore due to delay in execution of an order for supply of transformers</p> <p>Bharat Heavy Electricals Limited (BHEL) supplied the transformers ordered by UP Power Transmission Corporation Limited, Lucknow with delays ranging between six and 26 weeks resulting in invocation of price reduction clause, thereby, impacting the revenue of BHEL.</p>
2	<p>Avoidable loss due to laxities in supply of Alternate Current Electrical Multiple Units.</p> <p>Bharat Heavy Electricals Limited suffered a loss of Rs. 13.69 Crore due to laxity in supply of complete sets of Alternate Current Electrical Multiple Unit.</p>
3	<p>Non- safeguarding of financial interest resulted in additional burden towards payment of Safeguard Duty.</p> <p>Electronics Division, Bengaluru unit of Bharat Heavy Electricals Limited did not take cognisance of the proposed changes in tax structure and the delivery schedules, resulting in additional liability of Rs. 11.58 Crore towards payment of Safeguard Duty for clearing of imports.</p>
4	<p>Loss due to non-performance under a contract (Keban-BG encashment Rs. 28.35 Crore)</p> <p>BHEL suffered a loss of Euro 3.83 million (Rs. 28.35 crore) due to failure to deliver performance as per the contractual provisions and resultant invocation of Bank Guarantee by the client (Keban).</p>
5	<p>Undue benefit to employees towards Late Night Snacks Allowance.</p> <p>Bharat Heavy Electricals Limited, Hyderabad extended undue benefit to its employees towards payment of Late Night Snacks Allowance to the tune of Rs. 16.69 Crore, in violation of the guidelines of DPE as well as its own Personnel Policy.</p>
6	<p>Avoidable payment of customs duty and safeguard duty.</p> <p>Bharat Heavy Electricals Limited, Trichy unit did not obtain the amendments to the advance authorization for import of seamless carbon steel tubes in time and consequently made avoidable payment of customs duty (including safeguard duty) amounting to Rs. 5.71 Crore.</p>
7	<p>Irregular payment towards encashment of Half Pay Leave (HPL)/ Sick Leave (SL)/ Earned Leave (EL) as well as employer's share of EPF (Employees' Provident Fund) contribution on leave encashment.</p> <p>Audit observed that BHEL deviated from the DPE (Department of Public Enterprises) guidelines and made irregular payment of Rs. 36.86 Crore to their employees towards HPL/ SL/ EL encashment on superannuation over and above the ceiling of 300 days.</p>
8	<p>Irregular payment towards Performance Related Pay (PRP).</p> <p>Due to non-adherence to the DPE guidelines with respect to payment of performance related pay, the BHEL has made payment of Rs. 15 Crore.</p>
9	<p>Compliance of DPE Guidelines on Perquisites and allowances.</p> <p>DPE while issuing guidelines of pay revision stipulated therein a ceiling of 50% of basic pay on payments made to employee towards perquisites and allowances. Audit observed that BHEL incurred an excess expenditure of Rs. 359.55 Crore.</p>

C&AG AUDIT PARAS ON MATTERS RELATING TO BHEL

Sr. No.	Gist of the Audit Para pending	Date of Receiving	Action Taken by the Company to expedite the para	Present Status
CAG commercial Report of 2023				
1	Loss of revenue to the tune of 6.36 crore due to delay in execution of an order for supply of transformers	01.01.2024	Reply to the C&AG para submitted on 23.01.2024.	Under consideration with CAG office, New Delhi.
Chapter V of Report No. 14 of 2021 Para No. 5.1 (Year: 2020-21)				
2	Avoidable loss due to laxities in supply of Alternate Current Electrical Multiple Units. Bharat Heavy Electricals Limited suffered a loss of Rs. 13.69 Crore due to laxity in supply of complete sets of Alternate Current Electrical Multiple Unit.	Received on 01.10.2021	Replies/ATNs to the printed Para and vetting Remarks have been submitted to CAG. The latest replies to the vetting remarks were submitted on 19.10.2023.	MHI vide letter dated 28.02.2024, has intimated that The matter has been referred to COPU by C&AG.
Chapter V of Report No. 14 of 2021 Para No. 5.2 (Year: 2020-21)				
3	Non- safeguarding of financial interest resulted in additional burden towards payment of Safeguard Duty. Electronics Division, Bengaluru unit of Bharat Heavy Electricals Limited did not take cognisance of the proposed changes in tax structure and the delivery schedules, resulting in additional liability of Rs. 11.58 Crore towards payment of Safeguard Duty for clearing of imports.	Received on 10.06.2021	As per MHI letter dated 17.10.2024 para is settled and not to be perused further.	Para Settled
Chapter VI of Report No. 18 of 2020 Para No. 6.1 (Year: 2019-20)				
4	Loss due to non-performance under a contract (Keban-BG encashment Rs. 28.35 Crore) BHEL suffered a loss of Euro 3.83 million (Rs.	Received on 21.05.2021	Replies/ATNs to the printed Para and vetting remarks have been submitted to CAG. The latest replies to the vetting remarks were submitted on 19.10.2023.	MHI, vide letter dated 28.02.2024, has intimated that the matter has been referred to COPU by C&AG.

