मंत्री, भारी उद्योग एवं लोक उद्यम
भारत सरकार, नई दिल्ली–110 011

MINISTER OF HEAVY INDUSTRIES & PUBLIC ENTERPRISES
GOVERNMENT OF INDIA, URYOG BHAWAN,
NEW DELHI-110 011

सत्यमेव जयते

Foreword

The Public Enterprises Survey (2011-12) is the 52nd Survey in the series being laid in the Parliament. The Survey provides a consolidated report on the performance of all the Central Public Sector Enterprises (CPSEs). Out of the 225 operating CPSEs, 161 CPSEs earned net profit amounting to Rs. 1,25,116 crores in 2011-12 (up from Rs.1,13,944 crores in 2010-11) and 63 CPSEs incurred net losses amounting to Rs.27,602 crores during the year (up from Rs.21,817 crores in 2010-11).

2. While ONGC, NTPC Ltd and Coal India Ltd. have been the top three CPSEs in terms of profits, BSNL, Air India Ltd., and MTNL have been the top three loss making CPSEs during the year. The contribution of CPSEs to India's GDP currently stands in the range of 6-7 percent. This can go up to 10 percent of GDP provided the loss making CPSEs start earning profits and the profit making CPSEs continue with their expansion plans.

3. Despite a relatively slower growth of 6.7 percent in the domestic economy in 2011-12, 'under recoveries' of Oil marketing companies and fierce competition in telecom and air lines Sectors, the gross revenue (turnover) of all CPSEs grew by 22.96 percent during 2011-12.

4. On account of their good performance continuously for past several years, a number of CPSEs have large 'reserves and surplus' which they can leverage to raise debts from financial institutions for higher investment. Profitable CPSEs, with high growth rates, can also raise funds from the capital market as evident from the recent successes of listed CPSEs. The ceilings of 'external commercial borrowings' for infrastructure development have been also raised and 'private equity' has emerged as yet another source for raising funds. The CPSEs can take advantage of all these positive developments for higher growth.

5. Concerted efforts continue to be made by the Department of Public Enterprises for greater professionalization of the Boards (of Directors) of CPSEs. Consequent to the Second Pay Revision in CPSEs, furthermore, the Performance Related Pay (PRP) has been introduced in CPSEs to incentivize employees for higher productivity.

6. The sick and loss making CPSEs have greatly benefited from the recommendations of the Board of Reconstruction of Public Enterprises (BRPSE) that was set up in 2004. The number of sick and loss making CPSEs has significantly come down. Out of the 24 CPSEs who posted profits after receiving the revival package from the Government, 13 CPSEs have been declared 'turn around companies' as they made profits consecutively for three years.

7. The CPSEs have the presence in diverse sectors of manufacturing, mining, electricity, construction and services. Their growth benefits both the upstream and downstream industries, the various auxiliary units (and vendors), the host regions where they are located and the economy as a whole.

8. I congratulate the Department of Public Enterprises for bringing out yet another comprehensive Survey on the performance of Central Public Sector Enterprises.

February, 2013
New Delhi

(PRAFUL PATEL)

सत्यमेव जयते

भारत सरकार,
लोक उद्यम विभाग
भारी उद्योग एवं लोक उद्यम मंत्रालय

GOVERNMENT OF INDIA
DEPARTMENT OF PUBLIC ENTERPRISES
MINISTRY OF HEAVY INDUSTRIES &
PUBLIC ENTERPRISES

Preface

O.P. Rawat, IAS
Secretary

The Department of Public Enterprises (DPE) under the Ministry of Heavy Industries and Public Enterprises is the nodal Department in the Government of India to provide, inter-alia, an overview on the financial and physical performance of Central Public Sector Enterprises (CPSEs). The Public Enterprises (PE) Survey is a consolidated report on the performance of all CPSEs and is being prepared as per the recommendations of the Estimates Committee (2nd Lok Sabha). The Public Enterprises Survey is laid in the Parliament every year.

2. Besides statutory corporations, the CPSEs comprise those Government Companies (defined under Section 617 of Companies Act, 1956) wherein more than 50% equity is held by the Central Government. The subsidiaries of these companies registered in India are also categorized as CPSEs. The Survey, however, does not cover departmentally run public enterprises, banking institutions, insurance companies and enterprises wherein Central Government equity is less than or equal to 50%. However, a chapter on Public Sector Insurance Companies is included in Volume I of the Survey.

3. The Estimates Committee, in their 73rd Report (1959-60), had recommended 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 Department of Public Enterprises) in 1960-61 giving a consolidated picture of the performance of the Central Public Sector Enterprises.

4. In February, 2011, the Ministry of Corporate Affairs (MCA) issued a revised version of Schedule VI for preparing the financial statements of companies (including Government Companies) from Financial Year 2010-11 and onwards. Consequently, the Department of Public Enterprises constituted an "Expert Group to recommend suitable changes in the extant Data Sheet of Public Enterprises Survey to accommodate the Revised Schedule VI under the Companies Act 1956" on 1.6.2012 under the Chairmanship of Shri Amarjeet Chopra, Chairman, Committee on Public Finance & Government Accounting, Institute of Chartered Accountants of India (ICAI). The Expert Group submitted its report on 23.7.2012. It was subsequently deliberated upon by the executives of CPSEs dealing with finance in the Workshop held on 22.8.2012 by the Department. The Public Enterprise Survey (2011-12) is based on Revised Schedule VI and contains the financial data for the two years of 2010-11 and 2011-12. I am sure this change would add value to the database presented here-in.

5. The Public Enterprises Survey (2011-12) is the 52nd Survey Report in the series. The basic data for the Public Enterprises Survey is compiled based on the Annual Reports/Accounts of individual enterprises for the financial year 2011-12 as well as the data provided on line by these enterprises in the detailed data sheet/questionnaire developed by the Department. The data so compiled have been furthermore analyzed and presented in two separate volumes (i.e. Volume I & II).

6. While **Volume-I** contains the macro appraisal of the performance of CPSEs at the aggregate level in terms of the physical and the financial parameters, **Volume-II** contains enterprise-wise and cognate group-wise data for the two years of 2011-12 and 2010-11. Enterprises-wise data/report consists of summarized balance sheet, summarized profit and loss account, important management ratios and analysis of performance of the individual enterprises.

7. There were altogether 261 CPSEs (excluding 7 Insurance Companies) falling within the scope of the Survey 2011-12 (as on 31.3.2012) as against 248 CPSEs in 2010-11(as on 31.3.2011). During 2011-12, two CPSEs were either closed or merged with their Holding Company as decided by the concerned administrative Ministries.

8. The two enterprises which were covered in PE Survey 2010-11, but have not been covered in the PE Survey 2011-12 are: (i) Maharashtra Electrosmelt Ltd, and (ii) Bihar Drugs & Organic Chemicals Ltd. Whereas Maharashtra Electrosmelt Ltd. has been amalgamated with its Holding Company (SAIL), Bihar Drugs & Organic Chemicals Ltd. has been closed by the order of the Department of Pharmaceuticals.

9. Fifteen (15) new public sector enterprises, namely, Bharat Broadband Network Ltd., Biotechnology Industry Research Assistance Council, DGEN Transmission Co. Ltd., HLL Biotech Ltd., Irrigation & Water Resource Finance Corporation Ltd. Indian Oil-CREDA Biofuels Ltd., Mahanadi Basin Power Ltd., NMDC Power Ltd., PFC Green Energy Ltd., Power Equity Capital Advisers Pvt. Ltd., SAIL Jagdishpur Power Plant Ltd., SAIL Sindri Projects Ltd., SAILRefractory Company Ltd., Prize Petroleum Company Ltd. and PFC Capital Advisory Services Ltd. have been added to the list of CPSEs as per the information received from the concerned administrative Ministry/Department. Out of the 15 newly set up CPSEs, one CPSE namely SAIL Sindri Projects Ltd. has not been covered in the Survey as no paid up capital was allotted to the entity until 31.3.2012.

10. Among the newly established CPSEs, SAIL Refractory Company Ltd., Prize Petroleum Company Ltd. and PFC Capital Advisory Services Ltd. have become operative and CREDA-HPCL BIOFUELS Ltd., HPCL Biofuels Ltd. and BHEL Electrical Machines Ltd. which were shown as 'under construction' in the P E Survey 2010-11, became operative during the year.

11. Rural Electrification Corporation Ltd. and Scooters India Ltd. have been shifted from Power Transmission and Transportation Equipment's group to Financial Services and Medium and Light Engineering group respectively during 2011-12.

12. The administrative control of Burn Standard Company Ltd. changed from Ministry of Heavy Industries & Public Enterprises to Ministry of Railways during the year.

13. The data in respect of 50 CPSEs has however, been considered as provisional in 2011-12 as they did not either submit the audited annual accounts as per Revised Schedule VI of Companies Act, 1956 or did not furnish the complete data for both the years (2010-11 and 2011-12). A list of these CPSEs is shown at Appendix IV, at the end of this Volume.

14. The status of 268 enterprises (including 7 Insurance Companies) discussed in this Survey, is shown below:

Sl.No.	Categories	Total Enterprises (As on 31.3.2012)
1.	Operating Enterprises	225
2.	Enterprises which are yet to commence commercial operation	35
3.	Insurance Companies	7
4.	Not considered (as no paid up capital allotted yet)	1
	Total	**268**

15. Ministry/Department-wise, sectorial/group-wise and State-wise (as per their Registered Office), separate lists of the CPSEs are given in the Appendices I, II, and III respectively at the end of this Volume.

16. I express my grateful thanks to all the Ministries/Departments for making available the relevant information relating to CPSEs, such as Pricing Policy, Disinvestment Policy and proposals for Restructuring of CPSEs etc. The co-operation extended by all the CPSEs in submission of requisite data to the Department is also duly acknowledged.

17. The timely completion of the survey has been the result of the efforts put in by all the officers and staff of the Department and the Public Enterprises Division of NIC (Government of India). The overall supervision in this endeavour was provided by the Economic Adviser, Department of Public Enterprises.

18. The Survey is available on DPE's website **www.dpe.nic.in.** Suggestions to further improve the Public Enterprises Survey are welcome, and may be sent at the e-mail: **psesurvey@nic.in.**

(O.P. RAWAT)

February, 2013
New Delhi

Chapter-1

Performance Overview 2011-12

Public sector enterprises have been set up to serve the broad macro-economic objectives of higher economic growth, self-sufficiency in production of goods and services, long term equilibrium in balance of payments and low and stable prices. While there were only five Central Public Sector Enterprises (CPSEs) with a total investment of ₹ 29.00 crore at the time of the First Five Year Plan, there were as many 260 CPSEs (excluding 7 Insurance Companies) with a total investment of ₹ 7, 29,228 crore as on 31st March, 2012.

A large number of CPSEs have been set up as Greenfield projects consequent to the initiatives taken during the Five Year Plans. CPSEs such as National Textile Corporation, Coal India Ltd. (and its subsidiaries) have, however, been taken over from the private sector consequent to their 'nationalization'. Industrial companies such as Indian Petrochemicals Corporation Ltd., Modern Food Industries Ltd., Hindustan Zinc Ltd., Bharat Aluminum Company and MarutiUdyog Ltd., on the other hand, which were CPSEs earlier, ceased to be CPSEs after their 'privatization'.

Along with other public sector majors such as State Bank of India in the banking sector, Life Insurance Corporation in the insurance sector and Indian Railways in transportation, the CPSEs are leading companies of India with significant market-shares in sectors such as petroleum, (e.g. ONGC, GAIL and Indian Oil Corporation), mining (e.g. Coal India Ltd. and NMDC), power generation (e.g. NTPC and NHPC), power transmission (e.g. Power Grid Corporation of India Ltd.), nuclear energy (e.g. Nuclear Power Corporation of India Ltd.), heavy engineering (e.g. BHEL), aviation industry (e.g. Hindustan Aeronautics Ltd. and Air India Ltd.), storage and public distribution system (e.g. Food Corporation of India and Central Warehousing Corporation), shipping and trading (e.g. Shipping Corporation of India Ltd, and State Trading Corporation of India Ltd.) and telecommunication (e.g. BSNL and MTNL).

With economic liberalization, post-1991, sectors that were exclusive preserve of the public sector enterprises were opened to the private sector. The CPSEs, therefore, are faced with competition from both domestic private sector companies (some of which have grown very fast) and the large multi-national corporations (MNCs).

1.1 Indian Economy (2011-12) and CPSEs

The CPSEs play a critical role in the Indian economy. They influence the growth in the economy and are affected by the overall growth in the economy. As against the nominal GDP growth of 15.0 per cent (at current market price) in 2011-12, the gross value addition by all the CPSEs (exclusive of under-recoveries) grew by 4.24 per cent during the year (if however, 'the under recoveries' are added, then the gross value addition by all CPSEs during the year increased by 7.38 per cent). The turnover of petroleum (Refinery & Marketing), Coal, Fertilizers, Electricity (Generation and Transmission), Heavy Engineering, and Contract & Construction showed a significant increase during the year. Significant gains in terms of net profits were made by CPSEs in the Coal, Crude Oil, and Transportation equipment, Power Generation, Contract & Construction and Consultancy Services. The net losses, however, increased for CPSEs operating in telecommunication and transportation services. The highlights of performance of CPSEs, at the aggregate level, during 2011-12 are given in Box 1.

Macro view of the performance of CPSEs, during the last ten years, is shown in Box 2. The turnover of all 225 operating CPSEs during 2011-12 stood at ₹ 18, 41,927 crore as compared to ₹ 14, 98,018crore in the previous year. The share of earnings through export/deemed export amounted to 6.76 percent of total turnover during the year, and the CPSEs earned foreign exchange equal to ₹ 1, 24,492crorein 2011-12 as compared to ₹ 91, 774 crore in 2010-11. The foreign exchange outgo on imports and royalty, know-how, consultancy, interest and other expenditure, on the other hand, increased from ₹ 5,50,086 crore in 2010-11 to ₹ 7,33,544 crore in 2011-12 showing an increase of 33.35%.

The total employee strength in CPSEs stood at 13.98 lakh (excluding contractual & casual labours) in 2011-12 as compared to 14.40 lakh in 2010-11. The total strength of employees in CPSEs has gone down by 41,682 persons due to superannuation, voluntary retirement etc. The salary and wages in all the CPSEs, at the same time went up during the year from ₹ 98,402 crore in 2010-11 to ₹ 1, 05,407crore in 2011-12 showing a growth of 7.12%.

Box – 1

Highlights

- **Total paid up capital** in 260 CPSEs as on 31.3.2012 stood at ₹1,63,863 crore compared to ₹1,57,438 crore as on 31.3. 2011 (248 CPSEs), showing a growth of 4.08%.
- **Total investment** (equity plus long term loans) in all CPSEs stood at ₹.7, 29,228 crore as on 31.3.2012 compared to ₹ 6, 03,975crore as on 31.3.2011, recording a growth of 20.74%.
- **Capital Employed** (Paid up capital plus reserve & surplus and long term loans) in all CPSEs stood at ₹13, 43,176crore as on 31.3.2012 compared to ₹11, 64,178crore as on 31.3.2011 showing a growth of 15.38%.
- **Total turnover/gross revenue from operation** of all CPSEs during 2011-12 stood at ₹18, 41,927crore compared to ₹14, 98,018crore in the previous year showing an increase of 22.96%.
- **Total income** of all CPSEs during 2011-12 stood at ₹18, 24,627crore compared to ₹14, 70,569crore in 2010-11, showing an increase of 24.08%.
- **Under-recoveries** borne by the upstream oil producing and oil marketing companies (in retail prices of petroleum products) amounted to ₹55, 041crore in 2011-12 compared to ₹37, 190crore in 2010-11.
- **Profit** of profit making CPSEs stood at ₹1, 25,115crore during 2011-12 compared to ₹1, 13,944 crore in 2010-11, showing a growth of 9.80%.
- **Loss** of loss incurring CPSEs stood at ₹27, 602 crore in 2011-12 compared to ₹21, 817 crore in 2010-11, showing an increase in loss by 26.52%.
- **Overall net profit** of all 225 CPSEs during 2011-12 stood at ₹97, 513crore compared to ₹92, 128 crore during 2010-11, showing an increase of 5.84%.
- **Reserves & Surplus** of all CPSEs went up from ₹5, 60,203crore in 2010-11 to ₹6, 13,949 crores in 2011-12, showing an increase by 9.59%.
- **Net worth** of all CPSEs went up from ₹7, 17,641 crore in 2010-11 to ₹7, 77,812 crore in 2011-12 registering a growth of 8.38%.
- **Contribution of CPSEs to Central Exchequer** by way of excise duty, customs duty, corporate tax, interest on Central Government loans, dividend and other duties and taxes increased from ₹1,56,751 crore in 2010-11 to ₹1,60,801crore in 2011-12, showing an increase of 2.58%.
- **Foreign exchange earnings** through exports of goods and services increased from ₹91, 774 crore in 2010-11 to ₹1, 24, 492 crore in 2011-12, showing a growth of 35.65%.
- **Foreign exchange outgo** on imports and royalty, know-how, consultancy, interest and other expenditure increased from ₹5,50,086 crore in 2010-11 to ₹7,33,544crore in 2011-12, showing an increase of 33.35%.
- **CPSEs employed** 13.98 lakh people (excluding contractual &casual labours) in 2011-12 compared to 14.40 lakh in 2010-11, showing a reduction in employees by 2.91%.
- **Salary and wages** went up in all CPSEs from ₹98, 402 crore in 2010-11 to ₹1, 05,407crore in 2011-12, showing a growth of 7.12%.
- **Total Market Capitalisation** (M_Cap) of 44 listed CPSEs, based on the stock price in Mumbai Stock Exchange, declined from ₹15,06,698 crore as on 31.03.2011 to ₹12,53,245crore as on 31.03.2012. Market Capitalisation of CPSEs during this period, therefore, decreased by 16.82%
- **M_Cap** of CPSEs as per cent of BSE M_Cap decreased from 22.03% as on 31.3.2011 to 20.17% as on 31.3.2012.

Box-2

Macro-View of Performance of CPSEs

(₹ in crore)

Particulars	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
	(As per Pre-Revised Schedule VI)								(As per Revised schedule VI)	
No. of operating Enterprises	226	230	227	226	217	214	213	217	220	225
Capital employed	417160	452336	504407	585484	661338	724009	792232	908007	1153947	1328027
Total Gross Turnover/ Revenue	572833	630704	744307	837295	964890	1096308	1271529	1244805	1498018	1841927
Total Net Income/Revenue	548912	613706	734944	829873	970356	1102772	1309639	1272219	1470569	1824627
Net Worth	241846	291828	341595	397275	454134	518485	583144	652993	709505	766439
Profit before dep,Impairment, Int, Exc. Items,Ex.Or. Items &taxes (PBDIEET)	101691	127320	142554	150262	177990	195049	186836	211184	219714	250438
Depreciation, Depletion & Amortization	28247	31251	33147	34848	33141	36668	36780	41603	57118	60528
DRE/Impairment	905	1025	986	992	5841	5802	7661	9565	187	154
Profit before Int, Exc. Items, Ex.Or. Items &taxes (PBIEET)	72539	95039	108420	114422	139008	152579	142395	160017	162409	189756
Interest	23921	23835	22869	23708	27481	32126	39300	36060	29724	41060
Profit before Exc. Items, Ex.Or. Items &taxes (PBEET)	48618	71144	85550	90714	111527	120453	103095	123957	132686	148696
Exceptional Items	—	—	—	—	—	—	—	—	-1479	3927
Profit before Ex.Or. Items &taxes (PBET)	—	—	—	—	—	—	—	—	134164	144769
Extra-Ordinary Items	-1225	-3933	-1075	-3192	-3880	-1570	-14600	-8264	-2786	-452
Profit before taxes (PBT)	49843	75077	86625	93906	115407	122023	117695	132221	136950	145221
Tax provisions	17499	22134	21662	24370	34352	40749	33828	40018	44871	47709
Net Profit/Loss after Tax from Continuing Operations	32344	52943	64963	69536	81055	81274	83867	92203	92079	97512
Net Profit/Loss after Tax from Discontinuing Operations	—	—	—	—	—	—	—	—	49	1
Overall Net Profit/Loss	32344	52943	64963	69536	81055	81274	83867	92203	92128	97513
Profit of profit making CPSEs	43316	61606	74432	76382	89581	91577	98488	108434	113944	125116
Loss of loss incurring CPSEs	10972	8522	9003	6845	8526	10303	14621	16231	21817	27602
Profit making CPSEs (No.)	119	139	143	160	154	160	158	157	158	161
Loss Incurring CPSEs (No.)	105	89	73	63	61	54	55	60	62	63
CPSEs Making no profit/loss	2	2	-	1	1	-	-	-	-	1
No. of Operating CPSEs that have not furnished information	—	—	—	2	1	—	—	—	—	—
Dividend	13769	15288	20718	22886	26819	28123	25501	33223	35700	42627
Dividend tax	1193	1961	2852	*3215*	4107	4722	4132	5151	5394	5877
Retained profit	17382	35835	41394	43435	50129	48429	54233	53820	51056	49009

1.2 CPSEs and Profitability Ratios

Box-3 below shows the different financial ratios vis-a-vis the aggregate performance of CPSEs, for the last ten years. A perusal of profit related ratios shows a general improvement in profitability of CPSEs over the years (Fig 1.1). In comparison to 2010-11, however, the profitability ratios in terms of net profit to turnover/revenue, net profit to net worth and net profit to capital employed show a decline, whereas dividend payout has significantlyincreased in 2011-12. The major decline in profitability ratios such as Net Profit to Capital Employed is due to change in the formulae for calculating Capital Employed, which has been changed from "Net fixed Assets plus Working Capital" to "Shareholders' Funds plus Long term Borrowings" resulting in an increase in the quantum of Capital Employed in 2010-11 and 2011-12 as compared to the previous years. This change has been carried out as recommended by the Expert Group constituted in the Department of Public Enterprises consequent to the introduction of the Revised Schedule VI under the Companies Act, 1956.

Box - 3

Financial Ratio

(In per cent)

Particulars	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12
Sales to Capital employed	137.32	139.43	147.56	143.01	145.90	151.28	160.30	137.09	129.82	138.70
PBDITEP to Capital employed	24.38	28.15	28.26	25.66	26.91	26.91	23.55	23.26	19.04	18.86
PBET to Net worth	20.10	24.38	25.04	22.83	24.56	23.12	17.55	18.98	18.70	19.40
PBDIEET to Turnover/Revenue	17.75	20.19	19.15	17.95	18.45	17.79	14.67	16.97	14.67	13.60
PBIEET to Capital employed	17.39	21.01	21.49	19.54	21.02	21.05	17.95	17.62	14.07	14.29
PBIEET to Turnover/Revenue	12.66	15.07	14.57	13.67	14.41	13.92	11.18	12.85	10.84	10.30
PBEET to Turnover/Revenue	8.49	11.28	11.49	10.83	11.56	10.99	8.09	9.96	8.86	8.07
Net Profit to Turnover/Revenue	5.65	8.40	8.73	8.30	8.40	7.41	6.59	7.41	6.15	5.29
Net Profit to Capital Employed	7.75	11.71	12.88	11.88	12.26	11.21	10.57	10.15	7.98	7.34
Net Profit to Net Worth	13.37	18.16	19.02	17.50	17.85	15.60	14.28	14.12	12.98	12.72
Dividend payout Ratio	42.57	28.85	31.89	32.91	33.09	35.33	31.06	35.87	38.75	43.71
Tax Provision to PBEET	35.99	31.11	25.32	26.86	30.80	33.83	32.81	32.28	33.82	32.08
Interest to Gross Profit	23.52	18.72	16.04	15.78	19.77	21.06	27.60	22.54	18.30	21.64

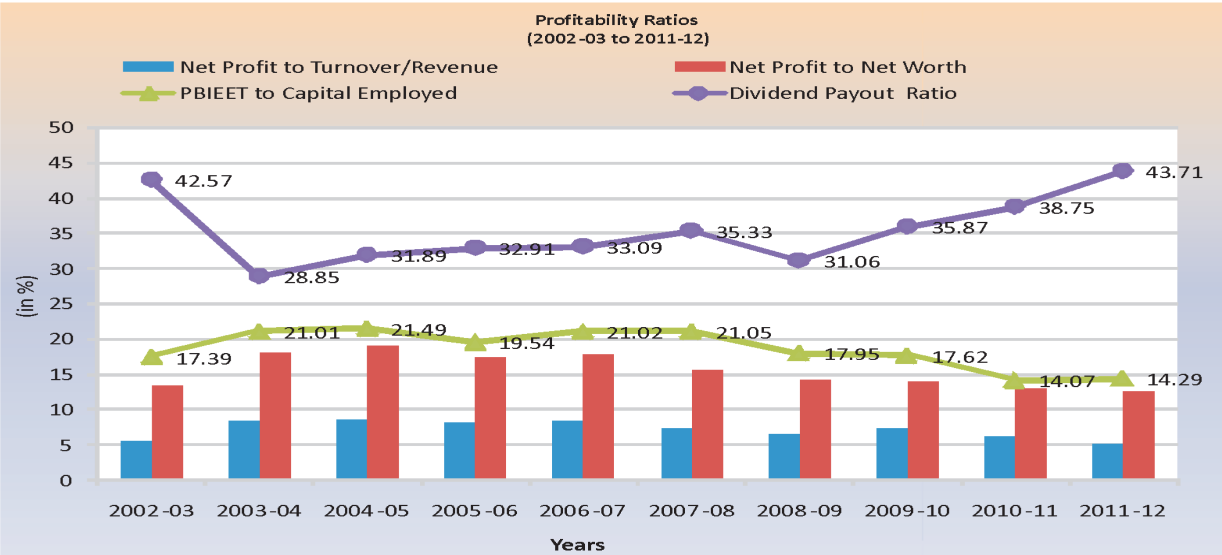

Fig.1.1

1.3 Effective Tax Rate & Interest Burden

The interest burden on CPSEs measured as 'interest to gross profit' shows a decline up to 2005-06. Subsequently, it has shown an upward trend up to 2008-09 and came down the levels of 2009-10 and 2010-11. It, however, declined in 2010-11 and increased marginally in 2011-12 to 21.64 percent (Fig 1.2). In terms of 'effective tax rate', the tax burden on CPSEs that improved significantly in 2004-05 and in 2005-06 got worse in 2007-08 and 2008-09; it came down marginally in 2009-10, but went up to 33.82 percent in 2010-11 and again came down up to 32.08 percent in 2011-12 (Fig 1.3).

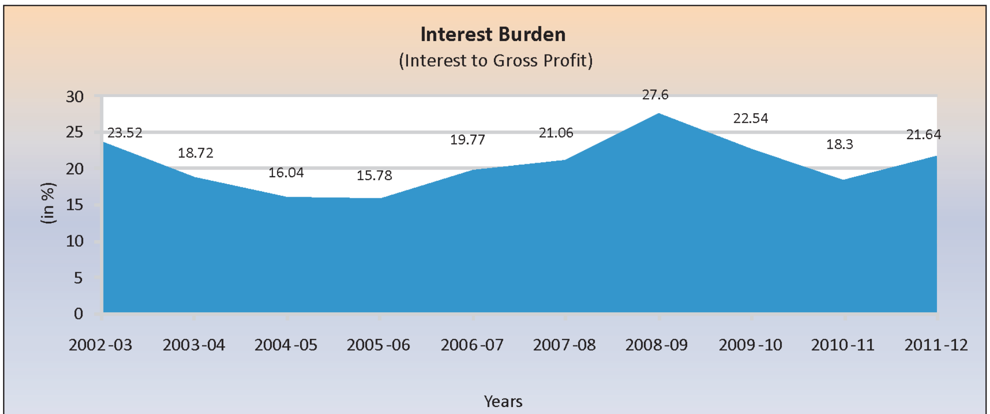

Fig.1.2

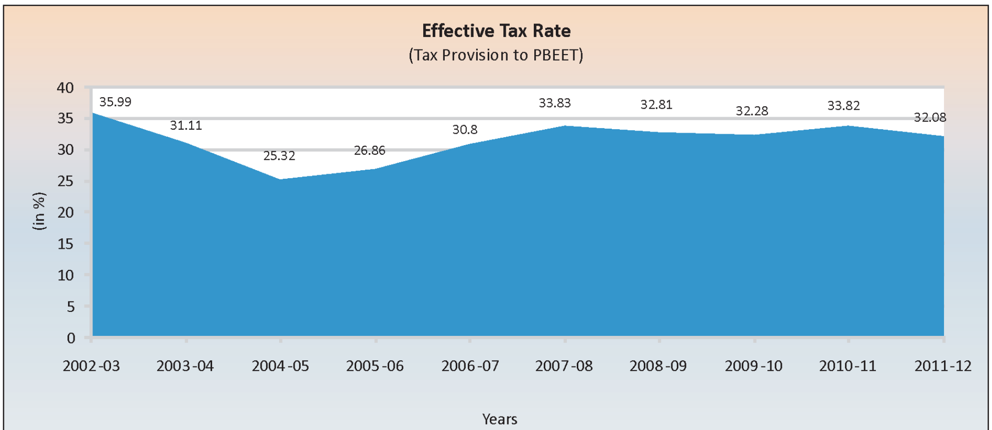

Fig.1.3

1.4 Aggregate Balance Sheet (2011-12 & 2010-11)

Table 1.1 below provides information on 'Sources of Funds Equity & Liabilities and Assets' (capital available and the utilization) with CPSEs at the aggregate level during the last two years based on the Revised Schedule VI issued by the Ministry of Corporate Affairs in February 2011.The share-holders funds available with CPSEs increased during the year which went up from ₹717640.85 in 2010-11 to ₹7, 77,812crore in 2011-12.While 'reserves and surplus' showed an increase of 9.59 per cent over the previous year, 'long term borrowings' increased by 26.61 percent during 2011-12 over 2010-11. In absolute terms, 'reserves and surplus' increased to ₹613948.52 crore in 2011-12 from the earlier level ₹560203.13 crore in 2010-11 (Table 1.1). Long term borrowings went up to ₹5, 65,364 crore in 2011-12 from the earlier level of ₹4, 46,537 crore in 2010-11.

In terms of Assets (application of funds) there was a growth of 14 percent in both 'non-current assets' and 'current assets' during 2011-12 over 2010-11.While there was a growth of 8.25 per cent in 'gross block' (under 'non-current assets'), there was reduction of 4.87 per cent in 'current investment' (under current assets) in 2011-12 over 2010-11. In terms of respective shares under' non- current assets', while' net block claimed a share of 41.8 percent, the share of long term loans and advances stood at 28.9 percent. In the category of' current assets', similarly, while 'trade receivable' claimed a share of 18.4 percent, the share of 'cash and bank balances' stood at 28 percent during 2011-12.

Table 1.1

Aggregate Balance Sheet of CPSE

(₹ in crore)

Particulars	2011-12	2010-11
I Equity & Liabilities		
(1.1) Share-holders Fund (a+b+c+d)	**777811.79**	**717640.85**
a. Paid-up Capital	161321.61	155533.71
b. Money Received against Share Warrants	3.25	3.25
c. Reserves & Surplus	613948.52	560203.13
d. Share Application Money	2538.41	1900.76
Total Share-holders Fund		
(1.2) Non-Current Liabilities(e+f+g+h)	**761360.42**	**629315.35**
e. Long Term Borrowings	565364.34	446536.88
f. Deferred Tax Liability (Net)	38661.34	36149.95
g. Other Long Term Liabilities	69780.52	68729.42
h. Long Term Provisions	87554.22	77899.10
(1.3) Total Current Liabilities (i+j+k+l)	**806788.81**	**706898.01**
i.Short Term Borrowings	226926.39	196226.57
j. Trade Payables	176190.60	151675.92
k. Other Current Liabilities	326697.94	297189.85
l. Short Term Provisions	76973.88	61905.67
Grand Total (1.1+1.2+1.3)	**2345961.02**	**2053954.21**
II. Assets		
(2.1) Non-Current Assets (a+b+c+d+e+f+g+h)	**1353475.33**	**1186480.65**
a. Gross Block	1111204.37	1026488.08
b. Depreciation & Amortization and Impairment	546094.80	495998.52
c. Net Block	565109.57	530489.56
d. CapitalWork-In-Progress (including Intangible Assets under development)	262321.92	210562.57
e. Non- Current Investments	84335.45	83949.78
f. Deferred Tax Assets	8374.28	8202.96
g. Long Term Loans & Advances	391648.14	317361.04
h. Other Non-Current Asstst.	41685.97	35914.74
(2.2) Current Assets (i+j+k+l)	**992485.69**	**867473.56**
i. Current Investments	32150.72	33795.09
j. Trade Receivables	182472.23	131016.42
k. Cash & Bank Balances	278595.36	276156.97
l. Other Current Assets	499267.38	426505.08
Grand Total (2.1 + 2.2)	**2345961.02**	**2053954.21**

1.5 Investment Pattern in terms of Gross Block

The overall growth in investment in CPSEs, in terms of 'gross block'(inclusive of capital work in progress), stood at 11.03 per cent in 2011-12 over the previous year. (Table 1.2 / Fig.1.4).In terms of gross block, the 'manufacturing' CPSEs had the highest share in aggregate investment (of all CPSEs) at 28.31 per cent during 2011-12. This was followed by 'electricity' (25.62%), 'mining' (23.52%) and 'services' (21.54%). In terms of growth in investment over the previous year, the highest growth (other than CPSEs under construction and agriculture) was recorded by 'electricity' (13.97%) followed by 'manufacturing' (13.24%) and 'mining' (11.76%).

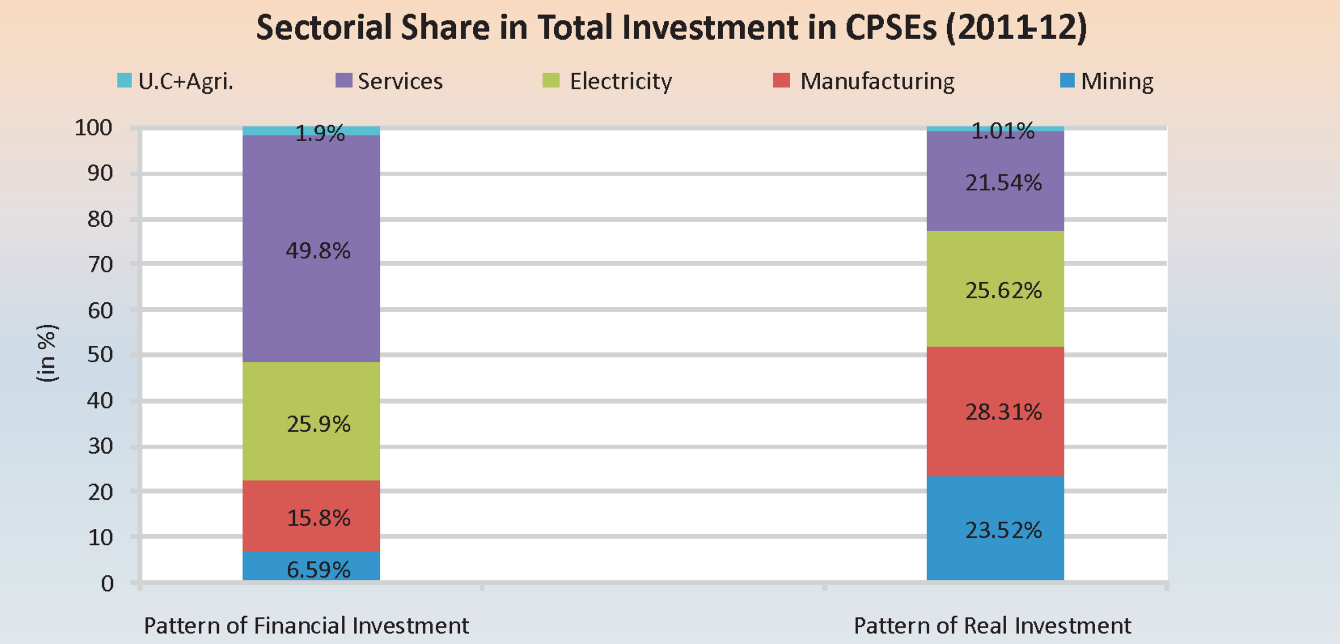

Fig 1.4

Table 1.2

Pattern of investment in terms of Gross Block

(2010-11 and 2011-12)

(₹ in crore)

Sl. No.	Sector	Investment in terms Of Gross Block as on 31.3.2012	Investment in terms Of Gross Block as on 31.3.2011	Growth rate over the previous year	Gross block as % of total (as on 31.3.12)
(1)	(2)	(3)	(4)	(5)	(6)
1.	Agriculture	869	118	636.44	0.06
2.	Mining	323120	289117	11.76	23.52
3.	Manufacturing	388895	343435	13.24	28.31
4.	Electricity	351938	308794	13.97	25.62
5.	Services	295837	287293	2.97	21.54
6.	CPSEs yet to Commence Operations	12867	8294	55.15	0.94
Total		**1373526**	**1237051**	**11.04**	**100.00**

Note : This is inclusive of capital- work -in- progress (including intangible assets)

1.5.1 Top Ten Enterprises in terms of Gross Block

Gross block in top ten CPSEs amounted to ₹9, 45,619crore as on 31.3.2012. This was equal to 68.85 percent of the total gross block in all CPSEs. Oil & Natural Gas Corporation Limited, Bharat Sanchar Nigam Ltd. and NTPC Ltd are the top three CPSEs amongst the top ten (CPSEs) in terms of gross block during the year 2011-12 (Table 1.3). The share of these three CPSEs alone was 54.76% of the total gross block of all the CPSEs as on 31.3.2012.

Table 1.3

Gross Block in Top Ten Enterprises, as on 31.3.2012

(₹ in crore)

Sl.No.	CPSEs	Investment in terms of Gross Block*	Share in total Gross Block %)
(1)	(2)	(3)	(4)
1.	Oil & Natural Gas Corporation Ltd.	219286.82	15.97
2.	Bharat Sanchar Nigam Ltd.	174828.36	12.73
3.	NTPC Ltd.	123658.12	9.00
4.	Indian Oil Corporation Ltd.	112890.23	8.22
5.	Power Grid Corporation of India Ltd.	91570.88	6.67
6.	Steel Authority of India Ltd.	69777.29	5.18
7.	NHPC Ltd.	42410.67	3.09
8.	Nuclear Power Corporation of India Ltd.	39044.13	2.84
9.	Hindustan Petroleum Corpn. Ltd.	37903.46	2.76
10.	Gail (India) Ltd.	34249.08	2.49
	Total Top Ten (CPSEs)	**945619.04**	**68.85**
	Total Gross Block	**1373526.29**	**100.00**

* Gross Block inclusive of Capital-work-in progress and intangible assets under development.

1.5.2 Financial Investment in CPSEs

Financial investment (equity plus long term loans) in all the 260 CPSEs as on 31.3.2012 stood ₹ 7,29,228 crore as compared to ₹6,03,975 crore in the previous year, showing an increase by ₹1,25,253crore or a growth of 20.74 percent.

In terms of share in total investment, the CPSEs in the ‘service’ sector had the highest share in financial investment (49.81%) as on 31.3.2012 (Fig. 1.4). This was followed by ‘electricity’ sector (25.89%) and ‘manufacturing’ sector (15.80%). Table 1.4 below shows the sector-wise and cognate group-wise cumulative investment in CPSEs as on 31.3.2011 and 31.3.2012.

Table 1.4

Group-wise Financial Investment in CPSEs

(2011-12 & 2010-11)

(₹ in crore)

Sl. No. Sector/ Cognate Group	Investment		Growth over previous year (3) - (4) %
	31.3.2012	31.3.2011	
(1) (2)	(3)	(4)	(5)
I. Agriculture			
1 Agro Based Industries	902.65	718.41	25.65
Sub Total	**902.65**	**718.41**	**25.65**
II. Mining			
2 Coal	16696.59	16738.27	-0.25
3 Crude Oil	26798.68	26936.17	-0.51
4 Other Minerals & Metals	4577.60	4577.61	- 0.0
Sub Total	**48072.87**	**48252.05**	**-0.37**
III. Manufacturing			
5 Steel	23656.25	21223.82	11.46
6 Petroleum(Refinery & Marketing)	42344.55	35265.76	20.07
7 Fertilizers	17670.26	15622.95	13.10
8 Chemicals & Pharmaceuticals	8142.02	7882.57	3.29
9 Heavy Engineering	2557.30	2428.98	5.28
10 Medium & Light Engineering	9261.78	8374.74	10.59
11 Transportation Equipment	1724.29	1915.89	-10.00
12 Consumer Goods	5661.38	5127.11	10.42
13 Textiles	4261.11	4074.21	4.59
Sub Total	**115278.94**	**101916.03**	**13.11**
IV. Electricity			
14 Power Generation	135073.39	124247.52	8.71
15 Power Transmission	53749.05	41845.70	28.45
Sub Total	**188822.44**	**166093.22**	**13.68**
V. Services			
16 Trading & Marketing	7149.35	7460.17	-4.17
17 Transport Services	46184.09	29316.30	57.54
18 Contract & Construction Services	15298.10	13920.60	9.90
19 Industrial Development & Tech. Consultancy Services	954.60	874.15	9.20
20 Tourist Services	201.35	191.12	5.35
21 Financial Services	271954.06	209689.22	29.69
22 Telecommunication Services	21504.28	17113.29	25.66
Sub Total	**363245.83**	**278564.85**	**30.40**
VI. Under Construction			
23 Enterprises Under Construction	12904.88	8917.46	44.71
Sub Total	**12904.88**	**8917.46**	**44.71**
Grand Total (I + II + III + IV + V + VI)	**729227.61**	**603974.60**	**20.73**

1.6 Turnover in CPSEs

Gross revenue / turnover from operating CPSEs have been robust during the last two years. Gross revenue of CPSEs increased by 22.96 per cent in 2011-12 over 2010-11. (Table 1.5 & 1.6).The manufacturing sector recorded the highest growth in turnover (27.73%) during 2011-12. This was followed by 'mining' with a 17.73% growth during the same period. The 'electricity' sector registered a 16.17 per cent growth in revenue during 2011-12. The revenue from operations in 'services' and 'agriculture' sector showed marginal improvement, over the previous year, with a growth of 12.83% and 8.33% respectively during 2011-12.

There was, moreover, much variation from industry to industry. There was significant decline in revenue in CPSEs belonging to industries like medium & light engineering, chemicals & pharmaceuticals and telecommunications services.

