ANNUAL REPORT 2005-2006

सत्यमेव जयते

Ministry of Heavy Industries and Public Enterprises

Government of India

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C O N T E N T S

Department of Heavy Industry







Department of Public Enterprises







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Chapter - 1

The Ministry of Heavy Industries & Public Enterprises

Introduction

THE MINISTRY

1.1 The Ministry of Heavy Industries and Public Enterprises focuses on promoting the development and growth of capital goods and engineering industry in the country besides framing policy guidelines for Central Public Sector Enterprises (PSEs) and administratively dealing with 48 PSEs. The Ministry comprises the Department of Heavy Industry and the Department of Public Enterprises.

DEPARTMENT OF HEAVY INDUSTRY (DHI)

1.2 The Department of Heavy Industry is concerned with the development of the heavy engineering industry, machine tool industry, heavy electrical industry, industrial machinery and auto-industry and administers 48 Central PSEs. The industries covered by this Department meet the requirements of equipment for basic industries such as steel, non-ferrous metals, fertilizers, refineries, petrochemicals, shipping, paper, cement, sugar, etc. The Department is responsible for development of a wide range of intermediate engineering products like castings, forgings, diesel engines, industrial gears and gear boxes. They cater to the need of goods and services for almost all sectors of the economy, including power, rail, road transport etc. The Department also administers a national level Laboratory i.e. the Fluid Control Research Institute at Palakkad which caters to the needs of the flow industry for standardization of calibration.

1.3 The Department consults various Industry Associations and evolves plans for the growth of industry. The Department also assists industry through policy initiatives, resolution of problems relating to tariffs and trade, promotion of technological collaboration and up-gradation, research & development, etc.

1.4 The Department of Heavy Industry is headed by a Secretary to the Government of India who is supported by an Economic Adviser and an Integrated Finance Wing. The organizational chart of the Department is given at Annexure-I.

1.5 The Department closely interacts with PSEs under its administrative control to monitor their performance. The Department also serves as an interface between these enterprises and other agencies of the Government and helps establish

long term linkages to improve their order book and ensure timely supplies to core sector customers.

PUBLIC SECTOR ENTERPRISES UNDER THE DEPARTMENT

1.6 The PSEs under the Department are engaged in manufacture of engineering/capital goods, consultancy and contracting activities. The total investment (Gross Block) in 48 Public Sector Enterprises under the Department was about Rs. 8826 crores as on 31st March, 2005 (Annexure–II). This computation of investment does not include the fourteen PSEs which have been closed or whose operations have been discontinued. The enterprises under the Department produce a wide range of products ranging from machine tools, industrial machinery, boilers, gas/steam/hydroturbines, turbo generators, railway traction equipments, pressure vessels, AC locomotives, prime movers, electrical equipment and agricultural tractors, consumer products such as watches, paper, tyres and salt. The Department is also concerned with the affairs of Maruti Udyog Ltd., a joint sector company in the auto sector.

1.7 The Department undertakes and encourages restructuring of Public Sector Enterprises under its administrative control in line with the overall Public Sector Policy of the Government. As per the Public Sector policy outlined in the National Common Minimum Programme (NCMP), generally profit making companies will not be privatized. Efforts will be made to modernize and restructure sick PSEs and chronically loss making companies will either be sold off or closed after all employees are paid their legitimate dues and compensation. With a view to implement this mandate of the NCMP, a Board for Reconstruction of Public Sector Enterprises (BRPSE) has been established. BRPSE would address the entire gamut of issues pertaining to revival/restructuring of public sector enterprises.

1.8 The Department provides financial support to the PSEs in consultation with the Ministry of Finance and Planning Commission for meeting their investment needs and implementation of restructuring plans of sick /loss making PSEs sanctioned by the Government/BIFR. The Department also provides financial support to the PSEs to implement Voluntary Retirement Scheme approved by the Government for undertaking manpower rationalization in the PSEs, where necessary to improve viability.

CITIZENS CHARTER

1.9 Public Sector Enterprises function under the Indian Companies Act, 1956 and the guidelines laid down by the Department of Public Enterprises. The Department of Heavy Industry is committed to the goal of effective and responsive administration. Following steps have been taken in this direction:

(i) As part of the effort to streamline the system of redressal of public grievances and staff grievances, a Joint Secretary and a Director in this Department are functioning as Joint Secretary (Public Grievances) and Director (Staff Grievances) in order to ensure that the grievances are redressed in time.

(ii) In an effort to computerize various matters in the Department, a Joint Secretary has been designated as IT Manager who is also responsible for updating the websites of the Department periodically.

(iii) A Nodal Officer of the rank of Director has been designated in the Department for the redressal of grievances of Pensioners.

(iv) For the purpose of settlement of grievances of the staff (disputes in Lok Adalat) a Nodal Officer of the rank of Director has been designated in the

Department in respect of officers/staff members working in the Department.

(v) The Annual Reports of the Department (both in English and Hindi) and other important information including initiatives and new policies are made available on the web-site of the Department, www.dhi.nic.in

(vi) An officer of the rank of Director in the Department has been nominated as liaison officer for the work relating to redressal of grievances of SCs/STs in the Department and PSEs under its control.

(vii) In order to create adequate awareness regarding human rights especially of female employees, Department of Heavy Industry, in accordance with the directions issued by the Government for the preservation and enforcement of rights to gender equality and justice to working women employees, has constituted a Complaint Committee for redressal of complaints related to sexual harassment of women.

(viii) Department of Heavy Industry encourages women employees to freely participate in all activities like seminars, competitions, training, meetings etc. to ensure their integration into the mainstream workforce.

DEPARTMENT OF PUBLIC ENTERPRISES (DPE)

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

1.2 The Department of Public Enterprises acts as a nodal agency for all Central Public Sector Enterprises (CPSEs) and assists in policy formulation pertaining to the role of PSEs in the economy as also in laying down policy guidelines on performance improvement and evaluation, financial accounting, personnel management and in related areas for the PSEs. It also collects, evaluates and maintains information on several areas in respect of PSEs. DPE also provides an interface between the administrative Ministries and the PSEs.

2. MANDATE OF DPE

2.1 As per Allocation of Business Rules of the Govt., the following subjects have been allotted to the Department of Public Enterprises:-

- Bureau of Public Enterprises including Industrial Management Pool.
- Coordination of matters of general policy of non-financial nature affecting all public sector industrial and commercial undertakings.
- Matters relating to Memorandum of Understanding mechanism of improving the performance of public sector undertakings.
- Matters relating to Permanent Machinery of Arbitration for the Public Sector Undertakings.
- Matters relating to Counselling, Retraining and Redeployment of rationalized employees of CPSEs.

A Board for Reconstruction of Public Sector Enterprises (BRPSE) has been set up under the administrative charge of the Department of Public Enterprises.

3. ROLE OF DPE

The Department of Public Enterprises acts as the nodal agency for all Central PSEs and assists in the formulation of policy pertaining to performance evaluation, autonomy and financial delegation, personnel management and related areas concerning CPSEs. DPE also collects, evaluates and maintains information on key areas in respect of CPSEs. In fulfilling its role, it coordinates with other Ministries, CPSEs and concerned organizations.

The important tasks of the Department are listed below:

- The work being done by Bureau of Public Enterprises including matters relating to the officers of industrial management pool transferred to Department of Public Enterprises.
- To bring out an Annual Public Enterprises Survey for submission to Parliament.
- Wage policy.
- Board structure, categorization, appointment of non-official Directors and training of executives of CPSEs.
- Review of Miniratna and Navratna CPSEs
- Matters relating to reservation of posts in CPSEs.
- Matters relating to International Centre for Promotion of Enterprises (ICPE), Slovenia.
- Issuance of Presidential directives and guidelines to CPSEs.
- Delegation of powers to Board of Directors of CPSEs.
- Signing of Memorandum of Understanding between the CPSEs and the administrative Ministries/ Departments.
- Matters relating to Purchase Preference Policy.
- Permanent Machinery of Arbitration for resolving commercial disputes (except relating to taxation and railways) between CPSEs interse as well as between CPSEs and Central Government Ministries/ Departments.
- Matters relating to Voluntary Retirement Scheme (VRS)
- Matters relating to Counselling, Retraining and Redeployment of rationalized employees of CPSEs.
- Board for Restructuring of Public Sector Enterprises (BRPSE)

4. ORGANIZATIONAL STRUCTURE

4.1 DPE is under the charge of the Minister for Heavy Industries and Public Enterprises. The Department is headed by a Secretary, assisted by an establishment with an overall sanctioned strength of 128 officers/personnel.

4.2 A Board for Reconstruction of Public Sector Enterprises has been set up to advise the Government on ways and means for strengthening Public Sector Enterprises in general and making them more autonomous and professional; to consider restructuring of CPSEs and suggest ways and means for funding such restructuring schemes; to examine the revival/restructuring proposals of sick/loss making CPSEs for their turn around and to make suitable recommendations related thereto; to advise the Government on disinvestment/ closure/sale of chronically loss making companies which can not be revived and advise the Government about sources of fund for the payment of all legitimate dues and compensation to workers and other costs of closure; to monitor incipient sickness in CPSEs and advise the Government on such other matters as may be assigned to it. The Board consists of a part-time Chairman and three non-official part time members. Secretary (Expenditure), Secretary (Disinvestment) are official members with Secretary (PE) as Member Secretary. Chairman, PESB, Chairman, SCOPE and CMD, ONGC are the permanent invitees. Secretary of the concerned administrative Ministry is the special invitee.

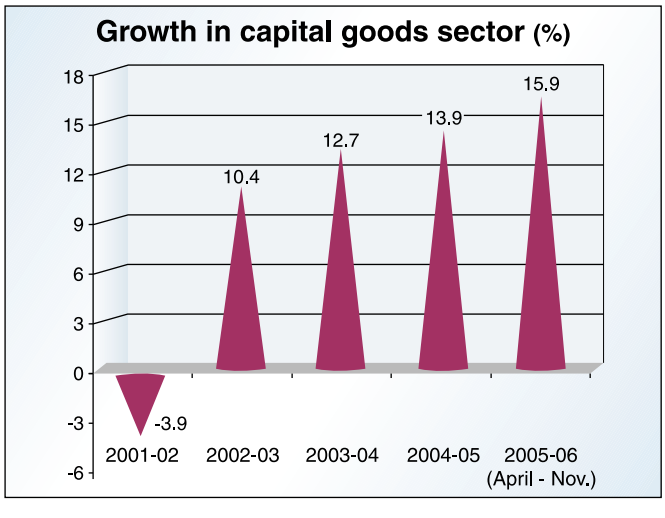
Organogram of DPE is at Annexure-I.

An Overview of Performance of Industrial Sectors and PSEs under the Department of Heavy Industry

2.1 Performance of Industry

The healthy growth in the industrial sector achieved during 2004-05 continued during the current year as well with overall industrial growth (measured in terms of the Index of Industrial Production) taking place at the rate of 8.3 per cent during the April–Nov. (2005-06) as compared to 8.6 percent achieved during the comparable period last year.

Capital goods sector, which posted a robust growth of 13.9 per cent in 2004-05, has maintained its growth momentum during the current year as well. According to the Index of Industrial Production, capital goods sector posted a growth of 15.9 per cent during April–Nov. 2005-06 as compared to growth during the corresponding period of the previous year.



2.2 The Department of Heavy Industry deals with the following 19 industrial sub-sectors:

(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 Locomotives
(xvi) Sugar Machinery
(xvii) Turbines & Generator sets
(xviii) Transformers
(xix) Textile Machinery

2.3 The Growth trends during April–October 2005-06 as compared to April–October

2004-05 are given in the table below:

	Sector-wise Growth Rates (in %)			
	Weight	2004-05 (Apr–Mar)	2004-05 (Apr–Nov)	2005-06 (Apr–Nov)
General	100.0	8.4	8.6	8.3
Mining & Quarrying	10.5	4.4	5.1	0.5
Manufacturing	79.3	9.2	9.1	9.4
Electricity	10.2	5.2	6.7	4.9
Use-Based Classification				
General	100.0	8.4	8.7	8.3
Basic Goods	35.6	5.5	5.9	6.0
Capital Goods	9.3	13.9	12.9	15.9
Intermediate Goods	26.5	6.1	7.3	3.0
Consumer Goods	28.7	11.7	11.2	12.9
(i) durables	5.4	14.4	15.8	13.4
(ii) non-durables	23.3	10.8	9.7	12.8

Source: Central Statistical Orgn.

2.4 Production and growth rates of some of the industries being dealt within the Department of Heavy Industry for the period April–November 2005-06 as compared to April–November 2004-05 are given below:

Industry	Unit	Production		Growth Rate (%)
		Apr–Nov. 2004-05	Apr–Nov. 2005-06	
Industrial Machinery	Rs lakhs	150451.29	196794.24	30.8
Machine Tools	Rs.lakhs	155510.32	172505.58	10.9
Boilers	Rs lakhs	121305.78	209649.37	72.8
Turbines (Steam/Hydro)	Rs lakhs	25980.53	44710.64	72.1
Electric generators	Rs lakhs	76847.53	47257.26	- 38.5
Power distribution transformers	Mill. KVA	31.61	41.21	30.4
Telecommunication cables	Mill. Mtr.	11982.54	8910.96	-25.6
Commercial vehicles	Numbers	214438.00	247270.00	15.3
Passenger cars	Numbers	631548.00	667653.00	5.7

Source : Department of IPP

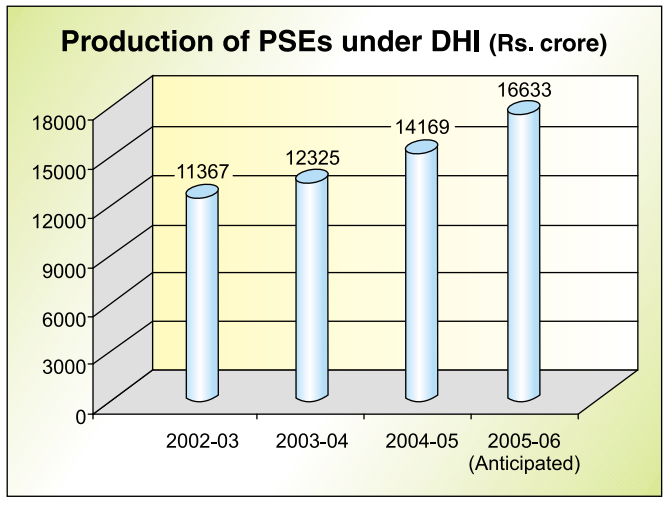
2.5 PSEs under the Department of Heavy Industry

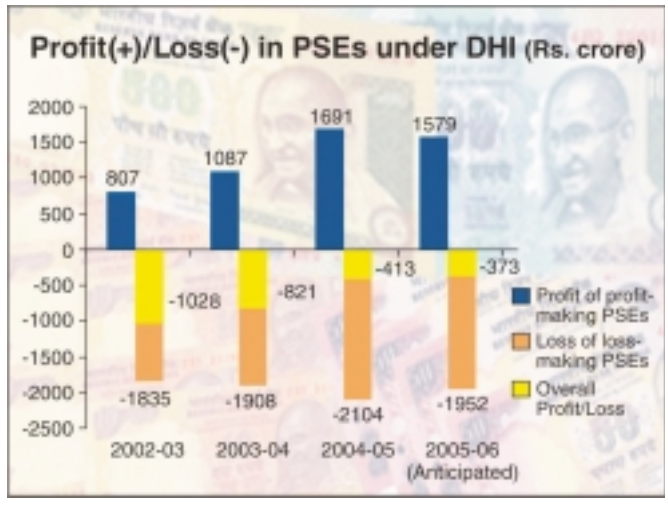
2.5.1 The PSEs under the Department are engaged in manufacturing, consultancy and contracting activities. Out of 48 PSEs, 14 PSEs have either been closed or are not in operation thus leaving the Department with 34 PSEs. During the year 2004-05, 13 PSEs have made profits and remaining 21 have made losses. The aggregate performance in 2004-05 and 2005-06 (anticipated) is as under:

(Rs. crore)

	2004-05	2005-06 (Anticapted)
Production	14169	16633
Profit(+)/Loss(-)	(-)413	(-)373

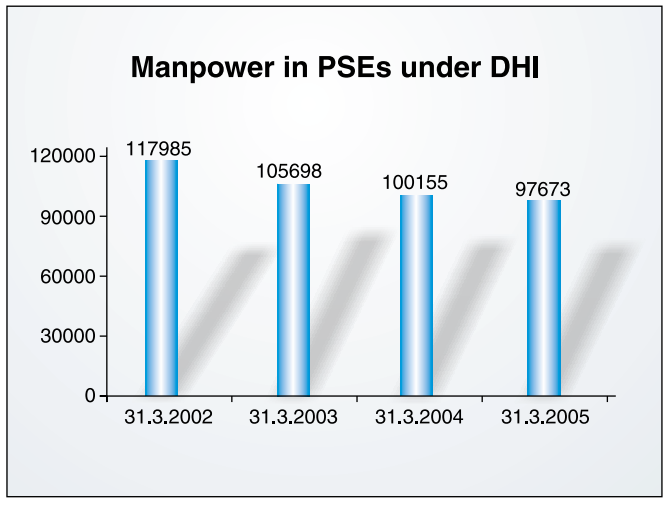
(PSE-wise details are available at Annexure. IV & V respectively.)





2.5.2 The loss is attributed to the shortfall in production in some major enterprises owing to poor order book, shortage of working capital, surplus manpower and obsolete plant and machinery, besides increase in the cost of inputs etc.

2.5.3 Several of these loss making PSEs 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 is given at Annexure–VI.

2.5.4 The order book in most of the PSEs has been gradually improving especially in case of BHEL whose order book has substantially improved from a level of Rs. 10,000 - Rs. 15,000 crore to about Rs. 30,000 crore. Details of order book position in individual PSEs is given at Annexure-VII.

2.5.5 There are only a few companies which have been able to export their products. Major exporting PSEs are BHEL and HMT. Details of export performance of PSEs under DHI are given at Annexure-VIII.

2.5.6 Government's investment in terms of equity in these PSEs is Rs. 3912 crore. Many of the PSEs have been making losses for the last few years eroding their net worth substantially. Details of Government equity, net worth and accumulated loss/profit of these PSEs are given at Annexure-IX.

500 MW Unit-7 at Ramagundam STPS by BHEL.

2.6 Policy regarding Central Public Sector as per National Common Minimum Programme (NCMP)

The salient points relating to the Public Sector policy under NCMP are:

- Successful profit making PSEs operating in competitive environment would be given full managerial and commercial autonomy.
- Generally, profit making companies will not be privatized.
- All privatization will be considered on a transparent and consultative case to case basis.
- While every effort will be made to modernize and restructure sick PSEs and revive sick industry, chronically loss making companies will either be sold off or closed after all workers have got their legitimate dues and compensation.
- Privatization should increase competition, not decrease it.

2.7 Board for Reconstruction of Public Sector Enterprises (BRPSE)

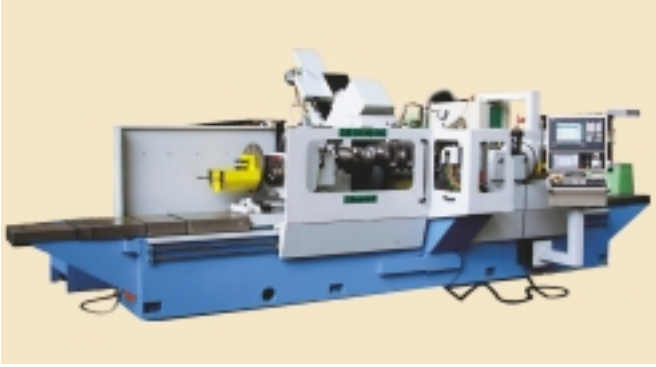
2.7.1 As per National Common Minimum Programme (NCMP), Government is committed to having a strong and effective public sector by strengthening, modernizing, reviving and restructuring the PSEs. Accordingly, a Board for Reconstruction of Public Sector Enterprises (BRPSE) has been constituted to address these tasks and advise the Government on strategic measures and schemes related to them.

2.7.2 Twenty out of the 48 PSEs under DHI stand referred to BRPSE. Status of these PSEs as on 1.1.2006 before BRPSE is as under -

(a)	Total cases presented to BRPSE	:	20
(b)	Cases considered by BRPSE	:	17
(c)	Cases awaiting consideration by BRPSE	:	3

Revival plans have been approved by Govt. in following 7 PSEs out of 17 cases considered by BRPSE:-

(i) Bridge & Roof Co. Ltd. (B&R)



CNC Crankshaft pin grinding machine by HMT.

(ii) Hindustan Salts Ltd (HSL)
(iii) BBJ Construction Co. Ltd. (BBJ)
(iv) Praga Tools Ltd. (PTL)
(v) HMT (Bearings) Ltd.
(vi) Heavy Engineering Corpn. Ltd. (HEC)
(vii) Braithwaite & Co. Ltd. (Braithwaite)

Remaining PSEs are under various stages of consideration.

2.8 Restructuring of PSEs in the past

2.8.1 Some of the restructuring efforts earlier taken up include:

- Conversion of Belting Division of Andrew Yule & Co. Ltd. (AYCL) in the year 1999 into a Joint Venture company (Phoenix Yule & Co.) with M/s Phoenix of Germany as the partner holding 74% of the equity with balance of 26% with AYCL.
- Conversion of Lagan Jute Machinery Co. Ltd. (LJMC), a subsidiary of BBUNL into a JV and transfer of management of the company to JV partner in July, 2000.
- Conversion of Jessop & Co. Ltd. (Jessop), a subsidiary of BBUNL into a JV and transfer of management of the company to JV partner in August, 2003.
- Disinvestment of majority stake in Maruti Udyog Ltd. (MUL).

2.8.2 While the Government have been supporting viable and credible revival plans, some PSEs were considered unviable by BIFR/Expert Agency and following PSEs have been closed / not in operation :

(i) Bharat Process Mechanical Engineers Ltd. (BPME)
(ii) Bharat Brakes & Valves Limited (BBVL)
(iii) Cycle Corporation of India (CCIL)
(iv) National Bicycle Corpn. of India Ltd. (NBCIL)
(v) Mining and Allied Machinery Corpn. Ltd. (MAMC)
(vi) Rehabilitation Industries Corp. (RIC)
(vii) RBL Limited (RBL)
(viii) Tannery & Footwear Corpn. Ltd. (TAFCO)
(ix) Weighbird India Ltd. (WIL)
(x) Bharat Leather Corporation Ltd. (BLC)
(xi) National Industrial Development Corporation Ltd. (NIDC)
(xii) Bharat Ophthalmic Glass Ltd. (BOGL)
(xiii) National Instruments Ltd. (NIL)
(xiv) Nagaland Pulp & Paper Corpn. Ltd. (NPPC)

2.8.3 Besides the fourteen PSEs mentioned above, four unviable units of HMT Ltd. (Watch Case Division, Lamp Division, Central Metal Forming Institute all at Hyderabad and Miniature Battery Unit in Guwahati), loss making refractory units and Jellingham Yard of Burn Standard Co. Ltd. (BSCL), Tangra Unit of Tyre Corporation of India Ltd. (TCIL) have been closed consequent upon the permission granted by the Appropriate Authority.

2.9 Manpower Rationalisation

2.9.1 Voluntary Retirement Scheme (VRS) has been introduced in a number of PSEs under DHI to shed surplus manpower without causing undue hardship to the workers. About 90,000 employees have opted for VRS during the last twelve years period 1992-93 to 2004-05 involving an expenditure of about Rs. 3000 crores.

2.10 Autonomy to PSEs/Navratnas and Miniratnas

2.10.1 BHEL is one of the Navratna CPSEs. The Board of the Company has been strengthened by induction of outside qualified professionals. Navaratna PSEs have been provided greater autonomy in respect of capital expenditure, formation of strategic alliances and formulation of HRD policies etc.

2.10.2 Besides BHEL, which is a Navratna, three PSEs under DHI namely REIL, HNL and HMT (I) have been categorized as Miniratnas. Miniratna PSEs have also been empowered with enhanced delegation.

2.11 Memorandum of Understanding (MOU)

2.11.1 With a view to giving greater autonomy to the public sector enterprises and making them accountable for achievement of their objectives, the following 11 PSEs have signed MOUs with Government of India for the year 2005-2006.

(i) Bharat Heavy Electricals Limited. (BHEL)
(ii) Engineering Projects (India) Limited. (EPI)
(iii) Hindustan Paper Corporation Limited. (HPC)
(iv) Hindustan Newsprint Limited (Subs. of HPC)
(v) Rajasthan Electronics & Instruments Ltd., Jaipur. (Subs. of IL)
(vi) HMT Ltd. (HMT)
(vii) HMT (MT) Ltd.
(viii) HMT (Chinar Watches) Ltd.
(ix) HMT (Watches) Ltd.
(x) HMT (Bearings) Ltd.
(xi) HMT (International) Ltd.

2.12 North Eastern Region

2.12.1 Out of the 48 Public Sector Enterprises under the administrative control of the Department of Heavy Industry, the following PSEs/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.

2.12.2 These PSEs/Units are engaged in the manufacture of Paper, Cement and Tea. As per the policy of the Government, 10% of the budget of this Department is being allocated for the development of North Eastern Region. Some of the major schemes undertaken in the past include modernization of paper units of Hindustan Paper Corporation Ltd. (HPC), D.G.set for power generation and installation of overhead crane at Bokajan Unit of Cement Corporation of India Ltd. (CCI) and rejuvenation of tea plantation of Andrew Yule & Company Ltd. (AYCL) in Assam. The Government budgetary support provided for capital investments made in the North East Region during 2001-02, 2002-03 and 2003-04 have been Rs. 7.12 crore, Rs. 4.34 crore and Rs. 5.84 crore respectively. However, no funds could be released during 2004-05.

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

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

Chapter - 3

Highlights

3.1 With reference to the policy stipulation contained in the National Common Minimum Programme (NCMP) in respect of Public Sector, a review for revival/restructuring, strengthening etc. of the PSEs has been undertaken. Based on this review, restructuring/revival proposals are being placed before the Board for Reconstruction of Public Sector Enterprises (BRPSE). As on 1.1.2006, a total of 20 PSEs of DHI have been submitted to BRPSE out of which recommendations have been received in case of 17 PSEs. Government have approved restructuring/revival of following seven PSEs :

(i) Hindustan Salts Ltd. (HSL)

(ii) Bridge & Roof Co. Ltd. (B&R)

(iii) Praga Tools Ltd. (PTL)

(iv) Braithwaite, Burn & Jessop Construction Co. Ltd. (BBJ)

(v) Heavy Engineering Corpn. Ltd. (HEC)

(vi) HMT (Bearing) Ltd. [HMT(B) Ltd]

(vii) Braithwaite & Co. Ltd. (Braithwaite)

3.2 A Conference of the Chief Executive Officers and Functional Directors of Public Sector Enterprises under the Department of Heavy Industry was organized at Vigyan Bhavan, New Delhi on 14th September, 2005 on the theme of 'Improving Competitiveness of the Public Sector Enterprises'. The Conference was inaugurated by the Hon'ble Minister for Heavy Industries and Public Enterprises, Shri Sontosh Mohan Dev. Thrust areas identified for this Department by PMO and Right to Information Act were also discussed during the meeting.

3.3 A new project namely NATRIP (National Automotive Testing and R&D Infrastructure Project) was approved by the Government aimed at bridging major infrastructural deficiency in the Auto Sector. This will create a state-of- the-art testing, validation and R&D infrastructure in the country and facilitate introduction of norms for safety, emission and performance standards in Automotive Sector.

3.4 Fluid Control Research Institute (FCRI) - was adjudged 'The Best' in the 'Service Industry Sector' by the Exhibition Committee in the 'Petrotech 2004 Exhibition' held at New Delhi 13-19 January 2005.

3.5 Major highlights reported by Bharat Heavy Electricals Ltd. (BHEL) are as under:

(i) Won the 'All India Trophy for the Exporter' award, instituted by the Engineering Export Promotion Council (EEPC), for the fourteenth year in succession.

(ii) Won Indian Merchants Chambers 'IMC Ramkrishna Bajaj National Quality Award 2004' for business excellence conforming to global standards.

(iii) Achieved a major milestone in the execution of mega power projects valued at Rs. 2079 crore with the commissioning of the first 500 MW unit at NTPC's Rihand Super Thermal Power Station Stage-II on schedule.

(iv) Won the first 'Safety Initiative Award' instituted by the Safety and Quality Forum of the Institution of Engineering (India) for creating a culture of safety in the economic sector aimed at implementing safety norms as well as maintaining quality standards.

(v) Entered into a Memorandum of Understanding with Rural Electrification Corporation (REC) to work jointly in offering solutions along with financial packages in the power generation sector covering both new power generation projects and renovation and modernisation of existing power plants.

(vi) Achieved a landmark in the execution of Captive Power Plants with the successful synchronisation of the first unit valued at Rs. 406 crore at Hindustan Zinc Limited in Rajasthan.

(vii) An employee of the company Sh B.L. Chouksey was conferred the country's civilian award 'Padmashri' for the year 2005 by the President of India on 28.03.2005 for his contribution in the field of science and engineering.

(viii) Achieved Earning Per Share (EPS) of Rs. 40.90 as against Rs. 26.89 during last year (par value of share Rs. 10.00)

(ix) Won for the third consecutive year British Safety Council's "International Safety Award" presented annually for creating a culture to further the cause of safety and for innovative practices at implementing the norms.

(x) Indigenously developed a new High Velocity Oxy Fuel (HVOF) coating to save critical components from silt erosion. By using this technology the life span of two Hydro Electric Power Stations (one in Punjab and other in Himachal Pradesh) is likely to be extended by nearly five years.

(xi) Commissioned solar power plants of ratings ranging from 2-5 KW in the tribal schools located at various places of Jharkhand which suffer from non-availability of conventional electricity in those areas.

(xii) Employees of the company bagged three "Vishwakarma Rashtriya Puraskars" awarded for various innovations, modifications undertaken by them in manufacturing systems and processes – resulting in a cumulative saving of more than Rs. one crore to the company.

(xiii) Won the "Best of its Class Distinction" from the 'International Asia Pacific Quality Award' (IAQA – 2005) – thus becoming the first engineering and manufacturing organization in the country to have won the recognition in the big manufacturing category as a part of IAQA.

(xiv) Awarded international certification for its Solar Photovoltaic Modules at the 'European Solar Test Installation' (ESTI) an internationally reputed independent Test Laboratory.

(xv) Achieved a new milestone in overseas markets with the commissioning of its state-of-the-art first 150 MW Gas Turbine in Libya.

(xvi) Awarded "Industrial Excellence Award" by Indian Nuclear Society in recognition of its role in the development and manufacture of nuclear equipment for Nuclear Power Plants and Research projects.

