



Annual Report 2017-18

- Heavy Engineering
- Machine Tools
- Heavy Electricals
- Automobiles
- Public Sector Enterprises



Government of India
Ministry of Heavy Industries
and Public Enterprises



सत्यमेव जयते

Annual Report

2017-18

Ministry of Heavy Industries and Public Enterprises

Government of India

Udyog Bhawan, New Delhi-110 011

Website : dhi.nic.in / dpe.nic.in

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Overview of the Ministry of Heavy Industries and Public Enterprises

1.1 The Ministry of Heavy Industries and Public Enterprises, comprising of the Department of Heavy Industry and the Department of Public Enterprises, functions under the charge of Cabinet Minister (Heavy Industries and Public Enterprises). There is a Minister of State for Heavy Industries and Public Enterprises. The Ministry promotes the development and growth of three sectors i.e. Capital Goods, Auto and Heavy Electrical Equipments in the country; administers 31 Central Public Sector Enterprises (CPSEs); 5 Autonomous Organizations and frames policy guidelines for Central Public Sector Enterprises (CPSEs) and overall administration of CPSEs.

A. Department of Heavy Industry (DHI)

1.2 The allocation of work of the Department of Heavy Industry entails promoting engineering industry viz. machine tools, heavy electrical, industrial machinery and auto industry and administration of 31 operating CPSEs and 5 autonomous organizations. The list of CPSEs and their current status is given in the Annexure-1(A). The CPSEs under the Department are engaged in manufacture and in consultancy and contracting services. The CPSEs under the Department manufacture a wide range of products viz; Boilers, Gas/Steam/Hydro turbines, Industrial machinery, turbo

generators, three wheelers, tractors and consumer products such as Paper, Salt and Watches. The Ministry also looks after the machine building industry and caters to the requirements of equipments for basic industries such as steel, mining, non-ferrous metals, power, fertilizers, refineries, petrochemicals, shipping, paper, cement, sugar, etc. The Department supports the development of a range of intermediate engineering products like castings, forgings, diesel engines, industrial gears and gear boxes. The Department also administers:

- i. Automotive Research Association of India (ARAI), set up in 1966, and ARAI – Forging Industry Division, (ARAI-FID) Pune, Maharashtra, set up in 2006.
- ii. Fluid Control Research Institute (FCRI), Palakkad, Kerala set up in July 1987, to cater to the needs of the flow industry for calibration,
- iii. NATRIP Implementation Society (NATIS), set up in July 2005, for guiding the implementation of the National Automotive Testing and R & D Infrastructure Project (NATRIP),
- iv. National Automotive Board (NAB) set up in 2012 to steer, coordinate and synergize all efforts of the government in the automotive sector.

- v. Central Manufacturing Technology Institute (CMTI), an R&D organization focusing in the country. The administrative control of CMTI is transferred from Department of Industrial Policy & Promotion to DHI in January 2017.

Allocation of Business for the Department of Heavy Industry is given at **Annexure-I**.

- 1.3** The Department maintains a constant dialogue with various Industry Associations and encourages initiatives for the growth of industry. The Department also assists the industry in achieving their growth plans through support for policy initiatives, suitable interventions for restructuring of tariffs and trade, promotion of technological collaboration and up-gradation, and research & development activities etc.

- 1.4** The Department of Heavy Industry is headed by a Secretary to the Government of India who is assisted by three Joint Secretaries, Economic Adviser, Directors/ Deputy Secretaries and a Technical Wing. The Department is also supported by Integrated Finance Wing headed by the Additional Secretary and Financial Adviser. The overall sanctioned strength of the Department (as on 01.01.2018) is 233. The organogram chart of the Department is at **Annexure-II**.

B Department of Public Enterprises (DPE)

- 1.5** In their 52nd Report, the Estimates Committee of 3rd Lok Sabha (1962-67) stressed the need for setting up a centralized coordinating unit, which could also make continuous appraisal of the performance of public enterprises. This led to the setting up of the

Bureau of Public Enterprises (BPE) in 1965 in the Ministry of Finance. Subsequently, as a result of the reorganization of the Ministries/ Departments of the Union Government in September, 1985, BPE was made part of the Ministry of Industry. In May, 1990, BPE was made a full-fledged Department known as the Department of Public Enterprises (DPE). Presently, it is part of the Ministry of Heavy Industries & Public Enterprises.

- 1.6** The Department of Public Enterprises is the nodal department for all the Central Public Sector Enterprises (CPSEs) and formulates policy pertaining to CPSEs. It lays down, in particular, policy guidelines on performance improvement and evaluation, autonomy and financial delegation and personnel management in CPSEs. It furthermore collects and maintains information in the form of a Public Enterprises Survey on several areas in respect of CPSEs.

- 1.7** In fulfilling its role, the Department Coordinates with other Ministries, CPSEs and concerned organizations. As per the Allocation of Business Rules of the Government, the following subjects have been allocated to the DPE:-

- Residual work relating to erstwhile Bureau of Public Enterprises including Industrial Management Pool.
- Coordination of matters of general policy affecting all Public Sector Enterprises.
- Evaluation and monitoring the performance of Public Sector Enterprises, including the

Memorandum of Understanding mechanism.

- Matters relating to Permanent Machinery of Arbitration for the Public Sector Enterprises.
- Counseling, training and rehabilitation of employees in Central Public Sector undertakings under Voluntary Retirement Scheme.
- Review of capital projects and expenditure in Central Public Sector Enterprises.
- Measures aimed at improving performance of Central Public Sector Enterprises and other capacity building initiatives of Public Sector Enterprises.

- Rendering advice relating to revival, restructuring or closure of Public Sector Enterprises including the mechanisms there for.
- Matters relating to Standing Conference of Public Enterprises.
- Matters relating to International Center for Public Enterprises.
- Categorisation of Central Public Sector Enterprises including conferring 'Ratna' status.
- Survey of Public Enterprises.

1.8 Department of Public Enterprises is headed by a Secretary to the Government of India who is assisted by an establishment with an overall sanctioned strength of 119 officers/ personnel. The organizational structure of DPE is at **Annex-1**.





Department of Heavy Industry (DHI)

Vision

To have a globally competitive, growth oriented and profitable Heavy Industry; and self- reliant and growth oriented CPSEs under the Department.

Mission

To facilitate Auto, Heavy Electrical and Capital Goods Sectors to be globally competitive, growth oriented and profitable and to provide all necessary support to the CPSEs in order to improve their overall performance.

1.1 Performance of Industry

1.1.1 Government has taken numerous steps to boost industrial development, capital formation and employment generation in the country. These, inter-alia, include, 'Make in India', 'Startup India' initiatives and 'Ease of Doing Business'. Steps taken to improve ease of doing business include simplification and rationalization of existing rules and introduction of information technology, setting up of an Investor Facilitation Cell, launch of e-biz Portal and liberalizing policy for industrial license for defence industries. Foreign Direct Investment (FDI) policy and procedures have been simplified and liberalized progressively. Government

has taken up a programme of building pentagon of industrial corridors across the country with an objective to provide developed land and quality infrastructure for development of industrial townships.

1.1.2 As per the National Accounts statistics, the Gross Value Added (GVA) in the industrial sector has recorded growth of 5.6 per cent in 2016-17. Within industry, the Gross Value Added (GVA) in the manufacturing sector has recorded growth of 7.9 per cent in 2016-17 (Table-1). During the first two quarters of 2017-18, GVA in manufacturing has registered growth rate of 1.2 per cent and 7.0 per cent respectively.

Table 1: Growth Rate of GVA at basic price (calculated at Constant Prices) (2011-12) prices (in per cent)

Industry	2012-13	2013-14	2014-15	2015-16	2016-17 (PE)
I. Agriculture	1.5	5.6	-0.2	0.7	4.9
II. Industry	3.3	3.8	7.5	8.8	5.6
Mining & quarrying	0.6	0.2	11.7	10.5	1.8
Manufacturing	5.5	5.0	8.3	10.8	7.9
Electricity, gas & water supply	2.7	4.2	7.1	5.0	7.2
Construction	0.3	2.7	4.7	5.0	1.7
III. Services	8.3	7.7	9.7	9.7	7.7
Trade, hotels, transport, communication & services related to broadcasting	9.8	6.5	9.0	10.5	7.8
Financial Services, real estate & professional services	9.7	11.2	11.1	10.8	5.7
Public administration, defence and other services	4.3	3.8	8.1	6.9	11.3
GVA at basic price	5.4	6.1	7.2	7.9	6.6
PE: Provisional Estimates					

Source: Central Statistics Office.

1.1.3 Industrial performance measured in terms of Index of Industrial Production (IIP), with base year 2011-12, registered growth of 2.5 per cent in the first seven months of the current year i.e April-October, 2017-18. During this period, the Manufacturing sector grew by 2.1 per cent. Mining and electricity sectors recorded growth of 3.4 per cent and 5.3 per cent respectively.

1.1.4 As per the use-based classification of IIP, in 2017-18 (April-October), the Consumer non-durables have shown consistency and have registered a growth of 7.5 per cent. Growth rate in the index of Primary Goods has witnessed a decline at 3.5 per cent during this period mainly due to suboptimal performance of Mining Sector and Fertilizers industry. Poor performance of Cement sector has mainly been responsible for slower growth rate of infrastructure/ construction goods in 2017-18 (April-

October), as this sector recorded a growth of 2.5 per cent as compared to 3.9 per cent in 2016-17. The performance of Capital goods has been dismal mainly due to the impact of destocking after announcement of GST in the first quarter of 2017-18.

1.1.5 The overall growth of Capital Goods during the current financial year has been 0.8 per cent; however during the second quarter there has been significant improvement in the performance of this sector which recorded a growth of 5.2 per cent, 8.2 per cent and 6.8 per cent in the months of August, September and October respectively. In particular, items such as Agriculture Tractors, Commercial Vehicles, Transformers and Fabricated Metal Products have performed remarkably well which also indicates a revival of manufacturing. The growth of IIP (Use-based classification) during 2017-18 is given in Table-2.

Table 2: Growth Rate of Index of Industrial production (IIP) (in %)

(Base: 2011-12)					
Sector/Groups	Weight	2015-16	2016-17	Apr-Oct	Apr-Oct
				2016-17	2017-18
1	2	3	4	5	6
Sector classification					
Mining	14.3725	4.3	5.3	2.7	3.4
Manufacturing	77.6332	2.8	4.4	5.9	2.1
Electricity	7.9943	5.7	5.8	5.9	5.3
Overall IIP	100.00	3.3	4.6	5.5	2.5
Use Based classification					
Primary goods	34.0486	5.0	4.9	5.1	3.5
Capital goods	8.2230	3.0	3.2	4.6	0.8
Intermediate goods	17.2215	1.5	3.3	3.4	0.2
Infrastructure/ construction goods	12.3384	2.8	3.9	5.2	2.5
Consumer durables	12.8393	3.4	2.9	6.0	-1.9
Consumer non-durables	15.3292	2.6	7.9	9.5	7.5
Overall IIP	100.00	3.3	4.6	5.5	2.5

Source: Central Statistics Office.

1.2 The Department of Heavy Industry has also been allocated the following subjects/Industrial Sectors:

- (a) Heavy Engineering Equipment and Machine Tools Industry
- (b) Heavy Electrical Engineering Industry
- (c) Automotive Sector, including Tractors and Earth Moving Equipment.

1.3 19 Industrial Sub-sectors under the 3 brand sector in section 1.2 are as under:-

- (i) Boilers
- (ii) Cement Machinery
- (iii) Dairy Machinery
- (iv) Electrical Furnace
- (v) Freight Containers
- (vi) Material Handling Equipment
- (vii) Metallurgical Machinery
- (viii) Mining Machinery
- (ix) Machine Tools
- (x) Oil Field Equipment
- (xi) Printing Machinery
- (xii) Pulp and Paper Machinery
- (xiii) Rubber Machinery
- (xiv) Switchgear and Control Gear
- (xv) Shunting Locomotive
- (xvi) Sugar Machinery
- (xvii) Turbines & Generator Set
- (xviii) Transformers
- (xix) Textile Machinery

1.4 CPSEs under the Department of Heavy Industry:

1.4.1 There are 31 CPSEs under the Department engaged in manufacturing, consultancy and contracting services.

1.4.2 The total investment (Gross Block) in the 22 operating out of 31 CPSEs under the Department was ₹ 9564.85 crore, as on 31.3.2017, as per details given at **Annexure-III**. The total number of employees in these CPSEs is 64698. The number of SC, ST, OBC & PWDs employees is 11961, 7826, 21591,1099 respectively as per details at **Annexure-IV**.

1.4.3 Out of the 22 operating CPSEs, 11 are making profit and the remaining 11 are incurring losses. However, on an aggregate basis, 22 CPSEs of DHI show a net profit before tax of (-) ₹ 357.62 crore in 2016-17. The target for 2017-18 is as under:

(₹ crore)

	2016-17 (Actual)	2017-18 (Target)
Production	34539.53	34290.91
Profit (+)/Loss(-)	(-) 357.62	(-)51.16

(CPSE-wise details of production, profit/loss are enclosed at **Annexure-V & VI** respectively).

1.4.4 The loss making enterprises suffer from a number of factors including poor order book, shortage of working capital, surplus manpower and obsolete plant and machinery, difficulty to adjust to changing market products/technology/competition, besides increase in the cost of inputs etc. Several of these loss making CPSEs have problems of large work force and huge

overheads, far above the industry norms. In this context, salary/wage bill and social overheads as percentage of turnover are given at **Annexure-VII**.

- 1.4.5 As on 30.09.2017, the order book of CPSEs, under the Department stands at ₹ 113714.65 crore. (**Annexure -VIII**). Major exporting CPSE is BHEL, and details of export performance of CPSEs under DHI are given at **Annexure-IX**. Details of Government equity, net worth and accumulated profit / loss of these CPSEs are given at **Annexure X**. Dividend Paid by the CPSEs under the Department of Heavy Industry for the year 2016-17 are:

BHEL	₹ 465.00 crore
B&R	₹ 4.87 crore
BBJ	₹ 6.36 crore
REIL	₹ 2.49 crore

1.5 Steps taken by DHI for revival/restructuring/Disinvestment/closure of CPSEs:

- 1.5.1 There are 31 CPSEs under the Department of Heavy Industry engaged in manufacturing, consultancy and contracting services. DHI has been undertaking appraisals of each loss making CPSE to assess the prospects of revival. As a part of this exercise, the loss making CPSEs having the potential of turnaround are revived and those found chronically sick are disinvested or closed down after payment of due compensation to employees. Steps taken by DHI so far in this regard are as follows:
- 1.5.2 The Government, on 22.12.2015, approved closure of Tungabhadra Steel Products Ltd.,

Hospet, Karnataka by offering an attractive VRS/VSS for their employees and disposal of movable & immovable assets and liquidation of outstanding liabilities. All its employees have availed VRS and been relieved and disposal of movable assets has been completed. Disposal of Immovable assets is underway.

- 1.5.3 The Government, on 6th January, 2016 approved closure of HMT Watches Ltd., HMT Chinar Watches Ltd., and HMT Bearing Ltd. by offering of attractive VRS/VSS package to their employees and disposal of their movable and immovable properties as per the Govt. Policy. Accordingly, the action for closure of these companies is in progress.
- 1.5.4 The Government, on 27th October, 2016 approved closure of Tractor Unit of HMT Ltd. at Pinjore by offering of attractive VRS/VSS package to their employees.
- 1.5.5 The Government, on 28.09.2016, approved closure of Hindustan Cables Ltd. by offering attractive VRS/VSS package to their employees and disposal of their movable and immovable properties as per the Govt. Policy. Accordingly, the action for closure of the company is in progress.
- 1.5.6 The Government, on 30.11.2016, has approved closure of Kota Unit of Instrumentation Ltd. and transfer of Palakkad Unit of Instrumentation Ltd. to Government of Kerala. In this connection, the Government has approved attractive VRS/VSS package at 2007 notional pay scale to employees of Kota Unit of Instrumentation Ltd. including the payment of pending salary, statutory dues etc.

1.5.7 The Government, on 21st September, 2016 has approved the proposal for enabling Richardson & Cruddas Co, Ltd. to come out of the purview of Board for Industrial and Financial Reconstruction (BIFR). For this purpose, Government approved the conversion into equity of the Government of India loan of ₹ 101.78 crore given to the Company, along with the interest amounting to ₹ 424.81 crore accrued on this loan. The Government further approved in principle, the strategic disinvestment of Nagpur and Chennai units of this Company and shifting of operations from Mumbai land to other locations of Company. However, the Company's land at Mumbai will be converted from lease hold to "Occupation Class II" so as to enable the company to identify the best use of this piece of land for optimal utilization as per Government guidelines.

1.5.8 The Government, on 27th October, 2016 approved the following:

- 100% disinvestment of Bridge & Roof Co. Ltd., Scooters India Ltd. and Bharat Pumps & Compressors Ltd.
- Disinvestment of 100% shareholding of the concerned CPSE in Hindustan Newsprints Ltd. to strategic buyer through two stage auction process.
- Units of Cement Corporation of India to be disinvested where it is legally permissible to strategic buyer through two stage auction process.
- Merger of Engineering Projects (India) Ltd. with similarly placed CPSEs.

Necessary action for implementation of above Government's decision dated 27th October, 2016 is underway in this Department.

1.6 Autonomy to CPSEs/Navratnas and Miniratnas

BHEL is a Maharatna CPSE in the Department. Maharatna CPSEs have been provided greater autonomy in respect of capital expenditure, formation of strategic alliance and formulation of HRD policies etc. Besides BHEL, a Maharatna Company, seven CPSEs under DHI namely BPCL, B&R, EPI, HMT (I), HNL, HPC, and REIL have been categorized as Miniratnas. Miniratna CPSEs have also been empowered with certain enhanced delegation of powers.

1.7 Memorandum of Understanding (MOU)

With a view to giving greater autonomy to the public sector enterprises and make them accountable for achieving their objectives, all the CPSEs under the Department signed MOUs with Government of India/ Holding companies for the year 2017-18.

1.8 National Automotive Testing and R&D Infrastructure Project (NATRIP)

National Automotive Testing and R&D Infrastructure Project (NATRIP) is fully Government of India funded project for setting up of state of the art automotive testing, homologation and R&D infrastructure facilities in India. The project aims at putting in place automotive testing infrastructure that will meet safety and emission regulation standard and also extend India's automotive R&D capabilities with objective to:

- a) Creating critically needed automotive testing infrastructure to enable the Govt in ushering in global vehicular safety, emission and performance standards.
- b) Deepening manufacturing in India, promoting larger value addition leading to significantly enhancing the employment potential/opportunities and facilitating convergence of India's strengths in IT and electronics with state-of-art automotive engineering.
- c) Enhancing India's abysmally low global outreach in this sector by de-bottlenecking exports, and
- d) Removing the crippling absence of basic product testing, validation and development infrastructure for automotive industry.

1.8.1 Scheme for North Eastern Region (NPPC, CCI & AYCL)

Under the Department of Heavy Industry, the following CPSEs/Units are situated in the North Eastern Region:-

- (i) Hindustan Paper Corporation Ltd. (HPC) (Nagaon & Cachar Paper Mills), Assam.
- (ii) Nagaland Pulp & Paper Company Ltd. (NPPC), Nagaland.
- (iii) Cement Corporation of India Ltd. (CCI), (Bokajan Unit), Assam.
- (iv) Andrew Yule & Company Ltd. (AYCL), (Tea Gardens), Assam.

These CPSEs/Units are engaged in the manufacturing of Paper, Cement and Tea. As per the policy of the Government, 10% of the mandatory budget of the Department is being allocated for the development of North Eastern.

1.9 Audit observations of Comptroller & Auditor General of India (CAG)

As per the requirement stipulated by the CAG, a summary of important audit observations of CAG of India on the working of the Department of Heavy Industry is given in **Annexure-XI**.

This Department administers 31 Public Sector Enterprises (CPSEs). These CPSEs have played a vital role in the industrial development of the country. Ranging from heavy electrical engineering equipment, the CPSEs cater to diverse sectors of the economy including civil construction, heavy machinery, precision tools, consultancy, tea plantation etc. A brief write up on the CPSEs under the Department is given below.

2.1 Andrew Yule & Co Ltd. (AYCL)

Andrew Yule & Co Ltd. (AYCL) has achieved production worth ₹ 263.48 crore against the MoU target of ₹ 313.28 crore. Sales worth ₹ 237.40 crore against the target of ₹ 283.08 crore and Net Profit (PBT) of ₹ 30.96 crore against the MoU target of ₹ 44.28 crore upto November, 2017. AYCL has achieved 84.10% of the Production Target and 83.87% of the Sales Target up to the month of November, 2017. The order book position is ₹ 110.14 crore up to the month of November, 2017 against the target of ₹ 104.58 crore. The CPSE has registered a negative growth in production and PBT over the corresponding period in the previous year.

2.2 Hooghly Printing Company Ltd.

Hooghly Printing Company Ltd. (HPCL) is a profit making wholly-owned Subsidiary

of Andrew Yule & Co. Ltd (A Govt. of India Enterprise). The Companies engaged in printing business involving printing assignments like multi coloured, newsletter, leaflets, folders, calendars, books etc. The production and Net Profit (PBT) of the Company up to November, 2017 are worth ₹ 6.07 crore and ₹ (-) 1.34 crore respectively against the corresponding production target of ₹ 6.60 crore and the Net Profit target of ₹ (-) 0.83 crore. There has been a positive/negative growth of (-) 23.79% in production compared to that achieved during the corresponding period in the previous fiscal.

2.3 Bharat Heavy Electricals Ltd. (BHEL)

Bharat Heavy Electricals Limited (BHEL), is a celebration of India's spectacular success in achieving self-sufficiency in the indigenous manufacture of heavy electrical equipment. The original mandate given to the company by the founding fathers of the Nation has been more than realized. The company is an integrated heavy and advanced class equipment manufacturer engaged in design, engineering, manufacture, construction, testing, commissioning and servicing of a wide range of products and services for the core sectors of the economy, viz. Power, Transmission, Industry, Transportation, Renewable Energy, Water management,

Oil & Gas and Defence & Aerospace with a profile of over 180 products meeting the needs of these sectors.



Shri Anant Geete, Hon'ble Union Minister for HI&PE. Shri Babul Supriyo, Hon'ble MoS for HI&PE and Shri Girish Shankar, the then Secretary, DHI with CMD, BHEL at the BHEL Day 2017 celebration

The company has a widespread network of 17 manufacturing units, 2 repair units, 4 regional offices, 8 service centres, 1 subsidiary, 3 overseas offices, 6 joint ventures, 15 regional marketing centres.

The ongoing project execution at more than 150 project sites across India and abroad corroborate the immense scale and size of its operations.



BHEL Directors with Dr. Asha Ram Sihag, Secretary DHI

BHEL is one of the few companies in the world having the capability to manufacture entire range of power plant equipment and has proven turnkey

capabilities for executing power projects from concept-to-commissioning. Till date, BHEL has supplied power plant equipment of around 180 GW, to domestic and international market.

The power sector of the company addresses business of thermal, gas, hydro, nuclear and solar power plants. BHEL has the experience of supplying and commissioning of steam turbines, generators, boilers and their auxiliaries upto 800 MW with capability to supply equipments upto 1000 MW sets.



800 MW LP rotor under assembly at BHEL Hardwar

BHEL has been executing projects on EPC basis including supercritical sets of 660/ 700/ 800 MW ratings.



Turbine hall of BHEL's first ever 700 MW supercritical unit at Bellary STPS, Karnataka

In the Industry Segment, diversification in Transmission, Transportation, Defence, Aerospace, Renewables and Water Business is the strategy adopted to maintain a balanced portfolio of offerings.



World's first + 800 kV pre-engineered Indoor DC hall at NE-Agra HVDC terminal

Over the years, BHEL has made significant contributions in Defence sector as supplier of strategic equipment, which includes Super Rapid Gun Mount (SRGM) and Integrated Platform Management Systems (IPMS) for naval Ships, Thermo pressed components, Heat exchangers for Light Combat Aircraft (LCA), Turret castings for T-72 tanks, castings for ships and simulators, etc. Also, BHEL is actively pursuing the large opportunities in Field Guns, Submarines, etc, opening up with the **'Make in India'** initiatives in the Defence Sector.

The greatest strength of BHEL is its highly skilled and committed workforce of around 39,000 employees, who have been the cornerstones of BHEL's journey towards engineering excellence. BHEL has also undertaken various social initiatives aimed at Community Development, Health & Hygiene, Education, Environment Protection,

Disaster Management, and Talent up gradation/Skill development.

To harness emerging opportunities and regain growth momentum, a strong resolve has been made towards journey of 'Creating BHEL of Tomorrow', a BHEL that is 'Responsive, Robust and Rising' to the needs of its stakeholders.

Performance Highlights

BHEL recorded a turnover of ₹ 28,840 Crore in the year 2016-17, a growth of 10.7% over the previous year - after reversing the declining trend during the last three years.

Value addition for the year 2016-17 stood at ₹ 10,111 Crore representing 37.97% of Gross Turnover, Net of Excise. The value added per employee was ₹ 25.39 Lakh in the year 2016-17.

BHEL turned around in the year 2016-17 by making Profit Before Tax of ₹ 628 Crore against loss of ₹ 1164 Crore (Ind-AS restated) in the year 2015-16. Profit After Tax stood at ₹ 496 Crore in the year 2016-17 against loss of ₹ 710 Crore (Ind-AS restated) in the year 2015-16. The Total Comprehensive Income (TCI) for the year 2016-17 is ₹ 467 Crore.

2017 marks the 25th year of BHEL being a public listed company and it has been a very rewarding journey for the shareholders. BHEL has paid total equity dividend of 79% for fiscal 2016-17, which is the highest in last 3 years. In value terms, the total dividend paid for fiscal 2016-17 amounts to ₹ 465 Crore (inclusive of dividend distribution tax). Continuing its endeavour of consistently rewarding investors, the company has also recommended issue of bonus shares in the ratio of 1 bonus share for every 2 existing shares.



CMD, BHEL presenting Final Dividend cheque for FY 2016-17 to Shri Anant Geete, Hon'ble Union Minister for HI&PE

Market Scenario and Order Booking

Though renewable energy is the fastest growing source of energy; Oil, gas, & coal together are expected to continue playing a major role for at least a few more decades.

BHEL secured orders worth ₹ 23,489 Crore during 2016-17 despite subdued business conditions in the power and infrastructure sectors coupled with intense competition in domestic and overseas market.

Major orders received in 2016-17

Power Sector

BHEL's Power Sector secured orders worth ₹ 7,261 Crore, for 3,622 MW of power projects in 2016-17. This includes orders for ₹ 2,686 Crore (a growth of 48% over the 2015-16) from Spares and Services Business, including R&M.

Major Orders received are:

- Largest-ever Lift Irrigation Scheme (LIS) orders for Palamuru Rangareddy LIS Stage 2 & 3 (9x145 MW+9x145 MW pump motor sets) for ₹ 1,051 Crore and ₹ 1,050 Crore respectively. This is the largest rating

of pump motor sets ordered for supply in India. With these orders, BHEL has secured a market share of 78% in the LIS segment during 2016-17.

- EPC order for 1x250 MW Rourkela II Expansion from NTPC-SAIL Power Company Private Limited (NSPCL) for ₹ 1,612 Crore.
- Orders for Boiler Modification for 1x800 MW APGENCO/ Vijaywada, 1x800 MW APPDCL/ Krishnapatnam, 1x800 MW TANGEDCO/ North Chennai Stg III, etc. towards meeting the revised environmental norms.

Industry Sector

BHEL Industry Sector bagged orders worth ₹ 6,181 Crore in 2016-17 for a wide variety of products & systems in Captive Power, Rail Transportation, Power Transmission, Oil & Gas, Renewable Energy & Water Business, Defence & Aerospace and other industrial products from different customers.

Major orders received during the year are:

- Ground mounted SPV Power plant orders for 131 MW including highest ever single order of 65 MW from Neyveli Lignite Corp. (NLC).
- 57.6 MLD Ultra Filtration Plant Package for sea water treatment from NTPC Tamilnadu Energy Co. Ltd., Vallur.
- Highest value order received from DLW, Varanasi for 326 nos. of Traction motor type IM4507 and 199 nos. Traction Alternator TA 9901.
- Highest value order received from RCF, Kapurthala for 94 sets Traction equipment for MEMU (without traction motor).

- Highest ever single order of 3 nos. Super Rapid Gun Mount (SRGM) for Delhi Class Ships.
- Order in Aerospace sector for fabrication, assembly, testing & supply of Space Quality Lithium Ion Batteries from ISRO Satellite Centre.
- \pm 800 KV, 6000 MW HVDC terminals associated with HVDC Bipole link between Western region (Raigarh, Chhattisgarh) and Southern region (Pugalur, Tamil Nadu) - North Trichur (Kerala) from POWERGRID.
- More than 100 nos. High Voltage Power Transformers (approx. 13000 MVA) and 3400 nos. Medium Voltage Switchgears from various customers.

International Operations

Major orders received are:

- Largest ever export order valued over ₹ 10,000 Crore for setting up 2x660 MW Maitree Super Thermal Power Project in Bangladesh on turnkey basis from Bangladesh India Friendship Power Company (Pvt.) Limited (BIFPCL), a 50:50 JV company of NTPC, India and BPDB, Bangladesh.
- BHEL's scope of work in the project includes design, engineering, manufacture, supply, construction, erection, testing and commissioning of 2x660 MW thermal sets on turnkey basis. The scope also includes setting up of a jetty and a river-water intake system. In order to meet stringent environmental norms, BHEL shall also install a state-of-the-art FGD plant and Dry bottom ash handling system.

- Entry into four new countries
- Maiden orders from Benin & Togo for motors.
- Maiden order from Chile for Transformer bushing.
- Maiden order from Estonia for Electronic cards.

With the above orders, BHEL's overseas footprints expanded to 82 countries across the globe during 2016-17.

Major orders received during 2017-18 upto September 2017

(Total orders received ₹ 3617 Crore)

Power Sector

Power Sector booked orders worth ₹ 1,382 Crore upto September 2017.

- Secured change orders for Boiler Modification for 1X250 MW NSPCL/Rourkela, and 1X800 MW TANGEDCO/Uppur to meet the revised environmental norms.

Industry Sector

Bagged orders worth ₹ 2,222 Crore upto September 2017 for a wide variety of products & systems in Solar power, Rail Transportation, Defence & Aerospace, Power Transmission, Oil & Gas and other industrial products from different customers.

Major orders received are:

- Received a prestigious developmental order from Railway Board, Ministry of Railways for supply and AMC of 30 nos. of 6000 HP Electric Locomotives of type WAG-9H. The locomotives shall be equipped with

state-of-the-art IGBT based propulsion equipment.

- 939 nos. Traction motor type TM4907 from DMW, Patiala.
- 66 sets IGBT based Complete Propulsion System including AMC for 3 phase Electric Loco from CLW, Chittaranjan.
- 74 sets of 7775 KVA Transformer from CLW, Chittaranjan.
- 297 nos. Traction motor type 6FRA6068 from CLW, Chittaranjan.
- Supply and supervision of E&C of 60 MW STG from Kutch Chemical Industries Ltd., Gujarat.
- Supply of 60 MWp Solar Photovoltaic Modules for Uttar Pradesh and Andhra Pradesh from Energy Efficiency Services Ltd.
- 14 nos. Transformers from TATA Projects Ltd. (TPL).
- 2.5 MW Motor driven Recycle Gas Compressor from IOCL, Haldia.
- 3 nos. 200 MVA and 1 no. 160 MVA, 220 KV Auto Transformers from KSEB, Kerala.

International Operations

BHEL target markets of Africa and South East Asia, expected to be the future growth centers and would contribute a major share of BHEL exports growth in the coming years.

Major orders received till September 2017 include:

- Maiden order for 435 kW motor from M/s FIMA Germany (New product in existing market).

- Orders received for products and after sales segments from different parts of the world, which include Belarus, Bhutan, Egypt, Ethiopia, Indonesia, Kazakhstan, Kenya, Myanmar, Nigeria, Oman, Senegal, Sri Lanka, Sudan, United Arab Emirates & United States.

Power Generation Capacity Addition

In 2016-17 BHEL commissioned/ synchronized 8,570.55 MW of power generation equipment. This includes 6,977.25 MW of utility sets, 1,515.30 MW of captive/ industrial sets and 78 MW sets in overseas markets.

BHEL has achieved capacity addition of 1909 MW and in addition has synchronized 800 MW during the period April 2017 to September 2017.

With this, the worldwide installed base of power generating equipment supplied by BHEL has gone up to 180 GW.

BHEL's 54% share in India's total installed capacity and 58% share in the country's total generation from thermal utility sets (coal based) as of March 31, 2017 stand testimony to its valuable contribution towards nation building.

Also, BHEL has achieved capacity addition of 45,274 MW during 12th Five Year Plan (2012-17), surpassing the target of 41,661 MW set by the Government of India for BHEL by 9%. With this BHEL continues to remain the single largest contributor to the country's power generation capacity addition with a share of 46% in the 12th Plan.

Generation, Plant Load Factor (PLF) & Operational Availability (OA) – FY 16-17

58% of the country's total generation of 945 Billion Units (BUs) from thermal utility sets (coal based)

contributed by BHEL supplied sets, testifying superior performance of BHEL sets.

- 18 sets registered Plant Load Factor (PLF) over 90% and 60 sets between 80% - 90% during 2016-17.
- 222 Thermal Sets of BHEL make achieved Operational Availability (OA) higher than or equal to 90% during 2016-17.

Significant Achievements

- BHEL has forayed into power generation with the commencement of commercial operation of the 2x800 MW Yeramarus TPS of RPCL, a joint venture of KPCL, BHEL and IFCI.



BHEL forayed into power generation with its JV project, 2x800 MW Yeramarus TPS

- Despite security concerns and immense logistic barriers, BHEL successfully commissioned all the three units of the prestigious 3x14 MW Salma hydropower project (Afghan India Friendship Dam) in Afghanistan.
- With 76/62 mm Super Rapid Gun Mount (SRGM) and Auxiliary control System (ACS) commissioned on INS Chennai, all the

three ships of Kolkata-class stealth guided missile destroyers of Indian Navy are now equipped with BHEL manufactured SRGM and ACS.

- Static trials/ oscillation trials of Air Conditioned EMUs with IGBT based three phase drive propulsion system has been successfully conducted in the presence of RDSO engineers in April 2017 and dynamic trials are in progress.



Air-conditioned AC EMU, equipped with BHEL electrics, under trial at Mumbai

Recognition of Excellence

Notable among these are mentioned below:

- The Hon'ble President of India, Shri Ram Nath Kovind presented the 'Vayoshreshtha Samman' 2017 to BHEL, in recognition of its outstanding service for promoting the well-being and welfare of senior citizens. The prestigious national award for 'Best Public Sector Undertaking in Promoting The Well Being And Welfare of Senior Citizens', was received by CMD, BHEL, along with Director (HR), BHEL.



Vayoshreshtha Samman 2017

- PSE Excellence Awards 2016 for R&D, Technology Development & Innovation, Human Resource Management Excellence and for Contribution of Women in PSEs, in the Maharatna & Navratna CPSEs category by the Indian Chamber of Commerce (ICC). Hon'ble Union Minister of State for HI&PE, Shri Babul Supriyo conferred the award on CMD, BHEL.



- BHEL won the ICAI National Award for Excellence in Cost Management-2016. The award was conferred by Hon'ble Union MoS (I/C) for Power, Coal and New & Renewable Energy, Shri Piyush Goyal on CMD, BHEL along with Director (Finance) in the presence of Hon'ble Union MoS for Finance & Corporate Affairs, Shri Arjun Ram Meghwal.
- BHEL has won six 'National Safety Awards' for outstanding achievements in terms of the longest accident free period and lowest accident frequency rate at their works. Hon'ble Union MoS for Labour & Employment (Independent Charge), Shri Santosh Kumar Gangwar conferred the award on CMD, BHEL.



National Safety Awards (6 numbers)

- CBIP Award 2017 for "Best Power Equipment Manufacturing Organization" to BHEL for its outstanding contribution in manufacturing a wide range of equipment for the development of core sector of economy including power generation, transmission and renewable energy conferred by Hon'ble Union MoS for Water Resources, River Development and Ganga

Rejuvenation, Shri S.K.Balyan on Director (Power), BHEL.



CBIP Award for best Power Equipment Manufacturing Organisation

- Vishwakarma Rashtriya Puraskars (15 numbers) to 63 BHEL employees, highest numbers of awards amongst all organisations, for their innovative suggestions leading to cost reduction, improvement in quality, productivity and working conditions, etc



Vishwakarma Rashtriya Puraskars (15 numbers) to 63 BHEL employees

- Won EPC India National Awards during 2016-17 for contribution in the country's exports as 'Star Performer - Project Exports' for 2015-16 as well as for 2014-15. Hon'ble Union Minister of Railways, Shri Suresh Prabhu conferred the award on CMD, BHEL.

Some of the other major recognitions are:-

- CMD-BHEL was also conferred with the Industry Honour for 'Visionary Leadership in Heavy Engineering at the 6th EPC World Awards for his exceptional contribution in the infrastructure and engineering sector with exemplary works and projects delivered, under his leadership by the company.
- India's Best PSUs 2016 for "Most Efficient Maharatna of the Year - Manufacturing" by Dalal Street Journal of Investment (DSI). Citation published in Journal.
- SKOCH Order of Merit - BSE Excellence Awards for Technology Deployment in Steam turbine & THRI cooled Turbo generator & Efficiency Enhancement of old thermal power plant through Energy Efficient R & M interventions by SKOCH.
- 11th BML Munjal Award for 'Business Excellence through Learning and Development for the year 2016' in recognition of BHEL's outstanding initiatives in the areas of Learning and Development

Capability building

- BHEL has enhanced its manufacturing capacity for Solar Photovoltaics (SPV) Modules to 226 MW and Solar cells to 105 MW with complete automation at its manufacturing units of Bengaluru.



Hon'ble Union Minister for HI&PE Shri Anant Geete, inaugurates BHEL's upgraded, state-of-the-art Solar PV Manufacturing lines

- Entered into a Technology Collaboration Agreement (TCA) with Kawasaki Heavy Industries Ltd. (KHI), Japan for manufacture of stainless steel coaches and bogies for metros.

Technology tie-up with KHI is a big boost to GoI's "Make in India" initiative and also BHEL's diversification foray into urban transportation business.

BHEL's partnership with one of the best rolling stock companies in the world, will go long way in establishing BHEL-KHI brand in Indian Transportation business.

BHEL is already having MoU with Kawasaki Heavy Industries, Ltd. (KHI) for joint working to provide High Speed Train sets for Mumbai-Ahmedabad High Speed Rail Project.

- BHEL is developing the Advanced Ultra Super Critical (AUSC) technology for higher efficiency thermal power plants, jointly with NTPC and IGCAR under the aegis of Government of India.

After successful development of AUSC technology the plant efficiency will be improved to 46% besides achieving reduction in coal consumption by 11% and reduction in CO2 emission by 11% as compared to existing Super Critical plants. This will significantly improve the country's energy security with cleaner use of the vast coal reserve.

2.4 BHEL- Electrical Machines Limited

BHEL-EML is a subsidiary of BHEL, formed in 2011 as a joint venture between BHEL,

and Government of Kerala. The focus area identified is to manufacture various rotating electrical machinery like Alternators, Motors, etc. and also to integrate its alternators providing the customers with Diesel generator sets.

Currently BHEL-EML manufactures and markets Diesel Generator (DG) sets as well as Alternators upto 1500KVA capacity, and Induction Motors in the range of 37 kW – 160 kW.

The Company caters Indian Railway (with Train Lighting Alternators, Rectifier Regulating Units, Power Car DA Sets and Traction Alternators) besides standby generators to various power stations.

Financial Performance

In the financial year 2016-17, the Company has recorded a turnover of ₹ 3212.93 Lakhs.

The Company has recorded loss of ₹ 379.26 Lakhs in 2016-17.

Significant Achievements

Major Achievements 2016-17

The major orders executed under the reporting period are as below-

Railways- Power cars

BHEL-EML has executed 72 numbers of 500 KVA DA Set for Power Car.

Alternators

BHEL-EML has supplied 81 numbers of Train Lighting alternators to Indian Railway and 82 numbers of General Purpose Alternators to various other customers.

DG Set for Self-propelled Accident Relief Train (SPART)

The Company has supplied 10 numbers of DG Sets for SPART.

Major Achievements 2017-18 upto September, 2017

The Company had confirmed orders worth ₹ 3245 Lakhs as on 01st April 2017, which is approx. 44% of the total budget target for the current financial year. The current order book (pending execution) is ₹ 2132 Lakhs.

Despite scarcity of the working capital, the company has executed almost 16.6% of the total budget target for the year.

In line with the 'Revival Plan' of the Company, following products/ diversified products have been planned and are being executed :

- a) String Monitoring Unit for Solar Power Plants
- b) Aux. Generator (18 kW) for Diesel Locomotive Works, Varanasi
- c) Traction Alternator for 1600 HP DEMU for Indian Railway
- d) System for Electric Vehicles (EV) for Green Energy Mass Transit System
- e) Permanent Magnet (PMG) Alternator for Railway Applications
- f) Cyclo/ Rotary Converter (60 kVA) for Strategic (Defense) Applications
- g) Marine Alternator (490 kW) for Strategic (Defense) Applications
- h) Electronic Rectifier cum Regulator Unit (ERRU) for Railway applications

As a part of National Electric Mobility Mission 2020, BHEL EML has already submitted a Project/ Proposal on Electric Mobility to the Department of Science and Technology (DST), Government of India, with a request for estimated grant of INR 50.66 Crore. The proposal is being taken up with the Department concerned. Proposals for capability demonstration of Electric Vehicles in typical routes (consisting of planes, inclines and stop/start traffic situations) are submitted to various State Governments (Viz., in Thiruvananthapuram City Service in Kerala, Coimbatore-Ooty Sector in Tamil Nadu and Jaipur-Udaipur Sector and Jaipur City Service in Rajasthan), which are under active consideration.

Export Plans

Alternators for micro Hydel projects exported to Nepal. There are indirect exports through Indian Customers (e.g. RITES to various foreign railways). Similar indirect Exports are planned through Toshiba India for their ultimate export for Micro Hydel projects around the world.

2.5 Braithwaite, Burn & Jessop Construction Company Limited.

The Braithwaite Burn & Jessop Construction Company Ltd. (BBJ) was incorporated on 26.01.1935 under the Indian Companies Act, 1913 contribution made by three major engineering companies of Eastern India namely, Braithwaite & Co Ltd. (40%), Burn & Co Ltd (30%) and Jessop & Co. Ltd (30%).

The Company become a 'Government company' consequent upon transfer of its entire share to erstwhile holding company viz Bharat Bhari Udyog Nigam Ltd. (BBUNL) under Section 617 of the Companies

Act, 1956 and became a wholly owned subsidiary of BBUNL w.e.f. 13.08.1987.

Consequent to the order of the Government of India that The Company (BBJ) as the transferor company, was merged with Bharat Bhari Udyog Nigam Ltd., as the transferee company w.e.f. 10.07.2015. Further, BBUNL renamed as The Braithwaite Burn and Jessop Construction Co., Ltd. (BBJ) w.e.f. 18.11.2015.

BBJ was not referred to BIFR. However, to make the company a viable enterprise on a sustainable basis, the financial restructuring proposal of BBJ was approved by the Government of India in July 2005. Since then, the company is continuously achieving Net Profit & positive Net Worth in mounting trend. From the financial year 2009-10, BBJ wiped out its accumulated losses completely.

BBJ paid dividend to Government of India ₹ 4.05 crore (Dividend Tax thereon of ₹ 0.69 crore) for both the financial years 2012-13 & 2013-14 and ₹ 13.32 crore (Dividend Tax thereon of ₹ 2.71 cr.) in 2015-16. BBJ proposes dividend for the financial year 2016-17 worth ₹ 6.36 crore (Dividend Tax thereon of ₹ 1.27 crore), to be paid in 2017-18 subject to approval of the same in AGM of BBJ.

BBJ received the following awards:-

- BBJ received the **“Turnaround CPSE” award** from **BRPSE** in March 2011.
- **“UDYOG RATTAN AWARD”** for EXCELLENCE from Institute of Economic Studies, Delhi.

- **“SKOCH Award”** of Merit Certificate for India’s Best Projects-2014 on November, 2014 for the mega project **“Rail-cum-Road Bridge”** over river Ganga at Munger, in Bihar State.
- **“The Economic Times Best Infrastructure Brands 2016”** award from the Times of India group in Sept., 2016 for various prestigious Bridge construction in India.
- **Utkrista Rajbhasha Shree”** Shield Samman in an **“Official Language Conference”** held under the auspices of Kendriya Sachivalya Hindi Parishad, Delhi.
- **“Raj Bhasha Puraskar”** under **“Official Language Award Scheme”** for excellent performance in the field of Official Language implementation during the year 2016-17 in a program organized by the **“Town Official Language Implementation Committee (PSUs)”**, Kolkata.

2.6 Bharat Pumps & Compressors Ltd.

Bharat Pumps & Compressors Ltd. (BPCL) was incorporated in 1970 with the manufacturing facility at Naini, Allahabad in U.P. The company is engaged in manufacture and supply of heavy duty pump & compressors and high pressure seamless and CNG gas cylinder/cascades to cater to the needs of sector like oil exploration and exploitation, refineries, petro-chemicals, chemicals and fertilizers and downstream industries. The Company is accredited with Integrated Management System Certification having ISO 9001-2000,

ISO 14001:2004 and OHSAS 18001-2007. The company is also accredited with API 7K license or manufacturing Slush Pump Components.

BPCL was sanctioned a revival package in December, 2006. The company which was earlier a BIFR referred sick company came out of the purview of BIFR in February, 2007 itself. During the next three years BPCL performed well. However, in the year 2016-17 the company registered a net loss of ₹ -73.99 crores (Prov), due to low order booking, slowdown in economy, the entry of foreign players, growth of domestic manufacturers led to decline in sales.

2.7 Bridge & Roof Company (India) Ltd.

Bridge & Roof Co. (India) Ltd. (B&R) was set up in January 1920 as a subsidiary of Balmer Lawrie & Company Limited. Subsequently, it became a Government Company in 1972 under the Ministry of Petroleum & Natural Gas. In June, 1986, the administrative control of B&R was transferred to the Ministry of Heavy Industries and Public Enterprises and it was subsequently brought under the fold of the holding company, M/s Bharat Yantra Nigam Ltd. (BYNL), Allahabad in 1987. Consequent to the decision taken by Government of India, BYNL ceased to be the holding company of Bridge & Roof from 06.05.2008 and B&R came directly under DHI. The Company capital restructuring and strengthening proposal was approved by GOI on 02.09.2005.