Table 1.5

Group-wise Gross Revenue from Operations of CPSEs

(2010-11 and 2011-12)

(₹ in crore)

Sl. No.	Sector/ Cognate Group	Tourover 31.3.2012	Tourover 31.3.2011	Growth over previous year (3) - (4) %
(1)	(2)	(3)	(4)	(5)
I. Agriculture				
1	Agro Based Industries	1017.72	939.48	8.33
Sub Total		**1017.72**	**939.48**	**8.33**
II. Mining				
2	Coal	70049.61	53801.19	30.20
3	Crude Oil	94183	82537.66	14.11
4	Other Minerals & Metals	23778.42	23359.44	1.79
Sub Total		**188011.06**	**159698.29**	**17.73**
III. Manufacturing				
5	Steel	66328.52	60236.42	10.11
6	Petroleum(Refinery & Marketing)	1027707.73	783669.05	31.14
7	Fertilizers	19451.30	15931.60	22.09
8	Chemicals & Pharmaceuticals	1532.92	1588.36	-3.49
9	Heavy Engineering	51657	45223.47	14.22
10	Medium & Light Engineering	13504.58	14016.76	-3.65
11	Transportation Equipment	23369.47	20786.28	12.43
12	Consumer Goods	5826.07	5321.23	9.49
13	Textiles	709.60	638.57	11.12
Sub Total		**1210087.63**	**947411.74**	**27.73**
IV. Electricity				
14	Power Generation	87526.57	75571.43	15.82
15	Power Transmission	10096.43	8460.96	19.33
Sub Total		**97623.00**	**84032.39**	**16.17**
V. Services				
16	**Trading & Marketing**	**224330.68**	**195884.31**	**14.52**
17	**Transport Services**	**31200.52**	**29282.98**	**6.55**
18	**Contract & Construction Services**	**13926.43**	**12649.25**	**10.10**
19	**Industrial Development & Tech. Consultancy Services**	**10053.07**	**8330.36**	**20.68**
20	**Tourist Services**	**986.24**	**889.29**	**10.90**
21	**Financial Services**	**34971.15**	**27831.55**	**25.65**
22	**Telecommunication Services**	**29719.17**	**31068.40**	**-4.34**
Sub Total		**345182.26**	**305936.13**	**12.83**
Grand Total (I + II + III + IV + V)		**1841926.67**	**1498018.03**	**22.96**

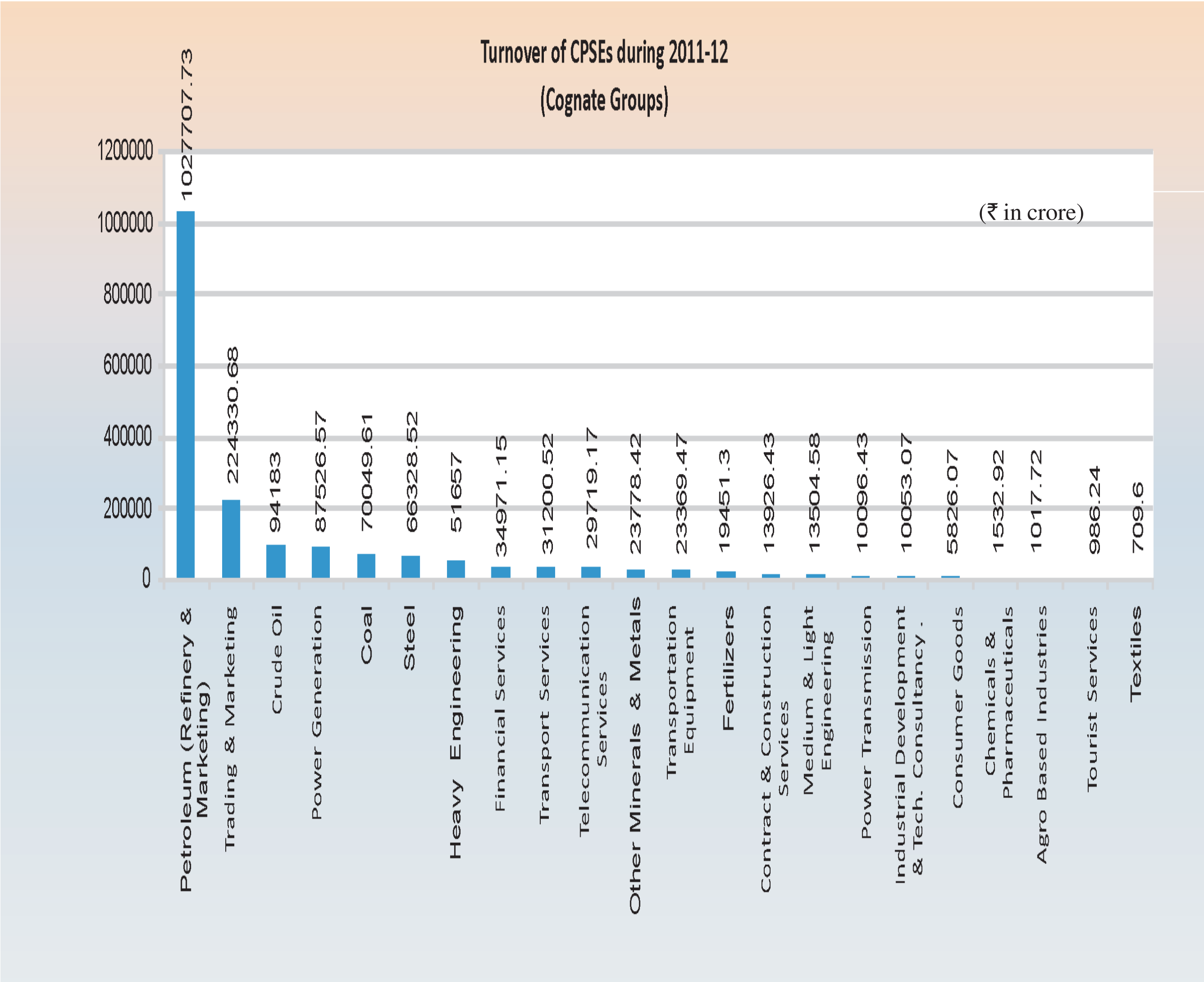

Fig. 15

The manufacturing sector recorded the highest growth in turnover (27.73%) during 2011-12 over the previous year. This was followed by 'mining' with a 17.73% growth during the same period. The 'electricity' sector registered a 16.17 per cent growth in revenue during the year. The revenue from operations in 'services' and in 'agriculture' sector showed marginal improvements , over the previous year, with a growth of 12.83% and 12.83% respectively during 2011-12.

Table 1.6

Sector wise Growth in GrossRevenue/Turnover, 2011-12

(In % age)

Sector	2011-12
Agriculture	8.33
Mining	17.73
Manufacturing	27.73
Electricity	16.17
Services	12.83
All CPSEs	22.96

There was,moreover, much variation from in growth in turnover industry to industry. There was a significant decline in revenue in CPSEs belonging to cognate groups of medium & light engineering, chemical & pharmaceuticals and telecommunication services.

1.7 Aggregate Profit and Loss of CPSEs

The net profit of profit making CPSEs stood at ₹1,25,115 crore in 2011-12 compared to ₹ 1, 13,944 crore in 2010-11. The loss of loss making CPSEs, on the other hand, was ₹27,602 crore in 2011-12 compared to ₹21,817 crore in 2010-11. At the aggregate level, the net profit of all CPSEs (aggregate net profit- aggregate net loss) stood at ₹97, 513 crore in 2011-12 compared to ₹92, 128 crore during 2010-11.

Cognate group-wise, the best results were achieved by the 'mining' sector with 29.45 per cent growth in profit over the previous year. This was followed by 13.42 per cent growth in profits achieved by (electricity sector). The 'Services' sector suffered a loss of ₹9, 057crore during 2011-12,which was higher than the loss of ₹4, 903 crore in 2010-11. This was mainly due to the loss suffered by Air India Ltd., Bharat Sanchar Nigam Ltd., Mahanagar Telephone Nigam Ltd. and Cotton Corporation of India Ltd. in both these years. Under the 'manufacturing sector', Steel, Petroleum, Heavy Engineering and Textiles showed a decline in profits while Transportation Equipment showed an increase in profits. CPSEs in the chemicals & pharmaceuticals sectors and medium & light engineering industries, on the other hand, reduced their losses during 2011-12.

Table 1.8

Net Profit/Loss of CPSEs

(₹ in crore)

Sl. No.	Sector/ Cognate Group	Net profit/Loss		Growth (in %)
		31.3.2012	31.3.2011	
(1)	(2)	(3)	(4)	(5)
I. Agriculture				
1	Agro Based Industries	-0.62	40.24	-101.54
Sub Total		-0.62	40.24	-101.54
II. Mining				
2	Coal	22054.13	15037.09	46.66
3	Crude Oil	30353.05	23935.21	26.81
4	Other Minerals & Metals	9203.40	8622.51	6.74
Sub Total		**61610.58**	**47594.81**	**29.45**
III. Manufacturing				
5	Steel	4364.63	5642.43	-22.64
6	Petroleum(Refinery & Marketing)	10993.60	16060.82	-31.55
7	Fertilizers	-540.62	-472.38	(14.45)
8	Chemicals & Pharmaceuticals	-619.45	-690.35	-10.27
9	Heavy Engineering	6899.75	7137.17	-3.33
10	Medium & Light Engineering	-286.82	-432.51	-33.68
11	Transportation Equipment	3821.06	3019.66	26.54
12	Consumer Goods	-934.18	-710.80	(31.43)
13	Textiles	22.50	1115.13	-97.98
Sub Total		**23720.47**	**30669.17**	**-22.65**
IV. Electricity				
14	Power Generation	17965.53	16013.67	12.18
15	Power Transmission	3274.32	2713.82	2.65
Sub Total		**21239.85**	**18727.49**	**13.42**
V. Services				
16	Trading & Marketing Services	438.52	555.22	-21.02
17	Transport Services	-6894.32	-4886.92	(41.08)
18	Contract & Construction Services	913.02	587.73	55.35
19	Industrial Development & Tech. Consultancy Services	1240.15	1073.20	15.56
20	Tourist Services	34.82	24.21	43.82
21	Financial Services	8085.83	6835.00	18.30
22	Telecommunication Services	-12874.83	-9091.26	(41.61)
Sub Total		**-9056.81**	**-4902.82**	**-84.72**
Grand Total (I + II + III + IV + V)		**97513.47**	**92127.89**	**5.85**

1.7.1 Top ten profit making CPSEs

Table 1.9 and Table 1.10 provide the list of the top ten profit making and the top ten loss making CPSEs respectively. Oil & Natural Gas Corporation Ltd., NTPC Ltd., and Coal India Ltd. ranked first, second and third CPSEs respectively amongst the top ten profit making CPSEs. All the top ten profit making companies are, more or less same in 2011-12 as in 2010-11 (with ranking slightly changed) except for South Eastern Coalfields Ltd. and Mahanadi Coalfields Ltd. which have replaced Oil India Ltd and Power Grid Corporation Ltd. respectively.

Table 1.9

Top Ten Profit Making CPSEs, 2011-12

(₹in crore)

Sl. No.	Name of the CPSEs	Net profit	% share in total net profit
(1)	(2)	(3)	(4)
1.	Oil & Natural Gas Corporation Ltd.	25122.92	20.08
2.	NTPC Ltd.	9223.73	7.37
3.	Coal India Ltd.	8065.10	6.45
4.	NMDC Ltd.	7265.39	5.81
5.	Bharat Heavy Electricals Ltd.	7039.96	5.63
6.	South Eastern Coalfields Ltd.	4098.68	3.28
7.	Indian Oil Corporation Ltd.	3954.62	3.16
8.	Mahanadi Coalfields Ltd.	3709.51	2.96
9.	GAIL (India) Ltd.	3653.84	2.92
10.	Steel Authority of India Ltd.	3542.72	2.83
	Total (1 to 10)	**75676.47**	**60.49**
	Net Profit of profit making CPSEs.	**125115.84**	**100.00**

1.7.2 Top ten loss making CPSEs

Table 1.10 provides the list of top ten loss making CPSEs. Amongst the loss making companies, Bharat Sanchar Nigam Ltd., Air India Ltd., and Mahanagar Telephone Nigam Ltd. were the top three loss making CPSEs during 2011-12. The top ten loss making companies claimed 90.43% of the total loss made by all the (63) CPSEs during the year. The top three CPSEs namely BSNL, Air India Ltd., and MTNL alone incurred a loss equal to 74.35% of the total loss of all CPSEs in 2011-12.The loss of BSNL and MTNLwent up by 39%and 47% respectively in 2011-12 over the previous year.

Table 1.10

Top Ten Loss Making CPSEs, 2011-12

(₹ in crore)

Sl. No.	Name of the CPSEs	Net Loss	(% share in total net loss)
(1)	(2)	(3)	(4)
1.	Bharat Sanchar Nigam Ltd.	(-) 8850.70	32.07
2.	Air India Ltd.	(-) 7559.74	27.39
3.	Mahanagar Telephone Nigam Ltd.	(-) 4109.78	14.89
4.	Hindustan Photo Films Manufacturing Co. Ltd.	(-) 1352.32	4.90
5.	Hindustan Cables Ltd.	(-) 648.27	2.35
6.	Air India Charters Ltd.	(-) 602.50	2.18
7.	Fertilizer Corporation of India Ltd.	(-) 538.68	1.95
8.	Indian Drugs & Pharmaceuticals Ltd.	(-) 489.88	1.77
9.	Shipping Corporation Ltd.	(-) 428.21	1.55
10.	Hindustan Fertilizer Corporation Ltd.	380.89	1.38
	Total Loss (1 to 10)	**(-) 24960.97**	**90.43**
	Net Loss of loss making CPSEs.	**(-) 27602.37**	**100.00**

1.8 Contribution to GDP

1.8.1 Gross Value Addition by CPSEs

The share of 'gross value addition' in CPSEs (net value addition + depreciation) as percent of Gross Domestic Product (at current market price) stood at 5.67 per cent in 2011-12 against 5.44 per cent in 2010-11. If, however, the under-recoveries of oil marketing companies (amounting to ₹55041crore in 2011-12 and 37190 crore in 2010-11) are included, then the share of gross value addition of all CPSEs in GDP goes up to 6.29 per cent in 2011-12 and 6.78 per cent in 2010-11.

1.8.2 Components of Net Value Addition

In terms of 'net value addition' (gross value addition - depreciation) generated by CPSEs in 2011-12, the share of 'profit before tax' (PBT) was the highest at 32.90 per cent. This was followed by indirect tax and duties (28.09%) , salary & wages (23.88%) and interest payment (9.30%) (Table1.11). A comparison between the respective shares of each of these items during 2011-12 and 2010-11 shows very little change during these two years (Fig.1.6).

Table 1.11

Components of Net Value Addition in CPSEs

(₹ in crore)

Sl.	Net Value Addition	2011-12	Share (%)	2010-11	Share(%)
(1)	(2)	(3)	(4)	(5)	(6)
1.	Profit before Tax (PBT)	145221	32.90	136950	32.27
2.	Interest	41060	9.30	29724	7.00
3.	Indirect Taxes & Duties (Net of subsidies)	123999	28.09	137885	32.49
4.	Salaries & Wages	105407	23.88	98402	23.19
5.	Rent, royalty and cess	25719	5.83	21439	5.05
	Total:	441406	100.00	424400	100.00

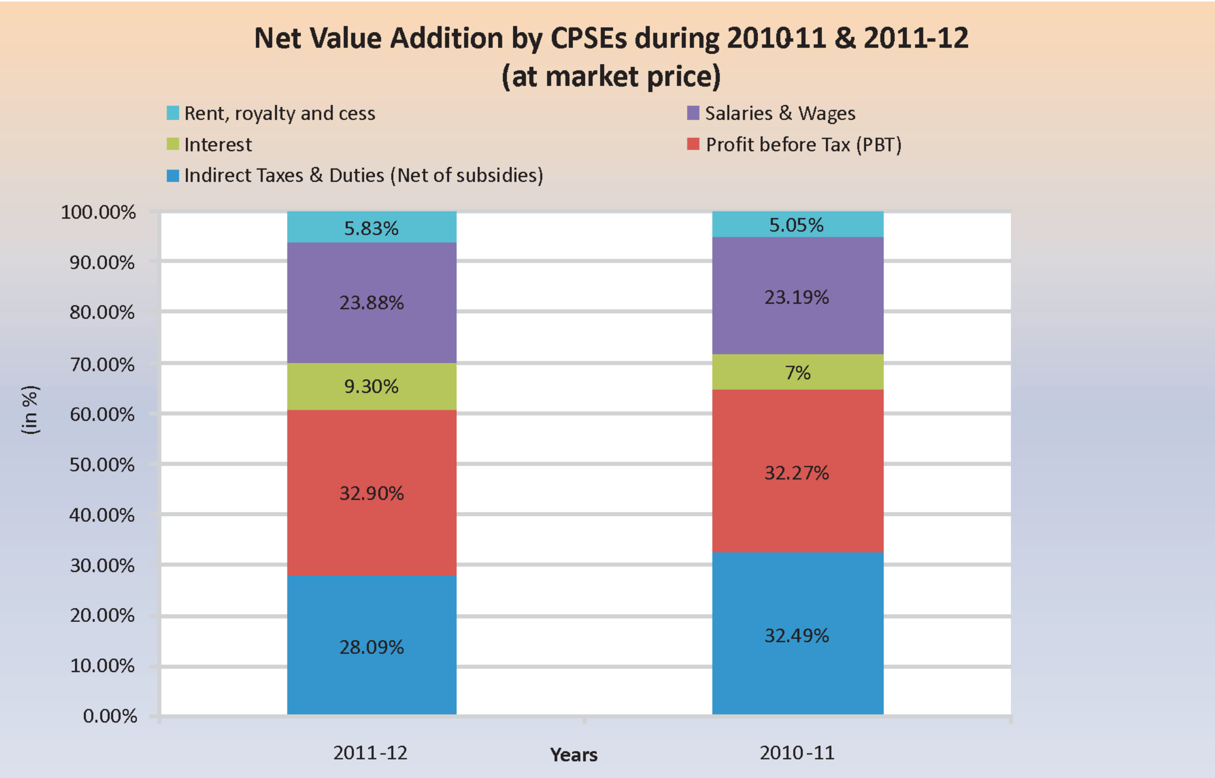

Fig. 1.6

1.9 Contribution to the Central Exchequer

CPSEs contribute to the Central Exchequer by way of dividend payment, interest on government loans and payment of taxes & duties. There was, however, a significant increase in the total contribution of CPSEs to the Central Exchequer during the year, which increased from ₹1,56,751 crore in 2010-11 to ₹1,60,801crore in 2011-12. This was, primarily due to increase in contribution towards 'corporate tax' and 'excise duty' which increased from ₹40,324crore to ₹44,358 and ₹57,755 crore to ₹ 61,165 crorerespectively in 2010-11 and 2011-12. There was, however, a decline in 'Custom Duty', 'other duties & taxes' and 'dividend tax' during the year as compared to the previous year. There was also a marginal decline in payment of central sales tax by the CPSEs.

Table 1.12

Contribution to the Central Exchequer

(₹ in crore)

S.No.	Particulars	2011-12	2010-11	Growth (%)
(1)	(2)	(3)	(4)	(5)
I. Investment in CPSEs				
1.	Dividend	28504.39	21865.76	30.36
2.	Interest	282.68	271.82	4.00
	Total (I)	**28787.07**	**22137.58**	**30.04**
II. Taxes and Duties (Central)				
1.	Excise Duty	61165.14	57755.25	5.90
2.	Customs Duty	11518.43	19958.12	-42.39
3.	Corporate Tax	44358.47	40324.23	10.00
4.	Dividend Tax	6093.33	7477.39	-18.51
5.	Central Sales Tax	2234.09	2294.71	-2.64
6.	Service Tax	3249.71	2823.39	15.09
7.	Other Duties & Taxes	3394.57	3980.27	-14.72
	Total (II)	**132013.74**	**134613.36**	**-1.93**
	Grand Total (I+II)	**160800.81**	**56750.94**	**2.58**

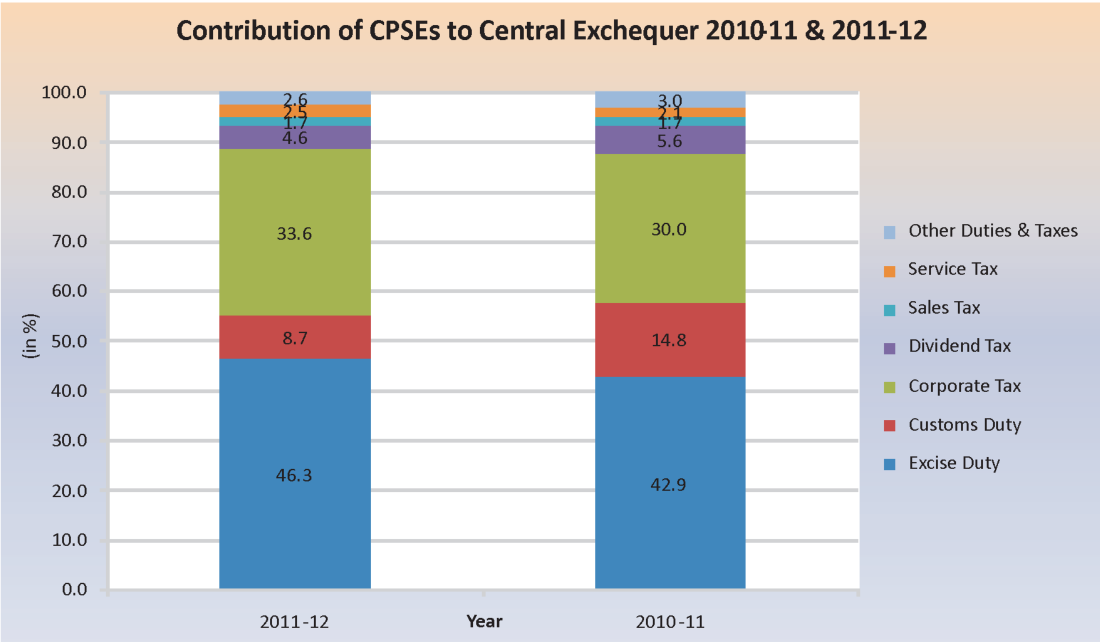

Fig.1.7

1.9 Government Disinvestment in CPSEs

Disinvestment of minority shares in CPSEs has become an important source of raising resource for the Government. The policy of 'disinvestment' in CPSEs has evolved over the years. Disinvestment of government equity in CPSEs began in 1991-92 following the Industrial Policy Statement of 1991, which stated that the Government would divest part of its holdings (minority share-holding) in select CPSEs.

1.9.1 Current Policy on Disinvestment

The current policy on disinvestment envisages people's ownership of CPSEs while ensuring that the Government equity does not fall below 51% and Government retains management control. Keeping this objective in view of disinvestment policy, the Government has adopted the following approach to disinvestment:

(i) Already listed profitable CPSEs (not meeting mandatory shareholding of 10%) are to be made compliant by 'Offer for Sale' (OFS) by Government or by the CPSEs through issue of fresh shares or a combination of both.

(ii) Unlisted CPSEs with no accumulated losses and having earned net profit in three preceding consecutive years are to be listed.

(iii) Follow-on public offers (FPO) would be considered in respect of profitable CPSEs having 10 per cent or higher public ownership, taking into consideration the needs for capital investment of CPSE, on a case by case basis and Government could simultaneously or independently offer a portion of its equity shareholding in conjunction.

(iv) Since each CPSE has different equity structure; financial strength; fund requirement; sector of operation etc., factors that do not permit a uniform pattern of disinvestment, disinvestment will be considered on merits and on a case-by-case basis.

(v) CPSEs are permitted to use their surplus cash to buyback their shares; one CPSE may buy the shares of other CPSEs from the Government.

1.9.2 Disinvestment in Loss Making CPSEs

The Board for Reconstruction of Public Sector Enterprises (BRPSE) has been mandated to examine loss-making/sick CPSEs for revival/restructuring for their turnaround and advise the Government on disinvestment/closure/sale in full or part, in respect of chronically loss-making/sick CPSEs that cannot be revived. As such if efforts to revive fail and the Government decides for privatization, then the Department of Disinvestment will take up such cases for strategic sale.

1.10 CPSEs as "National Champions"

A few countries give recognition to domestic companies with significant market-shares as 'national champions'. They are also accorded various concessions / privileges vis-à-vis interest rates etc with a view to further nurture them and develop them into 'global challenge' and 'global leaders'.

Based on this criterion of significant market-shares, there are a number of CPSEs who could be identified as 'national champions' (Table 1.10).The CPSEs operating in some industries/sectors are moreover 'monopolies' such as nuclear power generation. The other industries where they have a major share in domestic and national output (including imports) are coal, petroleum, telecommunication, power generation and transmission. In comparison to 1998-99, however, the share of CPSEs in these industries has been significantly coming down over the years (except power generation).

Table 1.10

CPSEs as National Champions, 2011-12 *

Sl No.	CPSEs	Sector/Industry	Domestic Market (share %)
I	**Monopolies**		
1.1	Coal India Ltd.	(a) Hard Coal (Non-coking coal) (b) Coking Coal	80%
1.2	Neyveli Lignite Corporation Ltd.	Lignite Coal	85%
1.3	MOIL	Manganese	85%
1.4	Uranium Corporation of India Ltd.	Uranium Ore	100%
1.5	Indian Rare Earths Ltd.	Limonite/Rutile/Zircon	100%
1.6	ONGC	Crude Oil	74%
1.7	GAIL	Natural Gas Transmission	82%
1.8	NPCIL	Nuclear Power	100%
1.9	Hindustan Aeronautics Ltd.	Transport & Fighter Aeroplanes	100%
1.10	Airport Authority of India Ltd.	Airport Services	100%
1.11	Antrix Corporation of India Ltd.	Space Products Services	100%
1.12	Mazagaon Dock Ltd.	Repair of Indian Warships	85%
1.13	Power Grid Corporation of India Ltd.	Inter State Transmission of Electricity	100%
1.14	Security Printing & Minting Corporation Ltd.	Security Papers and Coins	100%
1.15	Bharat Electronics Ltd.	Electronic Defence System	64%
II	**Other than Monopolies**		
2.1	Indian Oil Corporation Ltd.	Supply of Petrol & Diesel	46%
2.2	BPCL	Supply of Petrol & Diesel	23%
2.3	NMDC Ltd.	Iron Ore	16%
2.4	BHEL	Power Generation Equipment	—
2.5	BEML Ltd.	M & C Equipment's	62%
2.6	Bharat Pumps & Compressors Ltd	Centrifugal Pumps	90%
2.7	ALIMCO	Artificial Limbs & Rehabilitation Parts	60%
2.8	Food Corporation of India	i) Procurement of Foodgrains a. Wheat b.Rice ii) PDS (& supply chain logistics)	30% 41% 34% ——
2.9	Central Warehousing Corporation	Warehousing of foodgrains,agriculture produce agriculture inputs and other notified commodities	33%
2.10	Container Corpn. of India Ltd.	Transportation of Containers	75%
2.11	SAIL	a. Production of crude Steel b. Supply of finished steel	18% 15%
2.12	Mishra Dhatu Nigam Ltd.	Super alloyes/maraging Steel	65%

Note: * Based on information provided by CPSEs.

1.11 Policy for Revival of Sick PSEs

The CPSEs were brought under the purview of Sick Industrial Companies (Special Provision) Act, 1985 in 1991. The condition of sick CPSEs (i.e., CPSEs whose accumulated losses have exceeded their net worth) has been improving over the years. The number of sick CPSEs, which was 90 in 2004-05, came down to 66 in March 2012.

The Government subsequently set up the Board for Reconstruction of Public Sector Enterprises (BRPSE) in December, 2004 to advise the Government, inter alia, on the measures to restructure/revive, both industrial and non-industrial CPSEs. The cases of 67 sick CPSEs have been referred to BRPSE up to October 2012, out of which the Board has made recommendations in respect of 62 cases. Further five cases have been returned to the concerned administrative Ministries/Departments for further examination.

1.12 Board Structure of CPSEs

CPSEs are categorized into four Schedules namely 'A', 'B', 'C' and 'D', based on various quantitative, qualitative and other factors. The pay scales of Chief Executives and of full time Functional Directors in CPSEs are determined as per the Schedule of the concerned CPSE. Proposals from various administrative Ministries/Departments for initial categorization / up-gradation of CPSEs in appropriate schedule, personal up-gradation, creation of posts in CPSEs, etc. are considered in Department of Public Enterprises (DPE) in consultation with the Public Enterprises Selection Board (PESB).

1.13 Professionalization of Boards

In pursuance to the policy on public sector enterprises being followed since 1991, several measures have been taken by the DPE to professionalize the Boards ofCPSEs. The guidelines issued by the DPE in 1992 provide for induction of outside professionals on the Boards of CPSEs as part-time non-official Directors. Furthermore, it has been decided that the candidates from State Level Public Enterprises (SLPEs) and the private sector will also be considered as non-internal candidates, besides the candidates from CPSEs, for selection to the post of Functional Directors in CPSEs subject to the eligibility criteria.

1.14 Wages/ Salaries and Employees Welfare

The Department of Public Enterprises (DPE) functions as the nodal Department in the Government of India,*inter-alia*, in respect of policy relating to wage settlements of unionized employees, pay revision of non-unionized supervisors and the executives holding posts below the Board level and executives at the Board level in CPSEs. The CPSEs are largely following the Industrial Dearness Allowance (IDA) pattern scales of pay. In some cases, (only approx. 4%) Central Dearness Allowance (CDA) pattern of scales of pay is followed in the CPSEs.

1.15 Employment

As on 31.3.2012, the 260 CPSEs employed over 13.98 lakh people (excluding casual workers). One-fourth of the manpower belongs to managerial and supervisory cadres. The CPSEs have thus a highly skilled workforce, which is one of their basic strengths. The details of employment in CPSEs and per capita emoluments are shown in Table 1.13.

Table 1.13

Employment and Average Annual Emoluments in CPSEs

Year	Employees (in lakh) (Excl. contracted & casual workers)	Total Emoluments (₹ in crore)	Per Capita Emoluments (Rupees)
2006-07	16.14	52586	325869
2007-08	15.65	64306	410898
2008-09	15.33	83045	541716
2009-10	14.90	87792	589210
2010-11	14.40	98402	683347
2011-12	13.98	105407	753984

1.16 Voluntary Retirement Scheme (VRS)

The CPSEs operate under dynamic market conditions; while, some of them may face shortage of staff, others may have excess manpower. The Government, therefore, initiated a Voluntary Retirement Scheme (VRS) to help rationalize their manpower. The basic parameters of the model Voluntary Retirement Scheme (VRS) which were notified by the Government vide Department of Public Enterprises' OM dated 5.10.1988 and 6.1.1989 were in force since 1988 till April 2000. The Government modified the scheme and introduced a new scheme of VRS on 5.5.2000 and again on 6.11.2001. As per the available information, about 6.18 lakh employees opted for Voluntary Retirement Scheme (VRS) during the period beginning with 1988 till 31.3.2012.

1.16.1 Counseling, Retraining and Redeployment (CRR)

Counseling, Retraining and Redeployment (CRR) is an attempt to enable the VRS optees in CPSEs to remain productive partners in the society. Accordingly, the National Renewal Fund (NRF) that was established in February, 1992, aimed to cover both the expenses of VRS and the expenditure on retraining of retrenched workers in the organized sector. The main elements of CRR programme are Counseling, Retraining and Redeployment. Counseling helps the rationalized employees to absorb the shock 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. The selected training institute/nodal agencies impart need-based training of 30 days/ 40 days / 60 day's modules. The training leads to redeployment mostly through self-employment. Presently, 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. In order to evaluate the performance of nodal agencies DPE has decided in favour of a Third Party Assessment Agency (TPAA) from 2012-13.

1.17 Memorandum of Understanding (MOU) system in CPSEs

The Memorandum of Understanding (MoU), as applicable to public sector enterprises, is a negotiated document between the government and the management of the enterprise specifying clearly the objectives of the agreement and the obligations of both the parties. The main purpose of the MoU system is to manage CPSEs by results and objectives instead of by control and procedures. The 'management' of the enterprise is made accountable to the government through promise for performance or 'performance contract'.

Performance evaluation is done based on the comparison between the actual achievements and the annual targets agreed upon between the government and the CPSE. The targets constitute of both financial and non-financial parameters with different weights assigned to the different parameters. In order to distinguish 'excellent' from 'poor', moreover, performance during the year is measured on a 5-point scale. Table -1.14 provides a summary of the performance of MoU signing CPSEs as reflected in their MoU rating during the last five years.

Table: 1.14

Grading of the performance of MoU signing CPSEs

Grades	2007-08	2008-09	2009-10	2010-11	2011-12
Excellent	55	47	74	67	76
Very Good	34	34	30	44	39
Good	15	25	20	24	33
Fair	08	17	20	24	25
Poor	00	01	01	02	0
Total	112	124	145	161	175

1.18 Market Capitalization of CPSEs Stocks

There were 46 CPSEs listed on the stock exchanges of India as on 31.03.2011. Indian Tourism Development Corporation Ltd. did not trade during 2011-12. Maharashtra Elektrosmelt Ltd merged with SAIL w.e.f 30.9.2011. IRCON was delisted during 2011-12. There were stocks of 43 CPSEs, which traded on stock exchanges of India as on 31.3.2012. The total market capitalization of 45 CPSEs based on stock prices on Mumbai Stock Exchange as on 31.03.2011 stood at ₹ 1506698.10 crore. Market capitalization of 44 CPSEs as on 31.03.2012 stood at ₹ 1252923.68 crore. There was, therefore, a decrease in market capitalization of CPSEs by (-) 16.82% (₹253774.42 crore) as on 31.03.2012 over market capitalization as on 31.3.2011. During this period, the market capitalization of Mumbai Stock Exchange decreased by (-) 9.13% and Sensex decreased by (-) 10.50%. Market Capitalization (M_Cap) of all the listed CPSEs as a percentage of BSE M_Cap, therefore, decreased from 22.03% as on 31.03.2011 to 20.17% as on 31.3.2012. The closing price of listed CPSEs in BSE as on 31.3.2011 and 31.3.2012 (as well as M_Cap on these dates) is given in Table 1.15 below.

Table 1.15

Market Capitalisation of listed and traded CPSEs

S. No.	Company Name	BSE Closing Market Price of stocks as 31.03.2011 (₹ in crore)	BSE Closing Market Price of stocks as 31.03.2012 (₹ in crore)	Market Capital-ization as on 31.03.2011	Market Capital-ization as on 31.03.2012	% Change in Market Cap. (2012 over 2011)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Andrew Yule & Co. Ltd.	25.40	23.05	752.67	751.75	-0.12
2	BEML Ltd.	685.60	651.50	2,855.15	2,713.14	-4.97
3	BalmerLawrie& Co. Ltd.	541.20	533.40	881.40	868.70	-1.44
5	Bharat Electronics Ltd.	1,678.75	1,523.20	13,430.00	12,185.60	-9.27
6	Bharat Heavy Electricals Ltd.	2,060.85	256.95	100,882.73	62,891.08	-37.66
7	Bharat Immunologicals&BiologicalsCorpn. Ltd.	13.48	8.18	58.21	35.32	-39.32

(1)	(2)	(3)	(4)	(5)	(6)	(7)
8	Bharat Petroleum Corpn. Ltd.	611.30	699.30	22,101.07	25,282.64	14.4
9	Chennai Petroleum Corpn. Ltd.	223.00	154.00	3,320.72	2,293.24	-30.94
10	Coal India Ltd.	347.10	343.10	219,241.01	216,714.00	-1.15
11	Container Corpn. Of India Ltd.	1,212.00	943.50	15,753.91	12,263.88	-22.15
12	Dredging Corpn. Of India Ltd.	345.05	273.25	966.14	765.10	-20.81
13	Engineers India Ltd.	303.35	254.00	10,220.97	8,558.19	-16.27
14	Fertilisers& Chemicals, Travancore Ltd.	39.35	30.15	1,396.03	1,069.64	-23.38
15	GAIL (India) Ltd.	465.00	374.95	58,984.20	47,561.56	-19.37
16	HMT Ltd.	59.30	40.95	4,494.05	3,103.40	-30.94
17	Hindustan Copper Ltd.	291.15	267.50	26,937.72	24,749.58	-8.12
18	Hindustan Organic Chemicals Ltd.	32.85	18.15	220.66	121.92	-44.75
19	Hindustan Petroleum Corpn. Ltd.	356.95	303.20	12,087.30	10,267.18	-15.06
20	ITI Ltd.	32.10	23.65	924.48	681.12	-26.32
21	India Tourism Devp. Corpn. Ltd.	104.55	104.55*	896.72	896.72	0
22	Indian Oil Corpn. Ltd.	334.25	262.60	81,154.31	63,758.03	-21.44
23	MMTC Ltd.	926.50	783.45	92,650.00	78,345.00	-15.44
24	Madras Fertilizer Ltd.	22.6	20**	364.11	322.22	-11.5
25	Mahanagar Telephone Nigam Ltd.	45.45	27.35	2,863.35	1,723.05	-39.82
26	Maharashtra Elektrosmelt Ltd.	298.50	***	716.40		-100
27	Mangalore Refinery & Petrochemicals Ltd.	64.35	67.90	11,277.97	11,900.15	5.52
28	NMDC Ltd.	283.45	161.10	112,379.88	63,871.57	-43.16
29	NTPC Ltd.	193.00	162.70	159,137.46	134,153.71	-15.7
30	National Aluminium Co. Ltd.	95.65	54.70	24,651.29	14,097.49	-42.81
31	National Fertilizers Ltd.	104.55	71.80	5,129.00	3,522.35	-31.32
32	Neyveli Lignite Corpn. Ltd.	103.95	85.75	17,439.79	14,386.36	-17.51
33	Oil & Natural Gas Corpn. Ltd.	290.10	267.30	248,194.77	228,688.25	-7.86
34	Power Finance Corpn. Ltd.	250.25	184.00	28,722.86	24,286.74	-15.44
35	Power Grid Corpn. Of India Ltd.	101.80	107.90	47,130.60	49,954.74	5.99
36	Rashtriya Chemicals & Fertilizers Ltd.	79.50	56.65	4,385.92	3,125.31	-28.74
37	Rural Electrification Corpn. Ltd.	254.15	205.55	25,096.27	20,297.22	-19.12
38	Scooters India Ltd.	37.50	32.55	161.22	139.94	-13.2
39	Shipping Corpn. Of India Ltd.	107.90	62.00	5,025.97	2,887.95	-42.54
40	State Trading Corpn. Of India Ltd.	245.00	255.15	1,470.00	1,530.90	4.14
41	Steel Authority Of India Ltd.	169.75	94.05	70,113.55	38,846.42	-44.59
42	NHPC	25.35	19.65	31,182.38	24,170.96	-22.49
43	Oil India ltd.	1,312.85	514.95	31,568.05	30,955.50	-1.94
44	Hindustan Flurocarbons Ltd.	15.00	12.29	29.55	24.09	-18.48
45	SatlajJalVidhyut Nigam Ltd	22.10	19.70	9,141.94	8,149.15	-10.86
	Total Market Capitalisation of CPSEs			1,506,698.10	1,253,245.90	-16.82
	Total Market Capitalisation of BSE			6,839,082.89	6,214,941.00	-9.13
	BSE Sensex			19,445.22	17,404.20	-10.5
	Market Capitalisation of CPSEs as % of BSE Market Cap.			**22.03**	**20.17**	-8.44

Note:
i) *** Last traded on 21/10/2009**
(ii) **** As per NSE**
iii) ***** Maharashtra Elektrosmelt Ltd. has been merged with Steel Authority of India on 30.09.2011**
iv) **(A) HindustanPhotophilms Corporation, (B) KIOCL. has not trading and (C) IRCON has been delisted on 3/11/2011**
v) **In case of BHEL Face Value was splitted up from Rs 10 to Rs. 2/-w.e.f. 03.10.2011.**
vi) **In case of Oil India Ltd. bonus ws declared in the ratio of 3:2 w.e.f. 29.03.2012**

Central Public Sector Enterprises under various Five Year Plans

S. No.	CPSEs	Year of Incorporation	Holding/Subsidiary Company
Prior to Five Year Plan (1919-50)			
1	BIECCO LAWRIE & CO. LTD.	1919	H
2	BALMER LAWRIE & CO. LTD.	1924	S
3	MAZAGON DOCK LTD.	1934	H
4	FERTILIZERS & CHEMICALS (TRAVANCORE) LTD.	1943	H
5	NEPA LTD.	1947	H
6	I T I LTD.	1950	H
7	INDIAN RARE EARTHS LTD.	1950	H
First Five Year Plan (1951-55)			
8	HINDUSTAN SHIPYARD LTD.	1952	H
9	HMT LTD.	1953	H
10	HINDUSTAN PREFAB LTD.	1953	H
11	NATIONAL RESEARCH DEVELOPMENT CORPN.	1953	H
12	HINDUSTAN ANTIBIOTICS LTD.	1954	H
13	HINDUSTAN INSECTICIDES LTD.	1954	H
14	BHARAT ELECTRONICS LTD.	1954	H
15	NATIONAL SMALL INDUSTRIES CORPN. LTD.	1955	H
Second Five Year Plan (1956-60)			
16	STATE TRADING CORPN. OF INDIA LTD.	1956	H
17	NEYVELI LIGNITE CORPN. LTD.	1956	H
18	OIL & NATURAL GAS CORPORATION LTD.	1956	H
19	EXPORT CREDIT GUARANTEE CORPN.OF INDIA LTD.	1957	H
20	NATIONAL PROJECTS CONSTRUCTION CORPN. LTD.	1957	H
21	CENTRAL WAREHOUSING CORPN.	1957	H
22	HEAVY ENGINEERING CORPN. LTD.	1958	H
23	NMDC Ltd.	1958	H
24	HINDUSTAN SALTS LTD.	1959	H
25	NATIONAL BLDG. CONSTN. CORPN. LTD.	1960	H
26	HINDUSTAN PHOTO FILMS MANUFACTURING CO. LTD.	1960	H
27	GARDEN REACH SHIPBUILDERS & ENGINEERS LTD.	1960	H
28	TUNGABHADRA STEEL PRODUCTS LTD.	1960	H
29	HINDUSTAN ORGANIC CHEMICALS LTD.	1960	H
Third Five Year Plan (1960-65)			
30	INDIAN DRUGS & PHARMACEUTICALS LTD.	1961	H
31	SHIPPING CORPORATION OF INDIA LTD.	1961	H
32	FERTILIZER CORPN. OF INDIA LTD.	1961	H
33	HANDICRAFTS & HANDLOOM EXPORTS CORP. OF INDIA LTD.	1962	H
34	M M T C LTD.	1963	H
35	NATIONAL SEEDS CORPN. LTD.	1963	H
36	INDIAN OIL CORPORATION LTD.	1964	H
37	BEML LTD.	1964	H
38	HINDUSTAN STEELWORKS COSTN. LTD.	1964	H
39	HINDUSTAN AERONAUTICS LTD.	1964	H
40	SAMBHAR SALTS LTD.	1964	S
41	BHARAT HEAVY ELECTRICALS LTD.	1964	H
42	INSTRUMENTATION LTD.	1964	H
43	M S T C LTD.	1964	H
44	ONGC VIDESH LTD.	1965	S
45	CHENNAI PETROLEUM CORPORATION LTD.	1965	S
46	TRIVENI STRUCTURALS LTD.	1965	H
47	FOOD CORPN. OF INDIA	1965	H
48	CEMENT CORPN. OF INDIA LTD.	1965	H
49	ENGINEERS INDIA LTD.	1965	H

S. No.	CPSEs	Year of Incorporation	Holding/Subsidiary Company
Annual Plans (1966-68)			
50	INDIA TOURISM DEV. CORPN. LTD.	1966	H
51	HLL LIFECARE LTD.	1966	H
52	BHARAT HEAVY PLATE & VESSELS LTD.	1966	S
53	MADRAS FERTILIZERS LTD.	1966	H
54	HINDUSTAN COPPER LTD.	1967	H
55	URANIUM CORPORATION OF INDIA LTD.	1967	H
56	ELECTRONICS CORPN. OF INDIA LTD.	1967	H
57	GOA SHIPYARD LTD.	1967	H
58	CENTRAL INLAND WATER TRANSPORT CORPN. LTD.	1967	H
59	NATIONAL TEXTILE CORPN. LTD.	1968	H
Fourth Five Year Plan (1969-73)			
60	RURAL ELECTRIFICATION CORPN. LTD.	1969	H
61	STATE FARMS CORPORATION OF INDIA LTD.	1969	H
62	WAPCOS LTD.	1969	H
63	ENGINEERING PROJECTS (INDIA) LTD.	1970	H
64	COTTON CORPN. OF INDIA LTD.	1970	H
65	HINDUSTAN PAPER CORPORATION LTD.	1970	H
66	BHARAT PUMPS & COMPRESSORS LTD.	1970	H
67	HOUSING & URBAN DEV. CORPN. LTD.	1970	H
68	BHARAT DYNAMICS LTD.	1970	H
69	JUTE CORPN. OF INDIA LTD.	1971	H
70	P E C LTD.	1971	H
71	NAGALAND PULP & PAPER COMPANY LTD.	1971	S
72	HOTEL CORPN. OF INDIA LTD.	1971	S
73	AIR INDIA CHARTERS LTD.	1972	H
74	BRIDGE & ROOF CO.(INDIA) LTD.	1972	H
75	MINERAL EXPLORATION CORPN. LTD.	1972	H
76	HINDUSTAN CABLES LTD.	1972	H
77	BHARAT COKING COAL LTD.	1972	S
78	SCOOTERS INDIA LTD.	1972	H
79	COCHIN SHIPYARD LTD.	1972	H
80	RICHARDSON & CRUDDAS(1972) LTD.	1972	H
81	MISHRA DHATU NIGAM LTD.	1973	H
82	STEEL AUTHORITY OF INDIA LTD.	1973	H
83	COAL INDIA LTD.	1973	H
84	ARTIFICIAL LIMBS MFG. CORPN. OF INDIA	1973	H
85	MECON LTD.	1973	H
Fifth Five Year Plan (1974-78)			
86	RITES LTD.	1974	H
87	CENTRAL ELECTRONICS LTD.	1974	H
88	NATIONAL FERTILIZERS LTD.	1974	H
89	HMT (INTERNATIONAL) LTD.	1975	S
90	NHPC LTD.	1975	H
91	NTPC LTD.	1975	H
92	WESTERN COALFIELDS LTD.	1975	S
93	EASTERN COALFIELDS LTD.	1975	S
94	CENTRAL COALFIELDS LTD.	1975	S
95	CENTRAL MINE PLANNING & DESIGN INSTITUTE LTD.	1975	S
96	NATIONAL FILM DEV. CORPN. LTD.	1975	H
97	CENTRAL COTTAGE INDUSTRIES CORPN. OF INDIA LTD.	1976	H
98	IRCON INTERNATIONAL LTD.	1976	H
99	INDIA TRADE PROMOTION ORGANISATION	1976	H
100	KIOCL LTD.	1976	H
101	BHARAT PETROLEUM CORPN. LTD.	1976	H
102	HINDUSTAN PETROLEUM CORPN. LTD.	1976	H