(xvii) Won the coveted "FICCI Award for Environmental Conservation & Pollution Control" in recognition of its commitment and outstanding contribution towards preservation of environment.

(xviii) Bagged prestigious 'ICWAI National Award for excellence in Cost Management 2005' instituted by 'Institute of Cost & Works Accountants of India' presented annually to the corporate organizations for excellence in cost quality and delivery.

3.6 Engineering Projects (India) Ltd. (EPI) had the following achievements to their credit during the year:

156 MW (ISO) Gas Turbine-Generator Unit at Western Mountain Gas Turbine Power Project, Libya by BHEL.

- Achieved a cumulative turnover of Rs. 512.04 crore during the financial year 2004-05 - a growth of 31.34% over the turnover of Rs. 389.86 crore achieved during the last financial year.

- Diversified into the new area of electrical transmission system involving setting up of sub-stations etc. and related activities.

3.7 Scooters India Ltd. (SIL) was awarded Gold Medal for Excellence in Business Practice by the Foundation for Excellence in Business Practice, Geneva Switzerland.

3.8 Major highlights for HMT group of companies are as under –

(a) HMT Ltd. (holding company with Tractor Division) -

(i) All engines for Tractor application have been developed for compliance to Bharat stage III emission norms.

(ii) The company has introduced a new Tractor 'HMT Yuva' in 25 HP range, which is most fuel efficient and economical in this product category. This was launched by the Hon'ble Minister for Heavy Industries & Public Enterprises. HMT YUVA conforms to Bharat TREM – III emission norms and would facilitate the farming community to increase productivity at affordable costs.

(iii) The company entered into Technical Collaboration agreement with Trantor Vehicles Ltd., UK for high speed "Transport First Tractor".

(b) HMT (International) Ltd.

(i) Machines valued at Rs.100 lakh exported to Oman.

(ii) Secured a major order valued at Rs.150 lakh from Colombo Dock yard, Sri Lanka for machine tools refurbishing.

Fuel efficient 'HMT Yuva' Tractor.

(iii) Successfully commissioned a Project for Fruit Processing valued at Rs. 200 lakh set up at Dushanbe Tajikistan on behalf of Ministry of External Affairs, Govt. of India.

(iv) Achieved a breakthrough by securing an order for supply of X-Ray Films and processing chemicals through a tender in Uganda for the first time.

(v) Successfully completed supply, installation & commissioning of 8 Paper Guillotine Shearing Machines at EMPDE, Ethiopia against stiff international competition.

(c) HMT (Machine Tools) Ltd.

(i) Designed and developed a new series of Heavy Duty Lathe HDL70/2000 machine to the requirement of Hindustan Aeronautics Ltd. (HAL) Koraput and first machine dispatched to HAL.

(ii) Consequent upon signing of the agreement with M/s Gudel of Switzerland the company executed automation projects for Ordnance Factory, Ambajhari and Kanpur.

Chapter - 4

Public Sector Enterprises administered by the Department of Heavy Industry

4.1 ANDREW YULE & CO. LTD. (AYCL)

The company is engaged in manufacture, sales and servicing of various industrial products like industrial fans, tea machinery, air pollution control equipment, electrical equipments including switchgears, circuit breakers, etc. In 1986, six tea companies having 12 tea gardens in West Bengal and Assam, engaged in cultivation, manufacture and processing of tea, became a part of AYCL. Transformers and Switchgears Ltd., Madras and Brentford Electric (India) Ltd., Calcutta were also nationalized and vested in Andrew Yule & Company Ltd. The company is sick and has been referred to BIFR. The Andrew Yule Group includes a subsidiary, M/s Hooghly Printing Company Ltd, and two major associate companies namely Dishergarh Power Supply Company Ltd (since renamed as DPSC Ltd) and Tide Water Oil Company Ltd. The company's Belting Division was converted into a joint-venture company in February 1999 with M/s Phoenix, AG Germany acquiring 74% of the equity and AYCL retaining 26% of the equity in the new company. The company is likely to end the year 2005-06 with a production of Rs. 112.55 crore. The company is being reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP).

4.2 HOOGHLY PRINTING COMPANY LTD.

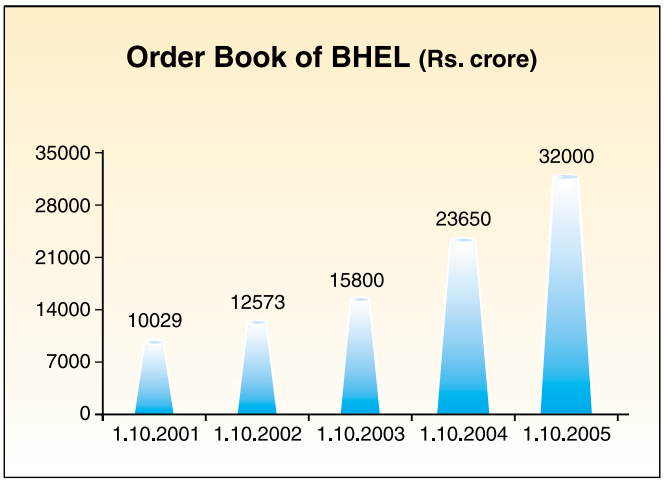
The company was established in the year 1922 for catering to the printing and stationery requirement of the companies under Andrew Yule Group. It is a wholly owned profit making subsidiary of Andrew Yule & Co. Ltd. The turnover of the company in 2005-06 is expected to be Rs. 12.00 crore

4.3 BHARAT HEAVY ELECTRICALS LTD.

The company was established for specially catering to the power generation & transmission equipment needs of the country. BHEL today is a major single point supplier of all systems and equipment required in power sector. It has 14 manufacturing plants, 8 service centres and

4 power sector regional centres besides project sites and regional offices spread all over India and abroad. The company has been identified as a 'Navratna' PSE. BHEL's performance in 2004-05 against MOU targets qualified it for placement in 'Excellent' category.

The company has taken several steps to enter into new business areas where its existing infrastructure, skills and capabilities could be optimally utilised. Some such new areas include Waste Heat Recovery Boilers, Advanced Class Gas Turbines, Ceralin Insulators, Turret Castings, Water management, material handling, O&M services, simulators and equipment & services for defence. During the year, BHEL has witnessed a substantial improvement in its order book.



The company has formed two Joint Ventures, one with M/s Siemens of Germany and the other with M/s General Electric, USA in the area of Servicing/renovation of Thermal Plants and Servicing of Gas turbines respectively.

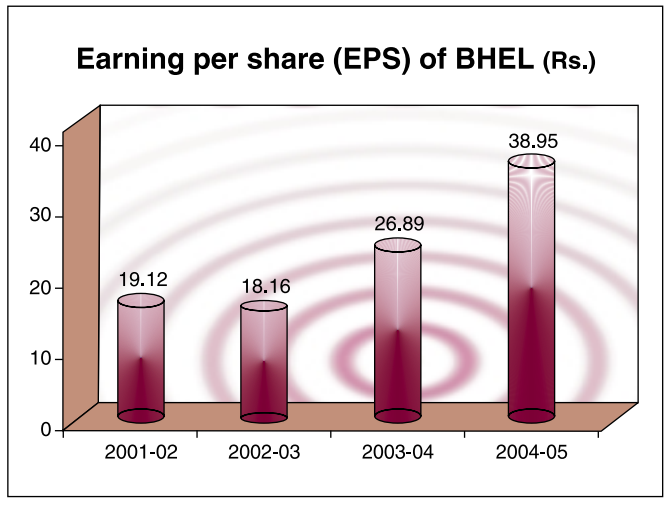
The company is likely to end the year 2005-06 with a production of Rs. 12000 crore.

The company achieved an order inflow of

2x500 MW Rihand Super Thermal Power Station by BHEL.

Rs. 18,016 crore during the year 2004-05 which is highest ever in a single year, some of which are as under -

- Secured an order valued at Rs. 241 crore from North Eastern Electric Power Corporation Limited for setting up a 600 MW Kameng Hydro Electric Project in Arunachal Pradesh
- Bagged a contract valued at Rs. 84 crore from Regency Power Corporation Limited, promoted by KSK Energy Venture Limited, Hyderabad, for setting up a 58 MW Combined Cycle Power Plant at Kallugurani village in district Ramanathpuram in Tamil Nadu.
- Secured a prestigious export contract of about Rs. 900 crore from Petroleum Development Oman for setting up of two Gas Turbines based on turnkey power projects in Sultanate of Oman.



Flat Wagon for Delhi Metro Rail Corporation by BSCL.

- Secured a contract valued at US$ 100 million for setting up a 120 MW eco-friendly Co-Generation Power plant for the captive use of PT Merak Energi Group, Indonesia.
- Secured a prestigious contract valued at Rs. 2120 crore from Andhra Pradesh Power Generation Corporation (AP Genco) for the supply and erection of the Main Plant Package for two separate 500 MW Thermal Power Stations in Andhra Pradesh.
- Secured an export order from Ethiopian Electric Power Corporation, Ethiopia valued at Rs. 26 crore for setting up 230 KV substations.
- Bagged an order valued at Rs.132 crore from Bhushan Steel and Strips Ltd. for setting up 125 MW Steam Turbine Generator set, along with two matching eco-friendly Bubbling Fluidised Bed Combustion boilers of 120 tonnes per hour capacity each for the captive power plant at their upcoming Meramandali Steel Plant near Angul in Orissa.

4.4 BHARAT BHARI UDYOG NIGAM LTD.

Bharat Bhari Udyog Nigam Ltd. (BBUNL) was incorporated as a holding company in 1986, with the following subsidiary companies :

(i) Burn Standard Company Ltd.
Subsidiaries :
  (a) Bharat Brakes & Valves Ltd. (BBVL) (since closed).
  (b) RBL Ltd. (RBL) (since closed)

(ii) Bharat Wagon & Engineering Company Ltd.

(iii) Braithwaite & Company Ltd.

(iv) Bharat Process & Mechanical Engineers Ltd (since closed)
Subsidiary :
  (i) Weighbird (India) Ltd. (WIL) (Since closed)
  (v) Braithwaite, Burn & Jessop Construction Co. Ltd.
  (vi) Jessop & Company Ltd. (since disinvested in Aug. 2003)

The aggregate production of all the operating subsidiaries of the holding company is likely to be Rs. 443.12 crore in 2005-06.

4.5 BURN STANDARD COMPANY LTD.

Consequent upon the nationalization of the erstwhile Burn & Company Ltd. and the Indian Standard Wagon Company Ltd., Burn Standard Company Ltd. (BSCL) was incorporated in 1976. The company has two large engineering units at Howrah and Burnpur in West Bengal besides eight refractory and ceramic units located in Bihar, West Bengal, Tamilnadu and Madhya Pradesh. The major products being manufactured by BSCL include wagons, structurals, points and crossings, bogies, ash handling plant, coal handling plant etc. The company is sick and is under reference to BIFR. 7 loss making refractory units and Jellinghum Yard of the company have been closed following the permission granted by the competent Authority.

The production of the company during the year 2005-06 is anticipated to be

Rs. 227.47 crore. The company's future is being reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP).

4.6 BRAITHWAITE & COMPANY LIMITED

Consequent upon nationalization, the company was taken over by Govt. in 1976. The company has three manufacturing units viz., (i) Clive Works, (ii) Victoria Works and (iii) Angus Works, which are engaged primarily in the manufacture of Railway Wagons, steel structurals, and general and special purpose cranes including Container Handling Cranes, Rail-Mounted Diesel Loco Break down Cranes, Jute Carding Machines and Roll Feeders for the Jute industry, etc. The company was reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP) and a revival/restructuring plan has been approved by the Government. The production of the company during the year 2005-06 is anticipated to be Rs. 99.23 crore.

4.7 BHARAT WAGON AND ENGINEERING COMPANY LTD.

Bharat Wagon & Engineering Company Ltd. (BWEL) was formed after nationalization of Britannia, Mokameh, Bihar and Arthur Butler, Muzaffarpur, Bihar in 1979. The main products of the company are Railway Wagons, screw pile bridges, steel fabrications, Grey Iron Castings etc. The company was referred to BIFR as it had become sick. The company's future is being reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP) for revival/ restructuring. The production of the company during 2005-06 is anticipated to be Rs. 64.77 crore.

4.8 BRAITHWAITE, BURN & JESSOP CONSTRUCTION CO. LTD.

Braithwaite Burn & Jessop Construction Co. Ltd. (BBJ) was constituted by Braithwaite, Burn and Jessop in 1935 for erection of the Howrah Bridge. BBJ turned into a PSE in 1987 when it became a subsidiary of Bharat Bhari Udyog Nigam Ltd., (BBUNL).

The company is engaged in construction of steel bridges, marine structures and jetties etc. BBJ has acquired the modern technology of construction of cable stayed long span road bridges. The company has diversified into marine related activity. The company was reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP) and a restructuring plan for the company has been approved. The turnover of the company in 2005-06 is anticipated to be Rs. 51.65 crore.

Shri Sontosh Mohan Dev, Hon'ble Minister for Heavy Industries & Public Enterprises at the inauguration of Electric Arc Furnace installed at the Angus Works of Braithwaite & Co. Ltd.

Delhi Metro Rail Corporation Bridge at Raja Garden by BBJ.

4.9 BHARAT YANTRA NIGAM LTD.

Bharat Yantra Nigam Ltd. (BYNL), was incorporated as a holding company in 1986, with following subsidiaries.

1. Bharat Heavy Plate & Vessels Ltd., Visakhapatnam.
2. Bharat Pumps & Compressors Ltd., Naini, Allahabad.
3. Bridge & Roof Company (India) Ltd., Kolkata
4. Richardson & Cruddas (1972) Ltd., Mumbai.
5. Tungabhadra Steel Products Ltd., Hospet, Karnataka.
6. Triveni Structurals Ltd., Naini, Allahabad.

The total production of all the subsidiary companies during 2005-06 is anticipated to be Rs. 737.14 crore.

4.10 BHARAT HEAVY PLATE AND VESSELS LTD.

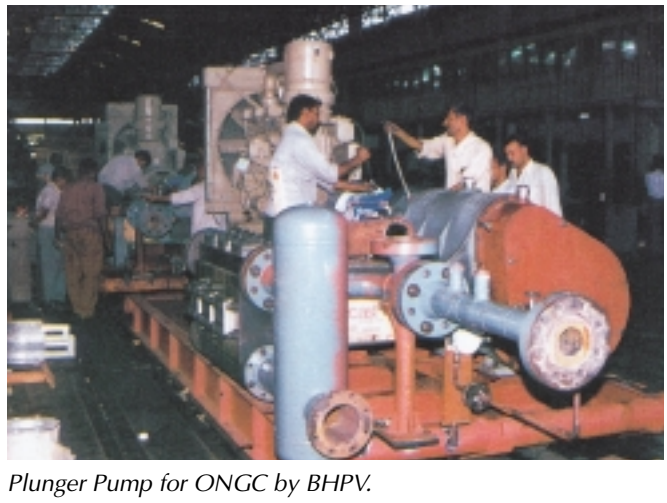
Bharat Heavy Plate & Vessels Ltd. (BHPV) was set up in the year 1966 for catering to the requirement of equipment for core Sectors such as Fertilizers, Oil Refineries, Petrochemicals, etc.

The company has three product divisions namely Process Plant Division, Cryogenics and Boiler Division. The company has been making losses for last few years and now it is being reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP). The production of the company for the year 2005-06 is anticipated to be Rs. 122.00 crore.

4.11 BHARAT PUMPS & COMPRESSORS LTD.

Bharat Pumps & Compressors Ltd. (BPCL) was incorporated in 1970 at Naini, Allahabad. The company is catering to the needs of sectors like oil, fertilizer, chemicals etc. for various types of pumps & compressors. The company became sick and was referred to BIFR. The company is being reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP). The company is likely to end the year 2005-06 with a production of Rs. 82.00 crore.

Super Insulated Skid mounted Cryogenic Tanks by BHPV.



Plunger Pump for ONGC by BHPV.

4.12 BRIDGE & ROOF COMPANY (INDIA) LTD.

Bridge & Roof Company (India) Ltd. (B&R) was initially a subsidiary of Balmer Lawrie & Co. Ltd. Subsequently, through investment of additional equity capital of Rs. 1.74 crore by Government of India in 1978, B&R became a Govt. company. The administrative control of this company was transferred to this Department from Ministry

of Petroleum in June, 1986. The company's operations cover fabrication of medium and heavy structures, civil engineering works in respect of buildings, concrete bridges, project civil work, cooling towers, mechanical erection of complete plants for refineries, fertilizers, chemicals, steel, aluminium, etc. The company was reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP) and a restructuring plan has been approved by the Government. The turnover of the company during the year 2005-06 is anticipated to be Rs. 500.00 crore.

Cross Country Pipe Line for GAIL, KG Basin, Phase-II by B&R.

4.13 RICHARDSON & CRUDDAS (1972) LTD.

Richardson & Cruddas (1972) Ltd. (R&C) was taken over from private sector in 1973. It has four units – two in Mumbai and one each in Chennai and Nagpur. The company became a subsidiary of BYNL in 1987.

The company is sick and under reference to BIFR. In July, 2003, the BIFR passed the orders for winding up of R&C. The company's production during the year 2005-06 is anticipated to be Rs. 26.89 crore. The company is being reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP).

4.14 TRIVENI STRUCTURALS LTD.

Triveni Structurals Ltd. (TSL) was incorporated in 1965. The company has facility for manufacture of heavy steel structural products, such as tall towers and mast for power transmission, communication and T.V. broad-casting, hydromechanical equipment, pressure vessels etc. The company became a subsidiary of BYNL in April, 1987. The company is sick and stands referred to BIFR. The company is being reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP).

143 M Single Span Steel Bridge by TSL.

4.15 TUNGABHADRA STEEL PRODUCTS LTD.

The company was established in 1960 as a joint enterprise of the Governments of Karnataka and Andhra Pradesh. Tungabhadra Steel Products Ltd. (TSP) became a subsidiary of BYNL in April, 1987. The company has facilities for design, manufacture and erection of hydraulic structures, penstocks, building structures, transmission line towers, EOT & gantry cranes, etc. The production of the company is anticipated to be Rs. 4.50 crore during 2005-06. The company is being reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP).

4 Nos. Radial Gates for Subarnarekha Multipurpose Project, by TSPL.

Cable manufacturing facilities at HCL, Rupnarainpur (West Bengal).

4.16 HINDUSTAN CABLES LTD.

Hindustan Cables Ltd. (HCL) was set up in 1952 as the first telecommunication cable manufacturing unit in the country. The company has units in Rupnarainpur, West Bengal; Naini, Allahabad, U.P. & Hyderabad, Andhra Pradesh.

The company has facilities for manufacture of a wide range of telecommunication cables and wires and had been catering to the needs of sectors like Railways, Defence, Communication etc. HCL is sick and is under reference to BIFR. The company is being reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP).

4.17 HEAVY ENGINEERING CORPORATION LTD.

Heavy Engineering Corporation Ltd. (HEC), Ranchi was incorporated in 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 the Iron and Steel Industry and other core sector industries like, Mining, Metallurgy etc. It has three manufacturing units namely – Heavy Machine Building Plant (HMBP), Heavy Machine Tools Plant (HMTP) and Foundry Forge Plant (FFP). The company manufactures a wide range of equipments for steel plants, material handling equipment like wagon tipplers and EOT cranes, heavy machine tools including CNC Machine tools and special purpose machine tools and various types of castings, forgings and rolls etc. The company is sick and under reference to BIFR. The company was reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP) and a revival/ restructuring plan has been approved by the Government. The company's production during the year 2005-06 is anticipated to be Rs. 210.43 crore.

4.18 HMT LTD. (Holding Company with Tractor Divn.)

HMT Ltd., Bangalore was set up in 1953 having facilities to manufacture Machine tools, Watches, Tractors, Printing machinery, special purpose machines, presses and dairy machinery.

The Company's Turnaround plan approved by the Government in July, 2000 envisaged Organizational Restructuring by conversion of Business Groups into four new separate subsidiary companies. The Company has been restructured into HMT Limited, (the Holding Company) with Tractor Business in

its fold, HMT Machine Tools Limited, HMT Watches Limited & HMT Chinar Watches Limited. Besides, the company has two wholly owned subsidiaries namely HMT (International) and HMT (Bearings) Ltd. and one partly owned subsidiary, Praga Tools Ltd.

The Tractor Division of HMT commenced its operations in 1971 with the manufacture of Tractors at the manufacturing plant established in Pinjore, Haryana.

The production of HMT Holding Company (Tractors Division) is anticipated to be Rs. 302.61 crore during 2005-06. The company is being reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP).

4.19 HMT MACHINE TOOLS LTD.

HMT Ltd., the pioneer in Machine Tools Industry in India and manufacturer of a diversified range of products has incorporated "HMT MACHINE TOOLS LIMITED" as its fully owned subsidiary in 1999. It has manufacturing units at different locations. All the manufacturing units of HMT-MT Ltd. are ISO 9001 certified. The production of the company in 2005-06 is anticipated to be Rs. 280.00 crore. The company is being reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP).

3-axis CNC Milling Machines by HMT (MT) Ltd.

4.20 HMT WATCHES LIMITED

HMT Watches Limited, manufactures mechanical and quartz watches.

The company has 3 manufacturing units at Bangalore, Tumkur and Ranibagh. All its manufacturing units have obtained the ISO 9001 certification.

The product range of HMT Watches Ltd. caters to different segments of the market. The production of the company during 2005-06 is anticipated to be Rs. 62.00 crore. The company is being reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP).

4.21 HMT CHINAR WATCHES LIMITED

HMT Chinar Watches Limited manufactures Mechanical watches. The company has one manufacturing Unit at Srinagar, J&K and an assembly unit at Jammu.

The company's registered office is located in Jammu. The production of the company in 2005-06 is anticipated to be Rs. 2.64 crore. The company is being reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP) as it has been making losses.

4.22 PRAGA TOOLS LTD.

Praga Tools Ltd. (PTL), Secunderabad, originally incorporated as a Public Limited Company in 1943, became a Central Public Sector Enterprises in 1959. PTL became a subsidiary of HMT Ltd. in 1988 when 51% of the share capital of the company was transferred in the name of HMT Ltd.

The company manufactures various types of machine tools viz. CNC cutter & tool

grinder, surface grinder, CNC milling machine, thread rolling machine, Jig boring machine and CNC jig boring machines etc. The company is sick and referred to BIFR. The company was reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP) and a restructuring/revival plan for PTL has been approved by the Govt. The production during the year 2005-06 is anticipated to be Rs. 14.56 crore.

4.23 HMT (BEARINGS) LTD.

HMT (Bearings) Ltd. (erstwhile Indo-Nippon Precision Bearings) was established in the year 1964 as a state public sector company. In the year 1981, this company became a central public sector enterprise as a subsidiary of HMT Ltd. The company was reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP) and a restructuring/ revival plan for HMT (Bearings) Ltd has been approved by the Govt. The production of the company during the year 2005-06 is anticipated to be Rs. 40.00 crore.

4.24 HMT (INTERNATIONAL) LTD.

HMT (I) Ltd. was established in December, 1974 as a trading company for giving greater thrust to exports of the products of the parent company, HMT Ltd. The major items for exports are machine tools, watches and other associated products which are being exported to various countries. The turnover of the company during the year 2005-06 is anticipated to be Rs. 51.00 crore.

HMT (Bearings) Plant.

4.25 INSTRUMENTATION LTD.

Instrumentation Ltd., Kota (IL) was set up in 1964. The company has three manufacturing units at Kota, Rajasthan, Jaipur, Rajasthan and Palakkad, Kerala and also has a subsidiary namely, M/s Rajasthan Electronics and Instruments Ltd. (REIL) at Jaipur. The company is engaged in manufacture of micro processor based digital distribution control systems, advanced electronic transmitters, fault tolerant control systems, railway signaling systems, telecommunication equipment etc.

The production of IL in the year 2005-06 is anticipated to be Rs. 200.00 crore. The company is being reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP).

4.26 RAJASTHAN ELECTRONICS & INSTRUMENTS LTD.

Rajasthan Electronics & Instruments Ltd. (REIL) was set up in 1981 as a Joint Venture of Instrumentation Ltd., Kota and RIICO for manufacture and supply of Electronic Milk Testers (EMT) to various milk plants/dairies, milk chilling centres and village cooperative societies. The company has diversified its product range to include Solar photo voltaic modules/system, Electronic Energy meters and Information technology. The company is a subsidiary of IL who is holding 51% of its equity. Remaining 49% of the equity is being held by RIICO, Govt. of Rajasthan. By virtue of its financial performance, the PSE has gained the status of 'Miniratna'. The

Solar operated Electronic Milk Testing equipment by REIL.

production of the company during the year 2005-06 is anticipated to be Rs. 48 crore.

4.27 NATIONAL INSTRUMENTS LTD.

National Instruments Ltd. (NIL), was incorporated as a PSE in 1957 after taking over the assets and liabilities of National Instruments Factory, a departmentally run workshop under the then Ministry of Production and Supplies. The company has facilities to manufacture various types of Opticals & Opto Electronic Surveying Instruments including Pressure & Vacuum Gauges, Cameras, Gas Meters, etc. together with sophisticated Night Vision devices. The company became sick and was referred to BIFR. The company is being reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP).

4.28 SCOOTERS INDIA LTD.

Scooters (India) Ltd. (SIL) was incorporated as a Government of India enterprise in 1972. At present, three wheelers are manufactured in its factory located in Lucknow. The company became sick and was referred to BIFR. The company has achieved turn around in its performance and posted profits consecutively for the last few years. With the improvement in the performance of the company, it has come out of the purview of BIFR. The company is likely to achieve a production of Rs. 155.49 crore during 2005-06.

4.29 BHARAT OPHTHALMIC GLASS LTD.

Bharat Opthalmic Glass Ltd. (BOGL) was set up in 1972 and took over the Ophthalmic Glass Plant at Durgapur from the National Instruments and Ophtalmic Glass Ltd. The company has facilities to manufacture ophthalmic blanks, flint buttons, optical glass, radiation shielding window (RSW) glass and other special quality optical glasses. The company became sick and was referred to BIFR. BIFR has recommended winding up of the company. The operations of the company have stopped since March, 2003. The company is being reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP).

4.30 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 Public Sector to achieve self-sufficiency in cement production and to remove regional imbalance. It has 10 units spread over 8 States/Union Territories, located in Mandhar, Akaltara in Chattisgarh; Nayagaon in MP; Kurkunta in Karnataka; Bokajan in Assam; Rajban in HP; Adilabad and Tandur in AP; Charkhi Dadri in Haryana and Delhi Grinding unit in Delhi.

Seven units out of 10 are non-operational due to various reasons. The company became sick on 8.8.1996 and was referred to BIFR. The production for the year 2005-06 in the running units is anticipated to be Rs. 189.45 crore. The company is being reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP).

4.31 HINDUSTAN PAPER CORPORATION LTD.

Hindustan Paper Corporation Ltd. (HPC), incorporated in 1970, is engaged in manufacture of paper, paperboards, Craft Paper and newsprint. HPC is a Holding company and has 2 subsidiaries and two major integrated pulp and paper mills under its control as given below:

Subsidiaries of HPC

a) Hindustan Newsprint Ltd. (HNL)

b) Nagaland Pulp & Paper Company Ltd. (NPPC).

Units of HPC

(i) Nagaon Paper Mills (NPM)

(ii) Cachar Paper Mills (CPM)

The company has been making profit for last few years. However the company have accumulated losses of the past which are likely to be wiped out soon. The production of the company (NPM and CPM) during the year 2005-06 is anticipated to be Rs. 616.03 crore.

4.32 NAGALAND PULP & PAPER COMPANY LTD.

Nagaland Pulp & Paper Company Ltd. (NPPC) is a subsidiary of Hindustan Paper Corporation (HPC). HPC holds 94.78% of the equity shares and the Government of Nagaland holds the balance 5.22%. There is no production activity in the plant. BIFR has recommended winding up of the company. However, the company is being reviewed in the light of the public sector policy under National Common Minimum Programme (NCMP).

4.33 HINDUSTAN NEWSPRINT LTD.

Hindustan Newsprint Ltd. (HNL) originally started as a unit of HPC was converted into a wholly owned subsidiary of HPC in August, 1983. This mill with annual capacity of 1 lakh MT is located in the State of Kerala and is engaged in the production of newsprint. The company has a De-inking Plant which has reduced its dependence on forest resources. The production during the year 2005-06 is anticipated to be Rs. 294.88 crore.

4.34 HINDUSTAN PHOTO FILMS MANUFACTURING COMPANY LTD.

Hindustan Photo Films Manufacturing Company Ltd. (HPF) was established in 1960. The company has two manufacturing plants, the main factory at Ootacamund and a plant at Ambattur near Madras. The company has facilities to manufacture cine films positive (black & white), cine films sound negative, medical X-ray films, photographic paper and amateur roll film (black and white). The company is sick and is under reference to the BIFR. The company is being reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP). The production of the company during the year 2005-06 is anticipated to be Rs. 13.50 crore.

4.35 HINDUSTAN SALTS LTD.

Hindustan Salts Ltd. (HSL), set up in 1959, is engaged in the production of common salt and salt-based chemicals at its three units located at Kharaghoda, Gujarat; Mandi, Himachal Pradesh and Ram Nagar, Uttar Pradesh. The company is sick and under reference to BIFR. Its production during the year 2005-06 is anticipated to be Rs. 13.90 crore. The company was reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP) and a restructuring/revival plan has been approved by the Government.

4.36 SAMBHAR SALTS LTD.

Sambhar Salts Ltd. (SSL) is a subsidiary of Hindustan Salts Ltd. (HSL). The paid up capital of the company is Rs. 1 crore, 60%

of which has been subscribed by HSL and balance 40% by the Government of Rajasthan. The company is producing salt, both for edible and industrial use, and salt based chemicals. The production of the company during the year 2005-06 is anticipated to be Rs. 7.98 crore.

4.37 NEPA LTD.

NEPA Ltd. (NEPA), formerly, the National Newsprint & Paper Mills Ltd. was initially set up in 1947 in private sector. Later on, in October, 1949, its management was taken over by the State Government. The Central Govt. acquired controlling interest in 1959 by conversion of loans into equity and it became a central PSE. The company produces Newsprint and paper. The company became sick and is under reference to BIFR. Final recommendations of BIFR are awaited. The company is being reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP).

The production of the company during the year 2005-06 is anticipated to be Rs. 69.11 crore.

4.38 TYRE CORPORATION OF INDIA LTD.

Tyre Corporation of India Ltd. was incorporated in 1984 after the nationalization of two sick companies, namely, M/s Incheck Tyres Ltd. and M/s National Rubber Manufacturers Ltd. The company has units at Kankinara and Tangra and is engaged in manufacture of tyres for automobiles. The Company is sick and is under reference to BIFR. Tangra unit has since been closed after necessary permission from the competent authority. The company is being reviewed in the light of Public Sector Policy under National Common Minimum Programme (NCMP).