Sr. No.	Gist of the Audit Para pending	Date of Receiving	Action Taken by the Company to expedite the para	Present Status
	28.35 crore) due to failure to deliver performance as per the contractual provisions and resultant invocation of Bank Guarantee by the client (Keban).		MHI, vide letter dated 28.02.2024, has intimated that the matter has been referred to COPU by C&AG.	
Chapter IV of Report No. 13 of 2019 Para 4.1 (Year: 2018-19)				
5	Undue benefit to employees towards Late Night Snacks Allowance. Bharat Heavy Electricals Limited, Hyderabad extended undue benefit to its employees towards payment of Late Night Snacks Allowance to the tune of Rs. 16.69 Crore, in violation of the guidelines of DPE as well as its own Personnel Policy.	Received on 10.10.2018	ATN was sent to C&AG on 11.08.2021 by the Ministry of Heavy Industries (MHI). Also, the concern raised in the Audit observation has been suitably addressed by BHEL, and its Action Taken Note (ATN) submitted to the MHI on 24.11.2021. In response to MHI communication, reply/ ATN has been submitted on 22.04.2022. Vide letter dated 10.06.2022, CAG requested MHI to forward the matter to COPU. Comments of BHEL submitted to MHI on 06.07.2022. Further, reply has been submitted on 31.08.2022 with respect to MHI letter dated 26.07.2022.	Matter referred to COPU by MHI vide letter dated 07.09.2022.
Chapter VI of Report No. 11 of 2018 Para 6.1 (Year: 2017-18)				
6	Avoidable payment of customs duty and safeguard duty. Bharat Heavy Electricals Limited, Trichy unit did not obtain the amendments to the advance authorization for import of seamless carbon steel tubes in time and consequently made avoidable payment of customs duty (including	Received on 12.01.2018	Reply/ATN submitted on 27.04.2018 and 04.06.2020 to the Ministry of Heavy Industries (MHI). Fresh ATNs submitted on 14.07.2022 and 09.08.2022 with respect to MHI letters dated 17.06.2022 and 18.07.2022 respectively.	DGFT, Chennai vide letter dated 30.07.2024, has intimated that a refund claim amounting to Rs 1.35 crore has been admitted. The remaining portion of the claim is currently under process.

Sr. No.	Gist of the Audit Para pending	Date of Receiving	Action Taken by the Company to expedite the para	Present Status
	safeguard duty) amounting to Rs. 5.71 Crore.			
Chapter XIII of Report No. 13 of 2014 Para 13.1 (Year: 2014-15)				
7	<p>Irregular payment towards encashment of Half Pay Leave (HPL)/ Sick Leave (SL)/ Earned Leave (EL) as well as employer's share of EPF (Employees' Provident Fund) contribution on leave encashment.</p> <p>Audit observed that BHEL deviated from the DPE (Department of Public Enterprises) guidelines and made irregular payment of Rs. 36.86 Crore to their employees towards HPL/ SL/ EL encashment on superannuation over and above the ceiling of 300 days.</p>	Received on 03.09.2014	Replies/ATNs to the para and subsequent rejoinders submitted from time to time. Last reply/ATN submitted to the Ministry of Heavy Industries (MHI) on 01.09.2021, with respect to MHI letter dated 25.08.2021.	Matter referred to COPU by MHI vide letter dated 15.11.2021.
Chapter XIII of Report No. 13 of 2014 Para 13.2 (Year: 2014-15)				
8	<p>Irregular payment towards Performance Related Pay (PRP).</p> <p>Due to non-adherence to the DPE guidelines with respect to payment of performance related pay, the BHEL has made payment of Rs. 15 Crore.</p>	Received on 03.09.2014	Replies/ATNs to the para and subsequent rejoinders submitted from time to time. Last reply/ATN submitted to the Ministry of Heavy Industries (MHI) on 24.12.2021.	<p>Under consideration with MAB-Delhi.</p> <p>[MAB: Member Audit Board]</p> <p>Reply to COPU query also submitted in Feb. 2023.</p>
Chapter XIV of Report No. 3 of 2011 Para 14.3 (Year: 2010-11)				
9	<p>Compliance of DPE Guidelines on Perquisites and allowances.</p> <p>DPE while issuing guidelines of pay revision stipulated therein a ceiling of 50% of basic pay on payments made to employee towards</p>	Received on 28.03.2011	ATNs clarifying correctness of payment and Conformance to the DPE Guidelines submitted from time to time. Last reply submitted to the Ministry of Heavy Industries (MHI) on 21.12.2020.	<p>Matter referred to COPU by MHI vide letter dated 31.08.2021.</p> <p>Reply to COPU query also submitted in Nov. 2022 and Feb. 2023.</p>