B&R is a premier construction and engineering company in the field of Civil and Mechanical Construction and

Turnkey Projects in various sectors such as hydrocarbon, power, aluminum, steel, railways, etc.

The company has been making profit since 2007-2008 and awarded Miniratna category-I in 2010. B&R's performance during the last few years has been phenomenal and turnover of the company during the year 2016-2017 was ₹ 1751.33 crore with PBT of ₹ 27.25 crore. B&R paid a dividend of ₹ 4.87 crore to Government of India in November 2017.

2.8 Richardson & Cruddas (1972) Ltd.

Richardson & Cruddas (1972) Ltd. (R&C) was taken over from private sector in 1973. The Company is a schedule "C" company and fully owned by Government of India. It has four operating units: two at Byculla and Mulund in Mumbai, one each at Nagpur and Chennai and is engaged in the field of Fabrication & Erection of Steel Structures, Fabrication of Pressure Vessels, Boiler Drums, Hot Pressed Dished Ends, Transmission line towers, providing environmental engineering laboratory services and maintaining townships. The turnover for the year 2016-17 of the company stood at ₹ 46.17 crore. Union Cabinet approved the financial restructuring of the company on 21.09.2016.

2.9 Triveni Structural Ltd

Triveni Structural Ltd. (TSL), located at Naini, U.P. was incorporated in 1965. The company had facility for manufacture of heavy steel structural products, such as tall towers and masts for power transmission, communication and T.V broadcasting,

hydro-mechanical equipment, pressure vessels etc. The company is sick and stands referred to BIFR. Pursuant to Allahabad High Court order dated 08.10.2013, company is under liquidation.

2.10 Tungabhadra Steel Products Ltd.

The company was established at Hospet (Karnataka) in 1960 as a joint enterprise of the Government of India with Governments of Karnataka and Andhra Pradesh. The company has facilities for design manufacture and erection of hydraulic structures, penstocks, building structures, transmission line towers, EOT & gantry cranes etc. CCEA in its meeting dated 22.12.2015 approved the closure of the company. At present TSPL has closed its operations and all the employees have accepted the VRS have been relieved.

2.11 Hindustan Cables Ltd.

As per the direction of Union cabinet taken on 28.09.2016 action pertaining to closure of the Company is being undertaken in terms of guidelines issued by Department of Public Enterprises.

2.12 Heavy Engineering Corporation Ltd.

HEC Ltd., Ranchi was incorporated on 31st December, 1958 with the primary objective of achieving self-sufficiency and self-reliance in the field of design and manufacture of equipment and machinery for iron and steel industry and other core sector industries like Mining, Metallurgical and Engineering Industries. It has three manufacturing units and one turnkey project division viz :

- **Heavy Machine Building Plant (HMBP)**

This unit manufactures wide range of equipment for Steel Plants like Blast Furnaces and rolling Mills etc., Material Handling Equipment like EOT Cranes and Wagon Tipplers, etc., equipment for Mining industries like 5 & 10 CuM Excavators, Crushers, Drag Lines and Mine Winders etc. In addition, it also executes order of technological structurals from various sectors.

- **Heavy Machine Tools Plant (HMTP)**

It manufactures complete range of Heavy Machine Tools including CNC Heavy Duty Machine Tools and Special purpose Machine Tools required for Railways, Defence, Power and other sectors.

- **Foundry Forge Plant (FFP)**

It Manufactures various types of Heavy & Medium Castings, Forging and Rolls for Power, Nuclear and other sector besides B.G. Crank Shaft for Railways. This Unit also acts as a feeder unit for HMBP and HMTP.

- **Turnkey Project Division**

It undertakes turnkey projects in the areas of Low Temperature Carbonization Plants, Coal Handling Plants, Coal Washeries, Sintering Plants, Continuous Casting Plants and Raw Material Handling System etc.

Deteriorating health of equipment/facilities coupled with acute shortage of working capital has been badly affecting the performance since 2013-14. In addition,

execution of old orders further affected the cost and company started incurring operating loss. Efforts like outsourcing also did not help due to issue of timely payment to vendors. With Strategic measures like more thrust on production of spare parts having better margin and high value special forging for nuclear sector helped company in reducing operating loss during 2016-17 as compared to 2015-16. Production and Gross Turnover during the year 2016-17 had been ₹ 364.84 crore and ₹ 390.11 crore respectively against ₹ 340.68 crore and ₹ 374.48 crore respectively during 2015-16. Operating loss during 2016-17 has been ₹ 82.27 crore against ₹ 180.77 crore during 2015-16.

MoU target of the Company for the year 2017-18 in terms of Net Turnover and Net Profit were Rs. 695.00 crore and (-) ₹ 32.12 crore respectively.

2.13 HMT Limited (HTML)

HMT Limited, one of India's premier Engineering conglomerates was incorporated by the Government of India in the year 1953, with the objective of producing machine tools required for building an industrial edifice for the country and a manufacturing unit was established at Bangalore in collaboration with M/s Oerlikon of Switzerland. Over the years the Company diversified into manufacture of various products like Watches, Tractors, Printing Machines, Food Procession Machinery, Presses, Bearings etc. and established manufacturing facilities for these products across the country, in places like Bangalore Hyderabad, Ajmer, Kalamassery

near Cochin, Pinjore near Chandigarh, Tumkur near Bangalore, Ranibagh near Nainital and Srinagar in Kashmir.

To meet the challenges of globalization consequent to the initiation of New Economic Policies of the Indian Government and in keeping with contemporary business models, the Company was restructured in the year 2000 with the formation of subsidiaries based on its various business portfolios under the ambit of a holding company.

HMT Limited, the holding Company manages the Tractor Business and Food Processing Machinery Business directly. HMT's Tractor manufacturing plant located at Pinjore in Haryana and tractor assembly unit located in Hyderabad are being closed. The Food Processing Machinery Division is located at Aurangabad in Maharashtra and the unit manufactures a variety of Dairy machinery and other food processing applications.

2.14 HMT Machine Tools Limited (HMT MTL)

The Machine Tools Business of HMT Limited was incorporated as a wholly owned subsidiary in the year 2000. HMT MTL manufactures metal cutting & metal forming machines including printing machines and Die-casting & Moulding machines, catering to both domestic and export markets. The manufacturing units of HMT MTL are situated in Bangalore, Pinjore, Kalamassery, Hyderabad and Ajmer. The Company also provides services for reconditioning and refurbishing of machines of HMT as well as other makes.

The Company has the distinction of supplying machines and equipment for special applications in Space, Atomic Energy & Defence Sectors. The erstwhile Praga Tools Ltd., manufacturers of CNC and non-CNC machine tools become a subsidiary of HMT Limited in the year 1988 and during 2007-08, the Company was merged with HMT Machine Tools Limited. The marketing network of HMT MTL is spread across the country to cater to the sales & service needs of the customers.

2.15 HMT (International) Limited (HMTI)

HMT (International) Limited regarded as one of the best export houses in the Country, exports HMT products as well as engineering goods of other Indian manufacturers. Major thrust is given for implementation of Turnkey projects in the area of Tool Rooms and Training Centers. The subsidiary was formed in the year 1974. HMT (International) has been accorded the status of 'Mini Ratna'.

2.16 Instrumentation Limited.

Instrumentation Ltd. Kota (IL) was set up in 1964 as a fully Government owned CPSE to cater to the growing Control & Instrumentation (C&I) needs of Core Industrial sectors viz. Power, Steel, Oil Refinery etc. and help achieve self reliance in this field. The company has its Registered Office & Headquarters at Kota, Rajasthan and manufacturing plants at Kota for Digital Control System, Telecom Products, Railway Signaling products etc. and at Palakkad, Kerala for Control Valves/ Actuators. Both the manufacturing plants are accredited with ISO 9001:2008 series

certification. Instrumentation Limited was a sick unit and referred to BIFR in 1994. Looking into all the aspects (including revival, merger) DHI decided to initiate a proposal for recommending closure of IL Kota and to transfer IL Palakkad unit to Government of Kerala. The proposal was approved by Union Cabinet in their meeting dated 30.11.2016. DHI after approval of the closure proposal provided fund of ₹ 400.02 Crore in March 2017 to settle the liabilities towards VRS/VSS to employees of Kota Unit, clearing pending dues to ex-employees and fund of ₹ 164.14 Crore was provided in July/August 2017.

The company got VRS/VSS applications from all the employees except one employee who had filed a civil writ petition in Rajasthan High Court against Closure of IL Kota by GOI. All the employees were relieved on 18.04.2017 and the case of one employee was also dismissed by the court in the hearing dated 17.11.2017. The employee opted for VRS/VSS and also relieved in line with other employees on 18.04.2017.

The progress of closure of IL Kota in nut shell is as appended below:

1. VRS/VSS to all the employees of Kota Unit completed.
2. Movable assets disposed of within time line as per closure guideline issued by DPE.
3. Secured creditors payment settled.
4. Payment to unsecured creditors and disposal of immovable assets in progress.

5. IL Kota has 181.883 Acre of Land at Kota and 10 Acre in Sitapura Jaipur on lease with GoR. These are to be handed over to Government of Rajasthan with approval from DHI.

Instrumentation Limited, Palakkad

The methodology to transfer Palakkad Unit to Government of Kerala (GoK) is being decided between GoK and Department of Heavy Industry. Meetings dated 11th January 2017, 31.05.2017 & 21.11.2017 between GoK and DHI took place to decide the methodology and valuation of the unit for takeover. Regarding the cutoff date for finalizing amount payable on the takeover in meeting dated 21.11.2017, it was decided that 31.03.2017 would be taken as the date, with changes in assets and liabilities thereafter to be incorporated appropriately

2.17 Rajasthan Electronics & Instruments Ltd.

The Rajasthan Electronics & Instruments Limited, Jaipur (REIL) was set up in 1981 as Joint Venture of Government of India through Instrumentation Limited, Kota (ILK) and Government of Rajasthan through Rajasthan State Industrial Development and Investment Corporation Limited (RIICO) with 51% and 49% **ownership respectively to undertake development manufacturing and deployment of technology/software in the area of Dairy Electronics, Renewable Energy (Solar Photovoltaic) and information Technology.** REIL is a Schedule 'C' Mini Ratna and ISO 9001 & ISO 14001 certified Central Public Sector Enterprises in Medium and Light Engineering Sector under the administrative control of Ministry

of Heavy Industries and Public Enterprises, Government of India with its registered and corporate office at Jaipur.

Pursuant to the approval of the Government of India for converting Rajasthan Electronics & Instruments Limited (REIL) Jaipur into an Independent Central Public Sector Enterprise, delinking of REIL has been done from Instrumentation Limited Kota (ILK) by transferring the entire shareholding of 62,47,500 shares of the face value of ₹ 10 each, being 51% equity held by ILK in REIL to The President of India. Consequent upon that REIL is ceased to be subsidiary of Instrumentation Limited, Kota.

REIL provides technology solutions for qualitative & quantitative analysis of milk across all verticals of **Dairy Industry sector** through its milk analysis and automation solution; addresses needs of the rural and related urban sector through **Solar Photo Voltaic**; and information Technology & security surveillance applications for e-governance, dairy vertical small business and Government sectors. The Motto of company is “*Shaping Rural India through Electronics, Renewable Energy & IT Solutions.*”

REIL has been registering steady growth over the years. In financial 2016-17 it has shown the good performance with Profit after Tax of ₹ 12.15 crore on a turnover of ₹ 230.37 Crore. The net worth of the Company rose by 7% from ₹ 103.83 Crore to ₹ 110.72 Crore with an order booking of ₹ 204.00 Crore in the FY 2016-17. For the first time, Company has paid dividend directly to Government of India which is highest ever

@ 48.16% on its equity share capital for the year 2016-17. The Company's deemed and direct exports were valued at ₹ 0.22 crore.

The Company, through its market driven in-house Research & Development (R&D), recognized by the Ministry of Science and Technology, Government of India has developed and deployed more than 100 variants that includes new products and up gradation of existing products to cater the needs of the customer.

Major development projects undertaken in FY 2016-17 include following:

- a) Smart GPRS Unit (SGU)
- b) GPRS based DPMCU-Project Implementation
- c) Modem for GPRS based DPMCU
- d) Hybrid Solar Electric Vehicle Charger

Major Ongoing Projects in the Financial Year 2017-18 are as follows:

- a) RMU-Remote monitoring unit for solar water pumping system
- b) Next Generation DPU
- c) Solar EV Charging Station (SEVCS)
- d) Solar pump controller

REIL has executed prestigious projects of National repute and has expertise of completing activities in **Product to Project Mode across the Country. The Company** has aligned its objectives and plans with Government's missions and policies and addressed the critical need of **National Milk Grid and Cold Chain** through deployment

of GPRS enabled Milk Automation Solutions; under **Make in India** initiative- Set up a production line for manufacturing of Electronic Milk Adulteration Testers and also started manufacturing of Low-cost Multi-parameter Milk Analyzer in response to MoU sign at Hannover Messe 2015; under **National Solar Mission**, designated as **expert CPSE and Project Management Consultant (PMC)** for 10 Ministries to rollout 765MW Grid Connected Rooftop Solar Power Projects; Nodal agency for implementing Solar projects in Rajasthan and Security Surveillance solutions under **Smart Cities Mission** and under **FAME India scheme**, deploying Solar/Electric fast-slow charging stations for charging of electrical vehicles.

Aligning Company's objectives with "Make in India" under National Solar Mission and as a part of its Green Energy Commitments, the Company installed Automatic Stringer Machine with a capacity of processing 700 cells/hr to make solar string and can process cut cells upto 40 mm. REIL also installed 30 KW Grid-connected Roof top Solar Power Plant with high efficiency modules at its premises making total installed capacity as 255 KW.

2.18 Scooters India Ltd.

Scooters India Limited, Lucknow, set up in 1972, with a second hand plant bought from M/s Innocenti of Italy, is engaged in manufacturing and marketing of three wheelers.

SIL was declared as a sick company in 11th August, 1992 and came under the

purview of Board for Industrial and Financial Reconstruction (BIFR). A revival proposal was approved by the Cabinet in their meeting held on 31.01.2013.

The Hon'ble Bench of BIFR, New Delhi during its hearing held on 15th September, 2015 noted that the net worth of SIL, Lucknow has become positive by substantial

amount as per Audited Balance Sheets as on 31.03.2013 and 31.03.2014, and thus does not remain to be sick industrial company in terms of Section 3(1)(0) of SICA. They have discharged the company from the purview of SICA.

The performance of Scooters India Limited (SIL) from 2012-13 to 2016-17 is as follows:

(₹ in crore)

Year	2012-13	2013-14	2014-15	2015-16	2016-17
Sales	209.82	193.66	167.72	152.04	108.55
Profit/(Loss)	-6.00	13.60	11.09	5.48	-10.28

The Cabinet Committee on Economic Affairs in their meeting held on 27.10.2016 approved the disinvestment of 100% shareholding of Government of India in Scooter India Limited (SIL). Accordingly the process of strategic disinvestment has been set in motion by appointing Asset Valuer, Technical Adviser & Legal Adviser and follow-up action is being taken as per the guidelines of DIPAM.

2.19 Cement Corporation of India Ltd.

Cement Corporation of India Ltd. (CCI) was established in 1965 with the principal objective of setting up cement factories in the public sector to achieve self-sufficiency in cement production and to remove regional imbalance. It has ten units spread over eight States/Union Territories, located at Mandhar, Akaltara in Chhatisgarh; Nayagaon in Madhya Pradesh; Kurkunta in Karnataka; Bokajan in Assam; Rajban in Himachal Pradesh; Adilabad and Tandur in Telangana; Charkhi Dadri in Haryana;

Delhi Grinding Unit in Delhi. The Company became sick and was referred to and registered with Hon'ble BIFR as sick Company in 1996. After great deliberation and discussion, the revival package of CCI was approved in 2006 with expansion/up gradation and modernization of three operating plants i.e. Rajban in Himachal Pradesh, Bokajan in Assam and Tandur in Telangana and closure/sale of 7 non-operating plants. 25% capacity expansion of Rajban unit has been completed. Order for 100% capacity expansion of Bokajan Unit alongwith grinding unit at Silchar has been issued on turnkey basis and work is under progress. Technological upgradation of Tandur plant has also been taken up.

As per the Sanctioned Scheme, for completing the sale process, Hon'ble BIFR has constituted the Asset Sale Committee under Chairmanship of representative of IFCI for disposal of the assets of the 7 non-

operating units. As per directive of Niti Aayog, the disinvestment process has been initiated for certain units of CCI.

2.20 Hindustan Paper Corporation Ltd.

Hindustan Paper Corporation Limited was incorporated on 29th May, 1970 as a wholly owned Government of India Enterprise with an objective to establish new pulp and paper & Newsprint Mills in the Country and subsequent management of these mills and manufacturing paper, paperboards, craft paper and newsprint and their distribution on an equitable and rational basis in the country. HPC was to act as a catalyst for ensuring adequate levels of investments in the paper industry and also to keep the prices stable in times of scarcity.

HPC is a Miniratna Schedule 'A' company. HPC has three subsidiaries and two major integrated pulp and paper mills under its management and control. These are (i) Hindustan Newsprint Limited (Upgraded from Schedule 'C' to 'B' w.e.f. 3.1.2007), (ii) Nagaland Pulp and Paper Co. Ltd (NPPC Ltd), Nagaland and (iii) Mandya National Paper Mills (Closed on 5.9.2000 under liquidation w.e.f. 20.10.2000). HPC has two units namely Nagaon Paper Mills (NPM) and Cacher Paper Mills (CPM).

HPC was a profit making company earlier and had been performing reasonable well till the year 2008-09. But thereafter, its capacity utilization started declining due to various external factors beyond the control of Management. The downtrend in performance started from the year 2009-

10 mainly due to shortage of bamboo on account of large scale severe gregarious flowering of bamboo in NER and also due to embargo by Mizoram Government on supply of bamboo outside Mizoram. As a result, capacity utilization of CPM Unit has been hovering around 50%. Later on, when bamboo availability normalized and HPC was set to recover, NGT put blanket ban on mining and transportation of Coal in the state of Meghalaya w.e.f. May 2014 from where CPM and NPM had been sourcing 100% and 60% of their coal requirements respectively since decades and again recovery process derailed. This fluctuating capacity utilization, continued load of salary and wages and fixed expenses has had a cascading effect on overall working of the Corporation and it has pushed up all the associated costs resulting in HPC posting losses and leading to erosion of working capital of the company. A proposal for revival of HPC is under consideration.

2.21 Hindustan Newsprint (HNL)

Hindustan Newsprint Limited (HNL), a wholly owned subsidiary of Hindustan Paper Corporation Limited (HPC) is a Mini Ratna Public Sector Enterprise under the administrative control of Ministry of Heavy Industries & Public Enterprises (HI&PE), Department of Heavy Industry (DHI). HNL was incorporated on June 7, 1983 with the main objective of taking over the business of erstwhile Kerala Newsprint Project (KNP), a unit of HPC. Registered Office of HNL is at Newsprint Nagar, District Kottayam, Kerala.

HNL located at Newsprint Nagar, Dist. Kottayam, Kerala is one of the largest integrated newsprint mills in India with an installed capacity of 1,00,000 ton per annum (TPA) of newsprint. The core competence of HNL lies in its highly skilled technical manpower, which is rated as the best in the domestic newsprint industry. HNL produces standard Newsprint grades of 42GSM, 45 GSM and 48.8 GSM of quality, which is at par with the best available in the market.

HNL was a profit making company till 2008-09. Since then it has been suffering marginal losses. HNL was making profit since FY 1988-89 except Financial Year 2002-03, 2009-10 and 2012-13. The sales turnover of the mill during the year 2014-15 is ₹ 340.98 crore.

2.22 Nagaland Pulp & Paper Company Ltd. (NPPC)

NPPC was incorporated on September 14, 1971 at Tuli, District Mokokchung, Nagaland, as a joint venture Company of the Government of Nagaland (GoN) and Hindustan Paper Corporation Limited (HPC), a Government of India Enterprise under administrative control of DHI, Ministry of HI&PE. The commercial production of the Mill was started on July 1, 1982 but subsequently owing to non availability of grid power from Government of Nagaland (GoN), poor performance of power boiler and lower capacity utilization due to non-operational Reed pulping street, the Company started making losses continuously and the Mill operation was suspended from October 1, 1992.

CCEA approved a proposal for revival of NPPC Limited and accordingly ₹ 100 crore has been released to HPC towards the revival of NPPC.

2.23 Nepa Limited

NEPA Limited, Neapanagar, Madhya Pradesh, a Public Sector Enterprise (PSE) was incorporated as a private enterprise on 26th January 1947 by M/s Nair Press Syndicate Limited under the name of “The National Newsprint and Paper Mills Limited” for production of newsprint. Government of India (GOI) took over the controlling interest of the company in 1958. GoI holds 97.82% equity shares in the capital of Nepa Limited. The name of the Company was subsequently changed to Nepa Limited in February 1989. The company holds license for production of newsprint and writing & printing paper.

The company was referred to Board for Industrial and Financial Reconstruction (BIFR) in 1998 as its net worth had completely eroded by accumulated losses as per annual results of 31st March, 1997.

The company is currently undergoing a revival and modernization plan approved by Cabinet. A proposal for further financial support to the Company is under consideration.

2.24 Hindustan Photo Films Manufacturing Co. Ltd. (HPF)

HPF was incorporated on 30th November, 1960 with the aim to make the country self-reliant in the field of photosensitive products.

The Company commenced commercial production in 1967. The Company started incurring continuous losses since 1992-93. On its Net Worth becoming negative on 31.03.1994, the Company was referred to the Board for Industrial and Financial Reconstruction (BIFR) in 1995. BIFR vide its order 30.01.2003 recommended winding up of HPF. Decision of BIFR was upheld by AAIFR.

The matter was taken to Hon'ble High Court of Madras which granted stay on the proceeding of BIFR/AAIFR on 27.06.2005. In view of the fact that efforts made in the past for revival of HPF had failed, BRPSE in their meeting held on 28.06.2013 inter alia recommended a VRS package for the employees of HPF followed by steps for closure of the company and also stated that the proceedings/litigation pending before Hon'ble Madras High Court/any other Court may also be kept in view while implementing the recommendations. CCEA in its meeting held on 28.02.2014 inter alia approved for VRS package for all the employees of HPF at 2007 notional scale. CCEA also decided to take further action for closure of the company as per recommendations of BRPSE in their meeting dated 28.06.2013.

A total of 466 employees have already been relieved on VRS and remaining employees are 167.

The Company was on salary/wages/statutory dues support from the Government. Salary/statutory dues/wages had been provided by Govt. to the company up to 31.03.2015.

As regards closure of the company an administrative decision was taken after due consultation to file a detailed petition in the Hon'ble High Court of Madras for winding up of the company under SICA as per BIFR order. The company was requested to take necessary action. Accordingly, the Hon'ble High Court of Madras was approached and the matter was heard on 29.08.2016. After hearing the matter the Court has dismissed the writ petitions and accepted the BIFR order. However, Writ Appeals regarding payment of Severance VRS package within a month and also exemption of deduction of Income Tax from VRS package filed by the Department in the Division Bench of Hon'ble High Court of Madras, which have been dismissed by the Hon'ble High Court of Madras. This Department, in consultation with Department of Legal Affairs, Ministry of Law and Justice has decided to file a SLP against Order of Division Bench of Hon'ble High Court of Madras. Now the Company is under liquidation w.e.f. 24.01.2017 and efforts are on for appointment of an Official Liquidator.

2.25 Hindustan Salts Ltd. (HSL)

Hindustan Salts limited (HSL) was incorporated on 12.04.1958 under the Companies Act, 1956 with an objective to take over Government Salts Works, which were then owned and departmentally managed by the Government of India at Sambhar Lake in Rajasthan and Kharaghoda (Gujarat). 100% shareholding of the HSL is held by the Government of India.

2.26 Sambhar Salts Ltd.(SSL)

Sambhar Salts Ltd. (SSL) is a subsidiary of Hindustan Salts Ltd. (HSL) was incorporated on 30.09.1964 under the Companies Act, 1956 with an objective to take over the salt Works at Sambhar Lake Area, which were then owned and managed by HSL. HSL holds 60% shares in the SSL and remaining 40% shares are held by the Government of Rajasthan. It is engaged in production and sale of edible and industrial salt through its operating unit at Sambhar Lake works in Rajasthan.

2.27 Engineering Projects (India) Ltd. (EPIL)

Engineering Projects (India) Ltd. (EPI) was incorporated in the year 1970 with the main objective to undertake turnkey projects and consultancy services in India and abroad. EPI is the first Indian Company to undertake large civil and industrial projects abroad. EPI is a profit making, dividend paying Mini Ratna Category-II Central Public Sector Enterprise in Industrial Development and Technical Consultancy Services sector under the administrative control of the Ministry of Heavy Industries & Public Enterprises with 100% shareholding by the Government of India and PSUs. EPI has pan-India presence having its Regional/ Zonal Offices at different geographical locations viz. New Delhi, Mumbai, Kolkata, Chennai, Guwahati, Hyderabad to undertake its operations across India besides projects sites spread all over the country as well as in Oman and Sri Lanka.

As on 30.09.2017, EPI has completed 550 projects in India and 31 projects abroad.

Major achievements

Turnover

- EPI achieved a record turnover of ₹ 1621.45 Cr. during the financial year 2016-17, which is 25% increase over the previous year.

Order Booking

- During the financial year 2016-17, Company has secured projects worth ₹ 2449.37 Cr. against the target of ₹ 2000 Cr. This includes a Road Projects of ₹ 607 Cr. (considering EPI's % of share) secured in Maynmar by JV of EPI-C&C.

Other achievement

- EPI & Manav Rachna International University jointly initiated the programme for Public Awareness on Cashless Transaction in important cities of Haryana. This programme was flagged by Hon'ble Governor of Haryana Shri Kapatan Singh Solanki on 17th December, 2016 at Manav Rachna International University, Faridabad.
- Awareness training on Cashless Transactions provided by EPI to employees, workers of EPI Project sites and Awareness Camps organized for Teachers & students, Industrial workers, Villagers and General Public at 100 locations in various districts of Haryana. More than 3000 persons were made aware of benefits of digital payment methods including payment of bills, convenience of shopping, scheduling of

financial transactions using smart phones. They were also educated how Electronic transactions help in curbing corruption and black money flow, thereby helping economic growth of the country. All the Payments at EPI are made electronically to employees/vendors in their account.



Commissioning of Wagon Tippler Route at Bhilai Steel Plant



Flyover Project, Dehradun

Heavy Electrical Engineering, Heavy Engineering and Machine Tool Industries

3.1. Heavy Engineering and Machine Tools Industry

Heavy Engineering and Machine Tools Sector mainly consists of Capital Goods Industry. Prominent sub-sectors of Capital Goods Industry are Machine Tools, Textile Machinery, Construction and Mining Machinery and other heavy industrial machinery such as Cement Machinery, Rubber Machinery, Metallurgical Machinery, Chemical and Fertilizer Machinery, Printing Machinery, Dairy Machinery, Material Handling Equipment, Oil Field Equipment, Paper Machinery etc. These industries are de-licensed and foreign direct investment (FDI) up to 100 percent under automatic route as well as technology collaboration are allowed freely. Import of old and new machineries are allowed freely.

The Department has reconstituted Development Councils for Machine Tools Industry, Textile Machinery Industry and Construction, Earthmoving and Mining Machinery. These Development Councils are the platform where machinery / equipment manufacturers, users of machineries and policy maker from Government Departments discuss the various issues and take decisions for the sustainable growth.

Department of Heavy Industry for Enhancement in the Competitiveness of the Capital Goods Sector encourages technology up gradation and acquisition, common engineering facilities, and also augmentation of modern industrial parks leading to global competitiveness of the industry.

3.1.1 Machine Tools Industry:

Machine Tools Industry is a strategic industry with around 200 machine tool manufacturers in the organized sector as also around 400 small scale units. The industry lacks series of operation and in design and engineering capability to undertake high precision CNC Machines. Due to technology gaps in the field of metal cutting machine tools, metal forming machines, special technologies and critical components development etc. the import of technology as well as R&D initiatives are encouraged to bridge the gaps.

Specified areas where technology is required were identified and discussions with IITM took place for the development of these technologies. Advance Technology Centre of Excellence has been set up in IITM to address the technology gaps and for manufacturing world class Machine Tools. For enhancing the production to meet the ever-growing domestic demand of hi-tech

machine tools, an integrated Machine Tools Park has also being set up by the Department in collaborations with the Government of Karnataka at Tumkur near Bengaluru. Total Productive Maintenance (TPM) programmes in association with UNIDO and CII for CG Sector including Machine Tools Industry is also being taken up by the Department.

3.1.2. Textile Machinery Industry:

Textile Machinery Industry is a significant component of the capital goods industry. This industry comprises of over 1446 machinery and component manufacturing units with over 600 units producing complete machinery and other units are mainly into the production of parts and accessories of textile machinery. The textile machinery includes sorting machinery, carding machinery, processing machinery of yarns/fabrics, weaving machinery etc.

There are technology gaps in areas like weaving, processing, special purpose finishing machines, knitting and garmenting machineries and critical components such as auto-coner and rotor spinning machine with automation, wider width processing machines, etc. There is insufficient in-house R&D in this industry as well as absence of large foreign/domestic players in weaving and processing machineries.

Central Manufacturing Technology Institute (CMTI) has been entrusted for the development of medium & high speed shuttle less loom's technology. Linkage with one of the Indian Institutes of Technology (IITs) for technology development with industry with the objective of long term strategy is proposed. Common Engineering

Facility Centre for textile machinery ancillary units is also planned for the manufacture of quality products with cost competitiveness.

3.1.3. Plastic Processing Machinery Industry:

There are 11 major manufacturers of machinery in the organized sector and nearly 200 small & medium manufacturers. Major plastic machineries manufactured in the country include Injection Moulding Machine, Blow Moulding Machine and Extrusion Moulding Machine.

Domestic manufacturers are able to meet 95% of processing industry needs on technology and product range. World leading companies have manufacturing presence in the country through wholly owned subsidiaries or technology license arrangements.

3.1.4 Dies, Moulds & Tools Industry:

Indian Tool Room Industry is very fragmented and consists of more than 500 commercial tool makers engaged in design, development and manufacturing of tooling in the country. In addition to commercial tool makers, 18 Government Tool Rooms cum Training Centres are also operating in the country. The key commercial Tool Room locations are Mumbai, Bengaluru, Chennai, Pune, Hyderabad and NCR. A Common Engineering Facilities Centre for Tool Rooms in and around Pune area is being set up in Chakan, Pune with grant from Department of Heavy Industry.

3.1.5 Process Plant Equipment:

There are over 200 Units engaged in the manufacturer of process plant machinery

in the country out of which 65% are small & medium manufacturers. Major process plant machineries which include tanks pressure vessels, evaporators, stirrers, heat exchangers, towers & columns, crystallizer, furnace, etc. are used in energy sector, gas, oil, refinery, chemical & petrochemical, fertilizer, paper & pulp, sugar, cement, dairy industry, etc.

The sector today is equipped with state of the art processes to engineer and fabricate complex process equipments across different materials of construction. The plant sizes of these companies have also increased and at times are comparable or even larger than global companies.

However, domestic industry lacks know-how on process technology, owing to which, sector is dependent on Overseas Process Licensors. However, China, on other hand has attempted to get the knowhow on process technology, by setting up research institutes and labs and acquiring such expertise from other regions. At operational level, Welding, Forming, Machining technologies could be improved to enhance the productivity. Target technologies to be developed are Sub Sea Equipment, Oil well drilling, Process gas Boilers for Ethylene and Gas Crackers, etc.

3.1.6. Earth Moving Construction and Mining Equipment:

Currently 20 large & global manufacturers and nearly 200 small & medium manufacturers of earthmoving & mining machinery are present in India. The product range comprises of Backhoe Loaders, Compactors, Mobile Cranes, Pavers, Batching Plants, Crawler Crane, Transit Mixer, Concrete Pump, Tower Cranes, Hydraulic Excavators, Dumpers, Mining Shovel, Walking Draglines, Dozers, Wheel Loaders, Graders, Drilling Equipment, etc.

In India open cast mining is much more popular than underground mining. Hence, the equipment required for the open cast mining like Dumpers, Dozers, Shovels, Draglines and Excavators are manufactured in India.

Based on the Industry forecast for the next 20 years, there is a need to develop indigenous capability in respect of Electric Dump Trucks~190 ton-240 ton, Rope shovels ~ 42 cum, Walking Draglines ~ 72 m-33 Cum; 150m-50 cum, Hybrid Drive Loaders ~ 10 cum bucket, 2500 HP Electronically Controlled Emission Compliant Engine, Long Wall Mining Systems and Continuous Miners for underground mines, etc to be able to meet the market demand, bulk of which is currently imported.

The data of production, Export and Import of sub-sectors of Capital Goods Sector are as under:

PRODUCTION

(₹ in crores)

Sub -sectors	2013-14	2014-15	2015-16	2016-17	3 yr CAGR
Machine Tools	3,481	4,230	4727	5803	18.6%
Textile Machinery	6,775	6,960	6580	6650	(-)0.6%
Earthmoving & Mining Machinery	16,000	17,000	19375	24945	16.0%
Heavy Electrical Equipment	128,823	137198	144861	159221	7.3%
Plastic Machinery	2,660	2,950	3300	3690	11.5%
Process Plant equipment	18,000	18,900	19000	19500	2.7%
Dies, Moulds & Press Tools	13,793	14,647	15000	14750	2.3%
Printing Machinery	160,69	15748	16916	16424	0.7%
Metallurgical Machinery	1,200	1,260	1386	1525	8.3%
Food processing machinery	11,750	20,000	15000	13000	3.4%
Total	218,551	238,893	246145	265508	6.7%

IMPORTS

(₹ in crores)

Sub -sectors	2013-14	2014-15	2015-16	2016-17	3 yr CAGR
Machine Tools	4,672	5,318	5945	6173	9.7%
Textile Machinery	7,546	7,814	10305	10098	10.2%
Earthmoving & Mining Machinery	12,689	12056	12858	14520	4.6%
Heavy Electrical Equipment	58,354	55,987	53986	55291	-1.8%
Plastic Machinery	1,250	1,350	1620	1863	14.2%
Process Plant equipment	9,820	12,933	13360	11925	6.7%
Dies, Moulds & Press Tools	3,081	3,322	2800	1200	-27.0%
Printing Machinery	6,042	6,381	7051	7734	8.6%
Metallurgical Machinery	3,817	2,593	2739	2202	-16.8%
Food processing machinery	5,200	5,500	12053	12656	34.5%
Total	112,471	113,254	122,717	123662	3.2%

EXPORTS

(₹ in crores)

Sub -sectors	2013-14	2014-15	2015-16	2016-17	3 yr CAGR
Machine Tools	247	281	296	360	13.4%
Textile Machinery	2,604	2,822	2351	2438	-2.2%
Earthmoving & Mining Machinery	6,460	7,385	7543	7849	6.7%
Heavy Electrical Equipment	29,227	35,418	38580	39280	10.4%
Plastic Machinery	821	901	750	810	-0.4%
Process Plant equipment	7,194	7,684	8956	9291	8.9%
Dies, Moulds & Press Tools	2,694	2,869	2300	1700	-14.2%
Printing Machinery	1,421	1,255	1366	1332	-2.1%
Metallurgical Machinery	1,137	1,104	1056	1358	6.1%
Food processing machinery	2,050	13,659	8728	9165	64.7%
Total	53,855	73,378	71,926	73583	11.0%

3.2 Capital Goods Scheme

A Scheme for 'Enhancement of Competitiveness in the Indian Capital Goods Sector' is in operation since 2014. The Scheme aims to make Indian Capital Goods Industry globally competitive by addressing the issue of improving technology depth and setting up Common Industrial Facility Centres. The Scheme has a total outlay of ₹ 930.96 crore which includes Government budgetary support of ₹ 581.22 crore. The Scheme envisages active industry participation and also mandates industry contribution in all but one of its components. The Scheme has infrastructural components for setting up Centre of Excellence (CoE) for technology development, Integrated Industrial Infrastructure Facility (IIIF), Common Engineering Facility Centre (CEFC) and Test and Certification Centre (T&CC). The Scheme also provides for

financial intervention through Technology Acquisition Fund Programme for acquisition or transfer of technology in Capital Goods Sector. Under different components of the said Scheme, so far, 27 proposals have been approved, which are under different stages of implementation with active participation of the Industry.

3.2.1 National Policy on Capital Goods

The National Capital Goods Policy was launched in the year 2016. After the launch of the National Capital Goods Policy, the Department of Heavy Industry is working closely with Industry to meet the goals set forth in the Policy which is to treble production in the capital goods sector and to treble employment opportunities in the sector, among other things. DHI is working on schemes to achieve the objectives of the National Policy on Capital Goods.

4.1 Overview of the Automotive Industry

Automotive Industry globally is one of the largest industries and is a key driver of economy. Owing to its deep forward and backward linkages with several key segments of industry, automotive industry has a strong multiplier effect on the economy. The well-developed Indian automotive industry of India ably fulfils this catalytic role by producing a wide variety of vehicles such as passenger cars, light, medium and heavy commercial vehicles, multi-utility vehicles, scooters, motor-cycles, mopeds, three wheelers, etc.

Automobile Industry was delicensed in July 1991 with the announcement of the New Industrial Policy. The passenger car was however delicensed in 1993. The norms for foreign investment and import of technology have also been progressively liberalized over the years for vehicles manufacturer including passenger cars in order to make this sector globally competitive. At present 100% Foreign Direct Investment (FDI) is permissible under automatic route in this sector including passenger car segment. With the gradual liberalization of the automobile sector since 1991, the number of manufacturing facilities in India has grown progressively. Aptly, the sector was christened as the '**Sunrise Sector**' of the economy.

Indian Automobile Industry which was at its nascent stage at the beginning of the 21st century has now become a huge industry that contributes majorly to growth and development of Indian Economy. As per the current statistics, the auto Industry's turnover is estimated to be equivalent to 7.1% of overall GDP. The auto industry currently employs more than 32 million people both directly and indirectly. The auto-industry is a key employment generator in the OEM factory that manufactures the vehicles, in the inbound auto component and logistics industry that makes and delivers component & systems and the outbound logistics and dealer network that sells, maintains and distributes the cars. Every vehicle produced, generates secondary and tertiary employment. The industry generates employment of 13 persons for each truck, 6 persons for each car and four persons for each three wheeler and one person for two-wheelers. It is important to appreciate the sector's multiplier effect on economic activity. If the industry produces as per its potential, it could support

employment of over 65 million people by 2026. If the Government's objective is to achieve the target of Make in India then the role of auto industry cannot be ignored and the industry has already made investments to achieve this objective and have increased

the capacity to levels that would be needed to achieve the objective.

The Industry has potential to grow to become a major economic contributor. The Government also recognizes the importance of the automobile industry in the Indian economy and hence is currently working with targets set in the Automotive Mission Plan 2016-26. The Department of Heavy Industries is also developing an automotive policy for holistic development of India.

Production: The Industry produced a total 14.7 million vehicles including passenger vehicles, commercial vehicles,

three wheelers and two wheelers in **April-September, 2017** against 13.4 million in **April- September, 2016** (**% of growth rate is 9.18%**)

Exports: In April-September 2017, overall automobile exports is 1.95 million against the same period i.e. **April-September 2016** is 1.76 million (**% of growth rate is 10.71%**).

The details of automobile production, domestic sales and export of various automobile segments during the year 2012-13 to 2016-2017 and 2017-2018 (up to September 2017) are given below:

Domestic Automobile production:

(No. in thousands)

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 {Apr.– Sep.}
No. of Produced	20,626	21,481	23,366	24016	25314	14675
Growth %	1.20	4.04	8.68	2.82	5.41	9.18

Sources: SIAM

Automobile export:

(No. in thousands)

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 {Apr.– Sep.}
Number of Export	2,898	3,107	3,573	3643	3478	1945
Growth percent	(-)0.41	7.21	14.89	1.96	-4.53	10.71

(Source: SIAM)

4.2 Auto Components Industry

Auto Components Manufacturers Association (ACMA) represent over 700 companies which contribute over 85% of the total Auto component output in the organized sector. It supplies components to vehicle manufacturers as original equipment, tier-one supplier, state transport

undertakings, defence establishments, railways and also to the replacement market. A variety of components are also being exported to OEMs and after- markets worldwide.

Performance of the Indian Auto Component Industry showed healthy growth of 14.3 percent posting ₹. 29,2184 crore/USD 43.5

billion turnover in the FY 2016-17. While the exports showed a growth of 3.1 percent scaling to ₹ 73,128 crore/ USD 8.4 billion in FY 2016-17. The Aftermarket grew by 25.6 percent to ₹ 56,096 crore/ USD 8.4 billion from ₹ 44,660 crore/USD 6.8 billion

in the previous fiscal.

The overall details of Automotive Components Industry-Performance are given below:

[₹ in 100 Crore]

Year @	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	CAGR
Turnover	2047	2161	2118	2349	2556	2922	7%
% Growth	15.70%	5.60%	-2.00%	11.1%	-8.8%	14.3%	
Exports	427	527	615	685	709	731	11%
% growth	40.7%	23.30%	16.70%	11.4%	3.5%	3.1%	
Imports	667	744	771	829	906	905	6%
% growth	34.3%	11.60%	3.60%	7.5%	9.3%	-0.1%	

Source ACMA

4.3. Agricultural machinery & Tractors Sector:

Agricultural Machinery mainly consists of Agricultural Tractors, Power Tillers, Combine Harvesters and other Agriculture Machineries & Implements. Due to negligible production of Power Tillers, Combine Harvesters and other Agricultural Machineries, this sector is mainly dominated by Agricultural Tractors. Indian Tractor Industry is the largest in the world (excluding sub 20 HP belt driven tractors used in China), accounting for one third of the global production. The other tractor markets in the world are China and United States.

Indian Tractors were exported to US and other countries like Malaysia, Turkey, etc. Indian players have aggressively started exporting to African countries by bidding for government tender requirement. As

such, Indian tractors are gaining acceptance in international markets. As the cost of tractors in India is cheapest in the world, there is tremendous scope for improvement of export of tractors in future.

4.4 Important initiatives taken in respect of auto sector by the Department of Heavy Industry (DHI):

DHI being the nodal Department for automobile and auto component industry, takes up an array of issues relating to automobile sector at various platforms for its growth. In this regard, DHI has taken various important initiatives, as outlined below:

4.4.1 Development Council for Automotive and Allied Industries (DCAAI):

The Development Council is under the chairmanship of Secretary, Heavy Industry. Issues relating to the growth of the sector

and achieving AMP targets were focused upon. This forum provides an opportunity to identify key areas of concern for which appropriate policy modulations and other identified areas of action can be taken up by various Ministries/Departments of the Government of India. According to the Industries (Development and Regulations) Act, 1951, *“A Development Council shall perform such functions of a kind specified in the Second Schedule as may be assigned to it by the Central Government and for whose exercise by the Development Council it appears to the Central Government expedient to provide in order to increase the efficiency or productivity in the scheduled industry or group of industries renders or could render to the community or to enable such industry or group of industries to render such service more economically”*.

4.4.2 Auto Cess Committee:

Cess on sale of automobiles is levied as per notification issued in 1983 @ 1/8th of one percent in terms of the Industries (Development & Regulation) Act, 1951. As per law, this is to be made available to the Development Council for the benefit and development of the scheduled industry (in this case automotive cess). For sake of administrative convenience this Cess is collected along with excise duty collections but is maintained in a separate head of account. This money is being used by Development Council for Automotive & Allied Industries (DCAAI) that is chaired by Secretary, DHI to fund pre-competitive R&D projects for the benefit of the industry

through a transparent process of Cess Committee which is chaired by Secretary, DHI. The proposals sent are evaluated by a Screening Committee and Technical Sub-committee. All decisions of the Cess Committee and the status of various funded projects are reported to and also discussed in the DCAAI. During the last FY-2016-17, ₹ 44.22 crore (excluding the amount released to UNIDO-ACMA project) was released for funding various projects. After introduction of GST, the Auto Cess has been subsumed. However DHI has asked for budgetary support in line of Auto Cess, to continue with the projects being supported.

4.4.3 UNIDO-ACMA-DHI Cluster Development Project:

The project aims to provide practical services to Small and Medium Enterprises (SMEs) for enhancing the performance of domestic SMEs in the automotive component industry to facilitate their inclusion into national, regional and global supply chain requirements (quality, cost and delivery), to upgrade and enhance the competitiveness of an increasing number of target companies along the supply chain in India, including lower tier suppliers. US \$ 320,895 as released during the FY.2016-17. UNIDO & ACMA are implementing Phase I of UNIDO-ACMA-DHI project since 2014 and it is scheduled to be completed by March, 2017. The Phase II of this programme is under consideration.

4.4.4 Indo-German Joint Working Group (JWG) on Automotive Sector:

Indo-German Joint Working Group (JWG) on automotive sector was established

under the aegis of Indo-German Joint Commission on Industrial and Economic Cooperation (JCM). This is the fifth JWG; the other four groups are in the areas of Agriculture, Coal Infrastructure and Tourism. The first meeting of the JWG held on 6.2.2009 in New Delhi constituted on (i) Technology, (ii) Commercialization & Framework Development and (iii) Institutional Cooperation, Training & Skill Development. The last meeting of this Joint Working Group co-chaired by Joint Secretary, DHI was held on 2nd May, 2017 in Berlin for evaluation of best practises in charging infrastructure for electric vehicles. The 67th IAA International Motor Show was held on 14th September, 2017 in Frankfurt, Germany which was visited by delegation led by Hon'ble Minister (Heavy Industries & Public Enterprises). Also, the next meeting of JWG is scheduled to be held in India in February 2018.

4.4.5 Automotive Skill Development Council (ASDC):

Department of Heavy Industry has taken an initiative for "Formulation of Skill Development Plan" with a view to make available adequate, trained manpower for sectors like machine tools, heavy electrical, auto industry etc. so as to ensure proper streamlined and high growth rate during the current fiscal and in future. As far as auto sector is concerned, the task of identifying the skill gaps in the industry was undertaken through the specialized group formed during the framing of AMP 2006-16, whereby the industry was expected to require an additional 25 million workforce by 2016. Based on the deliberations held in

the Department on various occasions, the Society of Indian Automobile Manufacturers (SIAM) prepared a Detailed Project Report (DPR). Accordingly, an Automotive Skill Development Council (ASDC) has been set up under the oversight of NSDC. ASDC was incorporated as a society under the Societies Registration Act, 1860 in March 2011.