The production during the year 2005-06 is anticipated to be Rs. 139.06 crore.

4.39 BHARAT LEATHER CORPORATION LTD.

Bharat Leather Corporation Ltd. (BLC) was set up in 1976 to undertake promotional and developmental activities besides commercial activities like procurement and marketing of leather goods, leather footwear etc. All the employees of the company have availed VRS with financial assistance from Government in April, 2001. Allahabad High Court has ordered for winding up of the company against a petition filed by BLC, and a liquidator has been appointed in Sept. 2005.

4.40 ENGINEERING PROJECTS (INDIA) LTD.

Engineering Projects (India) Ltd. (EPI) is a premier turnkey contracting company incorporated in the year 1970. The company's field of operation is extensive and includes projects relating to civil and structural engineering, material handling, metallurgy, petrochemicals, environment and pollution control etc. After the financial restructuring of the company in 2001, the company has turned around and has been posting profits. After a gap of 26 years, the company declared a dividend of 10% on equity for the financial year 2003-04. For the year 2004-05 also, the company declared a dividend of 15% on equity.

Firozshah Kotla Cricket Stadium, New Delhi by EPI.

The turnover of the company during the year 2005-06 is anticipated to be Rs. 611.30 crore.

4.41 NATIONAL INDUSTRIAL DEVELOPMENT CORPORATION LTD.

The National Industrial Development Corporation Ltd. (NIDC) was established by the Government in 1954. The company has been providing consultancy services in the field of Civil Engineering Projects, Industrial Townships, Water Supply & Treatment, Restructuring, Technology upgradation etc. The company has been making losses for last few years and has not been able to sustain its operations. Therefore, Government took a decision for closure of the company in April 2002. All employees of the company opted for VRS. Winding up process was initiated in Delhi High Court. The Court ordered for winding up of the Company on 13.1.2005 and appointed Liquidator.

Chapter - 5

Heavy Electrical Industry and other Industrial Machinery Sectors

5.1 HEAVY ELECTRICAL INDUSTRY

Heavy Electrical Industry covers power generation, transmission, distribution and utilisation equipments. These include turbo generators, boilers, various types of turbines, transformers, switchgears and other allied items. The demand for power generation equipment depends upon power development programme/generation targets. The targets for additional power generation during the Tenth and Eleventh Plan Period is one lakh Mega Watt, i.e. addition of about 10,000 MW per year. New power plants to be set up will generate substantial demand for heavy electrical equipment. It may be mentioned that major portion of the equipment successfully in operation in the power sector has been produced, installed and commissioned by the Indian Electrical Industry.

Electrical equipments such as transformers, switchgears etc. are used by all sectors of the Indian Economy. Some major areas where these are used are the multi crore projects for power generation including nuclear power stations, petrochemical complexes, chemical plants, integrated steel plants, non-ferrous metal units etc. The Industry has been upgrading the existing technology and is now capable of taking up turnkey contracts also for export markets. The Industry has been delicensed. Foreign collaborations are also allowed with 100% FDI.

A strong manufacturing base has already been established for heavy electrical equipment and existing installed capacity of the industry is of the order of 4,500 MW of thermal, 1,345 MW of Hydro and about 250 MW of Gas based power generation equipment per annum. The Indian Heavy Electrical Industry is also capable of manufacture and supply of equipment required for setting up nuclear power plants. The present share of the Indian industry is about 66% in the country's power generation capacity.

The Heavy Electrical Industry is capable of manufacturing transmission and distribution equipment upto 400 KV AC and high voltage DC. The industry has taken up the work of upgradation of transmission to the next

higher voltage system of 765 KV and have upgraded their manufacturing facilities to supply 765 KV class transformers, reactors, CTS, CVT, bushing and insulators etc. Large electrical equipment used in Steel plants, Petrochemical complexes and other such heavy industries are also being manufactured in the country.

The domestic Heavy Electrical equipment manufactures are making use of the developments in the global market with respect to product designs and upgrading of manufacturing & testing facilities.

A status report covered under Heavy Electrical Industry is given below:-

5.2 TURBINES & GENERATOR SETS

The capacity established for manufacture of various kinds of turbines such as steam & hydro turbines including Industrial turbines is more than 7000 MW per annum. Apart from BHEL, the public sector unit which has the largest installed capacity, there are units in the private sector also manufacturing steam & hydro turbines for power generation & Industrial use. The manufacturing range of BHEL includes steam turbines upto 660 MW unit rating and the facilities are available for 1000 MW unit size. They have capability to manufacture gas turbines upto 260 MW (ISO) rating and gas turbine based Co-generation and Combined Cycle Systems for industry and utility applications. Custom-built conventional hydro turbines of Kaplan, Francis and Pelton types with matching generators are also available indigenously.

AC Generators manufactured in India are on par with international AC Generators and consistently deliver high quality power with high performance. Domestic manufacturers are capable of manufacturing AC Generator right from 0.5 KVA to 25,000 KVA and above with specified voltage rating.

Gas Turbine rotor on assembly bed at BHEL, Hyderabad.

The imports and exports during 2004-05 were Rs. 1675.98 crore and Rs. 589.96 crore respectively.

5.3 BOILERS

BHEL is the largest manufacturer of boilers in the country (with more than 60% share) and has the capacity to manufacture boilers for Super Thermal Power Plants apart from utility boilers and industrial boilers. The industry has the capability to manufacture boilers with super critical parameters upto 1,000 MW unit size. The domestic industry has the capacity to meet the indigenous requirement / demand for boilers.

The imports and exports during 2004-05 were Rs. 74.19 crore and Rs. 223.90 crore respectively.

5.4 TRANSFORMERS

The domestic transformer industry is well established with capability to provide state-of-the-art equipments. The industry has the capacity to manufacture whole range of power and distribution transformers including the REC rating of 25,53,100 KVA and also the extra High voltage ranges of 400 kV, 600 MVA. Special types of transformers required for furnaces, rectifiers electric tract etc. and series and shunt reactors as well as HVDC transmission upto 500 kV are also being manufactured in the country.

The imports and exports during 2004-05 were Rs.1277.91 crore and 898.32 crore respectively.

5.5 SWITCHGEAR AND CONTROL GEAR

In India, the entire range of circuit breakers from bulk oil, minimum oil, air blast, vacuum to SF6 are manufactured to standard specification for the benefit of customers. The ranges of products produced cover the entire voltage range for 240V to 800KV, Switchgear and control gear, MCBs, air circuit breakers, switches, rewireable fuses and HRC fuses with their respective fuse bases, holders and starters. The industry is competitive in the field of design and engineering as the skill sets available in the country are relatively less expensive.

The imports and exports during 2004-05 were Rs.1250.74 crore and 718.53 crore respectively.

5.6 Production figures for the above sectors in last three years are as under:

(Rs. crore)

Sl. No.	Product	2002-03	2003-04	2004-05
1.	Turbines Generator Sets	1287	1320	1356
2.	Boiler	1623	1814	2014
3.	Transformers	273	303	369
4.	Switchgear and Control Gear	130	158	189

5.7 ELECTRICAL FURNACES

Electrical Furnaces are used in Metallurgical and Engineering industries like forging and foundry, machine tools, automobiles etc. Adequate capacity for production of these products has been established. The imports and exports during 2004-05 were Rs.161.91 crore and Rs. 60.92 crore respectively.

5.8 SHUNTING LOCOMOTIVES

Shunting locomotives for localized / internal transport facilities are used in Railways, Steel Plants, Thermal power plants etc. BHEL's Jhansi Unit among others is manufacturing such locomotives. The installed capacity is adequate to meet the domestic demand.

5.9 HEAVY ENGINEERING AND MACHINE TOOL INDUSTRY

5.9.1 Textile Machinery Industry

Indian Textile Machinery Manufacturers are manufacturing textile machinery required for sorting, cording, processing of yarns/ fabrics and weaving along-with the components, spares and accessories. There are over 600 units engaged in the manufacture of machinery and spares out of which about 100 units are manufacturing complete machinery.

The industry is gearing itself to avail of opportunities of supplying machines required to cater the export target of garment manufacturers post MFA.

With a capital investment of Rs. 1500 crore and an installed capacity of Rs. 3050 crore per annum, their current production as well as exports are as under: -

(Rs. crore)

Year	Production	Exports
2002-03	1175	406
2003-04	1339	535
2004-05	1685	457

5.9.2 Cement Machinery Industry

The Cement Machinery Industry is manufacturing and supplying complete cement plants based on dry processing and pre-calcination technology for capacities upto 7500 TPD. Modern cement plants are designed for zero downtime, high product quality and better output with minimum energy consumed per unit of cement production etc. At present, there are 18 units in the organized sector for the manufacture of

complete cement plant machinery. The industry is fully capable to meet the domestic demand of cement machinery. The value of the existing installed capacity has been estimated at Rs. 600 crore/annum.

(Rs. crore)

	2002-03	2003-04	2004-05
Import	1.30	NIL	NIL
Export	3.05	NIL	NIL

5.9.3 Sugar Machinery Industry

Domestic manufacturers occupy predominant position in the global scenario. They are capable of manufacturing sugar plants of latest design for a capacity upto 10,000 TCD (tonnes crushing per day). There are presently 27 units in the organised sector for the manufacture of complete sugar plants and components with installed capacity of Rs. 200 crore.

The manufacturers can design and manufacture from concept to commissioning entire plant of latest design.

(Rs. Lakh)

	2002-03	2003-04	2004-05
Import	1.70	427	1259
Export	852	1139	2682

5.9.4 Rubber Machinery Industry

There are at present 19 units in the organized sector for the manufacture of rubber machinery mainly required for tyre/tube industry. The range of equipments manufactured in the country includes inters-mixer, tyre curing presses, tube splicers, bladder curing presses, tyre moulds, tyre building machines, turnet servicer, bias cutters, rubber injection moulding machine, bead wires etc. There is gap in technology for the manufacture of high speed calendering line particularly for heavy earthmoving equipment and the like.

In the past the Industry has secured export orders against stiff international competition for tyre tube curing presses tube splicers etc.

(Rs. crore)

	2002-03	2003-04	2004-05
Import	12.81	25.91	36.75
Export	15.25	22.29	46.15

5.9.5 Material Handling Equipment Industry

The range of equipments manufactured includes crushing and screening plants, coal/ore/ash handling plant and associated equipment such as stackers, reclaimers, ship loaders/unloaders, wagon tipplers, feeders etc. catering to the growing and rapidly changing needs of the core industries such as Coal, Cement, Power, Port, Mining, Fertilizers and steel plants.

There are 50 units in the Organised sector for the manufacture of material handling equipment. Besides, there are numbers of units operating in the small-scale sector also manufacturing material handling equipment and its components. This industry is more or less self sufficient in meeting domestic demand and are capable of meeting global competition.

(Rs. crore)

	2002-03	2003-04	2004-05
Import	175.96	242.58	261.44
Export	22.21	41.54	80.16

5.9.6 Oil Field Equipment

The petroleum industry in India is undergoing a major change. In accordance with the ongoing process of liberalisation, the industry has been thrown open for

private sector in all the major areas of exploration, production, refining and marketing, resulting in increased demand for the oil field and related equipment. The users are ONGC, Oil India Ltd. etc.on charter-hire basis.

Domestic manufacturers are manufacturing drilling rigs for on-shore drilling. Offshore equipment drilling like jack-up rigs etc. are not being manufactured indigenously. However, offshore platforms and some other technological structures are being produced locally. The major producers are BHEL, Hindustan Shipyard, Mazagon Dock and Burn & Co.

(Rs. crore)

	2002-03	2003-04	2004-05
Import	63.03	142.49	638.20
Export	15.56	165.81	300.47

5.9.7 Metallurgical Machinery

Metallurgical machinery includes equipment for mineral benefication, ore dressing , size reduction , steel plant equipments, foundry equipments and furnaces. At present there are 39 units in the organized sector engaged in the manufactures of various types of metallurgical machinery.

The existing production capacity in the country is sufficient to meet the demand of these equipments in the country. However, there is a technological gap in the basic design and engineering for plants and equipments in the ferrous and non-ferrous sector for which the domestic manufacturers are dependent on imported know-how. Since the process of making ferrous and non-ferrous metal is linked up with the design of the equipment, there is a need for close interaction between the process know-how, designers and equipment manufacturers.

Indigenous manufacturers are in a position to supply majority of the equipment for steel plant like blast furnaces sinter plants, coke ovens steel melting shop equipment, continuous casting equipment, rolling mills & finishing line.

(Rs. crore)

	2002-03	2003-04	2004-05
Import	244.18	495.28	454.40
Export	267.96	434.23	370.70

5.9.8 Mining Machinery

The major mining equipments are Longwall Mining Equipments, Road Header, side discharges Loader (SDL), Haulage Winder, Ventilation Fan, Load Haul Dumper (LHD), Coal Cutter, Conveyors, Battery Locos, Pumps, Friction Prop, etc.

At present there are 32 manufacturers in the organized sector both in public and private sector for underground and surface mining equipment of various types. Out of these 17 units manufacture underground mining equipment.

The vast majority of mining equipment requirement of the mining industry is being met by the indigenous manufacturers of the equipment. In case of some highly sophisticated equipments, critical parts are being imported.

(Rs. crore)

	2002-03	2003-04	2004-05
Import	70.52	16.80	39.01
Export	0.11	1.15	1.55

5.9.9 Dairy Machinery Industry

The range of equipment presently manufactured by the indigenous manufacturers includes stainless steel dairy

equipments, evaporators, milk refrigerators and storage tanks, milk and cream deodorizers, centrifuges, clarifiers, agitators, homogenisers, spray dryers and heat exchangers (tubular and plate type) etc. At present there are 16 units manufacturing dairy machinery and equipment in the organized sector, both in private and public sector. The spray dryers, plate type heat exchanger and other core equipments for milk powder plant call for high degrees of polish requirement on the equipments because the presence of any micro crevices resulting from inadequate polish tends to be the incubation and breeding ground for the bacteria.

Small scale sector is also contributing to indigenous production for fabricated equipments for dairy industry. The technology gap exist for handling equipments such as self cleaning cream, separator, aseptic processing systems, etc. The processing technology for manufacture of yoghurt and traditional Indian sweets plant equipment is also deficient.

(Rs. crore)

	2002-03	2003-04	2004-05
Import	7.29	18.15	21.05
Export	4.44	10.54	8.08

5.9.10 Machine Tool Industry

Machine Tool Industry, which is the backbone of the entire industrial engineering sector, is today in a position to export general purpose and a standard machine tool to even industrially advanced countries. During the last four decades, the machine tool industry in India has established a sound base and there are around 150 machine tool manufacturers in the organized sector as also around 300 units in the small ancillary sector.

Though Indian Machine Tool Manufacturers produce General Purpose Machines of international standards in terms of quality and precision, they lack design and engineering capability to undertake very high precision Computer Numerically Controlled (CNC) Machines. Some companies have taken up manufacture of CNC Machines, but there is a need to upgrade R&D in this field.

Indian machine tools are manufactured to the international standard of quality/ precision and reliability. A number of collaborations have also been approved for bringing in the latest technology in this field of modern machine tools and the industry is now exporting conventional as well as NC/CNC high-tech machine tools. In the field of R & D, Central Manufacturing Technology Institute (CMTI), Bangalore has been doing research for upgradation and design of machine tools. The sector is delicenced and import is also permitted. There is gap in technology for Special Purpose Machines and even in some categories of CNCs. Import of technology is encouraged to bridge the gap.

(Rs. crore)

	2002-03	2003-04	2004-05
Production	500.70	797.00	1089.04
Import	450.80	965.00	1820.83
Export	33.90	55.00	52.61

Chapter - 6

Automotive Industry

6 OVERVIEW OF THE AUTOMOTIVE INDUSTRY

6.1 Automotive Industry, globally, as well in India, is one of the largest industries and key sectors of the economy. Due to its deep forward and backward linkages with several key segments of the economy, automotive industry has a strong multiplier effect and is capable of being the driver of economic growth. A sound transportation system plays a pivotal role in the country's rapid economic and industrial development. The well-developed Indian automotive industry ably fulfils this catalytic role by producing a wide variety of vehicles: passenger cars, light, medium and heavy commercial vehicles, multi-utility vehicles such as jeeps, scooters, motor-cycles, mopeds, three wheelers, tractors etc.

6.2 Although the automotive industry in India is nearly six decades old, until 1982, only three manufacturers – M/s. Hindustan Motors, M/s. Premier Automobiles & M/s. Standard Motors tenanted the motorcar sector. Owing to low volumes the sector perpetuated obsolete technologies and was out of sychronization with the world industry. In 1982, Maruti Udyog Limited (MUL) came up as a Government initiative in collaboration with Suzuki of Japan to establish volume production of contemporary models. After the lifting of licensing in 1993, 17 new ventures have come up, of which 16 are for manufacture of cars. There are at present 15 manufacturers of passenger cars and MUVs, 9 manufacturers of Commercial Vehicles, 14 of two and three wheelers and 14 of tractors besides 5 manufacturers of engines.

6.3 The automotive industry comprising of the automobile and the auto component sectors has shown great advances since delicensing and opening up of the sector to FDI in 1993. The industry had an investment of a sum exceeding Rs. 50,000 crore in 2002-03 which is slated to go upto 80,000 crore by a year 2007. The industry provides direct employment to about 4.5 lakhs persons and generates indirect employment of 1 crore. The contribution of the automotive industry

to GDP has risen from 2.77% in 1992-93 to 5.7% in 2003-04.

6.4 INSTALLED CAPACITY

The Automobile Manufacturers have put up a robust manufacturing capacity of 95 lakh plus vehicles per annum since 1993. Today India is the world's second largest manufacturer of two wheelers, fifth largest manufacturer of commercial vehicles and manufactures largest number of tractors in the world. The country offers fourth largest passenger car market in Asia today. A supplier driven market, having no more than a handful of vehicular models two decades ago, now offers more than 150 models and variants by way of customer options. The installed capacity of the automobile sector during the year 2003-04 was as under:

S. No.	Segment	Installed capacity (in nos.)
1.	Four wheelers	1,590,000
2.	Two & Three Wheelers	7,950,000
	Grand Total	**9,540,000**

6.5 Performance of the Automobile industry during 2004-05 and 2005-06:

6.5.1 Production:

One of the largest industries in India, automotive industry has been witnessing impressive growth during the last two decades. Abolition of licensing in 1991, permitting automatic approval and successive liberalization of the sector over the years have led to all round development of this industry. The freeing of the industry from restrictive environment has, on the one hand, helped it to restructure, absorb newer technologies, align itself to the global developments and realise its potential and on the other hand, this has significantly increased industry's contribution to overall industrial growth in the country. Overall automobile sector bagged a growth of 16.80% in 2004-05. During the year 2005-06 (upto April-Sept. 2005) the Industry has registered a growth rate of 15.86%. The details of actual production during 2004-05 and 2005-06 (upto April-Sept. 2005) are given below:

(in Nos.)

S. No.	Name of the Sector	Production	
		2004-05	2005-06 (April-Sept. 05)
1.	Commercial Vehicles	35,00,33	1,77,784
2.	Cars	9,60,505	4,94,297
3.	Multi-Utility Vehicles	2,49,149	1,28,272
4.	2-wheelers	65,26,547	35,67,798
5.	3-wheelers	3,74,414	2,01,369
	TOTAL	**84,60,648**	**45,69,520**

6.5.2 Export :

Automotive industry of India is now finding increasing recognition worldwide and a beginning has been made in exports of vehicles as well as components. The automobile industry along with the component industry is also contributing to the export effort of the country. During the year 2003-04 the export of automobile industry had registered a growth rate of

55.98% while it was 31.25% during the year 2004-05. The details of exports during 2004-05 and 2005-06 (upto April-Sept.2005) are given below:-

(in Nos.)

S. No	EXPORT	2004-05	2005-06 (April-Sept. 05)
1.	Commercial vehicles	2,99,49	18,095
2.	Passenger cars	1,60,677	87,463
3.	Multi- Utility Vehicles	5,736	2,614
4.	2-wheelers	3,66,724	2,59,639
5.	3-wheelers	66,801	39,069
	TOTAL	**6,19,887**	**4,06,880**

6.6 Vehicular Pollution Control Measures of the Government:

Government initiated pollution & safety checks by notifying emission & safety standards from the year 1992 which were further tightened in April, 1996 under the Motor Vehicle Act. **BHARAT STAGE-I** (**Equivalent to Euro I**) emission norms have already been made applicable throughout the country. Euro II equivalent Bharat Stage II norms are in force from 2001 in 4 metros of Delhi, Mumbai, Chennai and Kolkata. These norms have been extended to entire country w.e.f. 1.4.2005. India is harmonizing its Emission Norms for four Wheelers with the European Regulation and has adopted Euro III equivalent norms in 11 Metroplitan Cities from April 2005.

6.7 AUTO COMPONENTS INDUSTRY

6.7.1 Overview:

Surge in automobile industry since the nineties has led to robust growth of the auto component sector in the country. Responding to emerging scenario, Indian auto component sector has shown great advances in recent years in terms of growth, spread, absorption of newer technologies and flexibility, despite multiplicity of technology platforms and low volumes. India's reasonably priced skilled workforce, large population of technology workers coupled with strengths gained by the country in IT and electronics all build up an environment for significant leap in component industry. The Indian auto component sector is being written up as the next industry, after software, that has the potential of becoming globally competitive. Indian Auto Component Industry, with a turn over of Rs. 36,540 crore in the year 2004-05 and manufacturing all the key components required for vehicle manufacturing, is an important sector of the Automotive industry. The phased Manufacturing Policy (PMP) followed in the 1980s enabled the component industry to induct new technologies, new products and a much higher level of quality in their operations that enabled quick and effective localization of the component base. The Indian auto component industry over the years has played a key role in the growth and development of the country's automotive industry.

6.7.2. After a lull following global economic slump, auto component industry's growth rate has bounced back to 38% in 2002-03. However, the Industry could not sustained such a high growth rate and could achieve a growth rate of only 24% in 2003-04 and 16% in 2004-05.

Indicators	2002-03	2003-04	2004-05
Output	Rs. 24,500 crore	Rs. 30,640 crore	Rs. 36,540 crore
Exports	Rs. 3,800 crore	Rs. 4,620 crore	Rs. 6,237 crore
Employment	5,00,000 persons	5,00,000 persons	5,00,000 persons

Indian auto component industry has seen major growth with the arrival of world vehicle manufacturers from Japan, Korea, US & Europe. Due to diversities in the technological profiles of these OEMs, the sector today produces large variety of components. Today, India is emerging as one of the key auto components center in Asia and is expected to play a significant role in the global automotive supply chain in the near future.

6.8 PERFORMANCE OF THE AUTO COMPONENT INDUSTRY IN 2004-05 & 2005-06 (prov)

6.8.1 Production:

Indian auto component industry is wide (over 420 firms in the organized sector producing practically all components and more than 10,000 firms in small unorganized sector, in tierized format) and has been one of the fastest growing segments of automotive industry, growing by over 28%, in nominal terms, between 1995-98. In the current year the average growth in production of auto components is expected to be 20 percent.

6.8.2 Export:

Auto component exports shot up phenomenally by 40 percent in 2004-05 to a level of US$ 1.4 billion. A high growth of 30% is expected to continue in 2005-06 also. Indian Auto-components are being exported through out the world. During the year 2004-05, total export was of the order of Rs 6237 crore.

6.9 AGRICULTURAL MACHINERY

Agricultural Machinery mainly consists of Agricultural Tractors, Power Tillers, Combine Harvesters and other agriculture machineries and implements. Due to negligible production of Power Tillers, Combine Harvesters and other agriculture machineries, this sector is mainly dominated by agricultural tractors.

6.9.1 Agricultural Tractors

At present, there are 14 units in the organized sector manufacturing agricultural tractors covering a wide range from lower Horse Power in the range of 16-20 to higher Horse Power of 75. The Indian Tractor Industry has a total investment of over Rs. 6000 crore. The industry employs over 25,000 people directly and over 1,50,000 people indirectly.

6.10 PERFORMANCE OF THE TRACTOR INDUSTRY

The Industry made a beginning in 1961 with a total production of 880 units. There has been a substantial growth in the production of tractors since late 1990s and the production has reached a level of 2,66,385 in 2000-01. Production figures of tractors during the last few years are given below: -

Year	Numbers
2000-01	2,34,575
2001-02	2,15,000
2002-03	1,62,000
2003-04	1,91,633
2004-05	2,48,976

The industry grew by 32% in 2004-05 due to good monsoon and continued availability of bank credit. The production during April-

September current year was 1,32,519 nos. as against 1,15,883 nos. during the period matching last year. The industry exported around 10% of production during 2004-05 and during current year it is expected to export 15%.

6.10.1 Technological Capabilities:

Though tractor industry started production by importing technology from renowned manufacturers in USA, UK, USSR, Germany, Poland, Czechoslovakia etc. over the years, technology has been fully absorbed. Some tractor manufacturers have introduced higher Horse Power tractors of 75 HP with imported components for meeting the specific requirements of high HP category of tractors.

6.10.2 Markets:

Traditionally, Haryana, Punjab and Uttar Pradesh have been the main States for the tractor market. New markets for tractors in the States of Madhya Pradesh, Andhra Pradesh, Tamilnadu, Maharashtra, Rajasthan and Gujarat are now growing at a fast pace. 92% of the Tractor industry sales during 2004-05 was concentrated in 11 major states. Uttar Pradesh, the largest Tractor market, showed 21% growth and Madhya Pradesh grew by 16%. The growth in other states was between 5 to 10%.

6.11 EARTH MOVING AND CONSTRUCTION MACHINERY

6.11.1 Earth Moving Equipment and Construction Machinery Industry plays a vital role in the economic development of our country. This industry is closely linked with major development and infrastructural schemes such as coal and mineral, mining, irrigation and power projects, ports, steel, fertilizers etc. The technology required to manufacture such machines was not available earlier. It was, therefore, necessary to permit import of technology for development of the same from internationally reputed manufacturers like KOMATSU, CATERPILLAR, POCLAIN, DRESSER, DEMAG & HITACHI. The earth moving equipment currently being manufactured covers Shovels up to 10 cu.m. capacity, Bulldozers up to 770 HP, Dumpers up to 120 HP, Excavators up to 8.5 cu.m. capacity, Scrapper and Motor Graders up to 280 HP and walking Draglines, Mobile cranes etc. Construction equipment, (mainly road construction equipment) such as graders, loaders, excavators, vibratory compactors, hot mix plants etc. are being manufactured indigenously. These machines help to speed up development in irrigation and power projects, coal and iron ore mining, for excavation of lime stone for cement, for development and reclamation of vast track of land, constructing roads, making canals, preparing industrial sites and for all facets of the country's development activity. These machines also reduce dependence on labour and provide automation in construction work.

6.11.2 Indigenous production of Earth-moving and Construction Machinery commenced in the 1960s. Today, our country is, by and large, self-sufficient in respect of these items. In fact, during the last decade, the industry has made enormous progress and has grown both in size and diversity. The total capacity available in the Earth Moving & Construction Equipment Industry is around 6000 units. India has over 60 equipment manufacturers in the organized sector

besides several medium sized units. This industry is dominated by few large manufacturers in each product segment. BEML supplies nearly half of the total market. BEML and Caterpillar lead in dumpers and dozers while L&T, Komatsu and Telecon lead in excavators and Escort JCB in Backhoe loaders. With the Government's emphasis and priority on the development of infrastructure, this group of industry is expected to grow in the near future.

6.12 NATIONAL AUTOMOTIVE TESTING AND R&D INFRASTRUCTURE PROJECT

6.12.1 National Automotive Testing and R&D Infrastructure Project (NATRIP) is a crucial step aimed at bridging major infrastructural deficiency in the sector that has proved to be a retardant to growth, both domestic and global. NATRIP, the largest and one of the most significant initiatives in Automotive sector so far, represents a unique public private partnership between the Government of India, a number of State Governments and the Indian Automotive Industry to create a 'state-of-the-art' Testing, Validation and R&D infrastructure in the country. Availability of such infrastructure will help the Government in introducing superior safety, emission and performance standards in automotive sector. Equally important, this will encourage consolidation and confluence of generic R&D initiatives, deepening of manufacturing and all round sectoral growth leading to optimum realization of its potential in the national economy. A 'state-of-the-art' testing and validation infrastructure will facilitate seamless integration of Indian industry with the world and help create core global competencies in automotive sector in India. NATRIP has, as its focus, a drive to integrate India's strengths in IT and electronics with the automotive engineering which can catapult Indian automotive landscape into a global manufacturing hub.

6.12.2 NATRIP is aimed at addressing one of the most significant constraints of Indian automotive sector and, coupled with several other progressive policy initiatives of the Government in the offing, is likely to provide a major impetus to manufacturing in India significantly unlocking employment potential. Apart from ensuring availability of world class infrastructure to test modern vehicles and components and promoting larger value addition in automotive manufacturing, NATRIP is also slated to make a significant contribution to improving the road safety scenario in the country. India, accounting for nearly 10% of global road fatalities, losses more than 80,000 human lives every year in road accidents. These accidents cost the national economy in excess of Rs. 55,000 crore annually as per an estimate by the Planning Commission. NATRIP is aimed to ensure better safety and performance profile of vehicles. Its cost would be more than fully recovered even if it helps to reduce road accidents by a fraction.

Project envisages, *inter alia*, setting up of the following facilities :-

(i) A full-fledged testing and homologation center within the northern hub of automotive industry at Manesar in the State of Haryana.

(ii) A full-fledged testing and homologation

center within the southern hub of automotive industry at Oragadam 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), Ahmednagar

(iv) World-class proving grounds or testing tracks on more than 4,000 acres of land at Indore in the State of Madhya Pradesh as also the summer and winter pads at suitable climatic locations

(v) National Center for Testing of Tractors and Off-Road Vehicles together with National Facility for Accident Data Analysis and a specialized driving training centre at Rae Bareilly in the State of Uttar Pradesh

(vi) National Specialized Hill Area Driving Training Center as also Regional In-Use Vehicle Management Center at Dholchora (Silchar) in the State of Assam.

6.12.3 In the second phase beginning in 2009, certain 'Centres of Excellence' are proposed to be set up in collaborative efforts in several key areas like convergence of IT and electronics in automotive engineering, advanced materials and recyclability of automotive products, alternative fuels, etc.