S. No.	CPSEs	Year of Incorporation	Holding/Subsidiary Company
103	BRAITHWAITE & CO. LTD.	1976	H
104	BURN STANDARD COMPANY LTD.	1976	S
105	NORTH EASTERN ELECTRIC POWER CORPORATION LTD.	1976	H
106	NORTH EASTERN HANDICRAFTS& HANDLOOM DEV.CORPN. LTD.	1977	H
107	DREDGING CORPN. OF INDIA LTD.	1977	H
108	MOIL LTD.	1977	H
109	ANDAMAN & NICOBAR ISL. FOREST & PLANT.DEV.CORP.LTD	1977	H
110	HINDUSTAN FERTILIZER CORPN. LTD.	1978	H
111	RASHTRIYA CHEMICALS AND FERTILIZERS LTD.	1978	H
112	TELECOMMUNICATIONS CONSULTANTS (INDIA) LTD.	1978	H
113	BHARAT WAGON & ENGG. CO. LTD.	1978	H
114	RAJASTHAN DRUGS & PHARMACEUTICALS LTD.	1978	H
115	PROJECTS & DEVELOPMENT INDIA LTD.	1978	H
Annual Plan (1979-80)			
116	INDIAN MEDICINES & PHARMACEUTICAL CORPN. LTD.	1979	H
117	ORISSA DRUGS & CHEMICALS LTD.	1979	S
118	ANDREW YULE & COMPANY LTD.	1979	H
119	HOOGHLY PRINTING COMPANY LTD.	1979	S
120	FERRO SCRAP NIGAM LTD.	1979	S
121	NATIONAL JUTE MANUFACTURES CORPORATION LTD.	1980	H
Sixth Five Year Plan (1980-84)			
122	BRITISH INDIA CORPORATION LTD.	1981	H
123	HMT BEARINGS LTD.	1981	S
124	KARNATAKA ANTIBIOTICS & PHARMACEUTICALS LTD.	1981	H
125	OIL INDIA LTD.	1981	H
126	EdCIL(India) Ltd.	1981	H
127	NATIONAL ALUMINIUM COMPANY LTD.	1981	H
128	BENGAL CHEMICALS & PHARMACEUTICALS LTD.	1981	H
129	RAJASTHAN ELECTRONICS AND INSTRUMENTS LTD.	1981	H
130	NORTH EASTERN REGIONAL AGRI. MARKETING CORP.LTD.	1982	H
131	STCL LTD.	1982	S
132	RASHTRIYA ISPAT NIGAM LTD.	1982	H
133	HINDUSTAN NEWSPRINT LTD.	1982	S
134	NATIONAL HANDLOOM DEVELOPMENT CORPORATION LTD.	1983	H
135	AIRLINE ALLIED SERVICES LTD.	1983	S
136	HSCC (INDIA) LTD.	1983	H
137	RANCHI ASHOK BIHAR HOTEL CORPN. LTD.	1983	S
138	UTKAL ASHOK HOTEL CORPN. LTD.	1983	S
139	HINDUSTAN FLUOROCARBONS LIMITED	1983	S
140	VIGNYAN INDUSTRIES LTD.	1984	S
141	HOOGHLY DOCK AND PORT ENGINEERS LTD.	1984	H
142	BBJ CONSTRUCTION COMPANY LTD.	1984	S
143	HINDUSTAN VEGETABLE OILS CORPN. LTD.	1984	H
144	TYRE CORPORATION OF INDIA LTD.	1984	H
145	GAIL (INDIA) LTD.	1984	H
Seventh Five Year Plan (1985-89)			
146	PAWAN HANS HELICOPTERS LTD.	1985	H
147	NORTHERN COALFIELDS LTD.	1985	S
148	SOUTH EASTERN COALFIELDS LTD.	1985	S
149	ASSAM ASHOK HOTEL CORPN. LTD.	1985	S
150	DONYI POLO ASHOK HOTEL LTD.	1985	S
151	MADHYA PRADESH ASHOK HOTEL CORPN. LTD.	1985	S
152	PONDICHERRY ASHOK HOTEL CORPN. LTD.	1986	S
153	MAHANAGAR TELEPHONE NIGAM LTD.	1986	H
154	POWER FINANCE CORPORATION	1986	H
155	INDIAN RAILWAY FINANCE CORPORATION LTD.	1986	H

S. No.	CPSEs	Year of Incorporation	Holding/Subsidiary Company
156	BHARAT BHARI UDYOG NIGAM LTD.	1986	H
157	NUCLEAR POWER CORPN. OF INDIA LTD.	1987	H
158	BIRDS JUTE & EXPORTS LTD.	1987	S
159	INDIAN RENEWABLE ENERGY DEVT.AGENCY LTD.	1987	H
160	SJVN LTD.	1988	H
161	INDIAN VACCINE CORP. LTD.	1988	H
162	THDC LTD.	1988	H
163	CONTAINER CORPORATION OF INDIA LTD.	1988	H
164	MANGALORE REFINERY & PETROCHEMICALS LTD.	1988	S
165	J & K MINERAL DEVELOPMENT CORPN. LTD.	1989	S
166	POWER GRID CORPORATION OF INDIA LTD.	1989	H
167	NATIONAL SCHEDULED CASTES FINANCE & DEVP. CORPN.	1989	H
168	BHARAT IMMUNOLOGICALS & BIOLOGICALS CORP. LTD.	1989	H
Annual Plan (1990-91)			
169	BEL OPTRONICS DEVICES LTD.	1990	S
170	KONKAN RAILWAY CORPORATION LTD.	1990	H
Eighth Five Year Plan (1992-96)			
171	NATIONAL BACKWARD CLASSES FINANCE & DEVP.CO.	1992	H
172	ANTRIX CORPORATION LTD.	1993	H
173	NUMALIGARH REFINARY LTD.	1993	S
174	MAHANADI COALFIELDLS LTD.	1993	S
175	IDPL (TAMILNADU) LTD.	1994	S
176	NATIONAL MINORITIES DEVP. & FINANCE CORPN.	1994	H
177	CERTIFICATION ENGINEERS INTERNATIONAL LTD.	1994	S
178	NATIONAL INFORMATICS CENTRE SERVICES INCORPORATED	1995	H
179	BROADCAST ENGG. CONSULTANTS INDIA LTD.	1995	H
180	AIRPORTS AUTHORITY OF INDIA LTD.	1996	H
Ninth Five Year Plan (1997-2001)			
181	NATIONAL SAFAI KARAMCHARIS FINANCE & DEVPT. CORPN	1997	H
182	NATIONAL HANDICAPPED FINANCE & DEVPT. CORPN.	1997	H
183	PUNJAB ASHOK HOTEL COMPANY LTD.	1998	S
184	ENNORE PORT LTD.	1999	H
185	INDIAN RAILWAY CATERING AND TOURISM CORPN. LTD.	1999	H
186	MUMBAI RAILWAY VIKAS CORPORATION LTD.	1999	H
187	HMT WATCHES LTD.	1999	S
188	HMT MACHINE TOOLS LTD.	1999	S
189	HMT CHINAR WATCHES LTD.	1999	S
190	PRIZE PETROLEUM COMPANY LTD.	1999	S
191	KARNATAKA TRADE PROMOTION ORGANISATION	2000	S
192	TAMIL NADU TRADE PROMOTION ORGANISATION	2000	S
193	NHDC LTD.	2000	S
194	BHARAT SANCHAR NIGAM LTD.	2000	H
195	MILLENNIUM TELECOM LTD.	2000	S
196	RAILTEL CORPORATION INDIA LTD.	2000	H
197	NATIONAL SCHEDULED TRIBES FINANCE & DEVP. CORPN.	2001	H
198	BALMER LAWRIE INVESTMENTS LTD.	2001	H
199	KUMARAKRUPPA FRONTIER HOTELS LTD.	2001	H
Tenth Five Year Plan (2002-2006)			
200	BRAHMAPUTRA VALLEY FERTILIZER CORPN. LTD.	2002	H
201	NTPC VIDYUT VYAPAR NIGAM LTD.	2003	S
202	NTPC ELECTRIC SUPPLY COMPANY LTD.	2003	S
203	RAIL VIKAS NIGAM LTD.	2003	H
204	AIR INDIA AIR TRANSPORT SERVICES LTD.	2003	S
205	FCI ARAVALI GYPSUM & MINERALS (INDIA) LTD.	2003	H
206	NTPC HYDRO LTD.	2003	S
207	BHARATIYA NABHIKIYA VIDYUT NIGAM LTD.	2003	H

S. No.	CPSEs	Year of Incorporation	Holding/Subsidiary Company
208	SETHUSAMUDRAM CORPN. LTD.	2004	H
209	FRESH & HEALTHY ENTERPRISES LTD.	2006	S
210	CHHATTISHGARH SURGUJA POWER LTD.	2006	S
211	COASTAL KARNATAKA POWER LTD.	2006	S
212	COASTAL MAHARASHTRA MEGA POWER LTD.	2006	S
213	SECURITY PRINTING & MINTING CORPN. INDIA LTD.	2006	H
214	INDIA INFRASTRUCTURE FINANCE CO. LTD.	2006	H
215	BHARAT PETRO RESOURCES JPDA	2006	S
216	BRAHAMPUTRA CRACKERS & POLYMER LTD.	2006	S
217	BHARAT PETRO RESOURCES LTD.	2006	S
218	ORISSA INTEGRATED POWER LTD.	2006	S
219	REC TRANSMISSION PROJECT CO. LTD.	2006	S
220	KANTI BIJLEE UTPADAN NIGAM LTD.	2006	S
221	AIR INDIA ENGINEERING SERVICES LTD.	2006	S
222	NLC TAMIL NADU POWER LTD.	2006	S
Eleventh Five Year Plan (2007-2013)			
223	COASTAL TAMIL NADU POWER LTD.	2007	S
224	BHARTIYA RAIL BIJLEE CO. LTD.	2007	S
225	REC POWER DISTRIBUTION CO. LTD.	2007	S
226	DEDICATED FRIGHT CORRIDOR CORP. OF INDIA LTD.	2007	H
227	CENTRAL RAILSIDE WAREHOUSING CO. LTD.	2007	S
228	AIR INDIA LTD.	2007	H
229	PFC CONSULTING LTD.	2008	S
230	NMDC-CMDC LTD.	2008	H
231	IRRIGATION & WATER RESOURCES FINANCE CORPORATION LTD.	2008	H
232	JAGDISHPUR PAPER MILLS LTD.	2008	S
233	GAIL GAS LTD.	2008	S
234	CREDA HPCL BIOFUEL LTD.	2008	S
235	GHOGARPALLI INTEGRATED POWER COMPANY LTD.	2009	S
236	SAKHIGOPAL INTEGRATED POWER COMPANY LTD.	2009	S
237	MNH SHAKTI LTD.	2009	S
238	MJSJ COAL LTD.	2009	S
239	INDIAN OIL-CREDA BIOFUELS LTD.	2009	S
240	LOKTAK DOWNSTREAM HYDROELECTRIC CORPORATION LTD.	2009	S
241	IRCON INFRASTRUCTURE & SERVICES LTD.	2010	S
242	POWER SYSTEM OPERATION CORPORATION LTD.	2010	S
243	HPCL BIOFUELS LTD.	2010	S
244	EASTERN INVESTMENT LTD.	2010	S
245	ORISSA MINERAL DEVELOPMENT COMPANY LTD.	2010	S
246	BISRA STONE LIME COMPANY LTD.	2010	S
247	TATIYA ANDHRA MEGA POWER LTD.	2010	S
248	RITES INFRASTRUCTURE SERVICES LTD.	2011	H
249	BHEL ELECTRICAL MACHINES LTD.	2011	S
250	MAHANADI BASIN POWER LTD.	2011	S
251	SAIL REFRCTORY COMPANY LTD.	2011	S
252	SAIL JAGADISHPUR POWER PLANT LTD.	2011	S
253	NMDC POWER LTD.	2011	S
254	PFC GREEN ENERGY LTD.	2011	S
255	PFC CAPITAL ADVISORY SERVICE LTD.	2011	S
256	POWER EQUITY CAPITAL ADVISORS PVT. LTD.	2011	S
257	DGEN TRANSMISSION COMPANY LTD.	2011	S
258	BHARAT BROADBAND NETWORK LTD.	2012	H
259	HLL BIOTECH LTD.	2012	H
260	BIOTECHNOLOGY INDUSTRY RESEARCH ASSISTANCE COUNCIL	2012	H

Chapter-2

Investment in Central Public Sector Enterprises

The aggregate real investment in Central Public Sector Enterprises (CPSEs) measured in terms of 'gross block' went up from ₹1237051 crore in 2010-11 to ₹1373526 crore in 2011-12, showing an increase of ₹ 136475 crore or a growth of 11.03 percent over the previous year. In terms of share in *'gross fixed capital formation' (GFCF)* of the country, the share of gross block in CPSEs increased over the previous year, which went up from 4.59 per cent in 2010-11 to 5.22 per cent in 2011-12(Table 2.1).

Table 2.1

Growth in real investment / Gross Block

Year	Accumulated Gross Block @ in CPSEs	Gross Block during the year (₹ crore)	Growth over the previous year (in %) (₹ crore)	GFCF^, in the economy during the year * % of GFCF (3) / (5)*100	Gross Block in CPSEs, as (₹ crore)
(1)	(2)	(3)	(4)	(5)	(6)
2002-03	525301	34903	7.12	584366	5.97
2003-04	596727	71426	13.60	687150	10.39
2004-05	649245	52519	8.80	896774	5.86
2005-06	715108	65863	10.14	1109160	5.94
2006-07	782668	67560	9.45	1343843	5.03
2007-08	862240	79572	10.17	1630513	4.88
2008-09	978167	115927	13.44	1838499	6.31
2009-10	1129983	151816	15.52	2016186	7.53
2010-11	1237051	107068	9.48	2331382	4.59
2011-12	1373526	136475	11.03	2614634	5.22

Note: @including capital work in progress; ^ Gross Fixed Capital Formation.
* Source Central Statistical Organisation.

2.2 Growth in Financial Investment

The aggregate financial investment in CPSEs (comprising paid-up share capital, share application money pending allotment, money received against share warrents and long term loans) grew from ₹ 29 crore in 5 enterprises in 1951 to ₹ 729228 crore in 260 enterprises as on 31.3.2012 (Table 2.2). The financial investment during 2011-12 over 2010-11, moreover, increased by ₹ 125253 crore or by 20.74 percent.

Table 2.2

Movement in Growth of (Financial) Investment #

Particulars (₹. in crore)	Total investment (Nos.)	Enterprises
(1)	(2)	(3)
At the commencement of the Ist Five Year Plan (1.4.1951)	29	5
At the commencement of the 2nd Five Year Plan (1.4.1956)	81	21
At the commencement of the 3rd Five Year Plan (1.4.1961)	948	47
At the end of 3rd Five Year Plan (31.3.1966)	2410	73
At the commencement of the 4th Five Year Plan (1.4.1969)	3897	84

Note: # As in the Balance Sheet (*i.e.* paid up capital +pending Share application money + money received against share warrants + long term loan)

(1)	(2)	(3)
At the commencement of the 5th Five Year Plan (1.4.1974)	6237	122
At the end of 5th Five Year Plan (31.3.1979)	15534	169
At the commencement of the 6th Five Year Plan (1.4.1980)	18150	179
At the commencement of the 7th Five Year Plan (1.4.1985)	42673	215
At the end of 7th Five Year Plan (31.3.1990)	99329	244
At the commencement of the 8th Five Year Plan (1.4.1992)	135445	246
At the end of 8th Five Year Plan (31.3.1997)	213610	242
At the end of 9th Five Year Plan (31.3.2002)	324614	240
At the end of 10th Five Year Plan (31.3.2007)	420771	247
At the end of first year of Eleventh Five Year Plan (31.3.2008)	455554	242
At the end of second year of Eleventh Five Year Plan (31.3.2009)	513532	246
At the end of third year of Eleventh Five Year Plan (31.3.2010)	580784	249
At the end of fourth year of Eleventh Five Year Plan (31.3.2011)	603975	248
At the end of fifth year of Eleventh Five Year Plan (31.3.2012)	729228	260

2.3 Changing Structure of Financial Investment

The structure of financial investment in CPSEs has undergone some change over the years (Table 2.3). While the share of 'paid-up capital' in total (financial) investment was 32.57 percent during 2002-03, it declined to 22.12 percent in 2011-12. The share of 'long-term loans', on the other hand, went up from 66.56 percent in 2002-03 to 77.52 percent in 2011-12 (Table 2.3). The total investment has increased significantly in CPSEs over the years.

Table 2.3

Components of Financial Investment

(₹ in crore)

Year ending	Paid-up Capital	Pending Share application money	Money received against share warrant	Long term loans	Investment (3+4+5)
(1)	(2)	(3)	(4)	(5)	
As on 31.3.2003	109306 (32.57)	2933 (0.87)	- -	223408 (66.56)	335647 (100.00)
As on 31.3.2004	111874 (31.96)	7087 (2.02)	- -	231033 (66.01)	349994 (100.00)
As on 31.3.2005	117551 (32.84)	6494 (1.81)	- -	233894 (65.34)	357939 (100.00)
As on 31.3.2006	120844 (1.54)	6204 (29.93)	- -	276658 (68.53)	40370 (100.00)
As on 31.3.2007	125323 (29.80)	6306 (1.50)	- -	288847 (68.70)	420476 (100.00)
As on 31.3.2008	131232 (34.71)	3090 (6.78)	- -	321232 (70.51)	455554 (100.00)
As on 31.3.2009	138734 (27.02)	3222 (0.62)	- -	371576 (72.36)	513532 (100.00)
As on 31.3.2010	148367 (25.55)	1748 (0.30)	- -	430669 (74.15)	580784 (100.00)
<u>As per Revised Schedule VI:</u> As on 31.3.2011	155535 (25.75)	1901 (0.31)	3 (0.01)	446537 (73.93)	603975 (100)
As on 31.3.2012	161322 (22.12)	2538 (0.35)	3 (0.01)	565365 (77.52)	729228 (100.00)

2.3.1 Sources of Financial Investment

While the Central Government continues to have majority equity holding in CPSEs (81.06%), investment both in terms of equity and long terms loans has been forthcoming from other parties as well, such as the financial institutions, banks, private parties (both India and foreign), State Governments and Holding Companies. A perusal of 'sources of investment', over the years, moreover shows a significant change in the investment pattern of CPSEs during 2004-05 to 2011-12 (Table 2.4). Whereas the share of the Central Government in total (financial) investment (both equity and long term loans) stood at 37.78 per cent in 2004-05, it declined to 23.09 per cent in 2011-12. The share of financial institutions /banks (and 'others'), on the other hand, that was 39.89 per cent in 2004-05 has gone up to 57.07 per cent in 2011-12. In a way this shows the greater confidence of FIs and banks in the CPSEs. The share of 'foreign parties' in total financial investment has shown marginal increase from 8.37 per cent in 2004-05 to 12.06 per cent in 2011-12. The share of 'State governments' in total financial investment has also shown an increase from 0.94 percent in 2004-05 to 1.60 percent in 2011-12, which is given below (Table 2.4).

Table 2.4

Sources of Investment

Items	Central Govt.	State Govt.	Holding Company	Foreign Parties	FI/Banks & Others	Share Appl.Money (pending allotment)	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
As on 31.3.2005							
Equity (E)	98377	3113	11391	1421	3248	-	
Loan	(L)	36848	266	28591	28550	139639	-
E+L	135225	3379	39982	29971	142787	6494	357939
% of Total (E+L)	37.78	0.94	11.17	8.37	39.89	1.81	(100.00)
As on 31.3.2006							
Equity (E)	101350	3353	11152	1514	3475	-	
Loan (L)	45763	288	32040	27547	171019	-	
E+L	147113	3641	43192	29061	174494	6204	403706
% of Total (E+L)	(100.00)						
As on 31.3.2007							
Equity (E)	93874	3438	11449	1733	14829	-	
Loan (L)	46381	117	19067	35163	188414	-	
E+L	140255	3555	30516	36896	203243	6306	420771
% of Total (E+L)	33.33	0.84	7.25	8.77	48.31	1.50	(100.00)
As on 31.3.2008							
Equity (E)	110470	3544	11213	1627	4378	-	
Loan (L)	51535	230	16409	32935	220123	-	
E+L	162005	3774	27622	34562	224501	3090	455554
% of Total (E+L)	35.56	0.83	6.06	7.59	49.28	0.68	(100.00)
As on 31.3.2009							
Equity (E)	117319	3441	11701	1332	4941	-	
Loan (L)	40563	92	20782	43710	266429	-	
(E+L)	157882	3533	32483	45042	271370	3222	513532
%of total (E+L)	30.74	0.69	6.33	8.77	52.84	0.63	(100.00)
As on 31.3.2010							
Equity (E)	122201	3657	13487	1416	7606	-	
Loan (L)	34803	92	21588	40515	333671	-	
(E+L)	157004	3749	35075	41931	341277	1748	580784
%of total (E+L)	27.03	0.65	6.04	7.22	58.76	0.30	(100.00)
As on 31.3.2011							
Equity (E)	126668	3822	14847	2152	8048	1901	
Loan (L)	34257	82	21268	60585	330345	-	
(E+L)	160925	3904	36115	62737	338393	1901	603975
%of total (E+L)	26.64	0.65	5.98	10.39	56.34	0.31	(100.00)
As on 31.3.2012							
Equity (E)	130762	3819	15402	2047	9295	2538	
Loan (L)	37626	7845	23273	85868	410752		
(E+L)	168388	11664	38675	87915	420047	2538	729227
% of total (E+L)	23.09	1.60	5.30	12.06	57.07	0.35	100.00

2.4 Plan Investment in CPSEs

A good deal of investment in CPSEs in recent years has been made from internal resources (IR). Plan outlay in CPSEs constituting internal resources (IR), extra-budgetary resources (EBR) and Budgetary Support (BS) showed a continuous increase in absolute terms. Plan outlay in CPSEs has accordingly gone up from ₹ 59189.79 crore in 2002-03 to ₹ 190794.47 crore in 2011-12 (Table 2.5). The respective shares of IR, EBR (extra budgetary support) and Budgetary Support have, nevertheless, undergone a change. The share of IR has marginally increased from 55.51 per cent of plan outlay in 2002-03 to 56.57 per cent in 2011-12 and the share of Budgetary Support has come down from 8.98 percent in 2002-03 to 2.06 percent in 2011-12. The share of extra budgetary resources, on the other hand, increased from 35.51 percent in 2002-03 to 41.37 percent in 2011-12 (Table 2.5).

Table.2.5

Plan Investment in CPSEs
(2002-03 to 2011-12)

(₹ in crore)

Year	Internal Resources	Extra Budgetary Resources	Budgetary support	Plan Outlay
2002-03	32858.83 (55.51)	21017.05 (35.51)	5313.91 (8.98)	59189.79 (100)
2003-04	31103.29 (49.39)	26855.66 (42.65)	5014.46 (7.96)	62973.41 (100)
2004-05	32222.46 (50.89)	26006.52 (41.07)	5090.24 (8.04)	63319.22 (100)
2005-06	42143.53 (51.31)	35723.30 (43.49)	4271.70 (5.20)	82138.53 (100)
2006-07	58981.57 (60.86)	32676.47 (33.71)	5263.76 (5.43)	96921.80 (100)
2007-08	68140.97 (62.18)	38692.82 (35.31)	2745.80 (2.51)	109579.59 (100)
2008-09	72815.68 (55.06)	75807.99 (43.71)	1629.64 (1.23)	132253.31 (100)
2009-10	84980.15 (54.80)	65633.85 (42.32)	4458.75 (2.88)	155072.75 (100)
2010-11	107199.31 (64.00)	56174.62 (33.54)	4120.65 (2.46)	167494.58 (100)
2011-12	107940.18 (56.57)	78921.04 (41.37)	3933.25 (2.06)	190794.47 (100)

2.4.1 Internal Resources of CPSEs

A perusal of different components of IR, moreover, shows that the share of 'retained profit' has been showing a big increase during this period. It went up from ₹ 27176.50 crores in 2002-03 to ₹ 125501.14 crore in 2011-12 (Table 2.6). In terms of respective shares of the different components of IR, namely, 'depreciation', 'retained profit' and 'deferred revenue expenses'/as per pre-Revised Schedule VI and 'depreciation' after Revised Schedule VI, there has been a significant change. Whereas the share of 'depreciation' in IR declined from 48.79 per cent in 2002-03 to 37.45 per cent in 2011-12, the share of 'retained profit' in IR went up from 50.07 per cent in 2002-03 to 61.04 per cent in 2011-12. The 'DRE/impairment' in IR increased from 1.14 per cent in 2002-03 to 1.39 per cent in 2011-12. The 'deferred tax assets' have also been included added under internal resources as per Revised Schedule VI and it 1.39% share in IR during 2011-12 (Table 2.6).

Table 2.6

Internal Resources of CPSEs

(2002-03 to 2011-12)

(₹ in crore)

Year	No. of CPSEs	Depreciation which	DRE/ generated IR	Deferred Tax impairment	Retained	Total Profit
As per pre-Revised Schedule VI						
2002-03	119	26477.41	619.18	-	27176.50	54273.09
		(48.79)	(1.14)	-	(50.07)	(100.00)
2003-04	139	30526.72	769.15	-	44116.90	75412.77
		(40.48)	(1.02)		(58.50)	(100.00)
2004-05	143	32477.42	537.60	-	50847.60	83862.62
		(38.73)	(0.64)	-	(60.63)	(100.00)
2005-06	160	34540.93	797.93	-	50248.20	85587.06
		(40.36)	(0.93)	-	(58.71)	(100.00)
2006-07	154	32013.20	5475.33	-	58713.84	96202.27
		(33.28)	(6.69)	-	(61.03)	(100.00)
2007-08	160	35436.51	5653.54	-	58731.80	99821.85
		(35.51)	(5.65)	-	(58.84)	(100.00)
2008-09	158	34432.79	7516.89	-	68854.43	110804.11
		(31.08)	(6.78)	-	(62.14)	(100.00)
2009-10	157	28745.82	9575.56	-	70061.06	108382.44
		(26.52)	(8.84)	-	(64.64)	(100.00)
As per Revised Schedule VI						
2010-11	158	43808.91	*185.69	3928.18	72872.18	120794.96
		(37.27)	(0.15)	(3.25)	(60.33)	(100.00)
2011-12	161	46997.55	152.38	1739.70	76611.51	125501.14
		(37.45)	(0.12)	(1.39)	(61.04)	(100.00)

Note: * Only impairment.

2. 5 Pattern of Investment

Table 2.7 below shows cognate group-wise aggregate real investment in CPSEs during the last two years, as measured in terms of gross block. The share of 'manufacturing' CPSEs in gross block was the highest at 28.37 percent followed by 'electricity' (25.62%), 'mining' (23.22%) and 'services' (21.54%). In terms of growth in investment over the previous year, the highest growth (other than CPSEs under construction) was registered by 'agriculture' sector (29.41%), followed by 'electricity' (13.97%), 'manufacturing' (13.47%) and 'mining' (11.75%). The overall growth in investment in CPSEs, in terms of 'gross block', stood at 11.02 per cent in 2011-12 over the previous year. (Table 2.7)

Table 2.7

Pattern of investment in terms of Gross Block
(2010-11 and 2011-12)

(₹ in crore)

Sl. No.	Sector	Investment in terms of Gross Block as on		Growth rate over the previous year	Gross block/ as % of total (as on 31.3.2012)
		31.3.2012	31.3.2011		
(1)	(2)	(3)	(4)	(5)	(6)
1.	Agriculture	154	119	29.41	0.01
2.	Mining	323098	289117	11.75	23.53
3.	Manufacturing	389632	343435	13.45	28.37
4.	Electricity	351939	308794	13.97	25.62
5.	Services	295836	287292	2.97	21.54
6.	CPSEs yet to Commence Operations	12867	7707	66.95	0.94
	Total	1373526	1237051	11.02	100.00

1.5.1 Top Ten Enterprises in terms of Gross Block

Gross block in top ten enterprises amounted to Rs.945619 crore as on 31.3.2012. This was equal to 68.85 percent of the total gross block in all CPSEs. Oil & Natural Gas Corporation Limited, Bharat Sanchar Nigam Ltd. and NTPC Ltd are the top three CPSEs amongst the top ten CPSEs in terms of gross block during the year 2011-12 (Table 2.8). The share of these 3 CPSEs alone was 37.70% of the total gross block of all the CPSEs as on 31.3.2012.

Table 2.8

Gross Block in Top Ten Enterprises, as on 31.3.2012

(₹ in crore)

Sl. No.	CPSEs	Investment in terms of Gross Block*	Share in total Gross Block(%)
(1)	(2)	(3)	(4)
1.	Oil & Natural Gas Corporation Ltd.	219287	23.19
2.	Bharat Sanchar Nigam Ltd.	174828	18.49
3.	NTPC Ltd.	123658	13.08
4.	Indian Oil Corporation Ltd.	112890	11.94
5.	Power Grid Corporation of India Ltd.	91571	9.68
6.	Steel Authority of India Ltd.	69777	7.38
7.	NHPC Ltd.	42412	4.48
8.	Air India Ltd.	39044	4.13
9.	Nuclear Power Corporation Ltd.	37903	4.01
10.	Hindustan Petroleum Corporation Ltd.	34249	3.62
	Total Top Ten (CPSEs)	945619	68.85
	Total Gross Block	1373526	100.00

* Gross Block inclusive of Capital-work-in progress and intangible assets under development.

2.6 State-wise distribution of gross block:

The state wise distribution of 'gross block' shows a significant change over the years (Table 2.9). A comparison of percentage share of different states over the years shows that whereas the states of Bihar (21.91 percent), M.P. (13.04 percent), West Bengal (6.71 percent) and Orissa (5.65 percent) claimed the largest share in investment until 1977, it is now the states of Maharashtra (17.62 percent), Tamil Nadu (7.44 percent), A.P. (7.17 percent), Uttar Pradesh (6.61percent) that rank 1st, 2nd, 3rd and 4th states in terms of investment. These changes, in good measure, have occurred mainly on account of higher investments in oil exploration (e.g. Mumbai High), power projects and telecommunications in recent years vis-a-vis investments in steel, heavy engineering and coal mining made in the earlier years. Some differences have also occurred due to bifurcation of states like Bihar into Bihar and Jharkhand, Madhya Pradesh into Madhya Pradesh and Chhattisgarh and Uttar Pradesh into Uttar Pradesh and Uttaranchal as well as closing down of some CPSEs and conversion of other CPSE into Joint Ventures with private companies. In absolute terms, however, there has generally been increase in investments in most states. The state wise investment in terms of gross block is given in Table 2.9 below.

Table 2.9

State-Wise Distribution of Gross Block^

Sl. No	State / Union Territory	Gross Block (₹ in crore)				% share in Total Gross Block			
		1977	1987	1997	2012	1977	1987	1997	2012
1.	Andhra Pradesh	390.70	6761.52	19486.16	98514.95	3.41	9.94	6.85	7.17
2.	Arunachal Pradesh	-	-	1489.20	5470.64	0.00	0.00	0.52	0.40
3.	Assam	312.90	3808.72	12448.89	60055.45	2.73	5.60	4.38	4.37
4.	Bihar	2509.10	6969.2	19982.51	38218.94	21.91	10.24	7.03	2.78
5.	Chhattisgarh	49964.85	-	-	-	3.64			
6.	Delhi	400.70	1928.48	15014.81	67951.54	3.50	2.83	5.28	4.95
7.	Goa	3.30	35.27	144.57	1604.11	0.03	0.05	0.05	0.12
8.	Gujarat	523.40	3197.79	20092.87	63568.23	4.57	4.70	7.07	4.63
9.	Haryana	142.70	649.69	4352.25	42075.63	1.25	0.95	1.53	3.06
10.	Himachal Pradesh	11.80	527.43	4720.54	31867.77	0.10	0.78	1.66	2.32
11.	Jammu & Kashmir	5.70	117.84	6413.36	19846.64	0.05	0.17	2.26	1.45
12.	Jharkhand	-	-	-	36453.78	-	-	-	2.65
13.	Karnataka	268.20	1721.52	6439.48	51229.79	2.34	2.53	2.26	3.73
14.	Kerala	274.10	1074.44	3991.76	29025.98	2.39	1.58	1.40	2.11
15.	Madhya Pradesh	1492.70	8571.69	21503.52	57892.77	13.04	12.60	7.56	4.21
16.	Maharashtra	630.30	10905.09	54854.07	241998.57	5.50	16.02	19.29	17.62
17.	Manipur	-	139.68	148.31	841.81	0.00	0.21	0.05	0.06
18.	Meghalaya	-	4.27	53.43	753.57	0.00	0.01	0.02	0.05
19.	Mizoram	-	-	30.03	998.40	-	-	0.01	0.07
20.	Nagaland	-	78.17	465.36	1570.35	0.00	0.11	0.16	0.11
21.	Orissa	646.50	4637.65	17101.40	68077.69	5.65	6.81	6.01	4.96
22.	Punjab	197.80	641.02	2077.85	15184.91	1.73	0.94	0.73	1.11
23.	Rajasthan	227.10	780.95	6065.94	29332.98	1.98	1.15	2.13	2.14
24.	Sikkim	0.55	241.13	3704.81	0.00	0.00	0.08	0.27	
25.	Tamil Nadu	466.90	3018.82	13539.28	102184.52	4.08	4.44	4.76	7.44
26.	Tripura	160.83	830.54	4185.58	0.00	0.24	0.29	0.30	
27.	Uttar Pradesh	376.20	3913.96	20767.92	90778.36	3.29	5.75	7.30	6.61
28.	Uttaranchal	-	-	-	23069.62	-	-	-	1.68
29.	West Bengal	768.30	4524.94	18677.33	73571.18	6.71	6.65	6.57	5.36
30.	Andaman & Nicobar Islands	-	9.89	27.10	2003.93	0.00	0.01	0.01	0.15
31.	Chandigarh	-	4.06	289.30	429.17	0.00	0.01	0.10	0.03
32.	Pondicherry	-	8.53	30.40	353.72	0.00	0.01	0.01	0.03
33.	Others and unallocated	1802.80	3859.87	13082.21	60746.05	15.74	5.67	4.60	4.42
	Total:	11451.20	68051.8	284361.52	1373526.29	100.00	100.00	100.00	100.00

^ As on 31st March of each financial year.

Chapter-3

Pricing Policy in CPSEs

Price is one of the most important elements of a commercial enterprise. It determines the company's profitability and is determined by the market share of the company and its positioning market strategy. Pricing strategy, in turn, involves estimation of cost, analysis of competitor's price, determination of demand and finally selection of the appropriate price.

In a monopoly market, a public sector enterprise can fix the price that maximizes the mark- up as well as the gross profits. That may not happen, however, if the government intervenes to moderate the price and reduce the mark-up in the interest of consumers and user industries/sectors. A good many Central Public Sector Enterprises (CPSEs) in India are charging prices below average/marginal cost, and the Government has been subsidizing these prices in the interest of consumers. CPSEs, in the (crude) oil sector, in this respect have been an important vehicle of Government of India in keeping the prices low in the domestic market.

In general, the governments fix/administer the price of goods and services produced by public sector enterprises based on the following principles:

(a) true costs (fixed and variable cost) of goods and services plus a reasonable return on investment,

(b) cross-subsidization between one group and another or between one sector and another,

(c) differential price norm for peak and off-peak demand, below cost to stimulate demand under conditions of excess/unutilized capacity, lower price for giving incentive to encourage consumption(e.g. fertilizer consumption) and higher price as disincentive to discourage consumption (e.g. petroleum products),

(d) different prices/multi-tariffs to include discounts on purchases of larger volumes.

Prices of goods and services produced by public sector enterprises in India, for long, have been determined by the Government under the policy regime of 'controlled prices',or following the Administered Price Mechanism (APM). The APM, in most cases, has been based on the cost of production (plus a reasonable return on investment). The Government obtained the cost estimates either from 'the management' of the company or from 'an expert body'. In the case of CPSEs in the 'core sectors', the Government has relied upon the Bureau of Industrial Costs and Prices (merged in 1999 with the Tariff Commission, Ministry of Commerce and Industry) for cost estimates and the consequent recommendations made by them on (fair) prices of goods and services of these enterprises. Other than the Tariff Commission, there have been other agencies like the office of Chief Adviser (Cost), Department of Economic Affairs, Ministry of Finance, the National Pharmaceutical Pricing Authority (NPPA), Department of Pharmaceuticals and the Central Negotiation Committee, Ministry of Defence, which have been fixing the price of select goods and services.

In the wake of post-1991 economic liberalization, furthermore, industries in the 'core sector' are no more the exclusive preserve of the public sector. Consequently, a good many CPSEs have ceased to be monopolies and they face competition in the market both from private players (within the country) and from imports. APM has been gradually dismantled in these sectors, and the CPSEs have been given the independence to fix the prices on their own. The Government, however, continues to be sensitive to the needs of the poor and the impact of rise in output prices in the core sector on the Wholesale Price Index (WPI). Any rise in price levels of these products that is not acceptable to the Government is moderated through a combination of measures, such as, lowering of customs duties, excise and sales tax, administrative control on prices and grant of subsidies etc.

Since the late 1990s, moreover, the Government has come to rely increasingly on various price regulatory commissions/ authorities for regulating prices in the best interests of both the consumers and the producers. The writ of these regulatory commissions extends to both the public sector and the private sector enterprises. The price regulatory commissions have been prescribing 'the tariff ceiling', which provides scope for competition. Prices are reviewed, from time to time, and are revised in the light of new technological possibilities and higher / lower input costs. The CPSEs have often played an eminent role in giving competition to the private players, and have brought down prices.

3.1 Market Structures and Pricing Strategy of CPSEs

Prices of' 'manufactured products' and 'services' are observed to be determined by firms based on the average/marginal cost of production and the mark-up over and above the cost to accommodate profits. The margin of 'mark-up', in turn, depends on the competitiveness or the degree of monopoly and the elasticity of demand and brand value in the market. Given the elasticity of demand for the product, a monopolist is able to charge a higher mark-up (10 to 40%) compared to a competitive market scenario; the mark-up being the difference between the average revenue and the marginal cost per unit of output. The prices of 'primary commodities' like agricultural products and minerals, on the other hand, is determined by the market forces of demand and supply.

Table 3.1 below provides an illustration of CPSEs operating under different market structures:

Table 3.1

Market Structure, CPSEs, and Pricing Policy

S.No.	Market structure	CPSEs	Pricing Policy Strategy
(1)	(2)	(3)	(4)
1.	Monopsony (Govt. of India as the sole buyer)	HAL, Mezagon Dock Ltd., Goa Shipyard Ltd., BHEL, BEML, BEL, Electronics Corporation of India Ltd.	Cost Plus Pricing*
2.	(2.1) Monopoly	Coal India Ltd. (for core sectors), Indian Oil, ONGC, HPCL (for refined oil), Central Warehousing Corporation, NPCI Ltd.	A.P.M./ Notified Price **
	(2.2) Monopolistic Competition	ALIMCO, Hndustan Insecticides Ltd., IDPL (for scheduled drugs)	A.P.M/Notified Price
3.	Monopolistic Competition	BEML, WAPCOS Ltd., EIL, MECON, HSCL, NBCC, Tyre Corporation of India Ltd.	Competitvely Negotiated Price
4.	4.1 Oligopoly (in the domestic market)	Air India, BSNL,MTNL, HLL Life Care, ITDC.	Competition Based Price
	4.2 Monopolistic Competition	National Textile Corporation, HMT, Hindustan Salts Ltd., CCI, MIDHANI	Competition Based Price
5.	5.1 Monopoly	FCI, ONGC, Indian Oil, HPCL, CWC, HIL, NSIFDC, IFDC, NMDFC, NSE, FACT	Subsidised Price **
	5.2 Monopolistic Competition	EIL, MECON,HSCL, NBCC	Competition Based Price
6.	Perfect Competition (in international market)	Coal India Ltd. (for buyers other than core sectors), Indian Oil (for imported crude oil), SAIL, NMDC, NALCO, Hindustan Copper Ltd.	Based on Demand and Supply

Note: * This is mostly in response to Request for Price (RFP) issued, for defence/power sector procurements, to CPSEs selected on nomination basis.

** Prices in, such cases, are often below the average cost.

Besides market structures, a combination of factors comes into play in the determination of prices in the CPSEs. Exponential growth in markets such as the telecom sector have brought down the costs due to 'economies of scale'. The paragraphs below briefly discuss the pricing system in respect of products in sectors where CPSEs are major players, and which touch the lives of a large majority of people.

3.2 Coal

Central Government used to fix the price of coal under the provision of Colliery Control Order 1945.The price of coal produced and sold by Coal India Limited and its subsidiary companies was under control of the Government till 21.03.1996.Price was decided based on normative cost as per the formula developed by the Bureau of Industrial Cost & Prices (BICP) and notified by the Ministry of Coal.

3.2.1 Decontrol of price

The process of de-control of price of coal was started w.e.f 22.3.1996 and continued in phases under the provisions of the Colliery Control Order 1945. The prices of all grades of cooking coal,semi cooking coal and non cooking coal of grades 'A', 'B' & 'C' were de controlled w.e.f. 22.03.1996. The prices of non cooking coal of grades 'E', 'F', & 'G' were partially decontrolled (not to be more than BICP norms) w.e.f. 12.3.1997.The process of price decontrol of coal was finally completed on 01.01.2000 with Govt. Notification of new Colliery Control Order 2000.

3.2.2 Basis of pricing after decontrol of price

After complete decontrol of coal price w.e.f. 01.01.2000, Coal India Ltd.started fixing the prices of raw cooking and non cooking coal produced by CIL, and its subsidiary companies. The prices of coal were fixed from time to time to time based on the following:

- Increase in input cost for production of coal
- The upward movement of AICPI and WPI
- Capacity of the market to absorb the coal price
- Demand and supply scenario
- Landed cost of imported coal
- Requirement of fund for investment in upcoming projects and modernization of existing mines for augmentation of production
- Financial viability of new coal projects

With the withdrawal of Budgetary Support since 1995-96 and commercial operation in a deregulated regime the basic price objective of CIL is to ensure generation of sufficient surplus for the company for fresh investments. The price of coal, so fixed has also to ensure that the cost of domestic coal to different user industries at different consuming points , remains competitive vis-à-vis the landed cost of imported coal .

3.2.3 Differentiated Pricing Policy

In the price revision effective from 27.02.2011, the CIL for the first time adopted the concept of dual pricing i.e. one price for consumers for Power utilities (including IPPs), Fertilizer companies and for Defence (Regulated) sector and another for consumers other than these sectors. The price of coal for the non regulated sector (except for higher grade) are kept higher than that for the regulated sector. Since the prices of end products of coal consuming industries in the non regulated sector are market driven, CIL fixes the price of coal used in non regulated sector at a level that is closer to the market price.

The price for higher grade of non-cooking coal are fixed on import parity basis after providing for appropriate discount as per the Integrated Energy Policy(IEP) of Government of India, which provides for sale of high quality non-cooking coal at 15% discount on the import parity.

Pursuant to the Gazette notification of the Govt. of India dated 30.12.2011 to switch over from the existing Useful Heat Value (UHV) based grading and pricing system to Gross Calorific Value (GCV) based classifications of non cooking coal, CIL switched over to GCV based system of grading and pricing of non cooking coal w.e.f. 01.01.2012. Accordingly, in place of earlier seven nos. of grades (Grades A to G) under UHV system, non-cooking coal has been classified in the new GCV system into 17 no. of grades.

(Grade G1 to G17), each of 300 Kcal bandwidth starting from GCV of 2200 Kcal/Kg and above).

In the UHV based grading and pricing, earlier the price for same grades of coal in different subsidiaries of CIL (and even within the same subsidiary) used to be different, whereas under the GCV based system uniform price has been kept across all the subsidiary coal companies except WCL, and prices are fixed in such a way so that there is minimum over-all impact on the revenue generated from sale of coal for CIL as a whole.

3.2.4 Cost Plus Agreement

After introduction of New Coal Distribution Policy (NCDP) during October,2007, the Ministry of Coal issued guidelines for supply of Coal on Cost Plus Basis.Accordingly, coal is supplied at a price that covers cost of production and a reasonable return on investment, and from such sources which would have been otherwise non-viable at CIL notified price. The price is fixed at 85% capacity utilization at a return not less than 12% IRR. Price of washed coking coal is decided through negotiation with the buyer on import parity basis. Price of non-coking coal is decided through negotiation with the buyer on import parity basis. Price of non coking washed coal is decided based on value addition through washing, which is notified by the subsidiary companies concerned.Further, Around 10% of the CIL' coal is sold through e-auction to cater to the needs of such consumers who do not have any access to the institutional mechanism of buying coal from CIL source.