ASDC ACTIVITIES

Conducting Research

1. Continuous research of skill gap in Auto Sector
2. Identifying trades to be taken up for skill development
3. Developing Competency Standards for the Sector with inputs from the Auto industry
4. Benchmarking with international standards
5. Productivity analysis of human resources
6. Maintaining Data base of skilled manpower in Auto Sector

Delivery Mechanism

1. Affiliation of Training Delivery Partners
2. Certifying content/curriculum to ensure alignment with ASDC standards
3. Training the Trainers
4. Providing career guidance to students & assisting in employment

Quality Assurance

1. Developing assessment mechanism for trainers/ students

2. Developing Certification framework as per Occupation Standards
3. Certification of Skill Training course curriculums
4. Accreditation of Training Delivery Partners and Assessment Partners
5. Assessment & Certification of Trainers & Students

4.4.6 End of Life of Vehicle (ELV) Policy:

While MoRTH is reported to be engaged in preparing draft legislation for End of Life of Vehicle Policy in consultation with all stakeholders, the main role of DHI in the matter is to provide/create a proper roadmap, considering all related aspects before such a policy is laid out. There is a need for creating infrastructure for dismantling of vehicle in a scientific and environment friendly manner. There is an immediate need for generating awareness and public opinion for voluntarily giving the old vehicles for dismantling, for which incentives or some policy structures are to be created. There are other issues related to working out compensation structure for vehicle owners, setting environment/public health/safety parameters for scrapping, system for collection of vehicles to scrapping/dismantling centres, linkage between recycling or raw materials and location of scrapping centres etc.

4.4.7 Voluntary Vehicle Recall Information:

The vehicle recall is as per SIAM's guidelines "Voluntary Code on Vehicle Recall" announced in July 2012. This guideline addresses the potential issues that

exist in a motor vehicle that do not meet safety requirements due to a manufacturing defect and subsequent remedial actions. A vehicle is covered under safety recall for seven years and targets the first buyer. The decision on recall takes into account the degree of seriousness or severity of any possible hazard involved. This data is maintained by SIAM with a link on DHI website which is updated on a regular basis.

4.4.8 Scheme for Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India–FAME-India Scheme:

Government of India approved the National Mission on Electric Mobility in 2011 and subsequently National Electric Mobility Mission Plan 2020 was unveiled in 2013 by the then Hon'ble Prime Minister. As part of the mission, the Department has formulated a scheme namely FAME-India [Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India]. The overall scheme is proposed to be implemented over a period of 6 years till 2020, wherein it is intended to support the hybrid/electric vehicles market development and its manufacturing eco-system to achieve self-sustenance at the end of the stipulated period. Government is committed to instill confidence in the industry and allow them to plan requisite investments and create needed capacities. This shall also enable the scheme to align with "Make in India" initiative. The scheme shall have 4 focus areas i.e. Technology Development, Demand Creation, Pilot Projects and Charging Infrastructure. The Phase-I of the scheme, which was originally for a period of 2 years commencing from 1st April, 2015

till 31st March, 2017, has been extended till 31st March, 2018.

The Scheme is one of the green initiatives of the Government of India, which will be one of the biggest contributors in reducing pollution from road transport sector in near future. This scheme is aimed at incentivizing all vehicle segments i.e. 2-Wheelers, 3-Wheeler Auto, Passenger 4-Wheeler Vehicles, Light Commercial Vehicles and Buses.

During the year 2017-18, following amendments were made in the FAME-India Scheme:

- (i) The Phase-I of the Scheme was further extended for a period of 6 months i.e. upto 30.09.2017 and "Mild Hybrid" technology was excluded from benefits under FAME-India Scheme w.e.f. 01.04.2017 vide Notification S.O. 1055(E) dated 30.03.2017.
- (ii) Electric 3W (with maximum speed not exceeding 25 km/hr) has also been included for availing incentive under the scheme Vide Notification S.O. 2199(E) dated 04.07.2017.
- (iii) L5 category has been included in the Retro fitment category vide Notification S.O. 2198(E) dated 12.07.2017.
- (iv) The Phase-I of the Scheme was further extended for a period of 6 months beyond 30.09.2017 i.e. upto 31st March, 2018 vide Notification S.O. 3013(E) dated 12.09.2017.
- (v) Fully Electric Bus has also been included for demand incentive under the Scheme Vide Notification S.O. 3012(E) dated 12.09.2017.

During the financial year 2017-18, an amount of ₹ 175 Crore (BE 2017-18) was allocated for this Scheme, out of which an amount of ₹ 85.49 crores (approx.) has already been utilized for this scheme. Through this scheme about 1,54,000 electric & hybrid vehicles have been given direct support by way of demand incentives (total incentive amounting to ₹ 202.72 crore) since its launch on 1st April, 2015 and till 30th September, 2017. During current Financial Year 2017-18, from 1st April, 2017, nearly 16,000 vehicles were supported by demand incentive till 30th September, 2017.

Further, during Financial Year 2017-18, the Department has approved the Pilot projects, projects of charging infrastructure and project of technological development worth ₹ 17.50 crore. Some of the projects approved are for 200 (150-AC & 50 DC) Charging Stations at Delhi, Jaipur & Chandigarh, 75-AC Smart Chargers in NCR, 60 Nos. DC-Charging infrastructure, Pilot project for Five Electric Buses at IGI Airport and Design & Development of AC-DC Combined Public Charging Stations. The details of Fund Utilization during the Financial Years 2015-16 to 2017-18 are as under:

[₹ in Crore]

Financial Year	Fund Allocation	Fund Utilization
2015-16	75.00	75.00
2016-17	144.00	144.00
2017-18	175.00	85.49(Till 30/09/2017)
TOTAL	394.00	304.49

4.4.9 National Automotive Board (NAB):


The Government had approved the setting up of National Automotive Board (NAB) as an autonomous Society under the Department of Heavy Industry (DHI). NAB is intended to be a lean organization housing auto sector technical and domain expertise that will also bring on a single platform the multitude of agencies and Ministries that currently have a role to play in shaping the policies, regulations and interventions that impact the automotive sector thereby providing a holistic approach for the growth and development of the sector. Consequent upon the Cabinet Approval in October, 2012 for setting up of National Automotive Board (NAB) as an autonomous Society under DHI, NAB has been registered by the registrar of Society under the Societies Registration Act XXI of 1860 on 27th August, 2013 vide registration No. S/ND/311/2013. NAB's MOA and Rules & Regulations have also been registered.

The key functions assigned to National Automotive Board as contained in Cabinet Note are mainly three types of functions namely:

(a) **Key Functions** which *inter-alia* include Administer, Monitor, Coordinate, Regulate and Synergize the functioning of the testing Centres under DHI, Capacity building, standardization of testing procedures, Issuance of testing & homologation certificates based on test reports submitted to NAB by the testing Centres, To be the repository of technical data, domain knowledge

and expertise for providing advice, technical inputs and secretariat assistance for auto policy related issues, Develop skills sets and competence in the area of automotive R&D and testing etc.

- (b) **Core Functions** : which include inter-alia to prepare policies and carry out Accreditation of test labs, Look after the entire spectrum of initiatives and issues relate to the electric mobility in automobile sector, Design & Administration of New Vehicle Assessment Program [NVAP], To function as a National Repository of Data relating to Automotive Sector and undertake Analysis, Collaborate with the Road Safety Board under MoRTH, Coordinate R&D Projects funded by various organizations like Cess Fund co-relation audit and benchmarking, Appellate Body for any test related disputes, Development of Manpower Capability in the areas of emerging automotive technologies, Fostering and promoting exchange with industry and academia, (MoU and international and national exchange programs).
- (c) **Facilitative Functions**: which include inter-alia to function as a National Certification Board for vehicles and components and to issue Certificates for vehicles and components based on the test reports issued by the accredited test agencies, Study of feasibility for adoption of International Harmonization of regulations, Publication of standards,



Regulations and Information of Public Interest, Promotion of Indian Regulatory system for automotive testing internationally etc.

An incentive scheme to be known as **“DEMAND INCENTIVE DELIVERY MECHANISM (DIDM)”** has been launched to promote and create the demand of electric vehicles in the country effective

from 1st April, 2015. National Automotive Board (NAB) shall be the operating agency for the implementation of the scheme including disbursement of funds for the various components under the overall supervision and direction of Heavy Industry. So far demand incentive provided for about 1,54,000 electric & hybrid vehicles till September, 2017 and about ₹ 202.72 crores has been reimbursed to various OEMs.

Technology Up-gradation and R&D

5.1 India has established a strong and diversified manufacturing base for the production of a wide variety of basic and capital goods to meet the requirements of various sectors including heavy electrical, power generation and transmission industries, process equipment, automobiles, ships, aircrafts, mining, chemicals, petroleum, etc. However, share of manufacturing sector in India's economy is still quite low. There is a considerable potential for growth which, in a globalised world economy, has to be based on improving productivity and competitiveness. Innovation and adoption of new technologies are the key factors in competitiveness. In the Indian context, opening of the economy and consequently the entry of international players has substantially enhanced the need for production of goods and services matching international standards. Indian Industry has undertaken a number of steps to meet the needs of the customers in a fast changing environment. PSEs under the Department are also pursuing their plans to adopt and adapt new technologies through collaboration and in-house R&D efforts. Some of the initiatives in this regard are described below:

5.2 Testing and R&D infrastructure for Automotive Sector

National Automotive Testing and R&D Infrastructure Project (NATRIP) is the largest and one of the most significant initiative of the Government of India in the Automotive sector so far and represents a unique joining of hands between the Government of India in Dept. of Heavy Industries, a number of State Governments and Indian Automotive Industry to create a *state-of-the-art* Testing, Validation and R&D infrastructure in the country.

The project principally aims at:

- i Creating critically needed automotive testing infrastructure to enable the Govt. in ushering in global vehicular safety, emission and performance standards.
- ii Deepening manufacturing in India, promoting larger value addition leading to significant enhancement of employment potential and facilitating convergence of India's strengths in IT with automotive engineering.
- iii Enhancing India's global outreach in this sector by de-bottlenecking exports, and providing basic product testing, validation and development infrastructure for automotive industry.

Under National Automotive Testing and R&D Infrastructure Project (NATRIP), the following centres have been set up on grant received for

setting up testing:-

- i. International Centre for Automotive Technology (ICAT), a full-fledged testing and homologation centre within the northern hub of automotive industry at Manesar in the State of Haryana;
- ii. Global Automotive Research Centre (GARC), a full-fledged testing and homologation centre within the southern hub of automotive industry at a location near Chennai in the State of Tamil Nadu;
- iii. Up-gradation of existing testing and homologation facilities at Automotive Research Association of India (ARAI), Pune and at Vehicle Research and Development Establishment (VRDE), DRDO, Ahmednagar;
- iv. National Automotive Test Tracks (NATRAX), world-class proving grounds, testing tracks in Indore, Madhya Pradesh;
- v. National Institute for Automotive Inspection Maintenance and Training (NIAIMT), National Specialized Hill Area Driving Training Centre as also Regional In-Use vehicle management Centre at Dholchora (Silchar) in the State of Assam.
- vi. National Center for Vehicle Research and Safety (NCVRS) Raebareli, which has subsequently been wound up as per decision of CCEA and facilities of Accident Data Analysis Center (ADAC) reassigned to ICAT and GARC.

All NATRIP R&D test centers will have world class testing facilities and also aim at attracting customer for various parts of the world. The centers will also involve in advanced research in

the areas mentioned above besides collaboration in technology upgradation

5.2.1 Approval Funding Pattern

The cabinet Committee on Economic Affairs (CCEA) in the month of July, 2016 has approved the second revised cost estimate of ₹ 3727.30 Cr. on account of the Foreign Exchange variation, Statutory Levies, Rise in Input costs, Other Factors like change in Scope of Supply etc as per the following funding pattern:

A.	Plan supported by the Government By way of Grant	: ₹ 2628.17 Crore
	By way of loan	: ₹ 780.35 Crore
B.	User Charges	: ₹ 50.00 Crore
C.	Interest Accrued	: ₹ 264.43 Crore
D.	Liquidated Damages:	₹ 4.35 Crore
	Total	: ₹ 3727.30 Crore

Current Status of various facilities planned under NATRIP at the respective center

International Centre for Automotive Technology (ICAT):

- a. Powertrain Lab consisting of Vehicle Test Cell, Engine Test Cell, Climatic Vehicle Test Cell, Mileage Accumulation Chassis Dynamometer (MACD) Lab for 2&3 wheelers and 4x4 wheelers and Sealed Housing Evaporation Determination (SHED) facility for 2 wheelers and Passenger cars are operational. These facilities have been upgraded to meet emission norms upto Euro VI.
- b. Fatigue consisting of X-poster, Universal test benches, MAST for component and

- Vibration Shakers with Climatic Chambers are operational.
- c. The Passive Safety lab comprising of Pedestrian & Crash Core Facilities is operational.
 - d. Certification Lab consisting of Pendulum Test Rig for Plastic Fuel Tanks, Head Restraint Test Rig, and Interior Fitment Test system, Window Retention Test Rig, Knee Contact Test Device, Projection Measurement Device, Manikin and Universal Pneumatic Actuator, Side door strength test rigs, Hazemeter, Demisting and Defrosting, Small Environmental Chamber, Environmental Chambers, Tilt Test Platform under the Certification Lab are operational. The up-coming facilities are Seatbelt anchorage test rig, Resistance of seats for buses coupling devices test rigs, Cab pendulum test rig, Vehicle vertical orientation test set-up.
 - e. Rapid Prototyping facility for Metal and Plastic Prototypes under the Component Lab is operational.
 - f. CAD-CAE lab comprising of software like Abaqus, Hyperworks, CATIA, Siemens, NASTRAN, Altair, MSC Fatigue and Adams is operational.
 - g. MATLAB, Measurement Calibration & Diagnostic Tools (MCDF), Hardware in Loop (HIL) system for Single ECU test bench for Powertrain & Chassis and Rapid prototyping of ECU under Infotronics lab are operational.
 - h. The Semi Anechoic Chamber for component and Vehicle Semi Anechoic Chamber under Electromagnetic Compatibility (EMC) lab is operational to meet homologation requirements for electromagnetic compatibility.
 - i. Civil works for the Noise, Vibration and Harshness (NVH) Lab is completed. The Installation and commissioning of the equipment is under progress.
 - j. Test Track Instrumentation such as Pass by Noise measurement device, the Data Acquisition System, Vehicle Dynamics Sensors, Fuel Flow meter, Steering Wheel Sensors and Longitudinal Speed Sensors are commissioned.
 - k. Homologation Tracks along with associated utilities is partially operational while remaining work is under progress.

Global Automotive Research Centre (GARC),

- a. **Powertrain Lab:** The Mileage Accumulation Chassis Dynamometer (MACD) lab for 2&3 wheelers and 4x4 wheelers is operational. The civil works for the Powertrain lab building is 95% complete. The M&E and Utility works are under progress.
- b. **Fatigue Lab:** This facility consisting of Vibration Shakers and Environmental Chambers, Universal Test Bench (UTB) for cyclic actuators, Multi axial Simulation Table (MAST) with Climatic chamber and Four Poster is operational.
- c. **Certification Lab:** This facility consisting of Interior fitment test rig, Head restraint test equipment, Universal Tensile Machine (UTM), Bumper pendulum, Fuel tank pendulum, Window retention test equipment, Durability of retractor, Microslip, G-Lock test rig, Pneumatic

Coupling and Bus window cyclic actuators, Tilt test platform, Environmental chambers, Side door strength, Demisting facility, Hazemeter, Impact resistance test rig for rear view mirrors, Fuel tank overturn test rig, Warning triangle test rig are operational. The upcoming facilities under certification lab are Salt spray chamber, dust chamber, Ozone chamber and UV Chamber, Seat belt anchorage test rig, Ball drop, Fire resistance test rig for fuel tanks, Defrosting equipment, Coupling device test rigs and Cab pendulum test rig.

- d. **APSL:** The pedestrian lab and Air bag lab with Climatic chamber under Passive Safety Lab is operational. The civil works for the Full vehicle crash test like Frontal crash, Angular crash and Rollover is under progress.
- e. **EMC Lab:** The installation of the Semi Anechoic chamber's for two, three and 4 wheeler vehicle under Electromagnetic Compatibility (EMC) lab are under progress. The Component Semi Anechoic chamber is the upcoming facility.
- f. **CAD-CAE:** CAD-CAE lab with software's SIEMENS NX, CATIA V6, MSC Fatigue and Altair Hyper works is operational.
- g. **Infotronics Lab:** MATLAB, Measurement Calibration Diagnostics and Fleet Validation (MCDF), Hardware in Loop (HiL) for Powertrain and Chassis ECU's and Rapid Prototyping are operational.
- h. **Test Tracks:** External Noise Track, Steering pad track, Test Hills track, High Speed track and Braking Surface track are completed and operational. Also the Pass by noise

measurement device, Data Acquisition system (DAS), Vehicle Dynamic sensors, Fuel flow meter, Longitudinal speed sensors, Steering wheel sensors, Brake sensors, thermocouple and pressure gauges are commissioned and operational.

- i. **Photometry Lab:** This facility consisting of Goniophotometer, Integrating sphere, Reflectance and transmittance measurement, Profile Projector and Retro reflector test are operational.
- j. **Recycling Demo Unit:** This facility consisting of vehicle dismantling equipment, Bailing press and Wiring Harness Recycling plant are operational.
- k. **Accident Data Analysis centre:** GARC has planned to collect the Accident datas from Tambaram to Chengalpetu NH-45 with the support of Tamil Nadu Government.

National Automotive Test Tracks (NATRAX)

- a. Installation and Commissioning of the equipments in vehicle dynamic lab viz. Single axle K&C (Suspension parameter measuring machine) Test rig, Steering test rig (durability and performance of steering system), Damper test rig (performance of shock absorber), Elastomer test rig (performance of suspension bushing and engine mounts) have been completed. The facility under vehicle dynamics lab is mainly meant for developmental tests of full vehicle suspension and individual components. All the testing equipments are imported and such testing facilities were not available in India which are widely used by suspension designers for Ride handling and tuning of suspension system. This lab is operational

after trial runs on many vehicle upto LCV's. This lab is also equipped with CAD/CAE facilities which are ready for use.

- b. **Power Train Lab:** The installation & commissioning of 4x4 Chassis Dyno (150KW and max. axle load upto 4500 Kg) and Emission analyzer (Emission system for light duty vehicle with Petrol, Diesel, CNG, LPG, etc) has been completed and the lab is ready for use.
- c. **Other Client Workshop, Maintenance and General Storage Buildings** are completed and it is being used by customers.
- d. The Test Tracks have been divided into two contracts, one All Other Tracks other than High Speed Track (OTT) and the other is High Speed Track (HST).
- i. **Other Test Tracks:** Dynamic platform, breaking track, comfort track, 2 W handling track, Fatigue track, Gravel and Off road track, Gradient track external noise track sustainability track and wet skid pad, has been awarded to M/s L&T w.e.f. December 2014 with initial construction period of 24 months, which is now expected to be completed by November 2017.
- ii. **High Speed Test Track:** The work of completion of balance work of high speed track has been awarded to M/s L&T and the work has resumed w.e.f. March 2017 with construction period of 36 months.

5.2.2 Automotive Research Association of India (ARAI), Pune

- a. ARAI's Homologation and Technology Centre at Chakan, established under NATRiP, has commenced its operations with customer centric approach. The three labs

at this centre, i.e. Passive Safety Laboratory, Fatigue Laboratory and Powertrain Laboratory; have executed various projects for the customers. They have demonstrated their capabilities and competencies meeting specific requirements of the customers. This centre has successfully established itself with execution of projects on test results proving & inter-lab correlation and also has implemented OEM specific practices for seat testing on sled.

- b. Crash Core Test facility, Sled facility, Static Roll Over facility and the Dummy Calibration facility in Passive Safety Laboratory have been installed and commissioned. In Fatigue lab, all facilities, i.e. Drive-in 4-poster with Chamber, Multi Axis Simulation Table (MAST) and chamber, X-poster and UTBs have been installed and commissioned. Similarly, installation and commissioning of Powertrain lab facilities like Climatic Test Cell, Vehicle Test Cell, SHED facility and Mileage Accumulation Chassis Dynamometer has been completed. Fire mitigation system for test cell of Powertrain lab is on hand.

Vehicle Research and Development Establishment (VRDE), DRDO, Ahmednagar

- a. The electro Magnetic Compatibility (EMC) lab is operational.
- b. The Anti-lock Braking System (ABS) test track is operational.

National Institute for Automotive Inspection Maintenance and Training (NIAIMT)

- a. The I&M (Inspection and Maintenance) station comprising of fixed and mobile lanes is operational.

- b. The Mechanic Training Institute (MTI) is operational & conducting courses. The Driving Training Institute (DTI) comprise of “Driving Simulator” along with one Hill driving training track and one flat road training track is also operational & conducting course in association with TATA Motors limited under MoU signed with NATRIP.
- c. Diesel lab, Welding lab, Auto Electric lab, Gasoline lab and Diagnostic & Repair Lab are commissioned.
- d. Under Driving Training Institute (DTI) drivers from of Assam Rifles and Border Security Force were trained to upgrade driving skills.
- e. Recently center has done research work on ***Roller Brake Test Pass-Fail Criterion for Vehicle Fitness Certification, AIS-128, and Scope for Improvement*** and the research paper has been selected for Poster presentation at World Road Meeting (WRM)-2017 conference organized by International Road Federation (IRF) to be held in New Delhi on November 2017.

Exploring the possibilities of further operating of NATRIP center on Public Private Partnership (PPP) mode.

- a. While approving the last Revision of Cost Estimate (RCE-II) in July 2016, CCEA has directed that the burden of operating the NATRIP Centers on the Government should be minimized. Accordingly, in the 64th Governing Council meeting of NATRIP held on 18th July 2017 and chaired by Secretary, DHI, it was decided to explore the possibility of operating all four NATRIP

fully funded centers on Public Private Partnership (PPP) mode by engaging a Consultant (Transaction Advisor) through invitation of Expression of Interest (EOI). The four centers fully funded by NATRIP are as follows:

- I GARC-Chennai
- II NIAIMT-Silchar
- III CAT-Manesar
- IV NATRAX-Indore

- b. Accordingly, Expression of Interest was invited on 18th August 2017. The pre-bid meeting was held on 22nd September 2017 and last date for submission for bids fixed as 4th October 2017. A pre bid meeting was held with prospective bidders in NATRIP HQ on 22nd September 2017. The bids were opened on 11th October 2017 due to such demand by most bidders. A High Level Committee (HLC) meeting was held on 16th October 2017 to evaluate techno-commercial & financial bids received. On the recommendation of HLC, Governing Council, NATIS approved acceptance of offer of M/s Ernst & Young as Consultant (Transaction Advisor) which was the best offer as per combined scoring system adopted in this bid. Kick off meeting was held on 24th October 2017 and, M/s Ernst & Young has commenced the work after getting the letter of Acceptance on 23.10.2017.

5.3.1 The Automotive Research Association of India (ARAI)

Located in the picturesque surroundings in the western part of Pune, Maharashtra, India

and built on approximately 15000 sq. mts area, The Automotive Research Association of India (ARAI) houses various test facilities.

ARAI is a co-operative research organisation that was established in 1966 by the Indian Vehicle and Automotive ancillary manufacturers and the Government of India. ARAI is affiliated to the Ministry of Heavy Industries and Public Enterprises and recognised by the Department of Scientific and Industrial Research. It is an ISO 9001-2008, ISO 14001-2004, and OHSAS 18001-2007 certified organisation and is also accredited by National Accreditation Board for Testing and Calibration Laboratories (NABL) for its major certification facilities.

ARAI is registered as a society under the Societies Registration Act XXI of 1860 and major automobile and ancillary manufacturers are its members. The Governing Council consists of members from Indian Automotive Industry and representatives from Government of India.

ARAI has been playing a crucial role in assuring safe, less polluting and more efficient vehicles. It provides technical expertise in R&D, testing, certification, homologation and framing of vehicular regulations.

The state-of-the-art Research & Development and Testing facilities at ARAI are increasingly utilised for sponsored and in-house Research & Development projects as well as domestic CMVR Type Approval and export homologation activities.

An experienced and well trained human

resource of 685, which includes regular, trainee & temporary contractual employees, is ARAI's main strength. Out of this, 571 are technical and most of them have been trained in various fields of advanced automotive technology.

5.3.2 SIAT 2017

Fifteenth edition of Symposium on International Automotive Technology, i.e. (SIAT 2017) was organized by ARAI in association with SAE India, NATRIP and SAE International (USA) during 18th to 21st January 2017 at ARAI, Pune. It was inaugurated by Shri Sanjay Mitra, Secretary, Ministry of Road Transport and Highways and Shipping, Government of India. The other dignitaries present on this occasion included Dr. R.K. Malhotra, President, SAE India; Shri Sanjay Bandopadhyaya, CEO, NATRIP; Shri T. Mookiah, Associate Director (R&D), VSSC; and Mr. Murli Iyer, Executive Advisor- Global, SAE International. The theme of this edition of SIAT was 'Smart, Safe and Sustainable Mobility', keeping in tune with automotive industry's latest trends and future challenges. During this inaugural ceremony, proceedings of SIAT 2017, India Emission Regulation Booklet and collection of Late Shri Mangesh Tendulkar's cartoons on Road Safety were released. Also, ARAI Golden Jubilee award for the short film making contest on Road Safety Awareness was distributed. A significant event at the ceremony was unveiling of the 'Pilot Electric Vehicle' using indigenous Lithium in Battery'.

SIAT 2017 was successful with participation of around 1400 delegates from 21 countries.

During this symposium 40 keynote papers were presented and 205 technical papers published by experts from India and abroad. A notable feature was organizing of '4 Plenary Sessions' on Smart, Safe, Sustainable & Future mobility. It provided an ideal platform for researchers to put forth and deliberate their ideas to address India specific and global challenges facing the automotive sector. Major focus in this symposium was on recent advancements in automotive technology in different areas such as safety, emissions, engines, electric mobility, electronics, intelligent transportation, etc.

The symposium was complemented with SIAT EXPO 2017, which was organized concurrently and had 178 stalls showcasing latest technology solutions, products and services. A Student Poster Presentation competition was also organized during this event. Based on the theme of SIAT 2017, posters were invited from UG, PG and Ph.D. students on topics, viz. Sustainable Mobility and Smart & Safe Vehicles.

The valedictory function was graced by Shri Anant Geete, Hon'ble Minister for Heavy Industries & Public Enterprises, Government of India as the Chief Guest; and by Mrs. Eva Molnar, Director, Sustainable Transport Division, UNECE as the Guest of Honour. Various SIAT awards and ARAI Young Engineer award (which was contest as part of a project on 'Development of autonomous vehicle) was demonstrated during this function.

5.3.3 Performance

In the financial year ended on 31st March 2017, total income of ARAI was ₹ 289.80 crore, out of which operational income was ₹ 246.15 crore. This year, till 30th September 2017, total income is ₹ 150.19 crore. Anticipated total income for the financial year 2017-18 is ₹ 292.21 crore.

5.3.4 R&D Project

Under its research programme, ARAI undertakes various R&D projects, based on relevance and current needs of the industry, which also aim to build competence and acquisition of technologies. Following R&D projects, were successfully completed during October'2016 to September' 2017 period.

DHI Funded Cess Project:

- Development of Off-line and Real-time Simulator for EV and HEV application.
- Study and development of Lightweight Forging Process for automotive components
- Preparation of Draft Specifications and Standard for AC/DC Charging Stations for xEV Application under Indian Conditions.

Internally Funded:

- Development of Adaptive Front Lighting System (AFS)

Ongoing R&D projects funded by DHI under Cess Funding:

Sl. No.	Name of Project	Expected Project Completion Date
1	Development of Lightweight Bus Prototype with Aluminium (AL) Superstructure for Indian City application, meeting Bus Body Code (AIS:052) requirement	June 2018
2	Development of Duty Cycle of Public and Goods Transport Vehicle separately (intercity bus and truck application) and arrive at guidelines for estimating vehicle operating cost models with respect to pavement conditions	December 2017
3	Study of multi-disciplinary approaches / challenges in light weighting / performance improvements with focus on design optimization of components, systems	March 2018
4	Development of Advanced Low Temperature Diesel Combustion (LTC) System to achieve Euro V & Euro VI emission with considered conversion efficiencies of simplified after treatment with improved fuel economy	December 2018
5	Supercharging of Small (Single and Two Cylinder) Diesel Engines	October 2017
6	Source apportionment of PM2.5 & PM10 of Delhi city for identification of major sources	October 2017

Ongoing R&D projects funded by DHI under FAME-India Scheme:

Sl. No.	Name of Project	Expected Project Completion Date
1	Establishment of testing infrastructure for Certification Testing of xEVs	April 2018

Ongoing Internally Funded R&D Projects:

Sl. No.	Name of Project	Expected Project Completion Date
1	Development of competency for a Parallel Hybrid Small Commercial Vehicle Part 1: Development of Powertrain Control Systems for a Parallel Hybrid Small Commercial Vehicle	January 2018
2	Development of competency for a Parallel Hybrid Small Commercial Vehicle Part 2: Competency development for Control Strategies and Transmission System for Parallel Hybrid Small Commercial Vehicle	July 2018
3	Development of Direct Injection Technology for CNG Engine	March 2018

5.4 Fluid Control Research Institute (FCRI), Palakkad, Kerala

5.4.1 Fluid Control Research Institute, (FCRI) is an autonomous organization under Government of India, Ministry of Heavy Industries and Public enterprises located at Palakkad, Kerala. It has full fledged NABL

accredited laboratories for the calibration/ testing of flow products in water, oil and air media. It is a premier institute in the country rendering industrial services and solutions to industry. The fluid flow laboratories of FCRI are at par with National/International standards for flow measurement and are

accredited by NABL. The facilities are most comprehensive for flow engineering and provide a unique resource for industry in India and abroad. All the facilities are well utilized for sponsored R&D programs as well as calibration/evaluation of flow products. The accreditation has been awarded on the basis of compliance to NABL criteria and as per ISO standard 17025-2005. The laboratories accredited by NABL automatically get the approval from the Asia Pacific Laboratory Accreditation Cooperation (APLAC) and International Laboratory Accreditation Cooperation (ILAC).

5.4.2 The Flow Laboratories at FCRI are at par with similar International facilities in Europe, as have been proved through regular inter-laboratory comparison programmes with National Engineering Laboratory-UK Delft Hydraulic Laboratory-Netherlands, Denmark Tech. Institute-Denmark. NIST-USA and Czech Metrology Institute.

5.4.3 The major objective of the Institute is to establish research and development assistance to the flow product industry and to assist in upgrading quality and reliability of flow measurement and Instrumentation in the country. Higher level skill development and training of industrial personnel is also an integral activity of FCRI.

5.4.4 The quality assurance of flow products at FCRI are by and large carried out with reference to international standards like ISO, ISA, API, ASTM and OIML.

FCRI has the following accreditations from National/International agencies for its facilities:-

- **NABL (National Accreditation Board for Laboratories)** - under ISO 17025 norms for calibration/testing of fluid flow products, mechanical, electro-technical and thermal calibration.
- **BIS (Bureau of Indian Standards)** - for testing samples of products like water meters under BIS certification mark scheme.
- **DST (Department of Science & Technology)** - as R&D Institute in Fluid Flow Measurement.
- **Under Writers Laboratory Inc., USA**-for testing Fire Fighting equipment & product safety certification.
- **W&M (Department of Weights & Measures)** -conducting "Model Approval" tests as per OIML Standard for flow and volume measuring instruments.
- **Central Pollution Control Board**-certification of Petrol and Kerosene generator sets for implementation of noise limits.
- **CCE (Chief Controller of Explosives, Nagpur)** -to conduct tests on safety relief value at FCRI (as per ASME/API).
- **IFE (Institution of Fire Engineers New Delhi)** - for Hydraulic qualification test on firefighting equipments.
- **Ministry of External Affairs** - for conducting Technical Training Program for Foreign Nationals in the field of Fluid Flow Measurement & Control Techniques and Oil Flow Measurement under ITEC/SCAAP/TCS of Colombo Plan.

- NMI, The Netherlands certifies 20 bar Closed Loop Air Test Facility.
- **Nuclear Power Corporation of India Limited-** for seismic analysis of power plant equipment.

5.5 **Central Manufacturing Technology Institute Tumkur Road, Bengaluru**

Central Manufacturing Technology Institute, a premier R&D organization in the manufacturing technology, established in the year 1962, is an autonomous body registered as a Society and under the Administrative control of Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises from January 2017. The institute is assisting Indian Industries to achieve excellence in technology and stimulate economic growth. The Institute is active in metal working technology, evolving solutions to national strategic initiatives and is a one-stop destination for end-to-end solution in manufacturing technology deployment. The Institute is guided by a Governing Council consisting of representatives from industries in manufacturing sector, machine tool manufacturers, Government nominees and other stakeholder.

CMTI continues to support the Indian engineering industry and various sectors through its value added services in manufacturing technology and product development/realization activities. It continues to play a vital role of a catalyst in the application of manufacturing technology. The Institute is equipped with trained manpower, equipment and facilities for design, research, prototype production,

manufacturing, testing, inspection, calibration, product development, training and technical information.

The equipment, facilities and expertise required have been acquired & special civil infrastructure facilities are completed except for the Heating, Ventilation and Air Conditioning (HVAC) for the flagship project Nano Manufacturing Technology Centre (NMTC). The R&D projects that have been completed are now ready to be deployed for commercial applications. Vision lab has been set up to meet the special needs of vision based non-contact measurement. New 'skill development' training courses have been launched to enhance Human Resource Development (HRD) activities through Academy of Excellence Advanced Manufacturing Technology (AEAMT). Regional Centre at Rajkot has been augmented with new measurement facilities to cater to metrology needs of Rajkot region.

As part of "Sensor Technology Development Facility (STDF)" for developing miniature, micro & nano level sensors, infrastructure & packing equipment procurement are in progress.

The design of prototype Development of High Speed Shuttle less Rapier Loom technology is completed and testing is in progress.

CMTI inked NDA with Faiveley Transport Rail Technologies India Limited (FTRTIL) Hosur.

The following projects were approved by DHI during the financial year:

- a Setting up of “Smart Manufacturing Demonstration and Development Cell”, a Smart Manufacturing (Machine Tool Centric) at CMTI encompassing Industry 4.0, IoT (Internet of Things) Platform a CMTI, Bangalore, under the component of Common Engineering Facilities Centre (CEFC) under the Scheme on Enhancement of Competitiveness in the Indian Capital Goods Sector.
- b Modernization of Precision Metrology Laboratory of CMTI under the component of Common Engineering Facilities Centre (CEFC) under the Scheme on Enhancement of Competitiveness in the Indian Capital Goods Sector & funding from Government of Karnataka.
- c Nano Manufacturing Technology Centre (NMTC).
- d Sensor Technology Development Facility (STDF).

5.6 R&D Initiatives by the CPSEs.

Some of the technology up- gradation and R&D efforts of the Central Public Sector Enterprises under the Department of Heavy Industry are detailed below.

5.6.1 Bharat Heavy Electricals Ltd. (BHEL)

Research and Development (R&D) and Technology Up gradation

- The R&D expenditure of the company for 2016-17 was ₹ 793.62 Crore which is 2.75 % of the turnover. A total of ₹ 6,025 Crore (20.89 %) of the company’s total turnover has been achieved from its in-house developed products introduced in last 5 years. The company filed 508 patent

and copyright applications filed during the year 2016-17, enhancing the company’s intellectual capital to 3915 nos. (as on 31st March 2017).

Major R&D/ Technology Upgradation Achievements during 2016-17

- Indigenously designed and manufactured 420 kV GIS bay being supplied for NHPC Chamera project.
- Developed 2x500 kVA Hotel Load Converter (HLC) to replace polluting DG sets for Indian railways. The first 2x500 kVA HLC was commissioned in the locomotive attached to Chennai-Coimbatore Shatabdi express. With this successful development, BHEL has secured an order for supply of 32 sets of HLC through competitive bidding.
- Developed Polar Axis Passive Solar Tracker which will generate more energy for the same MWp rating. Presently 50 kW system is working at Shivasamudram site of KPCL.
- Designed and Commissioned India’s first 1 MW Seasonal Tilttable Canal Top Solar PV Plant at Bhimavaram, AP.
- Designed, commissioned and demonstrated 25 kWp floating solar plant at Narsapur Lake (near Hyderabad), Telangana. Besides generating power at higher efficiency, the floating solar farm conserves precious irrigation and drinking water by reducing evaporation.
- With the increasing trend of higher MW level of solar power plants, BHEL has successfully developed state-of-the-art 1.25 MW Grid Connected Power Conditioning Unit (GCPCU) for Solar Power Plant.

- BHEL has undertaken development of model software for Boiler and Auxiliaries for GUI based modeling tool for Thermal power plant simulator as an MOU R&D Project with Gol and successfully completed it on 24th Dec 2016. This will be used to offer GUI tool based Thermal Power plant simulators, which results in savings in cash out flow and eliminate dependency on external vendors. Simulator for NTPC, Gadarwara, TSGENCO's Nalgonda (800 MW) will be supplied with this tool.
- BHEL has undertaken development of Aero Mechanical design of Axial flow compressor for process applications as an MOU R&D Project with Gol and successfully completed it on 31st Aug 2016 achieving state-of-the-art efficiency level. This capability will enable BHEL to become an OEM in axial compressor industrial segment.
- Developed two cylinder reheat steam turbine with new back pressure HP module for 70 MW rating industrial sets. This turbine incorporated advanced blading and brush seals resulting in improved heat rate. This turbine is for supply to M/s NIRMA, Bhavnagar (Gujarat).
- Developed a new variant of 80 MW, 11 kV, 50 Hz, 3000 RPM Air cooled Turbo Generator with compact overhang brushless exciter, supplied to M/s NIRMA, Bhavnagar (Gujarat).
- Developed an efficient variant 5075 kW, 11 kV, 10 Pole ID fan motor with modified slot combination and slot size achieving low noise and low starting current for 3X660 MW North Karanpura STPP.
- Developed a new 3250 kW, 11 kV, 30 pole, vertical, slow speed cage Induction Motor for lift irrigation application which is capable of withstanding external thrust upto 140 Tonnes. Supplied to M/s Xylem Water Solutions India Pvt. Ltd. for Sardar Sarovar Narmada Nigam Ltd. (SSNNL PS-1).
- Developed a new compact 4061 kW Diesel Alternator to suit compact mounting requirement of Turbo diesel engines for 18 MW Diesel generator based power station for export order of M/s Man Turbo Diesel Engines in Union of Comoros.
- Developed High Temperature wear resistant coating by HVOF process and stellite coating by laser cladding on Ni-Based super alloy material (IN617 CCA) for Advanced Ultra Supercritical (AUSC) Steam Turbine control valve components. Developed coating shows four to six times improvement for high temperature erosion resistance over base material (IN617 CCA) at lab scale. This coating will be used for HP & IP control and stop valves for AUSC applications.
- Developed In-house capability through establishing special welding procedure and advanced NDT techniques for special Nickel based alloy IN617M capable of operating at high temperature & pressure for AUSC Boiler applications.
- Successfully manufactured, tested and supplied a new in-house designed Generator Module THRI 108/40 for Koradi R&M project. This shall propel BHEL towards self-reliance in executing R&M orders.

Major R&D/ Technology Upgradation Achievements upto September 2017 during 2017-18

- Developed largest Air compressor (DMCL1008), manufactured by BHEL in fabricated casing design for Blast Furnace Application.
- Developed 'Web Based Software (UGSD) for Civil Design of Underground RC Structures'.
- Completed development of Mechanical design of Rotor Shaft, Discs, Bearings, Seals and Casing for Axial flow Compressor.
- Development of largest rating 20 MW, 11 kV, 4 Pole Alternator for industrial applications.
- Developed a superhydrophobic coating suitable for addressing the problem of bio-fouling and corrosion in stainless steel condenser tubes.
- Developed a prototype of Regulator for Static VAR Compensator using state-of-the-art hardware for R&M order of Tata Steel, Jamshedpur.
- Developed a Structural Design Automation tool for slurry storage tanks of Flue Gas Desulphurisation (FGD) Plant.
- Successfully established Cooling Water Pump (CWP) Model test layout for testing pumps with capacity above 30,000 cu.m/hr.
- Developed and tested largest rating 11.65 MW, 11 kV, 12 Pole Vertical Synchronous Motor in salient pole type construction for lift irrigation sector.

- Developed an abrasive flow polishing process for closed Turbo Machinery components (for Compressor etc.) resulting in increase in surface finish and efficiency.
- Developed Three-phase AC Traction Motor type IM4802AZ for 9000 HP Locomotive.
- Established Design Optimization procedure for efficiency improvements of a typical 2D Centrifugal Compressor Stage.

Information Technology

- With a view to transform business activities, processes, competencies and models to fully leverage the changes and opportunities of digital technologies and their impact across business in a strategic and prioritized way, Corporate Digital Transformation Group has been created.
- As a step towards cashless transactions, BHEL introduced online payment gateway and its interface with BHEL applications like Retired Employees contributory Health Scheme (RECHS), recruitment system etc, aligning with company's policy of Consolidation, Simplification and Execution.

Human Resource Development

Aligned to the changing needs of the organization, Corporate Learning and Development (CLD) and HRDCs have facilitated knowledge transfer, skill development and behavioral interventions to build winning attitude in the employees.

In view of the various initiatives taken in response to changing demography of employees and the business mix, the company has been recognised in the business world by being adjudged as one of the 'Top 25 Best Companies to work for' in India

by the prestigious Business Today magazine-BHEL is the only PSU to figure in this distinguished list.

The Hon'ble Prime Minister, Shri Narendra Modi, presented a cheque of the highest amount of ₹ 1.79 Crore to Shri Atul Sobti, CMD-BHEL, as a mark of appreciation for BHEL's active participation by engaging a large number of apprentices across the country under the National Apprenticeship Promotion Scheme (NAPS), representing the organisation's contribution to the Prime Minister's 'Skill India' initiative.



Shri The Hon'ble Prime Minister, Shri Narendra Modi presented a cheque of ₹ 1.79 Crore to CMD, BHEL

Corporate Governance

BHEL endeavours to transcend much beyond the regulatory framework & basic requirements of Corporate Governance, focusing consistently towards building confidence of its various stakeholders including shareholders, customers, employees, suppliers and the society at large. The company has developed a framework for ensuring transparency, disclosure and fairness to all, especially minority shareholders.

Social Responsibilities

During the year BHEL was awarded with "Skoch Order-of-Merit" for "Holistic approach in Health Care Services Sector for good health & wellbeing of society". BHEL also received recognition from

HelpAge India on 1st October, 2016 for its exemplary services and commitment to provide quality medical healthcare services to the underprivileged people and in particular, the elderly people living in the remote/backward regions of the country.

- In partnership with HelpAge India, PHDRDF and Wockhardt Foundation, BHEL has provided support for running operations of 10 Mobile Medical Units (MMUs) in the vicinity of Project sites and Manufacturing Units benefitting more than one lakh patients during 2016-17.
- Provided financial support for distribution of Anti Hemophilic Factor (AHF) to 1021 Haemophilic patients. During the year, 20 camps were organized, covering 240 beneficiaries.
- Provided financial support for construction of Ganga Prem Hospice at Raiwala, Rishikesh, Uttarakhand. It is a 30 bedded facility for the palliative care of terminally ill cancer patients.



Inauguration ceremony – Ganga Prem Hospice, Raiwala, Rishikesh

- BHEL is providing support for construction of 25 Clusters of Bio-Digester toilets in Haridwar and Rishikesh. The project also includes provision for safe drinking water at each cluster and maintenance for a period of 2 years after commissioning



Inauguration of Bio-Digester Toilet & Drinking Water Complex at one of the Ghats of Ganga in Haridwar

- Provided financial support for running Mobile Science Labs in the vicinity of three units (one at each Unit) of BHEL viz, Haridwar, Jhansi and Trichy, benefitting more than 30,000 students during the year.



Children of one of the Govt. schools in Jhansi learning Science through hands on experience

- Provided financial support for installation of 75 kWp capacity Solar PV Plant at Ramakrishna Mission Ashram, New Delhi
- BHEL has constructed 96 Model Houses [Flats] at Vizag, Andhra Pradesh for the people affected by devastating cyclone Hud-Hud. These flats have been handed over to district administration for allotment to target beneficiaries.



Flats constructed by BHEL at Vizag for Hud-Hud affected people.

The road ahead.....

To sustain momentum of growth and profitability, the company is focussing on expeditious execution of orders and implementing structural changes for enhancing efficiency.

- Efforts are being made to convert stranded/ slow moving orders into executable ones. Around ₹ 12,000 Crore of non-executable orders have been made executable during 2016-17. Further, 4000 MW Project amounting to ₹ 20,400 Crore has been revived during current Financial Year (till October'17).
- Created customer focussed business groups for Nuclear, Hydro, Defence & Aerospace, and Transportation for strengthening diversification efforts.
- A dedicated 'Project Closure Synergy Group' has been created to ensure early closure of project sites, optimize manpower utilisation, resolving outstanding issues with various stakeholders, and realizing cash.
- A new "People Strategy Group" has been created with the objective to design and deliver major change programs that create

step-change performance improvement, build capabilities, and strengthen organizational behaviour to renew and sustain exceptional performance of our employees.

- Revised various company policies with focus on simplification and decentralisation to eliminate low-value added activities and multiplicity of works.
- Developing new products and services such as Emission Control Equipment, Lift Irrigation systems, enhanced offerings for Nuclear power and expanding spares and services business to complement the efforts to expand core business.
- Formed 'Corporate Digital Transformation' group to develop capabilities in diagnostics and predictive maintenance services as a business opportunity and enhance productivity in operations.
- Export strategies are being aligned with global dynamics with focus on market expansion and market penetration.
- For long-term sustenance, the focus is on strengthening the capabilities to innovate and bring more diversity in turnover, both in business-mix & geographical-mix.

5.6.2 BHEL-EML Research & Development and Technology Upgradation

Major R&D / Technology Upgradation Achievements during the Year 2016-17

Major R&D / Technology upgradation planned/achieved for the year are:

- Development of Traction Motors for Electric Vehicles, on-going project

- Development of String Monitoring Units for Solar Power Projects
- Development of Marine Alternator for strategic application

Corporate Governance

BHEL-EML has an established framework of Corporate Governance emphasizing its quality of governance, transparency, stakeholders' value enhancement and corporate social responsibility.

Social Responsibilities

The Company is providing apprentice training to various engineering students (Ranging from ITI to Post Graduates) in addition to short term (Summer) trainings on regular basis as a part of its social responsibility.

BHEL-EML also has a sustainable afforestation program in its premises to keep the environment green.

5.6.3 Rajasthan Electronics & Instruments Limited, (REIL)

The Research & Development activities of the Company are aimed at achieving its Corporate Mission by addressing customer expectations through development of new products and up-gradation of existing products/processes to deliver competitive, economic and reliable products/solutions while protecting the intellectual property rights.

The Company has a Research & Development Policy by the Board. It has fully equipped Research & Development centre with latest tools & technologies, skilled & experienced manpower. The Center has been recognized by the

Department of Scientific & Industrial Research, Ministry of Science & Technology, and Government of India since 1985. The prime objective of the activities are to develop new technologies to meet the customer needs, continuously improve upon the process specification and techniques for optimum utilization of resources, consistency in quality comparable to the national standards, utilities of its existing products and development of new higher variant of existing products as well as new hi-tech products to meet the customer's requirements.