6.12.4 Modern Automobiles are becoming increasingly complex. Incessant innovations are driving paradigm shift in not only the way vehicles are manufactured but also what the vehicles consist of. A more sensitized industry is responding on a war footing to the emerging environmental and safety concerns being articulated by discerning global consumers. Large-scale use of information technology, electronics, telematics, smart manufacturing materials are the emerging manufacturing norms. Passenger car of tomorrow will have electronics exceeding half of its value and multiple microprocessors will regulate all its major operations. Cutting edge designing tools based on informatics are already in operation and 'virtual reality centres' are helping auto majors to conceive, design, shape and build vehicles and components in laboratories. Fossil fuels are slated to be supplemented by alternative fuels, which could be sourced from anything like water or plants. In this realm of rapidly increasing sophistication, testing, validation and homologation needs have also become daunting. NATRIP is in keen alignment with these humungous changes and will evolve a cutting edge, flexible and modular testing infrastructure.

6.12.5 Project involves largest ever public investment in this sector amounting to Rs. 1718 crore. Automotive industry has been paying cess since 1983-84 and viewed in this context, the investment is being funded jointly. The real project cost would, however, exceed Rs. 2200 crore if the custom duty exemption granted by the Government and the notional cost of land being made available by various State Governments either free of cost or at highly concessional rates are considered. Most countries have funded these facilities with public investment treating this infrastructure as key to growth and modernization of automotive sector. The results have been most impressive across the globe.

6.12.6 The infrastructure being funded by this one time public investment will be entirely self-

sufficient. All the new centres being created would be autonomous and within a suitable governance framework to be managed and operated by professionals. The governing bodies of these entities shall have members elected from automotive industry as also nominees from the Government. The three main testing and homologation centers are expected to operate in healthy competition with one another in providing the testing and homologation services. However, the centers would also be involved in collaborative efforts on R&D and mutually supportive projects and activities on generic issues.

Dr. Carles Grasas, Managing Director & CEO of IDIADA, Spain and Sh. Sunil Chaturvedi, CEO & PD of NATRIP shaking hands after signing Consultancy Agreement in presence of the Secretary (Heavy Industries and Public Enterprises) Sh. Priyadarshi Thakur.

Chapter - 7

Technology Upgradation and R&D

7.1 A constant, conscious and concerted thrust on R&D is an essential ingredient to enable an enterprise to compete and survive in an increasingly competitive market environment. The deregulation of industry in its wake has brought the international competition at our doorstep further reinforcing the need for upgradation of technology to global standards. The changing demands of user sector also play a significant role in the selection of technologies and introduction of products. Given these realities, the Indian Industry which enjoyed protection for over four decades is bracing up to meet the challenge. The PSEs under the Department have also taken steps to acquire technology through technical and business alliances as well as pure R&D inputs. Areas where the country has specific advantages need to be strengthened to develop a brand image for the nation. In pursuance of these objectives, some of the initiatives taken by the Department are as under:

7.1.1 Integrated Gasification Combined Cycle (IGCC) Project

Lately, the increased production of SPM and green house gases in the atmosphere has worried the authorities and administrators alike. This has resulted in increased stress on more efficient methods of generation and utilization of energy through R&D initiatives. The Department of Heavy Industry in coordination with the Ministry of Power and close involvement of PSEs like BHEL and NTPC, is supporting the Integrated Gasification Combined Cycle (IGCC) project. IGCC is combined cycle power plant wherein the fuel gas for gas turbine is generated by the gasification of coal. The selection of the coal gasification process - which is largely decided by the type of coal available, and its efficiency integration with a suitably designed gas turbine is of paramount importance in achieving higher overall efficiency of IGCC plant.

BHEL has already made some headway in identifying and developing a technology suitable for local coal which has higher ash

content and the project will result in better utilisation of 'high ash' Indian Coal besides improving the efficiency of power generation and reducing pollution.

7.1.2 Testing and R&D infrastructure for Automotive Sector

In India, rapid industrialisation and consequent requirements for mobility of goods and passengers have led to high growth of vehicle population in recent years. Simultaneously, emergence of statutory regulations on emission and safety has necessitated independent and comprehensive testing of vehicles and their major assemblies and sub-assemblies being manufactured and imported into the country. In consonance with the announced policy of positioning India as an international hub for manufacture of small cars, it is proposed to promote setting up of testing and R&D infrastructure in conformity with international safety and emission standards as also undertaking upgradation of existing facilities in the country to cater to the emerging needs of the auto sector.

7.1.3 Scheme for Technology upgradation/R&D facilities for modernization of Machine tools and Textile machinery manufacturing sectors.

It is proposed to introduce a Pilot Scheme for capital goods sector for modernization of machine tools and Textile machinery manufacturing Industry to enhance their competitiveness. Capital goods being strategic, has occupied a central place in the planning process of India since 1951. Over the years, the country has been able to develop a strong engineering and capital goods base capable of manufacturing the entire range of machinery to serve a wide cross-section of Industry segments ranging from defence, oil & gas, refinery, nuclear, chemicals and petrochemicals, fertilizers, automobiles etc. In order to ensure steady growth and enhance the competitiveness of the Industry in the context of increasing globalisation, the scheme is intended to take some key policy initiatives for development of this sector. To start with it is planned to address the core areas of constraints identified in the Industry viz. modernization, business development services and R&D facilities. Initially this effort would be in the form of a 'Pilot Scheme' for two years and would cover the sub-sectors of Machine Tools and Textile machinery only.

7.2 R&D INITIATIVES BY THE PSEs

Some of the programmes of technology upgradation and R&D efforts of the Public Sector Enterprises under the Department of Heavy Industry are detailed below :

7.2.1 Bharat Heavy Electricals Ltd. (BHEL)

During the year 2004-05, a turnover of Rs. 942 crore was achieved by commercializing products and systems developed through in-house R&D. Credit for products and systems which have been commercialised during the last five years only has been taken. An amount of Rs. 125.20 crore was spent on R&D programmes. Of this Rs. 97.07 crore was spent on revenue expenditure, focusing on new product and system developments and improvements in existing products for cost effectiveness and higher reliability, efficiency, availability, quality etc. In addition an expenditure of Rs.27.50 crore was incurred for purchase of capital assets for R&D.

(a) Major R&D and Technology Upgradation Achievements for BHEL include:

- A 'state-of-the-art' Control and Instrumentation (C&I) Platform, code named OMEGA, has been developed as a significant step in the direction of achieving self-reliance in the high-tech and emerging area of C&I. This system is an indigenous automation solution for process control and uses the latest information technology and electronics to facilitate the automation. The system can be used for a wide range of industries like small sugar plants and paper mills to large steel mills and other plants. The system has been already used in the development of control applications like Petrol Depot Automation System, Control System for Diesel-Electric Locomotives and Gravimetric Feeder Control for feeding coal in power plants.

- A Centre of Excellence for Computational Fluid Dynamics (CFD) has been established at BHEL's Corporate R&D Centre, Hyderabad. The Centre will enhance BHEL's capability in the field of CFD, which has emerged as an important tool capable of giving designers valuable insights into the behaviour of fluid flow in complex geometries. With advanced software and manned by technically capable and trained personnel, the Centre will cater to a wide variety of products of the power and industrial sectors.

- BHEL has established a Centre of Excellence for development of Permanent Magnet Machines at its Corporate R&D Centre, Hyderabad. This centre will enable BHEL to develop compact Permanent Magnet Generator (PMG) of high capacity, efficiency and maintenance free operation. The centre can facilitate development of machines of PMG up to 1 MW capacity initially. High capacity PMGs are manufactured by only a few leading MNCs. With this Centre, BHEL will be on par with these MNCs.

- BHEL has proven its capability in the area of Flexible AC Transmission Systems (FACTS) by test commissioning India's first indigenously developed Thyristor Controlled Series Capacitors (TCSC) at the 400 kV sub-station of PGCIL at Ballabhgarh, Haryana. The TCSC is installed at Ballabgarh end of the 400 kV Kanpur – Ballabhgarh line. The project was jointly funded by BHEL, PGCIL and Department of Information Technology (DIT) and executed by BHEL. The system was successfully tested in both open and closed loop up to its maximum capacity. The basic purpose of this installation is to improve power flow and system stability using the in-built damping controller. With this achievement, BHEL joins the select group of few companies possessing 'FACTS' technology.

- For the first time an indigenously designed Bowl Mill of 91 tons per

hour capacity for pulverising coal in thermal power stations has been designed, manufactured and successfully commissioned at Maharashtra State Electricity Board 500 MW Chandrapur site. The optimised capacity will result in reducing the number of mills required for thermal power stations. It can also be used in thermal power plants of higher capacity.

- BHEL has developed in-house, the largest 60 MW Bubbling Fluidised Bed Combustion Boiler for power generation against the maximum size of 40 MW, being supplied so far. A vast potential of replacement of old pulverized fuel boilers of 60 MW rating with these new boilers exists, which can regain the original generating capacity even with poor coal quality. This development has opened a new line of business for the company.

- The first total impregnated turbo generator stator for 250 MW Parichha Unit-3 was successfully manufactured and tested. With this achievement, BHEL has entered a new era of generator design and manufacturing technology. The machine has several design and technological features, namely 'state-of-the-art' insulation technology (totally Vacuum Impregnated Stator) leading to higher thermal stability, increased electrical life and larger operating life. BHEL has orders for 14 sets of this design.

- BHEL has developed a 260 MW steam turbine designed to suit combined cycle power plants that are considered to be the most efficient as they have the highest fuel to electric power conversion efficiency. This design has been offered for NTPC's combined- cycle plant at Kawas.

- To meet the requirement of Greenfield projects where auxiliary steam is not available and to reduce commissioning time, a new eco-friendly, cost effective and less hazardous chemical cleaning system process for boilers using an organic chemical "Ethylene Diamine Tetra Acetic Acid (ETDA)' has been developed as an alternative to conventional hydrochloric acid, and successfully implemented in boilers of 210/250 MW at Panipat and Mejia TPS. The process has resulted in a cycle time reduction of nearly 20 days.

- BHEL has developed Tooling & Technology for machining of Curved Internal Fir Tree Root of Blades of 236 MW Nuclear Turbine on available CNC machines. This development was taken up in anticipation of order of spare blades. The 236 MW Nuclear Turbine blades have Curved Internal Fir Tree Root design and in the past, these roots were machined by Broaching method using imported broaching fixtures. The new method uses Form Cutters in place of Broaching method. The process developed shall provide better quality of

machining in Curved Internal Fir Tree Root Blades as well as reduce the cost of Blades by avoiding import.

- BHEL has developed a Wireless Control using Radio Frequency (RF) to receive the data and send commands. This is a futuristic technology which will find application in many data acquisition and control applications, where laying of cables is not feasible.

- BHEL has designed for the first time a 275 meter high Chimney, Single-flue with segmental Brick-lined-reinforced-concrete for 1x500 MW Birsinghpur TPS. The segmental brick liner is supported at every 10 meter interval. This chimney have been designed using in-house capabilities and resources and experience in design of 220 meter high chimney.

- BHEL has designed for the first time a 220 meter high steel lined Chimney, Twin-flue with reinforced-concrete, using in-house capabilities for 2x250 MW Korba-East TPS. The existing in-house developed software has been modified to suit the design of steel lined chimney. The steel lined chimney construction is in progress. With the development of steel lined chimney, BHEL is at par with the latest technologies in this field and also capable of taking up any new material for flue liner. Similar type of chimneys has also been envisaged in 2x250 MW Mejia 5/6 TPS, 2x250 MW Chandrapura TPS,1x210 MW Amarkantak TPS, 2x210 MW Bakreshwar TPS, 2x250 MW Bhilai TPS.

- BHEL has developed a computer programme FADD (Foundation Automated Design & Drawing) for automated design and drawing generation of Rectangular Foundations of a Building. FADD can automatically generate the required size and reinforcement for all the rectangular foundations of the building, the layout of the designed foundations and the summarized design calculations for all the designed foundations. FADD is an effort to automate the entire process of foundation design, drawing, document generation and achieving 40-50 % cycle time reduction.

- To meet customer requirements, BHEL has modified the design of interrupter of the existing 400 kV SF6 CB (Circuit Breaker) to withstand switching capacity duty of Class-2 (C2) as per IEC 6227-100. A prototype designated 420 kV/ 40kA SF6 Circuit Breaker, has been manufactured and successfully tested at CPRI, Bangalore and CESI, Italy. This has enabled BHEL to compete with other manufacturers.

- BHEL has designed a new GTG (Gas Turbine Generator) suitable for voltage rating 15 kV, 129.2 MW, 3000 rpm, for recent export order from Oman. The old design was suitable for 11 kV voltage rating. The new GTG design is having improved ventilation scheme for rotor winding and end tooth cooling,

which has increased the efficiency by 0.1 %.

- BHEL has designed, manufactured, erected and successfully commissioned pollution control equipment Gas Filtration System (SO2 emission control system) for Glass Plant of M/s SAINT GOBAIN for stream - 90,000 Nm^3/ hour for the first time. The plant is equipped with glass melting furnace with capacity to produce 650 tonnes per day of float glass. The gas cleaning system consists of Forced Draft Gas Cooler, Flue Gas De-sulphurisation System, Electrostatic Precipitators and ID fan.

- BHEL has developed a shaped tube pulse electro chemical machine (STPECM) for drilling deep micro cooling holes in gas turbine buckets.

1800 kVA Dry-Type Cast Resin Transformer by BHEL.

(b) Major R&D/Technology Projects likely to be completed during year 2005-06 are as under -

- Development of three phase AC drive system for Diesel Electric Locomotive-Phase-I.
- Design and development of two stage, triggered spark gap for protection of 400 kV series capacitors.
- Demonstration of 3 kW Polymer Electrolyte Membrane Fuel Cell (PEMFC) stack.
- Preparation of feasibility report and pre-engineering activities for 100 MW IGCC Plant at NTPC – Auraiya.
- Design, manufacturing and testing of a new design variant for 25th stage blade for wide frequency operation (for 210 MW Russian design).
- Development of 8 MW demonstration impulse steam turbine.
- Development of 150 kW, 200 V, 200 – 500 rpm Brushless exciter.
- Development of 3 Phase Compact Circuit Breaker module.
- Design automation of 500 MW Condenser using Knowledge based engineering.
- Development of Bypass over fire air (BOFA) system for NOx Reduction in coal fired boilers.
- Development and testing of 9 MW bulb turbine model.
- Design development of 100-140 MW single cylinder non-reheat steam turbines.

7.2.2 HMT Ltd.

HMT has established R&D centers in every manufacturing unit to meet the needs of research & development of different products with a focus to progressively achieve self-reliance in product technology as well as retain the competitive edge in respect of features, aesthetics and price. Highlights of R&D activities carried out / planned in the different product areas of HMT's domain are as below:

Shri M.S. Zahed, Chairman & Managing Director, HMT Limited hands over an indigenously developed Rugged Duty Manipulator to Dr. Anil Kakodkar, Chairman, Atomic Energy Commission.

a) Tractors:

(i) All HMT engine models for Tractor application have been developed for compliance to Bharat (TREM) stage III exhaust emission norms. With this technology HMT Tractors have become more Eco-friendly.

(ii) Introduced a Tractor model 'HMT Yuva' in 25 HP range, which is the most fuel efficient and economical in the product category.

b) Machine Tools :

The product development /upgradation in Machine Tools are as follows :

- Rotary Surface Grinder RSG 800 CNC
- Surface Grinder SGM – 2 CNC
- Heavy Duty Lathe HDL-70.
- Gear Hobbing Machine H400-4A CNC.
- Horizontal Machining Centre HMC 400M BT50 Taper.
- 4-Axes Turning Centre with Gantry SMC 60.
- Heavy Duty Turning Centre Stallion HD 100S.
- Graphite Turning Centre
- 5-Axes Vertical Machining Centre, Center Size 2000 and 1000.
- CNC Vertical Turning Lathe, Table Size 1000 and 1200
- Spent Fuel Chopper with cutter for BARC
- 4-Axes CNC Needle Sharpening Grinding Machine.
- 8-Axes CNC Crank Shaft Pin Grinding
- Three Piece Manipulator TPM for BARC.
- CNC Sliding Head Automat (JWA with DMG)
- Economic Hinumeric 2200 / 3-axis control / 2-axis spindle.

c) Watches

- Over 50 new model / variants of watches were developed and launched.

d) Bearings

R&D activities remained centered around the development of new Bearings for Defence and Indian Railways as well as improvement of existing Bearings.

7.2.3 Andrew Yule & Co. Ltd. (AYCL)

The main focus of in-house R&D facilitates in the company is to provide continuous

upgradation of existing products to match the domestic market as well as to grab the opportunity in export market. Their task includes new product development, product extension and revalidation of the Test Certificate for the upper ranges to be followed up by proto type development and commercialization. Some of the R&D activities carried out by the company's different units are as follows :

(a) Switchgear Unit developed a 12 KV 40 KA Indoor Vacuum Circuit Breaker panel, 6.6 KV, 400A Vacuum Contactor Panel, and 33 KV 1600A Porcelin Clad Vacuum Circuit Breaker.

(b) Brentford Unit of the company developed Dry Type Transformers of different ratings..

(c) Togami Unit developed –
  (i) 12 KV Katch Sectionalizer Switch.
  (ii) 12 KV 400A 20KA Vacuum Cap Switch with CGL VI as well as 100A and 150A Single Pole DC Moulded Case Circuit Breaker.
  (iii) Development process is in progress for Oil Field Auto Reclosure with Micro Processor based Control panel for export to Bangladesh.

(d) Transformer & Switchgear unit developed a Ring Main Unit with SF6.

7.2.4 Hindustan Paper Corpn. Ltd. (HPC)

Some of the R&D and technological upgradation have been as under -

- Optimization of kappa no. for pulp cooking in digester
- Optimization of fortified rosin consumption
- Regeneration of mercury from Caustic & Chlorine Plant (C&C) effluent.
- Installation of AOX Analyser at Nagaon Paper Mill for measurement and monitoring of AOX in Mill effluents for conforming to environmental management regulation.

7.2.5 Hindustan Newsprint Ltd. (HNL)

Some of the activities undertaken by the company are as under -

- Use of unconventional raw materials for the manufacture of mechanical printing, writing and printing paper.
- Optimization of de-inked pulp content in newsprint furnishes.
- Effect of seasoning on strength and optical properties of reeds.

7.2.6 Rajasthan Electronics & Instruments Ltd. (REIL)

(a) Agro-Dairy Product/applications

- Smart card based DPEMT has successfully been developed by R&D. This product is now ready to be commercialized in a specific project designed by National Dairy Development Board. Special Smart Cards are used to store and carry the shift, day, and monthly summary.
- In line with automation of Electronic Milk Tester, AUTO HANDLE has been developed to incorporate in the existing EMT's running in the field. The trial production of 5 nos. of the units has been undertaken for field evaluation of the product at the milk co-operative societies.
- AUTOEMT developed by R&D has been commercialized and 20 nos. have been installed at various Milk Co-operative Societies under Jodhpur Dairy.
- Solar Electronic Milk Tester has also

been commercialized during the year, which is very useful product in remote rural areas, with deficient/ no electricity.

(b) Solar Photo Voltaic Systems/Modules

- R&D has developed 250 W charge controller for DOT applications. This product has been certified by TEC. The product is now ready for commercialization.
- The 70W SPV based on line inverter for domestic application has been developed. This product has been developed specifically for the urban consumers and shop owners.

(c) Industrial Electronics & Information Technology Sector

- Smart Prepaid Meter developed under Grant-in-Aid was commercialized. 50 Nos. of meters have been installed at Ganga Sagar Island at Kolkata.
- In RFID (Radio Frequency Identification Tags) project, the reader for identification of various tags has been developed. The product is ready for commercialization. Exploration of market potential for different applications is in process. The project is funded by Department of Scientific & Industrial Research, Govt. of India for developing this project indigenously.

Shri M.M. Bhardwaj, Managing Director, REIL, receiving the DSIR National Award, 2004 from the Hon'ble Minister of State for Science & Technology, Shri Kapil Sibal.

7.2.7 Scooters India Ltd.

Product Development

- Development of 3-wheeler with Front mounted 4-stroke gasoline engine and operating on dedicated CNG/LPG mode in process.
- Vikram 350 (P) 3-seater Auto rickshaw fitted with rear mounted 4-stroke petrol engine.

Technology upgradation

- All existing models of three wheelers have been upgraded to meet CMVR norms effective from April 2005.
- Vikram 750-D with Air cooled engine provided with alternator and starter motor instead of dynastarter.
- Upgradation of 2-stroke petrol engine to meet BS-II emission norms on gaseous fuel in progress.
- Chassis material of existing models redefined for higher strength & cost reduction.

7.2.8 Heavy Engineering Corpn. Ltd. (HEC)

(i) Design improvement in Coke Quenching Car of 4.5M Battery for RSP has been done to achieve less than 4% moisture content in quenched coke. Use of this coke will improve the productivity of Blast Furnace.

(ii) Forged plates of low Carbon alloy steel with very low level of impurities were developed and manufactured.

(iii) Successfully developed facility and technology for heat treatment of Bulb bar strips to have required impact properties.

(iv) A Pellini Drop-Weight Testing machine, required for quality assessment of forging for Nuclear field, was indigenously manufactured & commissioned. This impact testing machine is used to determine the temperature at which material will have zero ductility.

(v) CNC Single Column Vertical milling machine model was specially designed for machining rubber insulation items at high-speeds upto 12000 rpm.

(vi) Planetary Gear Box for FFP – Planetary Gear Box having gear ratio of 44.4 for gas plant/FFP was developed as import substitution by reverse engineering.

(vii) Hot Blast Valve dia 1200 & Burner cut off Valve dia 1400 – Design was developed for the fabricated body with integral rings and fabricated disc. Both the body and the disc are lined with refractory. The design provides efficient cooling and perfect leak proof with increased life and reliability as compared to the conventional design without refractory.

7.2.9 Burn Standard Co. Ltd. (BSCL)

(i) Benefication of Magnesite through Bio-leaching.
After getting encouraging results in BIO-LEACHING of Magnesite for removal of Silica impurity in Pilot Plant trials, the same process is being introduced to Commercialise the Bio-leaching process.

(ii) Through indigenous R&D work, Salem Works have been able to produce good quality Mag Chrome / Chrome Mag Bricks by using cheaper raw materials. As a result of which rejection percent of fired Mag Chrome / Chrome Mag bricks has reduced from 7% to 5% on an average.

(iii) Implementation Huck Bolt in place of Rivets as per requirement of Rly. Board are under implementation for Wagon production.

7.2.10 Braithwaite & Co.Ltd. (Braithwaite)

(i) R&D efforts in the company are related to technological improvement of existing products. Technology upgradation in the fields of manufacturing process has been achieved by introduction of CNC Shearing m/c., Automatic Material Handling facilities and Plasma Cutting m/cs.

(ii) The company has also installed and commissioned 5T Electric Arc Furnace at Angus unit for melting of steel for production of castings through improved technology of Arc furnace from the existing method of melting by induction furnace.

7.3 NATIONAL LEVEL INSTITUTES FOR R&D IN NEW TECHNOLOGIES

7.3.1 In the past, five national level institutes have been set up with UNIDO/UNDP assistance for research in new technologies. These are; Fluid Control Research Institute (FCRI), Pollution Control Research Institute (PCRI), Centre for Electric Transportation Technology (CET), Ceramic Technological Institute (CII), and Welding Research Institute (WRI). Out of these only FCRI is under the direct administrative control of the Department while the remaining four are under the control of BHEL.

7.3.2 Fluid Control Research Institute, Palghat

The Fluid Control Research Institute (FCRI), set up as an independent national centre for developing a frame of reference/ standardisation in flow control/metering with precision, provides infrastructural facilities for applied engineering research projects in the area of fluid flow. It also acts as a national certifying authority for testing and calibration for all kinds of flow products. It has helped many organisations in obtaining ISO 9000 certification by calibrating their reference/master instruments with traceability to national standards and by imparting training as laid down in the ISO 9000 system requirements. It has set up a 20 bar HP air flow calibration and testing facility to enable the petroleum companies to have the tests carried out in India.

A view of the Water Flow Lab. – FCRI.

7.3.3 Ceramic Technological Institute, Bangalore

The developmental objective of this project is to support the Indian Ceramic Industry in modernising its technology and to develop new products of advanced ceramics. Many ceramic products required for the industry have been developed and a few of them commercialised. Test and evaluation services in this field are being provided to the industry by this Institute.

7.3.4 Centre for Electric Transportation, Bhopal

The Project for development of Electric Transporation Technology was approved by the Govt. of India and UNDP in July 1988. The capabilities in the Centre have been developed to analyse and test all aspects of electrically powered vehicle designs to improve their performance, reliability and efficiency. The Centre is also able to conduct both computer and physical simulations of the vehicles' performance under all different operating conditions.

7.3.5 Pollution Control Research Institute, Hardwar

Pollution Control Research Institute (PCRI) was set up by Department of Heavy Industry with Bharat Heavy Electricals Ltd. (BHEL) as the lead agency under United Nations Development Programme (UNDP). FCRI has evolved industrial pollution control technologies with respect to air, water, house and solid wastes to avoid unintended side effects of economic growth. The Institute provides services to various industries and Thermal Power Stations on a regular basis.

7.3.6 Welding Research Institute (WRI), Tiruchirapalli

Welding Research Institute (WRI), the only one of its kind in the country, is equipped with state-of-the-art welding research facilities like electron and laser beam, flashbutt, friction and plasma welding in addition to facilities for conventional arc welding. Further, it has advanced testing facilities for fatigue testing, Residual stress measurement, Residual life estimation etc. The institute has been providing services to ISRO, Indian Railways, Defence and industry in Public and Private sector.

Chapter - 8

Welfare of Minorities

8.1 This Department is highly conscious regarding the obligations of Public Sector Enterprises under this Department to promote the welfare of minorities in the light of Government's directive on the subject. Instructions issued by the Government in respect of reservation in appointment/promotions for SC/ST/OBC, handicapped persons and minorities have been generally followed by the PSEs under this Department. As per the Prime Minister's directions a special recruitment drive to fill up backlog vacancies reserved for SCs and STs in Central Public Enterprises has been launched.

8.2 An SC/ST Cell has been functioning under the supervision of a Liaison Officer of the rank of Director for proper monitoring of the implementation of reservation Policy of Government of India. This Cell is also responsible for conducting annual inspections of reservation rosters of the PSEs. The work force in the PSEs consists of a large number of persons from different minority communities. Their integration into the mainstream workforce is complete in all PSEs and there is no discrimination on account of their creed or religious beliefs. In terms of facilities like residential accommodation etc. all employees are treated at par.

8.3 Every year Quami 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.

Chapter - 9

Empowerment/Welfare of Women

9.1 Department of Heavy Industry and the PSEs under its administrative control constantly endeavour to ensure that there is no discrimination against women on any account. All members of the staff are made conscious of the principles of gender mainstreaming and gender justice enshrined in the Constitution of India.

9.2 In order to create awareness regarding human rights especially of female employees, Department of Heavy Industry, in accordance with the directions issued by the Government for the preservation and enforcement of rights to gender equality and justice to working women employees, a Complaint Committee headed by a woman officer is in place in this 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 and training etc. This helps in ensuring their integration into the mainstream work force.

9.3 In terms of Ministry of Finance, Department of Economic Affair's instructions, a Gender Budgeting Cell has been constituted in the Department to address issues pertaining to gender budgeting.

Chapter - 10

Vigilance

10.1 Vigilance activity is an essential requirement of any organization. The Department has a Chief Vigilance Officer of the rank of Joint Secretary to look into complaints against the employees of the Department as well as Board Level Officers of the Public Sector Enterprises and Organizations under its administrative control. He is assisted by a Director, one Under Secretary and a Vigilance Section.

10.2 The main areas of work of Vigilance Section are:

- Dealing with complaints against Board level appointees of PSEs as well as the officers of the Department of Heavy Industry;
- Issue of vigilance clearance in respect of Board level appointees in PSEs and all other appointments based on PSEs recommendation requiring ACC approval;
- Liaisoning with CVC, CBI and CVOs of PSEs under DHI to streamline flow of information in respect of vigilance matters;
- Tendering advice on issues of financial irregularity and procedural irregularity;
- Vetting charge sheet in respect of charges against Board level appointees.

10.3 The vigilance organization also lays emphasis on preventive vigilance and is promoting the use of IT to bring about greater transparency, However, punitive measures are also taken in appropriate cases and followed up wherever required.

10.4 Vigilance Section is responsible for maintaining Annual Confidential Reports of officers and staff of the Department and also of the Board level appointees & Central Vigilance Officers (CVOs) of PSEs under the administrative control of this Department.

10.5 Vigilance Section also monitors submission of Annual Property Returns by officers and staff of the Department of Heavy Industry as well as the Chief Executives of PSEs under the Department of Heavy Industry.

Chapter - 11

Progressive Use of Hindi

11.1 The Official Language Section in the Department takes up measures to promote use of Hindi in the Department. Efforts to promote the use of Hindi in official works of the Department continued during the period under review. The Official Language Implementation Committee held its periodical meetings regularly to review the progress made in use of Hindi and suggested ways to remove the impediments in implementation of provisions of the Official Language Act, 1963 and the rules made there under.

11.2 During the period under review, the Parliamentary Committee on Official Language inspected the offices of Cement Corporation of India Ltd., New Delhi, Bharat Heavy Electricals Ltd., Bangalore and Trichirapalli, Nagaland Pulp and Paper Corporation, Nagaland, HMT Chinar Watches Ltd. Srinagar (J&K) and Engineering Projects (India) Ltd., New Delhi and has expressed satisfaction with the progress of Hindi. The officers of the Department carried out inspections of some enterprises during the year to monitor progress made in the use of Hindi and the officers of these enterprises so visited were apprised of the Official Language Policy of the Government of India.

11.3 All the Notifications, Resolutions, Notes and Circulars, Parliament Questions, Annual Reports, (Budget Performance) General Orders and papers laid on the Tables of both Houses of the Parliament were issued both in Hindi and in English. All the letters received in Hindi were responded to in Hindi. In order to promote the use of Hindi and to increase correspondence in Hindi "Hindi Pakhwara" was organized from 14th September, 2005 to 30th September, 2005 during which several competitions including noting/drafting, translation from English to Hindi and vice-versa, Hindi typing on computer etc. were conducted. Officers of the Department participated in these activities with keen interest. Cash awards were given to winning candidates. A workshop was also organized for officers/

employees of the Department to impart training in noting/drafting in Hindi as well as filling up the proforma for quarterly report for progressive use of Hindi correctly. They were also apprised of the Official Language Act, 1963.

11.4 Following important steps were taken to promote progressive use of Hindi in official work during the year:-

- Under rule 10(4) of the Official Language (Use for official purpose of the Union) Rule, 1976, vide which the Central Government is required to notify the offices where more than 80% staff have acquired working knowledge of Hindi, the Department has accordingly identified and notified Units of Bharat Heavy Electricals Ltd. i.e. Bharat Heavy Electricals Ltd. Nagpur (Maharashtra) and Vadodra (Gujarat).