3.3 Petroleum and Gas

With the changeover from price being determined based on Administered Price Mechanism (APM) to market-determined pricing w.e.f 1.4.2002, the oil marketing companies (OMC) are fixing the prices of petroleum products after taking into account the prevalent international oil prices (except Diesel, Domestic LPG and PDS Kerosene). About 83% of crude oil processed by the domestic refineries is imported. As the input cost of crude, besides taxes, constitutes a substantive part of cost of the final products, international oil prices of crude oil become the determining factors for pricing of domestic petroleum products.

Table 3.2

International Price of Petroleum Products

(Indian Basket)					
Year	Crude $/bbl	Petrol $/bbl	Diesel $/bbl	Kerosene $/bbl	LPG $/mmt
2008-09	83.57	89.42	101.75	104.37	688
2009-10	69.76	76.23	74.67	75.35	582.69
2010-11	85.09	92.43	95.66	96.79	745.29
2011-12	111.89	121.6	125.38	125.99	899.42

The rising trend of the international prices of crude oil & petroleum products during the period 2008-09 to 2011-12 is shown in Fig 3.1.

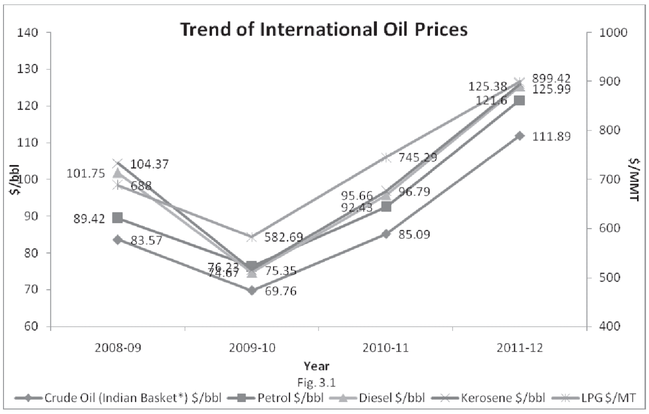

Fig. 3.1

Source: Ministry of Petroleum & Natural Gas

3.3.2 PDS Kerosene and Domestic LPG

While dismantling the Administered Pricing Mechanism (APM) for major petroleum products w.e.f 1.4.2002, the Government decided that the subsidies on PDS Kerosene and Domestic LPG, in the Post- APM era will be on the basis of a specified flat rate basis and will be met from the Union Budget under two schemes i.e. (a) Fiscal Subsidy and (b) Freight Subsidy Scheme. Further, the subsidy admissible for 2004-05,2005-06 and 2006-07 was to be at one third(1/3rd) level of the rates of subsidy for 2002-03. The Government has subsequently extended both the schemes till 31.03.2014.

3.3.2.1 Fiscal & Freight Subsidy

The details of the fiscal & freight subsidy paid on PDS Kerosene and Domestic LPG under the PDS Kerosene and

Domestic LPG Subsidy Scheme, (2002) since 2007-08 are shown in table 3.3 below:

Table 3.3

Price Subsidy on PDS Kerosene & Domestic LPG

(₹ crore)

Sl. No.	Year	Fiscal subsidy	Freight Subsidy
1	2007-08	2641	28.27
2	2008-09	2688	22.22
3	2009-10	2770	21.95
4	2010-11	2904	22.33
5	2011-12	3000	12.03
6	Apr-Sep,2012 (prov)	1460	12.03

3.3.2.2 Freight Subsidy (for far flung areas)

Freight subsidy is being provided to the Oil Marketing Companies (OMC's) for supplies and sales of products (i.e. PDS Kerosene and Domestic LPG) in the notified far flung areas.

3.3.3 Under recoveries of OMCs

Despite the increase in the international prices of crude oil since 2004-05, the retail selling prices of Petrol (decontrolled eff. 26.6.2010), Diesel ,PDS Kerosene and domestic LPG have not been raised/maintained in line with the international oil prices, resulting in "under-recoveries" on sale of these products by OMCs. Under-recoveries incurred by OMCs since 2008-09 to April-June 2012 are as shown in Table 3.4 below:

Table 3.4

Under Recoveries *of OMCs on sensitive Petroleum Products

(₹ in crore)

Under- Recovery*	2008-09	2009-10	2010-11	2011-12	April to Sep'12
Petrol	5,181	5,151	2,227#	Nil	Nil
Diesel	52,286	9,279	34,706	81,192	52,711
PDS Kerosene	28,225	17,364	19,484	27,352	14,331
Domestic LPG	17,600	14,257	21,772	29,997	18,544
Total	1,03,292	46,051	78,190	138,541	85,586

* Gross under recoveries without considering oil bonds and upstream assistance.
#This relates to Under- recovery on Petrol up to 25.06.2010.

3.3.6 Burden sharing mechanism

As passing on the entire impact of the steep increase in the imported oil prices to the consumers would have resulted in sharp increase in the domestic prices to unaffordable levels, it was decided that the burden of increase in international price of oil be shared by the different stakeholders, namely, the Government, the upstream oil companies, the oil marketing companies (OMC's) and the consumers through a burden sharing mechanism in the following manner:

(i) Government through issue of Oil Bonds and grant of cash subsidy to OMCs

(ii) Domestic upstream oil companies through price discounts to OMCs

(iii) OMCs to bear a portion of under recoveries; and

(iv) Consumer to bear minimal price increase.

The details of under-recoveries arising from higher prices of international crude oil and the burden sharing between the different stakeholders since 2008-09 and onwards are shown in Table 3.5 below:

Table 3.5

Components of Burden Sharing on Retail Price of Petroleum Products

(₹ in crore)

Sl. No	Items	2008-09	2009-10	2010-11	2011-12	April to Sep'12
(i)	Oil Bonds/ cash assistance paid by Government to OMC's	71,292	26,000	41,000	83,500	Nil
(ii)	Assistance provided by upstream oil producing companies (i.e. ONGC, OIL& GAIL)	32,000*	14,430	30,297	55,000	30,170
(iii)	Under Recoveries borne by OMCs	Nil	5,621	6,893	41	**55,417
	Total	1,03,292	46,051	78,190	138,541	85,586

Note : * In addition, import losses compensated by upstream sector amounting to Rs. 943 crore for year 2008-09.
**Unmet Under recovery as Government Assistance awaited.

3.3.7 Measures to control the impact of high international prices

The Government, on its part, has taken a number of measures to rationalize taxes/duties on petrol and diesel to keep the consumer prices of these sensitive (petroleum) products at reasonable limits. In view of the alarming situation arising out of projected massive under-recoveries of the OMCs during 2012-13 on account of high international crude oil prices and the sharp depreciation of Indian Rupee against US Dollar, the Government took the following decisions in September, 2012:

(1) Increase in price of Diesel by 5 per litre excluding VAT.Out of this, 1.50 per litre is on account of increase in Excise Duty.

(2) Restrict the supply of subsidized domestic LPG cylinders to each consumer at 6 cylinders (of 14.2 kg) per annum. The number of subsidized LPG cylinders available to each consumer in the remaining part of the current financial year to be 3 cylinders.

3.4 Electric Power

The Electricity Regulatory Commission Act was enacted in 1998 for creation of Regulatory Commissions at the Centre and in the States with the authority, inter-alia, to regulate/ determine power tariffs. The Central Government accordingly created the Central Electricity Regulatory Commission (CERC) to regulate/ determine power tariffs of CPSEs engaged in generation and inter-state transmission of power. CERC also issues order on Availability Based Tariff (ABT) for ensuring grid discipline.

The tariffs for the electricity supplied by CPSEs for the period of 2009-14 are determined by the CERC as per the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2009. Regulation 14 of the Tariff Regulations 2009 describes the components of the annual fixed cost of a generating station for the purpose of determination of tariff which are:

- Return on Equity
- Interest on loan capital
- Depreciation
- Interest on working capital
- Operation & Maintenance expenses
- Cost of Secondary Fuel (For Coal based and Lignite fired generating station only)
- Special allowances in lieu of R&M or separate compensation allowances, wherever applicable.

The Important features of the Tariff Regulations, 2009 having advantage for the generators or transmission licensee (over the Tariff Regulation, 2004) are as follows:

- The base rate for allowing return on equity has been raised from 14% to 15.5% (as this will attract more investors in the power sector).
- For timely completion of projects, an additional return on equity of 0.5 % is allowed as an incentive.
- New hydro power projects have been insulated from hydrological risks during the first 10 years of their operations, giving a relaxation to design energy, if a hydro power station cannot achieve the design energy due to reasons beyond the control of the generator.
- Tariff for hydro power project has been restructured to allow incentives for supply of peaking power.
- Return on equity @ 15.5% has been grossed up by the applicable tax rate.
- As against a depreciation rate of 3.6% for the thermal power project and 2.75% for hydro power projects, the CERC has increased the depreciation rate to 5.28% for most components of the projects.
- Capacity index based fixed charge recovery has been replaced by availability based fixed charge recovery.

Further, as per the Hydro Policy 2008,CPSUs/PSUs have been exempted from tariff based bidding and the tariff is to be determined on cost plus basis for the tariff period 2009-14 provided the financial closure of the project is achieved by Jan,11, 2011.

The dispensation available to CPSUs /PSUs regarding exemption from Tariff based Bidding need to be continued beyond Jan 2011, since it is not feasible for hydel projects to predict the actual cost of the project because of geological uncertainties, cost of Rehabilitation and Resettlement and other unforeseen factors leading to time and cost overruns. The Ministry of Power, Govt. of India therefore extended the exemption from tariff based bidding up to 31.12.15 vide Notification dated 9.8.2011.

3.5 Steel

The steel industry in India was one of the first few major sectors to be comprehensively deregulated as part of the general economic reforms. The erstwhile regime of controls was wholly dismantled in 1992 through the following policy changes :

(a) Price and distribution (with the exception of a few strategic areas) were freed,

(b) Trade barriers came down with reduction in tariff rates and removal of physical restrictions (canalizing and licensing) on imports and exports,

(c) Freight ceilings was replaced by freight equalization,

(d) FDI in Iron & Steel was allowed through the automatic route,

(e) Technology imports were made easier, and

(f) Capacity controls and reservation on the BF- BOF sectors were withdrawn.

Broadly, the price of both flat steel and long steel has been stable over the period between 2007—12. The increase in the price index of these prices has been lower than the increase in wholesale price index in the country.

As steel pricing was deregulated, prices came to be determined through competition in the market. The Ministry of Steel has, nonetheless, constituted a 'Steel Price Monitoring Committee' (SPMC). The Committee seeks to provide an interface between the producers and consumers of steel. The objective of the Committee is to keep a watch on the price movement. The Committee functions as a watchdog and ensures that a free and fair environment prevails in the market.

The selling prices of steel and steel products are, inter alia, based on the following factors:

(a) demand and supply position,

(b) competitor pricing,

(c) landed cost of imports,

(d) levels of Inventory,

(e) freight from producing point to consuming point,

(f) market position for customers' end products.

3.6 Fertilizers

For sustained agricultural growth and to promote balanced nutrient application, it is imperative that fertilizers are made available to farmers at affordable prices. Urea is the main nitrogenous fertilizer constituting about 60% of the total fertilizer consumption in the country. The market share of CPSEs in the area of fertilizer sector is a little more than 20%. Fertilizer is covered under statutory price (and partial distribution) control and is sold to the farmers at the notified sale price. All varieties of fertilizers, except Urea, were removed from price and distribution control in August, 1992. The Government of India, however, indicates the maximum retail price (MRP) in respect of major phosphatic and potassic fertilizers, namely, Di- Ammonium Phosphate (DAP), Muriate of Potash (MOP) and 11 grades of Complex Fertilizers. The MRPs for Single Super Phosphate (SSP) are indicated by the respective State Governments.

The statutorily notified sale price of urea and indicative MRPs of decontrolled phosphatic and potassic fertilizers are generally less than the cost of production of these fertilizers. The difference between the normative cost of production and the selling price/MRP is paid as subsidy/concession to the manufacturers.

As the consumer prices of both indigenous and imported fertilizers are fixed uniformly, financial support (being the difference between the cost of import and marketing/distribution and MRP) is also given non imported phosphatic and potassic fertilizers by the Government in the form of subsidy.

Table-3.6

Subsidy on Fertilizers (2006-07 to 2010-11)

(in Crore)

Years	Subsidy Released		Total Subsidy disbursed/due
	Urea	P & K Fertilizers	
2006-07	15354	10958	25952
2007-08	23204	17134	40338
2008-09	33940	65555	99495
2009-10	24580	39452	64032
2010-11	24336	41500	65836

3.6.1 Retention Price Scheme (RPS)

Until 31st March, 2003, fertilizer subsidy to urea manufacturers was being regulated in terms of the provisions of the Retention Price Scheme (RPS). Under RPS, the difference between retention price (cost of production as assessed by the Government plus 12% post tax return on net worth) and the MRP to be paid by the farmers was reimbursed as subsidy to the urea units.

3.6.2 New Pricing Scheme (NPS)

A 'group based' pricing scheme, namely the New Pricing Scheme (NPS) for urea units was introduced subsequently w.e.f. 1.4.2003, replacing the erstwhile RPS. The primary goal of the NPS was to encourage efficiency based on the usage of the most efficient feedstock, state-of-the-art technology etc. NPS is being implemented in stages. Stage-I was for one year duration i.e. from 1.4.2003 to 31.3.2004. Stage-II was of two and half years' duration i.e. from 1.4.2004 to 30.9.2006. Stage-III policy of the NPS has been made effective from 1.10.2006. Though the tenure of NPS stage III was up to 31.3.2010, the same is extended beyond March, 2010 as no policy is finalized on the issue.

With the projected improved availability of gas from 2009 onwards, it is expected that fresh investment in fertilizer sector will take place. The Government announced a new investment policy in September 2008 based on Import Parity Pricing (IPP) for the Urea sector to attract the necessary investment. The policy is expected to create availability of Urea at a price lower than IPP, and through reduction in imports, is expected to bring down the import subsidy on fertilizers .

The Government, furthermore, notified in June 2008 a farm-gate-based regulated nutrient price regime for use in the production of subsidized complex fertilizers. This will lead to decrease in existing MRPs of complex fertilizers. Under existing pricing regime, the prices of nutrients in complex fertilizers were higher than the price of same nutrients in other straight fertilizers like Urea, DAP, MOP and SSP. This has led to comparatively higher usage of straight fertilizers vis-à-vis complex fertilizers, the latter being agronomically better.

In order to encourage setting up of fertilizer plants through Joint Ventures (JV) in foreign countries where gas is available in abundance and is much cheaper, such JVs for production of urea may be set up subject to the condition that the Government of India will enter into long term buy- back arrangements with these JVs. Accordingly, suitable mechanisms can be evolved for securing long term fertilizer related supplies from abroad.

Table-3.7

Company-wise Subsidy Paid To CPSEs
(2005-06 to 2010-11)

(₹ in Crore)

Sl. No.	CPSEs	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
1	RCF - Thal	852.01	1193	1618.37	2217.27	1227.65	705.35
2	RCF - Trombay	1.91	0	0	0	66.02	313.94
3	MFL	676.39	1008.89	899.39	1045.66	1147.82	1290.71
4	NFL - Bhatinda	353.64	439.34	839.61	892.91	983.62	923.88
5	NFL - Panipat	309.35	424.83	879.58	873	846.27	801.39
6	NFL - Vijaipur-I	123.93	121.23	151.11	384.97	255.68	289.41
7	NFL - Vijaipur-II	350.06	391.18	306.46	508.52	324.18	443.14
8	NFL - Nangal	420.85	473.13	836.72	839.58	930.77	748.96
9	BVFCL - Namrup - III	20.7	76.28	72.57	42.83	26.37	56.1
10	BVFCL - Namrup - II	0	20.71	32.95	33.38	21.81	114.13

Since 2011-12 prices of P & K fertilizers are fixed under NBS policy. Under this, a fixed subsidy is announced on per kg basis of nutrient on annual basis. An additional subsidy is also given to micro nutrients. With the objective of providing a variety of subsidized fertilizers to farmers depending upon soil and crop requirements, the Government has included seven new grades of complex fertilizers under the NB'S. Under this scheme, the manufacturers are allowed to fix MRP. The farmers are paying only 50% of delivered cost of P&K fertilizers and the rest of the cost is borne by the Government of India in the form of subsidy.

3.7 Telecommunications

The independent regulatory authority TRAI regulates telecom services including fixation/revision of tariffs for telecom services. The recommendations and orders issued by TRAI are binding on both public sector (MTNL and BSNL) as well as private sector telecom operators. Various directions orders and regulations are issued by TRAI on pricing of products and services which are available on TRAI website.

Under the TRAI Act 1997, the Telecom Regulatory Authority of India (TRAI) notifies the rates at which telecommunication services within India and outside the country are to be charged. The Telecommunication Tariff Order was notified for the first time in March, 1999 by TRAI. Tariff amendment Orders are issued from time to time to reflect changes in tariff framework. The recommendations and orders issued by TRAI are binding on both public sector (MTNL and BSNL) as well as private sector telecom operators.

Currently, the tariff for telecom services is left to the discretion of telecom operators. They may decide the prices in terms of market forces, except in the areas of :

(a) rental, free call allowance and local call charges for fixed line rural subscribers,

(b) leased circuits-domestic and international, and

(c) national roaming services in mobile telephony.

The providers of telephone services are, moreover, free to offer various tariff plans to their subscribers. These plans may vary substantially in terms of the combinations of monthly rental, call charges and free call allowances. These tariffs, however, have to be consistent with the regulatory principles of non-discrimination and non-predation, and in compliance of the prescribed Interconnection Usage Charges (IUC).

Wherever applicable, the following points are taken into consideration by CPSEs operating in the telecom sector for price determination :

(a) Tariff ceiling prescribed by TRAI for different services,

(b) Tariff offered to consumers by competitors for similar services,

(c) Customers' needs and preferences, and

(d) Affordability of customer segments.

The pricing policy of BSNL is competition based. Prices of products and services are determined as per market trends.. Around June 2010 due to Intense competition, it has compelled telecom operators to offer local and STD calls rates at rock bottom prices, to as low as 1 paisa per second. Now, with this, ISD calls have come down to the 1 level.Further, the implementation of Mobile Number Portability (MNP) encouraged the telecom service providers to introduce innovative tariff offers to attract subscribers from other telecom service providers, and also to come up with lower tariff rates and other attractive packages.

The pricing policy of CPSEs in Telecommunication sector is competition based pricing. Prices of products and services are determined as per market trends. Differential pricing strategy is also followed which offers discounts for volume purchases and bundling offers.

3.8 Civil Aviation

3.8.1 Airport Services

The Airport Economic Regulatory Authority of India (AERA) has been established for regulating the various Airport and Navigational Tariff of all major airports. The Multi Year Tariff Proposal (MYTP) and Annual Tariff Proposal (ATP) have been submitted/are under submission for these airports to AERA .For airports other than non-major airports, Ministry of Civil aviation is functioning as the Regulator and AAI is in the process of submitting the proposal (s) for such airports.

3.8.2 Fares for Airflights

The air fares and tariff are deregulated.DGCA has vide various CAR (Civil Aviation Regulation) advised the airlines on the transparency in display of air fares & publishing of tariff(Rule 135 of Aircraft Rules,1937).

The 'fares' offered by Air India are competitive and market driven and are based on market considerations, such as, fares offered by competitors, seasonality, extent of competition and product features like frequency, timings, direct/ indirect operations etc.

Apart from the normal sector fare, Air India offers multiple levels of lower fares on the domestic network. The availability of a particular fare on the sector may vary from flight to flight and sector to sector as it is dependent on the demand and supply and consequent availability of seat in a particular fare level at the timing of booking.

Fair revision/computation is not governed by any rigid stipulation. It may not be necessary to simultaneously revise fares in all classes on a given sector nor is it necessary to revise the fares of all sectors at the same time. Dependent on the prevailing market conditions, there can be both upward / downward movement of the fare may remain unaltered on the particular sector at the time of any fare revision.

Pawan Hans Helicopter Ltd. has adopted the following broad principles of price determination:

- Competition based pricing-For a majority of contracts for helicopter services, Pawan Hans Helicopters Ltd. Has to engage in competitive domestic and global bidding. Most business in offshore Oil and Gas E&P sector and State/Central Govt. leases are secured in such a manner. In such cases prices are driven by competitive dynamics in order to secure long term contracts under tender bidding.
- Cost Plus pricing-For a small proportion of works, Pawan Hans Helicopters Ltd. Based on customer request and (or) agreement provides this kind of pricing subject to discussion and negotiation on final prices. Such method is followed for Contracts awarded on nomination basis, if any.

3.9 Pharmaceuticals

Prices of pharmaceutical products manufactured by CPSEs are fixed based on the Drugs Price Control Order (DPCO), 1995. Pharmaceutical products have been moreover, categorized as Scheduled and Non-Scheduled formulations. The Government of India notified the new National Pharmaceuticals Pricing Policy(NPPP) 2012 in December 2012. There are 348 drugs in the national List of Essential Medicines (NLEM 2011) under price control. The ceiling prices of these essential medicines under the new method are based on market based pricing (MBP) mechanism which is different for calculating ceiling prices of drugs based on Cost Based Pricing (CBP).

3.9.1 Prices of Scheduled Pharmaceutical Products

The Maximum Retail Prices (MRP) of Scheduled Formulations are fixed and revised by the National Pharmaceutical Pricing Authority (NPPA), the price regulatory authority of Government of India.

3.9.2 Prices of Non-scheduled Pharmaceutical Products

The prices of non-scheduled formulations are fixed by the Board of Directors of CPSEs based on DPCO guidelines, their cost and prevailing market trend. In case of pharmaceuticals CPSEs ,the pricing policy for various products are discussed in the paragraph below.

3.9.2.1 Prices of 102 products reserved under Preferential Purchase Policy (PPP) of Government of India (GOI) for pharma CPSEs:

3.9.2.1-A Pricing of 102 products reserved under PPP of GOI for pharma CPSEs for supply to Central Government & State Government institutions funded by GOI:

Preferential Purchase Policy for 102 drugs manufactured by 5 CPSEs was introduced by Deptt. of Chemicals & Petrochemicals (Deptt. of Pharmaceuticals) valid for 5 years i.e. upto 6 August, 2011. The drugs were categorized into Scheduled & Non Scheduled drugs.

A1: For scheduled drugs discount varying upto 35% were offered on the ceiling price fixed by NPPA.

A2: For Non scheduled drugs discount varying upto 35% was fixed on retail price (Notional ceiling price was worked by NPPA for the purpose of PPP policy).

Department of pharmaceuticals has initiated steps for the extension of purchase preference policy w.e.f. the approval of the competent authority.

3.9.2.1-B Price of 102 products reserved under PPP policy for CPSEs for supply to institutions not funded by GoI:

The benefits of reduced prices fixed under PPP policy as mentioned above was also extended to such supplies.

3.9.2.2 Prices of products other than 102 Products:

These prices for non PPP products are worked on the basis of (a) cost parameter of respective CPSEs. (b) Competitors pricing pattern. (c) Ceiling prices fixed by NPPA.

3.9.2.2- A Price of products being sold in open market:

The prices for open market sale are fixed based on (a) The prevailing price of the competitor brand, (b) Cost parameter of the respective CPSE. (c) Ceiling prices fixed by NPPA, (d) Guidelines given by DPCO in case of Non scheduled drugs.

3.9.2.2-B Prices of products under Janaushadhi Programme :

The prices of products sold by CPSEs under the Janaushadhi Programme of Department Of Pharmaceuticals, GOI are fixed by BPPI (Bureau of Pharma Public Sector Companies of India based on (a) 50% of the average MRP of the reputed manufacturer and, (b) cost parameters of CPSEs.

3.9.2.2-C There is no Subsidy Policy in case of supply if drugs/medicines available to CPSEs

3.10 Agriculture Products

3.10.1 Outputs: Wheat & Paddy

The Food Corporation of India (FCI) has been intervening in the foodgrain market through price support policy for farmers and through the public distribution system for consumers. Price support policy is implemented by the FCI primarily in regard to wheat and paddy. The two main objectives of this market intervention are (a) to protect the farmers from volatility in grain markets, and (b) to correct the trade bias against agriculture vis-à-vis other sectors of the economy.

The initial recommendation in regard to procurement price is made by the Commission on Agricultural Costs and Prices (CACP) in the Ministry of Agriculture, Government of India. These prices are arrived at on the basis of cost of cultivation and several other specified factors rather than on demand-supply basis.

The distribution of food grains to the vulnerable sections of the population by FCI is done at Central Issue Price (CIP). Despite increase in the Minimum Support Prices for both wheat and paddy in successive years, there has been no revision of CIP of food grains (wheat and rice) for Below the Poverty Level (BPL) population, Above the Poverty Level (APL) population and for Antyodaya Anna Yojana (AAY) since July1, 2002.

3.10.2 Inputs: HYV Seeds

National Seeds Corporation Ltd. (NSC) and State Farms Corporation of India Ltd. (SFCI) are the two CPSEs engaged in production of quality high- yield variety (HYV) seeds. The Government has not issued any direction to these CPSEs on fixation of prices of seeds, which are generally determined by market forces. NSC and SFCI are engaged mainly in production of high volume of low cost seeds of cereals and pulses and have been striving to make quality seeds available to Indian farmers at affordable prices to ensure national food security.

After globalization of the Indian economy, a number of private seed companies have entered Indian market. The Central PSEs are facing stiff competition from private sector seed companies, especially in case of hybrid seeds. In view of the above, the Government has left it entirely to the CPSEs to fix prices of their products, allowing them the freedom to maintain a balance between social objectives and commercial viability.

Seed pricing comprise of two stages i.e. (i) seed production/procurement, (ii) seed sale. Bulk of seed production, both foundation and certified, is largely arranged through regular registered contracts with seed growers. For finalizing the sale price of hybrid/high variety seed, the main factors taken into account are:

(a) the relevant Minimum Support Price (MSP) fixed for the crop/season,

(b) the commercial produce price in the local mandis/market yards, especially in the ultimate end-use/seed sale areas,

(c) all the costs incurred in terms of processing, treatment, packing, labeling, tagging, sealing, transportation, storage, handling, losses in the process, publicity, sales promotion, interest burden, dealers discount, etc

Chapter-4

Productivity in Public Enterprises

The Central Public Sector Enterprises (CPSEs) are technologically complex identities involving large scale production and economies of scale. CPSEs in the industrial sector (manufacturing, mining and electricity), in particular, are capital intensive and are characterized by higher productivity per unit of input/hour. Productivity is, however, influenced by both endogenous and exogenous factor. While endogenous factor constitute of higher technology, better quality of labour, scale of output and good management practice, the exogenous factors comprise interest rates, tax policies, infrastructure facilities, weather conditions, law and order and the overall state of the economy.

Productivity, in turn, is the measure of efficiency in use of resources (or inputs) in the production of various good and services. A comparison with the peer group or over time, highlights if 'productivity' is high or low and whether there is improvement/ deterioration in condition during the period under consideration. Some of the important parameters used for measuring 'productivity' are capacity utilization, inventory in relation to sales and energy use in the enterprise. The paragraphs below discuss each of these measurements of productivity in relation to CPSEs.

4.1 Capacity Utilization

Capacity utilization in this reports has been measured based on the installed/rated capacity. Wherever installed/rated capacity is not available for various reasons, the assessment of the management vis-à-vis capacity utilization in the enterprises has accepted. In the case of multiple product units, moreover, capacity utilization have been worked out with reference to major products.

Table 4.1 shows the capacity utilization in CPSEs during the last three years. As many as 42 CPSEs out of 64 units recorded capacity utilization of 75% and more in 2011-12 as compared to 48 out of 67 units. In 2010-11.

Table 4.1

Capacity utilization in CPSEs

Sl. No.	Description	2011-12	2010-11	2009-10
(1)	(2)	(3)	(4)	(5)
1	Units which have recorded 75% or more capacity utilization	42(65)	48(72)	50(67)
2	Units which have recorded 50% or more but less than 75%	9(14)	9(13)	9(12)
3	Units which have recorded less than 50% capacity utilization	13(21)	10(15)	16(21)
	Total	64(100)	67(100)	75(100)

(Figures in brackets show percentages)

The detailed enterprises-wise statement, indicating the unit-wise capacity utilization for major products during the last three years is given in the section on Statements & Appendices at the end of this Volume (Statement No. 18). The paragraphs below discuss enterprise-wise rated capacity and extent of utilization, under the various cognate groups.

4.1.1 Iron and Steel

The Information on capacity utilization for the last 3 years in respect of three CPSEs is presented in the Table below:—

Table 4.1.1

SI. No.	CPSE	Product	Installed Capacity (2011-12)	Capacity Utilization (%) 2011-12	2010-11	2009-10
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Mishra Dhatu Nigam Ltd.	Super Alloys	2729 (MT)	127	110	89
2	Steel Authority of India Limited	Saleable Steel	11.24 ml.t	110	116	114
3	Rashtriya Ispat Nigam Ltd.	Pig Iron	0.56 ml.t	71	57	73
		MMSM	0.85 ml.t	111	123	126
		Bars	0.71 ml.t	123	122	123
		Wire rods	0.85 ml.t	119	119	119
		Saleable steel	2.66 ml.t	113	116	119

(MT - Metric Tonne; TPA - Tonne per annum; ml.t - Million Tonne)

- The Mishra Dhatu Nigam Ltd. produced 3482 MT of alloys during 2011-12 as against3014 MT produced in the previous year.
- Steel Authority of India Limited produced 12.40 million tonne of saleable steel during the year 2011-12 as compared to 12.89 million tonne during the previous year.

- The RashtriyaIspat Nigam Ltd. produced0.39million tonne of Pig Iron, 0.85 million tonne of MMSM Products, 0.87 million tonne of bars, 1.02 million tonne of wire rods and 3.00 million tonne of saleable steel during 2011-12 as against a production of 0.32 million tonne of Pig Iron, 1.04 million tonne of MMSM Products, 0.87 million tonne of bars, 1.02 million tonne of wire rods and 3.08 million tonne of saleable steel during the previous year.

4.1.2 Minerals and Metals

The information in respect of five CPSEs for the years 2009-10, 2010-11 and 2011-12 is presented in the Table below: —

Table 4.1.2

Sl. No.	CPSE	Product	Installed Capacity (2011-12)	Capacity Utilization (%)		
				2011-12	2010-11	2009-10
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	FCI Aravali Gypsum & Minerals (India) Ltd.	Gypsum	905000 MT	100	98	80
2	Indian Rare Earths Ltd.	Ilmenite	5,10,000 MT	52	64	70
		Rutile	22300 MT	55	59	59
		Zircon	32500 MT	45	52	57
3	KIOCL Limited	Iron Oxide Pellets	3.5 Million Tonne	49	61	36
4	National Aluminium Company Ltd.	Bauxite	63 lakh MT	90.14	100.50	101.64
		Alumina	21 lakh MT	91.81	98.79	101.05
		Aluminium	4.60 lakh MT	89.80	96.43	99.88
5	The Orissa Minerals Development Co. Ltd.	Sponge Iron	30,000 TPA	-	7.79	28.22

(MT - Metric Tonne, TPA - Tonnes per annum)

- FCI Aravali Gypsum and Minerals India Limited excavated 904757 MT of Gypsum during the year 2011-12 as compared to 883441 MT in the previous year.
- The Indian Rare Earths Ltd. produced 266060 MT limonite, 12203MT rutile and 14582MTzircon during the year 2011-12. The corresponding figures for the previous year were 323681,13228 and 17042MTrespectively.
- KIOCL Limited produced 1.710 million tonne of iron oxidepellets during 2011-12 as compared to 2.124 million tonneofiron oxidepelletsin 2010-11.In pursuance to the directives of the Supreme Court, the mining activities at Kudremukh have been stopped on 31.12.2005. There was no production of Iron Ore Concentrate from 1.1.2006.
- National Aluminium Company Limited produced 50.03 lakh MT of Bauxite, 16.87lakh MT of Alumina and 4.13 lakh MT of Aluminium during the year 2011-12. The corresponding figures for the previous year were 48.24 lakh, 15.56 lakh and 4.44 lakh MT respectively.

4.1.3 Coal and Lignite

The information on capacity utilization for the last 3 years in respect of seven CPSEs is presented in the Table below:—

Table 4.1.3

Sl. No.	CPSE	Product	Installed Capacity (2011-12)	Capacity Utilization (%)		
				2011-12	2010-11	2009-10
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Central Coalfields Ltd.	OC Coal	71.89 M. Cum.	78	77	87
		UG Coal	1.956 MT	56	57	63
2	Eastern Coalfields Ltd.	Raw Coal	27.380 MT	111.6	96.34	105.19
3	Neyveli Lignite Corpn. Ltd.	Lignite	306 LT	80.36	75.63	92.97
4	Northern Coalfields Ltd.	Coal	67.8 MT	67.29	73.89	77.30
5	South Eastern Coalfields Ltd.	Coal	115.59 MT	98	103	96
6	Western Coalfields Ltd.	Coal	40.281 MT	107.02	96.33	111.18
7	Coal India Limited	Coal	7.50 MT	80.27	100.00	111.26

- Central Coalfields Limited produced 56.168 McuM of OC Coal and 1.088 MT of UG Coal during the year 2011-12 as compared to 59.284McuM and 1.274 MT during the previous year.
- Eastern Coalfields Limited produced 30.56 MT of Raw Coal during the year 2011-12 as compared to 30.80 MT in the previous year.
- The Neyveli Lignite Corporation Ltd. produced 245.90LT of lignite during 2011-12 as compared to 231.44 LT during the previous year.
- Northern Coalfields Limited produced 66.4 MT of Coal during the year 2011-12as compared to 66.25 MT in the previous year.
- South Eastern Coalfields Limited produced 113.837 MT of Coal during the year 2011-12 as compared 112.706 MT during the previous year.
- Western Coalfields Limited produced 43.110 MT of Coal during the year 2011-12 as compared to 43.654 MT during the previous year.
- The Coal India Limited produced 6.02 MT of Coal in 2011-12 as compared to 11.01 MT in 2010-11.

4.1.4 Electricity

The information in respect of five CPSEs for the last 3 years is given in the Table below : —

Table 4.1.4

Sl. No.	CPSE	Product	Installed Capacity (2011-12)	Capacity Utilization (%)		
				2011-12	2010-11	2009-10
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	NTPC Limited	Electricity	32650 MU	85.00	88.29	90.81
2	NHDC Limited	Electrical Energy	1520 MW	93.99	92.40	94.66
3	Neyveli Lignite Corporation Ltd.	Power Gross				
		(MU)	2740 MW	82.84	80.75	80.94
4	North Eastern Electric Power Corpn. Ltd	Electricity	1130 MW	87.14	91.97	82.15
5	Nuclear Power Corporation of India	Electrical Power	4680 MW	79	71	61
6	NHPC Limited	Electricity	3749.2 MW	83.3	85.3	84.1

(MU - Million Units; MW - Million Watts; MVA - Million Volts per annum)

- NTPC Limited generated 222068Million Units of Electricity during 2011-12 as against 220537 Million Units during the previous year.
- NHDC Limited generated 4663.68Million Units of Electrical Energy during 2011-12 as against 3196.65 Million Units during the previous year.
- Neyveli Lignite Corporation produced 18789 Million Units of power during 2011-12 as compared to 17881 Million Units during the previous year.
- North Eastern Electric Power Corporation Ltd. generated 4825 Million Units of Electricity during 2011-12 as compared to 5093 Million Units in the previous year.
- Nuclear Power Corporation of India Ltd. generated 32455 Million Units of Electrical Power during 2011-12 as compared to 26473 Million Units in the previous year.
- NHPC Limited generated 18683 Million Units of Electricity during 2011-12 as compared to 18606 Million Units in the previous year.

4.1.5 Petroleum

The information in respect of six CPSEs for the last 3 years is given in the Table below : —

Table: 4.1.5

Sl. No.	CPSE	Product	Installed Capacity (2011-12)	Capacity Utilization (%)		
				2011-12	2010-11	2009-10
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Bharat Petroleum Corporation Ltd.	Crude	21.5 MMT	106.6	101.3	94.9
2	Chennai Petroleum Corporation Ltd.	Crude	11.5 MMT	91.8	93.5	95.8
3	Indian Oil Corporation Ltd.	Crude Oil	54200 TMT	102.6	102.0	102.0
4	GAIL (India) Limited	LPG	1112373 MT	101.08	96.01	98.89
		Pentane	82450 MT	31.47	41.87	71.01
		Naptha/SBPS	128061 MT	114.10	100.36	92.54
		Polymers	410000 MT	108.78	102.53	101.56
5	Hindustan Petroleum Corporation Ltd.	Crude	14800 TMT	109	100	113
6	Mangalore Refinery Petrochemicals Limited	Crude	11850000 MT	108	107	106

(TMT - Thousand Metric Tonne; MMT - Million Metric Tonne; MT - Metric Tonne)

- Bharat Petroleum Corporation Ltd. produced 22.9 MMT of Crude Processed during the year 2011-12 as compared to 21.8 MMT during the previous year.

- Chennai Petroleum Corporation Ltd. achieved 10.56 MMTPA of Crude through put during 2011-12 as against 10.75 MMTPA in the previous year.

- The combined throughput by the seven refineries of the Indian Oil Corporation Ltd. during the year 2011-12 was 55621.9 TMT as against the previous year's throughput of 52963.8 TMT.

- The GAIL (India) Ltd. produced 10.49 lakh MT of LPG during 2011-12 as against a production of 10.68 lakh MT during the previous year. It also produced 446000 MT polymers as compared to 420358 MT in previous year.

- During 2011-12, Hindustan Petroleum Corporation Ltd. achieved 16.19 MMT throughput as against 14.75 MMT in the previous year.

- MRPL has processed128.2 lakh MT of crude in 2011-12 as compared to 126.4 lakh MT in 2010-11.

4.1.6 Fertilizers

The capacity utilization by the five CPSEs during the last 3 years is given in the Table below:—

Table 4.1.6

Sl. No.	CPSE	Product	Installed Capacity (2011-12)	Capacity Utilization (%)		
				2011-12	2010-11	2009-10
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Brahmaputra Valley Fertilizer	Urea-Namrup II	240000 MT	42.61	35.89	32.98
	Corporation Ltd.					
		Urea-Namrup III	270000 MT	65.42	73.71	85.34
2	Madras Fertilizers Ltd.	Ammonia	346500 MT	81.7	80.9	74.5
		Urea	486750 MT	100.0	98.4	89.6
		NPK	840000 MT	4.3	-	-
3	National Fertilizers Ltd.	Urea	3230700MT	105.3	104.6	102.3
4	Rashtriya Chemicals and Fertilizers Ltd.	Thal - Urea	1706800 MT	104	104	105
		Thal - Ammonia	990000 MT	113	115	114
		Trombay - Urea	330000 MT	102	103	93
		Trombay- Suphala	420000 MT	109	106	117
		Trombay - Ammonia-V	297000 MT	95	108	111
5	Fertilizers & Chemicals Travancore Ltd.	Ammonium Sulphate	225000 MT	72.7	89.0	79.8
		Caprolactum	50000 MT	75.7	88.7	84.0
6	- Udyogamanadal complex	NP 20:20	148500 MT	113.3	110.8	118.9
7	- Cochin Division	NP 20:20	485000 MT	92.6	98.9	119.0

(MT - Metric Tonne)

- The Brahmaputra Valley Fertilizer Corporation Ltd. produced 2.79 lakh MT of urea during 2011-12 as against the production of 2.85lakh MT during the previous year.

- The Madras Fertilizers Ltd. produced 2.83lakh MT ammonia, 4.87 lakh MT urea during 2011-12. The corresponding production figures for the previous year were 2.80 lakh MT ammonia, 4.79 lakh MT urea.

- The National Fertilizers Ltd. produced 34.01 lakh MT of urea during 2011-12 as against the production of 33.80lakh MT during the previous year.

- The Rashtriya Chemicals and Fertilizers Ltd. produced 17.73 lakh MT Urea, 11.21lakh MT Ammonia and 4.58 lakh tonne Suphaladuring the year 2011-12 as against 17.83 lakh MT Urea,11.35 lakh MT Ammonia and 4.47 lakh tonne Suphala during the previous year.

4.1.7 Chemicals and Pharmaceuticals

The details of capacity utilization in respect of six CPSE sare given below:—

Table 4.1.7

Sl. No.	CPSE	Product	Installed Capacity (2011-12)	Capacity Utilization (%)		
				2011-12	2010-11	2009-10
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Hindustan Antibiotics Ltd.	Vials	450 lakh	31.39	27.98	68.32
		Tablets	2400 lakh	40.74	48.28	94.05
		Capsules	2500 lakh	9.96	8.10	37.66
		I.V. Fluids	120 lakh	69.39	70.15	80.40
		Agrochem	72 lakh	69.79	80.42	126.23
2	Hindustan Fluorocarbons Ltd.	CFM-22	1265 MT	100	100	74
		TFE	575 MT	88	78	54
3	Hindustan Insecticides Ltd.	DDT Form.	12688 MT	51	46	53
		Mancozeb	1000 MT	72	69	80
		Malathion Technical	1800 MT	36	30	26
		Butachlor Technical	500 MT	6	19	48
		Monocrotphos Formulation	300 MT	108	109	95
4	Hindustan Organic Chemicals Ltd.	Phenol	40000 MT	75	107	92
		Hydrogen Peroxide	10450 MT	93	103	94
		Formaldehyde	33000 MT	86	97	99
		Aniline	191000 MT	19	10	29
		Nitrobenzene	27000 MT	45	30	41
5	Karnataka Antibiotics & Pharmaceuticals Ltd.	Dry Powder Vials	618 Nos.	95	100	74
		Liquid Parenterals	396 Nos.	146	145	123
		Tablets	3600 Nos.	203	178	192
		Capsules	450 Nos.	182	205	177
6	Indian Drugs & Pharmaceuticals Ltd.	Tablets	2961Million Nos.	32.2	28.5	23.0
		Capsules	590Million Nos.	16.8	16.1	29.0
		Liquid Orals	396 Kilo liters	43.9	42.0	38.0
		Dry Syrup	36 Lakh bottles	52.3	22.0	39.0

(KL - Kilo Liters; TPA - Tonne Per Annum; MT - Metric Tonne)

- The Hindustan Antibiotics Ltd. produced 978 lakh tablets, 249 lakh capsules and 83.27 lakh I.V. fluids during 2011-12. The comparative figures for the previous year were 1159 lakhs, 203 lakhs and 84.18 lakhs respectively.
- Hindustan Fluorocarbons Ltd. produced 1265 MT CFM-22 and 441 MT TFE during 2011-12 as against the production of 1265 MT and 389 MT respectively during the previous year.
- Hindustan Insecticides Ltd. produced 6427 MT of DDT Formulation, 716 MT of Mancozeb, 644 MT of Malathion Technical, 31 MT of Butachlor Technical and 324 MT of Monocrotphos during the year 2011-12. The comparative figures during the previous year were 5875 MT, 691 MT, 536 MT, 95 MT and 328 MT, respectively.
- Hindustan Organic Chemicals Ltd. produced 28284 MT Formaldehyde, 30034 MT Phenol, 9749 MT Hydrogen Peroxide, 3681 MT Aniline and 12029 MT Nitrobenzene during the year 2011-12 as compared to 31917 MT formaldehyde, 42933 MT Phenol, 10745 MT Hydrogen Peroxide, 1833 MT Aniline and 8093 MT Nitrobenzene during the previous year.
- Karnataka Antibiotics & Pharmaceuticals Ltd. produced 587 lakh dry power vials, 577 lakh liquid parenteral, 7307 lakh tablets and1638 lakh capsules during 2011-12. The comparative figures for the previous year were 615 lakh, 574 lakh, 6405 lakh and 924 lakh respectively Installed capacity for Capsules was increased in the year 2011-12 from 450 lakhs to 900 lakhs.
- Indian Drugs & Pharmaceuticals Ltd. produced 953.35 Million tablets, 99.3 Million capsules, 174.11 Kilo liters of liquid orals and 18.81 lakh bottles of Dry Syrup during 2011-12. The comparative figures for the previous year were 843.93 Million, 94.72 Million, 167.1 Kilo liters and 8.02 lakh bottles respectively.