Major Ongoing Projects in the Financial Year 2017-18 are as follows:

1. RMU- Remote Monitoring Unit for solar water pumping system
2. Next Generation DPU
3. Solar EV Charging Station (SEVCS)
4. Solar pump controller

5.6.4 HMT Limited

HMT has established R & D Centres in all manufacturing units to meet the needs of design & development of different products, with a focus to improve product technology and enhance product competitiveness.

R&D has been a focus area for the company in its endeavour to serve the customer better and develop new products. R&D activities are carried out in each subsidiary with particular reference to customer needs in product technology, quality, reliability and price competitiveness. Upgrading the existing products with additional features, design optimisation and improvement in

aesthetics are the major thrust areas. The initiative has resulted in many new products and also up-gradation of existing products. Highlights of R&D activities carried out / planned in the different product areas of HMT's domain are as below:

HMT Limited (Food Processing Machinery Division)

Following product development activities are planned :

- a) Crate washer-CRW01, Capacity 1000 Crates/Hr
- b) Triplex Plunger Pump with Shaft Reducing Gear Box
- c) Modification of Homogeniser for pressure controls from manual to Hydraulic versions.
- d) Development of Food Trolleys for IRCTC.

5.6.5 HMT Machine Tools Limited

All the manufacturing units of the Company have its own R&D facilities to meet its needs. The focus of R&D is to progressively achieve self reliance in product technology, upgrading the existing products with additional features. Further, HMT Machine Tools Limited, Hyderabad Unit was awarded in-house R&D recognition by DSIR. Bangalore Unit has applied for in-house R&D recognition for Metal Cutting R&D & CNC R&D respectively.

R&D is a continuous process and closely linked with the various operations of the Company and benefits could be derived as a result of the above R&D. Consistent efforts

are being made in-house to design, develop and manufacture new products as per technologies available as well as state-of-art and technology centric special purpose machines. Technology development plans are focused to facilitate reduction in cost of production by value engineering, thereby providing viable import substitution as well as Joint Working Arrangement with overseas foreign institute & IITs' etc.

In view of design & development for analysis of "Headstock of four Guide way lathe" and Development of the Turn Mill Centre with Y-axis SB CNC 30 TMY" HMT machine Tools Ltd., entered with Technical Agreement with International reputed firm M/s Fraunhofer for Technology Transfer. Technical Collaboration Agreement (TCA) has been signed between M/s Fraunhofer, Germany & HMT Machine Tools Ltd.

Government of India has sanctioned under enhancement of competitiveness in Capital Goods Sector. Design & Development of "Headstock of four Guide way lathe" and "Development of the Turn Mill Centre with Y-axis SB CNC 30 TMY" is under progress at Bangalore Complex & Kalamassery Units respectively. Prototype is likely to be ready by end of December, 2017.

HMT Machine Tools produced Flexible Manufacturing System under Research & development for Training Centre in view of bridging the gap between the classroom academics and the current industry technology.

❖ **Products Development and Technology Up gradation plans.**

- Design & Development of CNC Spring Grinding Machine.
- Design & Development of Flow Forming Machine.
- Design & Development of Combined Pin & Journal Grinding Machine.
- Design & Development of Surface Wheel Lathe.
- Design & Development of CNC Multi Tooling Shell Turn Machine.
- Design & Development of Directing Gear for Naval Equipment.
- Design, Development Manufacture of Low Cost CNC Lathe and Vertical Machining Centre has started at Kalamassery & Ajmer units.

5.6.6 NEPA Limited

R&D Centre of the company is registered with Department of Science and Industrial Research (DSIR), Ministry of Science and Technology, Government of India. Centre is quipped with modern facilities and company is going to procure latest equipment for technology up-gradation and producing writing & printing grades.

5.6.7 Andrew Yule & Company Limited (AYCL)

The R&D activities carried out by the company's different Divisions were as follows:-

- (i) **Steps have been taken for**
 - (a) Company Switchgear Unit introduced energy saving 3 star rated 250 KVA distribution transformers, manufactured and supplied 79 nos 250 KVA DT to BESCO.

(ii) **Benefit derived like product development, cost reduction or import substitution:**

- (a) Company Engineering Division has development 80% of the range of Tube Axial Flow Fan in 2016-17. The balance product range of 20% Tube Axial Flow Fan will be developed within 1st half of 2017-18. Company have bagged order for Tube Axial Flow and Centrifugal Fan-Ventilation type in the year 2016-17 for ₹ 91.14 lakh. Total Dispatch made during 2016-17 is ₹ 20.24 lakh. The balance order in hand value of ₹ 70.90 lakh would be executed during the 1st half of 2017-18. The new order in this product line in 2017-18 is expected to be ₹ 215.00 lakh.
- (b) The benefits have been observed from the process improvement like introduction of non-bolted composite liner, use of plasma cutting for refurbishment job in the form of productivity improvement and reduction of costs.

5.6.8 Bharat Pumps and Compressors Ltd. (BPCL)

Some important areas of technology up-gradation/ Acquisition & Product Design and development.

Centrifugal Pumps Area

- a) Modification of drawings are being in process to increase the working pressure range of pump model DVMX 6x8x11E.
- b) Development of fabricated bearing cover in place of casting covers in DVMX & SMK pump models to save time & cost.

- c) Research work in MNNIT is under progress to increase the efficiency & head of SMK 4x6x15 pump model.

Reciprocating Compressors Area

2 nos 2 HD/2 Hydrogen make-up Compressors were supplied to IOCL, Barauni in the year 2008-09. After 6 years of satisfactory performance gas composition was completely change with (-1000C due point) resulting in excessive wear of Packing rings, Rider Rings & Piston Rings.

5.6.9 The Braithwaite Burn & Jessop Construction Company Ltd. (BBJ)

In an increasingly competitive environment, BBJ has recognized the importance of R&D to maintain its leadership position. To further its competitive edge with the limited resources and concerted efforts by the employees, BBJ has developed new launching schemes for steel bridges in recent past. BBJ developed an effective erection scheme to replace old steel bridges with newly fabricated girders in a very short time on running lines. BBJ developed forward launching plans for DMRC project, Ganga Bridge at Munger and also for other projects. BBJ has developed appropriate cutting plans for fabrication to reduce wastage. Up gradation of technology by means of installation of new software based technology to monitor project execution and taking corrective action as and when needed to avoid time and cost overrun.

5.6.10 Cement Corporation of India Ltd. (CCI)

Technology up gradation measures have been taken up in all the three units. Capacity expansion of Bokajan unit by installing a separate line of 1200 tpd clinkerisation stream which encompasses the latest technology has been taken up.

Other related activities such as laying of broad gauge line, construction of road, strengthening of ropeway, installation of pollution control equipment etc. are also being taken up. Various technology up-gradation schemes of Tandur unit have been taken up for implementation as a part of the Sanctioned Scheme. Utilization of pet coke as an alternative fuel has been started in Rajban. Close circuiting of cement mill along with fly ash handling system is being given priority at Tandur. R&D activities are being taken up within the available limited resources, aimed at improving the plant process/operation.

Ministry of New and Renewable Energy has given in principle approval for setting of 6 MW grid connected solar PV Plant with VGF support @ ₹ 1 cr./MW under CPSE Schemes vide letter No. 30/11/2014-15/NSM dated 17th Feb 2016. MoU was signed between CCI & NTPC Vidyut Vyapar Nigam Limited (NVTN) on 26.12.2016 for setting up of 6 MW Solar Power Plant.

5.6.11 Engineering Projects (India) Ltd., (EPI)

Considering company's nature of job, there is limited scope for Research & Development activities as EPI executive jobs based on client requirements. However, EPI actively provides state of art technology like pre-cast/pre-fabricated structure techniques for faster, durable and cost effective construction.

Specific project-based collaborations are also arranged to meet the needs of modern industrial projects. EPI is making efforts to constantly upgrade technology and Construction technique and to look in to the aspects of appropriate designing and value engineering. New as well as updated

design software are used for in-house engineering activities.

EPI used excavated material for construction of roads/fence foundation etc. during project execution resulting in saving of construction cost. EPI is intending to use new methods/technology in the newly awarded " Namami Gange Project" like sewage treatment with zero discharge including online treatment with recycling, eco-sanitization for Desalination, Effective Microorganism technology (Bacterial Process) for reducing environmental pollution.

Employees are sponsored for training to various programmes and seminars for development of their technical knowhow.

5.6.12 Bridge & Roof Company (India) Ltd. (B&R)

The Company is making continuous efforts to update technology and upgrade quality standards along with R&D efforts. The Company has successfully diversified in various fields such as 2 Wire Automatic Rim Seal Fire Protection System, IT and Networking at Client Project Site, Implementation of Solar Power project, 33 KV aboveground cable networking, Suspension Bailey Bridge etc. and the Company has successfully managed to absorb technology and knowhow in these fields.

5.6.13 Scooters India Limited (SIL)

Upgradation of Existing 3 Wheeler models from Bharat Stage (BS-III) to Bharat Stage- (BS-IV) for mandatory compliance to BS IV norms. The vehicle models taken up are VIKRAM 1000CG, VIKRAM 1500CG, VIKRAM 450D, VIKRAM 750D.

Welfare of SC/ST/OBCS/PWDs and Minorities

- 6.1** It has been the constant endeavour of this Department to oversee the obligations of Central Public Sector Enterprises to promote the welfare of minorities in the light of Government's directive on this subject. Instructions issued by the Government in respect of reservation in appointment/promotion for SCs/STs/OBCs, Persons with Disabilities and minority communities are followed by PSEs under the Department.
- 6.2.** An SC/ST Cell is functioning within the Department, under the supervision of a Liaison Officer of the rank of Director/Deputy Secretary for proper monitoring of the implementation of the reservation policy of Government of India.
- 6.3** Government had constituted a Committee for making in-depth analysis of the reasons for non-filling up of reserved vacancies for SC, STs, and OBCs etc. in Government sector. As a part of recommendations of the said Committee, Department has Constituted a Committee under the chairmanship of Joint Secretary to monitor the progress in reducing the backlog of SCs, STs, OBCs, etc. in Department as well as in CPSEs under its administrative control.
- 6.4.** The work force in the CPSEs consists of a large number of persons from different minority communities. Their integration into the mainstream workforce is emphasized in all CPSEs and there is no discrimination on account of their caste, creed or religious beliefs. Facilities like residential accommodation etc. are extended to employees on equal terms. Every year, Qaumi Ekta /Sadbhavna Diwas is organized where people from all sections of the society including women and children participate to stimulate the spirit of oneness, national integration and harmony.
- 6.5.** All operating CPSEs under this Department have been advised to comply with the provisions of the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995. CPSEs follow the instructions issued by the Government from time to time to promote the welfare of Persons with Disabilities. Persons with Disabilities are provided facilities like special conveyance allowance, ground floor residential accommodation providing facilities, like user-friendly toilets, lifts etc., exemption from payment of professional tax, to and fro transportation facilities, provision of medical equipments and general medical assistance. The visually impaired persons are provided Braille symbols and are engaged in running telephone booths, repair of cane chairs etc. Special schools are being run

for mentally challenged children & visually impaired persons. These facilities are being provided to enable them to discharge their duties and facilitate their integration into the mainstream workforce. BHEL is also providing financial assistance for running special care schools and vocational training centres at Trichy, Bhopal, Hyderabad and Haridwar.

6.6. Department of Heavy Industry issues Essentiality Certificate to Persons with Disability for availing eligible concession on excise duty on purchase of modified cars. As a step towards simplification of Government procedure, the affidavit to be submitted by the applicant in this regard has been replaced with the self-attested certificate. The detailed eligibility conditions are displayed on website of the Department. During the year 2016-17, total numbers of applications received were 171 and certificates were issued to 132 persons and during the period from 1.4.2017 to 31.12.2017, total number of applications received were 326 and certificates were issued to 174 persons.

6.7 The annual data about representation of SCs, STs, OBCs and Persons with Disabilities in the Department of Heavy Industry as on 1st January of each year is furnished on-line to DOPT, through the portal launched by Department of Personnel & Training (www.rrcps.nic.in) for representation of reserved category in posts and services.

6.8 In compliance of Interim Order dated 28.04.2015 of Hon'ble Supreme Court in Contempt Petition No. 499/2014 in Civil Appeal No. 9096/2013 in the matter of National Federation of Blind, Department of Personnel & Training vide their letter No. 36012/39/2014-Estt (Res) dated 22nd May, 2015 had asked all the Ministries/Departments to launch a Special Recruitment Drive to fill up the vacancies for Persons with Disabilities. Accordingly, CPSEs concerned under the Department had launched Special Recruitment Drive to fill up vacancies for persons with Disabilities, as a result of which most of the vacancies for PwDs have been filled up.

Empowerment / Welfare of Women

- 7.1 Department of Heavy Industry and the CPSEs under its administrative control constantly endeavour to ensure that there is no discrimination against women on any count. All members of the staff are made conscious of the principles of gender mainstreaming and gender justice enshrined in the Constitution of India.
- 7.2 In order to create awareness regarding human rights, especially of female employees, in accordance with the directions issued by the Government for the preservation and enforcement of rights to gender equity and justice to women employees, a Complaints Committee has been constituted in the Department for redressal of complaints related to sexual harassment of women. Department actively encourages women employees to freely participate in all activities like meetings, seminars, competitions, training etc. This helps in ensuring their fuller integration into the mainstream work force.
- 7.3 The instructions issued by the Ministry of Women & Child Development on Gender Budgeting with a view to identify sectors/ services where initiatives can be taken by the Department for the implementation of schemes/programmes for promoting gender equality, are being followed in Department of Heavy Industry and CPSEs under the administrative control of the Department.

8.1 The Department has a Chief Vigilance Officer of the rank of Joint Secretary to look into the vigilance matters of employees of the Department as well as Board level officers of the Central Public Sector Enterprises and Organizations under its administrative control. He is assisted by a Director and an Under Secretary along with a Vigilance Section.


8.2 The main areas of work of the Vigilance Section are:

- ❖ Dealing with complaints against Board level appointees of PSEs under the administrative control of the Department of Heavy Industry as well as the officers of the Department;
- ❖ Periodical review of vigilance matter;
- ❖ Issue of vigilance clearance in respect of Board level appointees in PSEs and all other appointments based on PESB recommendations requiring ACC approval as well as officers/officials of DHI;
- ❖ Interfacing with CVC, CBI and CVOs of PSEs under DHI to streamline flow of information in respect of vigilance matters;

- ❖ Tendering advice on issues of procedural irregularity;
- ❖ Vetting charge sheet in respect of vigilance cases against Board level appointees;
- ❖ Monitoring & completion of Performance Appraisal Reports of officers and staff of the Department as well as Board level appointees of its PSEs and maintenance of the same.
- ❖ Monitoring, submission of Annual Property Returns by officers and staff of the Department of Heavy Industry as well as Board level appointees of its PSEs.
- ❖ Filling of APARs under SPARROW in respect of IAS/IPS/IFS officers and Group 'A' above level of CSS/ CSSS.

8.3 Vigilance Section lays considerable emphasis on preventive vigilance and is promoting the use of IT to bring about greater transparency. Punitive measures are also taken in appropriate cases and followed up wherever required.

8.4 Vigilance Awareness Week was observed by DHI from 30.10.2017 to 04.11.2017 to generate and spread awareness against corruption.



8.5 Vigilance cases are usually of complex nature demanding varied and detailed information, comments & analysis into the allegations with due assistance from the CVOs of the PSEs. Concerted efforts were made to identify the long pending cases, the oldest cases being given special attention to bring the investigation to the logical conclusion. There were 41 vigilance cases/complaints in the beginning of the year 2017. 46 new cases/complaints were

received during the year. Investigation was completed in 41 cases, and they were disposed of after the approval of competent authority and consultation with Central Vigilance Commission, wherever required.

8.6 Vigilance clearance was obtained by CVC in case of 55 Board level officers for recruitment/ confirmation/ extension/ retirement/ resignation and Vigilance Clearance of 94 Officers of DHI/PSUs were granted by CVO, DHI for various purpose.

Progressive Use of Hindi

- 9.1** In keeping with the motto "Shramev Jayate", Hindi Section of the Department of Heavy Industry is making all efforts to make the Official Language Hindi a medium to transact government business in accordance with the goals set by the Department of Official Language. To review the progress made in the use of Hindi, the Official Language Implementation Committee held its periodical meetings under the chairmanship of Joint Secretary, in-charge of Hindi Section in the Department and suggested ways to remove the impediments in the use of the Official Language in official work.
- 9.2.** The President of India conferred third prize of Rajbhasha Kirti Award for the best implementation of the Official Language Policy of GOI during the year 2016-17 in the category of Ministries/Departments on Department of Heavy Industry in a Ceremony Organised in Vigyan Bhawan on the occasion of HINDI DIVAS on 14th September, 2017.
- 9.3.** During the year 2017-18, the inspecting team of the Department carried out inspections of different Units/Offices of Central Public Sector Enterprises under the administrative control of the Department to monitor the progress made in the use of Hindi and also directed the officers of these Units/Offices to achieve the targets prescribed in the Annual Programme issued by the Department of Official Language.
- 9.4.** All the Cabinet Notes, Notifications, Resolutions, Notes and Circulars, Parliament Questions & papers laid on the Table of both Houses of the Parliament, Annual Report, CAG reports, Delay Statements, General Orders and Citizen Charter were issued both in Hindi and in English.
- 9.5.** Workshops were also organised for officers/employees to enable them to work on computer in Hindi. Apart from this, The Third Meeting of Reconstituted Hindi Advisory Committee was held on 09th November, 2017 at Gangtok, Sikkim under the chairmanship of Hon'ble Minister, Ministry of Heavy Industries & Public Enterprises Shri Anant Geete. This Meeting was held in energetic manner, the working of DHI in OFFICIAL LANGUAGE has been admired in the Meeting.
- 9.6** In order to promote the use of Hindi and to increase correspondence in Hindi, "Hindi Fortnight" was organized from 01st September, 2017 to 15th September, 2017 in which Officers/Staff of the Department participated enthusiastically. Prize Distribution Ceremony will be organised during the Winter Session of Parliament.



Photo of A Competition Conducted during Hindi Pakhwara.

9.7. Public Sector Undertakings, under the administrative control of this Department, also continued to make vigorous efforts to implement the Official Language Act and its provisions. Various Seminars, Competitions

and Workshops were organised in these PSUs to propagate the use of Hindi. **“HINDI FORTNIGHT/HINDI WEEK/HINDI MONTH”** were celebrated in these PSUs with great zeal. .

Implementation of Sevottam

10.1 The Department of Heavy Industry is committed to the goal of effective and responsive administration and service on delivery excellence. The SEVOTTAM framework of Government of India has been implemented in the Department. Following steps have been taken in this direction.

10.1.1 Citizens'/Clients' Charter (CCC) of the Department of Heavy Industry has been prepared and displayed on the website of the Department for the year 2015-16. Next review date of Citizens'/Clients' Charter (CCC) for the year 2016-17 in March 2018. The Department offers services to Citizens, Central Public Sector Enterprises under the Department, Industry Associations, Statutory bodies, Administrative authorities and the Ministries/ Departments of the Government of India, State Governments and Administrators of the Union Territories as per the service standards indicated in the Citizens'/Clients' Charter include in the CCC have been fixed. The CCC was last reviewed in March, 2017.

10.1.2 Grievance Redress Management: The Department has appointed Sh. B.J. Mahanta, Joint Secretary as the Public Grievance Officer for monitoring redressal of grievances. The Department receives online grievances

through CPGRAM Portal. The grievance redressal is monitored periodically by the Joint Secretary. In addition off-line grievances are also received. During the period from 01.04.2017 to 31.12.2017, 1721 grievances were received and 1720 grievances were disposed of. As on date, the rate of disposal of grievances pertaining to this Department is 98%.

10.1.3 Implementation of ISO: 9001:2008 certification:

In the first phase, the three units viz. Auto Engineering Industry, PE XI and Technical Services Wing (B) of the Department of Heavy Industry have been awarded ISO:9001:2008. The Certifying Body M/s Det Norke Veritas issued ISO certificate after final audit of the above three units. The Department has initiated the process of ISO:9001:2008 certification for the remaining sections of the Department.

10.1.4 Digitization

In furtherance of Government of India's endeavour to digitize all official records in order to bring transparency, accuracy and timely responses and cost savings from less creation, storage, retrieval and handling of paper records, major portion of this Department's record have been digitized.

This process is underway and all records of the Department has been undergoing digitization.

10.2 IT initiatives in the Department of Heavy Industry

Under Prime Minister's marvelous effort, India is transforming into Digital India. E.Government services are not only transforming into e. Governance in an effective and efficient way out also transmuting into citizen oriented transparent mode. To achieve this, D/o Heavy Industry enthusiastically has take various initiatives in phased manner. It upgrades its in house IT platform, empowering its work force w.r.to the technology available. In addition to that it directs and monitors all its CPSEs and Autonomous Bodies under its domain to promote digital platform and online services.

During 2017-18 accelerating of e-office implementation to the higher level, upgradation of FAME-India portal, enhancing the features of its departmental website and monitoring its content activity through MIS,DBT MIS on FAME India Scheme and Excise Duty Concession to PWDs Scheme, operational of various in-house intranet application/MIS etc are to be highlighted. DHI drives Industry 4.0 implementation in India policy which is wholly supplemented by Internet of Things Technology.

DHI informatics division of National Informatics Center, Ministry of Information technology renders NIC support services, consultations, development cum implementation of e-governance in DHI as

well as all its organizations. It also maintains departmental websites, facilitating DHI in accessing on-line e-governance services portals and conducting training/workshops on different topics w.r.to the need.

10.2.1 DHI Website

For effective dissemination of Information, Policies, Procedures, Feedback, performance, budget, RTI etc with the Industry as well as Citizens, DHI launched its website at <http://heavyindustry.gov.in/> <http://dhi.nic.in>. Flashing of latest initiatives, notices and events under what's new tag is mostly accessed globally. To encourage the participation of the Industry in Policy making, inviting the feedback from them within a due date was also in practice. Sectoral-wise Policy, Procedures, Schemes, RTI, Citizen Charter, Mission Plan, Budget, Grant & Aid details, GST implementation etc are some of the important topics published in the website. Being it is based on content management framework, twenty users have been given credentials for updating their respective web content. In order to monitor the up dation regularly, an automatic email alert has been activated. An exclusive MIS system has also been developed and implemented in intranet for monitoring the content moderation activity and trace out the audit log of the website. Both Cyber security audit and STQC certifications had been obtained for the website. Hindi version of the website is also made available and regularly updated by Hindi Section. During 2017 Global visitor are more than 71%. Country-wise US visitors top upto 41% followed by India, China Canada & Australia.

10.2.2 FAME-INDIA Scheme (DBT)

Faster Adoption and Manufacturing of (Hybrid&) Electric Vehicles in India (FAME INDIA) Scheme is introduced under National Mission on Electric Mobility in 2011/National Electric Mobility Mission Plan 2020 was released in 2013. It is under the frame work of Demand Incentive Distribution Mechanism. Subsidiary amount has been determined for each category of vehicle like Mild Hybrid, Strong Hybrid, Plug-in Hybrid and Pure Electric technologies and battery specification. It is implemented and monitored by National Automotive Board under D/o Heavy Industry. It is one of the DBT schemes categorized under in-kind mode.

Under the digitalization of the schemes for bringing efficiency, transparency with effective monitoring, FAME INDIA portal has been launched at <http://fame-india.gov.in/index.aspx>. All the process life cycle of the scheme has been digitalized in this online Portal. At present sixteen Original Equipment Manufacturer (OEM), Seventy Car Models are registered under this scheme. Till now total incentive amount disbursed is ₹ 206 crores for 172.715 vehicles. Dash board shows its state wise performance. It also reflects post benefit of e-vehicles as on Nov 17 are saved fuel due to electrification is 198,89,906 In litres, Fuel saving per day is 41045 In litres, CO2 Reduction per day is 102,758 In Kg and CO2 Reduction is 498,59,018 In Kg. Built-in MIS reports are also made available for monitoring and management purpose. Various reports like OEM wise sanctions, state-wise/manufacturer-wise/month- wise

progress etc are also incorporated for restricted users. As per the DBT compliance, integration of online Demographic Aadhaar Authentication of the beneficiaries is also being enabled.

10.2.3 Excise Duty Concession to PWDs Scheme (DBT)

It is one for the DBT schemes categorized under in-kind mode. Scheme issues certificate to the beneficiary who can avail excise duty concession for purchasing cars w.r.to their need. Procedure is made available in the link. A DBT apps with MIS has been developed and implemented in the open source platform. Regular updating is also carried out by the AEI section. Near about 175 beneficiaries data are maintained till date who got certificates to avail the benefits. MIS generates consolidated and state-wise report. It is seeded with aadhaar ID of the beneficiary and verified.

10.2.4 E-office Implementation

Under NeGD project, e-office has been implemented at <http://dhi.eoffice.gov.in> with all its modules in DHI and all are operationalized. E-file modules has been upgraded to ver. 5.5.0.2 with proper hands on training for successful performance. Other modules like EMD, E-leave, PIMS have also been upgraded to the latest version. Workshops on DSC/e.sign integration, e-mail diarisation, migration of files, e-receipts, special operations etc had also been conducted by NIC. Out of 251 e-office users near about twenty officers have been authorized to publish the circulars/Notices through KMS. Necessary facilitation for Integration with DSC, e-sign

and email diarisation have also been taken up. In order to monitor the performance, an intranet based MIS has been developed and deployed by NIC team of DHI.

10.2.5 Intranet Applications

Various web based intranet office automation applications and sectoral applications are operationalized. Office automation like on-line stationery, M/S system on PMO references, Court cases, VIP references, Parliament references, Online engagement, employees corner, etc are made operational. Various reports like age-wise pendency, JS/Dir/Section/CPSEs wise pendency, disposed off list are also made available. Sectoral database like CPSEs Performance monitoring system, performance on auto sector and capital goods sector are under implementation.

10.2.6 Online E-Governance Services

More online e-governance portals with common services like SPARROW (Smart Performance Appraisal Report Recording Window) for IAS.CSS,IPS officers, Supremo/AVMS Portal, Legal Information and Briefing (LIMBS), e-Suvidha, e-samiksha, e-Procurement, Gem, CPGRAMs portal, PFMS (Public Financial Management System), NDSAP Portal, Visitor Management System are integrated with DHI.

10.2.7 ICT infrastructure

New Hardware/Software/Accessories have been incorporated to the sections as well as officers level for better performance to utilize the latest information technology. Various cyber security measurements have been taken by deploying more firewall,

manageable network equipment as per the security guidelines issued time to time by GOI. System for automatic patch management and virus detections has also been upgraded to ensure virus free zone over the LAN/WAN/Email/Wifi services.

A dedicative VC studio has been set up in the conference hall for conducting VC meetings with CPSEs as well as during monthly PRAGATI. Desktop video conference facility with web enabled controlling has also been facilitated to senior officers of DHI and CMDs of CPSEs to establish VC meetings.

Desktop BAS devices, Tablet based BAS devices are also implemented for smoothening the Attendance system. IPV6 migration has also been achieved.

10.2.8 Social Media

As per the guideline of Meity, an official twitter account of DHI (@heindustry) has been launched and maintained regularly by DHI. This will bridge the direct platform with Industry/citizens more effectively in sharing the information between them.

10.2.9 IT in CPSEs of DHI

All CPSEs are asked to upgrade their ICT infrastructure with IPV6 compliance. Most of the CPSEs are having their own domain name and all are launched their websites for disseminating their progress. Their web links are made available in dhi website. In order to organize VC meetings and conferences few CPSEs are already set up dedicative VC studios. Some are having NICs desktop VC facility in which they used to organize internal meetings too. All are

instructed to integrate with on line e-gov applications like e-tendering, GeM, PFMS etc.

International Cooperation (as on 31-12-2017)

In furtherance of the objective of bringing the state of the art technologies in industry, DHI collaborated with various foreign countries and participated in following International meetings/conferences /seminars:

- The Joint Secretary in charge of Andrew Yule & Co., a CPSE under this Department and co-promoter of Tide Water Oil Co. led a delegation to attend the 21st ICIS World Base Oil & Lubricants Conference held on 16th & 17th February, 2017 in London and also made a visit to the Granville Manufacturing facility in Goldthorpe to get an update of the progress of business integration & development during post acquisition of Granville Oils & Chemicals by Tide Water. Mr. Garry Holland, Managing Director, gave a presentation on the progress of the business. Discussions were held on the initiatives undertaken on the issues regarding shifting of manufacturing of Veedol products from the UK toll blender to Granville, firming up product formulations, export of products to UAE and Bahrain, introduction of Veedol range in U.K, enrollment of new customers, starting of initial promotion of products with special scheme in Granville's winter catalogue and further expansion of the Company by acquiring the adjacent plot.
- Director(Auto) ,DHI alongwith CEO, NATRIP were included in the Indian delegation led by the Ministry of Road Transport and Highways to attend 171st

Session of WP-29 (World Forum for Harmonization of Vehicle Regulations) held from 14-17 March, 2017 at Geneva.

- After the stupendous success of its participation in 2015 and 2016 and in order to keep up the momentum as well as to explore areas of cooperation between India and Germany, Department of Heavy Industry headed by Secretary(HI) led a high level delegation to Hannover Messe, 2017, Germany from 24th to 28th April, 2017. A central showcase of 57 sqm on Indian Manufacturing sector showcased various milestones of the Indian Capital Goods Sector focusing on technical advancements, policy initiatives, thrust on Schemes under the Make in India initiative. The Department organised a Round Table on
"Integration of Industry for Industrial Efficiency with the aim to (i) create significant synergies between Indian and German industries for collaboration in innovation through Industry 4.0 (ii) Facilitate Trade, Investment & Technology transfer in these areas (iii) A panel discussion on "Digitization with special context to German and Indian companies having operations in India and Germany. (iv) Technology scouting and technology trends survey in specific areas and (v) Industrial and site visits.
- Joint Secretary(Auto) DHI participated as Co-Chair in the 10th Meeting of Indo-German Joint Working Group on Automotive Sector held in Berlin, Germany from 2-3 May, 2017 and also visited Helsinki, Finland from 4-5 May, 2017 to visit projects, Charging Infrastructure and Urban Electric Mobility.

- Secretary (HI) led a DHI delegation to participate in the St. Petersburg International Economic Forum (SPIEF) 2017, Russia during 1st to 3rd June, 2017. DHI organized a session on 'Capital Goods' which was the main show of the Department in SPIEF-2017 covering heavy engineering, machine tools, construction machinery and process plant equipment. The session was attended by about 50 CEOs from both side. Secretary (HI) addressed the session and spoke about opportunities of Make in India for Russian and global business community. He also shared the huge opportunities arising in India in the Capital Goods Sector in pursuant to the new integrated Capital Goods Policy introduced in February, 2016, emphasizing the necessity to grow manufacturing @ 13% CAGR to contribute 25% to GDP as per NMP and Capital Goods sector to increase production of US\$ 80 billion in 2022 from US \$ 30 billion in 2013-14 at the growth rate 17-19 % per annum.
- DHI was included in the Indian delegation led by the Ministry of Road Transport and Highways to attend 172th Session of WP-29 (World Forum for Harmonization of Vehicle Regulations) held from 20-23 June, 2017 at UN ECE, Geneva Joint Secretary(Auto) represented DHI. Representatives from NATRIP, ARAI, SIAM and ACMA also participated in the event.
- The Joint Secretary in charge of Andrew Yule & Co., a CPSE under this Department led a delegation to Tokyo, Japan from 3rd to 6th July, 2017 to meet with Senior Management of JXTG (Joint Venture Partners of Tide Water Oil Co.) post their merger with Tonen General and to discuss future plans. Andrew Yule Group is the co-promoter of Tide Water Oil Co with a shareholding of 26.3%. The delegation visited CTRL, the main R&D facility of JXTG along with its M.D. A detailed presentation was given on the facilities and development work being done at CTRL With the specific demonstrations of the newly developed lubricants, the delegation found the developments in the areas of special interest such as (i) Rust preventives with water repellent characteristics (ii) Special Gear Oils and (iii) Marine Oils and requested CTRL to explore possibilities of its introduction in India.
- Hon'ble Minister (HI&PE) on an invitation extended by the German Association of the Automotive Industry led a DHI delegation to the IAA India Day-India Europe Automotive Technology Meet on 15th September, 2017 in Frankfurt, Germany. IAA is a biennial event and it is the most comprehensive show of the automotive industry witnessed the large presence of suppliers through the whole automotive value added chain. The Hon'ble Minister delivered a welcome speech to the audience at the event and he was also invited to attend the IAA opening show as a guest of honour which took place on 14th September, 2017. As a partner association in the organization of this event, Indian Auto and Auto Component Associations such as ACMA and SIAM were part of exhibition area "New Mobility World" which shows the most important mobility issues like Connected Cars, Automated Driving, Mobility Services, Urban Mobility and E-Mobility.

- Joint Secretary (Auto), DHI led a delegation to attend the meeting of the Indo -German Working Group on Automotive which took place on the sidelines of IAA International Motor Show on 15th September, 2017 in Frankfurt. The Working Group meets every year to discuss and share information on a wide range of issues concerning auto sector including technology, regulatory policies, alternative fuels, electric mobility etc.
 - Joint Secretary (HE&MT), DHI led a delegation to Germany from 19th to 22nd September, 2017 for study of Industry 4.0 platform at EMO-2017 Fair, Hannover and interaction with key solution providers for Industry 4.0. At the workshop to celebrate 'India Day' at Joint participation in "New India"-Seminar, Convention Center, there were a number of presentations from DHI, Bosch, Oxford Economics, IMTMA, United Grindings and Tata Materials on various aspects of India's growth, growth of manufacturing in India and the role of Industry 4.0 in this context.
 - A DHI delegation led by Secretary (HI) visited Stockholm, Sweden from 12th to 13th October, 2017 to participate in the 'Make in India Sweden 2017'. Secretary (HI) attended the event as a speaker in the investor Roundtables for Automobiles, Auto Components and Capital Goods. These roundtables provided an excellent opportunity to showcase India as a investment destination in the Auto mobile, Auto component and Capital Goods Sectors.
- SHI also attended the Innovation Session held in 'Make in India Sweden 2017. Since Government is in the process of framing Auto Policy of which New Energy (NEVs) are an important components, he was briefed on advance vehicle technologies from Scania and Volvo-the leading Auto companies in Sweden.
- Director(Auto), DHI on invitation from Jassic Forum, Tokyo attended the 8th Public and Private Joint 'Forum in Asian Region-22nd Asia Government/Industry meeting held at Manila, Phillipines on 23-24th November, 2017. The theme of the 8th Public and Private Joint Forum was "*The preparations on International Harmonisation of vehicle regulations and mutual recognition of approval by Industries and Governments*" The topics during the session includes (i) Procedure for acceding to the 1958 agreement (ii) JASIC;'s support or acceding and utilizing the 1958 agreement (iii) report on the attendance to the WP29 and (iv) The experience of acceding to the 1958 agreement and how the revision 3 of the 1958 agreements effects the Asian countries (Panel discussion).
 - DHI was included in the Indian delegation led by the Ministry of Health & Family Welfare to participate in the WHO South East Asia Ministerial Meeting on accelerating actions for implementation of Decade of action for Road Safety held during 29-11-2017 - 01-12-2017 at Phuket, Thailand. Joint Secretary (Auto) represented DHI in the above meeting.

- 11.1** Various provisions of RTI Act and the instructions issued by the Government of India, Department of Personnel and Training and the Central Information Commission have been implemented in the Department of Heavy Industry. The Central Public Sector Enterprises under the administrative control of the Department, separate public authorities under RTI Act, have also been enjoined upon to implement the provisions of the RTI Act.
- 11.2.** The web portal '**RTI on Line**' launched by Department of Personnel & Training has been made operational in Department of Heavy Industry with effect from 18.7.2013. All the officers of the level of Under Secretary or equivalent have been designated as CPIOs and all officers at the level of Director/Dy Secretary or equivalent have been designated as First Appellate Authority under the RTI Act. In addition, officer of the rank of Director/Deputy Secretary is designated as Transparency Officer to ensure suo motu disclosure of information on the website of the Department in terms of Section 4(1) (b) of RTI Act, 2005.
- 11.3** Based on the guidelines issued by the Department of Personnel & Training on the basis of recommendations of Task Force, for the implementation of suo motu disclosure of information in terms of Section 4(1) (b) of RTI Act, 2005, various steps have been taken in the Department for suo motu disclosure and updating the information on the website of the Department. An officer of the rank of Joint Secretary has been designated as Nodal Officer for ensuring compliance with these pro-active disclosure guidelines.
- 11.4** For the effective and quick disposal of RTI applications/appeals, Government had decided to integrate the CPSEs/Autonomous Bodies with the 'RTI on Line' portal of DoP&T. As a part of implementation of this decision of Government, the Nodal Officer of RTI matter of CPSEs under the Department of Heavy Industry have been provided necessary training through DoP&T.
- 11.5** The RTI logo is being used on the printed stationery used in the Department. The Quarterly RTI returns were submitted to CIC online by the Department and the CPSEs under DHI.
- 11.6** During the year 2016-17, 860 application and 54 appeals under RTI were received in the Department and 826 applications and 51 appeals disposed off. For the period 1.4.2017 to 31.12.2017, 502 applications and 42 appeals has been received, and 445 applications and 24 appeals were disposed off.

Allocation of Business to the Department of Heavy Industry

INFORMATION IN RESPECT OF ADMINISTRATION SECTION

Department of Heavy Industry used to be one of the Departments of Ministry of Industry. With effect from 15th October, 1999, a separate Ministry viz. Ministry of Heavy Industries & Public Enterprises has been created. The Ministry comprises of the Department of Heavy Industry and Department of Public Enterprises. The Department of Heavy Industry is looking after the following items of work:

A) Work relating to following CPSEs:-

- 1 Heavy Engineering Corporation Limited
- 2 Engineering Projects (India) Limited
- 3 Bharat Heavy Electricals Limited

Subsidiaries:

- (i) BHEL Electrical Machines Limited

Joint Venture

- (i) NTPC BHEL Power Projects (Private) Limited

- 4 HMT Limited

Subsidiaries:

- (i) HMT (International) Limited
- (ii) HMT (Machine Tools) Limited

- 5 Scooters India Limited
- 6 Andrew Yule and Company Limited

Subsidiaries:

- (i) Hooghly Printing Company Limited

- 7 Cement Corporation of India Limited
- 8 Hindustan Paper Corporation Limited

Subsidiaries:

- (i) Nagaland Pulp and Paper Company Limited
 - (ii) Hindustan Newsprint Limited
 - (iii) Jagdishpur Paper Mills Limited
- 9 Hindustan Salts Limited

Subsidiary:

- (i) Sambhar Salts Limited
- 10 Rajasthan Electronics and Instruments Limited
- 11 NEPA Limited
- 12 Braithwaite, Burn & Jessop Construction Limited
- 13 Bharat Pumps and Compressors Limited
- 14 Richardson and Cruddas (1972) Limited
- 15 Bridge and Roof Company (India) Limited

CPSEs/Subsidiaries of CPSEs liquidated/under liquidation, wound up /winding up, closed/under closure, transferred to other Departments/Organizations:

- 1 Bharat Ophthalmic Glass Limited
- 2 Bharat Leather Corporation Limited
- 3 Tannery and Footwear Corporation of India Limited
- 4 Rehabilitation Industries Corporation
- 5 Bharat Yantra Nigam Limited
- 6 National Bicycle Corporation of India Limited

- 7 National Industrial Development Corporation Limited
- 8 Mining and Allied Machinery Corporation Limited
- 9 Cycle Corporation of India Limited
- 10 Jessop and Company Limited
- 11 Lagan Jute Machinery Company Limited
- 12 Reyrolle Burn Limited
- 13 Weighbird (India) Limited
- 14 Bharat Brakes and Valves Limited
- 15 Bharat Process and Mechanical Engineers Limited
- 16 Mandaya National Paper Mills Limited
- 17 Tyre Corporation of India Limited
- 18 Triveni Structurals Limited
- 19 HMT(Bearing) Limited
- 20 HMT (Watches) Limited
- 21 HMT (Chinar Watches) Limited
- 22 HMT Ltd- (Tractor Division, Pinjore only)
- 23 Tungabhadra Steel Plants Limited
- 24 Hindustan Cables Limited
- 25 Hindustan Photo Films Manufacturing Company Limited
- 26 Instrumentation Limited (Kota Unit-Under Closure & Palakkad Unit-Under Transfer to concerned State Govt.

(B) Autonomous Bodies:

- i) Fluid Control Research Institute (FCRI).
- ii) The Automotive Research Association of India (ARAI)
- iii) NATRIP Implementation Society (for the Implementations of National Automotive Testing and Research & Development Infrastructure Project)
- iv) National Automotive Board (NAB).
- v) Central Manufacturing Technology Institute (CMTI)

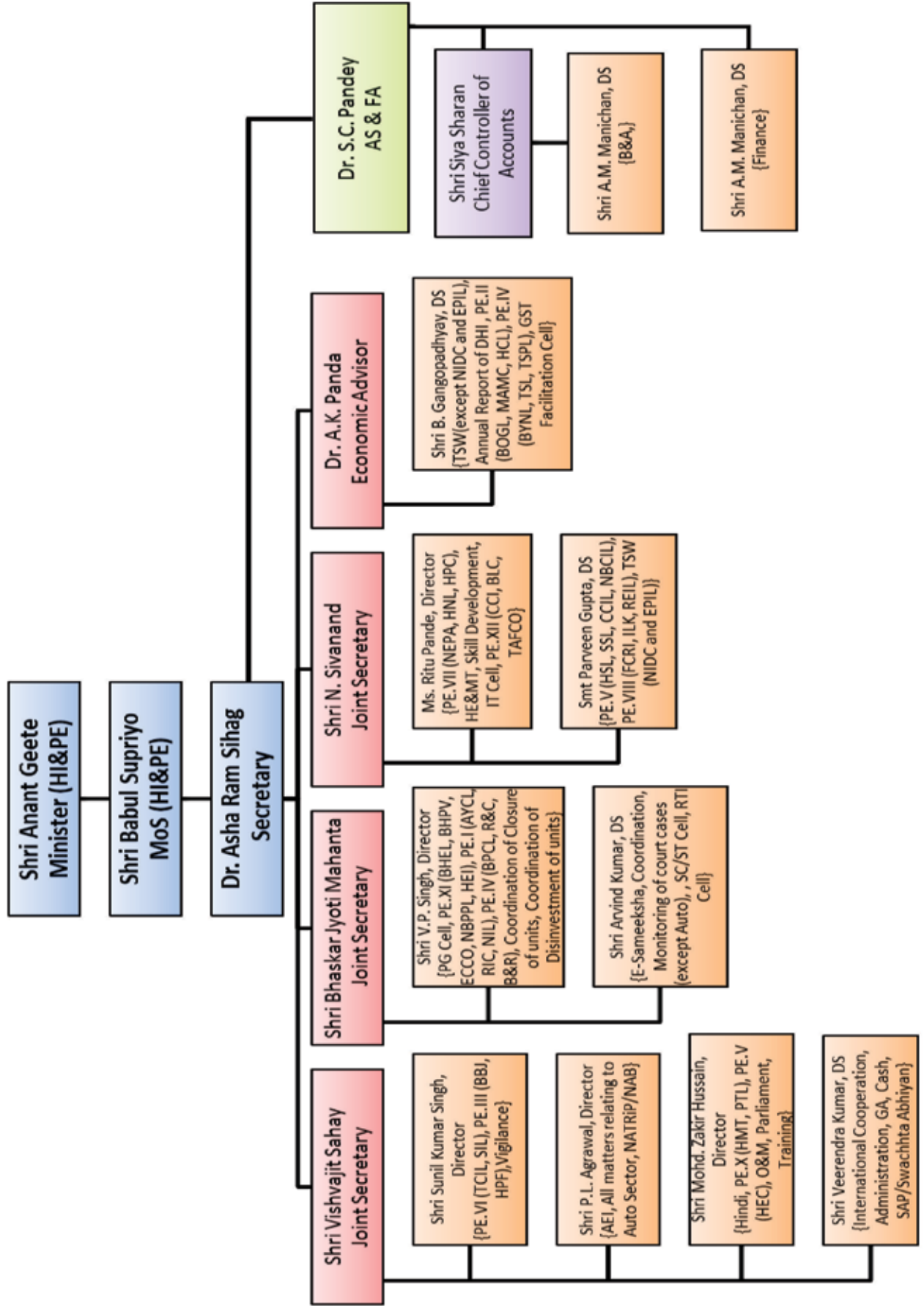
C) Other Subjects:

- 1 Manufacture of Heavy Engineering Equipment for all industries
- 2 Heavy Electrical Engineering Industries
- 3 Machinery Industries including Machine Tools and Steel Plant Equipment
- 4 Auto Industries, including Tractors and Earth Moving Equipment
- 5 All Type of diesel engines including automobile engines
- 6 Development Council for Heavy Electrical and Allied Industries.
- 7 Development Council for Textile Machinery Industry
- 8 Development Council for Machine Tools Industry
- 9 Development Council for Automobile and Allied Industries
- 10 Electrical Construction Company (A Joint Venture between Govt. Of India and Govt. of Libya).