Sr. No.	Gist of the Audit Para pending	Date of Receiving	Action Taken by the Company to expedite the para	Present Status
	perquisites and allowances. Audit observed that BHEL incurred an excess expenditure of Rs. 359.55 Crore.			

APPENDIX I

COMMITTEE ON PUBLIC UNDERTAKINGS (2025-26)

MINUTES OF THE FIFTH SITTING OF THE COMMITTEE

The Committee sat on Friday, the 1st August, 2025 from 1500 hrs. to 1550 hrs. in Committee Room No. '1', Ground Floor, Extension to Parliament House Annexe, New Delhi.

PRESENT

Shri Baijayant Panda - **Chairperson**

MEMBERS

Lok Sabha

2. Shri Tariq Anwar
3. Shri Kaushalendra Kumar
4. Shri Mukesh Rajput
5. Shri Pratap Chandra Sarangi
6. Shri Prabhakar Reddy Vemireddy
7. Shri Lalji Verma

Rajya Sabha

8. Shri Neeraj Dangi
9. Dr. Bhagwat Karad
10. Shri Surendra Singh Nagar
11. Shri Arun Singh

SECRETARIAT

1. Shri Anjani Kumar - Joint Secretary
2. Smt. Mriganka Achal - Director
3. Shri Tenzin Gyaltsen - Deputy Secretary

REPRESENTATIVES FROM DEPARTMENT OF ATOMIC ENERGY (DAE)

1. Dr. Ajit Kumar Mohanty - CMD
2. Shri Karthigeyan P. Subramanyam - Joint Secretary
3. Smt. Anjali Sinha - Joint Secretary

PART-A

2. The Hon'ble Chairperson briefly apprised the Members about the draft Report on Action Taken by the Government on the Observations/Recommendations contained in the Second Report of the Committee on Public Undertakings (18th Lok Sabha) on Bharat Heavy Electricals Limited (BHEL). The Committee then considered and adopted the report, without any changes/modifications.

3. The Committee authorized the Chairperson to finalize the draft Report on the basis of factual verification as suggested by the concerned CPSU and Ministry/Department and present the Report during the ongoing session of Parliament.

4. XXXX XXXX XXXX XXXX

Then, the Committee took up the next agenda of the sitting

APPENDIX II

(Vide para 4 of the Introduction)

ANALYSIS OF THE ACTION TAKEN BY THE GOVERNMENT ON THE OBSERVATIONS/RECOMMENDATIONS CONTAINED IN THE REPORT OF COMMITTEE ON PUBLIC UNDERTAKINGS ON BHARAT HEAVY ELECTRICALS LIMITED (BHEL)

I.	Total number of recommendations	44
II.	Observations/Recommendations which have been accepted by the Government: Sl. Nos 1, 2, 3, 4, 5, 8, 10, 11, 13, 14, 15, 16, 17, 18-21, 22, 25, 26, 27, 28, 29, 30, 31-33, 36, 37, 38, 39, 40, 41, 42, 43 and 44. Percentage of total:	36 81.82%
III.	Observations/Recommendations which the Committee do not desire to pursue in view of the Government's replies: Sl. Nos. 34 and 35. Percentage of total:	 04.55%
IV.	Observations/Recommendations in respect of which replies of Government had not been accepted by the Committee and which require reiteration: Sl. No. 9. Percentage of total:	 02.27%
V.	Observations/Recommendations in respect of which the Government has furnished interim replies and final replies are still awaited: Sl. Nos. 6, 7, 12, 23 and 24. Percentage of total:	 11.36%