4.1.8 Heavy Engineering

The information in respect of seven CPSEs for last 3 years is tabulated below:—

Table 4.1.8

Sl. No.	CPSE	Product	Installed Capacity (2011-12)	Capacity Utilization (%)		
				2011-12	2010-11	2009-10
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Bharat Heavy Electricals Limited	Turbine	15000 MW	116	107	106
		Generator	15000 MW	86	76	98
		Boilers, Valves & Boilers Aux.	691037 MT	146	129	190
		Power Transformers	45000 MVA	73	58	94
		Traction Machines	3200 Nos.	78	73	74
		Electrical Machines	2250 Nos.	84	76	112
2	Bharat Heavy Plate & Vessels Ltd.	Process plants, Industrial Boilers, etc.	23210 MT	35.70	53.06	21.97
3	Bharat Wagon &Engg. Co. Ltd.	Wagons	880 VUs	26	22	29
4	Braithwaite & Co. Ltd.	Wagon	1200 VU	100.7	88.3	83.4
		Bogie	1800 Nos.	45.6	32.8	59.7
		Structural	3000 MT	399.3	143.7	5.1
6	Burn Standard Co. Ltd.	Wagon	2100 Nos.	54.7	50.1	38.6
		Bogie	2400 Nos.	72.9	47.5	38.4
		Coupler	2400 Nos.	3.8	1.7	5.8
		Steel Castings	6000 MT	50.5	45.8	43.9
7	Heavy Engineering Corporation Ltd.	5 cum Rope shovel	6120 tons	20.30	26.03	60.92
		24/96 Dragline	2000 tons	38.71	82.50	0.00
		EOT Cranes	3400 tons	117.12	99.97	95.04
		Machine tools & Accessories	3200 tons	17.54	12.98	11.66
		Steel & Mining spares	1360	107.21	75.81	101.71
		Forging & Forged Rolls	9600 tons	22.85	23.03	23.82
		Steel castings	29088 tons	11.60	15.05	15.04
8	Tungabhadra Steel Products Ltd.	Hydro Mech. equipments & structural	8213 MT	1.58	3.61	1.72
		Hydel Power generation	50.09 Lakh Units	100.50	75.79	98.71

(MT - Metric Tonne; MW - Million Watt; MVA - Million Volts per annum; VUs -)

- Bharat Heavy Electricals Ltd. produced 17417 MW of turbine, 12939MW of generator and 10.1 Lakh MT of boilers, valves & boiler auxiliaries during 2011-12 as compared to 16059 MW turbine,11458 MW generator and 8.9 Lakh MT boilers, valves & boiler auxiliaries during the previous year.
- Bharat Heavy Plate & Vessels Ltd. produced 8285 MT of Process Plants, Industrial Boilers, etc. during 2011-12 as compared to 12316 MT during the previous year.
- Bharat Wagon & Engineering Company Ltd. produced 228 VUs of Railway Wagons during the year 2011-12 as compared to 197 VUs during the previous year.
- Braithwaite & Co. Ltd. produced 1208 VUs Wagons; 820 Bogies; 11979 MT structural during the year 2011-12. The corresponding figures during the previous year were 1059 VUs, 590 Nos. and 4311 MT respectively.
- Burn Standard Co. Ltd. produced 1149 Wagons; 1750 Bogies; 91 Couplers and 3029 MT Steel Castings during the year 2011-12. The corresponding figures during the previous year were 1053 VUs, 1140 Nos., 40 Nos. and 2745 MT respectively.
- Heavy Engineering Corporation Ltd. produced 1242.30 tons of 5 Cum Rope Shovel, 774.10 tons of 24/96 Dragline, 3982.11 tons of EOT Cranes, 561.20 tons of Machine Tools & Accessories, 1458.10 tons of Steel & Mining Spares, 2193.3 tons of Forging & Forged Rolls and 3373.70 tons of Steel Castings during the year 2011-12. The corresponding figures during the previous year were 1592.90 tons 5 Cum Rope Shovel, 1650 tons 24/96 Dragline, 3398.90 tons EOT Cranes, 415.20 tons Machine Tools & Accessories, 1031 tons Steel & Mining Spares, 2211 tons Forging & Forged Rolls and 4379 tons Steel Castings.
- Tungabhadra Steel Products Ltd. produced 130 MT hydro mechanical equipment & structural and 51.154 lakh units of hydel power during the year 2011-12 as compared to 297 MT and 38.58 lakh units in the previous year.

4.1.9 Medium and Light Engineering

The details of capacity utilization in respect of seven CPSEs for the last 3 yearsare given in the Table below: —

Table 4.1.9

Sl. No.	CPSE	Product	Installed Capacity (2011-12)	Capacity Utilization (%)		
				2011-12	2010-11	2009-10
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Andrew Yule & Co. Ltd.	Black Tea	112 lakh Kgs.	94.26	96.85	94.22
		Transformers	500000 KVA	176.76	112.72	64.40
		Regulators/ Rectifiers	235000 KVA	29.54	32.42	29.91
2	Central Electronics Limited	Solar PV Modules	10000 KW	30	32	20
		Axle counters	1000 Nos.	30	62	176
		Phase shifters	20000 Nos.	95	70	54
3	Electronics Corporation of India Ltd.	Electronic Fuzes	4 lakh Nos.	4	0	87
		Energy Meters	10 lakh Nos.	6	33	30
		Hybrid Micro Circuits	10 lakh Nos.	7	15	19
		Electronic Voting Machines	2 lakh Nos.	44	6	25
		M7 Radios	150 systems	151	109	33
4	HMT Machine Tools Ltd.	Machine tools & Printing	1181 Nos.	57	55	54
5	ITI Limited	GPoN				
		ONTs	60 K Nos.	18.32	96.5	-
		GSM - Infra BTS	6 ML (6000 BTS)	-	37.7	87.6
		SMPS Modules	2400 Nos.	7.1	16.7	13.8
		NPR Smart Cards	25 M. Nos.	14	-	-
6	Rajasthan Electronics & Instruments Ltd.	Electronic Milk Analyser	4500 Nos.	140.42	140.58	189.29
		SPV Modules	5000 Kwp	100.00	142.75	111.15
		Wind Power	20 lakh Kwh	69.22	58.56	77.33
7	Vignyan Industries Ltd.	Steel Castings	10000 MT	40.85	41.20	42.54

(KL - Kilo Liters; KW - Kilo Watt; MT - Metric Tonne)

- The Tea Division of Andrew Yule and Co. Ltd. produced 105.57 lakh Kg of tea during the year with a capacity utilization of 94.26 % as against a production and capacity utilization of 108.47 lakh Kg and 96.85 % during the previous year. It produced 8,83,810KVA transformers and 69,428 KVA regulators in 2011-12 as compared to 5,63,950 KVA transformers and 76,193 KVA regulators in 2010-11.

- Central Electronics Ltd. produced 3018 KW Solar PV modules, 301 axle counters and 19078 phase shifters during the year 2011-12. The corresponding production during the previous year were 3196 KW, 622 axle counters and 14000 phase shifters, respectively.

- Electronics Corporation of India Ltd. produced 17,701 electronic fuzes; 60,000 energy meters; 66,194 hybrid micro circuits and 88,050 electronic voting machines in 2011-12. The corresponding production in the previous year was 972, 3.25 lakh, 1.52 lakh and 12,250 respectively.

- HMT Machine Tools Ltd. produced 675 machine tools and printing machines in 2011-12 as compared to 652 in the previous year.

- ITI Limited produced 10,992 GPoN ONTs; no orders for GSM project and SDH products, 170 Nos. SMPS Modules and 3.5 million Nos. of NPR Smart Card during 2011-12. The corresponding figures during the previous year was 57,920 GPoN ONTs, 2371 BTS for GSM project, 3561 SDH products, 400 SMPS modules and no orders for NPR Smart Cards.

- Rajasthan Electronics & Instruments Ltd. produced 6319 Electronic Milk Analysers; 4825Kwp Solar PV modules and 13.84 lakh Kwh Wind Power during the year 2011-12 as compared to 6326 electronic milk analysers; 2855 Kwp SPV and 11.71 lakh Kwh Wind Power during the previous year.

- Vignyan Industries Ltd. has produced 4085 MT of Steel Castings during 2011-12 against 4120 MT in the previous year.

4.1.10 TRANSPORTATION EQUIPMENT

The position of capacity utilization in respect of seven CPSEs for the last 3 years is given in the Table below:—

Table 4.1.10

Sl. No.	CPSE	Product	Installed Capacity (2011-12)	Capacity Utilization (%)		
				2011-12	2010-11	2009-10
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	BEML Ltd.	Mining & Construction, Railway & Metro and Defence products	69.78 lakh SMH	118	114	114
2	Garden Reach Shipbuilders & Engineers Ltd.	Ship Building	3230 Ton	71	60	74
		General Engg.	2500 Ton	17	21	23
		Deck	35 Nos.	66	63	71
		Machinery	40 Set	10	5	5
		Diesel Engine	36 Nos.	25	39	36
3	Goa Shipyard Ltd.	Shipbuilding	5.85 SSU	79.24	109.61	102.24
4	Hindustan Aeronautics Ltd.	Standard Man Hours	282.31 Lakh SMH	118	112	106
5	Hindustan Shipyard Ltd.	Shipbuilding	75250 DWT	75	82	90
6	Mazagon Dock Ltd.	Shipbuilding & Submarine	0.97 EFU	105.36	108.81	96.38
7	Scooters India Ltd.	3-Wheelers	16500 Nos.	106.13	87.16	73.81

(SSU - Standard Ship Unit;DWT - Dead Weight Tonnage; EFU - Effective Frigate Unit; SMH - Standard Man Hours)

- BEML Limited made combined achievement in Mining & Construction, Railway & Metro and Defence products of 82.15 lakh hours during 2011-12 as compared to 81.54 lakh hours in the previous year.
- Garden Reach Shipbuilders & Engineers Ltd. Produced 5117 MT of Ship building (fabrication) and 3456 MT of general engineering (fabrication) during the year 2011-12 as compared to 5419 MT and 3148 MT respectively in the previous year. It has produced 38 pumps and 9 diesel engines during the year as compared to 49 pumps and 14 diesel engines in the previous year.
- The Goa Shipyard Limited produced 6.41 standard ship units in 2011-12 as compared to 4.64 Standard ship units in the previous year.
- Since the product-wise information in Hindustan Aeronautics Limited is of classified nature, the annual production is represented in terms of Standard Man Hours (SMH) in lakhs. The production during 2011-12 was 333.10 lakhs as compared to 323.28 lakhs in the previous year.
- Hindustan Shipyard Ltd. built 56,437DWT of ships during the year 2011-12 as compared to 61,853DWT in the previous year.
- The Scooters India Ltd. produced 17512 three-wheeler scooters during 2011-12 as against 14381 in the previous year.

4.1.11 CONSUMER GOODS

The information relating to capacity utilization in respect of five CPSEs for the last 3 years is given in the Table below:—

Table 4.1.11

Sl. No.	CPSE	Product	Installed Capacity (2011-12)	Capacity Utilization (%)		
				2011-12	2010-11	2009-10
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Artificial Limbs Manufacturing Corporation of India	Mech. Hand	6300 Nos.	68.60	69.49	58.43
		Axilla Crutch	62400 Nos.	40.34	42.95	98.27
		Wheel Chair	30000 Nos.	112.7	73.07	87.09
		Tricycle	78000 Nos.	65.21	46.85	77.24
		Hearing Aid	36000 Nos.	93.7	104.38	92.80
2	HLL Lifecare Ltd. (formerly, Hindustan Latex Ltd.)	Condoms	1344M.Pcs	100	101	100
		Blood Bags	11.5M.Pcs	38	56	85
		Copper T	5.50 M.Pcs	74	82	74
		Steroidal OCPs	98.66 M. Pcs	56	59	58
		Pregnancy Test Card	26 M. Pcs.	72	91	97
3	Hindustan Salts Ltd.	Liquid Bromine	900 TPA	23.4	16.8	35.4
4	Security Printing and Minting Corpn. of India Ltd.	Coins	3840 M.Pcs	164	158	152
5	Bank Notes	3950 M.Pcs	166	139	180	
6	Tyre Corporation of India Ltd.	Automotive Tyres	23,310 MT	5	44	9

(M.Pcs - Million Pieces; MT - Metric Tonne; TPA - Tonne Per Annum)

- Artificial Limbs Manufacturing Corporation of India produced 4322 Nos. Mechanical Hands, 25171 Nos. Axilla Crutch, 33813 Nos.Wheel Chairs, 50867 nos.Tricycles and 33732 Nos. Hearing Aids in 2011-12. The corresponding figures for the previous year were 4378, 26800, 21921, 36540 and 26305 respectively.
- HLL Lifecare Ltd. (formerly Hindustan Latex Ltd.) produced 1349 million pieces of condoms during the year 2011-12 as compared to 1328 million pieces in the previous year.
- Security Printing and Minting Corporation of India Ltd. produced 6282.40 Million pieces of Coins and 6541.41 Million pieces of Bank Notes during the year 2011-12 as compared to 6070.15 Million pieces of Coins and 5472 Million pieces of Bank Notes during the previous year.
- Tyre Corporation of India Ltd. is doing 100% Jobbing work. Production is based on availability of jobbing work. Production of own brand tyres discontinued from 1.4.2002. Due to increase of Plant capacity by the jobbers and change in the market demand pattern for BIAS tyres, there is no outsourcing of tyres by major tyre manufacturers. Thus TCIL have no scope to increase capacity utilization.

4.1.12 CRUDE OIL

Information relating to production in respect of two CPSEs for the last 3 years is given in the Table below:—

Table 4.1.12

Sl. No.	CPSE	Product	Installed Capacity (2011-12)	Capacity Utilization (%)		
				2011-12	2010-11	2009-10
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	Oil and Natural Gas Corporation Ltd.	Crude Oil	MMT	26.93	27.28	26.46
		Natural Gas	BCM	25.51	25.32	25.59
2	Oil India Ltd.	Crude Oil	MMT	3.842	3.580	4.061
		Natural Gas	MSCM	2472	2178	2233
		LPG	MT	51978	45004	44945

(MMT - Million Metric Tonne; BCM - Billion Cubic Metre; KL - Kilo Litre; MSCM - Million Standard Cubic Metre; MT - Metric Tonne)

4.2 INVENTORY MANAGEMENT

Materials management plays a significant role in improving the operational efficiency and profitability of an enterprise. It helps in achieving higher return on investment by minimizing locked up working capital and also in improving the cash flow and liquidity position. Materials management, therefore, requires to be given adequate importance in the present context where the thrust is on performance improvement. An attempt has been made in the paragraphs below to present an overview of inventory position in CPSEs during the various years, cognate group-wise and company-wise.

4.2.1 Overall Analysis

The materials management in public enterprises has improved over the years. The inventory level, which was 72 days cost of production/turnover as on 31.3.1997 has declined to 50 days cost of production/turnover as on 31.3.2012.

The overall position vis-a-vis inventory management, during the last 16 years, is shown in the Table 4.2.1 below:—

Table 4.2.1

Year ending	Value of Inventory (₹ in crore)	Cost of Production/ Turnover (₹ in crore)	Level of Inventory (in No. of days Cost of Production/ Turnover)
31.3.1997	40815	206658	72
31.3.1998	41661	218940	69
31.3.1999	44404	278720	58
31.3.2000	52414	354446	54
31.3.2001	50717	425100	44
31.3.2002	52175	431362	44
31.3.2003	58282	466444	46
31.3.2004	59705	513334	42
31.3.2005	73642	626427	43
31.3.2006	90885	714841	46
31.3.2007	101527	836922	44
31.3.2008	128688	958346	49
31.3.2009	126327	1147734	40
31.3.2010	161798	1087601	54
31.3.2011	191754	1293759	54
31.3.2012	220362	1605205	50

The above figures do not include inventory held by the Food Corporation of India, the Cotton Corporation of India Ltd. and the Jute Corporation of India Ltd. as these Corporations make large scale purchases and maintain stocks. Further, CPSEs operating in Industrial Development and Technical Consultancy Services, Tourist Services, Financial Services as well as Section 25 Companies have been also excluded from the review herein.

4.2.2 Cognate Group-Wise Analysis

Table 4.2.2 provides an analysis of inventory management in CPSEs, cognate groupwise during 2010-11 and 2011-12.

Table 4.2.2

Cognate Group	Inventory as on 31.3.2012		Inventory as on 31.3.2011	
	Value (₹ in crore) 2011-12	Level of Inventory (in No. of days Cost of Production/ Turnover)	Value (₹ in crore)	Level of Inventory (in No. of days Cost of Production/ Turnover)
(a) Agriculture Sector				
1. Agro-based Industries	263.26	94	154.23	60
Total	**263.26**	**94**	**154.23**	**60**
(b) Electricity Sector				
1. Electricity Generation	4898.66	20	4708.98	23
2. Electricity Transmission	440.31	16	381.51	16
Total	**5338.97**	**20**	**5090.49**	**22**
(c) Manufacturing Sector				
1. Chemicals & Pharmaceuticals	306.79	72	315.58	76
2. Consumer Goods	1568.29	107	1389.85	104
3. Fertilizers	2599.89	51	1765.94	42
4. Heavy Engineering	13874.23	126	11190.97	115
5. Medium & Light Engineering	4276.07	118	3718.46	101
6. Petroleum (Refinery & Mktg.)	109849.51	39	92982.43	43
7. Steel	17614.30	117	14955.51	115
8. Textiles	285.40	91	278.36	90
9. Transportation Equipment	36725.56	616	34722.23	647
Total	**187100.04**	**58**	**161319.33**	**64**
(d) Mining Sector				
1. Coal	6064.51	45	5578.84	53
2. Crude Oil	5887.40	37	4777.24	34
3. Other Minerals & Metals	2478.64	72	2321.59	71
Total	**14430.55**	**44**	**12677.67**	**45**
(e) Services Sector				
1. Contract & Construction Services	8686.92	228	7215.91	208
2. Telecommunication Services	679.84	8	639.72	8
3. Trading & Marketing Services	2409.23	07	3503.92	11
4. Transport Services	1453.33	17	1152.38	14
Total	**13229.32**	**24**	**12511.93**	**25**

The level of inventory in the 'electricity' cognate group of CPSEs which was 22 days cost of production/turnover as on 31.3.2011 has come down to 20 days cost of production/turnover as on 31.3.2012. In manufacturing group, there was a decrease in the level of inventory from 64 days as on 31.3.2011 to 50 days cost of production/turnover as on 31.3.2012. In case of 'mining' group the level of inventory in terms of number of days cost of production/ turnover which was 45 days as on 31.3.2011 has slightly come down to 44 days cost of production/turnover as on 31.3.2012. However, in the case of 'services' group, the level of inventory, which was 25 days cost of production/turnover as on 31.3.2011 has come down further to 24 days cost of production/turnover as on 31.3.2012. In Agriculture Sector, the level of inventory in terms of number of days cost of production/turnover has gone up from 60 days as on 31.3.2011 to 94 days as on 31.3.2012.

There was reduction in the level of inventory, in terms of number of days cost of production/turnover in CPSEs engaged in sectors such as Electricity Generation, Chemicals & Pharmaceuticals, Petroleum (Refinery & Marketing), Transport Equipment, Coal and Trading & Marketing Services. The level of inventory has gone up in sectors like Agro based Industries, Consumer Goods, Fertilizers, Heavy Engineering, Medium & Light Engineering, Steel, Textiles, Crude Oil, Other Minerals & Metals, Contract & Constructions Services and Transport Services. Level of inventory remained unchanged in the case of Telecommunication Services. Overall the level of inventory which was 54 days cost of production/turnover during 2010-11 has come down to 50 days cost of production/turnover during 2011-12.

4.2.3 Heavy Engineering

The value of inventory held by the 10 CPSEs belonging to this group except one holding company viz. BYNL which does not have any inventory holding, stood at ₹ 13874.23 crore representing 126 days cost of production as on 31.3.2012 as against a total inventory valued at ₹ 11190.97 crore representing 115 days cost of production as on 31.3.2011. The value of inventory held by individual enterprises together with the level of inventory, in terms of number of days cost of production turnover for the last two years is given in Table 4.2.3 below:—

Table 4.2.3

Sl. No.	Name of the Company	Inventory(Rs. in crore)		Level of Inventory in No. of days (cost of Production)	
		2010-11	2011-12	2010-11	2011-12
1.	Bhart Bhari Udyog Nigam Ltd.	0.92	0.00	26	0
2.	Bharat Heavy Electricals Ltd.	10852.05	13444.50	116	126
3.	Bharat Heavy Plate & Vessels Ltd.	49.55	63.31	140	170
4.	Bharat Wagon & Engg. Co. Ltd.	9.19	8.65	71	64
5.	BHEL Electricals Machines Ltd.	0.00	4.03	0	44
6.	Braithwaite & Co. Ltd.	19.64	36.85	45	55
7.	Burn Standard Company Ltd.	20.43	38.47	46	85
8.	Heavy Engineering Corpn. Ltd.	234.55	273.75	134	142
9.	Triveni Structurals Ltd.	4.07	3.72	156	223
10.	Tungabhadra Steel Products Ltd.	0.57	0.95	33	61
	Total	**11190.97**	**13874.23**	**115**	**126**

Of the nine (9) CPSEs, one could reduce the level of inventory during 2011-12 as compared to the previous year while in the case of seven (7) companies there has been increase in the level of inventory. BHEL Electricals Machines Ltd. had inventory for the first time during 2011-12.

4.2.4 Medium & Light Engineering

The value of inventory held by 22 enterprises of this group as on 31.3.2012 stood at ₹ 4276.07 crore representing 118 days cost of production as compared to ₹ 3718.46 crore representing 101 days cost of production held by them as on 31.3.2011. The company-wise inventory position for the last two years is depicted in the Table 4.2.4 below:—

Table 4.2.4

Sl. No.	Name of the Company	Inventory (₹ in crore)		Level of Inventory in No. of days (Cost of Production)	
		2010-11	2011-12	2010-11	2011-12
1.	Andrew Yule & Co. Ltd.	37.12	33.96	59	45
2.	Balmer Lawrie & Co. Ltd.	119.32	123.35	23	21
3.	Bharat Dynamics Ltd.	502.19	602.57	183	205
4.	Bharat Electronics Ltd.	2350.13	2673.8	183	185
5.	BEL Optronics Ltd.	5.48	44.58	44	266
6.	Bharat Pumps & Compressors Ltd.	51.76	54.85	102	135
7.	Biecco Lawrie Ltd.	12.14	14.39	56	89
8.	Central Electronics Ltd.	48.50	49.05	123	108
9.	Electronics Corpn. of India Ltd.	156.61	198.40	46	53
10.	Hindustan Cables Ltd.	42.57	42.49	82	97
11.	HMT Bearings Ltd.	3.24	3.72	75	79
12.	HMT Chinar Watches Ltd.	6.80	7.33	288	616
13.	HMT Ltd.	28.36	56.14	41	103
14.	HMT Machine Tools Ltd.	78.16	85.22	99	114
15.	HMT Watches Ltd.	32.74	34.41	154	210
16.	ITI Ltd.	117.89	112.62	17	33

		2010-11	2011-12	2010-11	2011-12
17.	IDPL (Tamilnadu) Ltd.	1.15	3.44	46	161
18.	Instrumentation Ltd.	61.18	68.77	82	104
19.	Rajasthan Electronics & Instruments Ltd.	16.07	11.06	46	20
20.	Richardson & Cruddas (1972) Ltd.	2.56	2.50	12	13
21.	Scooters India Limited	35.54	38.39	77	66
22.	Vignyan Industries Ltd.	8.95	15.03	103	161
	Total	**3718.46**	**4276.07**	**101**	**118**

Of the 22 public enterprises, 5 could reduce the level of inventory during 2011-12 as compared to the previous year while in the case of 17 companies there has been increase in the level of inventory.

4.2.5 Other Minerals & Metals

There were 12 companies operating in this group. The value of inventory held by these companies during the year 2011-12 was ₹ 2478.64 crore representing 72 days cost of production. At the end of 2010-11, the value of inventory was ₹ 2321.59 crore representing 71 days cost of production. The company-wise details are presented in the Table 4.2.5 below:—

Table 4.2.5

Sl. No.	Name of the Company	Inventory (₹ in crore)		Level of Inventory in No. of days (Cost of Production)	
		2010-11	2011-12	2010-11	2011-12
1.	Bisra Stone Lime Company Ltd.	7.08	7.84	40	74
2.	FCI Aravali Gypsum & Minerals (I) Ltd.	1.66	4.64	13	36
3.	Hindustan Copper Ltd.	322.67	320.65	133	107
4.	Indian Rare Earths Ltd.	45.73	68.22	44	64
5.	J&K Mineral Dev. Corpn. Ltd.	0.00	0.00	0	0
6.	Kudremukh Iron Ore Co. Ltd.	235.85	220.46	51	56
7.	Manganese Ore (India) Ltd.	97.43	81.29	88	60
8.	National Aluminium Co. Ltd.	1071.00	1212.70	80	75
9.	National Mineral Dev. Corpn. Ltd.	415.43	458.92	53	67
10.	Eastern Investment Ltd.	0.00	0.00	0	0
11.	Orissa Mineral Development Co. Ltd.	27.77	26.64	124	184
12	Uranium Corporation of India Ltd.	96.97	77.28	60	47
	Total	**2321.59**	**2478.64**	**71**	**72**

Of the 12 public enterprises, 4 could reduce the level of inventory during 2011-12 as compared to the previous year while in case of 6 companies there has been increase in the level of inventory. It remained unchanged in the case of 2 companies.

4.2.6 Fertilizers

There were seven (7) CPSEs engaged in the production of fertilizers. The value of inventory held by them as on 31.3.2012 was ₹ 2599.89 crore representing 51 days cost of production as compared to an inventory value of ₹ 1765.94 crore representing 42 days cost of production at the end of previous year. Company-wise analysis of inventory is given in Table 4.2.6 below:—

Table 4.2.6

Sl. No.	Name of the Company	Inventory (₹ in crore)		Level of Inventory in No. of days (Cost of Production)	
		2010-11	2011-12	2010-11	2011-12
1.	Brahmaputra Valley Fertilizer Corpn.	36.52	37.19	31	28
2.	Fertilizers & Chem. (Travancore) Ltd.	613.75	759.63	93	101
3.	Fertilizer Corpn. of India Ltd.	15.56	15.56	467	474
4.	Hindustan Fertilizer Corpn. Ltd.	0.00	0.00	0	0
5.	Madras Fertilizers Ltd.	202.22	302.94	48	54
6.	National Fertilizers Ltd.	363.14	516.82	24	27
7.	Rashtriya Chemicals & Fertilizers Ltd.	534.75	967.75	37	57
	Total	**1765.94**	**2599.89**	**42**	**51**

The level of inventory has decreased in one CPSE during 2011-12 and increased in case of 5 CPSEs. It remained unchanged in the case of one CPSE.

4.2.7 Chemicals & Pharmaceuticals

The value of inventory held by 11 enterprises belonging to this group as on 31.3.2012 was ₹ 306.79 crore representing 72 days cost of production as compared to ₹ 315.58 crore representing 76 days cost of production held by them as on 31.3.2011. The company wise inventory position for last two years is given in Table 4.2.6 below:—

Table 4.2.7

Sl. No.	Name of the Company	Inventory (₹ in crore)		Level of Inventory in no. of days (Cost of Production)	
		2010-11	2011-12	2010-11	2011-12
1.	Bengal Chem. & Pharmaceuticals Ltd.	25.64	18.96	132	92
2.	Bharat Immunologicals & Biologicals Ltd.	1.49	19.79	69	172
3.	Hindustan Antibiotics Ltd.	30.50	16.45	85	48
4.	Hindustan Flurocarbons Ltd.	20.80	6.14	246	37
5.	Hindustan Insecticides Ltd.	61.84	72.56	87	102
6.	Hindustan Organic Chemicals Ltd.	110.17	107.29	64	64
7.	Indian Drugs & Pharmaceuticals Ltd.	16.00	15.00	64	70
8.	Indian Medicines & Pharmaceuticals Corp. Ltd.	7.79	9.32	118	139
9.	Karnataka Antibiotics & Pharma. Ltd.	27.17	29.03	52	52
10.	Orissa Drugs & Chemicals Ltd.	2.97	3.30	194	117
11.	Rajasthan Drugs & Pharm. Ltd.	11.21	8.95	54	43
	Total	**315.58**	**306.79**	**76**	**72**

Of the 11 CPSES, five (5) could reduce the level of inventory during 2011-12 as compared to the previous year while in case of four (4) public enterprises there has been increase in the level of inventory. It remained unchanged in the case of two (2) CPSEs.

4.2.8 Steel

The value of inventory held by five (5) CPSEs was ₹ 14655.51 crore at the end of 2010-11 as compared to ₹ 17614.30 crore held by them at the end of 2011-12. The level of inventory has gone up from 115 days cost of production at the end of the previous year to 117 days cost of production at the end of 2011-12. The company-wise position is indicated in the Table 4.2.8 below:—

Table 4.2.8

Sl. No.	Name of the Company	Inventory (₹ in crore)		Level of Inventory in No. of days (Cost of Production)	
		2010-11	2011-12	2010-11	2011-12
1.	Ferro Scrap Nigam Ltd.	5.75	5.30	13	11
2.	Mishra Dhatu Nigam Ltd.	392.26	443.36	415	394
3.	Rashtriya Ispat Nigam Ltd.	3254.71	3403.11	121	101
4.	Steel Authority of India Ltd.	11302.79	13742.37	111	120
5.	SAIL Refractory Company Ltd.	0.00	20.16	0	245
	Total	**14955.51**	**17614.30**	**115**	**117**

The value of inventory has decreased in three (3) CPSEs during 2011-12 as compared to the previous year and increased in one CPSE. SAIL Refractory Company Ltd. held inventory for the first time in year 2011-12.

4.2.9 Transportation Equipment

Eight (8) CPSEs are engaged in the production of transportation equipment. The value of inventory held by these companies was ₹ 36725.56 crore during the year 2011-12 as against ₹ 34722.23 crore during 2010-11. The level, which was 647 days cost of production at the end of previous year, has come down to 616 days cost of production at the end of 2011-12. The company-wise details are given in the Table 4.2.9 below:—

Table 4.2.9

Sl. No.	Name of the Company	Inventory (₹ in crore)		Level of Inventory in No. of days (Cost of Production)	
		2010-11	2011-12	2010-11	2011-12
1.	Bharat Earth Movers Ltd.	1888.91	2420.64	265	334
2.	Cochin Shipyard Ltd.	234.76	362.54	70	109
3.	Garden Reach Shipbuilders & Engrs. Ltd.	2306.95	3317.07	853	1046
4.	Goa Shipyard Ltd.	299.93	355.97	145	224
5.	Hindustan Aeronautics Ltd.	17375.78	16085.83	504	438
6.	Hindustan Shipyard Ltd.	331.65	253.19	129	142
7.	Hooghly Dock & Port Engineers Ltd.	117.96	111.05	2272	970
8.	Mazagon Dock Ltd.	12166.29	13819.27	9165	2414
	Total	**34722.23**	**36725.56**	**647**	**616**

Of the eight (8) CPSEs, three (3) could reduce the level of inventory during 2011-12 as compared to the previous year. It increased in the case of five (5) public enterprises during the year 2011-12.

4.2.10 Consumer Goods

Fourteen (14) companies belonging to the consumer goods group held an inventory valued at ₹ 1568.29 crore representing 107 days cost of production during the year 2011-12 as against an inventory valued at ₹ 1389.85 crore held by them during the previous year representing 104 days cost of production. The company-wise position is given in Table 4.2.7 below:—

Table 4.2.10

Sl. No.	Name of the Company	Inventory (₹ in crore)		Level of Inventory in No. of days (Cost of Production)	
		2010-11	2011-12	2010-11	2011-12
1.	Artificial Limbs Mfg. Co. of India.	21.23	24.38	138	116
2.	Cement Corpn. of India Ltd.	130.03	159.66	160	169
3.	HLL Lifecare Ltd .	57.40	74.35	41	47
4.	Hindustan Newsprint Ltd.	69.09	72.04	82	79
5.	Hindustan Paper Corpn. Ltd.	117.71	218.24	57	92
6.	Hindustan Photo Films Manfg. Co. Ltd.	15.41	9.42	70	56
7.	Hindustan Salts Ltd.	0.70	0.63	16	19
8.	Hindustan Vegetable Oils Corpn. Ltd.	1.53	0.85	114	33
9.	Hooghly Printing Co. Ltd.	0.19	0.08	7	2
10.	Nagaland Pulp & Paper Mills Ltd.	0.20	0.09	5	3
11.	NEPA Ltd.	14.73	20.09	38	40
12.	Sambhar Salts Ltd.	4.38	6.19	134	131
13.	Security Printing & Minting Corpn. of India	955.55	979.84	132	128
14.	Tyre Corpn. of India Ltd.	1.70	2.43	15	27
	Total	**1389.85**	**1568.29**	**104**	**107**

The level of inventory has decreased in eight (8) CPSEs during 2011-12 and increased in six (6) public enterprises.

4.2.11 Petroleum (Refinery & Marketing)

There are eight (8) CPSEs operating in Petroleum (Refinery & Marketing) sector as on 31.3.2012. These companies had inventory valued at Rs. 109849.51 crore as on 31.3.2012 as compared to ₹ 92982.43 crore at the end of previous year. The level of inventory was 43 days cost of turnover as on 31.3.2011 as against 39 days cost of turnover as on 31.3.2012. The company-wise details of inventory are presented in the Table 4.2.11 below:—

Table 4.2.11

Sl. No.	Name of the Company	Inventory (₹ in crore)		Level of Inventory in No. of days (Cost of Production)	
		2010-11	2011-12	2010-11	2011-12
1.	Bharat Petroleum Copn. Ltd.	15375.08	15948.06	34	26
2.	Chennai Petroleum Corpn. Ltd.	5112.98	6359.72	49	51
3.	GAIL (India) Ltd.	855.11	1419.74	9	13
4.	GAIL Gas Ltd	2.89	5.16	35	6
5.	Hindustan Petroleum Corpn. Ltd.	16622.28	19454.53	43	38
6.	Indian Oil Corpn. Ltd.	49284.52	56829.20	51	45
7.	Mangalore Refinery & Petrochemicals Ltd.	4097.38	7817.58	34	50
8.	Numaligarh Refinery Ltd.	1632.19	2015.52	66	52
	Total	**92982.43**	**109849.51**	**43**	**39**

The value of inventory has increased in three (3) CPSEs during 2011-12 as compared to the previous year and decreased in five (5) CPSEs.

4.2.12 Crude Oil

There are five (5) CPSEs operating in Crude Oil sector as on 31.3.2012. These companies had inventory valued at ₹ 5887.40 crore as on 31.3.2012 as compared to ₹ 4777.24 crore at the end of previous year. The level of inventory was 34 days cost of production as on 31.3.2011 as against 37 days cost of production as on 31.3.2012. The company-wise details of inventory are presented in the Table 4.2.12 below:—

Table 4.2.12

Sl. No.	Name of the Company	Inventory (₹ in crore)		Level of Inventory in No. of days (Cost of Production)	
		2010-11	2011-12	2010-11	2011-12
1.	Bharat Petro Resources Ltd.	0.00	0.00	0	0
2.	Oil & Natural Gas Corpn. Ld.	4118.98	5165.44	34	40
3.	Oil India Ltd.	500.36	533.32	38	31
4.	ONGC Videsh Ltd.	157.90	188.25	19	14
5.	Prize Petroleum Company Ltd.	0.00	0.39	0	27
	Total	**4777.24**	**5887.40**	**34**	**37**

The value of inventory has increased in one CPSE during 2011-12 as compared to the previous year and decreased in case of two (2) CPSEs . Bharat Petro Resources Ltd. did not hold any inventory during 2011-12. Prize Petroleum Company Ltd. in this sector had inventory for the first time in year 2011-12.

4.2.13 Agro-Based Industries

The value of inventory held by five (5) CPSEs belonging to this group was ₹ 263.26 crore at the end of 2011-12 as compared to ₹ 154.23 crore at the end of the previous year. The level of inventory was at the level of 94 days cost of turnover at the end of 2011-12 as compared to 60 days cost of turnover at the end of previous year. Details of inventory held by these enterprises are given in the Table 4.2.13 below:—

Table 4.2.13

Sl. No.	Name of the Company	Inventory (₹ in crore)		Level of Inventory in No. of days (Cost of Production)	
		2010-11	2011-12	2010-11	2011-12
1.	Andaman & Nicobar Island. Forest & Plantation	1.72	2.21	202	114
2.	CREDA HPCL Biofuel Ltd.	0.00	0.00	0	0
3.	HPCL Biofuel Ltd.	2.48	68.78	0	5092
4.	National Seeds Corpn. Ltd.	63.08	78.82	37	46
5.	State Farms Corpn. of India Ltd.	86.95	113.45	103	109
	Total	**154.23**	**263.26**	**60**	**94**

Of the five (5) CPSEs under this group, one CPSE could reduce the level of inventory during 2011-12 as compared to the previous year and the level of inventory increased in the case of 2 public enterprises. It remained unchanged in the case of CREDILA HPCL Biofuel Ltd. HPCL Biofuel held inventory for the first time in year 2011-12.

4.2.14 Coal

The value of inventory held by eight (8) CPSEs belonging to this group as on 31.3.2012 was ₹ 6064.51 crore as compared to ₹ 5578.84 crore at the end of previous year. The level of inventory was 45 days cost of production as on 31.3.2012 as compared to 53 days cost of production at the end of previous year. Company-wise details are given in Table 4.2.14 below:—

Table 4.2.14

Sl. No.	Name of the Company	Inventory (₹ in crore)		Level of Inventory in No. of days (Cost of Production)	
		2010-11	2011-12	2010-11	2011-12
1	Bharat Coking Coal Ltd.	1112.36	1044.41	76	55
2	Central Coalfields Ltd.	1446.99	1531.88	116	95
3	Coal India Ltd.	35.69	18.51	23	13
4	Eastern Coalfields Ltd.	568.72	622.93	34	30
5	Mahanadi Coalfields Ltd.	591.07	648.70	47	42
6	Northern Coalfields Ltd.	493.97	727.97	41	55
7	South Eastern Coalfields Ltd.	892.95	899.51	42	32
8	Western Coalfields Ltd.	437.09	570.60	30	30
	Total	**5578.84**	**6064.51**	**53**	**45**

The value of inventory has decreased in six (6) CPSEs during 2011-12 as compared to the previous year and increased in the case of one public enterprise. It remained unchanged in the case of Western Coalfields Ltd.

4.2.15 Textiles

There are four (4) CPSEs in Textiles sector as on 31.3.2012. The value of inventory held by companies belonging to this group was ₹ 285.40 crore at the end of 2011-12 as compared to an inventory of ₹ 278.36 crore at the end of previous year. The level of inventory was 91 days cost of production during the year 2011-12 and 90 days at the end of previous year. The company wise details are given in the Table 4.2.15 below:—

Table 4.2.15

Sl. No.	Name of the Company	Inventory (₹ in crore)		Level of Inventory in No. of days (Cost of Production)	
		2010-11	2011-12	2010-11	2011-12
1.	Birds, Jute & Exports Ltd.	0.00	0.00	0	0
2.	British India Corpn. Ltd.	7.91	7.73	76	70
3.	National Jute Manufacturers Corpn. Ltd.	20.80	21.45	51	112
4.	National Textile Corpn. Ltd.	249.65	256.22	96	91
	Total	**278.36**	**285.40**	**90**	**91**

Of the four (4) CPSEs, the level of inventory increased in the case of two (2) CPSEs in year 2011-12 and decreased in the case of National Jute Manufacturers Corpn. Ltd. as compared to previous year. Birds Jute & Exports Ltd. did not hold any inventory during 2011-12.

4.2.16 Electricity Generation

The value of inventory held by 10 electricity generating companies as on 31.3.2012 was ₹ 4898.66 crore as compared to ₹ 4708.98 crore at the end of previous year. The level of inventory was 20 days cost of turnover as on 31.3.2012 as against 23 days cost of turnover as on 31.3.2011. The company wise break-up of inventory is given in the Table 4.2.16 below:—

Table 4.2.16

Sl. No.	Name of the Company	Inventory (₹ in crore)		Level of Inventory in No. of days (Cost of Production)	
		2010-11	2011-12	2010-11	2011-12
1.	Kanti Bijlee Utpadan Nigam Ltd.	2.42	18.75	18	54
2.	Neyveli Liginite Corpn Ltd.	491.71	506.19	42	38
3.	Narmada Hydro Electric Development Corpn.	5.50	5.79	02	02
4.	National Hydroelectric Power Corpn. Ltd.	33.71	43.81	3	3
5.	North Eastern Electric Power Corpn. Ltd.	103.34	123.98	31	38
6.	National Thermal Power Corpn. Ltd.	3639.12	3702.85	24	22
7.	Nuclear Power Corpn. of India	392.62	452.22	24	21
8.	REC Power Distribution Co. Ltd.	0.00	0.00	0	0
9.	Satluj Jal Vidyut Nigam Ltd.	22.88	28.47	5	5
10.	Tehri Hydro Development Corpn. Ltd.	17.68	16.60	4	3
	Total	**4708.98**	**4898.66**	**23**	**20**

Of the 10 CPSEs under this group, four (4) could reduce the level of inventory during 2011-12 as compared to the previous year while in the case of two (2) CPSEs there has been increase in the level of inventory. REC Power Distribution Co. Ltd. did not hold any inventory during 2011-12. It remained unchanged in the case of three (3) public enterprises.

4.2.17 Transport Services

There are 12 public sector enterprises operating in the transportation services sector. Of the 12 companies, Air India Air Transport Services Ltd. did not hold any inventory. The value of inventory held by remaining 11 companies was ₹ 1453.33 crore as on 31.3.2012 as compared to an inventory valued at ₹ 1152.38 crore at the end of previous year. The company-wise details are given in the Table 4.2.17 below:—

Table 4.2.17

Sl. No.	Name of the Company	Inventory (₹ in crore)		Level of Inventory in No. of days (Cost of Production)	
		2010-11	2011-12	2010-11	2011-12
1.	Air India Air Transport Services Ltd.	0.00	0.00	0	0
2.	Air India Charters Ltd.	43.54	53.53	12	14
3.	Air India Ltd.	675.96	907.26	18	23
4.	Airline Allied Services Ltd.	13.60	11.02	15	15
5.	Airports Authority of India	92.63	90.27	7	6
6.	Central Inland Water Transport Corpn. Ltd.	0.64	0.66	155	184
7.	Container Corpn. of India Ltd.	6.26	8.17	01	01
8.	Dredging Corpn. of India Ltd.	91.87	97.66	66	73
9.	Ennore Port Ltd.	4.79	0.00	10	0
10.	Fresh & Healthy Enterprises Ltd.	6.22	27.82	35	255
11.	Pawan Hans Helicopters Ltd.	70.37	79.49	62	70
12.	Shipping Corpn. of India Ltd.	146.50	177.45	15	17
	Total	**1152.38**	**1453.33**	**14**	**17**

Of 12 CPSEs in the transport group, the level of inventory increased in seven (7) CPSE during 2011-12 as compared to the previous year while in the case of one CPSE there has been decrease in the level of inventory. The level of inventory remained unchanged in 2 public enterprises. No inventory was held by Air India, Air Transport Services Ltd. and Ennore Port Ltd. during year 2011-12.

4.2.18 Trading & Marketing Services

There were 21 companies in the Trading & Marketing Services group during the year 2011-12. Three companies namely, Food Corpn. of India, Cotton Corpn. of India and Jute Corpn. of India have been excluded for the purpose of inventory analysis as these corporations keep stocks as a deliberate policy to provide storages. As such, the analysis covers the remaining 18 CPSEs only. These 18 companies held inventory valued at ₹ 2409.23 crore representing seven (7) days cost of turnover at the end of 2011-12 as compared to an inventory of ₹ 3503.92 crore representing 11 days cost turnover at the end of previous year. The company-wise details are given in the Table 4.218 below:—

Table 4.2.18

Sl. No.	Name of the Company	Inventory (₹ in crore)		Level of Inventory in No. of days (Cost of Production)	
		2010-11	2011-12	2010-11	2011-12
1.	Antrix Corporation Ltd.	0.00	0.00	0	0
2.	Central Cottage Industries Corpn.	5.45	7.08	32	36
3.	Central Railside Warehousing Co. Ltd.	0.00	0.00	0	0
4.	Central Warehousing Corpn.	7.23	6.57	3	2
5.	Handicrafts & Handlooms Exports Corpn.	35.35	99.58	3	3
6.	H.M.T. (International) Ltd.	0.00	0.41	0	5
7.	India Trade Promotion Organization	0.00	0.00	0	0
8.	Karnataka Trade Promotion Organization	0.00	0.00	0	0
9.	MMTC Ltd.	647.97	924.38	3	5
10.	MSTC Ltd.	16.18	0.00	3	0
11.	National Handloom Development Corpn. Ltd.	1.77	1.75	1	1
12.	North Eastern Handicrafts & Handlooms Corpn. Ltd.	1.45	1.31	31	28
13.	North Eastern Regional Agriculture Marketing Development Corporation	0.40	0.82	1	3
14.	NTPC Vidyut Vyapar Nigam Ltd.	0.02	0.02	0	0
15.	PEC Ltd.	1474.29	808.79	51	26
16.	STCL Ltd.	0.06	14.81	0	41
17.	State Trading Corpn. Ltd.	1313.74	543.71	23	6
18.	Tamilnadu Trade Promotion Organization	0.00	0.00	0	0
	Total	**3503.92**	**2409.23**	**11**	**7**

Of the 18 CPSEs in this group, 6 could reduce the level of inventory during 2011-12 as compared to the previous year while in 4 public enterprises there has been increase in the level of inventory. No inventory was held by Antrix Corporation Ltd, Central Railside Warehousing Co., NTPC Vidyut Vyapar Nigam Ltd. Tamilnadu Trade Promotion Organization, Karnataka Trade Promotion Organization and India Trade Promotion Organization. It remained unchanged in case of two (2) CPSEs.