List of Central Public Sector Enterprises under Department of Heavy Industry (along with disinvestment/closure status)

Sl. No.	Name of CPSE	STATUS OF CPSE
1	Andrew Yule and Company Ltd. (AYCL)	---
2	Bharat Heavy Electricals Ltd. (BHEL)	MAHARATNA
3	Bharat Pumps and Compressors Ltd. (BPCL)	MINIRATNA UNDER DISINVESTMENT
4	BHEL – Electrical Machines Ltd. (BHEL-EML)	---
5	Braithwait, Burn and Jessop Construction Ltd. (BBJ)	---
6	Bridge and Roof Company Ltd. (B&R)	MINIRATNA / UNDER DISINVESTMENT
7	Cement Corporation of India Ltd. (CCI)	UNDER DISINVESTMENT
8	Engineering Projects (India) Ltd. (EPI)	MINIRATNA / UNDER DISINVESTMENT
9	H.M.T. International Ltd.	MINIRATNA
10	H.M.T. Ltd.	---
11	H.M.T. Machine Tools Ltd.	---
12	Heavy Engineering Corporation Ltd. (HEC)	---
13	Hindustan Cables Ltd. (HCL)	UNDER CLOSURE
14	Hindustan Newsprint Ltd.	MINIRATNA / UNDER DISINVESTMENT
15	Hindustan Paper Corporation Ltd. (HPC)	MINIRATNA
16	Hindustan Photo Films Manufacturing Company Ltd. (HPF)	UNDER LIQUIDATION
17	Hindustan Salts Ltd. (HSL)	---
18	HMT Bearing Ltd.	UNDER CLOSURE
19	HMT Chinar Watches Ltd.	UNDER CLOSURE
20	HMT Watches Ltd.	UNDER CLOSURE
21	Hooghly Printing Co. Ltd.(HOOGHLY)	---
22	Instrumentation Ltd. (ILK)	UNDER CLOSURE
23	N.E.P.A. Ltd. (NEPA)	---
24	Nagaland Pulp and Paper Company Ltd. (NPPC)	---
25	Rajasthan Electronics and Instruments Ltd. (REIL)	MINIRATNA
26	Richardson and Cruddas Ltd. (R &C)	---
27	Sambhar Salts Ltd. (SSL)	---
28	Scooters India Ltd. (SIL)	UNDER DISINVESTMENT
29	Triveni Structural Ltd. (TSL)	UNDER LIQUIDATION
30	Tungabhadra Steel Products Ltd. (TSPL)	UNDER CLOSURE
31	Tyre Corporation of India Ltd. (TCIL)	UNDER LIQUIDATION

ORGANOGRAM OF DEPARTMENT OF HEAVY INDUSTRY (AS ON 01.01.2018)



GENERAL INFORMATION ABOUT CPSEs UNDER DHI

Sl. No.	Name of PSE and location of Registered Office	Year of setting up of CPSE	Gross Block as on 31.3.2017 (in crore)
1	Andrew Yule & Co.Ltd., (AY&CL), Kolkata	1919	187.90
2	Hooghly Printing Co. Ltd., Kolkata	1979	6.28
3	Bharat Heavy Electricals Ltd., (BHEL), New Delhi	1964	5541.00
4	BHEL-EML	2011	10.96
5	Braithwaite, Burn & Jessop Construction Co.Ltd., (BBJ), Kolkata	1987	19.82
6	Bharat Pumps & Compressors Ltd., (BPCL) Allahabad.	1970	104.69
7	Richardson & Cruddas (1972) Ltd., (R&C) Mumbai	1973	27.11
8	Bridge and Roof Co.(India) Ltd., (B&R) Kolkata.	1920	261.90
9	Heavy Engineering Corpn.Ltd., (HEC), Ranchi.	1958	396.76
10	HMT Ltd.,(Holdg Co.), Bangalore.	1953	144.97
11	HMT (Machine Tools) Ltd., Bangalore.	2000	341.00
12	HMT (International)	1974	5.00
13	Rajasthan Electronics & Instruments Ltd., (REIL) Jaipur	1981	43.17
14	Scooters India Ltd., (SIL), Lucknow.	1972	61.76
15	Cement Corpn.of India Ltd. (CCI), New Delhi.	1965	724.52
16	Hindustan Paper Corporation Ltd. (HPC), Kolkata.	1970	952.46
17	Hindustan Newsprint Ltd., (HNL), Vellore, Kottayam.	1983	484.44
18	Hindustan Salts Ltd., (HSL), Jaipur.	1958	15.84
19	Sambhar Salts Ltd., (SSL)Jaipur.	1964	35.77
20	Nepa Ltd ., (NEPA), Nepa Nagar.	1947	109.22
21	Engineering Projects (India) Ltd., (EPI), New Delhi.	1970	25.39
22	Nagaland Pulp & Paper Company Limited (NPPC), Dist. Mokokchyng, Nagaland	1971	64.89
	TOTAL:		9564.85

Employment Position including SC, ST & OBC as on 31.3.2017 in CPSEs under DHI.

Sl. No.	Name of CPSE	TOTAL NO. OF EMPLOYEES				Number of Employees			
		Executives	Supervisors	Workmen/ Others	Total	SC	ST	OBC	PWDs & their %
1	2	3	4	5	6	7	8	9	10
1	AYCL	224	88	14473	14785	2450	4384	7450	69
2	Hooghly Ptg	10	4	33	47	2	0	0	0
3	BHEL	11590	7645	20586	39821	8014	2644	12348	929
4	BBJ	57	7	51	115	7	0	5	0
5	BHEL-EML	19	4	151	174	12	6	116	3
6	BPCL	86	16	289	391	62	3	120	1
7	R&C	4	2	3	9	4	2	3	0
8	B&R	710	366	231	1307	165	11	72	21
9	HEC	735	106	614	1455	308	309	231	16
10	HMT (Hldg Co.)	35	12	222	269	46	2	36	6
11	HMT (MT)	332	182	1137	1651	306	74	474	25
12	HMT (International)	16	9	3	28	2	2	0	0
13	REIL	73	81	85	239	47	9	56	5
14	SIL	86	20	154	260	72	1	82	0
15	CCI	162	204	299	665	102	69	106	3
16	HPC	288	96	1157	1541	176	151	155	0
17	HNL	103	34	358	495	43	1	156	11
18	HSL	17	19	36	72	10	2	9	2
19	SSL	13	22	75	110	20	7	44	2
20	NEPA	196		558	754	45	13	57	2
21	EPIL	316	36	20	372	65	10	62	4
22	NPPC	6	3	129	138	3	126	9	0
	TOTAL	15078	8956	40664	64698	11961	7826	21591	1099

PRODUCTION PERFORMANCE OF CPSEs UNDER DHI

(₹ in crores)

Sl. No.	Name of CPSE	2014-15 (Actual)	2015-16 (Actual)	2016-17 (Actual)	2017-18 (Anticipated)	2018-19 (Tentative)
1	2	3	4	5	6	7
1	AYCL	358.55	357.51	270.70	391.00	427.00
2	Hooghly Printing	16.19	16.92	15.96	17.00	17.00
3	BHEL	30947.00	26050.00	28840.00	28500.00	31000.00
4	BHEL-EML	21.88	40.96	32.13	73.61	97.88
5	BBJ	196.54	166.61	105.30	250.00	250.00
6	BPCL	77.69	69.67	75.52	123.50	125.00
7	R&C	71.19	20.21	19.28	20.50	25.00
8	B&R	1428.59	1707.01	1746.44	1650.00	1700.00
9	HEC	319.58	340.68	364.84	513.77	626.21
10	HMT(Holding Co.)	53.66	37.18	19.38	11.48	13.89
11	HMT(MT)	181.50	201.44	183.83	183.83	230.00
12	HMT(International)	33.40	33.91	23.98	36.00	44.00
13	REIL	224.40	214.32	230.37	240.00	250.00
14	SIL	204.47	110.64	102.95	156.74	173.71
15	CCI	449.54	436.23	336.30	350.06	379.56
16	HPC	784.05	403.72	170.12	0.00	0.00
17	HNL	336.72	342.80	324.64	237.45	0.00
18	HSL	6.90	4.51	5.82	10.52	25.56
19	SSL	21.31	18.41	20.51	25.45	55.15
20	NEPA	102.12	70.99	30.31	0.00	135.70
21	EPI	1031.28	1295.46	1621.45	1500.00	1550.00
22	NPPC	0.00	0.00	0.00	0.00	0.00
	Total:	36866.56	31939.18	34539.83	34290.91	37125.66

Annexure-VI

PROFIT(+) LOSS (-) (BEFORE TAX) OF CPSEs UNDER DHI.

(₹ in crores)

Sl. No.	Name of CPSE	2014-15 (Actual)	2015-16 (Actual)	2016-17 (Actual)	2017-18 (Anticipated)	2018-19 (Tentative)
1	2	3	4	5	6	7
(A) PROFIT MAKING CPSEs						
1	AYCL	12.96	8.35	27.39	9.21	8.72
2	Hooghly Printing	0.10	0.29	0.23	0.11	0.25
3	R&C	-3.64	-10.07	14.94	18.74	20.00
4	B&R	17.89	5.03	27.25	16.50	17.00
5	BBJ	74.06	68.89	28.04	17.51	15.00
6	CCI	40.08	53.51	42.33	12.48	13.68
7	EPI	41.21	38.19	4.12	3.40	14.73
8	HMT(International)	1.66	0.87	0.26	3.32	4.00
9	BHEL	2140.00	-1164.00	628.00	450.00	550.00
10	HSL	-4.95	-1.13	0.40	1.51	2.65
11	REIL	20.96	17.78	17.37	16.60	17.25
Sub-total for (A) Profit making Companies		2340.33	-982.29	790.33	549.38	663.28
(B) LOSS MAKING CPSEs						
12	SIL	11.09	5.48	-10.27	3.11	4.71
13	BPCL	-47.76	-60.00	-82.39	-38.70	-38.15
14	HEC	-241.69	-144.77	-82.27	-96.98	-78.39
15	HNL	-7.81	-43.61	-60.15	-94.07	0.00
16	HPC	-331.29	-389.96	-450.00	-272.76	0.00
17	HMT(Hldg. Co.)	-96.57	-17.14	-239.49	-1.84	-2.03

Sl. No.	Name of CPSE	2014-15 (Actual)	2015-16 (Actual)	2016-17 (Actual)	2017-18 (Anticipated)	2018-19 (Tentative)
1	2	3	4	5	6	7
18	HMT(Machine Tools)	-134.94	-121.64	-127.95	-80.95	-79.41
19	NEPA	-48.71	-70.12	-68.62	8.75	-69.42
20	BHEL-EML	-3.96	-2.98	-3.79	0.55	5.08
21	NPPC	-15.38	-17.39	-14.47	-19.96	-17.89
22	SSL	-9.83	-8.90	-8.55	-7.69	0.52
Sub-total (B) Loss making Companies.		-926.85	-871.03	-1147.95	-600.54	-274.98
GRAND TOTAL(A&B)		1413.48	-1853.32	-357.62	-51.16	388.30

SALARY/WAGE BILL & SOCIAL OVERHEADS AS % OF TURNOVER OF CPSEs UNDER DHI

Sl. No.	Name of PSE	Wages and salaries as % of Turnover					Social overheads as % of Turnover				
		2014-15 (Actual)	2015-16 (Actual)	2016-17 (Actual)	2017-18 (Anticipated)	2018-19 (Tentative)	2014-15 (Actual)	2015-16 (Actual)	2016-17 (Actual)	2017-18 (Anticipated)	2018-19 (Tentative)
1	2	3	4	5	6	7	8	9	10	11	12
1	AYCL	37.47	44.38	40.85	40.09	40.72	0.09	0.12	0.17	4.39	3.80
2	Hoogly Ptg.	18.74	16.26	18.58	16.35	16.35	0.96	0.83	1.10	0.85	1.00
3	BHEL	17.61	20.65	18.72	22.46	21.29	2.56	2.82	2.53	2.61	2.43
4	BBJ	8.43	10.81	15.99	6.28	6.40	0.31	0.42	0.84	0.72	0.72
5	BHEL-EML	35.00	19.00	25.00	13.00	10.00	0.00	0.00	0.00	0.00	0.00
6	BPCL	63.70	84.90	80.90	42.11	40.00	2.50	1.90	1.40	0.73	0.80
7	R&C	1.18	2.36	3.31	3.50	3.75	0.00	0.00	0.00	0.00	0.00
8	B&R	7.68	8.99	9.46	10.91	12.65	1.50	1.41	1.51	2.42	2.94
9	HEC	33.92	28.52	26.73	22.13	19.07	0.25	-1.20	-0.23	0.02	0.07
10	HMT(Hldg)	152.00	148.00	95.00	100.00	78.00	13.00	11.00	6.00	7.00	5.00
11	HMT(MT)	91.00	70.00	64.00	54.00	48.00	12.00	11.00	11.00	11.00	10.00
12	HMT (Inerntional)	18.00	16.00	16.00	23.00	14.00	1.20	0.90	0.00	1.70	1.70
13	REIL	9.48	10.22	9.70	11.61	14.30	0.65	1.57	1.43	1.51	1.65
14	SIL	18.26	20.46	25.63	18.72	19.04	2.06	2.17	2.80	2.05	1.92
15	CCI	11.20	11.60	15.11	13.36	13.06	4.94	4.47	9.54	8.44	8.25
16	HPC	17.98	31.71	0.00	0.00	0.00	7.32	9.44	0.00	0.00	0.00
17	HNL	14.41	15.24	15.92	25.35	0.00	1.66	3.51	5.48	5.64	0.00
18	HSL	78.02	164.48	104.26	66.35	30.34	6.22	8.04	3.67	3.03	1.46
19	SSL	39.51	38.72	43.35	36.98	19.06	3.46	3.32	3.74	3.33	1.66
20	NEPA	14.26	49.97	138.40	0.00	31.08	3.50	2.80	1.59	0.00	0.85
21	EPIL	6.04	5.18	4.21	5.07	5.10	0.64	0.87	0.58	0.67	0.71
22	NPPC	8.32	8.15	8.40	8.65	8.91	0.00	0.00	0.00	0.00	0.00

ORDER BOOK POSITION OF CPSEs under DHI

(₹ in crores)

Sl. No.	CPSE	As on 1.10.2013	As on 1.10.2014	As on 1.10.2015	As on 1.10.2016	As on 1.10.2017
1	2	3	4	5	6	7
1	AYCL	90.63	90.66	37.45	81.39	67.02
2	Hooghy Ptg	2.38	11.31	8.89	11.07	7.72
3	BHEL	102300.00	103700.00	112300.00	103300.00	101380.00
4	BBJ	282.82	124.54	360.70	414.93	426.63
5	BHEL-EML	15.73	14.31	50.49	36.13	21.32
6	BPCL	195.19	116.49	154.35	137.02	105.54
7	R&C	35.44	72.07	15.92	19.17	11.67
8	B&R	1229.87	964.80	1255.79	834.10	1489.16
9	HEC	1386.10	1435.01	1460.21	1139.26	1056.24
10	HMT(Hldg)	0.00	0.00	0.00	0.00	0.00
11	HMT(MT)	325.75	214.22	307.57	291.72	264.16
12	HMT(I)	8.84	7.95	57.23	9.19	4.38
13	REIL	71.54	137.57	67.40	202.67	167.86
14	SIL*	-	-	-	-	-
15	CCI	22.74	3.39	5.93	6.67	5.26
16	HPC	495.88	209.40	398.67	135.27	42.19
17	HNL	-	-	-	-	-
18	HSL	3.29	5.79	5.46	3.45	3.63
19	SSL	3.09	7.33	8.23	8.84	10.20
20	NEPA	85.33	54.95	51.39	7.61	0.00
21	EPIL	3383.83	7099.61	9811.61	9669.89	8651.67
22	NPPC	-	-	-	-	-
	TOTAL	109938.45	114269.40	126357.29	116308.38	113714.65

*Goods are produced for stock and sale hence not applicable.

EXPORT PERFORMANCE OF CPSEs UNDER DHI

(₹ in crores)

Sl. No.	PSEs	2013-14 (Actual)			2014-15 (Actual)			2015-16 (Actual)			2016-17 (Actual)			2017-18 (Anticipated)		
		Physical	Deemed	Total	Physical	Deemed	Total	Physical	Deemed	Total	Physical	Deemed	Total	Physical	Deemed	Total
1	AYCL	1.86		1.86	2.19		2.19	4.49		4.49	1.78		1.78	3.65		3.65
2	BHEL	2422.00	16608.00	19030.00	1418.00	11539.00	12957.00	1265.00	10300.00	11565.00	1178.00	8779.00	9957.00	2160.00	5860.00	8020.00
3	BPCL		7.10	7.10		12.03	12.03		9.76	9.76	1.75		1.75	1.5		1.50
4	B&R	11.94		11.94	3.70		3.70	0.00		0.00	0.00		0.00	0.00		0.00
5	HEC	10.63		10.63			0.00			0.00			0.00			0.00
6	HMT(MT)	7.25		7.25	7.75		7.75	0.53		0.53	1.96		1.96	9.00		9.00
7	HMT(I)	25.08		25.08	33.40		33.40	33.91		33.91	23.98		23.98	40.00		40.00
8	REIL	2.80	0	2.80	1.54	0	1.54	0.23	0	0.23	0.22		0.22	0.50		0.50
9	SIL	0.38		0.38	0.049		0.05	0		0.00			0.00	0.2		0.20
10	HSL	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00			0.00
11	BHEL-EML	0.82	0.00	0.82	0.77	0.00	0.77	0.49	0.00	0.49	1.46		1.46	0.50		0.50
12	EPIL	340.85	0.00	340.85	591.42		591.42	497.78		497.78	550.97		550.97	600.00		600.00
13	HPC	0.090		0.090	0.18		0.18	0.00	0.00	0.00			0.00			0.00
	Total	2823.70	16615.10	19438.80	2059.00	11551.03	13610.03	1802.43	10309.76	12112.19	1760.12	8779.00	10539.12	2815.35	5860.00	8675.35

**PAID UP CAPITAL, NETWORTH AND ACCUMULATED PROFIT(+)/LOSS(-)
AS ON 31.3.2017 OF THE CPSEs UNDER DHI**

(₹ in crores)

Sl. No.	Name of CPSE	Paid up capital		Networth	Accumulated Profit (+)/Loss (-)
		Government/ Holding CPSE	Others		
1	2	3	4	5	6
1	AYCL	87.28	10.51	180.58	50.27
2	HOOGLY PTG	1.03	0.00	3.97	1.26
3	BHEL	308.69	180.83	32294.00	31805.00
4	BBJ	103.73	0.00	306.17	185.31
5	BHEL-EML	5.35	5.15	-2.23	-12.73
6	BPCL	53.53	0.00	-109.72	-193.26
7	R&C	156.61	0.00	-289.09	-445.70
8	B&R	54.63	0.36	323.09	268.11
9	HEC	606.08	0.00	-336.68	-1043.65
10	HMT (Holding Co.)	1128.06	76.03	205.30	-1101.75
11	HMT (Machine Tools)	276.60	0.00	-1104.93	-1361.94
12	HMT (International)	72	0.00	31.56	30.84
13	REIL	6.25	6.00	110.72	98.47
14	SIL	80.03	5.35	88.42	3.04
15	CCI	811.41	0.00	-13.82	-806.90
16	HPC	817.30	0.00	-805.79	-1660.76
17	HNL	99.99	0.00	82.42	-17.58
18	HSL	42.06	0.00	33.89	-16.38
19	SSL	1.00	0.00	-33.88	-42.32
20	NEPA	424.02	0.65	49.62	-634.13
21	EPIL	35.42	0.007	230.53	195.11
22	NPPC	65.99	0.63	-93.86	-160.33
	TOTAL:	5237.06	285.52	31150.27	25139.98

**Important Audit observations from
Comptroller & Auditor General of India Report for 2017**

Chapter – VIII of the Report No.9 of 20 is related to Department of Heavy Industry.

Bharat Heavy Electricals Limited

Violation of CVC and internal guidelines resulted in avoidable expenditure.

BHEL questioned technical acceptability of the vendor after opening the price bids in violation of CVC guidelines and procurement policy of BHEL and ignored repeated positive feedbacks regarding the vendor and the machine leading to delay, price bid becoming invalid and re-tender. Eventually, in the re-tender, BHEL incurred an avoidable expenditure of ₹ 5.57 crore.

Abbreviations

AAIFR	Appellate Authority of Industrial & Financial Reconstruction	CEA	Central Electricity Authority
ARAI	Automotive Research Association of India	CCEA	Cabinet Committee on Economic Affairs
AYCL	Andrew Yule & Company	CNC	Computer Numerically Controlled
BBJ	Braithwaite, Burn & Jessop Construction Company Limited	CPSE	Central Public Sector Enterprise
BBUNL	Bharat Bhari Udyog Nigam Limited	EFV	Environmentally Friendly Vehicle
BEML	BHEL Electrical Machines Ltd.	EOT	Electrically Operated Trolley
BHEL	Bharat Heavy Electricals Limited	EPC	Engineering Procurement and Construction
BHPV	Bharat Heavy Plate & Vessels Limited	EPI	Engineering Projects (India) Limited
BIFR	Board of Industrial & Finance Reconstruction	FCRI	Fluid Control Research Institute
BLC	Bharat Leather Corporation Limited	FFP	Foundry Forge Plant
BOGL	Bharat Ophthalmic Glass Limited	HCL	Hindustan Cables Limited
BPCL	Bharat Pumps & Compressors Limited	HMBP	Heavy Machine Building Plant
BPME	Bharat Process & Mechanical Engineers Limited	HMT(I)	HMT (International) Limited
BCL	Braithwaite & Company Limited	HMTP	Heavy Machine Tools Plant
BWEL	Bharat Wagon & Engineering Company Limited	HPC	Hindustan Paper Corporation Limited
BYNL	Bharat Yantra Nigam Limited	HNL	Hindustan Newsprint Limited
BRPSE	Board for Reconstruction of Public Sector Enterprises	HPF	Hindustan Photo Films Manufacturing Company Limited
CCI	Cement Corporation of India Limited	HSL	Hindustan Salts Limited
CCIL	Cycle Corporation of India Limited	IL	Instrumentation Limited
		ICGCC	Integrated Coal Gasification Combined Cycle
		ICEMA	Indian Construction Equipment Manufacturers Association

IMTMA	India Machine Tools Manufacturers Association	NATRIP	National Automotive Testing and Research & Development Infrastructure Project
JPML	Jagdishpur Paper Mills Limited	PSE	Public Sector Enterprise
JVC	Joint Venture Company	PMMAI	Plastic Moulding Machinery Association of India
JESSOP	Jessop Company Limited	PPMAI	Process Plant and Machinery Association of India
KV	Kilo Volt	PTL	Praga Tools Limited
KW	Kilo Watt	R&C	Richardson & Cruddas (1972) Limited
LAGAN JUTE	Lagan Jute Machinery Company Limited	RIC	Rehabilitation Industries Corporation Limited
OA	Operating Agency	RTI	Right to Information Act
MAMC	Mining & Allied Machinery Corporation Limited	SIL	Scooters India Limited
MAX	Main Automatic Exchange	SSL	Sambhar Salts Limited
MoU	Memorandum of Understanding	TAFCO	Tannery & Footwear Corporation of India Limited
MoHI&PE	Minister of Heavy Industries & Public Enterprises	TAGMA	Tools and Gauge Manufacturers Association of India
MT	Metric Tonne	TCIL	Tyre Corporation of India Limited
MUL	Maruti Udyog Limited	TMMA	Textile Machinery Manufacturers Association
MVA	Mega Volt Amperes	TSL	Triveni Structural Limited
MW	Mega Watt	TSPL	Tungabhadra Steel Products Limited
NBCIL	National Bicycle Corporation of India Limited	VRDE	Vehicle Research Development Establishment
NEPA	NEPA Limited	WIL	Weighbird (India) Limited
NPCIL	Nuclear Power Corporation of India Limited		
NIDC	National Industrial Development Corporation Limited		



Department of Public Enterprises

Vision

“Effective, Profitable and Globally Competitive
Central Public Sector Enterprises”

Mission

“To continuously improve management and performance of CPSEs through Corporate Governance, Performance Evaluation, Human Resource Management, Research & Development so as to enhance their global competitiveness”

Introduction

Department of Public Enterprises (DPE)

1. In their 52nd Report, the Estimates Committee of 3rd Lok Sabha (1962-67) stressed the need for setting up a centralized coordinating unit, which could also make continuous appraisal of the performance of public enterprises. This led to the setting up of the Bureau of Public Enterprises (BPE) in 1965 in the Ministry of Finance. Subsequently, as a result of the reorganization of the Ministries/ Departments of the Union Government in September, 1985, BPE was made part of the Ministry of Industry. In May, 1990, BPE was made a full-fledged Department known as the Department of Public Enterprises (DPE). Presently, it is part of the Ministry of Heavy Industries & Public Enterprises.
2. The Department of Public Enterprises is the nodal department for all the Central Public Sector Enterprises (CPSEs) and formulates policy pertaining to CPSEs. It lays down, in particular, policy guidelines on performance improvement and evaluation, autonomy and financial delegation and personnel management in CPSEs. It furthermore collects and maintains information in the form of a Public Enterprises Survey on several areas in respect of CPSEs.
3. In fulfilling its role, the Department coordinates with other Ministries, CPSEs and concerned organisations. As per the Allocation of Business Rules of the Government, the following subjects have been allocated to the DPE:
 - Residual work relating to erstwhile Bureau of Public Enterprises including Industrial Management Pool.
 - Coordination of matters of general policy affecting all Public Sector Enterprises.
 - Evaluation and monitoring the performance of Public Sector Enterprises, including the Memorandum of Understanding mechanism.
 - Matters relating to Permanent Machinery of Arbitration for the Public Sector Enterprises.
 - Counselling, training and rehabilitation of employees in Central Public Sector Undertakings under Voluntary Retirement Scheme.
 - Review of capital projects and expenditure in Central Public Sector Enterprises.
 - Measures aimed at improving performance of Central Public Sector Enterprises and other capacity building initiatives of Public Sector Enterprises.
 - Rendering advice relating to revival, restructuring or closure of Public Sector Enterprises including the mechanisms therefor.

- Matters relating to Standing Conference of Public Enterprises.
 - Matters relating to International Center for Public Enterprises.
 - Categorisation of Central Public Sector Enterprises including conferring 'Ratna' status.
- Survey of Public Enterprises.
 - 4. Department of Public Enterprises is headed by Secretary to the Government of India who is assisted by an establishment with an overall sanctioned strength of 119 officers/ personnel. The organizational structure of DPE is at **Annexure-1**.

Public Enterprises Survey

1.1 Public Enterprises Survey

The Department of Public Enterprises brings out the Public Enterprises Survey on the performance of Central Public Sector Enterprises (CPSEs), which is laid in the Parliament every year during Budget session. The Public Enterprises survey 2016-17 (57th Survey) will be laid in both the Houses of Parliament during the Budget Session of Parliament. The compilation and processing of information for Public Enterprises Survey, 2016-17 (57th Survey) is underway.

1.2 Performance of CPSEs, during the year 2015-16, is summarized below:

There were 320 Central Public Sector Enterprises under the administrative control of various Ministries / Departments as on 31.3.2016. Out of these 320 CPSEs, 244 were in operation and 76 CPSEs have yet to commence business.

Out of 244 operating CPSEs as many as 165 CPSEs showed profit during 2015-16, 78 CPSEs incurred losses during the year. The 'net profit' of profit making CPSEs (165) was ₹ 1,44,523 crore in 2015-16. The 'net loss' of loss making enterprises (78) stood at ₹ 28,756 crore during the year. The overall net profit of the 244 operating CPSEs went

up by 12.54% to 1,15,767 crore in 2015-16 from 1,02,866 crore in 2014-15. The contribution of CPSEs to Central Exchequer increased by 38.63% in 2015-16 as compared to previous year.

The cumulative investment (paid up capital plus long terms loans), which was ₹ 29 crore in 5 enterprises as on 31.03.1951, has gone up to ₹ 11,71,844 crore in 320 CPSEs as on 31.03.2016. The increase in 'investment' in all the CPSEs was 6.96% in 2015-16 over 2014-15, similarly 'capital employed' went up by 5.43% during the same period. (Table 1).

A comparison of the performance of CPSEs during 2015-16 vis-a-vis the previous year i.e. 2014-15, is at **Annexure-2**.

1.3 Scheme in respect of Research Development and Consultancies (RDC)

DPE is implementing a Plan Scheme of Research Development and Consultancies (RDC) for the executives of Central Public Sector Enterprises (CPSEs) and State Level Public Enterprises (SLPEs). Under the Scheme Management Development Programmes on various topics for increasing the knowledge & skill of executives of CPSEs and SLPEs are organized at various Centers for Excellence such as IIMs, IITs,

IIPA New Delhi etc. During the year 2017-18, 11 training programmes have been planned and successfully being conducted.

The details of all the eleven training programmes are given below:

S.No.	Institute	Institute	Dates	Subject
1.	IND-AS	ICAI	Delhi	5 th to 9 th June 2017
2.	GST & its Implementation	National Institute of Financial Management	Faridabad	21 st to 23 rd June 2017
3.	Effective Communication in a business environment	ASCI	Hyderabad	28 th to 30 th June 2017
4.	Project Management	IIM Shillong	Shillong	3 rd to 7 th July 2017
5.	Corporate Governance-Past, Present and future	IIM Bangalore	Bangalore	31 st Jul to 2 nd Aug 2017
6.	Leadership and Enablers of achieving business excellence	Indian Institute of Public Administration	New Delhi	7 th to 11 th Aug 2017
7.	Risk Management	IIM Ranchi	Ranchi	21 st to 23 rd August 2017
8.	Building Competencies for Personal Excellence	Art of Living foundation	Bangalore	28 th Aug to 1 st Sep 2017
9.	IND-AS	Indian Institute of Corporate Affairs	Goa	5 th to 8 th Sep 2017
10.	Finance for Non-Finance Executives	National Productivity Council	Gangtok	9 th to 13 th Oct 2017
11.	Inventory & Supply Chain Management	IIT Guwahati	Guwahati	6 th to 10 th Nov 2017

1.3.1 Under the DPE's Plan Scheme of RDC, following six workshops have been organized during 2017-18:

S.No.	Topic /subject	Institute	Venue	Date of Workshop
1.	Basics of GST	ICMAI	Delhi	28 th July,2017
2.	Instructions for filling up online data input sheet of Public Enterprises Survey 2016-17	ICAI	Delhi	4 th August 2017
3.	Instructions for filling up online data input sheet of Public Enterprises Survey 2016-17	ICAI	Bombay	24 th August 2017
4.	Basics of GST	ICMAI	Bombay	15 th Sep, 2017

5.	Recent changes in Companies Act 2013	Indian Institute of Corporate Affairs	Delhi	22 nd Sep, 2017
6.	Program on safeguards to be taken in tendering, procurement and Contracting	NPC	Delhi	17 th Nov, 2017

1.4 Laying of the C&AG Reports in the Parliament

DPE tables the Reports of the Comptroller and Auditor General of India in the Parliament and also follows up with the respective administrative Ministries / Departments for submission of Action Taken Notes (ATN) on Audit Paras to Committee on Public Undertakings as well as C & AG. Reports of the C & AG of India-Union Government (Commercial) No. 6 of 2017 General Purpose Financial Reports of Central Public Sector Enterprises (Compliance Audit) and Report No.9 of

2017 (Compliance Audit Observations) for the year ending March 2016 was placed on the Tables of Lok Sabha and Rajya Sabha on 05.04.2017.

1.5 Study to upgrade the Public Enterprises Survey

With a view to improve the analytical content, overall design and presentation of Public Enterprises survey, the department invited bids from external agencies of national repute. The study to upgrade the Public Enterprises Survey has been awarded to CRISIL. The report is expected to be received by December 2017.

2.1 The endeavour of the Government is to make Central Public Sector Enterprises (CPSEs) autonomous board managed companies. Under Articles of Association, the Board of Directors of CPSEs enjoy autonomy in respect of recruitment, promotion and other service conditions of below board level employees. The Board of Directors of a CPSE exercises delegated powers subject to broad policy guidelines issued by Government from time to time. The Government has granted enhanced powers to the Boards of the profit making enterprises under various schemes like Maharatna, Navratna and Miniratna in the manner stated in the following paragraphs.

2.2 MAHARATNA SCHEME

2.2.1 The main objective of the Maharatna scheme which was introduced in 2010 is to empower mega CPSEs to expand their operations and emerge as global giants.

2.2.2 The salient features of Maharatna scheme are at **Annexure-3**.

2.2.3 During the year, Bharat Petroleum Corporation Limited was granted Maharatna status.

2.2.4 Presently there are eight Maharatna CPSEs, viz. (i) Coal India Limited, (ii) Bharat Heavy Electricals Limited, (iii) GAIL India Limited,

(iv) Indian Oil Corporation Limited, (v) NTPC Limited, (vi) Oil & Natural Gas Corporation Limited (vii) Steel Authority of India Limited (viii) Bharat Petroleum Corporation Limited.

2.3 Navratna Scheme

2.3.1 The Government had introduced the Navratna scheme, in 1997, to identify Central Public Sector Enterprises (CPSEs) that had comparative advantages and to support them in their drive to become global giants. Under this scheme, the Boards of Navratna CPSEs have been delegated enhanced powers in the areas of (i) capital expenditure, (ii) investment in joint ventures/subsidiaries, (iii) mergers & acquisitions, (iv) human resources management, etc.

2.3.2 Presently, there are 16 Navratna CPSEs as under:

- (i) Bharat Electronics Limited
- (ii) Container Corporation of India Limited
- (iii) Engineers India Limited
- (iv) Hindustan Aeronautics Limited
- (v) Hindustan Petroleum Corporation Limited
- (vi) Mahanagar Telephone Nigam Limited

- (vii) National Aluminium Company Limited
- (viii) National Buildings Construction Corporation Limited
- (ix) Neyveli Lignite Corporation Limited
- (x) NMDC Limited
- (xi) Oil India Limited
- (xii) Power Finance Corporation Limited
- (xiii) Power Grid Corporation of India Limited
- (xiv) Rashtriya Ispat Nigam Limited
- (xv) Rural Electrification Corporation Limited
- (xvi) Shipping Corporation of India Limited

2.3.3 The powers delegated to the Boards of Navratna CPSEs and conditions/guidelines for exercise of delegated Navratna powers are at **Annexure-4**.

2.4 Miniratna scheme

2.4.1 In October 1997, the Government had decided to grant enhanced autonomy and delegation of financial powers to some other profit making companies subject to certain eligibility conditions and guidelines to make them efficient and competitive. These companies, called Miniratnas, are in two categories, namely, Category- I and Category-II.

2.4.2 The salient features of Miniratna scheme are at **Annexure-5**.

2.4.3 Presently, there are 74 Miniratna CPSEs (59 Category-I and 15 Category-II). The list of these 74 Miniratna CPSEs is enclosed at **Annexure-6**.

Corporate Governance & Professionalization of Board in Central Public Sector Enterprises (CPSEs)

3.1. Corporate Governance - Background

3.1.1 The term Corporate Governance includes the policies and procedures adopted by a corporate entity in achieving its objectives in relation to shareholders, employees, customers and suppliers, regulatory authority and the community at large. In general parlance, it means a code of corporate conduct in relation to all the stakeholders, whether internal or external. Corporate Governance implies transparency of management systems and encompasses the entire mechanics of the functioning of the company. It provides a system by which corporate entities are directed and controlled, besides attempting to put in place a system of checks and balances between the shareholders, directors, auditors and the management.

3.1.2 Keeping in view the importance of Corporate Governance principles in ensuring transparency and enhancing the trust of stakeholders and the fact that there was a continued need to adopt and apply the good Corporate Governance practices in respect of CPSEs where huge public funds are invested, Guidelines on Corporate Governance for all CPSEs on mandatory basis was approved by the Government in March, 2010.

3.1.3 The Guidelines cover issues like composition of Board of CPSEs, Audit Committee, Remuneration Committee, Subsidiary companies, Disclosures, Code of conduct and ethics, Risk management and reporting. They also include provisions relating to monitoring the compliance of Guidelines by the CPSEs and formation of Remuneration Committee. Since, the concept of Corporate Governance is dynamic in nature, it has also been provided that suitable modifications in these Guidelines would be carried out to bring them in line with prevailing laws, regulations, acts, etc. from time to time.

3.1.4 The salient features of these guidelines are at **Annexure-7**.

3.2 Professionalization of Board of CPSEs

3.2.1 Department of Public Enterprises (DPE) formulates policy guidelines on the Board structure of CPSEs. In pursuance of the public sector policy being followed since 1991 several measures have been taken by the Department of Public Enterprises to professionalize the Boards of public enterprises. The guidelines issued in 1992 provide that outside professionals should be inducted on the Boards of CPSEs in the form of part-time non-official Directors and that the number of such Directors should

be at least 1/3rd of the actual strength of the Board. In the case of listed CPSEs headed by executive Chairman, the number of non-official Directors (Independent Directors) should be at least half the strength of the Board. The guidelines also provide that the number of Government Directors on the Boards should be not more than one-sixth of the actual strength of the Board subject to a maximum of two. Apart from this, there should be some functional Directors on each Board whose number should not exceed 50% of the actual strength of the Board

3.2.2 As regards selection and appointment of non-official Directors on the Boards of CPSE, the following eligibility criteria has been prescribed:-

Criteria of Experience

- (i) Retired Government officials with a minimum of 10 years experience at Joint Secretary level or above.
- (ii) Persons who have retired as CMD/CEOs of CPSEs and Functional Directors of the Schedule 'A' CPSEs. The ex-Chief Executives and ex-Functional Directors of the CPSEs will not be considered for appointment as non-official Director on the Board of the CPSE from which they retire. Serving Chief Executives/Directors of CPSEs will not be eligible to be considered for appointment as non-official Directors on the Boards of any CPSEs.
- (iii) Academicians/Directors of Institutes/ Heads of Department and Professors having more than 10 years teaching or research experience in the relevant domain

e.g. management, finance, marketing, technology, human resources, or law.

- (iv) Professionals of repute having more than 15 years of relevant domain experience in fields relevant to the company's area of operation.
- (v) Former CEOs of private companies if the company is (a) listed on the Stock Exchanges or (b) unlisted but profit making and having an annual turnover of at least ₹ 250 crore.
- (vi) Persons of eminence with proven track record from Industry, Business or Agriculture or Management.
- (vii) Serving CEOs and Directors of private companies listed on the Stock Exchanges may also be considered for appointment as part-time non-official Directors on the Boards of CPSEs in exceptional circumstances.

Criteria of Educational Qualification

Minimum graduate degree from a recognized university.

Criteria of Age

The age band should be between 45-65 years (minimum/maximum limit)

This could, however, be relaxed for eminent professionals, for reasons to be recorded, being limited to 70 years.

3.2.3 The proposals for appointment of non-official Directors are initiated by the concerned Administrative Ministries/ Departments. The selection of non-official Directors in respect of all CPSEs is made by the Search Committee which

presently consists of Secretary (DoPT) as chairperson, Secretary (DPE), Secretary of the administrative Ministry/Department of the CPSE and 2 non-official Members. The concerned Administrative Ministry/Department appoints the non-official Directors on the basis of recommendations of Search Committee after obtaining the approval of competent authority.

3.2.4 During the year 2017, Search Committee held 4 meetings and recommended names for filling up 134 positions of non-official Directors on the Boards of various CPSEs.

3.2.5 The administrative Ministries/Departments were advised to take necessary steps to ensure appointment of requisite number of non-official Directors and at least one woman Director on the Boards of CPSEs under their respective administrative jurisdiction.

3.2.6 The functional Directors are appointed by the administrative Ministry on the recommendations of PESB and with the approval of Competent Authority. The Government Directors are appointed in ex-officio capacity by the concerned administrative Ministries/Departments.

3.2.7 DPE organized the seven orientation programmes as per following details for capacity building of newly appointed non-official Directors and Government Directors of CPSEs. The participating Directors were sensitized about their role and responsibilities in the context of newly enacted Companies Act, 2013 and important issues related to better functioning of Boards.

- (i) 30th and 31st January, 2017 in New Delhi which was attended by 21 non-official Directors of various CPSEs.
- (ii) 27th and 28th February, 2017 at Raipur which was attended by 33 non-official Directors of various CPSEs.
- (iii) 17th and 18th March, 2017 at Puducherry which was attended by 26 non-official Directors of various CPSEs
- (iv) 29th and 30th May, 2017 at Dehradun which was attended by 16 non-official Directors of various CPSEs.
- (v) 30th June, 2017 at Jammu which was attended by 32 non-official, functional and Government Directors of various CPSEs.
- (vi) 18th August, 2017 at Vadodara which was attended by 40 non-official, functional and Government Directors of various CPSEs.
- (vii) 5th and 6th October, 2017 at Gangtok which was attended by 41 non-official Directors of various CPSEs.

3.3 International Cooperation: - During the year, an Indian delegation led by Dr. Madhukar Gupta, Additional Secretary, DPE with Shri Kailash Bhandari, Deputy Director (DPE), Shri K. Sreekant, Director, Finance (PGCIL), (iii) Shri N.K. Nagpal, Executive Director (GAIL), Shri Prashant Lokhande, Counsellor (Economic & Commerce), Embassy of India, Beijing and Ms. Rocheus Sukanya Jaya, Third Secretary (Economic), Embassy of India, Beijing as members participated and spoke in the Second meeting of BRICS Forum on SOE Reform and Governance held in Beijing, China from 20th to 22nd September, 2017.

- 4.1** MoU is a negotiated agreement and contract between the Administrative Ministry/ Department / Holding CPSE i.e. majority shareholder and the Management of the Central Public Sector Enterprise (CPSE) on selected parameters having targets decided normally before the start of a new financial year and results evaluated after the end of the year to measure the performance.
- 4.2** The Government of India introduced the system of MoU in the year 1986, based on recommendations given by Arjun Sen

Gupta Committee report (1984). The report recommended that the CPSEs should enter into agreements with their Administrative Ministries for five years, with progress to be reviewed annually. The MoU system was given broader thrust by the Government after the announcement of the New Industrial Policy of 1991. In view of the above policy statement, the scope of MoU system has been extended to cover nearly all CPSEs over a period of time and this is given below:

Year	No. of MoU's signed	Year	No. of MoU's signed
1987-88	4	2009-10	197
1991-92	72	2010-11	198
2001-02	104	2011-12	197
2002-03	100	2012-13	196
2003-04	96	2013-14	197
2004-05	99	2014-15	214
2005-06	102	2015-16	215
2006-07	113	2016-17	231
2007-08	144	2017-18	198
2008-09	147		

4.3 Institutional Arrangements for Implementation of MoU Policy

- 4.3.1 High Powered Committee (HPC) on MoU:**
The High Powered Committee (HPC) on MoU is a Committee of Secretaries (COS)

set up by the Government as the Apex Committee to assess the performance of MoU signing CPSEs with reference to the commitments made by them in the MoU. The HPC is headed by the Cabinet Secretary and comprises of Finance Secretary, Secretary

(Expenditure), CEO, NITI Aayog, Secretary (Statistics & Programme Implementation), Chairman, Public Enterprises Selection Board; Chief Economic Advisor, Department of Economic Affairs; Chairman, Tariff Commission. The HPC on MoU gives guidance and directions with respect to the determination of the principles and parameters for evaluating the performance of CPSEs.

4.3.2 Inter-Ministerial Committee (IMC) on MoU:

Inter-Ministerial Committee on MoU consists of Secretary, DPE as Chairman, Secretary of concerned administrative Ministry/Department or his representative not below the rank of Joint Secretary (Member), Secretary, Ministry of Statistics and Programme Implementation or his representative not below the rank of Joint Secretary (Member), Additional Secretary, NITI Aayog or his representative not below the rank of Joint Secretary (Member). Secretary, DPE may co-opt any officer who is a finance expert in case the need is felt, Joint Secretary/Adviser (MoU), DPE provides secretarial support to the Committee.

The role of IMC is to approve the MoU targets and recommend its evaluated score and rating to the High Powered Committee (HPC).

4.3.3 Pre-negotiation Committee (PNC): The role of the Pre-negotiation Committee (earlier known as Standing Committee on MoU) would be to assist IMC in determining the most appropriate and relevant parameters for measuring improvement in performance and for fixing targets. Meetings of the Pre-negotiation Committee are held in each case before the meetings of IMC to look at the trends, discuss, negotiate and recommend MoU parameters and targets. The composition of Pre-negotiation Committee comprises of Adviser (MoU), DPE, concerned Joint Secretary/Adviser, Administrative Ministry, concerned Adviser (NITI Aayog), Director (MoU) and representative from Ministry of Statistics and Programme Implementation (MoSPI).

4.4 MoU Guidelines: DPE has finalized the MoU guidelines for 2017-18 and onwards. A Copy of Guidelines is at **Annexure-8**.

4.5 MoU Evaluation

4.5.1 Evaluation of MoU of the CPSE is done after the end of the year on the basis of actual achievements vis-à-vis the MoU targets of CPSEs (Holding as well as Subsidiaries). Details in this regard are given below:

Item	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Total MoUs Signed	198	197	196	197	214	215	231
Evaluation Report Submitted	161	175	189	187	200	191	185

4.5.2 A comparison of the MoU ratings secured by the CPSEs in the last 10 years and current year is as under:-

Rating	Number of Public Sector Enterprises under each rating over Years										
	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Excellent	46	55	47	73	67	76	75	76	73	57	49
V. Good	37	34	34	31	44	39	39	38	53	58	52
Good	13	15	25	20	24	33	37	36	41	28	38
Fair	06	08	17	20	24	25	36	29	26	22	26
Poor	00	00	01	01	02	02	02	08	7	26	19
Total	102	112	124	145	161	175	189	187	200	191	184*


* one CPSE under finalization.

Permanent Machinery of Arbitration (PMA)

- 5.1 Permanent Machinery of Arbitration (PMA) has been set up in Department of Public Enterprises for resolving commercial disputes, between CPSEs inter-se as well as between a CPSE and a Central Government Department/Ministry/Banks/ Port Trusts (except tax matters and Ministry of Railways) in 1989 in **compliance** of directions of Hon'ble Apex Court in the case of ONGC v/s. Collector of Central Excise, Mumbai vide OM dated 29-03-1989 and 30-06-1993.
- 5.2 PMA guidelines are revised from time-to-time and these were last revised on 11-04-2017. The disputes are required to be referred to Department of Public Enterprises for reference to the Arbitrator of PMA. Secretary, Department of Public Enterprises on being satisfied with prima facie existence of a dispute, refers the dispute to the Arbitrator of the PMA for Arbitration. The Arbitration Act, 1996 is not applicable in these cases. No outside lawyer is allowed to appear on behalf of either party for presenting/defending the cases. But the parties can take help of their own full time law officers.
- 5.3 The Arbitrator issues notices to parties concerned for submission of facts of the case and their claims and counter claims. The parties argue their case before him. Based on written records and oral evidence, the Arbitrator publishes an award. An appeal against the award of the Arbitrator can be made to the Secretary, Ministry of Law, for setting aside or revision of the award. The decision of Secretary, Ministry of Law is final and binding on the parties and no appeal can be made in any Court of Law/ Tribunal against the decision.
- 5.4 The PMA is designed to be self-supporting and the disputants are required to share equally the Arbitration Fee (payments are made through DDO, Department of Public Enterprises) worked out by the Arbitrator based on the formula given in the guidelines. During the year 2017-18 an amount of ₹ 1,36,06,422/- was collected from the parties as arbitration fees.
- 5.5 Since inception and till 15-12-2017, a total of 453 cases have been referred to the Arbitrator of PMA, out of which Awards in 391 cases have been published while 24 cases are sine die.
- 5.6 There were 45 old cases at the beginning of year 2017-18 and during the year 10 new cases were referred, making a total of 55 cases. During the year, 15 cases were decided till 15-12-2017 and 02 cases are sine die thus leaving balance of 38 cases.
- 5.7 From time-to-time, the Department of Public Enterprises monitors the progress of implementation of the Award of the Arbitrator.