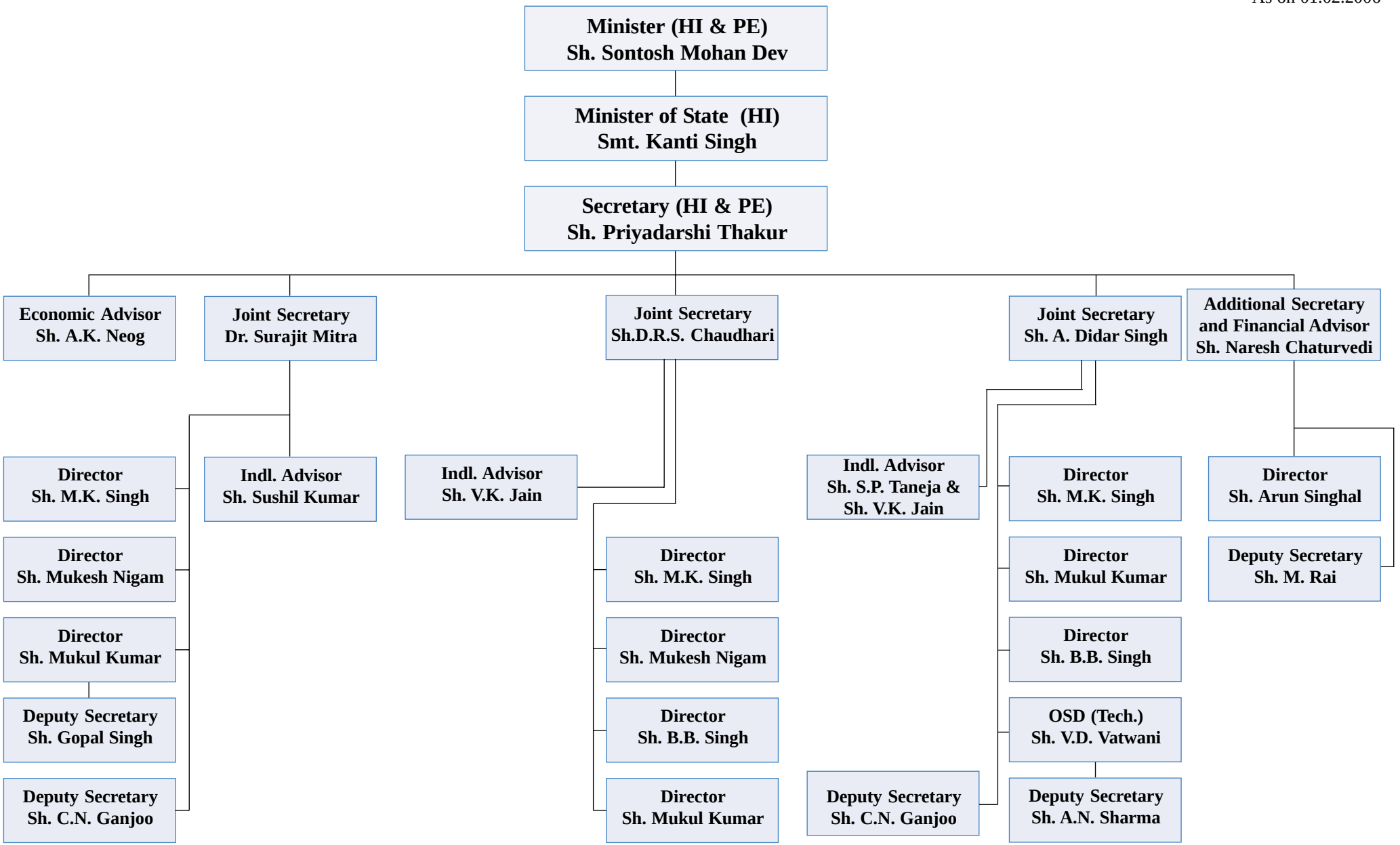
- Implementation of the programme of learning Hindi through **'AAJ KA SHABDA'.**

11.5 Public Sector Enterprises, 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 organized in these PSEs to propagate use of Hindi. **"HINDI PAKHWARA"/"HINDI WEEKS"** were celebrated in these PSEs with great zeal.

ANNEXURE - I

ORGANOGRAM OF DEPARTMENT OF HEAVY INDUSTRY

As on 01.02.2006



ANNEXURE-II

General Information about the Public Sector Enterprises under the Department of Heavy Industry

(Rs. in crore)

Sl.No.	Name of PSE and location of Registered Office	Year of setting up of PSE	Gross Block as on 31.3.2005 (Provisional)
1	Andrew Yule & Co. Ltd. (AY & CO) Kolkata	1979	201.24
2	Hoogly Printing Kolkata	1979	1.66
3	Bharat Heavy Electricals Ltd. (BHEL), New Delhi	1956	3724.00
4	Burn Standard Co. Ltd. (BSCL), Kolkata	1976	134.80
5	Braithwaite & Co. Ltd., Kolkata	1976	40.67
6	Bharat Wagon Engineering Company Ltd. (BWEL), Patna	1978	16.71
7	BBJ Construction Co. Ltd.	1987	6.05
8	Bharat Heavy Plate & Vessels Ltd. (BHPV), Vishakhapatnam	1966	78.85
9	Bharat Pumps & Compressors (BPCL), Allahabad	1970	38.24
10	Richardson & Cruddas (R&C), Mumbai	1972	34.73
11	Triveni Structurals Ltd. (TSL), Allahabad	1965	20.15
12	Tunghabhadra Steel Products Hospet, Karnataka	1967	21.66
13	Bridge and Roof Co. (India), Kolkata	1972	103.85
14	Hindustan Cables Ltd. (HCL), Kolkata	1952	523.68
15	Heavy Enginering Corpn. Ltd. (HEC), Ranchi	1958	316.97

(Rs. in crore)

Sl.No.	Name of PSE and location of Registered Office	Year of setting up of PSE	Gross Block as on 31.3.2005 (Provisional)
16	HMT Ltd (Holdg Company), Bangalore	1953	114.34
17	HMT Machine Tools Ltd., Bangalore	2000	212.22
18	HMT Watches Ltd, Bangalore	2000	187.78
19	HMT Chinar Watches Ltd., Jammu	2000	10.53
20	Praga Tools Ltd. (PTL) Secundrabad	1959	35.02
21	HMT (Bearing), Hyderabad	1981	28.74
22	HMT (International), Bangalore	1974	22.35
23	Instrumentation Ltd. (IL), Kota	1964	67.23
24	REIL, Jaipur	1981	9.92
25	Scooters India Ltd. (SIL), Lucknow	1972	50.27
26	Cement Corpn. of India Limited (CCI), New Delhi	1965	646.28
27	Hindustan Paper Corporation Ltd. (HPC), Kolkata	1970	814.34
28	Hindustan Newsprint Ltd. (HNL) Vellore, Kottayyam	1983	376.12
29	Hindustan Photo Films Mfg. Co. Ltd. (HPF), Ooty	1960	720.63
30	Hindustan Salts Limited (HSL), Jaipur	1959	4.92
31	Sambhar Salts Limited (SSL), Jaipur	1964	7.75
32	NEPA Ltd (NEPA), Nepanagar	1958	115.00

(Rs. in crore)

Sl.No.	Name of PSE and location of Registered Office	Year of setting up of PSE	Gross Block as on 31.3.2005 (Provisional)
33	Tyre Corpn. of India Ltd. (TCIL),	1984 Kolkata	117.37
34	Engineering Projects (India) Ltd. (EPI), New Delhi	1970	21.79
	TOTAL		**8825.86**

Note : (i) 9 PSEs namely, BPME, WIL, BBVL, RBL, TAFCO, CCIL, NBCIL, MAMC & RIC have been closed and 5 PSEs (BLC, NIDC, NPPC, BOGL & NIL) are not in operation.

(ii) Apart from above 34 PSEs , there are two non-manuacturing holding companies (BBUNL & BYNL) and one operatioal subsidiary namely; Scooters India International GmbH.

ANNEXURE-III

Employment Position including SC, ST & OBC as on 31.3.2005 in Public Sector Enterprises under the Department of Heavy Industry

S. No.	Name of PSE	TOTAL NO. OF EMPLOYEES				No. of Employees		
		Executives	Supervisors	Workmen/ Others	Total	SC	ST	OBC
1	2	3	4	5	6	7	8	9
1	Andrew Yule	211	108	15583	15902	962	4548	8066
2	Hoogly Printing	8	8	47	63	1	0	0
3	BHEL	9984	7175	26143	43302	7985	1751	3004
4	BSCL	126	168	1262	1556	169	14	283
5	BRAITHWAITE	63	31	455	549	56	1	0
6	BWEL	43	44	871	958	85	2	296
7	BBJ	45	6	40	91	6	1	0
8	BHPV	326	139	1053	1518	264	110	283
9	BPCL	222	47	975	1244	197	2	382
10	R&C	24	9	44	77	9	0	6
11	TSL	68	50	202	320	34	0	112
12	TSP	38	21	289	348	82	9	96
13	B&R	461	475	329	1265	166	5	37
14	HCL	451	494	2233	3178	842	232	200
15	HEC	827	957	1826	3610	308	649	849
16	HMT (Holding Co.)	275	188	2026	2489	567	108	28
17	HMT (MT)	1017	476	3038	4531	786	216	822
18	HMT (Watches)	246	216	1718	2180	388	98	306
19	HMT (Chinar Watches)	20	99	513	632	49	4	0
20	PTL	93	12	449	554	96	13	120
21	HMT (Bearings)	52	48	256	356	45	0	135

S. No.	Name of PSE	TOTAL NO. OF EMPLOYEES				No. of Employees		
		Executives	Supervisors	Workmen/ Others	Total	SC	ST	OBC
1	2	3	4	5	6	7	8	9
22	HMT (I)	40	26	10	76	11	3	9
23	IL	251	810	691	1752	287	81	279
24	REIL	55	43	98	196	27	11	31
25	SIL	222	75	1450	1747	305	2	475
26	CCI	182	204	1200	1586	195	125	197
27	HPC	602	215	2087	2904	292	232	51
28	HNL	193	89	804	1086	70	4	224
29	HPF	93	67	924	1084	177	55	501
30	HSL	15	36	89	140	20	9	28
31	SSL	9	26	105	140	38	8	35
32	NEPA	127	0	1348	1475	123	25	77
33	TCIL	31	38	239	308	15	2	0
34	EPIL	357	84	15	456	76	13	20
	TOTAL	**16777**	**12484**	**68412**	**97673**	**14733**	**8333**	**16952**

Note: (i) 9 PSEs namely; BPME, WIL, BBVL, RBL, TAFCO, CCIL, NBCIL, RIC and MAMC have been closed and 5 PSEs (BLC, NIDC, NPPC, BOGL & NIL)) are not in operation.

(ii) Apart from above 34 Operating PSEs, there are two non-manufacturing holding companies (BBUNL & BYNL) and one non-operational Subsidiary, namely; Scooter India International, GmbH.

ANNEXURE-IV

Statement showing Production Performance of Public Sector Enterprises under the Department of Heavy Industry

(Rs. in crore)

S.No.	Name of PSE	2002-2003 (Actual)	2003-2004 (Actual)	2004-2005 (Actual)	2005-2006 (Anticipated)	2006-2007 (Target)
1	2	3	4	5	6	7
1	AY & CO	106.55	96.62	119.64	112.55	199.16
2	Hooghly Printing	11.64	8.39	9.98	11.00	12.00
3	BHEL	7482.00	8662.00	10336.00	12000.00	13000.00
4	BSCL	208.35	176.92	186.24	227.47	304.84
5	BRAITHWAITE	75.07	66.37	66.20	99.23	135.76
6	BWEL	40.47	12.55	19.63	64.77	99.90
7	BBJ	46.59	26.58	38.29	51.65	55.00
8	BHPV	145.11	33.54	140.71	122.00	203.00
9	BPCL	66.41	50.57	70.00	82.00	102.00
10	R&C	47.47	89.58	15.40	26.89	30.10
11	TSL	24.58	30.00	1.50	1.75	2.00
12	TSP	10.84	3.50	3.36	4.50	22.35
13	B&R	364.24	393.47	455.65	500.00	605.00
14	HCL	391.35	121.40	21.19	7.00	0.00
15	HEC	134.64	151.34	188.80	210.44	323.46
16	HMT (Holding Co.)	141.45	129.35	186.74	302.61	354.53
17	HMT (MT)	197.07	177.95	208.10	280.00	375.00
18	HMT (Watch)	44.49	25.64	19.33	62.00	110.00
19	HMT (Chinar Watches)	1.97	1.97	0.20	2.64	15.00
20	PTL	6.29	8.12	10.53	14.56	22.50
21	HMT (B)	18.41	23.60	24.42	40.00	42.00
22	HMT (I)	43.92	32.90	29.08	51.00	61.20

(Rs. in crore)

S.No.	Name of PSE	2002-2003 (Actual)	2003-2004 (Actual)	2004-2005 (Actual)	2005-2006 (Anticipated)	2006-2007 (Target)
1	2	3	4	5	6	7
23	IL	131.53	153.25	175.85	200.00	225.00
24	REIL	40.44	44.70	49.52	48.00	50.50
25	SIL	134.50	148.62	135.36	155.49	180.21
26	CCI	120.69	131.33	178.53	189.45	197.52
27	HPC	565.08	581.91	551.62	616.03	638.80
28	HNL	204.05	250.99	273.55	294.88	302.40
29	HPF	30.32	35.13	16.83	13.50	30.86
30	HSL	6.69	5.63	4.71	13.90	19.86
31	SSL	6.22	5.25	7.19	7.98	20.83
32	NEPA	32.04	39.03	38.47	69.11	105.21
33	TCIL	128.22	144.32	60.31	139.06	168.00
34	EPI	358.71	462.69	526.45	611.30	710.52
	Total	**11367.40**	**12325.21**	**14169.29**	**16632.76**	**18724.51**

Note: (i) 9 PSEs namely; BPME, WIL, BBVL, RBL, TAFCO, CCIL,NBCIL, RIC, MAMC have been closed and 5 PSEs (BLC, NIDC, NPPC, BOGL & NIL) are not in operation.

(ii) Apart from above 34 operating PSEs, there are two non-manufacturing holding companies (BBUNL & BYNL) and one non-operational subsidiary, namely; Scooters India International GmbH.

ANNEXURE-V

Statement showing Profit(+)/Loss(–) (before tax) of Public Sector Enterprises under the Department of Heavy Industry

(Rs. in crore)

S. No.	Name of PSE	2002-03 (Actual)	2003-04 (Actual)	2004-05 (Actual)	2005-06 (Anticipated)	2006-07 (Target)
1	2	3	4	5	6	7
(A) PROFIT-MAKING PSEs						
1	Hoogly Printing	1.72	1.16	1.50	1.52	1.70
2	BHEL	803.00	1015.00	1581.00	1472.00	1655.00
3	HPC	40.60	59.69	55.60	55.84	56.42
4	HNL	-7.55	8.22	9.54	24.73	32.05
5	HMT (Hldg. Co.)	-34.01	-7.19	18.50	2.47	46.03
6	HMT (I)	0.34	0.13	0.08	0.55	0.75
7	HSL	-2.78	-2.41	8.34	0.61	0.58
8	SSL	-2.66	-3.11	2.35	-0.71	0.55
9	B&R	3.85	4.24	1.49	5.00	10.00
10	BBJ	-4.39	-24.30	0.33	0.76	1.51
11	EPI	3.01	29.66	7.85	12.00	15.00
12	REIL	3.55	2.88	3.03	1.73	2.75
13	SIL	2.65	3.16	1.39	2.05	3.02
	Sub-total for (A) Profit-making Companies	**807.33**	**1087.13**	**1691.00**	**1578.55**	**1825.36**
(B) LOSS-MAKING PSEs						
14	AY & CO	-60.66	-54.63	-75.44	-79.11	25.00
15	BRAITHWAITE	-29.22	-23.56	-21.91	-15.93	5.27
16	BSCL	-73.74	-110.65	-118.72	-120.34	-99.26
17	BWEL	-10.58	-24.05	-28.10	-16.24	-9.26
18	TSP	-2.63	-99.98	-16.64	-23.04	-3.80
19	BHPV	-187.63	-152.92	-78.24	-52.83	-34.81

(Rs. in crore)

S. No.	Name of PSE	2002-03 (Actual)	2003-04 (Actual)	2004-05 (Actual)	2005-06 (Anticipated)	2006-07 (Target)
1	2	3	4	5	6	7
20	BPCL	-12.92	-18.64	-11.62	1.35	9.52
21	R&C	-28.19	-39.26	-33.06	-44.00	-44.00
22	TSL	-26.26	-47.99	-48.00	-41.32	-38.76
23	HCL	-256.31	-307.87	-270.88	-300.15	-343.71
24	HEC	-173.82	-132.68	-285.02	-196.64	6.07
25	HMT(B)	-15.03	-9.58	-10.38	-8.72	-8.60
26	HMT (MT)	-102.05	-119.08	-73.80	-48.88	5.77
27	HMT (Watch)	-112.92	-134.81	-134.53	-110.64	1.28
28	HMT (Chinar Watch)	-6.31	-21.92	-25.23	-27.12	71.38
29	PTL	-37.50	-16.04	-34.39	-2.63	13.59
30	IL	-29.18	-29.02	-16.98	1.05	5.85
31	CCI	-215.36	-80.95	-218.94	-227.65	-230.56
32	HPF	-385.39	-443.02	-496.41	-539.57	-558.99
33	NEPA	-52.11	-46.17	-48.61	-46.52	-45.98
34	TCIL	-16.91	4.55	-56.87	-53.07	-53.50
	Sub-total (B) Loss-making Companies	**-1834.72**	**-1908.27**	**-2103.77**	**-1952.00**	**-1327.50**
	GRAND TOTAL(A & B)	**-1027.39**	**-821.14**	**-412.77**	**-373.45**	**497.86**

Note: (i) 9 PSEs namely; BPME, WIL, BBVL, RBL, TAFCO, CCIL, NBCIL, RIC and MAMC have been closed and 5 PSEs (BLC, NIDC, NPCC, BOGL & NIL) are not in operation.

(ii) Apart from above 34 operating PSEs, there are two non-manufacturing holding companies (BBUNL & BYNL) and one non-operational subsidiary, namely, Scooters India Internal GmbH.

ANNEXURE - VI

STATEMENT SHOWING SALARY/WAGE BILL & SOCIAL OVERHEADS AS % OF TURNOVER OF PUBLIC SECTOR ENTERPRISES UNDER THE DEPARTMENT OF HEAVY INDUSTRY

Sl.No.	Name of PSE	Wages and salaries as % of Turnover					Social overheads as % of Turnover				
		2002-03 (Actual)	2003-04 (Actual)	2004-05 (Actual)	2005-2006 (Anticipated)	2006-07 (Target)	2002-03 (Actual)	2003-04 (Actual)	2004-05 (Actual)	2005-2006 (Anticipated)	2006-2007 (Target)
1	2	3	4	5	6	7	8	9	10	11	12
1	AY&CO	54.85	46.70	40.13	37.30	16.00	5.50	5.40	9.93	9.50	8.50
2	Hoogly Ptg.	13.48	18.01	15.64	15.81	1525.00	1.02	1.20	1.23	1.17	1.12
3	BHEL	20.11	18.93	15.97	15.63	16.00	2.52	2.86	2.21	2.08	1.92
4	BSCL	20.54	15.43	12.73	13.14	11.08	2.08	2.18	4.14	2.19	1.67
5	BRAITHWAITE	31.70	20.26	21.20	10.39	9.42	1.50	0.88	0.78	0.77	1.08
6	BWEL	58.79	158.99	96.29	28.06	26.57	1.07	2.34	1.74	2.30	2.06
7	BBJ	12.59	15.19	10.00	9.79	9.62	0.87	1.07	0.69	0.82	0.73
8	BHPV	29.18	55.56	29.15	15.00	20.43	2.17	19.28	16.65	6.64	10.23
9	BPCL	42.70	50.01	34.00	30.50	24.90	1.62	1.91	1.24	1.01	0.84
10	R&C	27.75	20.96	2.40	2.68	4.80	0.94	1.30	1.67	1.19	1.18
11	TSL	219.18	2019.00	1664.00	1005.00	500.00	3.71	64.70	85.00	90.00	50.00
12	TSP	69.60	35.20	10.28	6.00	3.50	3.91	29.52	26.96	14.81	2.52
13	B&R	9.64	9.55	7.73	7.10	6.03	1.86	1.52	1.79	1.52	1.31
14	HCL	15.28	52.30	278.63	1020.86	0.00	1.62	4.91	23.04	78.00	0.00
15	HEC	31.02	34.05	29.77	27.47	18.21	4.56	5.33	5.12	1.43	1.08
16	HMT(Hldg)	32.43	37.70	30.06	18.90	14.29	3.48	4.18	3.07	1.93	1.55
17	HMT(MT)	43.00	54.00	43.00	32.00	33.00	3.00	4.00	3.00	3.00	3.00
18	HMT(Watches)	105.00	148.00	165.00	52.00	25.00	2.00	3.00	4.00	1.00	1.00
19	HMT(Chinar)	1072.00	928.00	1491.00	409.00	188.00	152.00	167.00	280.00	78.00	36.00
20	PTL	109.00	73.00	55.00	48.00	28.00	42.00	26.00	21.00	15.00	8.00
21	HMT(B)	48.81	26.19	26.07	19.88	19.88	5.21	2.92	3.20	2.44	2.44
22	HMT(I)	4.66	5.71	7.56	4.52	4.00	0.98	1.47	1.56	1.00	0.67
23	IL	28.90	21.92	20.26	17.00	15.56	1.70	1.29	1.03	0.88	0.78
24	REIL	8.08	7.70	7.87	8.62	8.85	1.75	1.43	1.49	1.72	1.80
25	SIL	16.70	15.77	17.36	15.32	14.60	4.74	5.63	6.40	6.59	5.92
26	CCI	32.07	19.80	11.45	11.02	10.75	11.61	8.79	4.76	4.10	3.74
27	HPC	9.31	9.22	10.08	8.92	8.74	4.62	4.62	5.13	4.90	4.78
28	HNL	11.38	8.54	8.32	7.24	7.11	4.49	4.08	3.87	4.33	3.91
29	HPF	49.07	45.18	72.97	105.54	47.33	2.74	2.39	4.62	4.77	2.00
30	HSL	63.44	60.44	42.94	40.31	18.87	3.67	3.56	3.99	3.49	1.47
31	SSL	47.26	53.23	39.54	39.06	15.05	3.22	3.61	2.95	2.99	1.15
32	NEPA	30.00	43.00	36.00	22.00	13.00	5.00	7.00	7.00	2.00	2.00
33	TCIL	14.47	7.73	45.05	24.96	26.83	5.00	3.02	4.60	2.37	2.02
34	EPIL	5.27	4.38	3.61	3.37	3.41	1.00	1.25	0.63	0.88	0.47

Note (i) 9 PSEs namely; BPME, WIL, BBVL, RBL, TAFCO, CCIL, NBCIL, RIC and MAMC have been closed and 5 PSEs (BLC, NIDC, NPPC, BOGL & NIL) are not in operation.

(ii) Apart from above 34 Operating PSEs, there are two non-manufacturing holding companies (BBUNL & BYNL) and one non-operational Subsidiary, namely; Scooters India International GmbH.

ANNEXURE-VII

Statement showing Order Book Position of Public Sector Enterprises under the Department of Heavy Industry

(Rs. in crore)

S.No.	Name of PSE	As on 1.10.2001	As on 1.10.2002	As on 1.10.2003	As on 1.10.2004	As on 1.10.2005
1	2	3	4	5	6	7
1	AY & CO	140.05	131.66	103.54	86.05	92.91
2	Hoogly Ptg	0.20	2.60	1.10	1.50	6.50
3	BHEL	10029.00	12573.00	15800.00	23650.00	32000.00
4	BSCL	86.83	111.02	174.74	152.80	102.80
5	Braithwaite	19.98	106.85	130.59	144.11	228.72
6	BWEL	33.24	32.68	115.48	101.99	150.94
7	BBJ	40.09	51.99	44.19	73.52	116.54
8	BHPV	183.05	130.41	115.50	186.90	302.90
9	BPCL	73.91	38.83	43.50	48.70	153.02
10	R&C	79.71	158.15	69.20	32.70	53.74
11	TSL	38.58	37.72	36.00	22.40	16.30
12	TSP	25.95	32.65	24.40	15.70	3.73
13	B&R	375.77	385.16	636.40	581.66	856.02
14	HCL	243.49	351.63	164.00	138.25	1.32
15	HEC	150.32	99.63	192.90	314.45	433.27
16	HMT (Hldg)	NA	NA	NA	NA	
17	HMT (MT)	145.08	99.19	111.23	166.65	175.31
18	HMT (Watch)	NA	NA	NA	NA	NA
19	HMT (Ch. watch)	NA	NA	NA	NA	NA
20	PTL	8.12	5.30	4.47	5.86	3.40
21	HMT (Bearing)	2.28	2.15	2.15	2.19	23.98
22	HMT (I)	42.53	53.15	12.11	21.68	7.51
23	IL	75	85	120.00	165	158
24	REIL	19.43	16.94	27.09	18.87	28.13
25	SIL	–	–	–	–	–
26	CCI	110.41	4.17	7.13		
27	HPC	24.10	4.15	15.21	27.46	12.76
28	HNL	–	–	–	–	–
29	HPF	0.00	5.10	2.60	2.85	5.57
30	HSL	0.39	3.22	6.12	7.03	4.57
31	SSL	2.10	1.03	2.07	2.84	4.36
32	NEPA	6.59	5.94	4.99	13.15	20.74
33	TCIL	5.00	4.80	5.00	1.00	3.00
34	EPIL	626.45	595.78	891.26	1459.96	1580.39
	TOTAL	**12587.65**	**15129.90**	**18862.97**	**27445.27**	**36546.43**

Note: (i) 9 PSEs namely; BPME, WIL, BBVL, RBL, TAFCO, CCIL, NBCIL, RIC and MAMC have been closed and 5 PSEs (BLC, NIDC, NPPC, BOGL & NIL) are not in operation.

(ii) Apart from above 34 Operating PSEs, there are two non-manufactuting holding companies (BBUNL & BYNL) and one non-operational Subsidiary, namely; Scooters India International GmbH.

ANNEXURE - VIII

EXPORT PERFORMANCE OF PUBLIC SECTOR ENTERPRISES UNDER THE DEPARTMENT OF HEAVY INDUSTRY

(Rs. in crore)

		2001-2002 (Actual)			2002-2003 (Actual)			2003-2004 (Actual)			2004-2005 (Actual)			2005-2006 (Anticipated)		
Sl	PSEs	Physical	Deemed	Total	Physical	Deemed	Total	Physical	Deemed	Total	Physical	Deemed	Total	Physical	Deemed	Total
No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	AY&CO	8.09	0.00	8.09	6.51	2.10	8.61	0.53	1.60	2.13	1.25	2.65	3.90	2.50	3.50	6.00
2	BHEL	987.00	1524.00	2511.00	637.00	1529.00	2166.00	596.00	1454.00	2050.00	829.00	1297.00	2126.00	910.00	3438.00	4348.00
3	BSCL	4.89	0.00	4.89	1.48	13.17	14.65	2.53	4.90	7.43	4.71	0.00	4.71	2.39	0.00	2.39
4	BBJ	0.00	1.43	1.43	0.00	0.63	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	BHPV	0.00	6.37	6.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	BPCL	0.00	0.10	0.10	0.00	4.63	4.63	0.00	5.29	5.29	0.00	7.03	7.03	0.00	10.00	10.00
7	R&C	0.24	0.30	0.54	0.71	0.00	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	TSPL	1.69	1.86	3.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	B&R	8.47	0.00	8.47	8.97	0.00	8.97	0.65	0.00	0.65	2.85	0.00	2.85	3.20	0.00	3.20
10	PTL	0.00	0.00	0.00	0.00	0.15	0.15	0.08	0.57	0.65	0.30	0.22	0.52	0.35	0.15	0.50
11	HMT (I)	49.68	0.00	49.68	34.73	0.00	34.73	29.94	0.00	29.94	28.17	0.00	28.17	50.00	0.00	50.00
12	IL	0.25	1.34	1.59	0.51	1.89	2.40	0.26	3.85	4.11	0.47	5.32	5.79	0.50	6.50	7.00
13	REIL	0.08	0.00	0.08	0.09	0.00	0.09	0.17	0.14	0.31	13.36	0	13.36	2.00	0.25	2.25
14	SIL	0.31	0.00	0.31	0.94	0.00	0.94	1.06	0.00	1.06	1.05	0.00	1.05	1.10	0.00	1.10
15	HPC	0.00	25.17	25.17	0.00	10.32	10.32	0.00	3.12	3.12	0.00	48.33	48.33	0.00	41.60	41.60
16	HSL	0.92	0.00	0.92	0.65	0.00	0.65	0.21	0.00	0.21	0.41	0.00	0.41	0.39	0.0	0.39
	Total	**1061.62**	**1560.57**	**2622.19**	**691.59**	**1561.89**	**2253.48**	**631.43**	**1473.47**	**2104.90**	**881.57**	**1360.55**	**2242.12**	**972.43**	**3500.00**	**4472.43**

ANNEXURE-IX

Paid-Up Capital, Networth and Accumulated Profit(+)/ Loss(–) as on 31.3.2005 (Provisional) of the PSEs under Department of Heavy Industry

(Rs. in crore)

Sl.No.	Name of PSE	Paid-up Capital		Networth	Accumulated Profit (+)/Loss (-)
		Government/ Holding PSE	Others		
1	AY&CO	154.91	3.93	-121.37	-268.27
2	HOOGLY PTG	1.03		2.89	0.36
3	BHEL	165.76	79.00	6027.00	5782.00
4	BSCL	128.82		-635.24	-723.89
5	BRAITHWAITE	108.99		-120.84	-225.48
6	BWEL	10.10		-103.61	-103.90
7	BBJ	16.02		9.11	-6.91
8	BHPV	33.80		-432.69	-422.79
9	BPCL	53.53		-121.24	-168.61
10	R&C	54.84		-144.99	-178.31
11	TSL	21.02		-321.08	-331.35
12	TSP	8.44		-153.11	-161.12
13	B&R	24.63		54.90	30.76
14	HCL	417.69	1.67	-1226.18	-1702.28
15	HEC	432.15		-1623.14	-2106.98
16	HMT (Holding Co.)	467.67	8.50	24.91	-405.31
17	HMT (MT)	10.70		-616.82	-461.75
18	HMT (Watch)	5.49		-658.10	-547.72
19	HMT (Chinar Watch)	1.41		-111.98	-104.10
20	PTL	17.23	19.11	-278.38	-310.39
21	HMT (Bearing)	9.49	0.24	-30.38	-27.30
22	HMT (I)	0.48		20.40	19.92
23	IL	83.77		-179.16	-241.48
24	REIL	1.15	1.10	10.30	8.05
25	SIL	43.04	1.99	57.40	12.56
26	CCI	429.28		-1723.58	-2152.86
27	HPC	700.38		666.84	-33.54
28	HNL	82.54		190.16	110.27
29	HPF	180.68	19.19	-2931.48	-3153.46
30	HSL	12.70		12.03	-10.95
31	SSL	1.00	0.00	-1.32	-12.82
32	NEPA	104.70	0.69	-158.43	-292.77
33	TCIL	93.10		-568.33	-661.43
34	EPIL	35.42		88.34	56.61
	TOTAL	**3911.96**	**135.42**	**-5097.17**	**-8795.24**

Note: (i) 9 PSEs namely; BPME, WIL, BBVL, RBL, TAFCO, CCIL, NBCIL, RIC and MAMC have been closed and 5 PSEs (BLC, NIDC, NPPC, BOGL &NIL) are not in operation.