4.2.19 Contract & Construction Services

There were 13 CPSEs operating in the Contract & Construction Services group. Of the 13 companies, Mumbai Railway Vikas Corpn. Ltd. And IRCON Infrastructure Services Ltd. did not hold any inventory. The value of inventory held by remaining 11 companies in this group was ₹ 8686.92 crore as on 31.3.2012 as compared to ₹ 7215.91 crore held by them at the end of previous year. The level of inventory has increased from 208 days cost of turnover to 228 days cost of turnover. The company-wise details are given in the Table 4.2.19 below:—

Table 4.2.19

Sl. No.	Name of the Company	Inventory (₹ in crore)		Level of Inventory in No. of days (Cost of Production)	
		2010-11	2011-12	2010-11	2011-12
1.	BBJ Construction Co. Ltd.	34.44	20.98	82	38
2.	Bridge & Roof Co. (India) Ltd.	584.53	695.83	160	201
3.	Hindustan Prefab Ltd.	0.34	0.21	1	0
4.	Hindustan Steelworks Constn. Ltd.	2.95	1.93	1	1
5.	IRCON Infrastructure & Services Ltd.	0.00	0.00	0	0
6.	IRCON (International) Ltd.	164.92	134.51	19	14
7.	Konkan Railway Corpn. Ltd.	24.20	19.48	10	8
8.	Mineral Exploration Corpn. Ltd.	6.75	6.54	19	16
9.	Mumbai Railway Vikas Corpn. Ltd.	0.00	0.00	0	0
10.	National Bldg. Constn. Corpn. Ltd.	409.48	450.06	48	48
11.	National Projects Constn. Corpn. Ltd.	1.18	2.53	0	1
12.	Projects & Development India Ltd.	4.72	2.36	17	9
13.	Rail Vikas Nigam Ltd.	5982.40	7352.49	1511	1679
	Total	**7215.91**	**8686.92**	**208**	**228**

Of the 13 public enterprises, 6 could reduce level of inventory during 2011-12 as compared to the previous year while in three (3) CPSEs there has been increase in the level of inventory. It remained unchanged in case of Hindustan Steelworks Constn. Ltd. and National Building Construction Corpn. Ltd. No inventory was held by Mumbai Railway Vikas Corporation Ltd. and IRCON Infrastructure & Services Ltd. during 2011-12.

4.2.20 Telecommunication Services

There were four (4) CPSEs operating in this group. Millennium Telecom Ltd. did not hold any inventory during the current year. Mahanagar Telephone Nigam Ltd., Bharat Sanchar Nigam Ltd. and Railtel Corporation India Ltd., belonging to this group held an inventory valued at ₹ 679.84 crore as on 31.3.2012 as compared to ₹ 639.72 crore held by them at the end of the previous year. Level of inventory remained unchanged as 8 days cost of turnover as on 31.3.2012 as well as at the end of previous year. The company-wise details are given in the Table 4.2.20 below:—

Table 4.2.20

Sl. No.	Name of the Company	Inventory (₹ in crore)		Level of Inventory in No. of days (Cost of Production)	
		2010-11	2011-12	2010-11	2011-12
1.	Bharat Sanchar Nigam Ltd.	513.59	576.98	7	8
2.	Mahanagar Telephone Nigam Ltd.	125.48	100.56	12	11
3.	Millennium Telecom Ltd.	0.00	0.00	0	0
4.	Railtel Corporation India Ltd.	0.65	2.30	01	2
	Total	**639.72**	**679.84**	**8**	**8**

Of the four (4) CPSEs in Telecommunication Services group, the level of inventory decreased in one CPSEs and increased in two CPSEs during 2011-12 as compared to the previous year. No inventory was held by Millennium Telecom Ltd.

4.2.21 Electricity Transmission

The value of inventory held by three(3) electricity transmission companies as on 31.3.2012 was ₹ 440.31 crore as compared to ₹ 381.51 crore at the end of previous year. The level of inventory was 17 days cost of turnover as on 31.3.2011 as against 16 days cost of turnover as on 31.3.2012. The company-wise breakup of inventory is given in the Table 4.2.21 below:—

Table 4.2.21

Sl. No.	Name of the Company	Inventory (₹ in crore)		Level of Inventory in No. of days (Cost of Production)	
		2010-11	2011-12	2010-11	2011-12
1.	Power Grid Corporation of India	381.51	440.31	17	16
2.	NTPC Electric Supply Co. Ltd.	0.00	0.00	0	0
3.	REC Transmission Project Co. Ltd.	0.00	0.00	0	0
	Total	**381.51**	**440.31**	**17**	**16**

Of the three (3) public enterprises, level of inventory decreased in the case of Power Grid Corporation of India Ltd. during the year 2011-12 while NTPC Electric Supply Co. Ltd. and REC Transmission Project Co. Ltd. did not hold any inventory.

4.3 ENERGY CONSERVATION IN CPSES

Rapid increase in energy demand and consumption in all the economic sectors of the economy, consequent to high economic growth, has led to overall shortage of both peak and normal energy requirements. In this perspective, the issue of energy conservation has assumed great importance. There is a greater merit in energy conservation to-day as creating or building additional capacity is not only capital intensive but also time consuming. Additional investment for energy conservation measures, if necessary, is more cost effective and yields results within a short period. Since CPSEs form a significant component of the Indian economy, they have a major role to play in the area of energy conservation.

The cognate group-wise pattern of energy consumption is given in Annex. 4.1. Energy conservation measures taken by some of the CPSEs during the year 2011-12 are discussed in the paragraphs below.

4.3.1 Steel Authority of India Limited (Sail)

Particulars	Consumption of Energy (₹ Crore)		Energy Cost as percentage of cost of production		Consumption of energy per unit of production		
	2011-12	2010-11	2011-12	2010-11		2011-12	2010-11
Purchased Electricity	2994	2371	7.04	6.24	kwh/tss	505	497
Fuel Oils	240	115	0.56	0.30	kl/tss	4	2
Coking Coal	16663	15360	39.17	40.42	kg/tss	1036	1089
Coke	1848	525	4.34	1.38	kg/tss	58	18
Non-Coking Coal	300	217	0.71	0.57	kg/tss	55	52
Others (oxygen, gases, steam, etc.)	969	778	2.28	2.05			

Energy conservation measures taken in SAIL during 2011-12 are listed below:

(i) Bhilai Steel Plant (BSP)

(a) LD Gas Holder repair along with in-situ repair of the roof structure with in-house resources

(b) Rebuilding of Coke oven Battery No. 6

(c) Impedance heating of tar carrying pipe up to 95-110°C

(d) Commissioning of VVVF Drives in Aluminium wire feeder of Argon Rinsing Unit-2

(e) Metallic recuperator developed in-house and installed in Furnace 1 of R&S Mill

(f) Installation & Commissioning of 14 Nos. VVVF drives in different areas of RSM

(g) VVVF drives commissioned for energy conservation and reduction of torque jerks at 5 Nos. Roller Table sections and for disc rotation motor and tilting motor in Merchant Mill

(h) Optimum capacity utilization of machines of Compressed Air Station (CAS-4) by modification of IPPL network and redistribution of consumer load.

(ii) Durgapur Steel Plant (DSP)

(a) Modification of Combustion System of Reheating Furnaces #1 & #2 of Section Mill

(b) Installation of Photo Sensors in the bay lights (133 nos.) of Wheel & Axle Plant

(c) Installation of on-line Oxygen Analyzers in Power Plant Boiler #1 & Blast Furnace #2 Stoves

(d) On-line sealing of steam and blast leakages (1633 nos.)

(e) Thermal insulation of steam line and other hot surfaces (3941 m²)

(iii) Rourkela Steel Plant (RSP)

(a) Thyristorization of CTS drive in Plate Mill & that of RTS drive in Hot Strip Mill

(b) Replacement of 2 Nos. Primary Gas Coolers in CCD

(c) Commissioning of 2 Nos. of ETPs in CCD expansion site

(d) Mixed gas firing in MP Boiler #1 of CPP-1

(e) Replacement of recuperator in Re-Heating Furnace #6 of Hot Strip Mill

(f) Thermal Insulation of steam lines covering (2000 m²)

(g) Commissioning of High Top Pressure operation of BF #3

(iv) Bokaro Steel Plant (BSL)

(a) Dry Gunniting @ 20 ovens per month and cleaning of doors and door frames @ 50 ovens/day in CO Batteries

(b) Changeover from CO gas firing to mixed gas firing in Battery No.1

(c) Replacement of GCM Controller by Electro Hydraulic Controller in Battery No. 6

(d) Introduction of Ceramic Welding in Battery No. 7 to prevent cross leakage

(e) Rebuilding and commissioning of Battery No. 2

(f) Increase in hot blast temperature from 917°C to 948°C through systematic repair of stoves and optimization of stove heating

(g) Increase in oxygen enrichment from 1.55% to 2.19%

(h) Increase in nut coke rate from 19.9 to 24.2 kg/thm

(i) Increase in Coal Dust Injection rate from 11.5 to 30.2 kg/thm

(j) Upgradation of BF No. 5 along with its stoves

(k) Capital Repair of 3 Nos. of Ceramic Recuperators at Soaking Pits

(l) Revisioning of BF Gas Valves & BF Gas Firing System to maximize BF gas consumption in Power Plant to 174 tcm/hr from previous average of 158 tcm/hr

(m) Approx. 11km of damaged process water line changed

(n) About 3600 m² insulation of steam line replaced along with 22 nos. of new steam traps

(v) IISCO Steel Plant (ISP)

(a) Closure of BF #3 of capacity 1200 t/day

(b) Cold Repair of Battery No. 8

(c) Running of only one Twin Hearth Furnace

(d) Introduction of Air Blaster at Battery No.10 coal service bunker for smooth flow of coal

(e) Introduction of PLC System in Coal Handling Plant of Batter No.10

(f) Introduction of BF Gas Firing System in Boiler Unit -A

(g) Installation of new BF Ladle Heating System near BF area

4.3.2 Mishra Dhatu Nigam Limited (Midhani)

MIDHANI obtained "Excellent" rating for being within the limits of energy consumption for Electricity and LPG on account of proactive steps taken in conserving energy.

The following measures were taken during 2011-12 for energy conservation:

(1) The up-gradation of facilities has been completed and modernization is still in progress and currently state-of-the-art equipments are being used at Midhani. This increased the capacity of production thereby reducing cost of production & overall energy consumption.

(2) Energy conservation measures were taken to bring improvements in specific energy consumption of LPG. This was implemented by revamping and calibration of furnaces, periodical maintenance of refractory and burner blocks, prompt repairs to re-heating furnaces and installation of flow meters, its measurement and monitoring, use of oxygen during, reduction of heat cycle time, compact charging, use of proper scrap mix.

(3) Installation of solar hot water system of 5000 LPD capacity at canteen.

(4) Installation of 10HP CWC pumps, in place of 135 HP pumps, for mill water requirement of HRM thereby saving power.

(5) Ceramic lining to Ludwig Furnace at Heat Treatment Shop to avoid heat losses.

(6) Provision of isolation valve on the compressed airline in Melt shop-III area. The valve is closed on holidays and Sundays to avoid charging of compressed airline to downstream shops and enable operation of smaller size 450 CFM Khosla make screw air compressor in place of 1000 or 1200 CFM Kirloskar compressor.

4.3.3 Rashtriya Ispat Nigam Limited (Rinl)

Energy conservation measures taken during the year 2011-12 include:—

(1) Reduction of coke rate from 532.7 kg/t HM 527.6 Kg/t HM by increasing hot blast temperature and ensuring proper coking coal blend coupled with techno economics

(2) Reduction of BF gas bleeding from 4.1% to 3.74% by taking up proactive measures and optimizing distribution through Supervisory Control and Data Acquisition system (SCADA)

(3) Replacement of Tubular air heater I Boiler-3 in thermal power plant

(4) Installation of refractory less Gas Pre heather in Gas Expansion Turbine of Blast Furnace 1

(5) Replacement of Air Recuperators in F/C-1& F/C-2 of LMMM

(6) Replacement of gas recuperator at the reheating furnace of WRM during capital repairs

(7) Reduction of Stelmor conveyor blowers by standardized operation for different sections of rolling

(8) Commissioned Energy Efficient Air separation plant no 4

(9) Replaced existing 211 Fluorescent Tube lights with Energy Efficient Tube lights (T5) and Installed 329 Translucent sheet to utilize natural lighting

(10) Replaced 33 Nos. of low capacity motor and reduced RPM of fans in Air Handling Units

4.3.4 Indian Rare Earth Limited (Irel)

Unit	Consumption of Energy (₹ Crore)		Energy cost as % of cost of production		Consumption of energy per unit of production	
	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
OSCOM -Electrical energy	19.99	13.5	13.58	10.61	kWh/MT 180	kWh/MT 144.58
Furnace oil	17.21	15.35	11.69	12.07	litre/MT 17.79	litre/MT 20.3
MK - Electrical energy	5.38	5.23	8.36	9.66	kWh/MT 121.09	kWh/MT 103.14
Furnace oil	3.91	3.4	6.08	6.28	litre/MT 18.95	litre/MT 18.01
Chavara - Electrical energy	3.66	6.16	4.64	6.79	kWh/MT 135.77	kWh/MT 108.87
Furnace oil	2.58	2.92	3.27	3.22	litre/MT 10.9	litre/MT 10.17

4.3.5 KIOCL Limited

The details of energy consumption of the company are as under:

Unit	Consumption of Energy (₹ Crore)		Energy cost as % of cost of production		Consumption of energy per unit of production	
	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
	102.30	100.10	7.62%	6.84%	70.62 kWh/t	71.02 kWh/t

(1) The electricity consumption per tonne of Pellet production in kWh was lower during the year as compared to the previous year.

(2) Various Energy Conservation measures like introduction of Electronic Lighting Energy saver, replacement of incandescent indication lamps with LED indication lamps, replacement of Sodium vapour street light fittings with LED street light fittings and introduction of timers for automatic switching ON & Off of outdoor area lighting were undertaken in BFU Unit during the financial year 2011-12. Similarly at Pellet plant unit, installation of fanless cooling towers, induction lamps, LED lamps, solar powered street lights, LED street light fittings, downsizing of certain motors as per recommendations of Energy Auditor, introduction of VFDs for pumps at PF plant etc., have been undertaken during the financial year 2011-12. Energy conservation cells both at Pellet plant and Blast Furnace Unit with members drawn from different departments regularly meet and monitor the energy conservation pattern in the plant.Various energy conservation measures are deliberated in all cell meetings before implementation.

4.3.6 National Aluminium Company Limited (Nalco)

Energy Conservation measures taken during the year 2011-12 are as under:—

Captive Power Plant:

1. On-line Monitoring of high energy drains: In order to monitor MAL valve passing thermo-couple attachments have been installed in Unit #6 and #5. In unit #6 the temperature data has been hooked up-to DCS. In Unit#5 cable laying has been over.
2. Installation of energy efficient lighting products: During the year about 200 Nos. of Y-5 fluorescent fitting and 500 electronic ballasts have been installed resulting in a saving of 23725 KWH of electricity per annum.
3. Installation of Energy meters for monitoring and control of area-wise consumption: Energy meters have been installed in RCPH, New Bunker MCC, Ash Pond, Intake pump house. This will help in building energy consumption data inventory for these important areas for analysis and control.
4. Order has been placed for two no. Intelligent power Controllers for use in Coal conveyors having the facility to control the power drawn by the coal conveyor drives to the optimum level, therby saving around 20% energy.
5. Online condenser cleaning system: System installed in Unit No.6 and by March'12 another set shall be installed in Unit #5.
6. APH basket has been replaced in two units in this year i.e. in Unit:1 and #6.
7. Replacement of soft touch redial seals has been carried out in three units in this year i.e Units #1, 6, 8.
8. Energy efficient fan blade: Two sets of FRP blades have been procured for Unit#1 and 6 cooling towers. Installation in Unit#6 has been in progress.

9. High Efficiency PA fan motors (900KW) have been procured for 04 units. Installation in Unit#6 is completed during the year.

10. Seven Nos. LT energy efficient motors ranging from 37KW have been procured for replacement of existing damaged motors.

11. Energy Audit: The order has been placed for energy audit in unit#7 and 8. The work in Unit#7 shall start shortly. Whereas the work in Unit#8 shall be delayed as the rotor is under repair at BHEL Hyderabad shop.

Smelter Plant:

(1) Reduction of DC energy consumption in Pot Line-III achieved by control of bath drop with ALPSYS advanced regulation system, reducing anodic problems, optimal alumina control & use of graphitized cathode block.

(2) Annual saving of electrical energy is 1,08,86,275 KWHr.

(3) Financial benefits for the year are ₹ 316.40 Lakhs @ ₹ 2.88 per KWHr.

4.3.7 Central Coalfields Limited (Ccl)

Consumption of Power* (₹ in Crore)		Consumption of Power for Raw Coal production (₹ in Crore)		Cost of Production of Raw Coal (₹ in Crore)		Power Cost as percentage of Cost of Production	
2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
305.32	230.18	215.63	164.44	4985.10	4012.86	4.33	4.10

Consumption of POL* (₹ in Crore)		Consumption of POL for Raw Coal production (₹ in Crore)		Cost of Production of Raw Coal (₹ in Crore)		POL Cost as percentage of Cost of Production	
2011-12	2010-11	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
252.34	240.64	243.93	230.62	4985.10	4012.86	4.89	5.75

* Consumption of Power Cost includes Power Cost of Collieries + Coking & Non-coking Washeries + Service Units

* Consumption of POL Cost includes Cost of Diesel + Cost of Lubricants + Cost of Petrol

4.3.8 Eastern Coalfields Limited (Ecl)

	Consumption of energy (₹ crores)		Energy cost as %age cost of production		Consumption of energy per unit of production KWH/Te	
Electricity Consumption	2011-12 505.71*	2010-11 467.25	2011-12 6.45	2010-11 7.87	2011-12 26.45	2010-11 26.14

* Out of ₹ 505.71 Cr., ₹ 11.95 Cr. is disputed and under subjudice.

The following measures were taken during 2011-12 for energy conservation:

(1) Installation of energy saving devices/energy meters.

(2) Installation of Capacitor banks.

(3) Re-organisation of power supply system and segregation of load

(4) Installation of cable through bore holes.

(5) Installation of pipe lines for direct pumping through bore holes

(6) Installation of energy efficient lamps.

4.3.9 Neyveli Lignite Corporation (Nlc)

Consumption of energy (₹ crores) Excluding Auxiliary consumption		Energy cost as percentage cost of production %	
2011-12	2010-11	2011-12	2010-11
2565.49	3239.73	77.67	78.98

Consumption of Energy per unit of production

Energy input	2011-12	2010-11
Auxiliary Power (%)	9.87	10.05
Oil (ml/Kwhr)	0.82	1.18
Lignite (Kg/Kwhr)	1.167	1.17

The details of major energy conservation taken during the year 2011-12 by the company are mentioned below:

(1) Use of FD discharge air for scanner cooling and elimination of cooling air fan in Burner Management System in 3 boilers in TPS-I.

(2) One number of mobile pump of 7.5 HP motor was introduced for ESP cleaning using high pressure water of HP flush pump of 200 KW capacity, 100 KW make up pump and one pump of 150 KW in Ash Discharge Pump House are avoided which led to conservation of water in TPS-II

(3) Replacement class 150 valve with 300 class valves in compressor resulted in arresting of compressor air leakage and improved efficiency in TPS-I Expansion.

(4) Replacement of 27 Numbers standard LT motors (415V)

of various capacities with similar capacity Energy Efficient Motor (EFF2) for auxillary drives in TPS-II

(5) Modification in one Boiler Feed Pumps of stage-I unit for replacing Labyrinth with mechanical seals in TPS-II.

(6) During rejuvenation of BWE 1357, Main Slewing Motor Generator set was replaced with 6 RA 70 drive unit in Mine-I

(7) Energy efficient Squirrel cage Induction motors of capacity 3.7 KW, 2.2 KW were procured and commissioned in Mine-I

(8) Seven numbers of 90 KW and 5 numbers of 55 KW, Energy Efficient Slip ring Induction motor procured and commissioned in Mine-I

(9) Ten numbers of Capacitor banks are in service in 10 numbers of bore wells starters in Mine-II.

(10) Energy efficient EFF2 class squirrel cage induction motor of capacity 2.2 KW was commissioned in slew drive of MTC 2 & RC1 and 7.5 KW in BWE 1421 and Man-II in Mine-II.

(11) Re-arrangement & clubbing of loads on 25 MVA, 230/11KV Transformer in SS were done during low load periods like conveyor shifting and re-routing, resulting in optimum utilization and energy saving in Mine-II.

(12) Energy saving Variable Voltage Variable frequency (VVVF) controls with PLC is introduced newly in all the M-II Expansion Machine and conveyors.

(13) 103 Nos. of 2400mm conveyor belt joints and 35 Nos. of 2000 MM conveyor belt joints were carried out using ceramic material heater elements for jointing conveyor belts in Mine-II.

(14) Excess drive motors in conveyors were isolated/removed depending upon the power requirement based on the length and the lift in S5, M3 and NL4 and also in the new surface bench system NS1 to NS7 in Mine-II.

(15) In Neyveli Township one number of 125 KVA/APFC (Automatic Power Factor Controller) to improve PF of water supply pump Distribution Transformers is installed. This will reduce the reactive component of the network and also the total current in the system from the source end.

(16) To measure the power consumption of Distribution Transformers and to monitor control energy CT operated energy meters with additional features like Data storage Remote Meter Reading was installed for ten distribution transformer as a trial measure in Township.

(17) 1220 Nos. Three phases electronic energy meters were replaced with old analogue meters.

(18) Lighting: Installation of timer switches, Energy efficient T5 series tube lights, replacement of conventional Sodium vapour lamps with compact flouresent lamps, introducing LED based aviation lamps in drive heads, annunciation lamps and replacement of conventional energy meters with electronic energy meters were carried out in plants and township which save a lot of energy

(19) The implementation of recommendation of Energy Audit carried out in various Units and as well as other improvement/conservation measures resulted in a saving of 35,85,092 Units for the year 2011-12.

4.3.10 Northern Coalfields Limited (Ncl)

Consumption of energy (₹ crores)		Energy cost as percentage cost of production		Consumption of energy per unit of production (in KWH/Cum.m composite)	
2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
266.75	254.64	5.48	5.55	2.65	2.46

The details of major energy conservation measures undertaken during the year 2011-12 are as follows:

(1) Compact fluorescent lamps and other energy efficient lamps have installed at various projects/units of NCL

(2) Time switches have been used for streetlights in CHP, Mines and residential areas of NCL

(3) Energy saver, energy meter and PF meters have been installed at some of the projects of NCL

(4) Additional capacitor bank has been installed at Nigahi project for improvement of Power Factor

(5) Various unauthorized electrical connections have been disconnected.

4.3.11 South Eastern Coalfields Limited (Secl)

Perticulars	Consumption of Energy (₹ Crore)		Energy cost as % of cost of production		Consumption of energy per unit of production (KWH/Te)(Ltrs/Te)	
	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
Electricity	577.56	532.30	5.68	6.67	9.06 (KWH/Te)	8.85 (KWH/Te)
Diesel	296.22	259.58	2.91	3.25	0.58 (Ltrs/Te)	0.56 (Ltrs/Te)

4.3.12 Western Coalfields Limited (Wcl)

Consumption of Energy (₹ Crore)		Energy cost as percentage of cost of production		Consumption of energy per unit of production	
2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
409.41	363.96	5.85%	6.75%	₹ 94.97 Per Tonne	₹ 83.37 Per Tonne
				14.22 KWH/T	15.11 KWH/T

Energy cost % for 2011-12 has been reduced as total cost increased in 2011-12 due to impact of NCWA-IX pay revision.

Power cost per ton in 2011-12 has been increased due to upward revision in tariff by supply agencies.

Energy Conservation measures taken during the year 2011-12, are given as under:—

(1) Addition of capacitors to improve and maintain the power factor above 0.95

(2) Staggering of pumping operations

(3) Eliminating stage pumping/re-organisation of pumping.

(4) Use of energy efficient tubes/CFL in place of high watt luminaires/conventional fittings.

(5) Use of energy saver & timer in street light circuit

(6) Installed demand controllers in main controlling switches to keep the demand within limit.

(7) Replacement of over rated motors

(8) Load shedding on domestic feeders

(9) Reduce the idle running of CHP

(10) Cleaning of belt conveyor & replacement of defective idlers to reduce friction losses.

(11) Adoption of FRP blade in place of metallic blade of main mechanical ventilation fan.

4.3.13 NHDC Limited (NHDCL)

Name of Unit	Consumption of Energy (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per unit of production	
	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
Indira Sagar Power Station	3.737	3.421	1.79%	1.52%	0.0017	0.00269
Omkareshwar Project	2.475	2.549	1.47%	1.65%	0.0027	0.004

4.3.14 North Eastern Electric Power Corporation Limited (NEEPCO)

Name of Power Station	Consumption of Energy (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per unit of production (in ₹/unit)	
	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
Kopili HE Plant	0.54	0.24	0.46%	0.27%	0.0045	0.002
Doyang HE Plant	0.60	0.51	0.71%	0.66%	0.026	0.02
Ranganadi HE Plant	1.08	1.01	0.69%	0.68%	0.011	0.01
Assam Gas Based Power Plant	3.69	4.15	0.88%	0.99%	0.02	0.02
Agartala Gas Turbine Power Plant	2.69	2.22	1.41%	1.30%	0.0404	0.03

Note: (i) Electricity-Auxiliary consumption includes Plant & Colony and the value calculated based on ECR for the power stations for the relevant financial year.

(ii) Cost of production is the total generation cost.

(iii) Production is actual generation for each power projects/plants during the relevant financial year.

Details of Energy conservation measures undertaken during the year 2011-12

During the year 2011-12, as a part of the Energy Conservation measure, Energy Audits for the three power stations of the 275 MW Kopili HE Plant (Kopili-Stage-I, Kopili Stage-II and Khandong Power Station) were carried out. This was a part of the MOU for the year 2011-12.

4.3.15 NTPC Limited (NTPCL)

Details of major energy conservation measures undertaken during 2011-12:

Energy Audits

During 2011-12, 96 energy audits in the areas of auxiliary power consumption, water balance, cooling water system, thermal insulation, compressed air, coal handling plant, milling system, air conditioning, ash handling system, WHRB performance, lighting etc. were carried out at different stations of the Company.

AUXILIARY POWER CONSUMPTION

Replacement of inefficient BFP cartridges and attending BFP recirculation valves at various projects, Modifying APH sector angle at Tanda, Removal of one stage in CEP at Vindhyanchal, Application of efficiency improvement coating on cooling water/other pumps internals at Faridabad, TalcherKaniha, Korba, Talcher Thermal, Gandhar, etc. Installation of VFD's in HFO pressurizing pumps and paddle feeders at Korba and in raw water pumps at Gandhar, Optimization pumping power by stopping leakages in underground pipework (by making it above ground) at Kahalgaon, Gravity Feeding of CT basin at Kayamkulam, AC compressors stopped after commissioning of vapour absorption system at Vindhyachal, Optimization of operation of CW pumps, ARCW, Clarified water pumps and Cooling Tower Fans at TalcherKaniha, Singruli, Kahalgaon, Sipat, Kawas, Anta, Auraiys, Unchahar, Farakka etc., Optimization DP across Feed Regulating Station at Korba and Singrauli.

LIGHTING

Replacement of conventional GLS lamps and conventional FTLs with CFLs/ efficient TL at various projects, Replacement of street lighting HPSV fixtures with LED light at Kayamkulam.

HEAT ENERGY

External surface cleaning of WHRB tubes with ammonia at Auraiya, Attending/upgrading thermal insulation at Unchahar, Auraiya, Kayamkulam etc., Attending passing in HP heaters at Ramagundam and Rihand, Turbine rotor replacement at TalcherKaniha, Cooling Tower performance improvement by improved water distribution.

4.3.16 Nuclear Power Corporation of India Limited (NPCIL)

Consumption of energy (₹ crores)		Energy cost as percentage cost of production		Consumption of energy per unit of production (₹ Cr./MU)	
2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
2879	2291	46.77	45.63	0.099	0.097

NOTE: Consumption of energy in the year 2011-12 is higher than that of previous year's due to high power generation during the year 2011-12. During the year 2011-12 generation of power was 23% higher than the generation in the year 2010-11.

4.2.17 Powergrid Corporation of India Limited (PGCIL)

Details of major energy conservation measures taken during the year 2011-12 are as follows:—

(1) Energy audit has been carried out by external agencies for 12 Nos. of POWERGRID Substations.

(2) Conventional light fittings have been replaced with LED and HPSV street lights replaced with CFL in POWERGRID Substations at Kanpur, Mandola, Seoni, Bhatapara, Raipur and Mapusa.

(3) Installation of Energy Savers unit at Bhatapara & Wardha Substation for reducing energy consumption in lighting load.

(4) In the year 2011-12, capacitor banks have been commissioned at Mapusa, Kanpur, Mandola and Wardha substations. Further installation of capacitor banks in few more Substations is in progress for improvement of power factor of auxiliary supply.

(5) Proper sealing of windows in Control Room area has been carried out at Kanpur Substation and defective / deformed false ceiling has been repaired so as to increase the efficiency of Air Conditioner.

(6) Replacement of old air conditioning plant with new one at Khammam, Munirabad, Vijayawada & Gooty Substations in Southern Region.

(7) Automatic control of lights by detecting presence of persons in SAS controlled Stations in Southern Region.

4.3.18 Bharat Petroleum Corporation Limited (BPCL)

Mumbai refinery	Unit	Consumption of Energy (₹ Crore)		Energy Cost as percentage of cost of production		Consumption of energy per unit of production	
		2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
Electricity Generated	000 KWH	346.2	211.3	0.58%	0.50%	42.90	44.10
Electricity Purchased	000 KWH	18.8	13.5	0.03%	0.03%	1.91	1.48
Purchased Fuel							
RLNG	MT	647.1	406.9	1.09%	0.96%	0.02	0.02
BHAG	MT	15.2	21.5	0.03%	0.05%	0.00	0.00
Own Fuel							
Refinery Gas	MT	314.6	257.8	0.53%	0.61%	0.01	0.01
LSHS	MT	888.6	591.9	1.50%	1.40%	0.02	0.02
BHGO	MT	56.1	50.4	0.09%	0.12%	0.00	0.00
Coke	MT	275.6	192.7	0.46%	0.45%	0.01	0.01
IBP-60	MT	0.3	12.6	0.00%	0.03%	0.00	0.00
PAS Off Gas	MT	74.9	58.5	0.13%	0.14%	0.01	0.01
Kochi refinery							
Electricity	000 KWH	432.0	299.1	105.89%	108.11%	49.65	43.30
Own Fuel:							
FCC Coke	MT	230.87	174.55	0.57%	0.63%	7.11	8.74
LSHS	MT	1344.60	739.73	3.30%	2.67%	41.39	37.04
DHDS Naphtha	MT	156.17	138.31	0.38%	0.50%	21.88	18.14
Ref. Fuel Gas	MT	573.91	255.51	1.41%	0.92%		
Total		**2737.50**	**1607.17**	**6.71%**	**5.81%**		

The details of major energy conservation taken during the year 2011-12 by the company are mentioned below:

Mumbai Refinery

The following energy conservation and loss control measures were adopted by Mumbai Refinery during the year 2011-12 which have resulted in significant fuel saving:

(1) Maximization of crude throughput in the modern highly energy efficient Integrated Crude & Vacuum Unit.

(2) Anti-fouling chemical injection in all Crude & Vacuum Units.

(3) Injection of fire side chemical additive in CDU/VDU Heaters.

(4) "Chemical decontamination" technique has been adopted for the refinery turnarounds. This resulted in reduction of turnaround duration and also improved heat exchanger cleaning.

(5) During turnaround, the services of the combustion technology specialists were obtained to acquire the best practices leading to improved efficiency of the furnaces.

(6) Excellent Hydrogen Management was achieved by processing of the hydrogen rich Catalytic Reformer Unit (CRU) off gas in DHDS, Hydro-cracker Unit PSA and Hydrogen Unit feed, to recover valuable hydrogen from the off gases.

(7) Innovative technology was adopted for dismantling the old Flare System by utilizing heat shield & rope access. This has resulted in avoiding shutdown of critical unit vlz. Hydrogen and Hydro cracker for seven days.

(8) Modification in Hydrogen unit steam networks enabled improvement in pre-reformer temperature, reduction in reformer skin temperature and reduction in fuel consumption. With this change, process heat was augmented by reducing steam superheat.

(9) Use of energy saving CFL lamps.

(10) Energy saving device/torroidal core transformer for energy saving in lighting circuits.

(11) Installation of Capacitor banks to maximize the power factor.

(12) Continuous monitoring & control of all parameters of Furnaces & Boilers.

(13) Continuous monitoring & control of flare.

(14) Regular steam insulation & leak surveys.

Kochi Refinery

The following energy conservation and loss control measures were adopted during the year 2011-12, resulting in significant fuel savings:

(1) Installation & commissioning of Variable Speed Drives for 16 pumps.

(2) Oil recovery from HSD / ATF tank drains.

(3) Recovery of flash steam enthalpy from Continuous Catalyst Regeneration Reformer (CCR) condensate system.

(4) Power savings in CCR condensate system.

(5) Installation of liquid coupled air pre-heater in boiler UB6

(6) Commissioning of low capacity/head BFW pump, FP14D.

(7) Stoppage of raw water pumps UP14 H / I.

(8) Routing of air from incinerator blower to reduction furnace.

(9) Implementation of advanced process control in Hydrogen Generation Unit.

(10) Steam optimization in naptha stabilizer unit through implementation of advanced control system.

(11) Condensate recovery from LP steam air pre-heaters of crude charge heater.

(12) Speed reduction and steam savings in boiler UB11 feed water pump turbine.

(13) Inferential control for diesel draw from VGO HDS.

(14) Stempless control in make up gas compressor.

Fuel saving as a result of the energy conservation measures implemented in the refineries during the year 2010-11 corresponds to a total savings potential of over 400 tons of fuel oil equivalent.

4.3.19 Chennai Petroleum Coporation Limited (Cpcl)

The following Energy conservation measures were taken by the company during 2011-12:

(1) Shutdown of Pre-Desulfurization unit Reformer-1 by using Sweet Naphtha from ISOM/OHCU/CRU.

(2) O2 enrichment in SRU enabling additional feed processing in OHCU and additional steam production in SRU

(3) Changeover from Sulfolane to N-Methyl Pyrolidone in Hexane plant resulting in reduction of reboiler duty.

(4) Processing Light Neutral (LN) distillate in NMP extraction unit enabling shutdown of Plant 8 furfural extraction unit thus saving operating energy.

(5) Reduction chamber off gas routed to separator in CCR.

(6) Routing of low sulphur HVGO directly to FCCU instead of OHCU.

The following additional investment proposals are being implemented:

(a) Initiated study of PSA-II Revamp for higher H2 recovery and recommendations received.

(b) Scheme initiated for recovery of H2 from Reduction chamber off gas from CCR unit for routing it directly to Hydrogen header. Work in progress.

(c) Study on usage of Natural Gas instead of naphtha in Reformer is in progress.

(d) Calcium Silicate insulation for VHP steam header initiated and approval is under progress.

The above measures which were implemented are expected to result in an estimated saving of about 6000-MT/annum of Fuel Oil Equivalent.

4.3.20 Gail (India) Limited (GAIL)

Consumption of energy (₹ crores)		Energy cost as percentage cost of production		Consumption of energy per unit of production (₹/MT)	
2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
663.13	574.69	17.33%	16.12%	3516.79	3244.67

The details of major energy conservation measures undertaken during the year 2011-12 are as under:—

1. GAIL PATA

i. Replacement of Existing 50 Nos. 200W GLS lamps by energy efficient 45W CFL:Replacement of Existing 50 Nos. 200W GLS lamps by energy efficient 45W CFL done in the plant area. This measure resulted in annual energy saving of 33,480 KWh and monetary saving of about ₹ 1.33 lakh per annum.

ii. Installation of Energy saver in lighting Circuit: Lighting Circuit of about 43.6 kw load normally connected with the lighting transformer output 240V AC. Lighting Circuit is modified with installation of Energy saver resulted in annual saving of ₹ 62,208.

iii. Implementation of logic of auto stoppage of blower of Empty Blender-2, 3 & 4: Implementation of logic of auto stoppage of blower of Empty Blenders (Nos. 2, 3 & 4) in LLDPE Plant resulted in monetary saving of about ₹ 12.50 lakh per annum

2. GPU-Gandhar

i. Recovery of LPG vapour during statutory inspection of LPG Mounded Bullets: Statutory internal inspection of bullets entails evacuation of hydrocarbon and inertization before taking up the inspection for safety reasons. As per standard practice LPG liquid from the bullet is being pumped out to the extent possible till the loading pumps leaves the load. Remaining hydrocarbons are being flared out. During current year at GPU Gandhar liquid hydro carbon vapour were recovered by installing the vapour recovery compressor till pressure reduced to ~ 1.0 to 1.5 Kg/cm2g. This operation led to saving of almost 200 MT of LPG. The corresponding saving is to the extent of ₹ 10.0 lacs in addition to reduction of 202 MT of CO2 emissions.

ii. Installation of LPG Condenser Trim Cooler: To efficiently handle the vapour load and pressure of the LPG column due to varying ambient weather conditions especially during the summer season, LPG trim cooler condenser has been installed at GPU Gandhar. The modification facilitated in stoppage of all existing motor driven LPG condenser Air Cooler fans and resulting in saving of ₹ 13 Lakhs/year on account of electrical energy saving. Further, implementation of this project has potential of additional recovery of ~1600 MT of LPG per annum during summer, which corresponds to around ₹ 80 Lacs/year additional profit.

iii. Retrofitting of RG heater with PLC based Burner Management System: Improved burner with PLC based Burner management system has been installed for RG heaters to replaced earlier inefficient burners with manual control at GPU Gandhar with an investment of around ₹ 89.95 Lakhs. The new PLC based Burner management system result in fuel saving of around 201960000 Kcal/annum of natural gas which corresponds to saving of ₹ 14.67 Lacs/year.

3. LPG Recovery Plant, Vaghodia

i. Retrofitting of RG heater with PLC based Burner Management System

GPU Vaghodia is having hot oil system for re-boiling of LHC in the distillation columns during the fractionation process for the recovery of LPG. The hot oil supplied in these reboilers is being heated in Hot Oil heater.

The hot oil heater had conventional type of gas fired heater having pilot operated four natural draft burners. The new system has changed the present furnace from natural draft to forced draft having proper control system for maintaining air to fuel ratio thus eliminating excess air as well as wastage of sensible heat loss. Thus, this retrofitting in Hot Oil Heater has improved the combustion efficiency thereby reducing the fuel gas consumption. The estimated reduction of fuel is 30 % of present level (the estimated annual saving in terms of energy with respect to current level is expected in order of 6404651 KWH).

The new system is also having intelligent PLC based sequential operation & control of heater lighting up with flame failure detection and associated safety interlocks to reduce the operating hazard.

ii. Heat Exchanger Project - Cooling of Feed Gas Supply to GPU Vaghodia

The feed gas temperature has significant effect on the recovery of LPG as the liquification of the natural gas decreases with increase in feed gas temperature thus affecting LPG recovery. GPU Vaghodia does not have any external refrigeration system for feed gas cooling.

Feed gas to GPU, Vaghodia is supplied from GREP compressor discharge. The feed gas temperature to GPU remains very high from the design temperature of 35°C in spite of rerouting of it through IP-2 station in order to use natural cooling gained by the gas by travelling a relatively longer distance.

This scheme of Heat Exchanger was carried out for pressure reduction in SGPL Network as required by the customers as well as to cool the feed gas supply to GPU Vaghodia by utilizingthe cooling of RLNG achieved in reducing the pressure from 85 kg to 45 kg. The annual energy saved is calculated to 5602326 KWh/year.

iii. Heat Recovery Steam Generation Project

The compressor station at GAIL, Vaghodia was commissioned in 1998 to compress about 31.8 MMSCMD of natural gas through underground HVJ pipeline. We are in process of setting up of a Heat Recovery Steam Generation (HRSG) Project. The HRSG boiler is an unfired, natural circulation, and Horizontal Heat Recovery Steam Generator which is installed in the exhaust of each gas turbine. The Capacity of Steam generation is proposed to be 60 tons/hour.

The steam shall be supplied to M/s. Apollo Tyres Limited and the D. M. water required for the generation of same shall be supplied by M/s. Apollo Tyres Limited. Apart from reduction of thermal load on the environment, the Heat Recovery Steam Generation Project will also save an energy equivalent of 446350 Mwh annually. It is calculated that an amount of 80589 EquivalentGHG Reduction (Tonnes CO2-e.) would be done, if the same energy is assumed to be produced by Natural Gas for Steam Generation.

iv. Replacement of Halon 1301 with Novec 1230

The fire protection system for the LPG control room was replaced from Halon 1301 to Novec 1230. The Phased out substance was having Ozone Depleting Potential and Global Warming Potential of 10 and 6900 respectively. While the new substance i.e. Novec 1230 is having Ozone Depleting Potential and Global Warming Potential of 0 and <1 respectively.

4.3.21 Hindustan Petroleum Corporation Limited (HPCL)

Energy inputs	Consumption of Energy (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per unit of production (KWH/T of Crude for Electricity & Ton/TMT of Crude for others)	
	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
HPCL MR						
Electricity	283.2	139.0	0.89	0.68	87.3	72.88
Liquid fuel	512.8	366.2	1.61	1.79	19.2	21.77
Fuel gas	914.3	583.7	2.88	2.85	39.9	40.13
Coke	239.2	82.7	0.75	0.40	9.0	4.91
HPCL VR						
Electricity	458.4	313.8	1.43	1.39	61.9	54.79
Liquid fuel	1326.7	1047.2	4.14	4.65	35.5	39.94
Fuel gas	713.1	402.5	2.23	1.79	23.0	18.57
Coke	265.1	154.0	0.83	0.68	8.5	7.08

The details of major energy conservation taken during the year 2011-12 by the company are mentioned below:

Mumbai Refinery:

(1) In an effort to recover hydrocarbon losses, refinery has commissioned a flare gas recovery system at Lube Refinery, thereby reducing the overall flare losses. The facility was commissioned during the second quarter of 2011-12.

(2) Refinery has installed Magnetic Resonators at Gas Turbine Generators (GTG III & GTG V) for increasing the combustion efficiency and reducing the carbon emissions. This has resulted in reduction of fuel consumption by 0.8%

(3) Naphtha Splitter Unit (NSU) furnace efficiency improvement was carried out resulting in lower fuel consumption. Furthermore, maximization of hot feed from Crude Distillation Unit (CDU I/II) Naphtha stabilizer to NSU has resulted in substantial amount of energy savings.

Visakh Refinery:

(1) Make up water heater was commissioned in one of the HRSGs (HRSG 6), resulting in considerable amount of energy saving.

(2) Antifoulant injection was carried out at SR side of crude/SR preheat exchangers in CDU-III, thus enabling reduced fouling of exchanger and hence resulting in energy saving.

(3) Periodic steam leak survey and steam trap survey was carried out for the entire Refinery by engaging external surveyor using ultrasonic detector and visual methods as a part of regular steam leak monitoring. Arresting of steam leaks was carried out.

(4) Operation of new boiler with higher efficiency in lieu of old boiler, resulted in better steam to fuel ratio and fuel saving.

(5) Reduction in specific fuel consumption achieved in CPP by operation of GTGs at higher loads.

(6) Online chemical cleaning of CDU-I, CDU-II, CDU-III & DHDS furnaces was carried out, which resulted in reduced stack temperatures and increased heater efficiencies.