Wage Policy and Manpower Rationalization

- 6.1** The Department of Public Enterprises (DPE) functions as the nodal Department, inter-alia, in respect of policy relating to pay revision of executives holding posts at the Board Level as well as below Board level and non-unionized supervisors and also, wage settlement of workmen in CPSEs. The Department renders advice to Administrative Ministries/ Departments and CPSEs in matters relating to revision in scales of pay of executives and in the wage policy of workmen. The CPSEs are largely following the Industrial Dearness Allowance (IDA) pattern of scales of pay. In some CPSEs, Central Dearness Allowance (CDA) pattern of scales of pay is being followed. DPE also issues quarterly DA orders in respect of IDA employees. The DA orders for CDA employees are issued for six monthly periods.
- 6.2 Third Pay Revision Committee**
- 6.2.1 On the recommendations of the third Pay Revision Committee, under the Chairmanship of Justice (Rtd) Satish Chandra and Government's decision thereon, guidelines were issued vide DPE OMs dated 03.08.2017, 04.08.2017 and 07.09.2017 for the pay revision of Board level & below Board level Executives and Non-Unionised Supervisors of CPSEs w.e.f. 01.01.2017.
- 6.3 Wage Revision for Workmen under IDA pattern**
- 6.3.1 DPE has issued policy guidelines for the 8th Round of Wage Negotiations with unionized workmen of CPSEs (generally effective from 01.01.2017) for a period of 10 years vide OM dated 24.11.2017.
- 6.4 Pay revision of employees under CDA Pattern in CPSEs**
- 6.4.1 Pay scales on CDA pattern are applicable to the clerical staff, unionized cadres and executives of 69 CPSEs who were on the rolls of these CPSEs as on 1.1.1986 and upto 31.12.1988 and were in receipt of the CDA pattern pay scales during that time. A High Powered Pay Committee (HPPC) was appointed by the Government in pursuance of the Supreme Court directions dated 12.03.1986. It submitted its Report to the Government on 24.11.1988 and its recommendations were implemented in these CPSEs. In pursuance of the Supreme Court direction dated 03.05.1990 read with subsequent directions dated 28.08.1991, IDA pattern and related scales of pay were introduced in these CPSEs with effect from 01.01.1989. DPE O.M. dated 10.08.2009 clarified that 'appointment' includes selection, promotion and deputation. Therefore, all appointments including




appointment on promotion should be under the IDA pattern of pay scales as per the directions of the Hon'ble Supreme Court.

6.4.2 DPE vide OM dated 17.08.2017 has issued guidelines for revision of pay scales and allowances w.e.f. 01.01.2016 of the employees of CPSEs following the CDA pattern. The benefit of pay revision would be allowed to the employees of those CPSEs that are not loss making and are in a position to absorb the expenditure on account of pay revision from their own resources without any budgetary support from the Government.

Categorization of CPSEs

- 7.1** The Public Sector Enterprises are categorized into four schedules namely 'A', 'B', 'C' & 'D'. The categorization of CPSEs has implications mainly for organizational structure and salary of Board level incumbents of the concerned CPSE. It also plays a role in grant of autonomy to the Boards of CPSEs under 'Ratna' scheme.
- 7.2** The initial categorization of CPSEs in the mid-sixties was made on the basis of their importance to the economy and complexities of their problems. Over the years the Department of Public Enterprises has evolved norms for the purpose of categorization/re-categorization of CPSEs. Categorization is based on criteria such as quantitative factors like investment, capital employed, net sales, profit before tax, number of employees and units, capacity addition, revenue per employee, sales/capital employed, capacity utilization, value added per employee and qualitative factors such as national importance, complexities of problems being faced by the company, level of technology, prospects for expansion and diversification of activities and competition from other sectors, etc. The other factors, wherever available, relate to share price, MOU ratings, Maharatna/Navratna/Miniratna status and ISO certification. In addition, the factor relating to the critical/strategic importance of the corporation is also taken into account. The present procedure involves consideration of the proposals in the administrative Ministry concerned and the Department of Public Enterprises which consults the Public Enterprises Selection Board. At present (as on 30th November, 2016) there are 64 Schedule 'A', 68 Schedule 'B', 45 Schedule 'C' and 4 Schedule 'D' CPSEs. The schedule-wise list of CPSEs is given in **Annexure-9**.
- 7.3** During the year 2016, the posts of Director (Operations) and Director (Marine Services) in Kamarajar Port Limited were re-designated as Director (Port Operations) and Director (Business Development & Projects) respectively.
- 7.4** During the year 2016, the following important guidelines/instructions were issued:
- (i) The revised guidelines on writing Annual Performance Appraisal Reports (APARs) of top management incumbents of CPSEs were issued in order to ensure timely completion of APARs and to provide that in case an APAR for a financial year is not recorded by 31st December of the year in the year in which the financial year ended, no remarks may be recorded thereafter and the officer



may be assessed on the basis of overall record and self-assessment for the year, if he has submitted has the self-assessment in time.

(ii) Following the directions of ACC, instructions were issued to all administrative Ministries/ Departments to the effect that the tenure of nominee part-time Directors on the Board of CPSEs shall be fixed as three years or till the date of superannuation or till further orders at par with tenure prescribed for non-official Directors of CPSEs.

(iii) On the basis of decision of ACC, directions were issued to all administrative Ministries/ Departments to the effect that the Appointments Committee of the Cabinet (ACC) has delegated its power to approve additional charge arrangements with respect to Board level posts in Schedule 'C' and 'D' CPSEs to the Minister-in-charge of the concerned administrative Ministry/ Department, irrespective of the period for which this additional charge is assigned, subject to the conditions specified in para III of the instructions dated 17th August, 2005.

Revival and Restructuring of Sick/loss making CPSEs

8.1 Introduction

8.1.1 Historically, the Central Public Sector Enterprises (CPSEs) have been playing an important role in socio-economic development of the country. The number of CPSEs, their investment, turnover, profit and contribution to exchequer has been consistently growing over a period. While CPSEs, as a group, are on a growth path, some CPSEs have been incurring losses for the last several years. As the Central Public Sector Enterprises (CPSEs) operate under dynamic market conditions, it is quite natural to see ups-and-downs in their performance. In a number of cases, their accumulated losses have exceeded their net worth, making the enterprises sick. Though reasons for losses/ sickness may vary from unit to unit, Government has taken many measures to improve the performance of CPSEs. CPSEs are expected to function on commercial considerations with a view to sustaining growth and viability of the companies. Government is of the view that revival/ restructuring of sick/ loss making CPSEs is to be done after taking into account their strategic & national importance and addressing their business concerns. Accordingly, plans for revival/ restructuring of sick/ loss making CPSEs are drawn and implemented by

the concerned administrative Ministries/ Departments and the Board of CPSEs, after obtaining the approval of the competent authority.

8.2 Reasons for Losses and Sickness in CPSEs

8.2.1 The reasons for losses/ sickness in CPSEs vary from enterprises to enterprise. However, some common problems for sickness in CPSEs include old and obsolete plant and machinery, outdated technology, low capacity utilization, low productivity, poor debt-equity structure, excess manpower, weak marketing strategies, stiff competition, lack of business plans, dependence on Govt. orders, heavy interest burden, high input cost, resource crunch, etc. With liberalization and opening up of the economy, many CPSEs that did not evolve fast lost ground to private companies. Attempts have, therefore, been made to overcome "sickness" in these CPSEs through various measures.

8.2.2 Multiple mechanisms for restructuring / revival of sick/loss making CPSEs existed. Sick Industrial Companies as defined in Sick Industrial Companies Act 1985 are referred to Board for Industrial and Financial Reconstruction (BIFR), which suggest a restructuring plan and seek sacrifices &

commitments from promoters and stake holders. BIFR has now been denotified and this work is being done by NCLT under Companies Act, 2013. Board for Reconstruction of Public Sector Enterprises (BRPSE), which was created in 2004 to advise the Government for the restructuring or revival plan of referred CPSEs, has been wound up in November, 2015.

8.3 Streamlining the mechanism of revival/restructuring of Central Public Sector Enterprises (CPSEs)

8.3.1 Government has taken steps to make the mechanism and process for revival/restructuring of CPSE time bound, comprehensive, performance driven and efficient. The Government has decided to remove multiple layers in the decision making process to ensure timely revival/restructuring of sick CPSEs. It has been decided that revival/restructuring of sick/incipient sick CPSEs is to be merit based taking into account strategic, national and business concerns of the CPSE. Accordingly, Government has wound up BRPSE and the concerned administrative Ministries/Departments will be responsible to monitor sickness of CPSEs functioning under them and take timely redressal measures with the approval of the competent authority. DPE has issued on 29th October, 2015 guidelines for "Streamlining the mechanism for revival and restructuring of sick/ incipient sick and weak Central Public Sector Enterprises; General principles and mechanism of restructuring" to be followed by the administrative Ministries /Departments in preparation of proposals for revival/restructuring or closure of CPSEs under

their administrative control. The guidelines are given in **Annexure-10**.

8.3.2 These guidelines are laid down for streamlining the mechanism for restructuring / revival or closure of sick or incipient sick CPSEs and weak CPSEs and replace the multiple options available for the same purpose.

8.4 Definition of sick, incipient sick and weak CPSEs:

(i) Sick CPSEs:

As per the guidelines, a CPSE is considered sick, if it meets one of the following criteria:

- a. If it is declared sick as per the provisions of the Companies Act, 2013.
- b. If it's net worth is negative.

(ii) Incipient sick CPSEs:

As per the guidelines, a CPSE is considered incipient sick, if it meets one of the following criteria:

- a. If its net worth is less than 50% of its paid-up capital in any financial year.
- b. If it had incurred losses consecutively for three years.

(iii) Weak CPSEs:

As per the guidelines, a CPSE is considered weak or sub-optimally performing, if it meets one of the following criteria:

- a. If its turnover or its operational profit has declined by more than an average of 10% in the last 3 years.
- b. If its profit before tax is less than income from the other sources.

- c. If its trade receivable and inventories are more than 50% of net worth of the CPSE.
- d. If the claims against the company, not acknowledged as debts, are more than its net worth.
- e. Any other criteria as may be prescribed to quantify early signs of weakness in the performance of the CPSEs by the government.

In all the reference to net worth, it would have the same meaning as defined under Section 2 (57) of the Companies Act, 2013.

8.4.1 As per the guidelines, the administrative Ministry/Department will classify CPSEs functioning under their control into sick, incipient sick and weak CPSEs within 6 months of the closure of the financial year or within one month from finalization of Annual Accounts, whichever is earlier. The concerned administrative Ministry/Department will formulate revival/restructuring/ closure road map for sick CPSEs as per the principles outlined in the guidelines. This would be done within three months from the issue of these guidelines in case of existing sick CPSEs and within nine months from the end of the financial year for a CPSE becoming sick subsequently.

8.4.2 The administrative Ministry will take the following action:

- (a) The administrative Ministry will put weak CPSEs under “observation and intensive review” to arrest the early signs of weakness in such CPSEs. It may include nomination of independent expert members on the board, quarterly intensive review or special

reviews for taking corrective business, operational and financial measures at the board level, fixing the responsibility for declining performance or non-performance or any other corrective step as may be appropriate and necessary by the administrative Ministry or Department.

- (b) The administrative Ministry will initiate the process for preparation of restructuring/ revival plan, which may include disinvestment or privatisation or closure options, for sick/ incipient sick CPSEs based on the classification as given above within 6 months from the closure of the financial year or within one month from finalisation of Annual Accounts, whichever is earlier.

- (c) Restructuring and revival plan for the sick and incipient sick CPSEs shall be prepared within nine months of the closure of the financial year.

- (d) External expert agency which has experience and expertise of the business environment, operational issues, technology option and financial viability of the sector in which such CPSE is functioning may be engaged by the government and shall function under the supervision of the administrative ministry for preparation of the future road map.

8.4.3 A Committee has been constituted in NITI Aayog for regular monitoring of the implementation of revival packages sanctioned for the sick/loss making CPSEs.

8.5 Guidelines on Time bound Closure of Sick/ Loss making Central Public Sector Enterprises (CPSEs) and disposal of movable and immovable assets

8.5.1 DPE has issued guidelines on 07th September, 2016 for “time bound closure of Sick/ Loss Making Central Public Sector Enterprises (CPSEs) and disposal of Movable and Immovable assets.” The detailed guidelines are given in **Annexure-11**.

8.5.2 The guidelines are intended to expeditiously complete the various processes and procedures for closure of CPSEs and lay down responsibilities of the administrative ministries/ departments/ CPSEs, including the support required to be extended by nodal departments/ organisations like Ministry of Finance, NITI Aayog, etc.

8.6 Applicability of Time bound Closure of Sick/ Loss making Central Public Sector Enterprises (CPSEs)

8.6.1 These guidelines shall apply to all sick/ loss making CPSEs, where:

- (i) Approval for closure has been obtained by administrative Ministry/ Department from the CCEA/ Cabinet; or
- (ii) In-principle approval for closure has been given by the CCEA/ Cabinet on the proposal/ recommendation of the administrative Ministry/ Department/ NITI Aayog; or
- (iii) The administrative Ministry/ Department has decided for the closure of the CPSE..

Scheme of Counselling, Retraining and Redeployment

9.1 The Scheme for Counselling, Retraining and Redeployment (CRR) of Rationalized Employees of CPSEs is being implemented by Department of Public Enterprises since 2001-02. CRR Scheme was modified in November, 2007 in order to widen its scope and coverage. One dependent of VRS optee is also eligible in case the VRS optee himself/herself is not interested. The Scheme has been subsequently modified in February, 2016 in order to broaden the network of Training Providers and also to follow standardized methodology of training, design and delivery.

9.2 Objective of the CRR scheme:

1. Separated employees of CPSE to be brought into the mainstream economy and thereby contribute to national income.
2. Reorientation of VRS / VSS optee / dependent to enable them to adjust to new environment and adopt new vocations.
3. Skill development for VRS optee/dependents for their redeployment.
4. Exposure to various industry associations, which is also a component of the CRR scheme, to help the trainee in product / service selection.

5. Awareness of various central and state government loan assistance/subsidized schemes.

9.3 The main elements of the CRR programme are Counselling, Retraining and Redeployment.

Counselling Counselling is the basic prerequisite of the rehabilitation programme of the separated employees. The separated employee needs psychological counselling to absorb the distress of loss of assured livelihood and to face the new challenges and also needs support to plan his compensation amount prudently. He also needs to be made aware of the new environment of market opportunities so that he may, depending upon his aptitude and expertise, take up economic activities and continue to be in the production process.

Retraining: The objective of such training is to help the separated employees for rehabilitation. The trainees will be helped to acquire necessary skills/expertise/orientation to start new avocations and re-enter the productive process after loss of their jobs. These training programmes will be short duration programmes according to the trade decided during counselling.

Redeployment: It will be the endeavor to

redeploy such rationalized employees in the production process through the counselling and retraining efforts. At the end of the programme, VRS/VSS optees/dependents should be able to engage themselves in alternate vocations of self/wage employment. Although there cannot be any guarantee that the separated employee will be assured of alternate employment, yet possible help from the identified nodal training agencies as well as from the CPSEs concerned would be extended to them for starting new avocations.

9.4 The target group of the CRR scheme is very unique and distinct from other skill development schemes of the Government. Mostly VRS/VSS optees are below 58 years of age. The program provisioned that if the VRS optee didn't want to come forward for training, the benefit of the scheme could be extended to VRS optee's dependent.

9.5 CPSEs are the key to the success of the scheme. They are expected to extend all possible support for the welfare of the separated employees by clearing their compensation/dues before release. Long association with employees puts CPSEs in a better position to identify their retraining needs.

9.6 Year wise number of persons trained under the scheme is shown as under:-

Year	Number of VRS optees trained
2001-02	8064
2002-03	12066
2003-04	12134
2004-05	28003
2005-06	32158

Year	Number of VRS optees trained
2006-07	34398
2007-08	9728
2008-09	9772
2009-10	7400
2010-11	9265
2011-12	9400
2012-13	7506
2013-14	3230
2014-15	2525
2015-16	3150
2016-17	1576
Total	1,90,375

9.7 CRR scheme - 2016-17

9.7.1 On 28th September 2016, a tripartite agreement was signed between Department of Public Enterprises (DPE), National Skill Development Fund (NSDF) and National Skill Development Corporation (NSDC) to initiate a skill development project with the objective to provide skill training under National Skills Qualification Framework (NSQF) to employees of CPSEs who left service under voluntary retirement scheme (VRS) or their dependents; over a period of one year. The training was targeted at fresh skilling of VRS optees across India (Jharkhand, Bihar, Madhya Pradesh, West Bengal, Karnataka and Maharashtra). The scope of the project was:

- Provide counselling, retraining and redeployment to CPSE's separated employees.
- Skill Training and Certification of VRS optees or their dependents.
- Redeployment (either self/wage employment) post-training.

9.7.2 During the year 2016-17, an allocation of ₹ 2.42 crore (RE) was made for the CRR scheme. Against a target for coverage of 2000 VRS/VSS optees/dependents, 1576 candidates were trained and 887 redeployed (self/wage employment). During the year, skill training was imparted at 24 locations by 6 empanelled Training Partners/ Agencies spread all over the country.

9.7.3 Post the training, all 1,576 candidates underwent assessment through the respective SSCs, and around 56% candidates have been placed into jobs till date. The project also included gauging the aspirations of VRS optees through counseling and providing them short term training to ensure that they are well equipped for self/wage employment to further their livelihood option.

9.7.4 Training Partner wise details are shown as under:

Training Partner	Total Trained	Total Assessed	Total Certified	Placement		
				Total	Self-employment	Wage employment
HCF	350	350	350	191	104	87
MPCON	300	300	195	111	88	23
Microsys	100	100	86	39	21	18
Orion	150	150	122	108	26	82
KIIT	440	440	360	280	217	63
Laurus	236	236	8	158	0	158*
Total	1576	1576		887	456	431

9.8 Glimpses of Skill Training Across Locations

9.8.1 As CRR Scheme is a unique project, training was mostly conducted through hand holding assistance and practical sessions that helped VRS / VSS optee to acquire new or updated skill set, which would be helpful in availing new vocation in life, ensuring viable livelihood opportunities. The training was conducted during the period of December 2016 to June 2017 in various locations as under:

TP	Trade	Sector	Target	State	Location
MPCON	Assistance Beauty Therapist	Beauty and wellness	21	Chhattisgarh	Durg
	Hand Rolled Agarbatti Maker	Handicrafts	84	Chhattisgarh	Durg
	Sewing Machine Operator	Apparel	55	Chhattisgarh	Durg
	Hand Embroiderer	Apparel	55	Chhattisgarh	Durg
	Pickle Making Technician	Food processing	55	Maharashtra	Mansar
	Jam, Jelly and Ketchup Processing Technician	Food processing	30	Maharashtra	Balaghat
KIIT	Mobile Phone Hardware Repair Technician	Electronics	150	Jharkhand	Ghatshila, Ramgarh
	Retail Sales Associate	Retail	230	Bihar	Barauni
	Beauty Therapist	Beauty and wellness	60	Jharkhand	Ramgarh

TP	Trade	Sector	Target	State	Location
HCF	Inventory Clerk	Logistics	140	Karnataka	Mengaluru
	Light motor Vehicle Driver Level 3	Automotive	90	Karnataka	Tumkur
	CC Camera Installation	Electronics	60	Karnataka	Tumkur
	TV Repair Technician	Electronics	60	Karnataka	Bengaluru
Microsys	Domestic data entry operator	IT-ITES	41	West Bengal	Dasnagar
	Jam, Jelly & Ketchup Technician	Food processing	44	West Bengal	Kolkata
	Installation Technician (Computing and peripherals)	Electronics	15	West Bengal	Kolkata
Laurus	Domestic data entry operator	IT-ITES	236	Karnataka	Tumkur, Bellary
Orion	Mobile Phone Hardware Repair Technician	Electronics	60	West Bengal	Niyamatpur
	Retail Sales Associate	Retail	90	West Bengal	Bijapur

9.9 Skill Training Classes



Photo: CC Camera Installation job role at Tumkur, Karnataka



Photo: Inventory clerk job role at Bengaluru, Karnataka



Photo: Sewing machine operator training at Durg, Chhattisgarh



Photo: Retail sales associate job role at Ramgarh, Jharkhand

9.10 Assessment



9.11 Certification



9.12 Few Success Stories under the CRR Scheme (2016-17)

1. Pawan Kumar

Pawan's father started earning his livelihood in early 1980s as a pump operator in Uranium Corporation India Limited (UCIL), Ghatsila. Besides, he had additional income from small jobs in cycle repairing at Nakhara Market. During those days, the going was good except little problems doing the rounds. As a sales man, he drew a salary of ₹ 3,000/- per month, which was his last salary in the mill prior to his retirement.



He was relieved from the service in January 2016. He had to reel under the trauma of job loss and growing-financial burden. The severance compensation of ₹ 2,00,000/- provided little relief; a major part of which was spent for social obligations and repayment of prior loans. Considering his interest and available resources, he chose to send his son Pawan for counselling and to get skill training. Pawan was recommended a 60-days' training course on retail sales associate by KSRM, KIIT University. Imbibing the acquired knowledge and skills, he has set up a small shop at his native place and has changed his approach from traditional selling to commercial selling.

Now, their family income has risen to over ₹ 7,500/- per month. Forgetting the days of pain and frustration, Pawan is now beaming with joy and freedom.

2. Suvasish Das

Suvasish Das is a dependent of VRS optee Chunilal Das who worked at Hooghly Dock & Port Engineers Limited (H.D.P.E.L) in Howrah, West Bengal. Chunilal availed the golden opportunity of CRR scheme sponsored by Department of Public Enterprise, Govt. of India.



Suvasish, during his counseling session, admitted that post his father's VRS, there was no sustainable income and he was also struggling to find job avenues for himself. After counseling, Suvasish took interest in Installation Technician (Computer & Peripherals) training. He was a keen learner and gradually acquired the skill set required for the job.

He also realized that there is dearth of skilled manpower in the field. With active support from the training partner Microsys, Suvasish secured a job as a Trainee Hardware Engineer at Srishti Computers in Konnagar, Howrah, at a salary of

₹ 6000/- per month. Suvasish feels satisfied with his job profile and is diligently progressing towards a bright and prospective career by acquiring good experience; and thereafter aims to work for much bigger IT organisations.

3. Manju Kumari Jha

Manju Kumari Jha, 21 years was born to a humble family in Dhanbad, Jharkand. Her parents after their voluntary retirement from Food Corporation of India (FCI), got daily wage jobs. Her parents' income was not enough to provide for three-time meals to the family. Due to financial constraints, Manju couldn't continue her higher education.



She got to know about the CRR training programme through an advertising campaign programme arranged by KII.T. After her counselling session, Manju got admission in retail sales trade and completed her skill training program with high scores. After her training, she joined Kottakkal Ayurveda Shop, a local store as an Accountant at a monthly salary of ₹ 5,000 and within six months has received a hike to ₹ 6,000/- per month. She has also paid off a loan that her family had taken for house-repair. Manju recommends the course to her friends and others in her community.

4. Pravat Kumar Sharma

Pravat Kumar's father Rama Chandra joined Central Coal Field Ltd. (CCL), Ramgarh as a Mechanic 25-years ago.



He not had the faintest idea that he would have to take retirement from the job and lead a miserable life. Accumulated loss compelled the CCL to downsize its staff through VRS Scheme. Being a victim to this untimely fate, Chandra became reclusive. But, how long? Day after day, the increasing financial pressure became unbearable and the marriage of his daughter reeled him under financial and emotional burden. His son Pravat, a graduate, took up petty jobs to support the family. He attended the counseling session where he was guided to take up Retail Sales Course, post which Pravat has set up a a small retail shop in Ranchi and earns nearly ₹ 8500/- per month. Now, Chandra is a happy man and is leading a content retired life.

5. Tinna Tiwari

Tinna's husband Basanta, a driver, was relieved from Central Coal Field Ltd(CCL) Ramgarh under VR scheme in January. He spent a lion's share of his savings and compensation on higher education

of his only son. His son joined a company outside of the state and didn't get enough to send money for his parents. As her husband was suffering with serious disease, so Tinna decided to earn a living.



After series of counseling Tinna was selected to receive training as a *Beautician* at Musaboni centre. Tinna now works from her home and earns more than ₹ 5,000/- per month.

6. Srikanta MS

Srikanta MS got separated from HMT under VRS scheme in the year 2016. Training Partner HCF received the application form from Srikanta and was called for counseling and was suggested to take up TV Repair Technician at Bangalore because he wanted to work as an entrepreneur. After completion of TV repair technician training, he has setup a small TV repair shop through HCF's connect with a local cooperative bank. He is drawing an average ₹ 18000 per month.



7. Jayanna D



Jayanna was born and brought up in Tumkur District, and worked with HMT watch factory till his VRS in year 2015. Jayanna attended the counselling session at HCF Training Center and expressed his interest to undergo training in CCTV installation. He was successfully completed the course and with a working capital of ₹ 15,000, he has started his small time business of CCTV installation.

8. Narendranath BC

Narendranath BC was discharged from KIOCL under VRS scheme in the year 2012. During the counselling session, Narendranath opted for TV Repair Technician course. After completion of training, he setup his own shop and is quite content in his life.



9. Bhuneswari Sahu

Bhuneswari Sahu lived with her parents in Durg, Chhattisgarh. Her father opted for voluntary retirement from the mines of Bhilai Steel plant. He wanted to invest the benefit money he had received from VRS into a saving option or activity which could get him regular income, however, didn't find anything suitable. In the meantime, his daughter Bhuneswari Sahu who had completed her matriculation, was also searching for a better opportunity to support her family.



It was at this juncture that she came to know CRR Scheme being implemented by MPCON for voluntary retired employees and their dependents. She joined the counseling sessions and chose Asst.

Beauty Therapist role. Post training, she started her own Beauty Parlor. With a monthly turnover of about Rs 20,000, she is getting ₹ 8000 as her margin of profit. She is thankful to her family for providing her the conducive environment. She is grateful to all concerned for her skill and entrepreneurial abilities and providing support in realizing her dreams.

10. Pashupathi

Pashupathi separated from HMT under VRS scheme in the year 2014. He learnt about the CRR Scheme during the mobilization and counselling session by HCF and selected Motor Driving course. After completion of motor driving training, and with the assistance of HCF program coordinator he got finance for vehicle and started to work on his own by attaching with UBER. Now, after paying his monthly EMI for the car, he is able to save approximately Rs 10,000 per month.



11. Tulsi Rajpoot

Tulsi Rajpoot after her matriculation aspired to start a business as her father had taken a VRS from Bhilai Steel Plant. She was looking for an opportunity wherein she could do something on her own with a small investment. But selection of such an activity was a challenge. It was at this juncture that she came to know about CRR Scheme through her father, who nominated her name to take the advantage of the Scheme. She joined the session for 03 days arranged by nodal agency and gathered the information about different opportunities and procedure for taking advantage. She selected 3-month Beauty Parlour training course. This programme developed confidence in her and immediately after completion of the programme, she started her own beauty parlour. The initial success motivated her as she draws an average profit margin of ₹ 8,000/- per month. She considers this as a beginning of realization of her dreams.



12. Manas Kanti Sur

Manas Kanti Sur, 51 years old, got discharged from Hooghly Dock & Port Engineers Limited (HDPEL) in the year 2016, under voluntary retirement scheme (VRS) and thereafter joined the skill development program. During counseling Manas Kanti Sur got to know about Domestic Data Entry Operator course and enrolled into the same. Ample exposures to computer applications were imparted in the course along with knowledge of latest technology and market demands. After completion Sri Manas received a job offer for back office work at Pritam Appliances, Seoraphuli branch. He has been working at a monthly salary of ₹ 7500/-.



Voluntary Retirement Scheme (VRS)

10.1 Voluntary Retirement Scheme (VRS)

10.1.1 As a result of the restructuring in some Central Public Sector Enterprises (CPSEs), Government announced the Voluntary Retirement Scheme (VRS) in October, 1988. A comprehensive scheme was later notified by the Department of Public Enterprises in May, 2000.

From the introduction of VRS Scheme in October, 1988, till March, 2017, approximately 6.25 lakh employees have been released under VRS.

10.2 VRS in CPSEs that can support the scheme on their own

10.2.1 Enterprises, which are financially sound and can sustain VRS on their own, can frame their own schemes of VRS and make it attractive enough for employees to opt for it. They may offer as compensation upto 60 days salary (only Basic Pay +DA) for every completed year of service. Such compensation will, however, not exceed the salary for the balance period of the service left.

10.3 VRS in marginally profit or loss Making / sick / unviable CPSEs

10.3.1 Marginally profit /loss making CPSEs as well as sick and unviable units may adopt either of the following models:

Gujarat Model, under which the compensation is computed by allowing 35 days salary for every completed year of service and 25 days for each year of the balance service left until superannuation subject to the condition that compensation shall not exceed the sum of salary for the balance period left for superannuation.

Department of Heavy Industry (DHI) model, under which ex-gratia payment made is equivalent to 45 days emoluments (Pay + DA) for each completed year of service or the total emoluments for the balance period of service, whichever is less. The employees who have completed not less than 30 years of service will be eligible for a maximum of 60 (sixty) months salary/wage as compensation and this will be subject to the amount not exceeding the salary/wage for the balance period of service left.

Executive Development Programmes

- 11.1 The Central Public Sector Enterprises (CPSEs) design their own human resource development programmes to upgrade skills and knowledge of middle and senior level executives by giving them training in various fields of management development through their own management institutes or outsourcing the services to premier management training institutions in India.
- 11.2 DPE is an ex-officio member of the Executive Board of the Standing Conference of Public Enterprises (SCOPE), New Delhi. Secretary, DPE is member on the Board of Governors of the Institute of Public Enterprise, Hyderabad.
- 11.3 India is a founder Member of International Center for Promotion of Enterprises (ICPE) headquartered in Slovenia. It was established as an inter-Governmental organisation of developing countries for improving the performance of their public enterprises as strategic instrument of economic and social development. Presently, the post of Director General, ICPE is held by India. ICPE pursues its goals by carrying out research, education, training, consultancy work and disseminating information through documentation and publishing activities directed towards bridging the gap between theory and practice on a wide range of issues pertaining to corporate governance, management and other related fields.

Corporate Social Responsibility (CSR) and Sustainability

- 12.1. As per Section-135 of the Companies Act, 2013, all profit making corporates, including Central Public Sector Enterprises (CPSEs) exceeding threshold limits prescribed in the Act regarding net worth of ₹ 500 crore, or turnover of ₹ 1000 crore or net profit of ₹ 5 crore in pursuance of its CSR Policy are mandated to spend at least 2% of the average net profits (Profit Before Tax) of the company made during the three immediately preceding years.
- 12.2 DPE Guidelines on CSR and Sustainability, 2014 issued to CPSEs have now been withdrawn in August, 2016, with the approval of Hon'ble Minister (Heavy Industries and Public Enterprises). The CPSEs are now required to follow the provisions contained in Section-135 of the Companies Act, 2013 and the CSR Rules notified thereunder by M/o Corporate Affairs and the Schedule-VII of the Act which lists the activities that can be undertaken by CPSEs.
- 12.3 An advisory on observance of transparency and due diligence in selection and implementation of activities under CSR has been issued by Department of Public Enterprises to the CPSEs in August, 2016. Another advisory has been issued by DPE in August, 2016 requesting all Ministries/ Departments to bring to the notice of CPSEs under their jurisdiction the recommendations of 'Group of Secretaries on Swachh Bharat and Ganga Rejuvenation' for spending 33% of the CSR funds towards 'Swachh Bharat' and advise them to contribute/ participate, accordingly, towards Swachh Bharat activities under CSR till the Swachh Bharat Mission is achieved.
- 12.4. During the current financial year, Department of Public Enterprises had organized a 3-day 'CSR Fair' in association with ONGC Ltd, PHD Chamber of Commerce & Industry and Indian Institute of Corporate Affairs from 4th to 6th May, 2017 at Pragati Maidan, New Delhi to showcase the CSR journey of CPSEs during the last three years.
- 12.5 CSR achievements of CPSEs, the CSR projects/ activities undertaken, planned to be undertaken, best practices, success stories, area of operation and the type of CSR activities implemented in various sectors like, education, healthcare, skill development, empowerment of women, promotion of sports, Swachh Bharat, sanitation, upliftment of marginalized section of society, etc. were showcased through a platform connecting all

stakeholders i.e. CPSEs, Ministries/ Departments, State Govts., implementing agencies, NGOs and the beneficiaries.

12.6 Hon'ble Minister (HI&PE) and Hon'ble Minister of State (HI&PE) in the presence of Secretary, DPE and Addl. Secretary, DPE and a number of CMDs of various CPSEs, inaugurated the 'CSR Fair' on 4th May, 2017 at Pragati Maidan, New Delhi. In total 120 organizations, which included 81 Maharatna, Navratna and Miniratna and other CSR eligible CPSEs, Central Ministries/ Departments and 34 NGOs/ implementing agencies, set up their stalls in the Fair showcasing their achievements in CSR, best practices, and also success stories through posters, photographs, short video films, slide shows and models, etc.

12.7 In addition, there were activities in tandem like 8 seminars on aspects/ topics relating to CSR viz.

- CSR- the Game Changer in Sports
- CSR as Prime Engine for Swachh Bharat
- Incubation of New Technology through CSR

- CSR as a driver for Skill Development and for providing livelihoods
- CSR in providing quality Pre-school, School and Higher Technical and Vocational Education
- CSR for furthering the Social Justice and Welfare Agenda
- Leveraging CSR for Conservation & Restoration of Cultural Heritage
- Scope and opportunities for Health & Nutrition Initiatives in the CSR space

12.8 Experts drawn from amongst, Secretaries, former Secretaries, Addl. Secretaries, Jt. Secretaries to the Govt. of India, CMDs, senior PSE executives, renowned national players like Shri P. Gopichand (Badminton), Ms. Mary Kom (Boxing), Shri Somdev Devvaran (Lawn Tennis), Shri Khazan Singh (Swimming), Ms. Karnam Malleswari (Weight-lifting), Shri Bhaichung Bhutia (Football), editor-in-chief of CSR Magazines, representatives from leading autonomous organizations and NGOs participated as speakers and contributed through deliberations and presentations for the benefit of stakeholders.

Compliance Report by CPSEs

13.1 Department related Parliamentary Standing Committee on Industry in its 216th report had recommended that DPE should play a meaningful and effective role in getting the policies and guidelines implemented by the PSEs. In compliance of this, the Department has made provision in MoU Guidelines 2015-16 providing for one

negative mark for non-compliance of DPE guidelines. Provision has been made more stringent by prescribing in MoU 2016-17 that CPSEs which are otherwise 'Excellent' would be downgraded to very good, if they do not comply with DPE guidelines having financial implication and in other case 5 marks will be deducted. List of CPSEs which have given ACR in 2016-17 is at **Annexure-12.**

Official Language Policy

- 14.1 DPE's Hindi Section is primarily responsible for implementation of the various provisions of the Official Language Act 1963 and the Rules framed there under. Hindi Section is also responsible for translation of documents required to be issued under Section 3(3) of the Official Language Act, 1963. As more than 80% of the staff of this Department knows Hindi, the Department has been notified under rule 10(4) of the Official Language Rules, 1976.
- 14.2 Resolutions, notifications, notices, circulars, papers etc. to be laid on the Table of the both houses of Parliament have been issued bilingually during the year 2017-18. Efforts were also made to promote original correspondence in Hindi. The Official Language Implementation Committee of DPE continues to function under the Chairmanship of the Addl. Secretary.
- 14.3 To create awareness and expanding the use of Hindi as Official Language, Hindi Pakhwada was organized by the Department from 1st September, 2017 to 15th September, 2017. During the Hindi Pakhwada four competitions namely, Hindi Essay Writing, Hindi Shrutlekh, Hindi Grammer and Chitra Lekhan were organized for the officers and staff including officials on contract basis. Prizes and Certificates will be awarded to the winners.
- 14.4 Annual Public Enterprises Survey on the working of Central Public Sector Enterprises is presented in the Parliament every year by this department. This is very voluminous and comprehensive document brought out by the Department simultaneously in English and Hindi. Annual Report of this Department is also brought out every year in Hindi and English.

Welfare of Women

- 15.1 The principle of gender equality is enshrined in the Indian Constitution in its Preamble, Fundamental Rights, Fundamental Duties and Directive Principles. The Constitution not only grants equality to women but also empowers the State to adopt measures of positive discrimination in favour of women. Within the framework of a democratic polity, our laws, development policies, plans and programmes have aimed at advancement of women in different spheres.
- 15.2 The Department has also set up a complaint committee under the chairmanship of a woman Officer, to ensure fair, safe and healthy environment at work place for women. The guidelines laid down by the Supreme Court relating to sexual harassment have been brought to the notice of all those working in this Department. Department of Public Enterprises vide its O.M. dated 29th May, 1998, has already issued detailed guidelines and norms to the Chief Executives of CPSEs for observance and prevention of sexual harassment of working women.
- 15.3 The Department has a total sanctioned strength of 119. There are 70 officers/ staff, in position, including 7 Women employees. The Department has made all possible efforts to create a healthy and congenial atmosphere so that women employees can perform duties with honour, dignity and without fear.

Statement of Plan Fund Expenditure

Department of Public Enterprises Demand No. 45 2017-18		
Scheme	(₹ in thousand)	
	BE 2017-18	Total Expenditure 2017-18 (upto 18.12.2017)
PLAN		
CRR Scheme		
Publications	0	0
Other Administrative Expenses	500	0
Professional & Special Services	3000	216
Grants-in-Aid	25500	9100
CRR Scheme NER (Grant-in-Aid)	1000	0
RDC Scheme		
Domestic Travel Expenses	2000	243
Foreign Travel Expenses	500	0
Publications	2000	414
Other Administrative Expenses	9000	7276
Professional & Special Services	9500	5939
Grants-in-Aid	10000	7139
Contribution ICPE	10000	0
RDC Scheme NER (Grant-in-Aid)	7000	1150
Total	80000	31477

Reservation in services for Scheduled Castes (SCs), Scheduled Tribes (STs), Other Backward Castes (OBCs) and others, in the CPSEs

- 17.1 The Personnel and Recruitment Policies in respect of appointments against below Board level posts are formulated by the management of respective CPSEs. However, on matters of general importance, policy guidelines are issued by the Government of India to the enterprises which are to be kept in view by the latter while framing their individual corporate policies. Furthermore, formal Presidential Directives are issued to CPSEs by the concerned administrative Ministries to ensure reservation in regard to employment for Scheduled Castes, Scheduled Tribes and Other Backward Classes (OBCs), on similar lines as applicable in the Central Government Ministries/Departments.
- 17.2 A comprehensive Presidential Directive incorporating all important instructions on reservation for SCs and STs was issued by DPE to all the administrative Ministries/Departments concerned on 25th April, 1991 for formal issuance of the same to CPSEs. Necessary changes and modifications are also circulated to CPSEs through their administrative Ministries/Departments for information and compliance.
- 17.3 Subsequently, based on the recommendation of the Second Backward Classes Commission (Mandal Commission) and in accordance with the Hon'ble Supreme Court Judgment in the Indira Sawhney case, instructions were issued in providing reservation of 27% of vacancies in favour of Other Backward Classes (OBCs). The Department of Personnel & Training (DoPT) which formulates the policy in respect of reservation in services, has been issuing instructions from time to time on various aspects of reservation in favour of OBCs. Reservation for OBCs was made effective w.e.f. 8.9.1993. Department of Public Enterprises (DPE) has been extending these instructions to CPSEs through their administrative Ministries for compliance. A comprehensive Presidential Directive incorporating all instructions was forwarded by the Department of Public Enterprises to all administrative Ministries vide DPE's OM dated 27th July, 1995 for formal issuance to the CPSEs under their control.
- 17.4 DoPT instructions on allocation of a sub-quota of 4.5% for minorities within the 27% reservation for OBCs have been also extended vide DPE O.M. dated 2nd January, 2012 to the administrative Ministries/Departments (concerned with CPSEs) for implementation in CPSEs under their control.
- 17.5 The present quota for providing reservation for candidates belonging to Scheduled Castes, Scheduled Tribes and OBCs as well as other categories of persons entitled to reservation of vacancies is shown below:

Quota for Reservation

Category	Managerial/ Executive Level/ Supervisory Level	Workers Skilled	Workers Unskilled
Scheduled Castes	15%	15%	15%
Scheduled Tribes	7.5%	7.5%	7.5%
Other Backward Classes (including sub-quota of 4.5% for minorities)	27%	27%	27%
Physically Handicapped Persons*	4%	4%	4%
Ex-servicemen & Dependents of those killed in action	–	14.5%	24.5%

*As per Rights of Persons with Disabilities Act, 2016

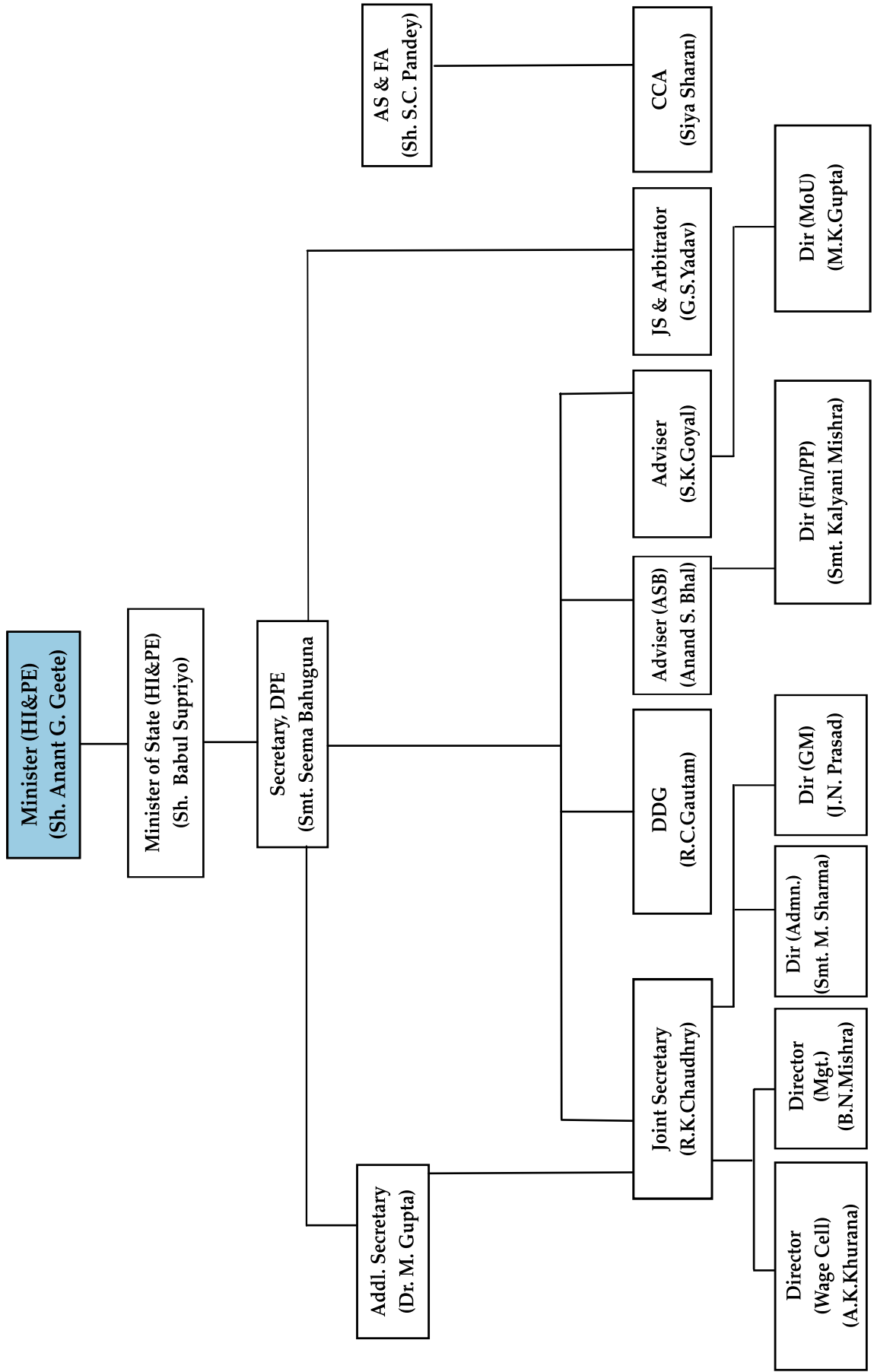
17.6 The need to ensure timely filling up of reserved posts and the backlog has been stressed through various instructions issued from time to time. All administrative Ministries/Departments have been requested to advise the CPSEs under their administrative control to take effective steps to fill up the unfilled reserved posts in Direct Recruitment as well as in Promotion in accordance with the existing instructions. Further, the DoPT has issued necessary instructions from time to time to launch a Special Recruitment Drive (s) to fill up backlog of reserved vacancies for SCs, STs & OBCs in CPSEs. DPE has also extended these instructions to all administrative Ministries/Departments dealing with CPSEs to fill up these vacancies in a time bound manner.

17.7 DPE has also extended instructions vis-à-vis the scheme for reservation for Ex-servicemen in CPSEs through the administrative Ministries/ Departments. Instructions streamlining the procedure for

recruitment of Ex-servicemen have also been issued with a view to augment their in-take in CPSEs. Such CPSEs, which are in a position to offer agencies/dealerships, have been advised to reserve quota of such agencies/dealership for allotment to Ex-servicemen.

17.8 DPE has issued Presidential Directive on 11.3.1997 to all the administrative Ministries/Departments concerned with the CPSEs in follow-up of DoPT instructions for employment of physically handicapped persons in CPSEs. With the enactment of the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995, the reservation to physically handicapped persons stood extended to identified Group 'A' and 'B' posts to be filled through Direct Recruitment. As per the The Rights of Persons with Disabilities Act, 2016, not less than 4% posts shall be reserved for Persons with Disabilities.

Organogram of Department of Public Enterprises



Annexure-2
(Para 1.2)

Performance of CPSEs during 2015-16

(₹ in crore)

Sl. No.	Item/Indicator	2015-16	2014-15	% growth over 2014-15
1.	Number of Operating CPSEs	244	236	3.39
2.	Turnover of (operating) CPSEs	1854667	1995176	(-)7.04
3.	Income of (operating) CPSEs	1764749	1965638	(-)10.22
4.	Investment in CPSEs	1171844	1095554	6.96
	4.1 Total paid up capital	228334	213020	7.19
	4.2 Total investment (equity plus long term loans)	1171844	1095554	6.96
	4.3 Capital employed (Paid up capital + long term loans and reserves & surplus)	1968311	1866944	5.43
5.	Profit of (profit making) CPSEs	144523 (165)	130364 (159)	10.86
6.	Loss of (loss making) CPSEs	28756 (78)	(-) 27498 (76)	4.57
7.	CPSEs neither making profit nor making loss	1	1	0
8.	Overall Net Profit	115767	102866	12.54
9.	Reserves and Surplus of CPSEs	796467	771389	3.25
10.	Net Worth of CPSEs	1020737	984409	3.69
11.	Contribution of CPSEs to Central Exchequer	278075	200593	38.63
12.	Foreign Exchange earnings of CPSEs	77216	103071	(-)25.08
13.	Foreign Exchange Outgo of CPSEs	388045	544561	(-) 28.74

Salient features of Maharatna scheme

Eligibility Criteria for grant of Maharatna status : The CPSEs meeting the following eligibility criteria are considered for Maharatna status:-

- a) Having Navratna status
- b) Listed on Indian stock exchange with minimum prescribed public shareholding under SEBI regulations
- c) An average annual turnover of more than ₹ 25,000 crore during the last 3 years
- d) An average annual net worth of more than ₹ 15,000 crore during the last 3 years
- e) An average annual net profit after tax of more than ₹ 5,000 crore during the last 3 years
- f) Should have significant global presence/international operations.