(ii) Apart from above 34 Operating PSEs, there are two non-manufacturing holding companies (BBUNL & BYNL) and one non-operational Subsidiary, namely; Scooters India International GmbH.

ANNEXURE-X

Important Audit observations from Comptroller & Auditor General Audit Report for 2005*

Bharat Heavy Electricals Limited.

Improper selection of firm led to delay of 32 months in the establishment of facilities for total impregnation of Turbo Generator. Resultantly, the Company's funds of Rs. 12.32 crore remained idle for more than two years, with consequential loss of interest amounting to Rs. 3.62 crore

(Para 11.1.1 of Report No. 3 of 2005) Commercial

The Company blocked its funds of Rs. 6.83 crore with consequential loss of interest of Rs. 1.47 crore due to non-availing of facility provided under EXIM Policy.

(Para 11.1.2 of Report No. 3 of 2005) Commercial

The Company suffered loss of Rs. 1.86 crore, due to acceptance of an order at unremunerative price by not adhering to its pricing policy as well as failing to estimate the workable cost.

(Para 11.1.3 of Report No. 3 of 2005) Commercial

By not ensuring the receipt of the machine as inspected, there was inordinate delay of almost three years in getting the machine commissioned, as a result of which, the Company's funds amounting to Rs. 2.62 crore remained blocked, with consequential loss of interest of Rs. 71.75 lakh.

(Para 11.1.4 of Report No. 3 of 2005) Commercial

The Company incurred an avoidable expenditure of Rs. 1.83 crore on replacement of damaged parts without ascertaining the reasons for damages.

(Para 11.1.5 of Report No. 3 of 2005) Commercial

Deviating from the provisions of the contract resulted in loss of Rs. 68.45 lakh.

(Para 11.1.6 of Report No. 3 of 2005) Commercial

Due to omitting a vital clause regarding third party inspection in the purchase orders, the Company incurred an extra expenditure of Rs. 65.82 lakh on cross transportation.

(Para 11.1.7 of Report No. 3 of 2005) Commercial

Failure of the Company in negotiating the rates for the first offer based on subsequent lower offer resulted in incurring avoidable extra expenditure of Rs. 58.23 lakh in February,2002.

(Para 11.1.8 of Report No. 3 of 2005) Commercial

Bharat Heavy Plate and Vessels Limited.

By allowing employees who had already attained the age of 58 years to avail VRS, even when the retirement age was proposed to be lowered to 58 years, the company incurred avoidable extra expenditure of Rs. 3.02 crore.

(Para 11.2.1 of Report No. 3 of 2005) Commercial

Engineering Projects (India) Limited.

Failure of the Company in evaluating financial worthiness of the contractor and poor monitoring of execution of the work coupled with delayed action to en-cash guarantees resulted in loss of Rs. 1.06 crore

(Para 11.3.1 of Report No. 3 of 2005) Commercial

Heavy Engineering Corporation Limited.

By not taking effective measures for checking loss of gas during transit, the Company suffered loss of Rs. 16.43 crore during 1999-2000 to 2002-03.

(Para 11.4.1 of Report No. 3 of 2005) Commercial

Hindustan Photo Films Manufacturing Company Limited.

Due to defective agreement with a private party, the Company could not recover Rs. 52.30 lakh on account of license fee.

(Para 11.5.1 of Report No. 3 of 2005) Commercial

HMT (International) Limited

Failure of the Company to regulate foreign travel claims of the employees in accordance with the instructions of the Department of Public Enterprises resulted in irregular payment of Rs. 1.10 crore

(Para 11.6.1 of Report No. 3 of 2005) Commercial

HMT Machine Tools Limited.

Lack of proper monitoring mechanism for clearance of imported consignments resulted in loss of Rs. 79.77 lakh.

(Para 11.7.1 of Report No. 3 of 2005) Commercial

NEPA Limited

The Company incurred capital expenditure of Rs. 2.21 crore on the purchase of equipment .which could not be utilized in the absence of funds for procurement of raw material. This resulted in unfruitful expenditure of Rs. 2.21 crore.

(Para 11.8.1 of Report No. 3 of 2005) Commercial

HMT Limited

Mid-term Review on Turnaround Plan

- Ø Turnaround Plan conceived only the reorganization of the business and did not attempt turning around the fortunes of the ailing Company. Thus, the failure of the Turnaround Plan was mainly due to unrealistic and overly optimistic projections with insufficient financial support which both the Company and Government of India were well aware of. The projections in the Turnaround Plan were not supported by actual trends preceding the period covered in the Turnaround Plan and concrete action plan to achieve them. An unwritten objective of the entire subsidiarisation process was to avoid a reference to the Board for Industrial and Financial Reconstruction.

- Ø Even though the Company agreed in the Memorandum of Understanding not to seek further financial assistance/concessions from the Government of India, the Company obtained loans amounting to Rs. 190.02 crore till October, 2004 for settlement of Voluntary Retirement Scheme payments and Rs. 87.38 crore for payment of arrears of salaries and wages of the subsidiaries upto July, 2004.

- Ø Ministry has not given due importance to the implementation of the Turnaround Plan in the Company. The posts of important functional Directors of HMT Limited and other Directors of the Subsidiaries were kept vacant during the crucial period of implementation of the Turnaround Plan.

- Ø Various Committee constituted in the Company, either specifically to oversee the implementation of the Turnaround Plan or monitor the performance of the Company in the normal course of business, were not effective.

(Report No. 4 of 2005) Commercial

*Observation as received from the Ministry of Finance vide their O.M. No. 2100/E-Coord/2003 dated 7.12.2005

ABBREVIATIONS

AAIFR	Appellate Authority of Industrial & Financial Reconstruction
ARAI	Automotive Research Association of India
AY & CO	Andrew Yule & Co.
BBJ	Braithwaite, Burn & Jessop Construction Co. Ltd.
BBUNL	Bharat Bhari Udyog Nigam Ltd.
BHEL	Bharat Heavy Electricals Ltd.
BHPV	Bharat Heavy Plate & Vessels Ltd.
BIFR	Board of Industrial & Finance Reconstruction
BLC	Bharat Leather Corporation Ltd.
BOGL	Bharat Opthalmic Glass Ltd.
BPCL	Bharat Pumps & Compressors Ltd.
BPME	Bharat Process & Mechnical Engineers Ltd.
BRAITHWAITE	Braithwaite & Co. Ltd.
BSCL	Burn Standard Company Ltd.
BWEL	Bharat Wagon & Engineering Co. Ltd.
BYNL	Bharat Yantra Nigam Ltd.
BRPSE	Board for Reconstruction of Public Sector Enterprises
C-DOT	Centre for Development of Telematics
CCI	Cement Corporation of India Ltd.
CCIL	Cycle Corporation of India Ltd.
CEA	Central Electricity Authority
CNC	Computer Numerically Controlled
DOE	Department of Electronics
EEC	European Economic Community
EOT	Electrically Operated Trolley
EPI	Engineering Projects (India) Ltd.
FBP	Fluidised Bed Combustion
FCRI	Fluid Control Research Institute
FFP	Foundry Forge Plant
HCL	Hindustan Cables Ltd.
HMBP	Heavy Machine Building Plant
HMT(I)	HMT (International) Ltd.
HMTP	Heavy Machine Tools Plant
HNL	Hindustan Newsprint Ltd.
HPC	Hindustan Paper Corporation Ltd.
HPF	Hindustan Photo Films Manufacturing Co. Ltd.
HSL	Hindustan Salts Ltd.
HVDC	High Voltage Direct Current
ILK	Instrumentation Ltd., Kota
ISRO	Indian Space Research Organisation

JESSOP	Jessop & Co. Ltd.
kV	Kilo Volt
kW	Kilo Watt
LAGANJUTE	Lagan Jute Machinery Co. Ltd.
MAMC	Mining & Allied Machinery Corporation Ltd.
MAX	Main Automatic Exchange
MoU	Memorandum of Understanding
MT	Metric Tonne
MUL	Maruti Udyog Ltd.
MVA	Mega Volt Amperes
MW	Mega Watt
NBCIL	National Bicycle Corporation of India Ltd.
NC	Numerically Controlled
NEPA	NEPA Ltd.
NCMP	National Common Minimum Programme
NIDC	National Industrial Development Corporation Ltd.
PSE	Public Sector Enterprise
PTL	Praga Tools Ltd.
R&C	Richardson & Cruddas (1972) Ltd.
RDSO	Research Design & Standard Organisation
RIC	Rehabilitation Industries Corporation Ltd.
RSW	Radiation Shielding Window
SIL	Scooters India Ltd.
SSL	Sambhar Salts Ltd.
TAFCO	Tannery & Footwear Corporation of India Ltd.
TCIL	Tyre Corporation of India Ltd.
TSL	Triveni Structurals Ltd.
TSP	Tungabhadra Steel Products Ltd.
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial Development Organisations
VRS	Voluntary Retirement Scheme
WIL	Weighbird (India) Ltd.







Department of Public Enterprises

Chapter - 1

Public Enterprises Survey

1.1 Department of Public Enterprises (DPE), presents to Parliament every year an overview of the financial, physical and socio-economic performance of Central Public Sector Enterprises (CPSEs).

1.2 The Public Enterprises Survey covers the Central Public Sector Enterprises (CPSEs) established by the Government of India as Government Companies under the Companies Act or as Statutory Corporations under specific statutes of Parliament. This survey covers only those Government companies in which Central Government's holding in paid-up share capital is not less than fifty one percent and also covers the subsidiaries of such CPSEs but does not include public sector commercial banks and financial institutions.

1.3 The Estimates Committee, in their 73rd Report (1959-60), had recommended to the Government that in addition to the individual annual report of each enterprise laid on the Table of both the Houses of Parliament, a separate comprehensive report should be submitted to the Parliament indicating Government's total appraisal of the working of public enterprises. Accordingly, the first "Annual Report" (Public Enterprises Survey) was prepared by the erstwhile Bureau of Public Enterprises (now DPE) in 1960-61 giving a consolidated picture of the performance of the central public sector enterprises.

1.4 The Committee on Public Undertakings (COPU) in their 46th Report (5th Lok Sabha) covered various aspects such as scope, coverage, classification of undertakings, contents of the report, time for presentation and other matters relating to the Public Enterprises Survey. Recommendations of the COPU have also been taken into account while preparing the Public Enterprises Survey.

1.5 Public Enterprise Survey 2004-05 shall be the 45th report on the overall performance of CPSEs. The basic data for the Survey is compiled from the Annual Reports and Accounts furnished by the individual enterprises to this Department. The data is

compiled, analysed and presented in three separate volumes.

1.5.1 Volume-1 contains a macro appraisal and analysis of the performance of central public enterprises in terms of broad physical and financial parameters. Various chapters in this Volume reflect the key activities and progress made in the specific areas by the public enterprises. An analysis on the performance of enterprises with reference to some important ratios such as profit before interest and tax to capital employed, sales to capital employed, etc. are also included in this Volume. It also covers items like internal resources generation for financing the Plan Outlay, contribution to the public exchequer, management development, development of backward regions, employment generation, employees welfare measures, foreign exchange earnings, import substitution effort and such other related matters, so as to present a comprehensive picture.

1.5.2 Volume-2 contains an analysis of the performance of the CPSEs in different sectoral cognate groups and of individual enterprises. It also contains a brief description of the background on the areas of activities and physical & financial performance of individual enterprises.

1.5.3 Volume-3 contains enterprise-wise analytical data for the last three years (viz. 2004-2005, 2003-2004 and 2002-2003). The information consists of summarised balance sheet, summarised profit and loss account and important management ratios.

Chapter - 2

Autonomy to PSEs and Professionalization of their Boards

2.1.1 The endeavour of the Government is to make public sector enterprises autonomous board managed companies. Under Articles of Association, the Board of Directors of PSEs enjoy autonomy in respect of recruitment, promotion and other service conditions of below Board level employees. The Board of Directors of a PSE exercises delegated powers subject to broad policy guidelines issued by Government from time to time. The Government have granted enhanced powers to the Boards of the profit making enterprises under various schemes like Navratna and Miniratna.

2.1.2 Keeping in view the pledge made in the National Common Minimum Programme (NCMP) that full managerial and commercial autonomy will be devolved to successful profit making companies operating in a competitive environment, DPE had constituted an adhoc group of experts under the chairmanship of Dr. Arjun Sengupta to consider issue like autonomy, delegation of powers to CPSEs, etc. Based on the recommendations of the expert group, the Government have already enhanced the powers of the Board of Directors of Navratna, Miniratna and other profit making PSEs in August 2005. The present position is stated in the following paragraphs.

2.2 NAVRATNA PSEs

2.2.1 In July 1997 the Government had identified 9 Public Sector Enterprises that had comparative advantages and potential to emerge as global giants as Navratnas. The Navratna PSEs are BHEL, BPCL, GAIL, HPCL, IOC, MTNL, NTPC, ONGC and SAIL. These PSEs were given enhanced autonomy and delegation of powers to incur capital expenditure, to enter into technology joint ventures/strategic alliances, to effect organizational restructuring, to create and abolish below Board level posts, to raise capital from domestic and international market, to establish financial joint ventures and wholly owned subsidiaries, etc.

2.2.2 The enhanced powers presently delegated to the Boards of Navratna PSEs are as under:-

(a) To incur capital expenditure on purchase of new items or for replacement, without any monetary ceiling.

(b) To enter into technology joint ventures or strategic alliances.

(c) To obtain by purchase or other arrangements, technology and know-how.

(d) To effect organisational restructuring including establishment of profit centres, opening of offices in India and abroad, creating new activity centres, etc.

(e) Creation and abolistion of all posts including and upto those of non-Board level Directors, i.e. Functional Directors who may have the same pay-scales as that of Board level Directors, but who would not be members of the Board. All appointments upto this level would also be in the powers of the Boards and would include the power to effect internal transfers and re-designation of posts.

(f) The Board of Directors of these PSEs 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 PSE, as may be decided by the Board of the PSE.

(g) To raise debt from the domestic capital markets and for borrowings from international market, which would be subject to the approval of RBI/Department of Economic Affairs as may be required and should be obtained through the administrative Ministry.

(h) To establish financial joint ventures and wholly owned subsidiaries in India or abroad with the stipulation that the equity investment of the PSE should be limited to the following: -

i. Rs. 1000 crore in any one project,

ii. 15% of the networth of the PSE in one project,

iii. 30% of the networth of the PSE in all joint ventures/subsidiaries put together.

(i) 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 PSE, (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.

(j) To approve business tours abroad of functional directors up to 5 days' duration (other than study tours, seminars, etc.) in emergency, by the Chief Executive of the PSE under intimation to the Secretary of the administrative Ministry. In all other cases including those of Chief Executive, tours abroad would continue to require the prior approval of the Minister of the Administrative Ministry/ Department.

2.2.3 The exercise of these powers is subject to various conditions and guidelines laid down for this purpose including restructuring of the Board of Directors by inducting non-official Directors.

2.2.4 Performance of all Navratna Companies was reviewed by the Apex Committee headed by the Cabinet Secretary during the year 2005.

2.3 MINIRATNA PSEs

2.3.1 In October 1997, the Government had also 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.

2.3.2 The criteria for conferring the Miniratna status are:

(i) PSE should be profit making for the last 3 years continuously and should have positive net worth;

(ii) it should not have defaulted in repayment of loans/interest payment on loans due to government;

(iii) it should not depend upon budgetary support or government guarantee (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) and;

(iv) restructuring of the Board of Directors by inducting non-official Directors.

PSEs which have made pre-tax profit of Rs.30 crore or more in at least one of the 3 years are given Category I status while others are given Category II status. The administrative Ministries are empowered to declare a PSE as a Miniratna if it fulfils the eligibility conditions.

2.3.3 The enhanced powers presently delegated to the Boards of Miniratna PSEs are as under: -

(i) Capital Expenditure

(a) For PSEs in category I: The power to incur capital expenditure on new projects, modernization, purchase of equipment, etc., without Government approval upto Rs. 500 crore or equal to net worth, whichever is less.

(b) For PSEs in category II: The power to incur capital expenditure on new projects, modernization, purchase of equipment, etc., without Government approval upto Rs. 250 crore or equal to 50% of the Net worth, whichever is less.

(ii) Joint Ventures and Subsidiaries:

(a) Category I PSEs: To establish joint ventures and subsidiaries in India with the stipulation that the equity investment of the PSE in any one project should be limited to 15% of the networth of the PSE or Rs. 500 crore, whichever is less. The overall ceiling on such investment in all projects put together is 30% of the networth of the PSE.

(b) Category II PSEs: To establish joint

ventures and subsidiaries in India with the stipulation that the equity investment of the PSE in any one project should be 15% of the networth of the PSE or Rs. 250 crore, whichever is less. The overall ceiling on such investment in all projects put together is 30% of the networth of the PSE.

(iii) Mergers and Acquisitions

The Board of Directors of these PSEs have the 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 PSE, (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.

(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 PSEs 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 PSE, as may be decided by the Board of the PSE.

(v) Tour Abroad of Functional Directors

The Chief Executive of the PSE 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. In all other cases including those of Chief Executive, tours abroad would continue to require the prior approval of the Minister of the Administrative Ministry/Department.

(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.

2.3.4 Presently there are 44 Miniratna PSEs (29 Category I and 15 Category II). The names of Miniratna PSEs are given in the **Annexure-II**. Exercise of enhanced powers by these PSEs is subject to the condition that adequate number of non-official Directors are inducted on their Boards. Performance of Miniratna CPSEs was reviewed by the Inter Ministerial Committee headed by the Secretary, Department of Public Enterprises during 2003-04.

2.4 OTHER PROFIT-MAKING PSEs

2.4.1 Those PSEs which have shown a profit in each of the 3 preceding accounting years and have a positive net worth are categorized as 'other profit-making PSEs' and have been delegated enhanced powers as under:-

(i) The power to incur capital expenditure without Government approval stands revised to Rs. 150 crore or equal to 50% of the Net worth, whichever is less.

(ii) The Chief Executive of the PSE shall 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. In all other cases including those of Chief Executive, tours abroad would continue to require the prior approval of the Minister of the Administrative Ministry/ Department.

2.5 PROFESSIONALIZATION

2.5.1 In pursuance of industrial policy statement announced on 24th July 1991, several measures were taken to professionalise the boards of management of public sector enterprises. As per the guidelines issued by DPE in March 1992, the number of non-official part-time Directors should be at least 1/3rd of the actual strength of the Board. The guidelines also envisage that the number of Government Directors on the Boards should be not more than one-sixth of the actual strength of the Board and in any case should not exceed two. Apart from this, there should be some functional Directors on each Board whose number could be upto 50% of the actual strength of the Board. In the cases of listed companies headed by executive Chairman at least half of the Board should comprise of Independent Directors.

2.5.2 Appointment of non-official part-time Directors on the Boards of PSEs is made by the administrative Ministries/Departments from the panel prepared in consultation with the Department of Public Enterprises. In so far as Navratna and Miniratna PSEs are concerned the panel of non-official part-time Directors is prepared by the Search Committee consisting of Chairman (PESB), Secretary (DPE), Secretary of the administrative Ministry/Department concerned and 4 non-official Members. According to the Navratna and Miniratna schemes, the Boards of these companies should have a minimum of 4 non-official Directors in the case of Navratnas and 3 non-official Directors in the case of Miniratnas before the Board exercise the enhanced powers.

2.5.3 The Government has laid down criteria for selection and appointment of part-time non-official Directors on the Boards of PSEs. Accordingly, the part-time non-official Director should have a minimum qualification of a graduate degree from a recognized university; he should have not less that 10 years experience at the level of Joint Secretary and above in the Government; CMD/MD in Corporate Sector/PSE; Professor level in an Academic Institution/professionals of repute like eminent Chartered Accountants/Cost Accountants at the level of Directors of Institutes/Heads of Department; persons of eminence with proven track record from Industry, Business or Agriculture; and should be between 45-65 years of age. The upper age could, however, be relaxed upto 70 years for eminent professionals for reasons to be recorded.

Chapter - 3

MOU System in Central Public Sector Enterprises

3.1 THE CONCEPT OF MOU

3.1.1 The Memorandum of Understanding is a negotiated document between the Government, acting as the owner of Public Sector Enterprise (PSE) and a specific PSE. It should contain the intentions, obligations and mutual responsibilities of the Government and the PSE.

3.1.2 Further, MOU makes an attempt to move the management of PSEs from management by controls and procedures to management by results and objectives.

3.2 INSTITUTIONAL ARRANGEMENTS FOR IMPLEMENTING MOU POLICY

3.2.1 The present institutional arrangement envisages to put in place an objective and transparent mechanism to evaluate the performance of the managements of the PSEs. It provides a system through which the commitments of both the parties to the MOU can be evaluated at the end of the year besides improving the technical inputs required to finalize the MOUs. The details of this institutional arrangement and their inter-linkages are given in the following paragraphs.

3.3 HIGH POWER COMMITTEE (HPC)

3.3.1 At the apex of this institutional arrangement is the High Power Committee (HPC) consisting of following members:

1. Cabinet Secretary, Chairman
2. Finance Secretary, Member
3. Secretary (Expenditure), Member
4. Secretary(Planning Commission), Member
5. Secretary(Statistics & Programme Implementation), Member
6. Chairman (Public Enterprises Selection Board), Member
7. Chairman, Tariff Commission, Member
8. Chief Economic Adviser, Member
9. Secretary(Public Enterprises), Member-Secretary.

3.3.2 The functions of this committee are to review the draft MOUs before the final draft

is signed and to make an end-of-the-year evaluation to judge how far the commitments made by both parties of the MOU have been met. Now, the power to approve the final MOUs has been delegated to Task Force TF/DPE and only in those cases where TF is not able to take a decision is referred to HPC.

3.3.3 The concern regarding the imbalance in the technical expertise available with the Government has been sought to be rectified by forming the Task Force.

3.4 TASK FORCE

3.4.1 The main objective behind the creation of a Task Force was to take care of the concern regarding the imbalance in technical expertise available between the Government and PSEs. The main functions of the Task Force are to:

(a) examine the design of MOU at the beginning of the year. For this purpose the draft MOU agreed upon by the PSE and the relevant Administrative Ministry is examined by the Task Force. If Task Force has any comments or questions regarding the draft MOUs, they seek clarifications via MOU Division. Once the signatories to MOUs have responded to the concerns expressed by the Task Force on their draft MOUs, the MOU negotiation meetings are organized. These meetings are attended by the executives of PSEs, senior officials of the concerned Administrative Ministry and the representatives from the nodal agencies such as Planning Commission, Ministry of Statistics & Programme Implementation, Ministry of Finance, etc. The draft MOUs are discussed and finalized during these meetings.

(b) evaluate the composite score for each enterprise at the end of the year.

3.4.2 The Task Force consists of retired civil servants, executives of public sector, management professionals and independent members with considerable experience. It was decided by the High Power Committee that no one belonging to the Government should be a member of this Task Force. This was considered essential to maintain objectivity and credibility of the Task Force.

3.5 MOU DIVISION

3.5.1 The HPC and Task Force are assisted by the MOU Division in the Department of Public Enterprises. It also acts as the permanent secretariat to this HPC and Task Force. The main functions of this Division are to :

- provide logistic, technical and administrative support to the Task Force;
- act as buffer between the Task Force members and the two signatories to the MOUs - PSEs and Administrative Ministries;
- develop information and data base on MOU signing PSEs;
- assist the High Power Committee;
- monitor the progress of MOUs;
- advise and counsel to the MOU signatories on methodological and conceptual aspects of the MOU policy; and
- coordinate research and training on various aspects of MOU policy.

3.6 WORKING OF MOU SYSTEM

3.6.1 The process of signing of MOU is initiated with the issue of guidelines by the MOU

Division for drafting of MOUs. These guidelines indicate the broad structure and the aspects to be covered in the draft MOU including the weights to be assigned to the financial parameters. These guidelines reflect the main concerns of the Government and contain the general direction to the PSEs.

3.6.2 On the basis of these Guidelines, the draft MOUs are prepared by PSEs and submitted to DPE after due discussions in Board and with the concerned Administrative Ministry/Department in the month of December. The draft MOUs received in DPE are examined in detail in consultation with Task Force. During the process of examination of these draft MOUs all possible relevant information/sources of information are utilized to ensure that the targets proposed in the draft documents are realistic. Wherever possible inter-firm comparison is carried out and the proposed targets are viewed in the context of the past performance of the PSE.

3.7 MOU NEGOTIATION MEETINGS

3.7.1 Under the present system efforts are made to ensure that all the MOUs are signed well before the beginning of the financial year. In view of this, the draft MOUs submitted by the PSEs are discussed in the MOU negotiation meetings. Besides Task Force members, these meetings are attended by senior officials of the Administrative Ministries, top executives of PSEs and the representatives from the nodal agencies of the Government of India such as Planning Commission, Ministry of Finance & Deptt. of Programme Implementation. As mentioned earlier, all possible inputs provided by the professionals, Ministries and the DPE are utilized to finalise the targets. In addition to this the general aspects of existing economic situation relating to the performance of the PSE are also discussed in detail before finalizing the targets. The parameters to measure the performance of the managements of the PSEs are selected after a great deal of thought and the weights are assigned to these performance parameters keeping in view their importance and the nature of operation of the PSE. The targets proposed by the PSEs are discussed freely and are finalized broadly on consensus basis. In fact, the MOU negotiation meetings also provide a forum to discuss certain good practices adopted in other PSEs and in a way these innovative ideas are disseminated through this process. The MOUs finalised during these meetings are signed by the Chief Executive of the PSE and the Secretary of the concerned Ministry before 31st of March.

3.8 EVALUATION OF PERFORMANCE OF MOU SIGNING PSEs

3.8.1 Performance of MOU signing PSEs is evaluated with reference to their MOU targets. First the performance is evaluated on the basis of provisional results and later on the basis of audited data. The performance evaluation exercise is carried out in an extensive manner. As mentioned earlier this performance evaluation exercise is not carried out purely through a mechanical procedure. The MOU evaluation is finalised on the basis of the actual performance and the PSEs are graded as "EXCELLENT", "VERY GOOD", "GOOD", "FAIR" or "POOR".

3.9 COVERAGE OF PSEs UNDER THE MOU SYSTEM

3.9.1 The MOU system has grown over time from 4 MOUs signed in the year 1987-88 to 99

MOU's for the year 2004-05. Infact many of these 99 PSEs are the holding companies and if their subsidiaries are also included, then the total number of PSEs covered under MOU system works out to 144. The number of MOUs signed since the inception of the MOU system are as follows:

Year	No. of MOU's signed	Year	No. of MOU's signed
1987-88	4	1996-97	110
1988-89	11	1997-98	108
1989-90	18	1998-99	108
1990-91	23	1999-00	108
1991-92	72	2000-01	107
1992-93	98	2001-02	104
1993-94	101	2002-03	100
1994-95	100	2003-04	96
1995-96	104	2004-05	99
		2005-06	101*

*List of PSEs – Annexure-III

3.10 ACHIEVEMENTS OF THE MOU SYSTEM

3.10.1 Viewed in the light of the objectives the effectiveness of the MOU system can be summarised as follows:

* The focus, under the MOU system, has shifted to achievements of results.
* Operational autonomy has also been encouraged and increased.
* By laying stress on marketing effort and comparing with private sector enterprises, MOUs are helping PSEs to face competition.
* The quarterly performance review (QPR) meetings have become more focused since the introduction of MOUs. Discussion is confined to overall achievement as outlined in the MOUs.

3.11 PERFORMANCE OF THE MOU SIGNING PSEs

3.11.1 The summary performance of MOUs signing PSEs as reflected in their MOU rating during the last five years has been as follows:

Rating	No. of Public Sector Enterprises				
	2000-01	2001-02	2002-03	2003-04	2004-05 (Provisional)
Excellent	50	41	46	53	42
Very Good	28	25	21	23	33
Good	09	15	12	12	12
Fair	14	12	16	8	11
Poor	03	03	02	–	01
Excluded	01	08	03	–	–
Total	**105**	**104**	**100**	**96**	**99****

**List of PSEs - Annexure IV

MOU Awards Winners of PSEs with Hon'ble Vice-President

◄ *Hon'ble Vice President and Shri Sontosh Mohan Dev, Minister for Heavy Industries and Public Enterprises during the Conference of Chief Executives of Central Public Sector Enterprises on 10th January, 2006.*

Chapter - 4

Human Resources Development

4.1 Central Public Sector Enterprises (CPSEs) have a vast reservoir of professionally qualified manpower in different disciplines and the efficient operations of these enterprises, to a large extent, depend on the effective utilization of this manpower. There have been widespread changes in the management techniques, technologies, financial methods, production management, etc. due to globalisation and liberalization. Human Resource Development is thus a thrust area of public sector performance. It necessitates creating an environment in which people can develop their full potential for productive and creative activities. To improve the quality and capabilities of the manpower as well as to upgrade their knowledge and skill, various steps have been taken by the CPSEs. Apart from organizing in-house training programmes, the CPSEs also depute their executives for various training programmes being organized by premier Management/Training Institutes in India and abroad.

4.2 TRAINING

4.2.1 As the nodal Department for PSEs, the Department of Public Enterprises is supplementing the efforts of the public enterprises towards human resource development by organizing Executive Development Programmes (EDPs) for senior and middle level executives in collaboration with premier Management/ Training Institutes in the country. DPE also sponsors PSE executives for training abroad under various aided schemes.