4.3.22 Indian Oil Corporation Limited (IOCL)

Energy inputs	Consumption of Energy (₹ Crore)		Energy Cost as percentage of cost of production		Consumption of energy per unit of production		
	2011-12	2010-11	2011-12	2010-11	Unit	2011-12	2010-11
Total - IOCL							
Electricity	2719.15	2074.94	8.11%	7.67%	KWH/MT	97.918	89.466
Liquid Fuel	6618.06	4794.99			MT/MT	0.038	0.040
Fuel Gas	6202.30	3468.05			MT/MT	0.036	0.031
Natural Gas	2233.96	1322.90			MT/MT	0.016	0.017
Coke	525.62	532.13			MT/MT	0.007	0.007

The details of major energy conservation taken during the year 2011-12 by the company are mentioned below:

Reasons of variation:

For IOC, cost as percentage of total of production has increased in 2011-12 in comparison to 2010-11 because of addition of HGU, DHDT units at Bongaigaon Refinery and DCU unit at Gujarat Refinery resulting higher fuel consumption. Besides, price of fuel gas has increased from ₹ 23059/MT in 2010-11 to ₹ 33291/ MT in 2011-12 & price of Natural gas increased from ₹ 16494/- MT in 2010-11 to ₹ 27557/- MT in 2011-12.

Major Energy Conservation Schemes Undertaken in 2011-12 are:

(1) Optimization of heat load by routing hot stabilized naphtha ex Pre-topping Column Splitter directly to MSQ Splitter instead of routing the same via Main Column Splitter at Guwahati Refinery.

(2) Installation of staged Flare System at Barauni Refinery.

(3) Installation of magnetic resonators in GT-4/5 & LAB at Gujarat Refinery.

(4) Waste Heat recovery from KHDS furnace by installing APH at Haldia Refinery.

(5) Optimization of RSU throughput by adjustment of distillation parameters post revamp of NSU column of CCRU & OHCU at Mathura Refinery.

(6) Installation of auto decantation valves in MS/Naphtha/ Diesel tanks at Mathura Refinery.

(7) Improvement in desalter wash water temperature in AVU-1 & 2 by installing additional heat exchanger at Panipat Refinery.

(8) Generation of MLP steam from LP steam generators in PREP HCU at Panipat Refinery.

(9) Optimization of GT operation with export of power @ 2.5 MWH (at Assam Power Distribution Company Limited) at Digboi Refinery.

(10) Installation of magnetic resonators in FO & FG lines of Boiler Nos. 1, 2, 3 & 5 at Bongaigaon Refinery

4.3.23 Mangalore Refinery & Petrochemicals Limited (MRPL)

The Company continued its emphasis on energy conservation through operational optimization, continuous monitoring and implementation of several energy conservation schemes-

(A) Major energy conservation measures taken during the year

(i) Additional interconnection between Phase-I & Phase-II Low Pressure steam header for better steam distribution & minimizing intermittent LP steam venting.

(ii) Ceramic coating carried out for VBU-1, HCU-1, heaters, which resulted in lesser Specific Fuel consumptions.

(iii) CDU1 and VDU1 heaters provided with Refractory Modules for better heat recovery.

(iv) Online chemical cleaning of CDU1, VDU1 furnaces were carried out. This resulted in better heat recovery and also helped in increasing through puts in both units.

(v) Adsorbents of PSA unit were changed in Hydrogen Generation unit-1 which improved Hydrogen recovery in this unit.

(B) Additional investments and proposals, if any, being implemented/under consideration for reduction of consumption of energy/resources.

(i) Repair & Maintenance of steam lines insulation and steam traps.

(ii) Steam Condensate Recovery in VBUI and HCUI units.

(iii) Slop recycling provision with coalesce in CDU1 & VBU2 units.

(iv) Replacing CDU2 Air Pre-Heater for better heat recovery from flue gas.

(C) The measures (a) above resulted in Energy consumption reduction by - 62000 MT/Year, which is equivalent to a net saving of approx. Rs. 206 Million/year, with an investment opportunity of Rs.133 million.

Fuel & Loss in the Refinery for the year 2011-12 was 6.75%, whereas it was 6.85% in 2010-11. The Refinery Energy index (MBTU/BBL/BRGF) is lower at 57.92 for the year 2011-12 as compared to 58.13 for the year 2010-11.

4.3.24 Brahmaputra Valley Fertilizers Corporation Limited (BVFCL)

Consumption of energy per unit of output			
Energy Inputs	2011-12	2010-11	2009-10
Namrup-II	15.57	15.76	18.32
Namrup-III	12.78	14.65	14.17

Energy consumption of Namrup-III in the year 2011-12 could be brought down by 2.13 Gcal/MT due to renovation jobs like replacment of synthesis converter basket, attending leaky coolers and other energy saving schemes.

Following energy conservation schemes haveeen implemented:—

1. The synthesis converter of Namrup-IIIwas retrofitted with improved S-200 basket.
2. Water Cooled Condenser & BFW Heaters in Ammonia Synthesis Section were replaced.
3. The waste exhaust steam from turbines of ID Fans & FD Fans of Service Boiler of Namrup-II have been utilized fruitfully as deaeration steam in De-aerator. This has led to 3 MT/Hr savings of Process steam.
4. Around 10 MT/Hr of LP Steam was getting vented from Ammonia-III Steam Loop. This is being now being used as deaeration steam in De-aerator of Service Boiler & Waste Heat Boilers in Captive Power Plant.

4.3.25 The Fertilizers and Chemicals Travancore Limited (FACTL)

Fact Ltd.	Consumption of Energy (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per unit of production (MT/MT)	
	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
	FO	FO	FO	FO	FO	FO
Udyogamandal Division						
AMMONIUM SULPHATE	43.25	41.91	14.43	14.02	0.07	0.09
FACTAMFOS 20:20	36.19	31.10	7.78	8.45	0.06	0.08
Cochin Division						
FACTAMFOS 20:20	104.94	73.89	8.38	7.49	0.06	0.07
Petrochemical Division						
Caprolactam	174.74	161.15	29.37	24.75	1.33	1.75

Fact Ltd.	Consumption of Energy (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per unit of production (MWH/MT)	
	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
Udyogamandal Division						
AMMONIUM SULPHATE	7.73	8.71	2.58	2.91	0.13	0.12
FACTAMFOS 20:20	5.87	5.69	1.26	1.55	0.09	0.09
Cochin Division						
FACTAMFOS 20:20	20.89	20.79	1.67	2.11	0.12	0.11
Petrochemical Division						
Caprolactam	12.92	9.50	2.17	1.64	0.91	0.58

4.3.26 Madras Fertilizers Limited (MFL)

Energy Source	Consumption of energy (₹ Crore)		Energy cost as percentage cost of production (%)	
	2011-12	2010-11	2011-12	2010-11
Naphtha	1081.91	845.83	55.50	55.42
Furnace Oil	513.08	368.35	26.32	24.14
H S D	10.99	2.57	0.56	0.17
Electricity	50.78	50.25	2.61	3.29
Total	1656.76	1267.00	84.99	83.02

Energy Source	Unit	Consumption of energy per unit of production (Unit/MT)					
		2011-12			2010-11		
		Ammonia	Urea	Complex	Ammonia	Urea	Complex
Naphtha	MT	0.7617	-	-	0.7608	-	-
Furnace Oil	MT	0.2133	0.1089	0.0149	0.2108	0.1073	-
H S D	MT	0.0075	-	-	0.0019	-	-
Electricity	Kwh	71.706	161.385	66.407	86.278	161.347	-

The details of major energy conservation taken during the year 2011-12 by the company are mentioned below:

(1) Consumption of energy inputs (Naphtha, HSD) are marginally higher during 2011-12 compared to 2010-11 due to higher number of interruptions in Ammonia Plant (11 during 2011-12 compared to 5 in 2010-11)

(2) Ammonia Plant had two planned shut downs during 2011-12 (unlike 2010-11), one for the Statutory Annual Inspection of Boilers (Dec. 2011-Jan. 2012) and another for Annual Turn-around in Mar. 2012, involving additional energy inputs for shut down/ start-up

(3) Consumption of HSD is higher due to captive generation in place of purchased TNEB Power which is lower than 2010-11

4.3.27 National Fertilizers Limited (NFL)

Name of the Company	Energy cost (₹ in crores)		Energy cost as %age of cost of production	
NATIONAL FERTILIZER LIMITED	2011-12	2010-11	2011-12	2010-11
Nangal	1525	1063	90.81%	90.26%
Bathinda	1480	1196	92.19%	92.51%
Panipat	1432	1037	91.80%	90.59%
Vijaipur-I	793	627	92.71%	89.45%
Vijaipur-II	857	658	92.22%	86.65%

1. Energy Saving and Urea Capacity Enhancement Projects at Vijaypur-I & II unit undertaken by the company and commissioned during 2012-13 (upto Sept.-12).
2. Changeovers of Feedstock from FO to NG are under implementation at FO based units which will result in reduction in energy consumption and usage of cheaper raw material and shall be commissioned in 2012-13.

4.3.28 Rashtriya Chemicals And Fertilizers Limited (RCFL)

Product	Consumption of Energy (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per unit of production (₹/MT)	
	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
Trombay Unit						
UREA	247.44	216.24	69.441	68.516	7364.173	6339.804
SUPHALA (S-15:15:15)	20.96	24.71	2.520	3.817	457.436	552.706
ANP (S-20:20:20)	18.60	11.45	5.098	4.504	970.787	724.818
Thal Unit						
UREA	1323.36	1128.52	82.60	80.98	7466.08	6327.73

The details of major energy conservation taken during the year 2011-12 by the company are mentioned below:

Trombay Unit—

(1) Replacing old Reactor sieve trays by New Modified trays from M/s Casale leading to steam saving

(2) Installation of Low Pressure & Waste Water section off gas scrubber resulting in saving of Ammonia.

(3) Modification of the suction duct of PAC. Saving in stream due to reduction in suction pressure drop.

(4) E-203 steam super heater coils replacement by new one.

(5) Primary Reformer Catalyst tubes replaced with better MOC to reduce energy consumption.

(6) Old Girdler Cooling water pump has been replaced with a energy efficient pump & motor.

(7) Replacement of one ordinary 5.5 KW motor by new energy efficient motor in MPNA plant.

(8) Replacement of one ordinary 11 KW motor by new energy efficient motor in SNN plant

(9) Replacement of existing 132 KW Sewage transfer Pump at Ghatkopar Pumping Station with same capacity, modified, 110 KW energy efficient pump.

Thal Unit—

(1) Replacement of combustion air preheater in waste heat section of Primary Reformer

(2) Modification of NG coil E204A/B in waste heat section of Primary Reformer

(3) Replacement of combustion air preheater in waste heat section of Primary Reformer

(4) Modification of NG coil E204A/B in waste heat section of Primary Reformer

(5) Additional S-50 Converter and Loop Boiler to enhance conversion of ammonia and Steam production.

(6) Relocation of PC-7 (HP section pressure control valve) Outlet gases to MV-2 (Medium pressure decomposer) top line in Urea-31.

(7) TG 2 overhauling to reduce Sp. Steam consumption

(8) Use of energy efficient motor for DM water pump in WTP.

(9) Replacement of SGP Control room A.C. with scroll compressor units.

4.3.28 Hindustan Fluorocarbons Limited (HFL)

Consumption of Energy (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per unit of production	
2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
3.31	3.28	0.07	0.08	₹ 13098 Per MT Production	₹ 14039 Per MT Production

4.3.29 Hindustan Insecticides Limited (HIL)

Product	Consumption of Energy (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per unit of production	
	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
Power & Fuel Consumption						
ELECTRICITY	7.85	6.42	3.00	2.69	0.79	0.71
FURNACE OIL	19.15	13.53	7.33	5.67	0.31	0.27
FUEL OIL (HSD)	0.55	0.46	0.21	0.19	0.01	0.01

4.3.30 Hindustan Organic Chemicals Limited (HOCL)

Product	Consumption of Energy (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per unit of production	
	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
Rasayani Unit	14.48	15.24	2.40%	2.12%	380	440
Kochi Unit						
a. Power	13.46	14.48	1447	1157		
b. Fuel	59.44	53.46	18%	15%	0.21	0.18

4.3.32 Karnataka Antibiotics & Pharmaceuticals Limited (KAPL)

Consumption of Energy (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per lakh of production value		
2011-12	2010-11	2011-12	2010-11	Particulars	2011-12	2010-11
2.68	2.48	1.21%	1.24%	Electricity in Units	150	160
				Furnace Oil in Ltrs	4.20	3.90

4.3.33 Bharat Heavy Electricals Limited (BHEL)

Energy Management is an important thrust area in BHEL. BHEL has been proactive in Energy Conservation in its operation.

Major activities undertaken for energy conservation during the financial year 2011-12 were:

(1) Key personnel were certified as Energy Manger/Energy Auditor at manufacturing units

(2) Energy conservation week was celebrated across the company 14th to 21st December. Several competitions like painting. Essay writing in regional language, quiz, were organized in units/offices/ and school/ township

(3) Energy audit was conducted at HPEP Hyderabad, IP Jagdishpur, and EPD Bangalore to find OFI (opportunities for improvement)

(4) Solar street lighting had been installed to tap renewable energy

(5) Guidelines for Procurement of Energy Efficient Equipment on the basis of LCCA (Life Cycle Costing Analysis) were issued

4.3.34 Bharat Heavy Plate & Vessels Limited (BHPV)

Description	Consumption of Energy (₹ Crore)		Energy cost as percentage cost of production (%)		Consumption of energy per unit of production (₹ L/MT)	
	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
Electrical consumption	2.01	1.97	1.38	1.56	0.02	0.02
Diesel consumption	0.61	0.53	0.42	0.69	0.01	0.01
LPG consumption	1.20	1.03	0.82	0.42	0.01	0.01

4.3.35 Bharat Wagon & Engineering Company Limited (BWECL)

Description	Consumption of Energy (₹ Crore)		Energy cost as percentage cost of production (%)		Consumption of energy per unit of production (₹ Equiv. VU)	
	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
Electricity purchased	0.62	1.43	1.65%	4.03%	27154	72472
Electricity generated						
(Cost of HSD)	0.48	0.42	1.28%	1.18%	20987	21157
Coal (All types)	0.0024	0.0039	0.01%	0.01%	105	198

4.3.36 Braithwaite & Company Limited (B&C)

Consumption of Energy (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per unit of production (Rs. Lacs)	
2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
5.8046	5.5637	2.3207	3.4171	0.4805	0.5254

4.3.37 Burn Standard Co. Limited (BSCL)

Product	Consumption of Energy (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per unit of production (Unit/MT)	
	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
ELECTRICITY	8.15	7.26	5.46%	4.94%	336.32KWH	358.29KWH
COAL	0.04	0.06	0.03%	0.04%	0.015MT	0.0026MT
FURNACE OIL	2.80	1.96	1.88%	1.33%	26.14 Ltr.	31.81 Ltr.

4.3.38 Heavy Engineering Corporation Limited (HEC)

Energy Source	Consumption of energy (₹ Crore)		Energy cost as percentage cost of production (%)	
	2011-12	2010-11	2011-12	2010-11
Electricity	25.09	25.80	4.88%	5.02%
Coal	20.49	18.83	3.95%	3.67%
Fuel Oil	1.66	1.48	0.32%	0.24%

Energy Source	Consumption of energy per unit of production			
	Per Lakh of Production		Per Ton of Production	
	2011-12	2010-11	2011-12	2010-11
Electricity (KWH)	920.30	1042.04	2892.18	3084.24
Coal (Tons)	1.29	1.45	4.07	4.29
Fuel Oil (Ltrs)	4.24	7.37	13.32	21.81

The details of major energy conservation taken during the year 2011-12 by the company are mentioned below:

(1) Switching off Power transformers located in Plant on Sundays and holidays.

(2) Switching off unloaded transformers to save power.

(3) Replacement of MG Sets by use of Static Transformers and Rectifiers.

(4) Campaign to Switching off unwanted lights, fans and idle machines.

(5) Reduction in heat cycle time for melting furnaces etc.

(6) Synchronization of the operation of compressor units for optimum utilization of compressor air. Old centralized compressor unit is being replaced with energy efficient decentralized compressors at user end.

4.3.39 Tungabhadra Steel Products Limited (TSPL)

Consumption of Energy (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per unit of production	
2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
0.1171	0.1398	2.56%	2.61%	₹ 9008/- Per MT	₹ 4707/- Per MT

NOTE: TSPL manufactured products are labour related jobs and are not highly energy consumed product

4.3.40 Bharat Dynamics Limited (BDL)

Consumption of Energy (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per unit of production	
2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
9.06	7.09	0.85%	0.71%	Not Applicable	

The company continues to emphasize on energy conservation. Some of the measures adopted by the company for energy conservation during the year 2011-12 include:

(1) Energy audit conducted by professional agencies such as IIPE (Indian Institute of Plant Engineer)

(2) Audit recommendations being implemented during 2011-12 & 2012-13.

(3) Automatic power factor control panels were introduced in different sub-stations to improve power factor upto 0.96.

(4) Solar street lights were introduced during 2011-12 in Kanchanbagh Unit.

(5) Installed Solar Water Heaters in the place of Electric Geysers in Canteen at Bhanur Unit.

(6) Solar Water Heating and Solar Cooking System will be implemented in new units likely to come up.

(7) Installed Scew Type Air Compressors in place of Conventional reciprocating water colled Air Compressors, thereby saving Energy and Water.

4.3.41 Bharat Pumps And Compressors Limited (BPCL)

Product	Consumption of Energy (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per unit of production (Per rupee production)	
	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
Electricity	2.48	2.56	1.564%	1.226%	₹ 0.0156	₹ 0.0123
Coal	-	-	-	-	-	-
Furnace Oil	3.15	2.23	1.992%	1.065%	₹ 0.0199	₹ 0.0106

The energy conservation measures taken during the year 2011-12 by the company are mentioned below:

Subsequent to Energy Audit conducted in the year 2007 by Academy of Conservation of Energy, Vadodara, various energy conservation methods as suggested by the agency were implemented. The power factor was maintained above 0.90 during 2011-12.

4.3.42 Central Electronics Limited (CEL)

The details of major energy conservation taken during the year 2011-12 by the company are mentioned below:

(1) Copper ballasts are being replaced by electronic ballasts.

(2) 40-watt tube-lights are being replaced by 28 watt T-5 tube light.

(3) Power factor is being improved by improving performance of capacitor bank.

(4) Street light bulbs are being replaced by LED lights.

4.3.43 HMT Machine Tools Limited (HMTMT)

Consumption of Energy (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per unit of production*	
2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
9.65	9.06	4.42	5.11	0.0143	0.0144

* Average energy cost per unit of production

The energy conservation measures undertaken during the year 2011-12 include:

- Use of Energy Efficient Lighting Systems like mercury vapour lamps, high power sodium vapour lamps and fluorescent tube lamps.
- Centralised Control of coolers and shop lighting.
- Use of transparent roof sheets wherever possible and cleaning of glass in sheds periodically to make an effective use of natural lighting.
- Use of power capacitors to improve the power factor.
- Creating awareness among employees about the necessity of energy conservation by observing energy conservation week.
- Power Savings by using AC Motor with Low power in place of DC Motors in High Power Machine, while refurbishing etc.

4.3.44 Rajasthan Electronics & Instruments Limited (REIL)

Year	Product	Consumption of Energy (₹ Crore)		Energy Cost as percentage of cost of production		Consumption of energy per unit of production	
		2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
Energy Input							
Electrical Energy from	EMT	0.05	0.09	0.028	0.082	20.3729	28.5845
Grid with DG Set in back up	PV	0.14	0.15	0.077	0.136	0.0757	0.1076

4.3.45 Vignyan Industries Limited (VIL)

Consumption of Energy (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per unit of production	
2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
3.67	3.42	11.89	11.53	₹ 8973.72 per MT	₹ 8291.66 per MT

4.3.46 BEML Limited (BEML)

Product	Consumption of Energy (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per unit of production (Per rupee production)	
	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
Electricity	25.15	30.08	1.39%	1.67%	-	-
Coal	Nil	Nil	N.A	N.A	-	-
Furnace Oil	0.22	0.27	0.01%	0.01%	-	-
Other	0.95	0.93	0.05%	0.05%	-	-
Total	26.32	31.28	1.46%	1.74%	-	-
Cost of Production (₹ Crore)			1808.17	1801.29		

The details of major energy conservation taken during the year 2011-12 by the company are mentioned below:

(1) Introduction of 2 Nos. 5000 litres capacity solar water heating system in Workers Canteen for pre-heating of water at 600 centigrade.

(2) Replacement of Inverter welding sets (18KW) in place of old type Kirloskar make Moter.

(3) Generator welding set of 30KW.

(4) Switching off of roof extractors during lunch time in I, II shifts and shifts ending hours/\

(5) Non-working hours.

(6) Introduction of 150W metal halide high bay fitting for street lights in place of 800W.

(7) HPMV lamp at various places in the unit premises.

(8) Introduction of 24 Watt LED solar lights in place of 250 Watt HPSV perimeter lighting.

(9) Introduction of LED type DSL power supply indication lamps for EOT cranes and panel

(10) Indication lamp in place of incandescent lamp.

4.3.47 Garden Reach Shipbuilders & Engineers Ltd. (GRE)

Product	Consumption of Energy (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per unit of production	
	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
Electricity	7.98	7.72	0.83%	0.70%	NA	NA
Fuel	0.19	0.16	0.02%	0.01%	NA	NA

4.3.48 Goa Shipyard Limited (GSL)

Consumption of Energy (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per unit of production (KWH/SU)	
2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
1.95	2.01	0.35%	0.26%	818670	646750

Details of major energy conservation measures taken during the year 2011-12:

- Replacement of Old 250W street light fitting with New Energy Efficient 85W CFL light fitting.
- Replacement of 400W HPMV bay overhead light fittings by 250W Metal halide fitting in NewconstructionBay 2.

4.3.49 Hindustan Shipyard Ltd. (HSL)

Consumption of Energy (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per unit of production (KWH/SU)	
2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
5.57	5.36	0.99%	0.89%	NA	NA

Note: The above information may be provided for each of the major energy inputs being such as electricity, fuel oil, coking coal, gas, etc.

The details of major energy conservation taken during the year 2011-12 by the company are mentioned below:

(1) Reduction of lighting to optimum levels.

(2) Running of heavy loads like Air compressors are restricted to minimum.

(3) Operation of Distribution transformers around 70% loading by turning off during OFF peak hours.

(4) Switching off plant & machinery when not in use.

(5) Replacement of old welding machines with new welding machines including energy saving units.

(6) Replacement of old switchgear & PLCA cable with suitable capacity XLPE cables and new switchgear etc.

(7) Use of Capacitor banks to improve the power factor thereby reducing the overall power consumption.

(8) Replacement of old lighting with energy efficient CFL lamps.

(9) Replacement of old plant and machinery with new energy efficient systems like VVVF drives, inverter technology welding machines etc.

(10) Replacing of old air conditioners with BEE certified star rated appliances.

4.3.50 Mazagon Dock Limited (MDL)

Energy Cost in ₹ Crore		Consumption of Electrical energy in KWH	
2011-12	2010-11	2011-12	2010-11
11.0488	10.9819	11352700	16147175

The details of major energy conservation taken during the year 2011-12 by the company are mentioned below:

(1) Replacement of 450 Nos Conventional 40W Fluorescent tube lights with T-5 Fluorescent tube lights of 28W.

(2) Installation of Variable Voltage Variable Frequency (VVVF) drive in Fire Fighting Pump panel.

(3) Installation of Solar Thermal Water Heater of 3000 liters for canteen.

(4) Maintained the Power Factor above 0.97 to get incentive in the energy bill from power supply authority M/s. BEST.

4.3.51 Scooters India Limited (SIL)

Consumption of Energy (Power & Fuel) (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per unit of production (₹ Crore)	
2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
3.66	3.52	1.51	1.87	0.000209	0.000245

Measures taken for conservation of energy are:

Compressors

3. Stopping wastage of compressed air.
4. Periodic servicing of suction filters, moisture traps, unloader and delivery valves.

Water

1. Monitoring of control of water wastage.
2. Recycling of cooling water.

Power

1. Control of maximum demand in peak hours.
2. Monitoring and control of power factor on regular basis and power factor improved by 0.01 approx.
3. Monitoring and control of electricity consumption in different sections of the plant.
4. By using low consumption accessories and equipments.
5. Full capacity utilization of ovens and furnaces.

4.3.52 Artificial Limbs Manufacturing Corporation Of India (ALIMCO)

Consumption of Energy (Power & Fuel) (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per unit of production (₹ Crore)	
2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
1.10	0.814	1.54%	1.48%	0.0134 Paise	0.0159 Paise

Energy Conservation Measures taken:

The factory operates in only one shift and the highest recorded demand during the year 2011-12 being 554 kwh, total energy consumption is reasonably low. Considering the load pattern and equipment in use during the year we emphasized a proper utilization and a power factor between 0.957 to 0.973. This has resulted in optimal utilization at minimum energy consumption level.

4.3.53 Security Printing And Minting Corporation Of India Limited (SPMCIL)

Consumption of Energy (Power & Fuel) (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per unit of production (Rs. Crore)	
2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
39.00	33.97	1.632%	1.542%	0.0010	0.0011

4.3.54 Tyre Corporation Of India Limited (TCIL)

Product	Consumption of Energy (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per unit of production	
	2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
Electricity	2.35	2.54	7.48%	6.36%	1621 KWH per MT	1193 KWH per MT
Coal	1.58	1.24	5.03%	3.10%	2340 KG per MT	1402 KG per MT

Consumption per unit both for Power & Coal increased due to low capacity utilization of the plant. Percentage of cost of production was also increased for higher procurement cost of coal & electricity.

No fresh energy conservation measures could be undertaken during 2011-12 since TCIL is in the process of Disinvestment/ Outright Sale. However, following existing measures were in continuance in the Financial year 2011-12:—

(1) Reduction of Boiler Blow-down by use of DM Water in Boiler.

(2) Use of Evaporate Cooling tower in place of Refrigerator Water-Two Cooling towers are in system to cater to the need. In Tread Extruder section a Chilling plant has been installed to cater to technical requirement so as to provide water below 20 degree centigrade.

(3) Replacement of the service water (pond water) by soft water circulated through cooling towers to improve the efficiency of Air Compressor Cooling System.

(4) Optimum use of compressor without affecting air pressure.

(5) Bypass of 200 KW Sheeting Mill I Mixing Area.

(6) Saving of Lighting Energy through replacement of Standard Lighting Set by energy efficient lighting.

4.3.55 Oil and Natural Gas Corporation Limited (ONGC)

Consumption of Energy (Power & Fuel) (₹ Crore)		Energy cost as percentage cost of production		Consumption of energy per unit of production (eq. KWH/MTOW)	
2011-12	2010-11	2011-12	2010-11	2011-12	2010-11
960.00	895.00	2.34%	2.29%	30.51	30.08

1. The energy consumption is for Diesel (equivalent in KWH) & Electricity purchased at the approximate Rate of ₹ 6/Unit. In physical terms, the figures are 1600 Million units and 1491.7 Million units for 2011-12 and 2010-11 respectively.
2. Diesel has been converted to equivalent KWH based on equivalent energy (i.e. BTU) basis, which comes to a figure of "01 It of diesel being equivalent to 9,3 KWH of electricity" (01 It of diesel = 32000BTU, 01 KWH of electricity = 3440 BTU_.
3. Cost of production (of oil and oil equivalent gas i.e. O+OEG) for ONGC-Standalone, is ₹ 41104.586 Cr and Rs. 39023.773 Cr. for 2011-12 and 2010-11 respectively.
4. For the purpose of consumption of energy per unit of production, production of ONGC is taken as Million metric ton oil equivalent (MMTOE). MMTOE is the aggregate figure of oil and equivalent natural gas based on calorific value. For the purpose of statistics, the equivalence figure in ONGC is taken as "01 billion Cu.m (i.e. BCM) natural gas being equivalent to 01 MMT of oil. The MMTOE figures for ONGC standalone are 52.435 and 49.6 for 2011-12 and 2010-11 respectively.

Energy Conservation Efforts by ONGC in 2011-12:

(1) ONGC has saved ₹ 409.23 Crores, for adopting different energy conservation measures in its Head Quarters and different installations.

(2) Training on Energy Conservation Techniques has been started throughout ONGC for Non-executives. A total of233 training is planned to be conducted for 7000 non-executives. Total 2822 non-executives trained trough 94 training programs in 2011-12. Earlier ONGC has trained more than 18000 Executives of ONGC on Energy Conservation among ONGC employees to adopt best practices on energy conservation. The training has created an intangible gain to the tune of 20% on account of energy conservation.

(3) 20,400 LPD solar water heating system (SWHS) installed at ONGC Colony, ONGC Colony, Dehradun, Total installed capacity in ONGC is 80,600 LPD.

(4) Conducted Special Process Energy of HaziraPlantandUranpalnt. A total savings of 40 Crores is expected on implementation of all energy conservation projects.

(5) Conducted 209 Energy Audit which helped in achieving the energy conservation savings of ONGC.

(6) Installed LED Street lights in CISF Colony, ONGC, Dehradun.

(7) To educate & propagate the awareness among masses ONGC celebrated OGCF, Energy Conservation Day Rajiv Gandhi AkhshayUrja Divas and distributed the calendars, brochures on energy conservation tips under "URJA UDAI" campaign.

4.3.56 Oil India Limited

Name of Company	Consumption of Energy (₹ in Crore)		Consumption of Energy (kWh) unit of Production (kWh)	
F.Y.	2011-12	2010-11	2011-12	2010-11
Oil Indian Limited	2891.31	387.93	0.061	0.072

Various Measures adopted by Oil India Limited for conservation of energy during the year 2011-12:

A total quantity of 4188.40 KL of Crude oil was saved / retrieved from different operational activities during the year under review by adopting the following measures:

(1) Use of Oil Soluble Demulsifier (OSD).

(2) Use of dual fuel (Natural Gas and Crude Oil as fuel) engine in Crude Oil Despatch Pumps in PS-1 & PS-2 since natural gas is available.

(3) Regular & proper maintenance of Crude Oil Transportation Trunk / Branch pipelines to minimize pumping power requirement. This is further reduced by treating the crude oil flow improver chemical / heat treatment.

(4) Water Clarification Plant and use of De-Oilier.

(5) Retrieved from various pits and sumps.

Cognate Group-wise Pattern of Energy Conservation

Sl. No.	Cognate Group	Total Cost on Energy		Energy Conservation	
		31.3.12	31.3.11	31.3.12	31.3.11
1	AGRO BASED INDUSTRIES	138.6	152.6	0	0
2	CHEMICALS & PHARMACEUTICALS	17185.63	17903.16	0.24	0.31
3	COAL	128657.92	111834.24	1.8	1.94
4	CONSUMER GOODS	82331.76	74423.16	1.15	1.29
5	CONTRACT & CONSTRUCTION SERVICES	18873.92	8892.78	0.26	0.15
6	CRUDE OIL	3723.2	4181	0.05	0.07
7	FERTILIZERS	183443.26	150976.35	2.57	2.61
8	FINANCIAL SERVICES	1009.12	987.36	0.01	0.02
9	HEAVY ENGINEERING	49966.2	46315	0.7	0.8
10	INDUSTRIAL DEVEPLOMENT & TECH.CONSULTANCY SERVICES	8344.96	8641.1	0.12	0.15
11	MEDIUM & LIGHT ENGINEERING	65799.8	64207.44	0.92	1.11
12	OTHER MINERALS & METALS	395475.84	326387.52	5.54	5.65
13	PETROLEUM (REFINERY & MARKETING)	401669.76	237992.32	5.63	4.12
14	POWER GENERATION	4269075	3604824	59.82	62.43
15	POWER TRANSMISSION	978.48	865.68	0.01	0.01
16	STEEL	124248	83599.6	1.74	1.45
17	TELECOMMUNICATION SERVICES	40086.08	38970.4	0.56	0.67
18	TEXTILES	2125.44	1845.44	0.03	0.03
19	TOURIST SERVICES	3026.16	2600.91	0.04	0.05
20	TRADING & MARKETING	24122.7	22640.94	0.34	0.39
21	TRANSPORT SERVICES	1302490.08	953287.2	18.25	16.51
22	TRANSPORTATION EQUIPMENT	14333.44	12966.4	0.2	0.22

Chapter-5

International Operations of CPSEs

The CPSEs are increasingly into 'international trade' in goods and services, which has a bearing on the Balance of Payments of the country. During the year 2011-12, as many as 147 CPSEs out of the 225 operating CPSEs either had foreign exchange earnings (FEE) or foreign exchange expenditure (FEE) (Annex 5.1). As many as 34 CPSEs were net foreign exchange earners (Annex 5.1). Out of these 34 CPSEs, 10 CPSEs, namely, Bharat Heavy Electricals Ltd , Air India Ltd. , National Aluminium Company Ltd., Airports Authority of India Ltd. , Air India Charters Ltd. , IRCON International Ltd. , RITES Ltd. , KIOCL Ltd. , Indian Rare Earths Ltd and Cochin Shipyard Ltd. earned net foreign exchange of more than 100 crore during 2011-12.

5.1 Foreign Exchange Earnings

Table 5.1 below shows the (15) CPSEs that had gross foreign exchange earnings of more than 1000 crore, during 2011-12. Out of these fifteen CPSEs, 6 CPSEs namely, Bharat Heavy Electricals Ltd., Air India LTD. , National Aluminium Company Ltd. , Airports Authority of India Ltd , Air India Charters Ltd. and IRCON International Ltd. have been net foreign exchange earners. MMTC and Air India Charters have shown reduction in their foreign exchange earnings during 2011-12. Oil Marketing Companies (OMCs) had foreign exchange expenditure more than their foreign-exchange earnings.

Table 5.1

Gross Foreign Exchange Earnings of select CPSEs (more than 1000 crores)

(₹ In crores)

Sl.No.	CPSE	2011-12	2010-11	Change over the previous year (%)
1	MANGALORE REFINERY & PETROCHEMICALS LTD	23418.32	14603.16	60.36
2	INDIANOIL CORPORATION LTD	19828.74	16967.55	16.86
3	BHARAT PETROLEUM CORPORATION LTD	19315.61	12380.37	56.02
4	BHARAT HEAVY ELECTRICALS LTD	14419.15	9226.00	56.29
5	AIR INDIA LTD	9528.45	6094.37	56.35
6	ONGC VIDESH LTD	8102.97	5871.97	37.99
7	HINDUSTAN PETROLEUM CORPORATION LTD	7782.48	5522.80	40.92
8	OIL AND NATURAL GAS CORPORATION LTD	6315.27	4711.55	34.04
9	NATIONAL ALUMINIUM COMPANY LTD	2557.78	2055.74	24.42
10	MMTC LTD	2069.92	3218.64	-35.69
11	IRCON INTERNATIONAL LTD	1862.44	1541.63	20.81
12	AIRPORTS AUTHORITY OF INDIA LTD	1319.51	1209.12	9.13
13	STEEL AUTHORITY OF INDIA LTD	1230.10	980.46	25.46
14	AIR INDIA CHARTERS LTD	1151.81	1493.81	-22.89
15	P E C LTD	1075.99	1065.26	1.01

5.1.1 Sources of Foreign Earnings

Export of goods & merchandise, and other income are the major sources of foreign exchange earnings of CPSE's. Export of merchandise was the major source of foreign exchange earnings in both the years 2010-11 and 2011-12. Its share in total earnings, increased slightly from 88.80 % of the total in 2010-11 to 88.94% of the total in 2011-12 (Table 5.2). The share of Royalty, Know-How, Consultancy Fee and Fee for Professional Services as sources of foreign exchange reduced from 1.55 % in 2010-11 to 1.22 % in 2011-12.

Table 5.2

Foreign Exchange Earnings of CPSEs

(2011-12 and 2010-11)

(₹ in crore)

Sl.No.	CPSE	2011-12	2010-11	Change over the previous year (%)
(i)	Export of Goods on FOB basis	110728.22 (88.94)	81493.98 (88.80)	35.87
(ii)	Royalty, Know-how, Professional and Consultancy fee	1524.38 (1.22)	1422.67 (1.55)	7.15
(iii)	Interest and Dividend	243.93 (0.20)	182.99 (0.20)	33.30
(iv)	Other Income	11995.44 (9.64)	8674.08 (9.45)	38.29
	Grand Total (i) to (iv)	124491.97 (100.0)	91773.72 (100.00)	35.65

Note: Figure in brackets are as percentage of total

5.2 Foreign Exchange Expenditure

Table 5.3 shows the (26) CPSEs that had gross foreign exchange expenditure more than ₹ 1000 crore during 2011-12. In terms of growth / change in foreign exchange expenditure during 2011-12 over 2010-11 , there was a significant increase in foreign expenditure in the case of Handicrafts & Handloom Exports Corpn. of India Ltd. , ONGC Videsh Ltd. , AirIndia Ltd., Rashtriya Chemicals and Fertilizers Ltd. , Hindustan Petroleum Corporation Ltd. In the case of other CPSEs like PEC Ltd., STCIL, Hindustan Aeronautics Limited , Mazagon India Ltd , NTPC Ltd, MSTC Ltd., there was a general reduction in the foreign exchange expenditure during 2011-12 in comparison to 2010-11. (Table 5.3).

Table 5.3

Gross Foreign Exchange Expenditure of select CPSEs

(more than 1000 crore)

(₹ in crore)

Sl.No.	CPSE	2011-12	2010-11	Change over the previous year (%)
1	INDIAN OIL CORPORATION LTD	240481.95	171424.79	40.28
2	HINDUSTAN PETROLEUM CORPORATION LTD	101312.57	59052.94	71.56
3	BHARAT PETROLEUM CORPORATION LTD	75060.25	51559.83	45.58
4	MMTC LTD	60993.97	59686.03	2.19
5	MANGALORE REFINERY & PETROCHEMICALS LTD	47805.88	30736.24	55.54
6	OIL & NATURAL GAS CORPORATION LTD	40169.86	37115.41	8.23
7	CHENNAI PETROLEUM CORPOARATION LTD	35919.90	26317.28	36.49
8	STATE TRADING CORPORATION OF INDIA LTD	18235.42	19515.81	-6.56
9	STEEL AUTHORITY OF INDIA LTD	17887.37	15615.76	14.55
10	HANDICRAFTS & HANDLOOM EXPORTS CORP. OF INDIA LTD	12107.96	4914.02	146.40
11	BHARAT HEAVY ELECTRICALS LIMITED	10021.32	8565.27	17.00
12	ONGC VIDESH LTD	9250.85	3313.43	179.19
13	CONTAINER CORPORATION OF INDIA LTD	7646.44	4975.84	53.67
14	PEC LTD	7549.74	8631.63	-12.53
15	GAIL (INDIA) LTD	6423.60	4060.86	58.18
16	HINDUSTAN AERONAUTICS LTD	5803.34	11495.30	-49.52
17	RASHTRIYA ISPAT NIGAM LTD	5569.86	4490.40	24.04
18	AIRINDIA LTD	5183.27	2169.41	138.93
19	SHIPPING CORPORATION OF INDIA LTD	4258.09	3103.92	37.18
20	POWER GRID CORPORATION OF INDIA LTD	2366.38	1987.62	19.06
21	RASHTRIYA CHEMICALS AND FERTILIZERS LTD	1868.59	1039.03	79.84
22	MAZAGON INDIA LTD	1750.88	1766.23	-0.87
23	NTPC LTD	1481.97	1596.48	-7.17
24	IRCON INTERNATIONAL LTD	1440.13	1132.01	27.22
25	MSTC LTD	1427.48	3463.38	-58.78
26	FERTILIZERS & CHEMICALS (TRAVANCORE) LTD	1133.99	773.91	46.53

There was a big increase in foreign expenditure of Handicrafts & Handloom Exports Corpn. of India Ltd. during 2011-12 due to increased trading in bullion. The Oil Marketing Companies (IOCL, BPCL, MRPL, CPCL, ONGC and GAIL) and others, namely, MMTC, SAIL, BHEL, RINL, SCI also incurred increase in gross foreign exchange expenditure during 2011-12. Table 5.4 below shows the expenditure of foreign exchange under different heads of import of goods (raw material/plants & machinery), consultancy fee and other payments. Import of 'raw materials' and 'capital goods' have been the major items of foreign exchange expenditure in both the years.

Table 5.4

Items of Foreign Exchange Expenditure of all CPSEs
(2011-12 and 2010-11)

(₹ in crore)

	Particulars	2011-12%	2010-11	Change over the year
(a)	**Imports (CIF Basis)**			
	(i) Raw materials/Crude oil	495564.55 (81.91)	352725.40 (77.34)	40.50
	(ii) Stores, Spares & Components	12816.65 (2.12)	9812.21 (2.15)	30.62
	(iii) Capital Goods	96637.74 (15.97)	93523.48 (20.51)	3.33
	Sub Total (a)	605018.94 (82.48)	456061.06 (82.91)	
(b)	**Expenditure on account of :**			
	(i) Royalty and Consultancy fee	23222.39 (18.07)	21637.74 23.01	7.32
	(ii) Interest payment	3056.87 (2.38)	1813.67 (1.93)	68.55
	(iii) Others	102240.92 (79.55)	70545.35 (75.03)	
	(iv) Dividend remitted in Foreign Currency	4.59 (0.00)	28.32 (0.03)	-83.79
	Sub Total (b)	128524.77 (17.52)	94025.08 (17.09)	36.69
	Grand Total (a + b)	733543.71 (100)	550086.14 (100)	33.35

Note: Figure in brackets are as percentage of total

The share of 'raw materials' / crude oil continued to claim the largest share (around 82%) of gross foreign exchange expenditures in both the years of 2010-11 and 2011-12. Exchange rate fluctuation and change in commodity prices have been also impacting the earnings and expenditures of CPSEs.

5.3 International Finance & Investment

5.3.1 Sources of funds

International finance refers mainly to external commercial borrowings, supplier's credit and funds raised through the equity market abroad. Shares of MTNL (ADR) are listed on the New York Stock Exchange and GAIL (GDR) and SAIL (GDR) are listed on the London Stock Exchange. Funds raised by CPSEs in the form of secured and unsecured loans (more than ₹ 1000 crore), during 2010-11, are shown at Annex -5.2.

5.3.2 Foreign Investments by CPSEs

Foreign investment comprises off-shore investment by CPSEs through establishment of Indian subsidiaries abroad as well as joint ventures (JVs) and mergers and acquisitions (M&A). Several CPSEs have set up subsidiaries abroad for marketing their products, for procuring raw materials and for consolidating their international operations. ONGC Videsh, in particular, has been successful in acquiring oil and gas assets abroad. As on 31.3.2012, OVL has participation directly or through wholly owned subsidiaries/ J.Vs in 30 exploration and production projects in 14 countries. The Company holds stakes in these projects either directly or through Subsidiary Companies (29) / Joint Venture (1 incorporated and 15 unincorporated) Companies as per the structuring requirement of the overseas business. The other CPSEs are following the lead given by OVL in international investments. SAIL, CIL, RINL, NMDC and NTPC have together formed a JV in International Coal Ventures Pvt Ltd. for acquisition of coal assets abroad.

5.3.2.1 Policy on Acquisition of Raw Materials Overseas

[to be incorporated from chapter 7 (paragraph 7.5)]

5.4 International Operations of Select CPSEs

The paragraphs below discuss briefly the international operations of select CPSEs as top 'net foreign exchange earner' or 'net foreign exchange spender':

5.4.1 Mangalore Refinery and Petrochemicals Limited (MRPL)

MRPL attained a foreign exchange earning of 23418.32 in 2011-12 crore against the foreign exchange earning of 14603.16 crore in 2010 -11, an increase of 8814.72 crore. The company achieved the highest ever export turnover during the year 2011-12 by exporting products like Motor Spirit (MS), Naphtha, Mixed Xylene, High Speed Diesel (HSD), Jet fuel and Fuel Oil (FO).MRPL continues to have the term export contract for supply of petroleum products to Mauritius in collaboration with the State Trading Corporation (STC), Mauritius. In the global competitive market, MRPL has secured a place by exporting the petroleum products and continues to explore opportunities for its growth. The foreign exchange expenditure, however, stood at ₹ 47805.88 crore; it had, therefore a net foreign exchange expenditure of ₹ 24387.56 crore during 2011-12.

5.4.2 Bharat Heavy Electricals Limited (BHEL)

BHEL had a foreign exchange earning of ₹ 14419.15 crore during 2011-12 , and a foreign exchange expenditure of ₹ 10021.32 crore against the foreign exchange expenditure of ₹ 8565.27 crore in 2010-12 , an increase of ₹ 1456.05 crore . Its net foreign exchange earning stood at 4397.83 crore during the year.