Procedure for grant/divestment of Maharatna status: - The procedure for grant of Maharatna status as well as their review is similar to that in vogue for the grant of Navratna status.

Powers delegated to Maharatna CPSEs: - (1) The Boards of Maharatna CPSEs in addition to exercising all powers to Navratna CPSEs, exercise enhanced powers in the area of investment in joint ventures/subsidiaries and creation of below Board level posts. The Boards of Maharatna CPSEs have powers to (a) make equity investment to establish financial joint ventures and wholly owned subsidiaries in India or abroad and (b) undertake mergers & acquisitions, in India or abroad, subject to a ceiling of 15% of the net worth of the concerned CPSE in one project, limited to an absolute ceiling of ₹ 5,000 crore (₹ 1,000 crore for Navratna CPSEs). The overall ceiling on such equity investments and mergers and acquisitions in all projects put together will not exceed 30% of the net worth of the concerned CPSE. In addition, the Boards of Maharatna CPSEs have powers to create below Board level posts up to E-9 level.

(2) The delegated powers to establish financial joint ventures and subsidiary entities would be exercised by the board of Maharatna CPSEs in the following manner:-


- (i) The proposal for establishing financial joint ventures and subsidiary entities will be presented to the board of concerned CPSE.
 - (ii) The concerned administrative ministry / department will obtain the concurrence of NITI Aayog for such proposals on a case to case basis and firm up its view on the proposals as the stakeholder for the board's deliberations through its representative on the board for appropriate decision.
- (3) The government directors will ensure that the views of the government, being the majority shareholder, on such proposals are properly presented before the board while a decision on such proposal is being taken. The decision for investment to set up financial joint ventures and subsidiary entities should only be taken by the board when government directors are present in the board meeting.

Salient features of Navratna scheme

1. **Eligibility criteria for grant of Navratna Status** : The CPSEs which are Miniratna I, Schedule 'A' and have obtained 'excellent' or 'very good' MOU rating in three of the last five years and have a 'Composite Score' of performance to be 60 or above in six identified performance parameters are eligible to be considered for grant of Navratna status. The composite score is calculated on the basis of performance of the concerned CPSEs during the last three years. For calculation of composite score, 6 performance indicators have been identified based on their general applicability to the PSUs. The performance indicators have been chosen so as to capture the performance of PSUs irrespective of their belonging to manufacturing sector or services sector. The 6 identified performance indicators are:-

S.No.	Performance Indicator	(Maximum Weight)
1.	Net Profit to Net worth	25
2.	Manpower Cost to total Cost of Production or Cost of Services	15
3.	PBDIT to Capital employed	15
4.	PBIT to Turnover	15
5.	Earning Per Share	10
6.	Inter Sectoral Performance	20
	Total	100

2. The powers delegated to the Boards of Navratna CPSEs are as under: -
- (i) **Capital Expenditure:** - The Navratna CPSEs have the powers to incur capital expenditure on purchase of new items or for replacement, without any monetary ceiling.
 - (ii) **Technology Joint Ventures and Strategic Alliances:** - The Navratna CPSEs have the powers to enter into technology joint ventures or strategic alliances and obtain by purchase or other arrangements, technology and know-how.
 - (iii) **Organization Restructuring:** - The Navratna CPSEs have the powers to effect organizational restructuring including establishment of profit centres, opening of offices in India and abroad, creating new activity centres, etc.


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- (iv) **Human Resources Management:** - The Navratna CPSEs have been empowered to create posts up to E-6 level and wind up all posts up to non-Board level Directors and make all appointments up to this level. The Boards of these CPSEs have further been empowered to effect internal transfers and re-designation of posts. The Board of Directors of Navratna CPSEs have the power to further delegate the powers relating to Human Resource Management (appointments, transfer, posting, etc.) of below Board level executives to sub-committees of the Board or to executives of the CPSE, as may be decided by the Board of the CPSE.
- (v) **Resource Mobilization:** - These CPSEs have been empowered to raise debt from the domestic capital markets and for borrowings from international market, subject to condition that approval of RBI/Department of Economic Affairs, as may be required, should be obtained through the administrative Ministry.
- (vi) **Joint ventures and Subsidiaries :-** (1) The Navratna CPSEs have been delegated powers to establish financial joint ventures and wholly owned subsidiaries in India or abroad with the stipulation that the equity investment of the CPSE should be limited to the following: -
- i. ₹ 1000 crore in any one project,
 - ii. 15% of the net worth of the CPSE in one project,
 - iii. 30% of the net worth of the CPSE in all joint ventures/ subsidiaries put together.
- (2) The delegated powers to establish financial joint ventures and subsidiary entities would be exercised by the board of Maharatna CPSEs in the following manner :
- (i) The proposal for establishing financial joint ventures and subsidiary entities will be presented to the board of concerned CPSE.
 - (ii) The concerned administrative ministry / department will obtain the concurrence of NITI Aayog for such proposals on a case to case basis and firm up its view on the proposals as the stakeholder for the board's deliberations through its representative on the board for appropriate decision.
- (3) The government directors will ensure that the views of the government, being the majority shareholder, on such proposals are properly presented before the board while a decision on such proposal is being taken. The decision for investment to set up financial joint ventures and subsidiary entities should only be taken by the board when government directors are present in the board meeting.
- (vii) **Mergers and acquisitions:-** The Navratna CPSEs have been delegated powers for mergers and acquisitions subject to the conditions that (i) it should be as per the growth plan and in the core area of functioning of the CPSE, (ii) conditions/limits would be as in the case of establishing joint ventures/subsidiaries, and (iii) the Cabinet Committee on Economic Affairs

would be kept informed in case of investments abroad. Further, the powers relating to Mergers and Acquisitions are to be exercised in such a manner that it should not lead to any change in the public sector character of the concerned CPSEs.

- (viii) **Creation of/Disinvestment in subsidiaries:-** The Navratna CPSEs have powers to transfer assets, float fresh equity and divest shareholding in subsidiaries subject to the condition that the delegation will be in respect of subsidiaries set up by the holding company under the powers delegated to the Navratna CPSEs and further to the proviso that the public sector character of the concerned CPSE (including subsidiary) would not be changed without prior approval of the Government and such Navratna CPSEs will be required to seek Government approval before exiting from their subsidiaries.
- (ix) **Tours abroad of functional Directors:** - The Chief Executive of Navratna CPSEs have been delegated powers to approve business tours abroad of functional directors up to 5 days' duration (other than study tours, seminars, etc.) in emergency under intimation to the Secretary of the administrative Ministry.

3. Conditions/guidelines for exercise of delegated Navratna powers

- a) The proposals must be presented to the Board of Directors in writing and reasonably well in advance, with an analysis of relevant factors and quantification of the anticipated results and benefits. Risk factors if any must be clearly brought out.
- b) The Government Directors, the Financial Directors and the concerned Functional Director(s) must be present when major decisions are taken, especially when they pertain to investments, expenditure or organizational/ capital restructuring.
- c) The decisions on such proposals should preferably be unanimous.
- d) In the event of any decision on important matters not being unanimous, a majority decision may be taken, but at least two thirds of the Directors should be present, including those mentioned above, when such a decision is taken. The objections, dissents, the reasons for over-ruling them and those for taking the decision should be recorded in writing and minuted.
- e) No financial support or contingent liability on the part of the Government should be involved.
- f) These CPSEs will establish transparent and effective systems of internal monitoring, including the establishment of an Audit Committee of the Board with membership of non-official Directors.
- g) All the proposals, where they pertain to capital expenditure, investment or other matters involving substantial financial or managerial commitments or where they would have a long term impact on the structure and functioning of the CPSE, should be prepared by or with the assistance of professionals and experts and should be appraised, in suitable cases, by financial



institutions or reputed professional organizations with expertise in the areas. The financial appraisal should also preferably be backed by an involvement of the appraising institutions through loans or equity participation.


- h) The exercise of authority to enter into technology joint ventures and strategic alliances shall be in accordance with the Government guidelines as may be issued from time to time.
- i) The Boards of these CPSEs should be restructured by inducting at least four non-official Directors as the first step before the exercise of the enhanced delegation of authority.
- j) These public sector enterprises shall not depend upon budgetary support or Government guarantees. The resources for implementing their programmes should come from their internal resources or through other sources, including the capital markets. However, wherever Government guarantee is required under the standard stipulations of external donor agencies, the same may be obtained from the Ministry of Finance through the administrative Ministry. Such Government guarantee shall not affect the Navratna status. Further, budgetary support to implement Government sponsored projects of national interest and Government sponsored Research & Development projects will not disqualify CPSEs from retaining their Navratna status. However, for such projects, investment decisions will be taken by the Government and not by the CPSE concerned.

Salient features of Miniratna scheme

1. Eligibility conditions and criteria for grant of Miniratna status are as under.
 - (i) **Category-I CPSEs** should have made profit in the last three years continuously, the pre-tax profit should have been ₹ 30 crores or more in at least one of the three years and should have a positive net worth.
 - (ii) **Category-II CPSEs** should have made profit for the last three years continuously and should have a positive net worth.
 - (iii) These CPSEs shall be eligible for the enhanced delegated powers provided they have not defaulted in the repayment of loans/interest payment on any loans due to the Government.
 - (iv) These public sector enterprises shall not depend upon budgetary support or Government guarantees.
 - (v) The Boards of these CPSEs should be restructured by inducting at least three non-official Directors as the first step before the exercise of enhanced delegation of authority.
 - (vi) The administrative Ministry concerned shall decide whether a Public Sector Enterprise fulfilled the requirements of a Category-I/Category-II company before the exercise of enhanced powers.
- (ii) The delegation of decision-making authority available at present to the Boards of these Miniratna CPSEs is as follows:
 - (i) **Capital Expenditure**
 - (a) **For CPSEs in category I:** The power to incur capital expenditure on new projects, modernization, purchase of equipment, etc., without Government approval upto ₹ 500 crore or equal to net worth, whichever is less.
 - (b) **For CPSEs in category II:** The power to incur capital expenditure on new projects, modernization, purchase of equipment, etc., without Government approval upto ₹ 250 crore or equal to 50% of the Net worth, whichever is less.
 - (ii) **Joint ventures and subsidiaries:**
 - (1)(a) **Category I CPSEs:** To establish joint ventures and subsidiaries in India with the stipulation that the equity investment of the CPSE in any one project should be limited to 15% of the

network of the CPSE or ₹ 500 crore, whichever is less. The overall ceiling on such investment in all projects put together is 30% of the network of the CPSE.

- (b) **Category II CPSEs:** To establish joint ventures and subsidiaries in India with the stipulation that the equity investment of the CPSE in any one project should be 15% of the net worth of the CPSE or ₹ 250 crore, whichever is less. The overall ceiling on such investment in all projects put together is 30% of the net worth of the CPSE.
 - (2) The delegated powers to establish financial joint ventures and subsidiary entities would be exercised by the board of Maharatna CPSEs in the following manner :
 - (i) The proposal for establishing financial joint ventures and subsidiary entities will be presented to the board of concerned CPSE.
 - (ii) The concerned administrative ministry / department will obtain the concurrence of NITI Aayog for such proposals on a case to case basis and firm up its view on the proposals as the stakeholder for the board's deliberations through its representative on the board for appropriate decision.
 - (3) The government directors will ensure that the views of the government, being the majority shareholder, on such proposals are properly presented before the board while a decision on such proposal is being taken. The decision for investment to set up financial joint ventures and subsidiary entities should only be taken by the board when government directors are present in the board meeting.
- (iii) **Mergers and acquisitions:** - The Board of Directors of these CPSEs have the powers for mergers and acquisitions, subject to the conditions that (a) it should be as per the growth plan and in the core area of functioning of the CPSE, (b) conditions/limits would be as in the case of establishing joint ventures/subsidiaries, and (c) the Cabinet Committee on Economic Affairs would be kept informed in case of investments abroad. Further, the powers relating to Mergers and Acquisitions are to be exercised in such a manner that it should not lead to any change in the public sector character of the concerned CPSEs.
- (iv) **Scheme for HRD:** - To structure and implement schemes relating to personnel and human resource management, training, voluntary or compulsory retirement schemes, etc. The Board of Directors of these CPSEs have the power to further delegate the powers relating to Human Resource Management (appointments, transfer, posting, etc.) of below Board level executives to sub-committees of the Board or to executives of the CPSE, as may be decided by the Board of the CPSE.
- (v) **Tour abroad of functional Directors:** - The Chief Executive of these CPSEs have the power to approve business tours abroad of functional directors up to 5 days' duration (other than study tours, seminars, etc.) in emergency, under intimation to the Secretary of the administrative Ministry.

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- (vi) **Technology Joint Ventures and Strategic Alliances:-** To enter into technology joint ventures, strategic alliances and to obtain technology and know-how by purchase or other arrangements, subject to Government guidelines as may be issued from time to time.
 - (vii) **Creation/Disinvestment in subsidiaries :-** To transfer assets, float fresh equity and divest shareholding in subsidiaries subject to the condition that the delegation will be in respect of subsidiaries set up by the holding company under the powers delegated to the Miniratna CPSEs and further to the proviso that the public sector character of the concerned CPSE (including subsidiary) would not be changed without prior approval of the Government, and such Miniratna CPSEs will be required to seek Government approval before exiting from their subsidiaries.


The above delegation of powers is subject to similar conditions as are applicable to Navratna CPSEs.

List of Miniratna CPSEs

Miniratna Category - I CPSEs

1. Airports Authority of India
2. Antrix Corporation Limited
3. Balmer Lawrie & Co. Limited
4. Bharat Coking Coal Limited
5. Bharat Dynamics Limited
6. BEML Limited
7. Bharat Sanchar Nigam Limited
8. Bridge & Roof Company (India) Limited
9. Central Warehousing Corporation
10. Central Coalfields Limited
11. Chennai Petroleum Corporation Limited
12. Cochin Shipyard Limited
13. Dredging Corporation of India Limited
14. EdCIL (India) Limited
15. Kamarajar Port Limited
16. Garden Reach Shipbuilders & Engineers Limited
17. Goa Shipyard Limited
18. Hindustan Copper Limited
19. HLL Lifecare Limited
20. Hindustan Newsprint Limited
21. Hindustan Paper Corporation Limited
22. Housing & Urban Development Corporation Limited
23. HSCC (India) Limited

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24. India Tourism Development Corporation Limited
 25. Indian Rare Earths Limited
 26. Indian Railway Catering & Tourism Corporation Limited
 27. Indian Renewable Energy Development Agency Limited
 28. India Trade Promotion Organization
 29. IRCON International Limited
 30. KIOCL Limited
 31. Mazagaon Dock Shipbuilders Limited
 32. Mahanadi Coalfields Limited
 33. Manganese Ore (India) Limited
 34. Mangalore Refinery & Petrochemical Limited
 35. Mishra Dhatu Nigam Limited
 36. MMTC Limited
 37. MSTC Limited
 38. National Fertilizers Limited
 39. National Small Industries Corporation Limited
 40. National Seeds Corporation
 41. NHPC Limited
 42. Northern Coalfields Limited
 43. North Eastern Electric Power Corporation Limited
 44. Numaligarh Refinery Limited
 45. ONGC Videsh Limited
 46. Pawan Hans Helicopters Limited
 47. Projects & Development India Limited
 48. Railtel Corporation of India Limited
 49. Rail Vikas Nigam Limited
 50. Rashtriya Chemicals & Fertilizers Limited
 51. RITES Limited

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52. SJVN Limited
 53. Security Printing and Minting Corporation of India Limited
 54. South Eastern Coalfields Limited
 55. State Trading Corporation of India Limited
 56. Telecommunications Consultants India Limited
 57. THDC India Limited
 58. Western Coalfields Limited
 59. WAPCOS Limited

Miniratna Category-II CPSEs

60. Artificial Limbs Manufacturing Corporation of India
61. Bharat Pumps & Compressors Limited
62. Broadcast Engineering Consultants (I) Limited
63. Central Mine Planning & Design Institute Limited
64. Central Railside Warehouse Company Limited
65. Engineering Projects (India) Limited
66. FCI Aravali Gypsum & Minerals India Limited
67. Ferro Scrap Nigam Limited
68. HMT (International) Limited
69. Indian Medicines & Pharmaceuticals Corporation Limited
70. MECON Limited
71. Mineral Exploration Corporation Limited
72. National Film Development Corporation Limited
73. PEC Limited
74. Rajasthan Electronics & Instruments Limited

Salient features of the Guidelines on Corporate Governance for CPSEs

Composition of Board


1. In respect of the Board composition, these Guidelines provide that the number of functional Directors should not exceed 50% of the actual strength of the Board; and the number of Government nominee Directors shall be restricted to maximum of two. In case of listed CPSEs with executive chairmen, the number of non-official Directors shall be at least 50% of Board members. In case of unlisted and listed CPSEs with non-executive chairmen, at least one-third of the Board Members shall be non-official Directors. The Government has also laid down pre-defined criteria in terms of educational qualifications, age and experience in respect of persons to be considered for appointment as non-official Directors. Relevant clauses have been incorporated in these guidelines to ensure 'independence' of non-official Directors and avoid potential conflict of interest. It has also been provided that the Directors nominated by any institution other than public financial institution will not be treated as non-official Directors.
2. It has been further mandated that the Board meetings are to be held at least once in every 3 months and at least 4 such meetings held in a year and all relevant information is to be given to the Board. Further, the Board should lay down code of conduct for all members and senior management. In this regard, a model Code has been incorporated in the Guidelines to assist the CPSEs. The Guidelines inter alia provide that the Board should ensure integration and alignment of risk management system and the company should undertake suitable training programmes for its new Board members.

Audit Committee

3. The provisions relating to Audit Committee require a qualified and independent Audit Committee to be set up by CPSEs with minimum three Directors as members. Further, two-thirds of the members of this Committee should be independent Directors with an independent Director as Chairman. The Audit Committee has been given extensive powers with regard to financial matters of company and is required to meet at least 4 times in a year.

Subsidiary Companies

4. With regard to subsidiary companies, it has been provided that at least one independent Director



of holding company will be Director on the Board of subsidiary company and the Audit Committee of holding company will review financial statements of subsidiary. All significant transactions and arrangements of subsidiary companies are required to be brought to the attention of Board of Directors of the holding company.

Disclosures

5. The provisions regarding disclosures require all transactions to be placed before the Audit Committee. The Guidelines mandate that while preparing financial statements, treatment should be as per prescribed Accounting Standard and if there are any deviations, the same are to be explicitly mentioned. Further, the Board is to be informed about risk assessment and minimization procedures and senior Management is to make disclosures to Board relating to all financial and commercial transactions where they have personal interest or may have a potential conflict.

Compliance

6. It has also been mandated in the Guidelines that Annual report of companies should contain a separate section on Corporate Governance with details of compliance. The CPSEs will have to obtain a certificate from auditors/company secretary regarding compliance with these Guidelines. Chairman's speech in AGM will also carry a section on compliance with Corporate Governance Guidelines and will form part of the company's Annual Report. The CPSEs are required to submit quarterly compliance/grading report in the prescribed format to their administrative Ministries who will furnish consolidated annual report to DPE.

MoU Guidelines for the Year 2017-18 and onwards

- 1. Memorandum of Understanding (MoU):** MoU is a negotiated agreement and contract between the Administrative Ministry/ Department/ Holding CPSE i.e. majority shareholder and the Management of the Central Public Sector Enterprise (CPSE) on selected parameters having targets decided normally before the start of a new financial year and results evaluated after the end of the year to measure the performance. For carrying out this exercise, CPSEs would provide brief in format at **Appendix-I** and trend analysis in **Appendix-III**.
- 2. Purpose of MoU:** The purpose of the MoU is to measure the performance of the management of the CPSEs on key selected parameters against the targets agreed upon so as to improve the critical performance indicators of the organisation.
- 3. Scope:** All CPSEs (Holding as well as Subsidiaries) are required to sign MoUs. The Apex/Holding companies will sign MoUs with their administrative Ministries/ Departments, while the Subsidiary companies will sign MoUs with their respective Apex/ Holding companies.
- 4. Exemption from MoU:** Following CPSEs may be exempted from MoU system by the Inter-Ministerial Committee (IMC):
 - i. CPSEs under liquidation where Liquidator has already been appointed. However administrative ministry would provide the list of such CPSEs to DPE along-with brief write-up.
 - ii. CPSE which is not in operation or having no employees or on any other ground on the recommendation of administrative Ministry.
- 5. Parameters:** CPSEs work in various sectors under different conditions. In view of this, the following guidelines are laid down:-
 - 5.1 There would be uniform parameters for measuring financial performances such as revenue from operations, operating profit and return on investment (e.g. ratio of PAT/Net-worth). This would be applicable to all CPSEs, except CPSEs which are dependent on government grant or performing functions of distribution of grant etc. e.g. Biotechnology Industry Research Assistance Council (BIRAC). Hence, 3 financial parameters have been prescribed for all CPSEs with total weightage of 50% except for CPSEs like BIRAC. The mandatory parameters are at **Appendix-II (Part-A)**.

- 5.2 For the remaining 50% weightage, a menu of parameters has been suggested for selection depending on the sector in which the CPSE is operating. Separate Format has been given for Finance Sector at **Appendix-II (Part-C)** and another Format for the remaining operating CPSEs at **Appendix-II (Part-B)**. The parameters most appropriate and relevant for measuring performance shall be suggested by the Pre-Negotiation Committee (PNC) to the Inter-Ministerial Committee (IMC). In all the cases IMC shall take appropriate decision on the suggestions made by PNC.
- 5.3 For CPSEs under closure/ under construction/ under reconstruction, parameters have not been prescribed leaving it to the PNC to suggest the most appropriate parameters and targets for IMC to take decisions. For such CPSEs, the emphasis should be to suggest parameters and fix targets for starting commercial operations as early as possible. For CPSEs under closure, the targets would be for ensuring time bound closure. Format for such CPSEs is at **Appendix-IV**.
- 5.4 Definition and explanatory notes on the suggested the parameters are given in **Appendix-V**.

6. MoU Ranking:

- i. With a view to distinguish 'excellent performance' from 'poor performance', five different performance ratings have been fixed in the MoU, i.e., 'Excellent', 'Very Good', 'Good', 'Fair' and 'Poor'.
- ii. Apart from rating of CPSEs, MoU performance of all MoU signing CPSEs, there will be category-wise ranking of CPSEs (Maharatna, Navratna, Miniratna, others) and sector-wise ranking of CPSEs (Mining, Power, Petroleum, Finance, consultancy etc.) only for the purposes of acknowledging where they stand in their respective category/ sector.

7. MoU Targets:

- i. Targets fixed should be realistic, growth oriented and aspirational. Generally target for Excellent should not be lower than best achieved in last 5 years and Very Good should not be lower than the expected achievement of the current year (year immediately preceding the year for which targets are being fixed) unless there are specific reasons to fix lower targets and are duly supported by the administrative ministry/ department.
- ii. Once MoUs are signed, any revision of targets would not be permissible. MoU targets are unconditional and non-provisional.

8. **Pre-negotiation Committee (PNC):** The role of the Pre-negotiation Committee (earlier known as Standing Committee on MoU) would be to assist IMC in determining the most appropriate and relevant parameters for measuring improvement in performance and for fixing targets. Meetings of the Pre-negotiation Committee would be held in each case before the meetings of IMC to look at the trends, discuss, negotiate and recommend MoU parameters and targets. The composition of Pre-negotiation Committee would remain the same of erstwhile Standing Committee.

9. **Inter-Ministerial Committee (IMC):** MoU targets would be decided by the IMC. There is no change in the composition of the Committee. Any change in the composition of the committee would be done with the approval of Cabinet Secretary.
10. **Time-lines for submission of MoU:** The draft MoU with all documents/ Annexures should be submitted to administrative Ministry/ Department in respect of all CPSEs and their subsidiaries by **21st November of each year** for the forthcoming year. The draft MoU after the approval of administrative Ministry/ Department should be sent to DPE by **5th December of each year** for the forthcoming year with all documents/Annexures. A copy of draft MoU may also be sent to IMC Members other than DPE. Secretary, DPE may extend these dates if there is delay in issue of guidelines.
11. **Enclosures with Draft MoU:** CPSEs should send the Draft MoU in the relevant format along with all the annexures prescribed and documents mentioned below.
- i. MoU as per App. I, App. II (Part-A and Part-B or Part-C), and App. III (Part-A and Part-B) duly filled in for CPSEs in operation and Annex (I & IV) for CPSEs under closure/ under construction/ reconstruction enclosed with these Guidelines.
 - ii. Copy of latest Annual Report.
 - iii. Latest quarterly/half-yearly results.
 - iv. Copy of the latest Annual Plan and Annual Budget.
 - v. Copy of Corporate Plan.
 - vi. Minutes of the IMC meeting of previous year.
12. **MoU Signing Process:** MoU based on the parameters, targets and weightage recommended by IMC without any deviation shall be signed between CMD/ MD of CPSE and Secretary of administrative Ministry/ Department in case of holding/ independent CPSEs and between CEO/ MD of subsidiary company and CMD/ MD of holding CPSE in case of subsidiary by 31st March (i.e. before start of financial year in respect of which targets are fixed) or within 21 days from issue of IMC meeting minutes, whichever is later. In case, deviation is detected, IMC minutes would prevail and performance of the CPSE will be downgraded to the next lower rating.
13. **MoU Evaluation:** Evaluation of MoU of the CPSE is done after the end of the year on the basis of actual achievements vis-à-vis the MoU targets. CPSEs (Holding as well as Subsidiaries) are required to submit performance evaluation reports on the basis of audited accounts to Department of Public Enterprises after approval of the Board of CPSE and through the administrative Ministries/ Departments on or before **30th September (in respect of immediately preceding year) or any other date communicated by DPE.** Figures and information in the MoU achievement which are not verifiable from audited accounts/ annual report would be relied on the basis of certification by way of resolution of the Board given separately for each parameter.

If at the time of evaluation, it is observed that any CPSE may have under-pitch their projected performance for the year concerned to have soft targets fixed. DPE/ IMC may call the CMD of such CPSE to clarify the matter for enabling the IMC to evaluate the performance and assign marks and rating based on justification given by the CMD.

14. MoU Score and Rating: MoU score is an aggregate of score on all parameters with respect to performance vis-à-vis the targets.

14.1 The system of rating of CPSEs on the basis of MoU Aggregate Score is as follows:

Aggregated Score		Rating
More than	Equal to or less than	
90	100	Excellent
80	90	Very Good
70	80	Good
50	70	Fair
0	50	Poor

14.2 Score and rating as per para 14.1 would be subject to fulfilling additional eligibility criteria as mentioned below:

a. Additional Eligibility criteria (1): CPSEs have to essentially comply with the following conditions, failing which its MoU rating would be downgraded to next lower rating except CPSEs getting poor rating e.g. CPSEs with 'Excellent rating' would be treated as 'Very Good' and aggregate score shall be read as 90.00 and CPSEs with 'Very Good rating' would be treated as 'Good' and aggregate score shall be read as 80.00 and so on.

- i. Compliance of Provisions of The Companies Act, 2013 or the relevant Act under which they have been regulated (To the extent compliances are within the ambit of CPSEs).
- ii. In case of listed CPSEs, compliance of provisions of Listing Agreement (To the extent compliances are within the ambit of CPSEs).
- iii. Compliance of DPE Guidelines having financial implications.
- iv. No adverse observations by CAG on Annual Accounts pointing out misappropriation of funds of any amount or Over/ under statement of profit/ loss (surplus/ deficit)/ assets/ liabilities amounting to 5% of Revenue from Operation.
- v. Holding of AGM without seeking extension of time.
- vi. Submission of Draft MoU/ MoU evaluation through administrative ministry/ department to DPE by prescribed date.

vii. Signing of MoU as prescribed without deviation from minutes of the IMC meeting.

b. **Additional Eligibility Criteria (2):** CPSEs have also to essentially comply with the following failing which its aggregate MoU marks would be reduced by one mark each for non-compliance of each of the conditions and rating would be revised accordingly.

i. Compliance of Public Procurement Policy for Micro and Small Enterprises issued by M/o Micro, Small and Medium Enterprises.

ii. Compliance of DPE guidelines on allocation of CSR fund by CPSEs for Swachh Bharat activities.

iii. Compliance of DPE guidelines on Digital India.

iv. Compliance of DPE guidelines on any policy (other than mentioned in ii and iii above), issued from time to time, and prescribed specifically in this regard.

c. Compliance of each of additional eligibility criteria to be confirmed/ certified by Board of Directors by way of resolution.

15. CPSEs not signing of MoU or not submitting MoU Evaluation: The CPSEs who do not submit MoU/ MoU Evaluation through their administrative Ministries/ Departments within a stipulated time of the prescribed date will be rated as 'poor'. Stipulated time would be decided by Secretary, DPE. Prescribed dates are given in para 10 and 13 of the guidelines.

16. Approval of Score and Rating: DPE would carry out the evaluation of the performance based on the MoU received through the administrative ministries/ department. The results of MoU score and rating of CPSEs would be submitted to the IMC. IMC may scrutinize the evaluation and wherever it is felt necessary, modify the score and rating. The score and the ratings of the CPSEs would be submitted to chairman of the HPC for approval. Score and rating would be final after it is approved by the Chairman of the HPC.

Brief about the CPSE

1.	Name of the CPSE			
2.	Status (Please tick): As per DPE guidelines			Sick/ Incipient Sick / weak/ none
3.	Reasons of Sickness, if applicable			
4.	Whether registered with BIFR, If yes, details			
5.	Schedule of the CPSE (Please tick)			A/B/C/D/ none
6.	Purpose for which CPSE has been setup and the main business now			
7.	Number and Name of subsidiary companies along with amount invested and share in its profit during last five years			Separate sheet may be attached, if more than one subsidiary. Information may be separately given in respect of each subsidiary and aggregated (consolidated) also.
	Year*	Name of subsidiary	Amount invested (₹)	Share in its profit (₹)
	2011-12			
	2012-13			
	2013-14			
	2014-15			
	2015-16			
8.	Number and Name of Joint Venture companies along with amount invested and share in its profit during last five years			Separate sheet may be attached, if more than one Joint Venture. Information may be separately given in respect of each Joint Venture and aggregated (consolidated) also.
	Year*	Name of Joint Venture	Amount invested (₹)	Share in its profit (₹)
	2011-12			
	2012-13			
	2013-14			
	2014-15			
	2015-16			
9.	Details of revival plan approved earlier			

*Note: For each succeeding year of MoU, one more year may be added after the MoU 2017-18 and the first year deleted so that total data available is for the past five years.

Mandatory parameters

PART A

(Applicable to all CPS Esexcept CPSEs Distributing Government grant)

Sl. No.	Financial Performance Criteria	Unit	Marks	Current Year (Estimate)	Best in 5 years	MoU Target for the year					%Improvement*
						Excellent 100%	V.G. 80%	Good 60%	Fair 40%	Poor 20%	
1	Turnover Revenue from Operations	₹ crore	10								
2	Operating Profit/Loss CPSEs with operating profit (Profit/ Surplus before Tax excluding other Income, Extraordinary and Exceptional Items):- Operating profit/ surplus as a percentage of Revenue from operations (net).	%	20								
	CPSEs with operating Loss (Loss/ Deficit not taking into account other Incomes, Extraordinary and Exceptional Items):- Reduction in operating Loss/ Deficit (s) over previous year.	%									
3	Return on investment: Profit Earning CPSEs with no accumulated losses: PAT or Surplus / Average Net Worth	%	20								
	Loss making CPSEs or CPSEs having Accumulated losses: Reduction in Total Expenses as a percentage of Total Income as compared to previous year.	%									
	Total (A)		50								

*Improvement would be worked out on very Good Target for MoU year over Current year expected actuals.

Other Parameters

(Part-B)

Applicable to all Operating CPSEs except CPSEs in Finance Sector

Sl. No.	Performance Criteria	Unit	Marks	Current year (Estimate)	Best in 5 years	MoU Target for the year					% Improvement*
						Excellent 100%	V.G. 80%	Good 60%	Fair 40%	Poor 20%	
1	Capacity Utilisation/ Production/ Generation/ Transmission, etc.		0-10								
2	New orders Received during the year	₹ crore	0-10								
3	Exports as a percentage of Revenue from operations	%	0-10								
4	Development or Revenue from new products or product with new features		0-10								
5	Any Production Efficiency parameter		0-10								
6	Completion of milestone of clients orders/ agreements without time overrun	%	0-10								
7	R&D, Innovation, Technology up-gradation parameter		0-10								
8	Increase in Market share	%	0-10								
9	CAPEX (₹ Crore)		0-10								
10	Percentages of value of CAPEX contracts/ projects running/ completed during the year without time/ cost overrun to total value of CAPEX contracts running/ completed during the year	%	0-10								
11	Inventory of finished goods and work in progress to Revenue from operations (Net)	%	0-10								
12	Reduction in Inventory of more than one year old to Revenue from operations (Net)	%	0-10								
13	Trade receivables (Net) as number of days of Revenue from Operations (gross)	Days	0-10								
14	Reduction in claims against the Company not acknowledged as debt	%	0-10								
15	Return (share of profit/loss) on Investment in JV	%	0-10								
16	Milestones with respect to subsidiary CPSEs not signing MoUs separately		0-10								
17	Parameters pertaining to milestones of Revival		0-10								
18	HR Related Parameter		Up 10								
19	Any other sector specific result-oriented measurable parameters		0-10								
	Total (B)		50								

*Improvement would be worked out on very Good Target for MoU year over Current year expected actuals.

Other Parameters

Appendix-II (Part-C)

Applicable to all CPSEs Operating in Finance Sector

Sl. No.	Performance Criteria	Unit	Marks	Current year (Estimate)	Best in 5 years	MoU Target for the year					% Improvement*
						Excellent 100%	V.G. 80%	Good 60%	Fair 40%	Poor 20%	
1	Loans disbursed/ Total Funds Available	%	10-20								
2	Loans disbursed to Micro Finance Beneficiaries as a % Total Disbursement	%	0-10								
3	Overdue loans/ Total loans (Net)	%	10								
4	NPA/ Total loans (Net)	%	10								
5	Cost of raising funds through bonds as compared to similarly rated CPSEs/ entities		0-10								
6	Contingent liabilities: Reduction in claims against the Company not acknowledged as debt	%	0-5								
7	Return on Investment (share of profit/loss) in Joint Ventures- CPSEs having Joint Ventures	%	0-5								
8	Milestones with respect to subsidiary CPSEs not signing MoUs separately		0-5								
9	Any other sector specific result-oriented measurable parameters		0-10								
10	Total		50								

*Improvement would be worked out on very Good Target for MoU year over Current year expected actuals.

PART A
TREND Analysis

Sl. No.	Financial Performance Criteria	Unit	Target v/s Actual	2011-12	2012-13	2013-14	2014-15	2015-16	Current Year	
									Actual upto...	Estimated
1	Revenue from Operations -Gross	₹ crore								
	Revenue from Operations -Net		Actual MoU							
2	a. Profit before Tax	₹ crore								
	b. Other Incomes									
	c. Extraordinary & Exceptional items									
	d. Prior Period Items									
	e. Operating Profit/ Loss (a-b+/-c+/-d)		Actual MoU							
3	a. PAT	₹ crore								
	b. Net Worth at year end									
	c. Average Net worth									
	d. PAT/ Net Worth	%	Actual MoU							
	e. Paid-up Share Capital									
	f. Govt share									
	g. Reserves and surplus									
4	Total Expenses	₹ crore								
5	Total Incomes									
6	Total expenses/ Total Incomes	%								
7	Detail of other incomes									
	a. Interest	₹ crore								
	b. Dividend									
	c. Other Incomes									
	d. Total									
8	a. Cash and Bank Balance and equivalent									
	b. Investment in mutual funds									
	c. Investment in shares other than subsidiary/JVs)									
	d. Total (a+b+c)									
	e. Cash credit/ Over-draft loan/ Short-Term loan									
	f. Balance in Current account									
9	g. Dividend paid/ declared for the year, excluding Dividend Tax									

Note: Trend would be given for actual figures for preceding five years (audited) and estimates of current year i.e. previous year to the year in respect of which targets are being negotiated.

(Part-B) - TREND Analysis

Sl. No.	Financial Performance Criteria	Unit	Target v/s Actual	2011-12	2012-13	2013-14	2014-15	2015-16	Current Year	
									Actual upto...	Estimated
1	Installed Capacity in respect of each product									
2	Capacity Utilisation in respect of each product		Actual							
			MoU							
3	Contribution of each product in sales	%								
4	New orders received during the year	₹ crore	Actual							
			MoU							
5	Exports as a percentage of Revenue from operations	%	Actual							
			MoU							
6	Development or Revenue from new products or product with new features		Actual							
			MoU							
7	Production efficiency parameters		Actual							
			MoU							
8	Completion of milestone of clients orders/ agreements without time overrun	%	Actual							
			MoU							
9	R&D, Innovation, Technology up-gradation parameter		Actual							
			MoU							
10	Market share	%	Actual							
			MoU							
11	CAPEX		Actual							
			MoU							
12	CAPEX contracts/ projects running/ completed without time/ cost overrun to total value of CAPEX	%	Actual							
			MoU							
13	Inventory of finished goods and work in progress	₹ crore								
14	Inventory of finished goods and work in progress to RO(Net)	%	Actual							
			MoU							
15	Inventory of finished goods of more than one year	₹ crore	Actual							

Sl. No.	Financial Performance Criteria	Unit	Target v/s Actual	2011-12	2012-13	2013-14	2014-15	2015-16	Current Year	
									Actual upto...	Estimated
16	Inventory of finished goods of more than one year as a percentage of RO	%	Actual							
			MoU							
17	Trade Receivables (net)	₹ crore	Actual							
			MoU							
18	Trade receivables(Net) as number of days of RO(gross)	Days	Actual							
			MoU							
19	Claims against the Company not acknowledged raised by:	₹ crore								
	Central Government Departments									
	State Governments/ Local Authorities									
	CPSEs									
	Others									
	Total		Actual							
			MoU							
20	Loans disbursed/ Total Funds Available		Actual							
			MoU							
21	Overdue loans/ Total loans (Net)		Actual							
			MoU							
22	NPA/ Total loans (Net)		Actual							
			MoU							
23	Cost of raising funds as compared to similarly rated CPSEs/ entities		Actual							
			MoU							
24	Return (share of profit/loss) on Investment in Joint Ventures	%	Actual							
			MoU							
25	Any other result-oriented parameters taken for target setting		Actual							
			MoU							

Note: Trend would be given for actual figures for preceding five years (audited) and estimates of current year i.e. previous year to the year in respect of which targets are being negotiated **RO: Revenue from Operations.**

Definitions and Explanatory notes for Targets

The terms used should be same as defined in Schedule III or elsewhere in The Companies Act, 2013, applicable Ind AS/ Accounting Standards unless otherwise specified. All financial figures are to be taken on the basis of Audited Annual Accounts or Annual Report. For section 8 CPSEs preparing Income & Expenditure statement, profit/loss would mean surplus/ deficit. **The raw score for performance below the 'poor' level would be worked out proportionately between 0 and 1, i.e., 20% (the score will be treated as zero in those cases where the achievement in the parameter is zero or below zero).**

The terms used in App.-II are also explained as under:-

A. Appendix-II (Part-A):

1. **Revenue from Operations:** This would be taken as given in audited Annual Accounts of the CPSE. Target for turnover may be fixed net of excise duty, service tax, GST, etc., whether shown as reduction from Revenue from Operations or under the head Expenditure. As per schedule III, in respect of a company other than finance company revenue from operations consist of: (a) Sale of products; (b) Sale of services; (c) Other operating revenues. In respect of a finance company, revenue from operations shall include revenue from (a) Interest income; and (b) Other income from financial services.

If the price of product is regulated by statutory authorities/ international transparent mechanism, adjustment in revenue from operations may be allowed for variation in price, i.e., where target is fixed with the condition that adjustment in variation of price/ input cost (e.g., natural gas as a pass through in case of fertilizer) would be allowed due to regulatory regime, etc., the target would be adjusted according to the variation in price at the time of evaluation. For this purpose, first physical target would be decided and then financial target would be arrived at after applying applicable prices so that there is no ambiguity at the time of evaluation.

2. **Operating Profit/ Surplus or Reduction on Operating Loss/ Deficit:** It would mean Profit before Tax/ Surplus excluding other incomes, and not taking into account Extraordinary and Exceptional Items. Section 8 CPSEs, preparing Income and Expenditure Statement in place of Profit and Loss Account, profit/ loss would mean surplus/ deficit. The purpose of this is to capture profit from operations. This would be worked out from figures given in audited Annual Accounts. Extraordinary and Exceptional Items, prior period items may be excluded, if shown separately in audited Annual Accounts. There would be no adjustment in target due to changes in exchange rate, regulatory prices of raw material or finished goods or due to any other reason since target would be fixed as a ratio of operating profit to revenue from operations. With the change in price, there would be change in denominator alongwith change in numerator, hence ratio becomes price neutral to a large extent.


In case of loss making CPSEs, reduction in loss should be target since target cannot be fixed for loss. This reduction would be in the year under reference with reference to loss for the previous year. For excellent grade target for reduction in loss should be 100% or target for profit in absolute terms.

- 3. PAT / Net Worth or Shareholders Fund:** Profit Earning CPSEs with no accumulated losses, ratio would be Profit after Tax (PAT)/ Net Worth. PAT would be taken from audited Annual Accounts. There would be no adjustment due to changes in exchange rate, regulatory prices of raw material or finished goods. Net-worth would have the same meaning as defined in Section 2(57) of the Companies Act, 2013, i.e. Aggregate value of the paid up share capital and all reserves created out of profits and securities premium account, after deducting the aggregate value of accumulated losses, deferred expenditure and miscellaneous expenditure not written off, as per the Audited Balance Sheet, but does not include reserves created out of revaluation of assets, write-back of depreciation and amalgamation. This ratio gives return on Investment or shareholders fund. However, if there is extra-ordinary item of substantial value, the same would be considered at the time of evaluation.


Loss making CPSEs or CPSEs having accumulated losses parameter would be reduction in Total Expenses as a percentage of Total Income as compared to previous year. It may be ensured that target for excellent would be reduction to the extent to bring net loss to at least zero. Similarly for CPSEs with first year of operation, target may be Total Expenses as a percentage of Total Income with excellent target of 100 or less.

B. Appendix-II (Part-B):

- 1. Capacity Utilisation:** Capacity utilization used to be a part of Notes to Accounts in case of manufacturing companies till recently. Reference may be made to earlier Annual Accounts while introducing target under this parameter. The purpose of this target is to reflect performance of CPSEs in physical/ quantitative terms which lead to quantification of goods and services. Reference to capacity utilization may be with reference to installed capacity or rated capacity, wherever available. The target may be given either as a percentage of installed capacity or rated capacity or production/ generation/ transmission in absolute terms.
- 2. New orders received during the year:** This may be a parameter mainly for CPSEs in Consultancy or Construction Sector. Only new orders received during the year would be taken.
- 3. Export as a percentage of Revenue from Operations:** This parameter may be taken in respect of CPSEs having potential for export. The target may be to increase export income. Export would include sale of goods and sale of services.
- 4. Development or Revenue from new products or product with new features:** This parameter may be taken where CPSE is engaged in innovative work or has the capacity to develop new products. The intention of this parameter is to encourage development of new products/ features and also to encourage their commercialization.

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5. **Production Efficiency parameter:** Any sector specific result oriented measurable parameter leading to physical efficiency in production over previous year may be taken, eg., reduction in specific energy consumption, reduction in raw material input per unit of production, etc.
 6. **Completion of milestones of client's orders/ agreement without time overrun:** This would be a compulsory parameter for CPSEs manufacturing on the basis of orders received from clients and Consultancy organizations where delay leads to levy of penalty. The target for excellent level would be 100%.
 7. **R&D, innovation, technological upgradation:** Commercialisation of R&D achievement, innovation or technological upgradation leading to efficiency in operations, or reduction in cost may be taken under this heading.
 8. **Increase in market share:** This parameter may be taken where transparent system of measuring market share is available.
 9. **CAPEX:** Capital Expenditure (CAPEX) means any expenditure incurred towards acquisition/addition of fixed assets i.e. on completion, it would form part of fixed assets. CAPEX may be for expansion, modernization or diversification. This has to be considered on accrual basis and not on cash basis. CAPEX may be decided on the basis of viable projects available for expansion, modernization or diversification, cash and bank balance or parked funds, net-worth, borrowings, etc. CAPEX may be with own funds or by borrowings by leveraging net-worth or may be by way of budgetary support. **CAPEX would be compulsory target for CPSEs having adequate funds or borrowing capacity and have viable business opportunities for expansion, modernization or diversification.** In case of manufacturing CPSEs not taking CAPEX as one of the parameters, justification need to be given duly supported by the administrative Ministry. There may be some projects for expansion, modernisation, diversification having project completion period of more than one year. In such cases, detail of the project e.g. total cost, year-wise amount to be incurred, schedule completion date, amount to be spent, milestone to be achieved during the year, source of funding (own/ borrowed/ budgetary support) etc. need to be given for each project separately.
 10. **Percentages of value of CAPEX contracts/ projects running/ completed during the year** without time/ cost overrun to total value of CAPEX contracts running/ completed during the year: This would be a compulsory target for CPSEs which have taken target for CAPEX. This would be worked out in respect of **all ongoing projects for value above ₹ 150 crore.** Information would be given where there was time and/ or cost over-run. CPSE would submit list of all projects which are in progress and / or 10 top projects at the time of target setting. **Time/ cost overrun of projects under monitoring of MoSPI should be captured from OCMS system maintained by them. CPSEs are to ensure that details of all projects of over ₹ 150 crore are entered in OCMS system of MoSPI and/or has to submit details of 10 top projects.** It may be ensured that parameter of monitoring time and cost overrun of projects for numerator and denominator would be referring to same set of projects.