4.2.2 The EDPs are conducted for duration of 2-5 days. During 2004-05, 44 EDPs were conducted and for the year 2005-06, 37 such programmes are planned. About 600-800 executives are covered every year under this programme. These programmes are organized in collaboration with Indian Institutes of Management; Institute of Public Enterprise, Hyderabad; National Institute of Financial Management, Faridabad; Indian Institute of Public Administration Delhi; Institute of Chartered Accountants of India; Indian Institute of Plantation Management,

Bangalore; International Management Institute, Delhi; Indian Society for Training & Development; Institute of Cost and Works Accountants of India; Institute of Company Secretaries of India; V.V. Giri National Labour Institute, Noida; Management Development Institute, Gurgaon; National Productivity Council, New Delhi; CMC Limited, etc. The subjects covered under these programmes include financial management, leadership challenge, effective marketing management, total quality management, information technology & e-commerce, management information systems, communication skills, corporate governance, MOU principles & practices, project management, capital market reform & risk management, negotiation strategies & skills, health and stress management, industrial relations & labour issues, international taxation/international finance, etc.

4.2.3 The training programmes abroad being offered under various aided schemes are coordinated by the Department of Public Enterprises. During 2005-06 (up to October 2005), 28 executives have been recommended for different training programmes in Canada, Malaysia, Thailand, Singapore, New Zealand, Korea, USA, Vietnam and Japan under different aided schemes. These programmes were on subjects like developing e-governance strategies, globalisation – implications for management and governance, benchmarking and ISO 9000, supporting public sector reform using education and training strategies to build capability, etc.

4.2.4 India is a founder member of International Centre for Promotion of Enterprises (ICPE), Ljubljana, Slovenia. India makes an annual contribution of US$ 75000 to ICPE from the DPE budget. Currently Secretary (DPE) is the President of the ICPE Council.

4.2.5 Secretary, DPE is a member on the Board of Governors of IIM Ahmedabad, IIM Calcutta and Institute of Public Enterprise, Hyderabad. Secretary, DPE is also a member of the Executive Board of the Standing Conference of Public Enterprises (SCOPE).

4.3 PERSONNEL POLICY

4.3.1 Various personnel policy matters relating to PSEs are dealt by DPE. Some of the important policy initiatives taken during the year are given in the following paragraphs.

4.4 PROCEDURE FOR SELECTION TO BOARD LEVEL POSTS IN PSEs

4.4.1 The Public Enterprise Selection Board (PESB) had been recommending two names in order of merit for each board level posts in Public Sector Undertakings that fall within the selection purview of PESB. The second name is recommended in order to obviate the necessity of going through the selection process all over again in case the person at serial number one is not available owing to lack of vigilance clearance or any other reason. However, it has been decided that henceforth PESB will recommend only one name for each vacant post.

4.5 AGE OF RETIREMENT OF EMPLOYEES OF PUBLIC SECTOR ENTERPRISES

4.5.1 As per decision taken by the Government in August, 2001, the authority to approve the proposals for roll back of age of superannuation from 60 years to 58 years

for all PSEs and all categories of employees both board level and below board level, which are duly approved by their Board of Directors, was delegated to the Minister-in-Charge of the administrative Ministry. The Government has reviewed the matter and decided in April, 2005 that the powers for roll back of age of retirement of employees of PSEs, including Board level executives, shall henceforth vest with the Cabinet.

4.6 HOLDING BOARD MEETINGS OF CENTRAL PUBLIC SECTOR ENTERPRISES AT HEADQUARTERS

4.6.1 The Government has noticed that some public sector enterprises particularly those which are located in the North East are holding their Board meetings and other sub committee meetings in places like Delhi, Kolkata, Mumbai, etc. Very rarely these meetings are held at the Head Quarters of the PSE concerned. This has created resentment among the employees of the PSE concerned. Further the Board of Directors is deprived of exposure to field organizations. The Government has decided in July, 2005 that normally the meetings of Board and sub-committees of the Board should be held at the HQ of the PSE concerned. There should, however, be no objection in holding the meetings at the Unit HQ of the company also as it would give an opportunity to the Directors to acquaint themselves with the working of different divisions/units of the company. If the meeting is to be held in any place other than the HQ of the PSE or the unit HQs, the reasons for doing so should be recorded in writing.

4.7 PROCEDURE TO BE OBSERVED FOR BOARD LEVEL APPOINTMENTS FOR CPSEs REQUIRING APPROVAL OF ACC

4.7.1 Detailed guidelines have been issued on entire ACC approval process for board level appointments. According to these instructions, whenever personnel related schemes or policies are under review, proposals under that scheme or policies should continue to be processed under the existing rules and regulations till such time amendments are actually approved by the ACC. However, such amendments should be carried within 6 months of the directions of the ACC. In case the process of amendments of such policies goes beyond this time period, the concerned Ministry/ Department would have to explain date wise steps taken for finalisation of the rules.

4.7.2 In respect of board level appointments in PSEs, it is desirable to initiate action at least two years in advance of the date of occurrence of the vacancy with a stipulation that PESB recommendations in respect of such board level vacancy should be made at least six months in advance of the date of vacancy and the same should be sent to the Ministry concerned for completing other formalities. For extension of tenure of board level appointees, the proposals should be initiated one year in advance of the date of occurrence of the vacancy so as to ensure that proposals are submitted two months in advance for consideration of the ACC.

4.7.3 The ACC has delegated its power for entrusting additional charge management in all Central PSEs to the respective Ministries up to 3 months from the date of vacancy with the approval of Minister-in-

Charge. The proposal for additional charge beyond three months up to a maximum of 6 months should be submitted to the Establishment Officer for obtaining approval of the competent authority. The delegation of the powers to the Administrative Ministry/Department is subject to the following :

(a) additional charge of the post of CMD is assigned only to the senior-most functional Director in the PSE;

(b) the officer is clear from vigilance angle;

(c) timely action has been taken to fill up the vacancy and the position is brought out in the proposal seeking additional charge;

(d) any deviation from the above would require ACC approval;

(e) the above delegation shall not apply to companies referred to BIFR. The proposals in this regard, for entrusting additional charge may continue to be sent to the Establishment Officer for obtaining approval of the competent authority.

(f) The proposals other than those delegated in the preceding sub-paras may be submitted to the EO who would arrange to get the formal orders issued with the approval of the competent authority.

4.7.4 The ACC has directed that the current charge arrangements beyond 3 months be totally dispensed with and full additional charge be considered in such cases. The current charge arrangements has been allowed to the Ministries up to 3 months with the approval of the Minister-in-Charge. In so far as PSEs are concerned, there should not be any occasion to give current charge of a functional Director to anyone, the same should automatically vest in the CMD and, in case of a post of CMD, the same should be entrusted to the Senior most functional Director as per the extant orders. However, this may exclude BIFR referred companies.

4.8 ANNUAL PERFORMANCE APPRAISAL OF TOP MANAGEMENT INCUMBENTS OF PUBLIC ENTERPRISES

4.8.1 The Annual Performance Appraisal (APR) format prescribed under BPE D.O. No. 5 (11)/82-GM.II dated 21.1.1983 for all top and senior level managers who do not belong to any organized service of Centre/ State Government have been modified.This format will be replaced by two formats, one for Chief Executives of non-MoU signing PSEs and directors on the board of all PSEs and the other for executives up to two stages below the board level in PSEs. These formats will be applicable for the year 2006-07 onwards. Instructions have been issued in October 2005. The format prescribed in Sepetember 1995 for writing CRs of Chief Executives of MOU signing PSEs will remain unchanged.

4.9 CUT-OFF AGE FOR BOARD LEVEL APPOINTMENTS IN CENTRAL PUBLIC SECTOR ENTERPRISES

As per Government's policy, the candidates for interview by PESB for board level appointments in PSE should not exceed 58 years of age where the age of retirement is 60, and 56 years where the age of retirement is 58 years. The Government has decided in October, 2005 that the cut-off age for external candidates for

consideration for board level posts in public sector enterprises should be minimum of 3 years service left (on the date of occurrence of vacancy) with reference to superannuation age applicable in the PSE against which the candidate is being considered. For internal candidates, the residual service condition would continue to be 2 years.

4.10 TIME LIMIT FOR BOARD LEVEL APPOINTEES TO JOIN POSTS IN PSEs

4.10.1 As per Government's policy, a time limit of 3 months from the date of issuance of offer of appointment was prescribed for an appointee to join the board level posts, failing which he would be debarred from being considered for board level post in any PSE. A clause to this effect was to be incorporated in the offer of appointment. The Government has since reconsidered the matter and decided in October, 2005 that a candidate who does not join a board level post after being selected shall be debarred for a period of 2 years from the date of offer of appointment from being considered for board level post in any PSE. The debarment would be applicable to all PSEs other than the one to which the candidate belongs. Names of appointees who fail to join the post within the prescribed time limit will be reported to the Establishment Officer and Secretary, PESB by the concerned Administrative Ministry/ Department.

4.11 OPERATION/REVIVAL OF BOARD LEVEL POSTS IN CPSEs AFTER DEEMED ABOLITION

4.11.1 The Government have laid down criteria for operation/revival of board level posts in CPSEs after deemed abolition. Accordingly, board level posts which are vacant for one year or more and where PESB selection process is not currently underway shall be deemed to have been abolished. If the post is required subsequently, the prescribed procedure for creation of new posts will have to be followed. However, in cases where posts were kept in abeyance because of initiation of disinvestment process, a one time relaxation of period of abeyance for a maximum 4 years or up to 31.3.2006, whichever is earlier, is permissible for PSEs which were slated for disinvestment.

4.12 EMPLOYMENT IN CENTRAL PUBLIC ENTERPRISES UNDER RESERVED CATEGORIES

4.12.1 The Public Enterprises generally follow the instructions of the Department of Personnel & Training regarding Reservation Policy. A Presidential Directive incorporating all the important instructions in this regard was issued in February, 1982 to the concerned administrative Ministries/Departments by the Department of Public Enterprises for formal issuance to the Public Enterprises. Since then, the Department of Personnel & Training has issued many instructions/ directives relating to the reservation Policy of the Government. The Department of Public Enterprises have consolidated these instructions and a revised comprehensive directive was issued to all Administrative Ministries/Departments in April, 1991 for formal issuance to PSEs. Instructions issued subsequently on reservation matters have also been extended to Public Sector Enterprises.

4.12.2 The present quota of reservation for employees belonging to Scheduled Castes,

Schedule Tribes and OBCs where recruitment is on All-India basis through open competition as well as other categories of employees entitled to reservation is indicated below:-

	Group 'A' & 'B'	Group 'C'	Group 'D'
Scheduled Castes	15%	15%	15%
Scheduled Tribes	7.5%	7.5%	7.5%
Other Backward Classes	27%	27%	27%
Physically Handicapped Persons	3%	3%	3%
Ex-servicemen & Dependents of those killed in action	–	14.5%	24.5%

4.12.3 Although the administrative Ministries/ Departments concerned have been made responsible for implementation of reservation policy, the Department of Public Enterprises also keep a watch on the progress made by PSEs in the implementation of the reservation scheme in the recruitment by calling for Annual Reports from the Public Enterprises and also by taking follow-up action after scrutinizing these reports. Based on the information furnished by the PSEs the position regarding representation of Scheduled Castes, Scheduled Tribes and Other Backward Class (OBCs) in respect of 211 Public Enterprises as on 1.1.2005 is given below:-

Group	Total No. of Employees	Representation of SCs/STs					
		SCs No.	%age	STs No.	%age	OBCs No.	%age
Group 'A'	1,65,405	20,864	12.61	6,607	3.99	10,410	6.29
Group 'B'	1,54,174	20,335	13.18	9,444	6.12	13,001	8.43
Group 'C'	6,64,501	1,31,204	19.74	64,957	9.77	1,13,407	17.06
Group 'D' (excluding Safai Karamcharis)	2,42,973	53,027	21.82	34,594	14.23	54,845	22.57
Total	**12,27,053**	**2,25,430**	**18.37**	**1,15,602**	**9.42**	**1,91,663**	**15.61**
Group 'D' (Safai Karamcharis)	15,543	12,072	77.66	469	3.01	557	3.58
Grand Total	**12,42,596**	**2,37,502**	**19.11**	**1,16,071**	**9.34**	**1,92,220**	**15.46**

4.12.4 The need to ensure timely filling up of reserved posts has been stressed in various instructions from time to time. All administrative Ministries/Departments have been requested to advise the PSEs under their administrative control to take effective steps to fill up the unfilled reserved posts and backlog vacancies in Direct Recruitment as well as in promotion in accordance with the existing instructions. One of the agenda enunciated in National Common Minimum Programme (NCMP) is to launch a Special Recruitment Drive to fill up backlog of reserved vacancies for SC and ST in CPSEs. DPE has issued instructions to all Administrative Ministries/ Departments dealing with CPSEs to fill up these vacancies expeditiously.

4.13 RESERVATION FOR OBCs

4.13.1 Based on the recommendations of the Second Backward Classes Commission (Mandal Commission) and in accordance with the Supreme Court Judgement in the Indira Sawhney Case, instructions were issued providing reservation of 27% of vacancies in favour of Other Backward Classes (OBCs) in Civil Posts and Services under the Government of India.

4.13.2 Department of Personnel & Training (DOPT) who formulate the policy in respect of reservation in services, have been issuing instructions from time to time on various aspects of reservation in respect of OBCs. Reservation for OBCs was made effective w.e.f. 8.9.1993. Department of Public Enterprises (DPE) have been extending these instructions to the Public Sector Enterprises through their administrative Ministries for compliance. A comprehensive Presidential Directive incorporating all instructions was prepared by the Department of Public Enterprises and issued to all administrative Ministries vide DPE's OM dated 27th July, 1995 for formal issuance to the PSEs under their control,

under the relevant Articles of Association/ Section of the relevant Act.

4.14 RESERVATION FOR PERSONS WITH DISABILITIES

4.14.1 This Department has also issued instructions to ensure reservation for the Persons with Disabilities up to 3% of the vacancies occurring in a particular year (1% for Visually Handicapped, 1% for Hearing Handicapped and 1% for Orthopaedically Handicapped). A Presidential Directive in respect of reservation for physically handicapped persons, incorporating all important instructions in this regard was issued in April, 1991 to the concerned administrative Ministries / Departments by the Department of Public Enterprises for formal issuance to the Public Enterprises. 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 filled through Direct Recruitment. All PSEs have been advised to comply with the provisions of the Act and evolve a time frame by which the backlog of vacancies can be cleared.

Chapter - 5

Support Services to PSEs

5.1 PURCHASE PREFERENCE POLICY

5.1.1 Purchase Preference Policy was introduced in 1992 replacing the earlier policy of price preference. The objective of the policy is to provide level playing field to the Central Public Sector Enterprises (CPSEs) in the wake of globalization/liberalization and to provide an opportunity to adjust themselves in the new environment of competition and effectiveness. The policy aims to utilize the created capacities in the public sector to the fullest extent so as to improve the performance of CPSEs at sustainable level on long term basis.

5.1.2 The Purchase Preference Policy has been reviewed and extended from time to time. In pursuance of the decision of the Government on 30.6.2005, the Policy which was in force till 31.3.2005 has been extended for a further period of three years with a clear stipulation that it will be terminated with effect from 31.3.2008.

5.1.3 This policy provides purchase preference to CPSEs in supply of goods and services to the Government Departments, Autonomous bodies and other PSEs at L1 price if the price quoted by the supplying CPSE is within 10% of the lowest valid bid price, other things being equal. Purchase preference support will be extended to the contracts including civil and turnkey contracts of Rs. 5 crore and above but not exceeding Rs. 100 crore. The provisions relating to purchase preference should be specified in the "Notice Inviting Tender" (NIT) for Rupees five crore and above but not exceeding Rs.100 crore. The policy is applicable to the CPSEs and their subsidiaries where CPSE owns 51% or more shareholding but not to a joint venture owned by a CPSE and a private partner. However, the concerned Ministries/ Departments have to prepare a list of CPSEs, which may or may not require purchase preference. For availing of the benefit of purchase preference policy, a minimum value addition of 20% by the CPSE/ subsidiary companies by way of manufacturing and or services would be a prerequisite.

5.1.4 If the PSE does not meet the minimum qualification, it should be subject to disqualification. However, in suitable cases the purchasers/clients may relax the condition of 'net worth' from the list of minimum qualification. In case Public Enterprises which avail of the benefit of purchase preference fail to perform, they should be subject to payment of liquidated damages or any other penalty included in the contract. Respective Ministries/ Departments will be responsible for implementing the policy in letter and spirit. For any deviation including exclusion of the purchase preference clause from the NIT, it will be obligatory for the concerned Ministries/Departments/ CPSEs/Autonomous bodies to obtain prior exemption from the Cabinet in consultation with the Department of Public Enterprises.

5.2 PERMANENT MACHINERY OF ARBITRATION

5.2.1 Permanent Machinery of Arbitration (PMA) has been set up in Department of Public Enterprises for resolving commercial disputes, except taxation, between PSEs inter-se as well as between a PSE and a Central Government Department/Ministry. From 1993-94 disputes with Port Trusts have also been included under the purview of PMA for arbitration. The Ministry of Railways were excluded from the purview of PMA vide DPE's OM dated 12.2.97. The disputes are required to be referred to Department of Public Enterprises for its reference to the Arbitrator of PMA. Secretary, Department of Public Enterprises on being satisfied with prima facie existence of dispute, refers the dispute to the Arbitrator of the PMA for Arbitration. The Arbitration Act, 1940 (now 1996) is not applicable in these cases. No outside lawyer is allowed to appear on behalf of either party for presenting/defending the cases.

5.2.2 The PMA guidelines were revised and issued on 22.1.04. There is one Arbitrator in the PMA and ever since the PMA was created in 1989, the Secretary (PE) has referred 196 cases to the Arbitrators of PMA, out of which Awards in 111 cases have been published so far. The PMA is designed to be self-supporting, hence the PMA charges an Arbitration fee which is worked out by the Arbitrator, based on the formula given in the guidelines.

Chapter - 6

Wage Policy and Manpower Rationalization

6.1 WAGE POLICY

6.1.1 The Department of Public Enterprises inter-alia functions as a nodal agency for policy issues relating to wage settlements of unionized employees/ pay revision of non-unionized supervisors and executives holding posts below the Board level as well as at the Board level. It also deals with finalisation of terms and conditions as well as determination of pay of Board level executives and finalisation of terms and conditions of civil servants deputed as CVOs in CPSEs. The Department provides clarifications and renders advice to the administrative Ministries/ Departments and the CPSEs in matters relating to the wage policy and revision in the scales of pay of the executives. The CPSEs are following Industrial Dearness Allowance (IDA) pattern scales of pay and Central Dearness Allowance (CDA) pattern scales of pay.

6.2 INDUSTRIAL DEARNESS ALLOWANCE (IDA) PATTERN AND RELATED SCALES OF PAY IN CPSEs

Government policy relating to pay scales and pay pattern is that all employees of the CPSEs should be on IDA pattern and related scales of pay. Instructions had been issued by the DPE in July, 1981 and July, 1984 to all the administrative Ministries that as and when a new CPSE is created or established, IDA pattern and related scales of pay should be adopted ab-initio. There are 242 CPSEs (excluding Banks, Insurance Companies and Financial Institutions) under the administrative control of the Central Government. They employ approximately 17.67 lakhs workers, clerical staff and executives. Out of this approximately 96% of the workers and executives are on IDA pattern and related scales of pay.

6.3 PROCEDURE ADOPTED FOR REVISION OF PAY IN IDA PATTERN OF SCALES W.E.F. 1.1.1997

6.3.1 The last pay revision for the executives and non-unionized supervisors under IDA pattern was done w.e.f 1.1.97 for a period of ten years based on the recommendations of Justice Mohan Committee and consequent DPE O.M dated 25.6.99. Procedure adopted for revision of pay is as under:-

(i) CPSEs which have been consistently making profit are allowed to adopt revised scales of pay in the IDA pattern in accordance with DPE's guidelines.

(ii) CPSEs which had incurred loss during any of the three financial years preceding to pay revision would also be allowed to revise the scales with the approval of the Government i.e. the administrative Ministry acting in consultation with DPE, provided they give an estimate as to how the resources would be generated by them to meet the extra expenditure.

(iii) In respect of sick enterprises referred to BIFR, revision of pay scales for all employees following IDA pattern would be strictly in accordance with the rehabilitation packages approved or to be approved by the BIFR and after providing for the additional expenditure on account of pay revision in this package.

(iv) CPSEs under construction or new CPSEs would submit their proposals for adoption of revised scales of pay to their administrative Ministries for approval in consultation with the DPE.

6.4 WAGE REVISION FOR WORKMEN UNDER IDA PATTERN

6.4.1 In respect of workmen following IDA pattern scales of pay, autonomy has been allowed to the managements of CPSEs to negotiate revision of pay scales for the workmen within certain stipulated conditions. The latest wage negotiation to be entered between managements and the workers' unions, was to come to effect from 1.1.1997 for 10 year periodicity and 1.1.2002 for five year periodicity. The Government orders were issued on 14.1.1999, 26.7.2000 and 11.2.2004 to this effect as under:

For the unionized employees covered by the IDA pattern pay scales in the Central Public Enterprises, the Government have decided to allow the option to opt for either:-

i. A ten year periodicity of pay revision with 100% neutralization of DA as set out in the guidelines issued on 14.1.99

OR

ii. A five year periodicity on the basis of graded neutralization as did exist previously i.e. from 1.1.1992 to 31.12.1996

The CPSEs who had opted earlier for five year wage negotiation for workmen have been allowed wage negotiation for a period of five years with effect from 1.1.2002. Some of the CPSEs have already implemented negotiated wage settlements.

6.5 CDA PATTERN IN CPSEs

6.5.1 CDA pattern pay scales are applicable to some of the clerical staff, unionized cadres and executives of the 69 CPSEs who were on the rolls of these companies as on 1.1.1986 and upto 31.12.1988 and were in receipt of CDA pattern pay scales during that time. A High Power Pay Committee (HPPC) was appointed by the Government in pursuance of the Supreme Court directions dated 12.3.1986 which submitted its Report to the Government on 24.11.1988. Its recommendations have been implemented in these CPSEs. In pursuance of the Supreme Court direction dated 3.5.1990 read with the subsequent directions dated 28.8.1991, IDA pattern and related scales of pay have been introduced in these CPSEs with effect from 1.1.1989. All appointments made in CPSEs on or after 1.1.1989 are on IDA pay structure only. Out of 69 CPSEs (covered under HPPC), at present there are only 61 CPSEs, which are following both CDA and IDA pattern scales of pay. Approximately 4% of the total workforce in all CPSEs taken together is presently under CDA pattern of scales. The recommendation of 5th Pay Commission w.e.f. 1.1.1996 has also been extended to the employees of CPSEs following CDA pattern of scales. The employees of CPSEs following CDA pattern

have also been allowed the benefit of merger of 50% of DA with basic pay w.e.f 1.4.2004. This benefit has been allowed to the employees of those CPSEs that are not loss making and are in a position to absorb the additional expenditure on account of merger of DA with basic pay from their own resources without any budgetary support from the government.

6.6 VOLUNTARY RETIREMENT SCHEME (VRS)

6.6.1 In the present globally competitive and deregulated scenario, in view of the ongoing restructuring in the industries including CPSEs, several measures for reforms and restructuring of PSEs have been taken up by the Government. Right sizing of manpower in the CPSEs is one of the measures adopted. In the process, the Voluntary Retirement Scheme, which was initially announced in October, 1988 for the first time was revised and a comprehensive package was notified vide DPE's O.M dated 5th May, 2000 so as to cater to the need of the CPSEs to meet their objectives and also to protect the interest of the workers affected due to various modes of restructuring.

6.6.2 Considering the difficulties faced by the enterprises where the wage revision of 1992 or 1997, as the case may be, could not be effected, the Voluntary Retirement Scheme was liberalized by issuance of subsequent notification on 6th November, 2001, which inter alia provides for 100% additional compensation for the employees where wage revision of 1992 could not be effected and similarly 50% additional compensation for employees where the wage revision of 1997 could not be made effective. The ex-gratia under VRS to employees following CDA pattern at 1986 scales has also been enhanced by 50% w.e.f 26.10.2004. These increases in VR compensation are to be computed based on the existing pay of the employees.

6.6.3 From the introduction of the Voluntary Retirement Scheme initially in October 1988 till March 2004, approximately 5.33 lakh employees have been released under VRS.

6.7 VRS IN CPSEs WHICH CAN SUSTAIN IT THEMSELVES

6.7.1 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. However, such compensation will not exceed the salary for the balance period of service left.

6.8 VRS IN MARGINALLY PROFIT OR LOSS MAKING CPSEs

6.8.1 Marginally profit/loss making CPSEs as well as sick and unviable units may adopt either:

(i) the 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 superannuating subject to conditions that the compensation shall not exceed the sum of salary for the balance period left for superannuation.

or

(ii) the VSS package of Department of Heavy Industry (DHI model) under which ex-gratia payment 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, is applicable. 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 balcne period of service left.

Chapter - 7

Categorisation of PSEs

7.1 The Public Sector Enterprises are categorized into four schedules namely 'A', 'B', 'C' & 'D'. The pay scales of Chief Executives and Functional Directors of PSEs are linked with the schedule of the concerned enterprise. Normally the Chief Executive of the enterprise is given the scale of pay attached to the schedule of the company while the Functional Directors are allowed the scale of pay attached to the next below schedule. At times the posts of Chief Executives or Functional Directors are upgraded on personal basis so that exceptionally capable executives are retained in the PSEs where they had rendered meritorious service. Such arrangements also help in attracting talent to sick or high-tech enterprises.

7.2 The initial categorization of PSEs 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-categorisation of PSEs. Categorisation is based on criteria such as quantitative factors like investment, capital employed, net sales, profit, number of employees and qualitative factors like national importance, complexity of problems, level of technology, prospects for expansion and diversification of activities and competition from other sectors, etc. In addition a criteria relating to the strategic importance of the PSE 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 there are 52 Schedule 'A', 87 Schedule 'B', 54 Schedule 'C' and 7 Schedule 'D' PSEs. The schedule wise list of PSEs is given in Annexure V.

Chapter - 8

Board for Reconstruction of Public Sector Enterprises (BRPSE)

8.1 During the Budget Speech for 2004-2005, Finance Minister announced that Government would constitute Board for Reconstruction of Public Sector Enterprises (BRPSE) to address the problems relating to strengthening, modernizing, reviving and restructuring of Public Sector Enterprises. Subsequently the Government, vide notification dated 6th December 2004, had constituted the Board (BRPSE) consisting Chairman, three non-official members and three official members. Chairman, PESB, Chairman, SCOPE and Chairman, Oil and Natural Gas Corporation Ltd. are the permanent invitees to the meetings of the Board. Secretary of the concerned administrative Ministry/Department is a special invitee to the meetings in which the proposals of the PSEs under his ministry/ department are considered.

8.2 TERMS OF REFERENCE OF THE BRPSE ARE AS FOLLOWS:-

(i) To advise the Government on ways and means for strengthening public sector enterprises in general and making them more autonomous and professional;

(ii) To consider restructuring – financial, organizational and business (including diversification, joint ventures, merger and acquisition) – of CPSEs and suggest ways and means for funding such schemes;

(iii) To examine the proposals of the administrative Ministries for revival/ restructuring of sick/loss making CPSEs for their turnaround.

(iv) To advise the Government on disinvestments/closure/sale in full or part in respect of chronically sick/loss making companies, which cannot be revived. In respect of such unviable companies the Board would also advise the Government about sources of fund including sale of surplus assets of the enterprise for the payment of all legitimate dues and compensation to workers and other costs of closure;

(v) To monitor incipient sickness in CPSEs; and

(vi) To advise the Government on such other matters as may be assigned.

8.3 First meeting of BRPSE was held on 16.12.2004. Till December 2005, 28 meetings have taken place and the Board has considered the proposals of 33 cases of sick PSEs. It has given its recommendations in respect of 26 cases of PSEs and the balance 7 cases have been referred to the concerned administrative Ministries/Departments for additional information.

8.4 The recommendations of BRPSE in respect of the 26 cases fall under the following 3 broad categories.

S. No.	Category	No. of cases of PSEs
1	Revival through revival package	18
2	Revival through Joint Venture with PSEs/disinvestment	7
3	Closure	1
	Total	26

Chapter - 9

Scheme for Counselling, Retraining and Redeployment

9.1 There has been thrust on restructuring the central public enterprises. In the process, rationalization of manpower has also become a necesity. The policy of the Government has been to implement reforms with a humane face and provide adequate safety net for the affected workers.

9.2 Considering the need to have safety net, Government had established National Renewal Fund (NRF) in February, 1992 broadly to cover the expenses of VRS and to provide retraining to the workers in the organized sector. The NRF was later abolished in February, 2000. The retraining activity was administered by Deptt. of Industrial Policy & Promotion till 31st March, 2001. The Plan Scheme for Counselling, Retraining and Redeployment (CRR) of rationalized employees of CPSEs has been under implementation by the Department of Public Enterprises since 2001-02.

9.3 The Scheme for Counselling, Retraining and Redeployment (CRR) inter-alia aims:

- to provide opportunity for self-employment.
- to reorient rationalized employees through short duration programmes.
- to equip them for new avocations,
- to engage them in income generating self-employment.
- to help them rejoin the productive process.

9.4 Counselling helps the rationalized employees to absorb the trauma of leaving the organization, to properly manage their funds including compensation and to motivate them to face the challenges and to re-join the productive process. Similarly, retraining strengthens their skill/expertise. Selected training institutes impart need-based training of 20 days/30 days/40 days modules. The faculty support is both internal and external, and the approach is to provide classroom lectures as well as field experience. In the process, trainees interact with experts from various fields and are being helped in preparation/finalization of project reports. The retraining should lead to redeployment mostly through self-

employment. In the present scheme, the objective is to maximize the rate of self-employment. The Nodal Agencies, therefore, provide need-based support, linkage with credit institutions and continuously follow up with the retrained personnel.

9.5 The 3 days' sensitization programme in the premises of the CPSEs aims at providing capsule course, literature for guidance, motivation cum awareness, information on market opportunities etc. prior to the release of the employees so that they can leave the organization with confidence to meet the challenges of their early retirement.

9.6 For monitoring the CRR programme the in-built mechanism involves field visits and inspections by the concerned officers of DPE. Coordination Committees at local level have also been formed. The Scheme also provides for inter-ministerial Review Committee under Secretary (PE) with members from selected concerned Government Departments/agencies/CPSEs.

Shri Vijay Vithalrao Kitukale, a VRS optee, displaying the products manufactured by him consequent to training under CRR Scheme

9.7 The Nodal Training Agencies are required to counsel VRS optees, impart training and reorientation, develop curriculum/ materials, prepare feasibility reports market surveys, post training follow up, interface with credit institutions, support in self employment, regular liaison with CPSEs, convening meeting of Co-ordination Committee etc.

9.8 CPSEs are the key to the success of the scheme. They are supposed 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.

9.9 A Plan Fund of Rs. 8 crore was allocated initially during 2001-02, which was enhanced to Rs. 10 crore during 2002-03 and 2003-04. The plan fund substantially increased to Rs. 30 crore during 2004-05. During 2005-06, the budget allocation of Rs. 30 crore has been maintained. For imparting training to the rationalized employees, 42 selected nodal agencies are operational with 126 Employees Assistance Centres (EACs). Under the CRR scheme during the year 2001-02, 2002-03, 2003-04 and 2004-05, number of persons retrained was 8064, 12066, 12134 and 28003, respectively. The physical target of 28000 has been assigned during 2005-06. On an average, redeployment rate has been 45%. A list of nodal agencies is given at Annexure V.

Chapter - 10

Implementation of Official Language Policy

10.1 Hindi Cell of this Department is primarily responsible for implementation of various provisions of the Official Language Act and the rules framed thereunder. Hindi Cell is also responsible for translation of documents required to be issued under Section 3(3) of the Official Language Act. 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.

10.2 All notifications, resolutions, notices, circulars, papers laid on the Table of the House of Parliament etc., have been issued bilingually during the year 2005-06. 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 Joint Secretary and meetings of the said Committee were held regularly during 2005-06.

10.3 With a view to create consciousness and accelerating the use of Hindi as Official Language, Hindi Pakhwada, was organized by this Department in October, 2005. During the Pakhwada, various competitions such as, Elocution, Essay Writing, Noting & Drafting (Hindi Speaking), Noting & Drafting (Non-Hindi Speaking), Hindi Shrutlekh and Hindi typing were organized for the officers and employees and prizes were distributed to the winners.

10.4 The Library of the Department has been purchasing Hindi books regularly. Utmost efforts were made to achieve the targets prescribed by the Department of Official Language during 2005-06.

10.5 The Department has been presenting Annual "Public Enterprises Survey" on the working of Industrial and Commercial Undertakings of the Central Government in the Parliament every year during the Budget Session. This is a voluminous and comprehensive document brought out by the Department simultaneously in English and Hindi.

Chapter - 11

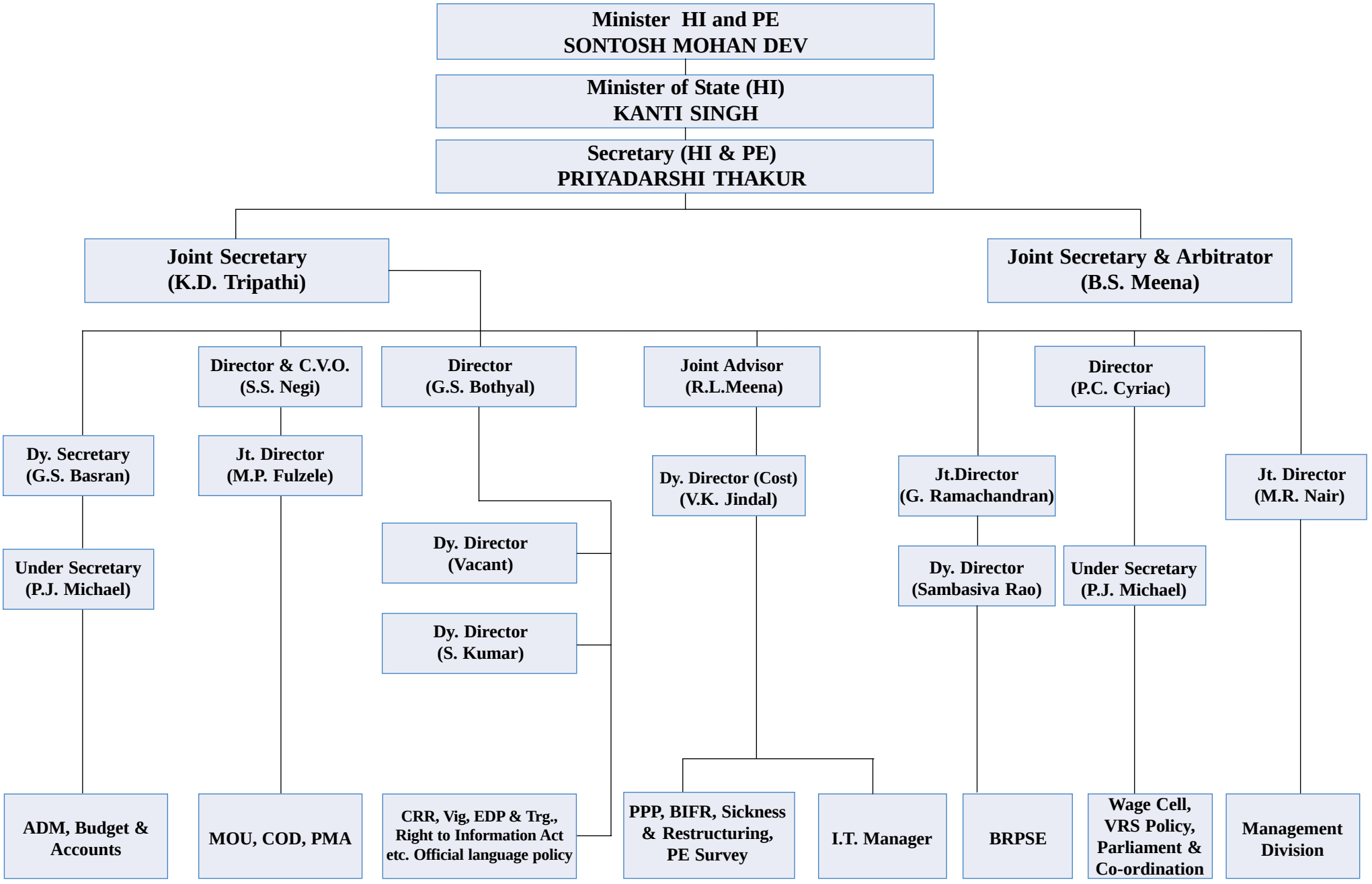
Welfare of Women

11.1 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.

11.2 The Department has also set up a complaint committee under the Chairmanship of a lady 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 their OM dated 29th May 1998, has already issued detailed guidelines and norms to Chief Executives of PSEs for observance and prevention of sexual harassment of working women.

11.3 The Department of Public Enterprises is small in size having a total strength of 128 officers/staff, which includes 14 lady employees. The Department acts as a nodal agency for all PSEs and formulates policy pertaining to all PSEs . The Department have made all possible efforts to create a healthy and congenial atmosphere so that women employees can perform duties with honour, dignity and without fear.

ORGANIZATION CHART OF DEPARTMENT OF PUBLIC ENTERPRISES



List of Miniratna PSEs

Miniratna PSEs - Category I

1. Bharat Dynamics Ltd.
2. Bharat Electronics Ltd.
3. Bongaigaon Refineries & Petrochemicals Ltd.
4. Central Warehousing Corporation
5. Chennai Petroleum Corporation Ltd.
6. Container Corporation of India Ltd.
7. Dredging Corporation of India Ltd.
8. Engineers India Ltd.
9. Hindustan Aeronautics Ltd.
10. Hindustan Newsprint Ltd.
11. Housing & Urban Development Corporation Ltd.
12. India Tourism Development Corporation Ltd.
13. IRCON (International) Ltd.
14. Kochi Refineries Ltd.
15. Kudremukh Iron Ore Company Ltd.
16. MMTC Ltd.
17. National Aluminium Company Ltd.
18. National Fertilizers Ltd.
19. National Mineral Development Corporation Ltd.
20. Neyveli Lignite Corporation Ltd.
21. Numaligarh Refinery Ltd.
22. Oil India Ltd.
23. Power Finance Corporation Ltd.
24. Power Grid Corporation Ltd.
25. Rashtriya Chemicals & Fertilizers Ltd.
26. Rural Electrification Corporation Ltd.
27. Shipping Corporation of India Ltd.
28. State Trading Corporation of India Ltd.
29. Telecommunications Consultants (India) Ltd.

Miniratna PSEs - Category II

30. Balmer Lawrie & Co. Ltd.
31. Educational Consultants (I) Ltd.
32. Ferro Scrap Nigam Ltd.
33. HMT (International) Ltd.
34. Hospital Services Consultancy Corporation (I) Ltd.
35. India Trade Promotion Organisation
36. Indian Medicines Pharmaceuticals Corporation Ltd.
37. MST C Ltd.
38. Manganese Ore India Ltd.
39. MECON Ltd.
40. National Film Development Corporation Ltd.
41. PEC Ltd.
42. Rajasthan Electronics & Instruments Ltd.
43. RITES Ltd.
44. Water & Power Consultancy (India) Ltd.

Syndicate-Wise List of PSEs Shortlisted to Sign MOU for the year 2005-2006

1. Indian Oil Corporation Ltd.
2. Bharat Petroleum Corpn. Ltd.
3. Balmer Lawrie & Co. Ltd.
4. Hindustan Petroleum Corpn. Ltd.
5. Oil India Ltd.
6. Oil and Natural Gas Corp. Ltd.
7. GAIL (India) Ltd.
8. Power Grid Corporation Ltd.
9. Coal India Ltd.
10. North Eastern Elec. Power Corp.
11. NTPC Ltd.
12. Nevyveli Lignite Corp. Ltd.
13. Nuclear Power Corp.
14. National Hydro-Elect. Power Ltd.
15. Satluj Jal Vidyut Nigam Limited
16. Bharat Heavy Electricals Ltd.
17. HMT Ltd.
18. Bharat Earth Movers Ltd.
19. Bharat Dynamics Limited
20. Hindustan Aeronautics Limited
21. Hindustan Latex Limited
22. HMT Ltd.
23. Karnataka Antibiotics & Phar. Ltd.
24. Hindustan Paper Corporation Ltd.
25. Indian Medicine Pharmaceuticals Ltd.
26. Kudremukh Iron Ore Co. Ltd.
27. Manganese Ore India Ltd.
28. National Mineral Dev. Corp. Ltd.
29. Indian Rare Earths Limited
30. Mineral Exploration Corporation Limited
31. Uranium Corporation of India Limited
32. Steel Authority of India Ltd.
33. Hindustan Copper Ltd.
34. National Aluminium Co. Ltd.
35. Rashtriya Ispat Nigam Ltd.
36. Mishra Dhatu Nigam Ltd.
37. Sponge Iron India Limited
38. ITI Limited
39. Bharat Electronics Ltd.
40. Bharat Sanchar Nigam Limited
41. Electronics Corpn. of India Limited
42. Central Electronis Limited
43. Mahanagar Telephone Nigam Limited
44. Rajasthan Electronics & Instruments Ltd.
45. Railtel Corpn. of India
46. Telecommunication Consult. (I) Limited
47. Shipping Corp. of India Ltd.
48. Dredging Corp. of India Ltd.
49. Goa Shipyard Limited
50. Cochin Shipyard Ltd.
51. Indian Airlines Ltd.
52. Mazagaon Docks Ltd.
53. Container Corp. of India Ltd.
54. Hindustan Shipyard Ltd.
55. Airport Authority of India Ltd.
56. Garden Reach Shipbuilders & Engg. Limited
57. Konkan Railway Corporation Limited
58. Mumbai Railway Vikas Nigam
59. MMTC Limited
60. Handicraft and Handloom Corp. Ltd.
61. State Trading Corp. Ltd.
62. PEC Limited
63. Central Cottage Industries Corp. Ltd.
64. Cotton Corporation of India Ltd.
65. National Handlooms Development Corpn.
66. Indian Trade Promotion Organisation
67. India Tourism Development Corporation
68. MSTC Limited
69. Ferro Scrap Nigam Limited
70. Hindustan Steelworks Construction Ltd.

71. Artificial Limbs Manufacturing Corporation
72. Indian Railway Catering & Tourism Corp.
73. Rashtriya Chem. & Fert. Ltd.
74. National Seeds Corporation Ltd.
75. Central Warehousing Corp. Ltd.
76. National Fertilizers Ltd.
77. State Farms Corp. of India Ltd.
78. Brahmputra Valley Fertilizer Corpn. Limited
79. North Eastern Regional Agricultural Marketing Corpn. Ltd.
80. Engineers India Limited
81. IRCON International Ltd.
82. Engineering Projects(I) Limited
83. Hospital Services Cons. Ltd.
84. RITES Limited
85. Educational Consultants India Limited
86. National Small Industries Corpn.
87. National Research Development Corpn.
88. Water & Power Consul. Serv. Limited
89. National Building Corporation Ltd.
90. BroadCast Engineering Consultants(I) Limited
91. MECON Limited
92. National Film Development Corpn.
93. Housing & Urban Dev. Corpn.
94. Rural Electrification Corpn.
95. IREDA
96. Export Credit Guarantee Corpn.
97. Power Finance Corpn.
98. Indian Railway Finance Corpn.
99. National SC Fin. & Dev. Corporation
100. National BC Fin. & Dev. Corporation
101. National Minorities Fin. & Dev. Corporation

List of PSEs Signing MOUs for the year 2004-05 and their MOU composite scores based on provisional data

S.No.	Name of PSE	MOU Score (as per DPE)	MOU Rating
1.	Airports Authority of India	1.54	Very Good
2.	Balmer Lawrie & Co. Ltd.	1.26	Excellent
3.	Broadcast Engineering Consultants India Limited	1.88	Very Good
4.	Bharat Earth Movers Limited	1.99	Very Good
5.	Bharat Electronics Limited	1.29	Excellent
6.	Bharat Petroleum Corporation Ltd.	1.48	Excellent
7.	Bharat Sanchar Nigam Ltd.,	1.19	Excellent
8.	Brahmaputra Valley Fertilisers Corp Ltd.,	2.86	Good
9.	Central Warehousing Corporation	1.36	Excellent
10.	Central Electronics Limited	2.06	Very Good
11.	Central Cottage Industries Corp. of India	2.24	Very Good
12.	Coal India Limited	1.50	Excellent
13.	Cotton Corporation of India Ltd.	1.46	Excellent
14.	Container Corporation of India	1.05	Excellent
15.	Dredging Corporation of India	2.12	Very Good
16.	Educational Consultants India Ltd.	4.44	Fair
17.	Electronics Corp. of India Ltd.	3.32	Good
18.	Engineering Projects (India) Ltd.	2.92	Good
19.	Export Credit Guarantee Corp.	1.56	Very Good
20.	Ferro Scrap Nigam Ltd.	1.83	Very Good
21.	Fertilizers and Chemicals (T) Ltd.	2.09	Very Good
22.	Goa Shipyard Ltd.	1.89	Very Good
23.	Garden Reach Shipbuilders &Eng. Ltd.	2.10	Very Good
24.	Hindustan Paper Corporation	1.43	Excellent
25.	Hindustan Petroleum Corp. Ltd.	1.42	Excellent
26.	Hindustan Shipyard Limited	4.10	Fair
27.	Handicrafts & Handlooms Export Corpn.	2.57	Good
28.	Hindustan Aeronautics Ltd.	1.00	Excellent
29.	Hindustan Copper Ltd.	2.17	Very Good
30.	HMT Ltd.	4.65	Poor

S.No.	Name of PSE	MOU Score (as per DPE)	MOU Rating
31.	Hospital Services Consultancy Corp.	3.29	Good
32.	Hindustan Steelworks Construction Ltd.	3.40	Good
33.	Indian Medicines Pharmaceuticals Corporation Ltd.,	3.79	Fair
34.	India Tourism Development Corp.	1.75	Very Good
35.	Indian Airlines	2.15	Very Good
36.	Indian Oil Corporation Ltd.	1.13	Excellent
37.	Indian Renewable Energy Dev. Agency	2.74	Good
38.	Indian Rare Earth Ltd.	1.70	Very Good
39.	IRCON International Ltd.	1.31	Excellent
40.	ITI Ltd.,	3.48	Good
41.	Karnataka Antibiotics & Pham.Ltd.	1.21	Excellent
42.	Konkan Railway Corporation Ltd.	4.28	Fair
43.	Madras Fertilizers Ltd.	4.06	Fair
44.	Mazagoan Dock Ltd.	2.25	Very Good
45.	MECON Ltd.	2.10	Very Good
46.	Mineral Exploration Corporation Ltd.	1.54	Very Good
47.	Mishra Dhatu Nigam Ltd.	1.08	Excellent
48.	MMTC Ltd.	1.08	Excellent
49.	Mahanagar Telephone Nigam Ltd.	2.36	Very Good
50.	MSTC Ltd.	1.04	Excellent
51.	National Aluminium Co. Limited	1.27	Excellent
52.	National Small Industries Corpn.	3.41	Good
53.	National Seeds. Corpn.	3.18	Good
54.	National BC Fin. & Development Corpn.	1.00	Excellent
55.	National Mineral Dev. Corp.	1.19	Excellent
56.	National Film Development Corp.	4.28	Fair
57.	National Fertilizes Ltd.	1.28	Excellent
58.	National Handloom Dev. Corp.	2.23	Very Good
59.	NMFDC	1.41	Excellent
60.	National Research Dev. Corpn.	2.47	Very Good
61.	Nuclear Power Corpn. Ltd.	1.45	Excellent
62.	Oil & Natural Gas Co. Ltd.	1.61	Very Good
63.	PEC Limited	1.44	Excellent
64.	RITES Limited	2.28	Very Good
65.	Rashtriya Chemicals & Fertilisers Ltd.,	1.14	Excellent

S.No.	Name of PSE	MOU Score (as per DPE)	MOU Rating
66.	Rural Electrification Corpn.	1.00	Excellent
67.	Rajasthan Electronics & Instrumentation Ltd.,	1.52	Very Good
68.	Scooters India Ltd.	3.13	Good
69.	Shipping Corpn. of India Ltd.	1.28	Excellent
70.	Sponge Iron India Ltd.	2.13	Very Good
71.	State Farms Corporation of India Ltd.	4.06	Fair
72.	Water & Power Consultancy Ser. (I) Ltd.	1.31	Excellent
73.	Bharat Dynamic Limited	4.32	Fair
74.	Bharat Heavy Electricals Limited	1.25	Excellent
75.	Hindustan Latex Limited	1.28	Excellent
76.	Uranium Corporation of India Ltd.	1.97	Very Good
77.	Manganese Ore (I) Ltd.	1.47	Excellent
78.	Rashtriya Ispat Nigam Ltd.	1.32	Excellent
79.	Kudremukh Iron Ore Co. Ltd.	1.43	Excellent
80.	Steel Authority of India Ltd.	1.32	Excellent
81.	Telecomunication Consultancy of India Ltd.	3.75	Fair
82.	Power Grid Corporation of India Ltd.	1.01	Excellent
83.	National Hydrolic Power Corporation	1.44	Excellent
84.	North Eastern Electric Power Corporation of India Ltd.	1.75	Very Good
85.	Satluj Jal Vidyut Nigam Ltd.	2.59	Good
86.	Nevveli Lignite Corporation Ltd.	1.32	Excellent
87.	NTPC Ltd.	1.11	Excellent
88.	Oil India Ltd.	1.60	Very Good
89.	GAIL (I) Ltd.	1.24	Excellent
90.	National Building Construction Corporation Ltd.	1.19	Excellent
91.	Engineers India Ltd.	2.38	Very Good
92.	Cochin Shipyards Ltd.	3.76	Fair
93.	Air India Ltd.	3.69	Fair
94.	State Trading Corporation of India Ltd.	1.66	Very Good
95.	Artificial Limbs Manufacturing Corporation of India Ltd.	1.71	Very Good
96.	India Trade Promotion Organisation	1.58	Very Good
97.	Indian Railway Finance Corporation	1.00	Excellent
98.	Housing & Urban Development Corporation	1.22	Excellent
99.	Power Finance Corporation	2.39	Very Good

MoU Composite Score	MoU Rating
1.00 – 1.50	Excellent
1.51 – 2.50	Very Good
2.51 – 3.50	Good
3.51 – 4.50	Fair
4.51 – 5.00	Poor

Schedule-Wise List of Public Sector Enterprises

Schedule - A

1. Air India Ltd.
2. Airports Authority of India
3. Bharat Bhari Udyog Nigam Ltd.
4. Bharat Earth Movers Ltd.
5. Bharat Electronics Ltd.
6. Bharat Heavy Electricals Ltd.
7. Bharat Petroleum Corporation Ltd.
8. Bharat Sanchar Nigam Ltd.
9. Bharat Yantra Nigam Ltd.
10. Coal India Ltd.
11. Container 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 Petroleum Corporation Ltd.
21. HMT Ltd.
22. Housing & Urban Development Corporation Ltd.
23. I T I Ltd.
24. Indian Airlines Ltd.
25. Indian Oil Corporation Ltd.
26. Konkan Railway Corporation Ltd.
27. Kudremukh Iron Ore Company Ltd.
28. M M T C Ltd.
29. Mahanagar Telephone Nigam Ltd.
30. Mazagon Dock Ltd.
31. Metallurgical & Engineering Consultants (India) Ltd.
32. Mumbai Rail Vikas Corporation Ltd.
33. National Aluminium Company Ltd.
34. National Fertilizers Ltd.
35. National Hydroelectric Power Corporation Ltd.
36. National Mineral Development Corporation Ltd.
37. National Textile Corporation Ltd.
38. NTPC Ltd.
39. Neyveli Lignite Corporation Ltd.
40. Oil & Natural Gas Corporation Ltd.
41. Oil India Ltd.
42. Power Finance Corporation
43. Power Grid Corporation of India Ltd.
44. RailTel Corporation of India Ltd.
45. Rail Vikas Nigam Ltd.
46. Rashtriya Chemicals and Fertilizers Ltd.
47. Rashtriya Ispat Nigam Ltd.
48. Rural Electrification Corporation Ltd.
49. Shipping Corporation of India Ltd.
50. State Trading Corporation of India Ltd.
51. Steel Authority of India Ltd.
52. Telecommunications Consultants (India) Ltd.

Schedule - B

1. Andrew Yule & Company Ltd.
2. Balmer Lawrie & Company Ltd.
3. Bharat Coking Coal Ltd.
4. Bharat Dynamics Ltd.
5. Bharat Heavy Plate & Vessels Ltd.
6. Bharat Pumps & Compressors Ltd.
7. Bongaigaon Refinery & Petrochemicals Ltd.
8. Brahmaputra Valley Fertilizer Corporation Ltd.
9. Braithwaite & Company Ltd.
10. Braithwaite, Burn & Jessop Construction 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. Central Warehousing Corporation.
19. Chennai Petroleum Corporation Ltd.
20. Cochin Shipyard Ltd.
21. Cotton Corporation of India Ltd.
22. Dredging Corporation of India Ltd.
23. Eastern Coalfields Ltd.
24. Engineering Projects (India) Ltd.
25. Ennore Port Ltd.
26. Fertilizer Corporation of India Ltd.
27. Garden Reach Shipbuilders & Engineers Ltd.
28. Goa Shipyard Ltd.
29. Guru Gobind Singh Refineries Ltd.
30. Handicrafts & Handlooms Export Corporation Ltd.
31. Hindustan Cables Ltd.
32. Hindustan Fertilizer Corporation Ltd.
33. Hindustan Organic Chemicals Ltd.
34. Hindustan Paper Corporation Ltd.
35. Hindustan Shipyard Ltd.
36. Hindustan Steelworks Construction Company Ltd.
37. Hindustan Vegetable Oils Corporation Ltd.
38. HMT (I) Ltd.
39. HMT (MT) Ltd.
40. HMT (Watches) Ltd.
41. IBP Co. Ltd.
42. India Tourism Development Corporation Ltd.
43. India Trade Promotion Organisation
44. Indian Drugs & Pharmaceuticals Ltd.
45. Indian Iron & Steel Company Ltd.
46. Indian Oil Blending Company Ltd.
47. Indian Railway Catering & Tourism Corporation Ltd.
48. Indian Railway Finance Corporation Ltd.
49. Indian Rare Earths Ltd.
50. Instrumentation Ltd.
51. IRCON International Ltd.
52. Kochi Refineries Ltd.
53. Madras Fertilizers Ltd.
54. Mahanadi Coalfields Ltd.
55. Mangalore Refineries & Petrochemicals Ltd.
56. Manganese Ore (India) Ltd.
57. Mineral Exploration Corporation Ltd.
58. Mishra Dhatu Nigam Ltd.
59. National Building Construction Corporation Ltd.
60. National Jute Manufacturers Corporation Ltd.
61. National Projects Construction Corporation Ltd.
62. National Small Industries Corporation Ltd.
63. North Eastern Electric Power Corporation Ltd.
64. Northern Coalfields Ltd.
65. NTC (Andhra Pradesh, Karnataka, Kerala & Mahe) Ltd.
66. NTC (Delhi, Punjab & Rajasthan) Ltd.
67. NTC (Gujarat) Ltd.
68. NTC (Madhya Pradesh) Ltd.
69. NTC (Maharashtra North) Ltd.
70. NTC (South Maharashtra) Ltd.
71. NTC (Tamilnadu & Pondicherry) Ltd.
72. NTC (Uttar Pradesh) Ltd.
73. NTC (West Bengal, Assam, Bihar & Orissa) Ltd.
74. Numaligarh Refineries Ltd.
75. ONGC Videsh Ltd.
76. P E C Ltd.
77. Pawan Hans Helicopters Ltd.
78. Projects & Development India Ltd.
79. RITES Ltd.
80. Satluj Jal Vidyut Nigam Ltd.
81. Scooters India Ltd.
82. Semi-Conductor Complex Ltd.
83. South Eastern Coalfields Ltd.
84. Tehri Hydro Development Corporation Ltd.
85. Tyre Corporation of India Ltd.
86. Uranium Corporation of India Ltd.
87. Western Coalfields Ltd.

Schedule - C

1. Airlines Allied Services Ltd.
2. Andaman & Nicobar Islands Forest & Plantation Development Corporation Ltd.
3. Artificial Limbs Mfg. Corporation of India
4. Bengal Chemicals & Pharmaceuticals Ltd.
5. Bengal Immunity Ltd.
6. Bharat Leather Corporation Ltd.
7. Bharat Ophthalmic Glass Ltd.
8. Bharat Refractories Ltd.
9. Bharat Wagon & Engineering Company Ltd.
10. Biecco Lawrie Ltd.
11. Broadcast Engineering Consultants India Ltd.
12. Central Cottage Industries Corporation of India Ltd.
13. Central Inland Water Transport Corporation Ltd.
14. Chinar Watches Ltd.
15. Educational Consultants (India) Ltd.
16. FCI Aravali Gypsum & Minerals India Ltd.
17. Ferro Scrap Nigam Ltd.
18. Hindustan Antibiotics Ltd.
19. Hindustan Insecticides Ltd.
20. Hindustan Latex Ltd.
21. Hindustan Newsprint Ltd.
22. Hindustan Photo Films Manufacturing Corporation Ltd.
23. Hindustan Salts Ltd.
24. HMT (Bearings) Ltd.
25. Hooghly Dock and Port Engineers Ltd.
26. Hotel Corporation of India Ltd.
27. Indian Renewable Energy Development Agency Ltd.
28. Jute Corporation of India Ltd.
29. M S T C Ltd.
30. Nagaland Pulp & Paper Company Ltd.
31. National Backward Classes Finance & Development Corporation.
32. National Film Development Corporation Ltd.
33. National Handicapped Finance & Development Corporation.
34. National Handlooms Development Corporation Ltd.
35. National Instruments Ltd.
36. National Minorities Development & Finance Corporation
37. National Research Development Corporation of India.
38. National Safai Karamcharis Finance & Development Corporation.
39. National SC Finance & Development Corporation
40. National ST Finance & Development Corporation
41. National Seeds Corporation Ltd.
42. NEPA Ltd.
43. North Eastern Handicrafts & Handloom Development Corporation Ltd.
44. North Eastern Regional Agricultural Marketing Corporation Ltd.
45. Praga Tools Ltd.
46. Rajasthan Electronics & Instruments Ltd.
47. Richardson & Cruddas (1972) Ltd.
48. Smith Stanistreet Pharmaceuticals Ltd.
49. STCL Ltd.
50. Sponge Iron India Ltd.
51. State Farms Corporation of India Ltd.
52. Triveni Structurals Ltd.
53. Tungabhadra Steel Products Ltd.
54. Water & Power Consultancy Services (India) Ltd.

Schedule - D

1. Hindustan Fluorocarbons Limited
2. Hindustan Prefab Ltd.
3. Indian Medicines Pharmaceutical Corporation Ltd.
4. Karnataka Antibiotics & Pharmaceuticals Ltd.
5. Orissa Drugs & Chemicals Ltd.
6. Rajasthan Drugs & Pharmaceuticals Ltd.
7. U.P. Drugs & Pharmaceuticals Ltd.

List of Selected Nodal Training Agencies

1. Associated Chamber of Commerce & Industry of India (ASSOCHAM), New Delhi
2. Central Institute of Plastic Engg. and Technology(CIPET) , Chennai
3. CIPET, Amritsar
4. CIPET, Bhubaneshwar
5. CIPET, Guwahati
6. CIPET, Hajipur
7. Central Leather Research Institute, Chennai
8. Centre for Development of Advanced Computing, Mohali, (Chandigarh)
9. CMC Ltd.
10. CMD, Trivendrum
11. Director General of Employment &Training, M/O Labour
12. Electronics Service & Training Centre, Kaniya, Ramnagar
13. Indian Council of Small Industries, Kolkata
14. Indian Institute of Entrepreneurship, Guwahati
15. Institute of Entrepreneurship Development, Patna.
16. Institute of Labour Development, Jaipur
17. Kalinga Institute of Industrial Technology (KIIT), Bhubaneswar
18. Madhya Pradesh Consultancy Organisation, Bhopal
19. MITCON, Pune
20. National Institute of Small Industry Extension Training (NISIET), Hyderabad
21. National Productivity Council, New Delhi
22. National School of Computer Education, Kolkata
23. National Small Industries Corpn Ltd., New Delhi
24. NIESBUD, Noida
25. NITRA, Ghaziabad
26. Small Industries Service Institute, Agartala
27. Small Industries Service Institute, Bangalore
28. Small Industries Service Institute, Chennai
29. Small Industries Service Institute, Coimbatore
30. Small Industries Service Institute, Guwahati
31. Small Industries Service Institute, Indore
32. Small Industries Service Institute, Kanpur
33. Small Industries Service Institute, Karnal
34. Small Industries Service Institute, Kolkata
35. Small Industries Service Institute, Mumbai
36. Small Industries Service Institute, New Delhi
37. Small Industries Service Institute, Patna.
38. Small Industries Service Institute, Raipur
39. Small Industries Service Institute, Ranchi
40. Small Industries Service Institute, Thrissur
41. Small Industries Service Institute, Vizag
42. Uttar Pradesh Consultancy Organisation Ltd., Kanpur

Ministry of Heavy Industries and Public Enterprises

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