- 11. Number of days of Inventory of finished goods and Work-in-progress to Sale of Products (wherever applicable).** This parameter is compulsory to all CPSEs having inventory of finished goods and work in progress of more than 15 days except the CPSEs which have been mandated to have minimum stock by the Government of India/ administrative Ministries/ Departments. The figures would be taken from audited Annual Accounts for inventory of finished goods, work in progress and sale of products. It is to be noted that inventory of raw material, stores and spares, loose tools and others (if any) shall be excluded and goods in transit shall be included under the relevant sub head work in progress or finished good as applicable.
- 12. Reduction in inventory of more than one year old as a percentage of Revenue from Operations:** This would be a parameter for trading CPSEs. These CPSEs need to liquidate their stock as early as possible.
- 13. Trade Receivables as number of days of Revenue from Operations (Gross):** This parameter is compulsory to all CPSEs having trade receivables of more than 15 days. The figures of trade receivable, revenue from operations would be taken from audited Annual Accounts. Trade receivables would include all trade receivables wherever shown in the Balance Sheet except deferred trade receivables.
- 14. Reduction in Claims against the Company not acknowledged as debt:** This would be taken on the basis of figures given in Notes to Accounts to the Balance Sheet under the heading 'Contingent Liabilities'. Evaluation would be done for reduction in claims from the opening balance (closing balance of previous year). **Efforts should be made to bring claims by the CPSEs to Nil and substantial reduction in respect of claims raised by others.** This may be bifurcated into Claims raised by:
- i. Central Government Departments;
 - ii. State Government Departments or Local Bodies;
 - iii. CPSEs;
 - iv. Others
- 15. Return (share of profit/ loss) in Joint Ventures:** This would be a compulsory parameter for CPSEs having investment (after written off) in Joint Ventures. Share of profit/ loss would be as per actual profit and loss (PAT) in the Joint Venture Company.
- 16. Milestones with respect to subsidiary CPSEs not signing MoU separately:** This would be a compulsory parameter for CPSEs having subsidiaries and not signing MoU. The parameter would depend on the nature of the CPSE.
- 17. Parameters pertaining to milestones of Revival:** Where revival/ restructuring of the CPSE has been approved by the competent authority and revival plan is under implementation, in such cases, milestones for revival may be taken as target to ensure timely implementation of revival plan of the CPSE.

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18. **HR Related Parameter :** The MoU may have 10 points for HR parameters. Online filing of Annual Performance Appraisal Report (APAR), online vigilance reporting system and succession plan may carry 2 points each, while for other HR parameters carrying total 4 points may be drawn out of bouquet of parameters to be drawn out of for use in the MoUs.
 19. **Any other sector specific result-oriented measurable parameter:** Under this head, sector specific result-oriented measurable parameter may be taken. Parameters which are process oriented e.g. parameters related to training, HR etc. may not be taken. The minimum weightage of the parameters may be kept as 3 so that it may be given adequate consideration by the CPSE.

C. Appendix-II (Part-C):

1. **Loans disbursed/ total funds available (in %):** This would be worked out on the basis of total loans disbursed during the year and total funds available. Total funds available would include cash and bank balance in the beginning of the year, share capital received during the year, loans raised/ repaid during the year, any funds received from any source for this purpose, sale of assets, repayment/ pre-payment received during the year, and reducing therefrom any investment in assets.
2. **Loans disbursed to Micro Finance Beneficiaries as a percentage of total disbursement:** The intention of this target is to increase the percentage of loans disbursed to Micro Finance Beneficiaries as compared to bigger beneficiaries.
3. **Overdue loans/ total loans (net) (in %):** Figures of loan due but not recovered and total loan (net) would be based on audited accounts.
4. **NPA/ Total loans (net) (in %):** The figures of NPA would be Net NPA taken on the basis of regulatory framework under which CPSE perform as on the last date of the year under reference. Loan assets (net) would be based on Audited balance Sheet.
5. **Cost of raising funds through bonds as compared to similarly rated CPSEs/ entities:** This would be a compulsory parameter for CPSEs raising funds from the market. Target for excellence would be for raising funds at cheaper rates as compared to similarly rated CPSEs/ entities.
6. This would be taken on the basis of figures given in Notes to Accounts to the Balance Sheet under the heading 'Contingent Liabilities'. Evaluation would be done for reduction in claims from the opening balance (closing balance of previous year). **Efforts should be made to bring claims by the CPSEs to Nil and substantial reduction in respect of claims raised by others.** This may be bifurcated into Claims raised by:
 - i. Central Government Departments;
 - ii. State Government Departments or Local Bodies;

- iii. CPSEs;
 - iv. Others
7. **Return (share of profit/ loss) in Joint Ventures:** This would be a compulsory parameter for CPSEs having investment (after written off) in Joint Ventures. Share of profit/ loss would be as per actual profit and loss (PAT) in the Joint Venture Company.
 8. **Milestones with respect to subsidiary CPSEs not signing MoU separately:** This would be a compulsory parameter for CPSEs having subsidiaries and not signing MoU. The parameter would depend on the nature of the CPSE.
 9. **HR Related Parameter :** The MoU may have 10 points for HR parameters. Online filing of Annual Performance Appraisal Report (APAR), online vigilance reporting system and succession plan may carry 2 points each, while for other HR parameters carrying total 4 points may be drawn out of bouquet of parameters that may be prescribed by DPE for use in the MoUs.
 10. **Any other sector specific result-oriented measurable parameter:** Under this head, sector specific result-oriented measurable parameter may be taken. Parameters which are process oriented e.g. parameters related to training, HR etc. may not be taken. The minimum weightage of the parameters may be kept as 3 so that it may be given adequate consideration by the CPSE.

D Miscellaneous:

In case there is no suitable parameter under Annex II (Part B or C), weightage may be assigned to Return on Investment.

SCHEDULE-WISE LIST OF CENTRAL PUBLIC SECTOR ENTERPRISES

As on November, 2017

Schedule - A


1. Airports Authority of India
2. Air India Limited
3. BEML Ltd.
4. Bharat Electronics Ltd.
5. Bharat Heavy Electricals Ltd.
6. Bharat Petroleum Corporation Ltd.
7. Bharat Sanchar Nigam Ltd.
8. Central Warehousing Corporation.
9. Coal India Ltd.
10. Container Corporation of India Ltd.
11. Dedicated Freight Corridor Corporation of India Ltd.
12. Electronics Corporation of India Ltd.
13. Engineers India Ltd.
14. Fertilizers & Chemicals (Travancore) Ltd.
15. Food Corporation of India
16. GAIL (India) Ltd.
17. Heavy Engineering Corporation Ltd.
18. Hindustan Aeronautics Ltd.
19. Hindustan Copper Ltd.
20. Hindustan Paper Corporation Ltd.
21. Hindustan Petroleum Corporation Ltd.
22. HMT Ltd.
23. Housing & Urban Development Corporation Ltd.
24. I T I Ltd.
25. Indian Oil Corporation Ltd.
26. IRCON International Ltd.

27. Indian Railway Finance Corporation Ltd.
28. Konkan Railway Corporation Ltd.
29. Kudremukh Iron Ore Company Ltd.
30. MMTC Ltd.
31. Mahanagar Telephone Nigam Ltd.
32. Mangalore Refinery & Petrochemicals Ltd.
33. Mazagon Dock Shipbuilders Ltd.
34. MECON Ltd.
35. MOIL Limited
36. Mumbai Railway Vikas Corporation Ltd.
37. National Aluminium Company Ltd.
38. National Building Construction Corporation Ltd.
39. National Fertilizers Ltd.
40. NHPC Ltd.
41. National Mineral Development Corporation Ltd.
42. National Textiles Corporation Ltd.
43. NTPC Ltd.
44. Neyveli Lignite Corporation Ltd.
45. North Eastern Electric Power Corporation Ltd.
46. Oil & Natural Gas Corporation Ltd.
47. Oil India Ltd.
48. ONGC Videsh Ltd.
49. Power Finance Corporation
50. Power Grid Corporation of India Ltd.
51. Power System Operation Corporation Limited
52. RITES Ltd.
53. RailTel Corporation of India Ltd.
54. Rail Vikas Nigam Ltd.
55. Rashtriya Chemicals and Fertilizers Ltd.
56. Rashtriya Ispat Nigam Ltd.
57. Rural Electrification Corporation Ltd.
58. Satluj Jal Vidyut Nigam Ltd.
59. Security Printing & Minting Corporation of India Ltd.

60. Shipping Corporation of India Ltd.
61. State Trading Corporation of India Ltd.
62. Steel Authority of India Ltd.
63. Telecommunications Consultants (India) Ltd.
64. THDC India Limited

Schedule - B

1. Andrew Yule & Company Ltd.
2. Balmer Lawrie & Company Ltd.
3. Bharat Coking Coal Ltd.
4. Bharat Dynamics Ltd.
5. Bharat Petro Resources Ltd.
6. Bharat Pumps & Compressors Ltd.
7. Brahmaputa Crackers & Polymers Ltd.
8. Brahmaputra Valley Fertilizer Corporation Ltd.
9. Biotechnology Industry Research Assistance Council
10. Braithwaite & Company Ltd.
11. Bridge & Roof Company (India) Ltd.
12. British India Corporation Ltd.
13. Burn Standard Company Ltd.
14. Cement Corporation of India Ltd.
15. Central Coalfields Ltd.
16. Central Electronics Ltd.
17. Central Mine Planning & Design Institute Ltd.
18. Chennai Petroleum Corporation Ltd.
19. Cochin Shipyard Ltd.
20. Cotton Corporation of India Ltd.
21. Dredging Corporation of India Ltd.
22. Eastern Coalfields Ltd.
23. Engineering Projects (India) Ltd.
24. Kamrajar Port Ltd.
25. Fertilizer Corporation of India Ltd.
26. Garden Reach Shipbuilders & Engineers Ltd.
27. Goa Shipyard Ltd.

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28. Handicrafts & Handlooms Export Corporation Ltd.
 29. Hindustan Cables Ltd.
 30. Hindustan Fertilizer Corporation Ltd.
 31. HLL Lifecare Ltd.
 32. Hindustan Newsprints Ltd.
 33. Hindustan Organic Chemicals Ltd.
 34. Hindustan Shipyard Ltd.
 35. Hindustan Steelworks Construction Company Ltd.
 36. HMT (International) Ltd.
 37. HMT Machine Tools Ltd.
 38. HMT Watches Ltd.
 39. India Tourism Development Corporation Ltd.
 40. India Trade Promotion Organization
 41. Indian Drugs & Pharmaceuticals Ltd.
 42. Indian Railway Catering & Tourism Corporation Ltd.
 43. Indian Rare Earths Ltd.
 44. Indian Renewable Energy Development Agency Ltd.
 45. Instrumentation Ltd.
 46. M S T C Ltd.
 47. Madras Fertilizers Ltd.
 48. Mahanadi Coalfields Ltd.
 49. Mineral Exploration Corporation Ltd.
 50. Mishra Dhatu Nigam Ltd.
 51. National Handloom Development Corporation Ltd.
 52. National Jute Manufacturers Corporation Ltd.
 53. National Projects Construction Corporation Ltd.
 54. National Seeds Corporation Ltd.
 55. National Small Industries Corporation Ltd.
 56. Northern Coalfields Ltd.
 57. Numaligarh Refinery Ltd.
 58. Orissa Mineral Development Company Ltd.
 59. PEC Ltd.
 60. Pawan Hans Helicopters Ltd.

61. Projects & Development India Ltd.
62. Scooters India Ltd.
63. South Eastern Coalfields Ltd.
64. Tyre Corporation of India Ltd.
65. Uranium Corporation of India Ltd.
66. W A P C O S Ltd.
67. Western Coalfields Ltd.

Schedule - C

1. Andaman & Nicobar Islands Forest & Plantation Development Corporation Ltd.
2. Artificial Limbs Mfg. Corporation of India
3. BBJ Construction Ltd.
4. Bengal Chemicals & Pharmaceuticals Ltd.
5. BHEL Electric Machines Ltd.
6. Bharat Wagon & Engineering Company Ltd.
7. Bisra Stone Lime Company Ltd.
8. Broadcast Engineering Consultants India Ltd.
9. Central Cottage Industries Corporation of India Ltd.
10. Central Inland Water Transport Corporation Ltd.
11. Central Railside Warehouse Company Ltd.
12. Certification Engineers International Ltd.
13. Delhi Police Housing Corporation
14. Educational Consultants (India) Ltd.
15. FCI Aravali Gypsum & Minerals (India) Ltd.
16. Ferro Scrap Nigam Ltd.
17. Hindustan Antibiotics Ltd.
18. Hindustan Insecticides Ltd.
19. Hindustan Photo Films Manufacturing Company Ltd.
20. Hindustan Prefab Ltd.
21. Hindustan Salts Ltd.
22. HMT Bearings Ltd.
23. HMT Chinar Watches Ltd.
24. Hooghly Dock and Port Engineers Ltd.
25. HSCC (India) Ltd.

26. Hotel Corporation of India Ltd.
27. Jute Corporation of India Ltd.
28. Karnataka Antibiotics & Pharmaceuticals Ltd
29. Nagaland Pulp & Paper Company Ltd.
30. National Backward Classes Finance & Development Corporation.
31. National Film Development Corporation Ltd.
32. National Handicapped Finance & Development Corporation.
33. National Minorities Development & Finance Corporation
34. National Research Development Corporation of India.
35. National Safai Karamcharis Finance & Development Corporation.
36. National SC Finance & Development Corporation
37. National ST Finance & Development Corporation
38. NEPA Ltd.
39. North Eastern Handicrafts & Handloom Development Corporation Ltd.
40. North Eastern Regional Agricultural Marketing Corporation Ltd.
41. Rajasthan Electronics & Instruments Ltd.
42. Richardson & Cruddas (1972) Ltd.
43. STCL Ltd.
44. Triveni Structural Ltd.
45. Tungabhadra Steel Products Ltd.

Schedule - D

1. Hindustan Fluorocarbons Limited
2. Indian Medicines Pharmaceutical Corporation Ltd.
3. Orissa Drugs & Chemicals Ltd.
4. Rajasthan Drugs & Pharmaceuticals Ltd.

Guidelines for “Streamlining the mechanism for revival and restructuring of sick/ incipient sick and weak Central Public Sector Enterprises: General principles and mechanism of restructuring”

These guidelines are laid down for streamlining the mechanism for restructuring / revival or closure of sick or incipient sick CPSEs and replace the multiple process options available for the same purpose.

2. Multiple mechanisms for restructuring / revival of sick and incipient sick CPSEs exist. Sick industrial companies as defined in Sick Industrial Companies Act 1985 are referred to Board for Industrial Financial Reconstruction (BIFR), which suggest a restructuring plan and seek sacrifices & commitments from promoters and stake holders. Board for Reconstruction of Public Sector Enterprises (BRPSE) has been created to advise the government through the resolution No.16(25)2004-Fin. dated 6th December, 2004 to consider the restructuring or revival plan of CPSEs prepared by a CPSE itself under the guidance of its administrative ministry. The administrative ministry may, in the public interest, prepare a revival or restructuring plan for a CPSE which may involve comprehensive restructuring, disinvestment, closure etc. of the sick and incipient sick CPSE and take it directly to the competent authority for appropriate decision.
3. Primary responsibility for supervision of a CPSE for its efficient functioning lies in the administrative ministry and final view for restructuring and revival of sick and incipient sick CPSEs or taking appropriate measures for CPSEs showing early indications of weakness has to be taken by them with approval of the competent authority after inter - ministerial consultation and concurrence of the Ministry of Finance through PIB/ EFC mechanism as may be required. It is in the public interest to make this process, time bound, comprehensive, performance driven and efficient so that such decisions are taken and implemented in a time bound manner to minimise further losses. Hence there is a need to lay down broad principles and guidelines to be followed in such cases.
4. **Guidelines:**
 - 4.1 The Companies Act, 2013 Chapter XIX refers to Revival and Rehabilitation of Sick Companies and Chapter XX to Winding up of the Companies. The decision whether a company has become a sick company would be taken by the Tribunal (National Company Law Tribunal). The Administrative Ministries/ Departments have to keep a track of the debts of CPSEs and take advance action to avoid a situation where the CPSEs may be considered fit to be declared sick entity as per provisions of the Companies Act, 2013.
 - 4.2 The administrative ministry shall, at the end of the each financial year, analyse the performance of its CPSEs to classify them by a specific order in the following categories within 6 months of the

closure of the financial year or within one month from finalisation of Annual Accounts, whichever is earlier.

4.2.1 **Sick CPSEs:** A CPSE shall be considered sick if it meets one of the following criteria:

- a. If it is declared sick as per the provisions of the Companies Act, 2013.
- b. If its net worth is negative.

4.2.2 **Incipient sick CPSEs:** A CPSE would be considered incipient sick if it meets one of the following criteria:

- a. If its net worth is less than 50% of its paid-up capital in any financial year.
- b. If it had incurred losses consecutively for three years.

4.2.3 **Weak CPSEs:** A CPSE would be considered weak or sub optimally performing if it meets one of the following criteria:

- a. If its turnover or its operational profit has declined by more than an average of 10% in the last 3 years.
- b. If its profit before tax is less than income from the other sources.
- c. If its trade receivable and inventories are more than 50% of net worth of the CPSE.
- d. If the claims against the company, not acknowledged as debts, are more than its net worth.
- e. Any other criteria as may be prescribed to quantify early signs of weakness in the performance of the CPSEs by the government.

4.3 In all the reference to Net worth, it would have the same meaning as defined under Section 2 (57) of the Companies Act, 2013.

4.4 The administrative ministry will take the following action:

- (a) The administrative ministry will put weak CPSEs under “**observation and intensive review**” to arrest the early signs of weakness in such CPSEs. It may include nomination of independent expert members on the board, quarterly intensive review or special reviews for taking corrective business, operational and financial measures at the board level, fixing the responsibility for declining performance or non-performance or any other corrective step as may be appropriate and necessary by the administrative ministry or department.
- (b) The administrative ministry shall initiate the process for preparation of restructuring/ revival plan, which may include disinvestment or privatisation or closure options, for sick/ incipient sick CPSEs based on the classification as given above within 6 months from the closure of the financial year or within one month from finalisation of Annual Accounts, whichever is earlier.

- (c) Restructuring and revival plan for the sick and incipient sick CPSEs shall be prepared within nine months of the closure of the financial year.
- (d) External expert agency which has experience and expertise of the business environment, operational issues, technology option and financial viability of the sector in which such CPSE is functioning may be engaged by the government and shall function under the supervision of the administrative ministry for preparation of the future road map.

4.5 Restructuring and revival plan with the help of the agency and other experts, as may be required, shall be prepared by the administrative ministry/department and shall specifically include:

4.5.1 Perspective of Relevance and Functioning:

- a) Background and purpose of the formation of the CPSE.
- b) Economic and regulatory environment along with their impact on the growth of the company
- c) Liberalisation and its impact on its business operation
- d) Ability of the CPSE in adapting new business strategies, technology to regain and sustain its economic viability.
- e) Efforts and special interventions made for its revival or avert early sickness and its impact on the health of the CPSE.

4.5.2 Strategic Plan for Restructuring/Revival:

- (a) The concerned administrative ministry/department should clearly bring out the national and strategic interest served by the CPSEs in the light of the sectoral business environment, domestic as well as global.
- (b) Prevailing market need to be analysed for supply of goods or services through other providers in the private sector, domestic or from other countries, to bring out if there is a specific role of the CPSE in this segment to serve the national strategic or defence interests.
- (c) Keeping the business environment other relevant facts in mind, a CPSE may be categorised as **a high priority or priority** CPSE to meet the strategic interest of the country. For this purpose, a report of the 14th Finance Commission may also be referred to.
- (d) All other sick CPSEs which are not required to serve the strategic national/defence interests should be categorised as **non priority** CPSEs.

4.5.3 Business Plan for Restructuring/ Revival Plan:

A. High Priority or Priority CPSE.

- a) For high priority CPSEs, the business plan has to be made keeping in mind the strategic national interest and economically viable business opportunities.

- b) For strategic business model, requirement for Government policy convergence should be clearly spelt out to meet the economic viability of such enterprises. Also, viability gap funding, if required for such strategic operations have to be brought out.
- c) For high priority sector, the business plan may be drawn seeking specific financial and non financial support from the Government. It may include strategic disinvestments or joint ventures etc.

B. Non-priority CPSE.


- a) For CPSEs in the non-priority category, the business plan is to be made on business and economic viability model to attain self sufficiency in short or medium term.
- b) Business plan should be based on performance efficiency bench marks, viable scale of economic operation and road map for technology adoption/ upgradation to support business strategy for viability and sustainability over period of time.
- c) Business reorganisation through merger, demerger or closure of various business activities.
- d) It should support desirable market share to be sustainable in the medium and long term.
- e) All the presumptions underlying the business plan with respect to their business environment, economic viability and mechanism of funding should be market validated and credibly established.

4.5.4 Operational Restructuring:

- a) Keeping in mind the business plan, the required human resource needs are to be assessed and rationalised.
- b) It may be seen whether sectoral efficiency benchmarks as are existing globally/ domestically can be achieved by the CPSE in short or medium term through implementation of this plan in shortest period of time.
- c) Options for adopting requisite technology and up-gradation of the same as per requirement through various management options including JV, disinvestment or privatisation to be factored into the operational restructuring plan.
- d) The options of merger or de-merger of various operations in line with the proposed business plan to ensure continuous procurement of new technology and its up-gradation.

4.5.5 Financial Restructuring Plan:

- a) For high priority and priority CPSEs, a comprehensive financial restructuring plan should be drawn comprising various methods of financing with minimum and unavoidable viability gap funding in the strategic national/defence interest. Limited private investment through disinvestment within permissible limits may also be considered under financial plan.

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- b) In case of other (non priority) CPSEs financing plan should be based on economic viability of operations. Various options of leveraging private and/or institutional funding may be explored.
 - c) Details of projected profitability/cash flow for the next five years. These presumptions should be pragmatic and market validated.

4.6 Mechanism and Methodology to be followed for restructuring/ revival/closing of sick CPSEs

- (a) The concerned administrative ministry/ department would classify the CPSE as sick CPSE, incipient sick or with early indications of weakness as per para 4.2 above. The concerned Administrative Ministry/ Department will also inform DPE about the status of CPSE accordingly.
- (b) The concerned administrative ministry/ department will be responsible for formulating revival/ restructuring/ closure road map for sick CPSEs as per the principles outlined above. This would be done within three months from the issue of these guidelines in case of existing sick CPSEs and within nine months from the end of the financial year for a CPSE becoming sick subsequently.
- (c) Administrative Ministry/ Department may engage credible expert organisation for drawing of business, operational and financial restructuring plans. Such expert entity, if appointed, should function under the direct control of administrative ministry/ department so as to draw a professionally credible, implementable and realistic restructuring plan. Suitable mechanism for market validation should be incorporated during the Request for Proposal (RFP) stage of engagement of expert(s)/ expert organisation(s) and the market validation should be cross checked and confirmed by the administrative ministry/department as well.
- (d) Implementation plan with specified time line for various stages should be objective, quantifiable and supported with the monitoring mechanism.

Subject: Guidelines for time bound closure of Sick/ Loss Making Central Public Sector Enterprises (CPSEs) and disposal of Movable and Immovable assets.

The Government has been concerned about the inordinate delays and extended time taken for closing down Sick/ Loss Making Central Public Sector Enterprises (CPSEs) where decisions for closure were taken long time back. For such CPSEs, Government has been providing budgetary support straining its scarce resources. The Government would now like to ensure that the decisions taken by the competent authority are implemented by ensuring payment of financial compensation, discharging of liabilities, legal responsibilities, disposal/ monetisation of lands and moveable assets in a time bound manner.

To expeditiously complete the various processes and procedures for closure of CPSEs and lay down responsibilities of the administrative ministries/ departments/ CPSEs, including the support required to be extended by nodal departments/ organisations, guidelines for time bound closure of Sick/ Loss Making CPSEs and disposal of movable and immovable assets are laid down hereunder:

1. **Applicability:** These guidelines shall apply to all sick/ loss making CPSEs, where –
 - (i) approval for closure has been obtained by administrative Ministry/ Department from the CCEA/ Cabinet; or
 - (ii) in-principle approval for closure has been given by the CCEA/ Cabinet on the proposal/ recommendation of the administrative Ministry/ Department/ NITI Aayog.
 - (iii) the administrative Ministry/ Department has decided for the closure of the CPSE and the process for obtaining the approval of the competent authority is underway.

Note: These guidelines shall not apply to CPSEs under liquidation where liquidator has been appointed. However, the Administrative Ministry/ Department of such CPSE(s) may take necessary action in respect of various activities relating to closure of the CPSE and disposal of its movable/immovable assets in consultation with NITI Aayog and in accordance with the legal requirements of the liquidation process.

2. **Definitions**

- (i) **Zero Date** shall be the date of issue of minutes conveying the decision of Cabinet/ CCEA for closure. In respect of those CPSEs where approval for closure has already been obtained, the **zero date** shall be the date of issue of these guidelines.
- (ii) **Preparatory Date** shall be the date of issue of minutes conveying the decision of in-principle

approval of Cabinet/ CCEA for closure or date of decision for closure by the administrative Ministry/ Department, as the case may be.

(iii) CPSE: The definition of 'CPSE' given by DIPAM vide O.M. No. 5/2/2016-Policy dated 27.5.2016 regarding Capital Restructuring of Central Public Sector Enterprises (CPSEs) shall apply for the purpose of these guidelines, which is reproduced below:

“all corporate bodies where Government of India and/or Government controlled one or more body corporate have controlling interest.

- (i) Body corporate shall include body incorporated under the provisions of the Companies Act, 1956 or the Companies Act, 2013, or under any other Act as may be applicable except Limited Liability Partnership.
- (ii) Controlling interest means control over the composition of the Board of Directors; or exercise or control over more than one-half of the total share capital or able to exercise more than 50 per cent voting rights in the meeting of the members, Board of Directors or any other similar executive structure, e.g., Governing Body, Executive Committee, etc.

A body corporate in which Government of India and/ or CPSEs, including their subsidiaries, control the composition of the Board of Directors; or exercise or control more than one-half of the total share capital shall be deemed to be a body controlled by Government of India.”

Note: Banks and Insurance companies will not be covered in the above definition of CPSE for the purposes of these guidelines.

- (iv) **Land Management Agency (LMA)** is the CPSE, such as NBCC/EPIL, which is nominated by the administrative Ministry/ Department/ the Board of the CPSE under closure to manage, maintain and assist in disposal of land.
- (v) **Auctioning Agency (AA)** is the CPSE, such as MSTC, which is nominated by the administrative Ministry/ Department/ the Board of the CPSE under closure to dispose of movable and immovable assets through e-auction in a transparent manner.

3. Preparatory Activities before Decision on Closure

The CPSEs mentioned in para 1 (ii) and (iii) of the guidelines shall take advance preparatory action for such CPSEs which shall include the following:

- 3.1 **Estimation of Statutory dues:** The CPSE will estimate the statutory dues/ liabilities towards revenues, taxes, cesses and rates due to Central Government or State Government or to local authorities under the supervision of its administrative Ministry/ Department.

3.2 Estimation of dues of employees:

- (i) Preparation of VRS/ VSS package at 2007 notional pay scale, irrespective of the pay scale in which the CPSE is operating for release of the employees. Estimation of financial implications for such a package.
- (ii) Estimation of funds required for payment of wages/salaries and statutory dues in respect of the employees till the time the employees are released by way of opting for VRS/ VSS/ retrenched or settled.
- (iii) Total Estimated budgetary support for (i) and (ii) above with the phasing of requirement of funds and time lines.

3.3 Estimation of liabilities towards Secured Creditors etc.

- (i) Secured creditors are those in whose favour a charge has been created on the assets of the Company and filed/ registered with the Registrar of Companies.
- (ii) Administrative Ministry/ Department will negotiate with the secured creditors to settle their dues at the minimum value as One Time Settlement (OTS). Administrative Ministry/Department may critically examine the best possible settlement including schedule of payment, waiver of interest and penalties with secured creditors so that it requires minimum budgetary support.
- (iii) Processing of offers from secured creditors and statutory dues for settling them at minimum value and estimation of the total amount so determined to be paid back to the secured creditors.
- (iv) Modalities of the settlement of liabilities covered by the Government guarantees will be settled in consultation with the Ministry of Finance.

3.4 Estimation of dues payable to the Central Government: The dues payable to the Central Government availed in the form of loans extended from time to time, segregated into the principal outstanding amount and the interest thereon shall be worked out.

3.5 Estimation of other liabilities: Administrative Ministry/ Department will get the estimates of all other liabilities required to be paid including unsecured creditors.

3.6 Estimation of Movable assets:

- (i) Updating details of movable assets including plant(s) & machineries. The inventory of all moveable assets should be got verified/ certified from an independent third party e.g. a firm of Chartered Accountants;
- (ii) Book Value of the movable assets as well as the current estimated market value and estimation of realisable value from their sale by the CPSE/ administrative Ministry/ Department.

- (iii) Where movable assets are on lease negotiation with the lessor whether he would take it back at market price or would like it to be auctioned.
- (iv) Ascertaining whether movable assets are to be utilised by holding CPSE, if any or by the administrative Ministry/ Department.
- (v) Ascertaining whether factory/ office building (superstructure) is required to be disposed off alongwith movable assets or alongwith land.
- (vi) Ascertaining of market value of brand name, goodwill, trademarks, etc. of the CPSE under closure.

3.7 Estimation of receivables including trade receivables, securities, loans and advances, etc.

3.8 Estimation of Budgetary Support Required for closure

- (i) Total Estimated funds required for financing the closure of the Company which would include liabilities at para 3.1 to 3.5 above, along with time-lines/ phasing of release of funds from the Central Government.
- (ii) CPSE's own resources, including amount to be realised from sale of assets, which may be available for settlement of liabilities during the course of closure shall be taken into account for working out the requirement for budgetary support, with phasing of funds and time lines.

3.9 Immovable assets including buildings:

- (i) Updating of land records with geo-mapping and details such as title deed, lease hold land, free hold land, conditions of lease, remaining period of lease, current land use, FAR and other rights relating to use of land, whether land compensation (partly/fully) has been paid by the CPSEs/ Central Government at the time of acquisition, amount of compensation paid, status of possession of land, encroachments, if any, etc.
- (ii) Obtaining the concurrence/ agreement of the State Government in respect of utilisation/ settlement of lease hold land of the CPSE intended to be closed for further use for similar or identical activities as per local laws governing land use by other Central Government/ State Government/ Departments or PSEs/ organisations for public purpose/ expansion of economic activities, etc, if options possible.
- (iii) Valuation of land at the prevalent circle rates or current acquisition cost (excluding the R&R expenses).
- (iv) Ascertaining whether immovable assets are to be utilised by holding CPSE, if any or by the administrative Ministry/ Department failing which appointment of Land Management Agency (LMA) and sharing information with it.

4. CPSEs under Board for Industrial and Financial Reconstruction (BIFR)

NITI Aayog shall advise the administrative Ministry/ Department in respect of the CPSEs which are sick and are registered under BIFR or proceedings are pending before the AIIFR regarding the two alternative courses of action, namely, liquidation under BIFR or taking the CPSE out of BIFR through appropriate financial restructuring, after analysing the assets and liabilities of the company. If the NITI Aayog suggests taking the CPSE out of BIFR purview, the concerned administrative Ministry/ Department shall submit the appropriate financial restructuring/ support proposal to the competent authority to the extent required to make its net-worth positive so that the sick CPSE is taken out of the purview of BIFR.

5. Responsibility of the Board of Directors of CPSEs for Closure

In respect of CPSEs where decision for closure has been taken or in-principle approval for closure has been given by Cabinet/ CCEA, the Directors of the CPSE should provide all support and material required in formulating the closure proposal and its implementation, failing which the administrative Ministry/ Department shall take a view on removing the Functional Directors including the CMD and give additional charge of the CMD to the Joint Secretary concerned and charge of other functional Directors to other senior officers in the administrative Ministry/ Department. This fact of removal of the Functional Directors including the CMD will be communicated to the PESB.

6. Role of the administrative Ministry after in-principle Decision for Closure

In respect of the CPSEs mentioned in para 1 (ii) and (iii) of the guidelines, the concerned administrative Ministry/ Department will be responsible for formulating the detailed proposal for closure of the CPSE and place the same before the Cabinet/ CCEA within a period of three months. It shall be ensured by the administrative Ministry/ Department that all relevant details along with their financial implications, details of liabilities, movable and immovable assets to be offered for sale are covered in the approval para of the proposal for closure of the CPSE.

7. Role of the Administrative Ministry/ Department after Decision for Closure

After obtaining decision of the competent authority on closure of the CPSE, the administrative Ministry/ Department shall take up the following processes and activities:-

7.1 Request for Budgetary Support: Request budgetary support from the Department of Expenditure, Ministry of Finance, within 15 days from the Zero date. For this, a mechanism for time bound release of funds required to implement all aspects of closure of CPSEs may be put in place by the Department of Expenditure, Ministry of Finance so that funds are released within one month of receiving the request, except where Parliamentary approval for Supplementary Demand for Grants is required.

7.2 Settlement of Liabilities:

(i) Instruct the CPSE for taking necessary action for bringing the CPSE out of BIFR/AIIFR, if required;

- (ii) Instruct the CPSE for payment of statutory dues/ liabilities towards revenues, taxes, cesses and rates due to Central Government or State Government or to the local authorities;
- (iii) Instruct the CPSE to give a general notice within 05 days from the Zero date to employees and other stakeholders intimating about intended closure. Intimate/ apply to the Ministry of Labour and Employment in respect of closure, as may be applicable under Industrial Disputes Act, 1947. Implement VRS package with a timeframe/ final cut-off date and settle wages/ salaries of employees and statutory dues within 3 months from the Zero Date or within such extended time required due to the need to seek Parliamentary approval for additional funds.
- (iv) Take action for completing the legal formalities for retrenchment of employees not opting for VRS within the stipulated period of time by payment of compensation as per law.
- (v) Settlement of secured creditors. The settlement should be completed within 3 months from the Zero Date unless there are financing constraints beyond the control of the administrative Ministry/ Department.
- (vi) Settlement of other liabilities should be the next priority.

7.3 Disposal of Assets

In case the CPSE is a subsidiary of another CPSE and if the assets are required by such holding company, the same may be transferred to the holding company at book value, in consultation with the State Government, wherever so required within 30 days from zero date. Similarly, if assets are required by the administrative Ministry/ Department for its own use, the same may be transferred to it at book value within 30 days from zero date. In respect of remaining assets, guidelines as mentioned in subsequent paras, i.e., 8, 9 and 10 shall apply.

8. Disposal of Movable Assets

- (i) The CPSE shall carry out the processes of disposal of movable assets including plant & machinery in a transparent manner immediately after 'Preparatory Date' under the supervision of Administrative Ministry/ Department.
- (ii) The leasehold assets may be transferred to the lessor at his option.
- (iii) The CPSE in consultation with the administrative ministry/ department, if necessarily required, may dispose of factory building structure along with disposal of movable assets.
- (iv) If there is a need for auction of movable assets including brand name, goodwill, trade marks, etc., Auctioning Agency shall be nominated by the Administrative Ministry/ Department/ CPSE for completing the job within three months from the zero date.
- (v) If the CPSE is not able to dispose off movable assets within the stipulated time-frame, it should be brought to notice of the Administrative Ministry/ Department and Niti Aayog by the CPSE.

Thereafter, the Administrative Ministry/ Department shall redress the matter within 15 days and shall take a decision on settlement of the disposal of movable assets.

9. Disposal of Immovable Assets: Land & Building

Considering that land of the CPSE may be lease-hold or free-hold or a conditional Land Grant with restricted rights of occupation and use, the CPSE shall carry out the following activities after examining issues mentioned in para 3.8 above, under close supervision and guidance of the administrative Ministry/ Department and in consultation with State Government(s)/ lessor, wherever required.

9.1 Disposal of Lease Hold Land

- (i) **Leasehold land with conditions:** Lease hold land with specific condition that it will be given back to the State in case the CPSE ceases to exist or non-utilisation of land for the purpose for which it had been allotted etc. or where there is no provision of sale in the lease agreement, such land may be returned to the State Government on receipt of financial compensation determined as per the terms and conditions of the Lease or Land Grant Agreement. In such a case, financial compensation, if any, paid by the CPSE/ Central government at the time of acquisition or the higher amount shall be re-paid/ paid by the State government while taking back the land.
- (ii) **Other Lease hold land:** In case the terms and conditions of the Lease do not contain any restrictive conditions regarding the use/ disposal of such land, and/or do not confer any preemptive rights in favour of the State/lessor in the event of closure of the CPSE, the subject land may be treated akin to free-hold land and dealt with in the same manner as prescribed for the free-hold land, subject to any specific terms and conditions of the Lease.

9.2 Disposal of Free Hold Land: Free hold land is generally allotted to the CPSE by the State government after acquisition or purchased by CPSE directly. There may or may not be conditions of land use attached to such land. In case of freehold land with conditions of land use attached, best possible use of such land may be worked out in the light of the original land-use of the land or the current land-use of the area as per the master plan of the locality, whichever is better. The following process shall be followed for settlement of the free-hold land of the CPSEs:

- (i) CPSE/ administrative Ministry/ Department shall first invite the offers for purchase of land through LMA and determine the demand for such land. Land shall be allotted, subject to the approval of the Cabinet/ CCEA as required, in order of priority mentioned below at the current circle rates applicable at the time of offer and/ or the prevalent acquisition cost (excluding the R & R Costs). In case any the organisation is willing to take the entire land (without any division thereof), the same shall be given priority over others.

Order of priority:

- (a) Central Government Department(s)
 - (b) Central Government Bodies/CPSEs
 - (c) State Departments
 - (d) State Government Bodies/ State PSEs/ State Authorities
- (ii) In case, above category of organisations are interested in taking part of the land, it would require preparation of a Development Plan of the area of land, plotting and provision of internal infrastructure works/ facilities, which shall be prepared by LMA and presented to the CPSE/ administrative Ministry/ Department. The administrative Ministry/ Department will consider the land development plan, approve it including the scheme of financing and may entrust LMA or any other suitable agency(ies) to execute it to ensure allotment/ settlement of such divided land parcels as per the priority given in the guidelines.
- (iii) In case no offer is received within 6 months from zero date, the disposal of immovable assets is to be done in a transparent process through the auctioning agency to any entity with the approval of the competent authority. Land would be sold as per the approved land use, FAR and other applicable conditions. However, before the bid is finalised, if any offer is received from agencies mentioned in para 9.2(i), the same will be given overriding priority.
- (iv) In case of non-feasibility of above options, land/ property may be utilised for public purposes including affordable housing, any flagship programme of Government of India as may be permissible in consultation with Niti Aayog and approval of the Cabinet/ CCEA, as required.
- (v) Wherever the Administrative Ministry/ Department faces any difficulty in disposal of land, it shall consult the NITI Aayog and take action as per the advice tendered in this behalf.

9.3 Negotiations with the State Government

The Secretary of the Department/ Ministry concerned shall lead the interactions with the State Government regarding the utilisation/ alternative utilisation of land, return of land to the State Government and conclude these deliberations within a period of two months from Zero Date.

10. Role of Land Management Agency

The administrative Ministry/ Department and the Board of the CPSE under closure may entrust the immovable assets as per para 3.8 to the nominated Land Management Agency (LMA), which shall:

- (i) Manage, maintain and, if required, engage security agency for the watch and ward of the assets on contract basis for the CPSE against payment. The LMA shall ensure that the land is not encroached, movable assets are not stolen and premises is secured. The LMA may engage a few key employees dealing with assets of the CPSE on contract basis to obtain, manage,

- maintain and update the records of lands and other immovable assets of the CPSEs on behalf of the CPSE.
- (ii) Collect and validate the information regarding the land, e.g. title deed, lease hold or free hold, conditions of lease, remaining period of lease, whether land compensation was paid by the CPSE/ Central Government at the time of acquisition, status of possession of land, encroachment, if any, and its verification on the ground.
 - (iii) Examine the current land use, FAR and the land use as per the local laws applicable in that area to determine the suitability of the land for industrial, manufacturing or some other purposes.
 - (iv) Carry out valuation of land on the applicable circle rates, acquisition cost (excluding the R&R expenses) and any other information necessary for use/ valuation of land/ building including limitations arising out of nature of title, master plan and State Government restrictions, if any.
 - (v) The Land Management Agency shall compile all such information and publish the same on its website (Land management portal) at the earliest, but not later than three months from preparatory date, in the public domain for the information of all parties that may be interested in taking such land.
 - (vi) LMA shall also invite Expressions of Interest (EoI) from all Central/ State government(s)/ their agencies and others interested in taking the entire or part of the land.
 - (vii) If the LMA comes to the conclusion from the EoIs received that disposal of immovable assets as per priorities set out in the Guidelines would require allotment of the asset or a part thereof, it should bring the matter to the notice of the Administrative Ministry/ Department, which shall make the allotment with the approval of the Cabinet/CCEA, as required. The LMA shall suggest the CPSE/ Administrative Ministry/ Department a plan of allotment/ settlement of the whole land or a part thereof.
 - (viii) If the LMA comes to a conclusion that disposal of land would require division of land into parcels and development of such land parcels to facilitate their monetisation, the LMA shall prepare and place before the Administrative Ministry/ Department a Land Development Plan along with its scheme of financing for consideration and further approval.
 - (ix) The LMA shall submit monthly report updating the status of disposal of immovable property to the administrative Ministry/ Department as per their approvals, with a copy to the NITI Aayog.
 - (x) The LMA will be entitled to land management fee which would be 0.5% of the value realized from disposal of land, subject to a maximum of Rupees One crore.
 - (xi) In cases where the LMA is required to support watch and ward of the asset under disposal, such expenditure shall be reimbursed by the administrative Ministry/Department on the basis of actuals every month. LMA would obtain prior approval of the administrative Ministry/ Department before incurring any expenditure which require reimbursement.

- (xii) LMA may be required to engage the State Government Public Sector Enterprises on appropriate terms and conditions for discharge of some of its responsibilities.

11. Role of Auctioning Agency

The auctioning agency shall dispose the assets of the Company by e-auction through a transparent process. The Auctioning Agency would be paid 1% of amount realized from auction subject to maximum of ₹ 25.00 lakh per auction.

12. Role of Niti Aayog

- (i) For all cases of closure, NITI Aayog shall monitor the implementation of the decision along the prescribed timelines.
- (ii) There shall be an Oversight Committee in place in NITI Aayog. This Committee shall carry out the work of monitoring the implementation of decisions of the Government in this regard.
- (iii) The administrative Ministry/ Department may approach NITI Aayog for resolution of any problem/dispute arising out of sale of immovable assets of CPSE(s) approved for closure. NITI Aayog will develop a framework in place for resolution of such issues.

13. Role of Ministry of Finance

- (i) Ministry of Finance may examine, either through professional help or otherwise, the request for budgetary support at the stage of seeking in-principle or final approval of the competent authority for closure of CPSE.
- (ii) Once closure proposal is approved Ministry of Finance would release funds as per the prescribed time-lines.

14. Proceeds from sale of assets after making payment for all liabilities would be deposited in Consolidated Fund of India.

15. Application to the RoC for Removal of the name of the Company from the Register of Companies

Immediately upon settlement and discharge of all the liabilities, the Board of Directors of the CPSE shall take necessary steps to apply to the Registrar of Companies (RoC) for removal of the name of the Company from the Register of Companies under Section 560 of the Companies Act, 1956 (the corresponding provision under Section 248 of the Companies Act, 2013 has not yet been notified). The Board of Directors may also pass a resolution at this stage to transfer all the residual assets of the Company to another entity or the Central Government as considered necessary.

16. Time-Lines

For ease of use, a matrix of timelines of various steps for closure of the CPSE as per these Guidelines is annexed.

Further, in respect of CPSEs, where the process of closure has already started with the approval of the competent authority and is underway, a shorter timeline may be re-worked out by the administrative Ministry/ Department in consultation with NITI Aayog as per these guidelines.

Time-lines of activities for closure of CPSEs

Sr. No.	Milestones/ Activities	Time-Lines	Para No. of Guidelines
A. Preparatory date: Date of issue of minutes of in-principle approval for closure of sick/ loss-making CPSE by the Cabinet/ CCEA or date of decision by the administrative Ministry for closure. This is shown as P_o .			
1.	Estimation of Statutory dues	$P_o + 2$ months	3.1
	Estimation of dues of employees		3.2
	Estimation of liabilities towards Secured Creditors etc.		3.3
	Estimation of dues payable to Central Government		3.4
	Estimation of other liabilities		3.5
	Estimation of Movable assets		3.6
	Estimation of receivables		3.7
	Estimation of Budgetary Support Required		3.8
	Consultation with NITI Aayog and decision on taking out of BIFR, if applicable		4
2.	All preparatory actions in respect of immovable assets, e.g. updating of land records with geo-mapping and other formalities, Obtaining State Governments commitments, Valuation etc.	$P_o + 3$ months	3.9
	Detailed Proposal for closure to be placed before the Cabinet/ CCEA		6
	Placing of information relating to immovable assets/ land on the 'Land Management Portal web site'		10 (v)
B. Zero date: Date of issue of minutes of approval for closure of sick/ loss-making CPSE by the Cabinet/ CCEA. In respect of CPSEs where Cabinet/ CCEA had already approved closure of CPSE, zero date would be the date of the guidelines. This is shown as T_o .			
3.	General notice to employees and other stakeholders intimating about intended closure	$T_o + 5$ days	7.2.iii
	Intimate/ apply to the Ministry of Labour and Employment in respect of closure		
4.	Request for budgetary support from Department of Expenditure.	$T_o + 15$ days	7.1
	Action for taking CPSE out of BIFR		7.2.(i)
5.	Transfer of assets to Holding company/ administrative Ministry/ Department	$T_o + 1$ months	7.3

Sr. No.	Milestones/ Activities	Time-Lines	Para No. of Guidelines
6.	Settlement of statutory dues/ liabilities towards revenues, taxes etc.	T _o + 2 months	7.2.(ii)
	Payment of secured creditors as one time settlement		7.2.(v)
	Negotiation with State Government		9.3
7.	Settlement of wages/salaries of employees and statutory dues	T _o + 3 months	7.2 (iii)
	Disposal of movable assets		8
	Return of leasehold land to State Government with conditions of non-sale		9.1 (i)
8.	Retrenchment of employees not opting for VRS	T _o + 4 months	7.2.(iv)
9.	Sale of leasehold/ freehold land to Central Government departments, Central Government bodies/ CPSEs, State Government departments, State Government bodies/ PSEs.	T _o + 6 months	9.2 (i), (ii)
10.	Auction of land to any entity after exhausting option at sl no. 9	T _o + 12 months	9.2 (iii)
11.	Application to Registrar of Companies for removal of name of CPSE	T _o + 12 months	15
12.	Utilisation of land for public purposes including affordable housing and other flagship programme of Government of India	T _o + 15 months	9.2 (iv)

Note: The above timelines would be suitably modified in individual cases requiring Parliamentary approval.



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