5.4.3 PEC Ltd

PEC Ltd attained a foreign exchange earning of ₹ 1075.99 crore in 2011-12 against the foreign exchange earning of ₹ 1065.26 crore in 2010 -11 , an increase of ₹ 10.73 crore. The foreign exchange expenditure stood at ₹ 7549.74 crore in 2011-12; it had, therefore a net foreign exchange expenditure of ₹ 6423.75 crore during 2011-12. PEC was the first agency to offer issuance Letter of Credit facility to import gold. PEC imports gold and silver both on Letter of Credit basis as well as on Consignment basis. PEC offers a variety of services with highly qualified human resource to very demanding customers of India.

5.4.4 Steel Authority of India Ltd. (SAIL)

SAIL had a foreign exchange earning of ₹ 1230.1 crore during 2011-12 , and a foreign exchange expenditure of ₹ 17,887.37 crore against the foreign exchange expenditure of ₹ 15615.26 crore in 2010-11 , an increase of ₹ 2272.11 crore from its previous year . Its net foreign exchange expenditure stood at ₹ 16657.27 crore in 2011-12.

5.4.5 Air India Ltd.

Air India Ltd had a foreign exchange earning of ₹ 9528.45 crore in 2011-12 against the foreign exchange earning of ₹ 6094.37 crore in 2010-11, an increase of ₹ 3434.08 crore. Its foreign exchange expenditure stood at ₹ 5183.27 crore in 2011-12. Its net foreign exchange earnings was ₹ 4345.18 crore in 2011-12.

Air India now has a younger fleet comprising eight B777-200LRs and 12 B777-300ERs, 20 Airbus A-321s and 19 A-319s. On the international network Air India now operates 28 weekly services to three destinations in the USA - New York, and Chicago including a daily non-stop flight between Mumbai-New York and Delhi-New York following the induction of brand new Boeing 777-200LR in its fleet. With a fleet of 124 aircraft, Air India has been gradually expanding its network to cover new destinations in India and abroad.

5.4.6 Hindustan Petroleum Corporation Limited (HPCL)

HPCL had a foreign exchange earning of ₹ 7782.48 crore and an expenditure of ₹ 101312.6 crore , Its net foreign exchange expenditure was ₹ 93530.12 crore in 2011-12 against the net foreign exchange expenditure of ₹ 53530.14 crore in 2010-11.HPCL commissioned 1056 new retail outlets , which include ₹ 329 retail outlets and 218 distribution centres . In aviation sector, HPCL achieved a highest ever sales of ₹ 768 TMT and its pipeline achieved a thruput of ₹ 13.62 million years exceeding the targeted thruput.

5.4.7 Oil and Natural Gas Corporation Ltd (ONGC)

ONGC had a foreign exchange earning of ₹ 6315.27 crore and foreign exchange expenditure of ₹ 40169.86 crore in 2011-12. Its net foreign exchange expenditure stood at ₹ 33854.59 crore against net foreign exchange expenditure of ₹ 32403.91 crore in 2010-11.

5.4.8 Bharat Petroleum Corporation Ltd (BPCL)

BPCL Ltd attained a foreign exchange earning of ₹ 19315.61 crore in 2011-12 against the foreign exchange earning of ₹ 12380.37 crore in 2010 -11, an increase of ₹ 6935.24 crore over the previous year. The foreign exchange expenditure stood at ₹ 75060.25 crore in 2011-12. Therefore, it had a net foreign exchange expenditure of ₹ 55744.64 crore during 2011-12.

5.4.9 Handicrafts and Handloom Exports Corporation of India

Handicrafts and Handloom Corporation of India's had a foreign exchange expenditure of ₹ 12107.96 crore in 2011-12, an increase of ₹ 7193.94 crore, over the previous year of 2010-11. This increase was mainly on account of gold import from foreign countries.

5.4.10 MSTC Ltd

MSTC Ltd. had a foreign exchange expenditure of ₹ 1427.48 crore in 2011-12, a decrease of ₹ 2035.9 crore, from its previous year of 2010-11. Their foreign exchange expenditure has reduced because of decrease in imported material for procurement.

5.4.11 IRCON International Ltd

IRCON International Ltd attained a foreign exchange earning of ₹ 1862.44 crore in 2011-12, against the foreign exchange earning of ₹ 1541.63 crore in 2010 -11, an increase of ₹ 320.81 crore from its previous year. IRCON has achieved its highest ever operating income of ₹ 3601 crore approximately 13% more than it achieved in 2010-11, out of which 51% is from foreign projects implemented by IRCON.

5.4.12 MMTC Ltd (MMTC)

Against a foreign exchange earnings of ₹ 2069.92 crore during 2011-12, the foreign exchange outgo of the Company stood at ₹ 60,993.97 crore. MMTC had, therefore, a net foreign exchange expenditure of ₹ 58924.05 crore during the year. MMTC is the India's largest International Trading Company, and also the largest exporter of mineral. It is also the leading exporter / importer of agro commodities, the single largest importer / supplier of metals including Gold & Silver and a major player in the Coal and Hydrocarbons imports by the country. The Company commands extensive market coverage in over 65 countries in Asia, Europe, Africa, Oceania and America etc. and currently holds the no. 1 rank amongst the trading companies of India.

Foreign Exchange Earning (FEE) & Foreign Exchange Utilization (FEU) by CPSEs DURING 2011-12

Sl. No.	CPSEs	in crores		
		FEE	FEU	Net FEE
1	BHARAT HEAVY ELECTRICALS LTD.	14419.15	10021.32	4397.83
2	AIR INDIA LTD.	9528.45	5183.27	4345.18
3	NATIONAL ALUMINIUM COMPANY LTD.	2557.78	327.91	2229.87
4	AIRPORTS AUTHORITY OF INDIA LTD.	1319.51	138.45	1181.06
5	AIR INDIA CHARTERS LTD.	1151.81	0.00	1151.81
6	IRCON INTERNATIONAL LTD.	1862.44	1440.13	422.31
7	RITES LTD.	310.15	28.98	281.17
8	KIOCL LTD.	496.22	250.18	246.04
9	INDIAN RARE EARTHS LTD.	200.76	3.19	197.57
10	COCHIN SHIPYARD LTD.	677.20	540.23	136.97
11	HINDUSTAN COPPER LTD.	66.50	1.28	65.22
12	WAPCOS LTD.	115.48	80.07	35.41
13	COTTON CORPN. OF INDIA LTD.	33.00	0.13	32.87
14	CENTRAL COTTAGE INDUSTRIES CORPN. OF INDIA LTD.	23.47	0.00	23.47
15	NATIONAL TEXTILE CORPN. (Holding Co.) LTD.	25.12	2.23	22.89
16	KARNATAKA ANTIBIOTICS & PHARMACEUTICALS LTD.	22.09	4.31	17.78
17	INDIA TOURISM DEV. CORPN. LTD.	20.38	2.73	17.65
18	TELECOMMUNICATIONS CONSULTANTS (INDIA) LTD.	200.70	183.27	17.43
19	HINDUSTAN INSECTICIDES LTD.	21.18	5.49	15.69
20	INDIAN RAILWAY CATERING AND TOURISM CORPN. LTD.	12.52	0.44	12.08
21	PROJECTS & DEVELOPMENT INDIA LTD.	8.09	1.25	6.84
22	EXPORT CREDIT GUARANTEE CORPN.OF INDIA LTD.	8.68	3.38	5.30
23	HLL LIFECARE LTD.	48.72	44.70	4.02
24	MAHANAGAR TELEPHONE NIGAM LTD.	5.79	3.63	2.16
25	NATIONAL SEEDS CORPN. LTD.	1.98	0.00	1.98
26	MECON LTD.	4.82	2.85	1.97
27	EdCIL(India) Ltd.	3.40	1.64	1.76
28	ANDREW YULE & COMPANY LTD.	1.19	0.41	0.78
29	HOTEL CORPN. OF INDIA LTD.	0.64	0.00	0.64
30	TAMIL NADU TRADE PROMOTION ORGANISATION	0.48	0.00	0.48
31	SCOOTERS INDIA LTD.	0.50	0.11	0.39
32	HMT LTD.	0.23	0.00	0.23
33	ASSAM ASHOK HOTEL CORPN. LTD.	0.04	0.00	0.04
34	REC TRANSMISSION PROJECT CO. LTD.	0.02	0.00	0.02
35	NATIONAL JUTE MANUFACTURES CORPORATION LTD.	0.00	0.01	-0.01
36	NATIONAL BACKWARD CLASSES FINANCE & DEVP.CO.	0.00	0.01	-0.01
37	STATE FARMS CORPORATION OF INDIA LTD.	0.00	0.01	-0.01
38	NTPC ELECTRIC SUPPLY COMPANY LTD.	0.00	0.01	-0.01
39	CENTRAL WAREHOUSING CORPN.	0.27	0.29	-0.02
40	NTPC VIDYUT VYAPAR NIGAM LTD.	0.00	0.03	-0.03
41	ENGINEERING PROJECTS (INDIA) LTD.	0.00	0.07	-0.07
42	HINDUSTAN PREFAB LTD.	0.00	0.08	-0.08
43	HOOGHLY DOCK AND PORT ENGINEERS LTD.	0.00	0.10	-0.10
44	HINDUSTAN PHOTO FILMS MANUFACTURING CO. LTD.	0.00	0.10	-0.10
45	HMT BEARINGS LTD.	0.00	0.10	-0.10
46	BIECCO LAWRIE & CO. LTD.	0.00	0.20	-0.20

Sl. No.	CPSEs	in crores		
		FEE	FEU	Net FEE
47	RAIL VIKAS NIGAM LTD.	0.00	0.21	-0.21
48	RANCHI ASHOK BIHAR HOTEL CORPN. LTD.	0.00	0.22	-0.22
49	CERTIFICATION ENGINEERS INTERNATIONAL LTD.	1.33	1.56	-0.23
50	BHEL ELECTRICAL MACHINES LTD.	0.00	0.36	-0.36
51	ARTIFICIAL LIMBS MFG. CORPN. OF INDIA	0.03	0.74	-0.71
52	MINERAL EXPLORATION CORPN. LTD.	0.00	0.72	-0.72
53	BHARAT HEAVY PLATE & VESSELS LTD.	0.00	0.85	-0.85
54	HMT (INTERNATIONAL) LTD.	4.65	5.80	-1.15
55	URANIUM CORPORATION OF INDIA LTD.	0.00	1.24	-1.24
56	BHARAT WAGON & ENGG. CO. LTD.	0.00	1.58	-1.58
57	CENTRAL MINE PLANNING & DESIGN INSTITUTE LTD.	0.00	1.62	-1.62
58	BRIDGE & ROOF CO.(INDIA) LTD.	0.48	2.40	-1.92
59	INDIAN RENEWABLE ENERGY DEVT.AGENCY LTD.	23.48	25.45	-1.97
60	NATIONAL FILM DEV. CORPN. LTD.	2.21	4.28	-2.07
61	BHARAT PETRO RESOURCES LTD.	0.00	2.36	-2.36
62	NATIONAL SMALL INDUSTRIES CORPN. LTD.	0.96	3.34	-2.38
63	HINDUSTAN ORGANIC CHEMICALS LTD.	0.00	2.54	-2.54
64	NEPA LTD.	0.00	2.79	-2.79
65	HINDUSTAN PAPER CORPORATION LTD.	0.00	4.28	-4.28
66	MANGANESE ORE(INDIA) LTD.	0.00	5.57	-5.57
67	HINDUSTAN ANTIBIOTICS LTD.	1.60	7.83	-6.23
68	BURN STANDARD COMPANY LTD.	0.00	6.48	-6.48
69	HOUSING & URBAN DEV. CORPN. LTD.	1.58	8.11	-6.53
70	GAIL GAS LTD.	0.00	6.54	-6.54
71	INDIA TRADE PROMOTION ORGANISATION	10.19	17.40	-7.21
72	TEHRI HYDRO DEVELOPMENT CORP. LTD.	0.00	7.60	-7.60
73	MAHANADI COALFIELDLS LTD.	0.00	8.03	-8.03
74	PRIZE PETROLEUM COMPANY LTD.	0.00	8.92	-8.92
75	NORTH EASTERN ELECTRIC POWER CORPORATION LTD.	0.00	9.97	-9.97
76	HINDUSTAN NEWSPRINT LTD.	0.00	13.22	-13.22
77	HMT MACHINE TOOLS LTD.	0.00	16.34	-16.34
78	INDIA INFRASTRUCTURE FINANCE CO. LTD.	4.48	22.51	-18.03
79	NLC TAMIL NADU POWER LTD.	0.00	18.45	-18.45
80	KONKAN RAILWAY CORPORATION LTD.	0.00	19.68	-19.68
81	BHARAT PUMPS & COMPRESSORS LTD.	0.00	20.30	-20.30
82	CENTRAL ELECTRONICS LTD.	6.73	29.28	-22.55
83	BRAHMAPUTRA VALLEY FERTILIZER CORPN. LTD.	0.00	25.13	-25.13
84	CENTRAL COALFIELDS LTD.	0.00	25.64	-25.64
85	SOUTH EASTERN COALFIELDS LTD.	0.00	28.67	-28.67
86	INSTRUMENTATION LTD.	0.19	32.08	-31.89
87	DREDGING CORPN. OF INDIA LTD.	0.00	36.94	-36.94
88	WESTERN COALFIELDS LTD.	0.00	40.85	-40.85
89	RAJASTHAN ELECTRONICS AND INSTRUMENTS LTD.	0.49	42.18	-41.69
90	NEYVELI LIGNITE CORPN. LTD.	0.00	45.54	-45.54
91	BHARAT IMMUNOLOGICALS & BIOLOGICALS CORP. LTD.	0.46	49.65	-49.19
92	EASTERN COALFIELDS LTD.	0.00	50.15	-50.15
93	HEAVY ENGINEERING CORPN. LTD.	0.00	56.39	-56.39
94	SJVN LTD.	0.00	59.35	-59.35

Sl. No.	CPSEs	in crores		
		FEE	FEU	Net FEE
95	BROADCAST ENGG.CONSULTANTS INDIA LTD.	3.93	76.12	-72.19
96	GOA SHIPYARD LTD.	0.30	95.02	-94.72
97	NATIONAL INFORMATICS CENTRE SERVICES INCORPORATED	0.00	100.41	-100.41
98	BALMER LAWRIE & CO. LTD.	28.50	130.05	-101.55
99	NMDC Ltd.	0.00	112.53	-112.53
100	I T I LTD.	0.00	123.47	-123.47
101	NUMALIGARH REFINARY LTD.	0.00	150.76	-150.76
102	AIRLINE ALLIED SERVICES LTD.	2.23	153.61	-151.38
103	MISHRA DHATU NIGAM LTD.	0.00	153.72	-153.72
104	NHPC LTD.	0.00	164.56	-164.56
105	POWER FINANCE CORPORATION	0.00	173.51	-173.51
106	BHARAT SANCHAR NIGAM LTD.	107.64	287.69	-180.05
107	HINDUSTAN SHIPYARD LTD.	3.38	194.77	-191.39
108	MADRAS FERTILIZERS LTD.	0.00	200.81	-200.81
109	COAL INDIA LTD.	0.09	211.23	-211.14
110	MUMBAI RAILWAY VIKAS CORPORATION LTD.	0.00	216.04	-216.04
111	PAWAN HANS HELICOPTERS LTD.	158.16	389.71	-231.55
112	GARDEN REACH SHIPBUILDERS & ENGINEERS LTD.	0.00	248.85	-248.85
113	NORTHERN COALFIELDS LTD.	0.00	255.29	-255.29
114	RURAL ELECTRIFICATION CORPN. LTD.	0.00	260.43	-260.43
115	OIL INDIA LTD.	1.64	284.57	-282.93
116	ANTRIX CORPORATION LTD.	31.36	345.66	-314.30
117	NATIONAL FERTILIZERS LTD.	0.00	319.71	-319.71
118	ELECTRONICS CORPN. OF INDIA LTD.	6.17	331.00	-324.83
119	ENGINEERS INDIA LTD.	116.08	460.67	-344.59
120	INDIAN RAILWAY FINANCE CORPORATION LTD.	0.00	345.76	-345.76
121	BHARAT DYNAMICS LTD.	0.11	419.44	-419.33
122	SECURITY PRINTING & MINTING CORPN. INDIA LTD.	7.96	458.03	-450.07
123	BEML LTD.	116.12	683.51	-567.39
124	NUCLEAR POWER CORPN. OF INDIA LTD.	0.00	636.71	-636.71
125	FERTILIZERS & CHEMICALS (TRAVANCORE) LTD.	153.89	1133.99	-980.10
126	ONGC VIDESH LTD.	8102.97	9250.85	-1147.88
127	M S T C LTD.	0.00	1427.48	-1427.48
128	NTPC LTD.	2.76	1481.97	-1479.21
129	MAZAGON DOCK LTD.	0.00	1750.88	-1750.88
130	RASHTRIYA CHEMICALS AND FERTILIZERS LTD.	1.82	1868.59	-1866.77
131	POWER GRID CORPORATION OF INDIA LTD.	9.65	2366.38	-2356.73
132	SHIPPING CORPORATION OF INDIA LTD.	0.00	4258.09	-4258.09
133	RASHTRIYA ISPAT NIGAM LTD.	544.51	5569.86	-5025.35
134	HINDUSTAN AERONAUTICS LTD.	348.33	5803.34	-5455.01
135	GAIL (INDIA) LTD.	8.85	6423.60	-6414.75
136	P E C LTD.	1075.99	7549.74	-6473.75
137	CONTAINER CORPORATION OF INDIA LTD.	0.00	7646.44	-7646.44
138	HANDICRAFTS & HANDLOOM EXPORTS CORP. OF INDIA LTD.	31.34	12107.96	-12076.62
139	STEEL AUTHORITY OF INDIA LTD.	1230.10	17887.37	-16657.27
140	STATE TRADING CORPN. OF INDIA LTD.	303.46	18235.42	-17931.96
141	MANGALORE REFINARY & PETROCHEMICALS LTD.	23418.32	47805.88	-24387.56
142	OIL & NATURAL GAS CORPORATION LTD.	6315.27	40169.86	-33854.59
143	CHENNAI PETROLEUM CORPORATION LTD.	156.67	35919.90	-35763.23
144	BHARAT PETROLEUM CORPN. LTD.	19315.61	75060.25	-55744.64
145	M M T C LTD.	2069.92	60993.97	-58924.05
146	HINDUSTAN PETROLEUM CORPN. LTD.	7782.48	101312.57	-93530.09
147	INDIAN OIL CORPORATION LTD.	19828.74	240481.95	-220653.21
	Grand Total	124491.97	733543.71	-609051.74

Loan (secured & unsecured) raised abroad by CPSEs during 2011-12
(more than ` 500 Crore)

Sl. No.	CPSEs	2011-12		Total	2010-11		Total
		Secured Loan	Un Secured Loan		Secured Loan	Un Secured Loan	
1	BHARAT PETROLEUM CORPN. LTD.	0	20339	20339	0	11702	11702
2	CHENNAI PETROLEUM CORPORATION LTD.	97	1469	1566	134	1578	1712
3	COAL INDIA LTD.	0	1173	1173	0	1187	1187
4	GAIL (INDIA) LTD.	0	2323	2323	0	0	0
5	HINDUSTAN PETROLEUM CORPN. LTD.	0	4401	4401	0	2797	2797
6	HOUSING & URBAN DEV. CORPN. LTD.	0	678	678	0	663	663
7	INDIA INFRASTRUCTURE FINANCE CO. LTD.	0	4201	4201	0	3181	3181
8	INDIAN OIL CORPORATION LTD.	0	26234	26234	0	17491	17491
9	INDIAN RAILWAY FINANCE CORPORATION LTD.	147	8339	8486	151	6286	6437
10	INDIAN RENEWABLE ENERGY DEVT.AGENCY LTD.	0	1446	1446	0	0	0
11	MANGALORE REFINERY & PETROCHEMICALS LTD.	257	1855	2112	0	0	0
12	NEYVELI LIGNITE CORPN. LTD.	0	539	539	0	519	519
13	NORTHERN COALFIELDS LTD.	0	618	618	0	640	640
14	NTPC LTD.	99	12929	13028	256	9507	9763
15	NUCLEAR POWER CORPN. OF INDIA LTD.	0	901	901	0	0	0
16	POWER FINANCE CORPORATION	0	4662	4662	0	4150	4150
17	POWER GRID CORPORATION OF INDIA LTD.	11744	2607	14351	10007	1421	11428
18	RURAL ELECTRIFICATION CORPN. LTD.	0	10471	10471	0	6616	6616
19	SHIPPING CORPORATION OF INDIA LTD.	5168	0	5168	3950	0	3950
20	SJVN LTD.	0	1207	1207	0	811	811
21	STEEL AUTHORITY OF INDIA LTD.	0	7087	7087	0	5573	5573
	Grand Total:	17512	113479	130991	14498	74122	88620

Chapter-6

Organisational Structure and Human Resource Management

6.1 Organisational Structure of CPSEs

The Department of Public Enterprises formulate policy guidelines on the Board structure of Public Enterprises and advises on the shape and size of organizational structure of CPSEs. The public enterprises are categorized in four Schedules namely 'A', 'B', 'C' and 'D' based on various quantitative, qualitative and other factors. The quantitative factors are: investment, capital employed, net sales, profit before tax, number of employees and units, capacity addition, revenue per employee, sales/capital employed, capacity utilization and value added per employee. Qualitative factors are: national importance, complexities of problems being faced by the company, level of technology, prospects for expansion and diversification of activities and competition from other sectors, etc. The other factors, wherever available, relate to Share price, MOU ratings, Maharatna/Navratna/Miniratna status and ISO certification and also the factor relating to the critical/strategic importance of the corporation. The pay scales of Chief Executives and full time Functional Directors in CPSEs are determined as per the schedule of the concerned enterprise.

Proposals received from various administrative Ministries/Departments for initial categorization /upgradation of CPSEs in appropriate schedule, personal upgradation, creation of posts in CPSEs, etc. are considered in DPE in consultation with Public Enterprises Selection Board (PESB). During 2011-12, 1 CPSE (Hindustan Prefab Ltd.) was upgraded to higher schedule, 2 CPSEs (Orissa Minerals Development Company Ltd. and Bisra Stone Lime Corporation Ltd.) were initially categorized in the appropriate schedules, one Chief Executive of a CPSE (Numaligarh Refinery Ltd.) was given higher scale of pay on personal basis and one post of Functional Director was created (Director-Human Resource & Corporate Affairs in Balmer Lawrie & Co. Ltd.). During the period from April 2012 to October 2012, one CPSE (ONGC Videsh Ltd.) was upgraded to higher schedule, 3 posts of Functional Directors were created (Joint Managing Director in Air India Ltd. and Director (Finance) & Director (Production and Planning) in Orissa Minerals Development Company Ltd.) and one Chief Executive of a CPSE (National Film Development Corporation Ltd.) was given higher scale of pay on personal basis.

As on 31.3.2012, there were 260 CPSEs. Out of 260 there are 61 Schedule 'A', 71 Schedule 'B', 44 Schedule 'C', 4 Schedule 'D' and remaining 80 are uncategorized CPSEs. The Schedule-wise list is at Annex-A.

6.2 Appointment of Functional Directors of CPSEs

Functional Directors including Chief Executives of the CPSEs are appointed by the concerned Administrative Ministries/Departments on the basis of recommendations of Public Enterprises Selection Board (PESB). The Public enterprises Selection Board is a high powered body constituted by the Government of India vide its Resolution dated 3.3.1987. The PESB has been set up with the objective of evolving a sound managerial policy for the Central Public Sector Enterprises and, in particular, to advise Government on appointments to their top management posts. As per GOI Resolution, the PESB shall consist of a part-time or full-time chairperson and three full-time Members. The Chairperson and Members are persons who have had a long and distinguished career in management of public or private corporations or public in administration, and have had a proven record of achievements, preferably, in the field of personnel, finance, production or marketing. The Government has decided that candidates from State Level Public Sector Enterprises (SLPEs) and the Private sector will also be considered for selection to the port of functional directors in CPSEs as non-internal candidates along with the candidates of Public Sector Enterprises subject to fulfilling the eligibility criteria. The Government has furthermore streamlined the procedure for selection and appointment of Functional Directors on the Boards of CPSEs. The procedure for confirmation and extension of tenure of Board level incumbents of CPSEs has also been simplified and streamlined by the Government.

6.2.1 CVC Clearance

The Government has also laid down the procedure for obtaining vigilance clearance from Central Vigilance Commission (CVC) in respect of candidates recommended by PESB for Board level posts in CPSEs so as to reduce delays and it has been prescribed that CVC will grant its clearance (or otherwise) to the concerned Administrative Ministry/Department within 15 days of the receipt of recommendations of PESB.

6.3 Professionalization of Board of CPSEs

Department of Public Enterprises (DPE) formulates policy guidelines on the Board structure of CPSEs. In pursuance of the public sector policy being followed since 1991 several measures have been taken by the Department of Public Enterprises to professionalize the Boards of public enterprises. The guidelines issued in 1992 provide that outside professionals should be inducted on the Boards of CPSEs in the form of part-time non-official Directors and that the number of such Directors should be at least 1/3rd of the actual strength of the Board. In the case of listed CPSEs headed by executive Chairman, the number of non-official Directors (Independent Directors) should be at least half the strength of the Board. The guidelines also provide that the number of Government Directors on the Boards should be not more than one-sixth of the actual strength of the Board subject to a maximum of two. Apart from this, there should be some functional Directors on each Board whose number should not exceed 50% of the actual strength of the Board

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

6.3.1.1 Criteria of Experience

(i) Retired Government officials with a minimum of 10 years experience at Joint Secretary level or above.

(ii) Persons who have retired as CMD/CEOs of CPSEs and Functional Directors of the Schedule 'A' CPSEs. The ex-Chief Executives and ex-Functional Directors of the CPSEs will not be considered for appointment as non-official Director on the Board of the CPSE from which they retire. Serving Chief Executives/Directors of CPSEs will not be eligible to be considered for appointment as non-official Directors on the Boards of any CPSEs.

(iii) Academicians/Directors of Institutes/Heads of Department and Professors having more than 10 years teaching or research experience in the relevant domain e.g. management, finance, marketing, technology, human resources, or law.

(iv) Professionals of repute having more than 15 years of relevant domain experience in fields relevant to the company's area of operation.

(v) Former CEOs of private companies if the company is (a) listed on the Stock Exchanges or (b) unlisted but profit making and having an annual turnover of at least ₹ 250 crore.

(vi) Persons of eminence with proven track record from Industry, Business or Agriculture or Management.

(vii) Serving CEOs and Directors of private companies listed on the Stock Exchanges may also be considered for appointment as part-time non-official Directors on the Boards of CPSEs in exceptional circumstances.

6.3.1.2 Criteria of Educational Qualification

Minimum graduate degree from a recognized university.

6.3.1.3 Criteria of Age

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

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

The proposals for appointment of non-official Directors are initiated by the concerned Administrative Ministries/Departments. The selection of non-official Directors in respect of all CPSEs is made by the Search Committee which presently consists of Chairman (PESB), Secretary (DPE), Secretary of the administrative Ministry/Department of the CPSE and 2 non-official Members. The concerned Administrative Ministry/Department appoints the non-official Directors on the basis of recommendations of Search Committee after obtaining the approval of competent authority.

During the year 2011-12, the proposals for filling up 156 positions of non-official Directors on the Boards of 88 CPSEs were considered and suitable recommendations were conveyed to the concerned administrative Ministries/Departments.

6.4 Corporate Governance in Central Public Sector Enterprises (CPSEs)

Keeping in view the importance of Corporate Governance principles in ensuring transparency and enhancing the trust of stakeholders, the Government had, in 2007, approved the Guidelines on Corporate Governance for CPSEs. These guidelines were formulated by DPE keeping in view relevant laws, instructions and procedures. These Guidelines, after approval by the Cabinet, were released by the then Finance Minister on 22nd June, 2007. The Cabinet while approving the implementation of the Guidelines for an experimental phase of one year had directed that (i) any adjustments required in the Guidelines be made in the light of the experiences gained with the approval of competent authority; and (ii) mid-year progress reports be submitted by the CPSEs.

Since the issue of these Guidelines in June, 2007, the CPSEs have had the opportunity to implement them for the whole of the financial year 2008-09. It was felt that while the principles of Corporate Governance apply equally to both the public and private sector, there was a continued need to adopt and apply the good Corporate Governance practices in respect of CPSEs wherein huge public funds are invested. The continued need for adoption of good Corporate Governance principles has been reinforced in the light of recent events in the corporate world. Thus, it was decided to continue the Guidelines on Corporate Governance for CPSEs and after due inter-ministerial consultations, the proposal for introduction of Guidelines on Corporate Governance for CPSEs on mandatory basis was approved by the Government in March, 2010.

These Guidelines have now been made mandatory and are applicable to all CPSEs. The Guidelines cover issues like composition of Board of CPSEs, Audit Committee, Remuneration Committee, Subsidiary CPSEs, Disclosures, Code of Conduct and Ethics, Risk Management and Reporting. The Guidelines have been modified and improved keeping in view the experience gained during the experimental phase of one year and include additional provisions relating to monitoring the compliance of Guidelines by the CPSEs and formation of Remuneration Committee. Since, the concept of Corporate Governance is dynamic in nature, it has also been provided that suitable modifications in these Guidelines would be carried out to bring them in line with prevailing laws, Regulations, Acts, etc. from time to time.

The DPE has also taken the initiative to grade CPSEs on the basis of their compliance with Guidelines and such grading will be used for MOU Awards. Keeping in view the importance of Corporate Governance in State Level Public Enterprises, all States have also been advised to implement these Guidelines. The salient features of these guidelines are as under.

6.4.1 Composition of Board

In respect of the Board's composition, these Guidelines provide that the number of functional Directors should not exceed

50% of the actual strength of the Board; and the number of Government nominee Directors shall be restricted to maximum of two. In case of listed CPSEs with Executive Chairman, the number of non-official Directors shall be at least 50% of Board Members. In case of unlisted and listed CPSEs with Non-executive Chairman, at least one-third of the Board Members shall be non-official Directors. The Government has also laid down pre-defined criteria in terms of educational qualifications, age and experience in respect of persons to be considered for appointment as Non-official Directors. Relevant clauses have been incorporated in these guidelines to ensure 'independence' of Non-official Directors and avoid potential conflict of interest. It has also been provided that the Directors nominated by any institution other than public financial institution will not be treated as Non-official Directors.

It has been further mandated that the Board meetings are to be held at least once in every 3 months and at least 4 such meetings held in a year and all relevant information is to be given to the Board. Further, the Board should lay down code of conduct for all members and senior management. In this regard, a model Code has been incorporated in the Guidelines to assist the CPSEs. The Guidelines inter alia provide that the Board should ensure integration and alignment of risk management system and the company should undertake suitable training programmes for its new Board members.

6.4.2 Audit Committee

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

6.4.3 Subsidiary Companies

With regard to subsidiary companies, it has been provided that at least one Independent Director of holding company will be Director on the Board of subsidiary company and the Audit Committee of holding company will review financial statements of subsidiary. All significant transactions and arrangements of subsidiary companies are required to be brought to the attention of Board of Directors of the holding company.

6.4.4 Disclosures

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

6.4.5 Compliance

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

DPE organized an Interactive Session with Company Secretaries of all CPSEs to discuss issues related to Compliance of Guidelines on Corporate Governance of CPSEs. Thereafter, DPE had constituted a Committee of Company Secretaries of select CPSEs to review the format for grading CPSEs on the basis of their compliance with Guidelines on Corporate Governance for CPSEs and on the basis of recommendations of this Committee, the format for grading the CPSEs has been revised during the year and for the year 2011-12, the grading would be finalized on the basis of new format and all CPSEs have been requested to furnish self-evaluation reports in the prescribed format to their concerned Administrative Ministries/Departments on quarterly basis. The concerned Administrative Ministries/Departments have been further requested to furnish consolidated annual score and grading in respect of all CPSEs under their administrative control to DPE.

6.5 Wage Policy and Manpower Rationalisation

The Department of Public Enterprises (DPE) functions as nodal Department inter-alia, in respect of policy relating to wage settlement of workmen, pay revision of non-unionized supervisors and executives holding posts below the Board level as well as at the Board level in CPSEs. The Department renders advice to the Administrative Ministries/ Departments and the CPSEs in matters relating to the wage policy of workmen and revision in the scales of pay of the executives. The CPSEs are largely following Industrial Dearness Allowance (IDA) pattern scales of pay. In some cases Central Dearness Allowance (CDA) pattern scales of pay is followed. DPE also issues quarterly DA orders in respect of IDA employees. The DA orders for CDA employees are issued on six monthly periods.

6.5.1 Industrial Dearness Allowance (IDA)

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/ Departments that as and when a new CPSE is created or established, IDA pattern and related scales of pay should be adopted ab-initio. In line with DPE O.M. dated 12.06.1990, DPE vide its O.M. dated 10.08.2009 reiterated and emphasized that 'appointments' including 'promotion' on or after 01.01.1989 in CDA scales of pay have to be in IDA scales of pay. There were 260 CPSEs (excluding Banks, Insurance Companies and newly set up CPSEs), as on 31.03.2012 under the administrative control of the Central Government. They employed approximately 13.98 lakh workmen, clerical staff and executives. Out of this, around 75% of the workmen and executives are on IDA pattern and related scales of pay. The remaining employees are on CDA pay pattern, deputation etc.

6.5.2 Second Pay Revision Committee

As the periodicity of previous pay revision was coming to an end, the Second Pay Revision Committee (2nd PRC) headed by Mr. Justice M. JagannadhaRao, retired judge of Supreme Court, for the revision of scales of pay of Board level and below Board level executives including non-unionized supervisors of CPSEs following Industrial Dearness Allowance (IDA) pattern scales of pay w.e.f. 01.01.2007, was constituted vide the Government of India Resolution dated 30.11.2006. The IInd PRC submitted its report to Government on 30.05.2008. The Government, after due consideration of the recommendations of the 2nd PRC issued orders on 26.11.2008 and 09.02.2009. The salient features of these orders are as follows:—

(i) Pay scales ranging from ? 12,600-32,500 for E-0 grade and to ? 80,000-1,25000 for Chief Executives of schedule 'A' CPSEs.

(ii) A uniform fitment benefit @ 30% on basic pay plus DA @ 68.8% as on 01.01.2007.

(iii) Rate of increment @ 3% of basic pay.

(iv) Perks and allowances upto the maximum of 50% of basic pay, with provision of 'Cafeteria Approach'.

(v) PRP ranging from 40% to 200% of the basic pay.

(vi) Superannuation benefits upto 30% of basic pay.

(vii) Ceiling of gratuity in respect of executives and non-unionized supervisors raised to ? 10.00 Lakh w.e.f. 01.01.2007.

(viii) Implementation of Pay Revision linked to affordability of the CPSE.

(ix) The CPSE concerned have to finance pay revision from their own resources and no budgetary support will be provided.

(x) An Anomalies Committee consisting of Secretaries of Department of Public Enterprises, Department of Expenditure and Department of Personnel & Training constituted to look into further specific issues/ problem that may arise in implementation of Governments orders on the recommendation of 2nd PRC.

(xi) DPE will issue necessary instructions/clarifications whenever required in implementation of the decision on pay revision.

Subsequently, a Committee of Ministers headed by the then Home Minister looked into the demands of the executives of Oil & Power Sector CPSEs. Based on the recommendations of the Committee of Ministers, government issued orders on 02.04.2009 to extend the following additional benefits:-

(i) Benefit of merger of DA with basic pay for the purpose of fitment raisingit from 68.8% to 78.2%.

(ii) Superannuation benefitupto 30% of basic pay + DA instead of basic pay alone.

(iii) Limiting the expenditure on infrastructure to recurring cost of running the facilities with a ceiling of 10% of basic pay.

(iv) Enhanced allowances could be effective from 26.11.2008, instead of from the date of issue of Presidential Directive, provided the Presidential Directive is issued within one month of 02.04.2009.

(v) These benefits to be extended to all CPSEs. Benefits as given in these O.Ms to be viewed as a total package. No change need be made in O.Ms dated 26.11.2008 and 09.02.2009.

6.5.3 Recommendation of Anomalies Committee

In terms of the provision of Anomalies Committee under DPE O.M. dated 26.11.2008, certain issues have been considered by the Anomalies Committee and DPE has issued orders accordingly. The issues covered are (i) Pay etc. of Government officers on deputation to CPSEs, (ii) Self Lease, (iii) Medical Expenditure, (iv) Encashment of Leave (v) Benefit of bunching of increment,(vi) Procedure of pay fixation in some past cases of Board level executives, (vii) Protection of last drawn pay in a particular case of Board level executives (viii) NPA not to be considered as pay for the purpose of calculating other benefits (ix) no other allowance or perks to be kept outside the 50% ceiling except the '4' that have been provided in DPE guidelines and (x) not to include 'under recoveries' in PBT for the purpose of calculating PRP.

6.5.4 Wage Revision for Workmen under IDA pattern

DPE vide O.Ms dated 9.11.2006 and 01.05.2008 has issued policy guidelines for the 7th Round of Wage Negotiations (which was on a general basis from 01.01.2007) with the unionized workmen of CPSEs. The guidelines are broadly similar to the earlier policy on the Sixth Round of Wage Negotiations. The guidelines also provide that administrative Ministries/ Departments may take a decision on a case by case basis for the periodicity of wage settlement within 10 years but not less than 5 years, with the approval of their Minister.

6.5.5 Pay revision of employees under CDA Pattern in CPSEs

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 CPSEs 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 were 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 were introduced in these CPSEs with effect from 1.1.1989. Vide DPE O.M. dated 10.08.2009 it was clarified that 'Appointment' includes selection, promotion and deputation. Therefore, all appointments including appointment on promotion should be under IDA pattern of pay scales as per the direction of Hon'ble Supreme Court.

DPE vide O.Ms dated 14.10.2008 and 20.01.2009 has revised pay scales and allowances of the employees of CPSEs following CDA pattern w.e.f. 01.01.2006. The benefit of pay revision was allowed to the employees of those CPSEs that are not loss making and are in a position to absorb the expenditure on account of pay revision from their own resources without any budgetary support from the Government.

6.5.6 Important policy guidelines issued during the period 2011-12

(i) The issue of sanction of foreign tour programme of Chief Executives and Functional Directors was reviewed and DPE vide O.M. dated 20.07.2011, inter alia, clarified that status-quo as indicated in O.M. dated 24.08.2007 to be maintained.

(ii) DPE vide O.M. dated 20.07.2011 allowed administrative Ministries/Departments to create 'Common Corpus' for the retired employees of CPSEs under their administrative control in the light of DPE O.M. dated 08.07.2009.

(iii) DPE vide O.M. dated 30.05.2011 issued guidelines to be followed by employees of CPSEs/Association/Trade Unions etc. while sending their representations on wage/ pay related issues.

(iv) Based on the recommendations of Anomalies Committee, DPE vide O.M. dated 01.06.2011 has clarified that 'NPA' will not to be considered as pay for the purpose of calculation of other benefits and no other allowance or perks will be kept outside the 50% ceiling except the four allowances that have been provided in DPE O.M. dated 26.11.2008.

(v) DPE vide O.M. dated 20.03.2012 conveyed administrative Ministries/Departments to issue suitable guidelines to the CPSEs under their administrative control regarding rate for recovery of rent on lease/self-lease accommodation.

6.6 Voluntary Retirement Scheme (VRS)

In the present market scenario, in view of the ongoing restructuring in industry including CPSEs, several measures for reforms and restructuring of CPSEs have been taken up by the Government. Right sizing of manpower in the CPSEs is one of the measures adopted. In this process, the Voluntary Retirement Scheme, (initially announced in October, 1988 for the first time) was further liberalized and a comprehensive package was notified by DPE in May, 2000 in ordrer 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 restructuring models.

Considering the difficulties faced by the enterprises where the wage revision of 1992 or 1997 (as the case may be) could not be effective, the Voluntary Retirement Scheme was liberalized by issuance of subsequent notification of 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 wage revision of 1997 could not be made effective. The ex-gratia payment under VRS to employees following CDA pattern at 1986 scales of pay has been enhanced by 50% w.e.f. 26.10.2004. These increases in VRS compensation are to be computed based on existing pay of employees.

6.6.1 VRS In Cpses that can Sustain a VRS with their Own Surplus Resources.

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.

6.6.2 VRS in Marginally Profit or loss Making and Sick and Unviable CPSEs

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 ervice left until superannuating, subject to the condition that the compensation shall not exceed the sum of salary for the balance period left for superannuation (ii) or the VRS 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 an amount not exceeding the salary/wage for the balance period of service left.

6.7 Scheme of Counselling, Retraining and Redeployment

Restructuring of enterprises is a global phenomenon, particularly in the context of liberalized economy. There has been thrust on restructuring central public enterprises both at macro as well as micro level. In the process, rationalization of manpower has also become a necessity. However, in some cases it affects the existing manpower due to shift in technology and changed manpower requirements. As such, the policy of the Government has been to implement reforms with a humane face and provide adequate safety net for the affected workers adversely affected due to right sizing.

Considering the need to have safety net, Government had established the 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 retraining activity was administered by Department of Industrial Policy & Promotion. However, in February, 2000, due to various reasons NRF was abolished in February, 2000. Since 2001-02, the Scheme for Counselling, Retraining and Redeployment (CRR) of Rationalized Employees of CPSEs is being implemented by Department of Public Enterprises. CRR Scheme was modified in November, 2007 in order to widen its scope and coverage. One dependent of VRS optees is also eligible in case the VRS optee himself is not interested.

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

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

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

Counselling helps the rationalized employees to cope with the trauma of leaving the organization, to properly manage their funds including compensation and to motivate them to face challenges and re-join the productive process. Similarly, ***retraining*** strengthens their skill/expertise. Selected training institutes impart need-based training in modules of 30 days / 45 days / 60 days.. The faculty support is both internal and external, The approach is to provide classroom lectures as well as field experience. In the process, trainees interact with experts from various fields and are 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.

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

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

In 2011-12, a Plan Fund of ₹ 8.90 crore was allocated. During the year, 11 nodal agencies were operational with 49 Employees Assistance Centres (EACs) located all over the country. Year wise number of persons trained under the scheme is shown as under:-

Table 6.1

CRR Scheme

Year	No. of persons trained
2001-02	8064
2002-03	12066
2003-04	12134
2004-05	28003
2005-06	32158
2006-07	34398
2007-08	9728
2008-09	9772
2009-10	7400
2010-11	9265
2011-12	9400
Total	172388

In order to evaluate the performance of nodal agencies DPE is considering to engage a Third Party Assessment Agency (TPAA) in the year 2012-13.

6.8 Employment Under Reserved Categories

The Personnel and Recruitment Policies in respect of appointments against below Board level posts are formulated by the management of respective CPSEs. However, on matters of general importance, policy guidelines are issued by the Government of India to the enterprises which are to be kept in view by the latter while framing their individual corporate policies. Furthermore, formal Presidential Directives are issued to CPSEs by the concerned administrative Ministries to ensure reservation in regard to employment for Scheduled Castes, Scheduled Tribes and Other Backward Classes (OBCs), on similar lines as applicable in the Central Government Ministries/Departments. The Department of Public Enterprises keeps a watch on the reservation policies in the recruitment through calling for Annual Reports from the CPSEs and taking necessary follow-up actions after scrutinizing these reports. A comprehensive Presidential Directive incorporating all important instructions on reservation for SCs and STs was issued by DPE to all the administrative Ministries/Departments concerned on 25th April, 1991 for formal issuance of the same to CPSEs. Necessary changes and modifications are also circulated to CPSEs through their administrative Ministries/ Departments for information and compliance.

Subsequently, based on the recommendation of the Second Backward Classes Commission (Mandal Commission) and in accordance with the Supreme Court Judgement in the Indira Sawhney case, instructions were issued in providing reservation of 27% of vacancies in favour of Other Backward Classes (OBCs). The Department of Personnel & Training (DoPT) who formulate the policy in respect of reservation in services, have been issuing instructions from time to time on various aspects of reservation in favour of OBCs. Reservation for OBCs was made effective w.e.f. 8.9.1993. Department of Public Enterprises (DPE) has been extending these instructions to CPSEs through their administrative Ministries for compliance. A comprehensive Presidential Directive incorporating all instructions was 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 CPSEs under their control. DoPT instructions on allocation of a sub-quota of 4.5% for minorities within the 27% reservation for OBCs have been also extended vide DPE O.M. dated 2nd January, 2012 to the administrative Ministries/Departments (concerned with

CPSEs) for implementation in CPSEs under their control. The castes/communities of the said minorities which are included in the Central list of OBCs, notified from time to time by the Ministry of Social Justice & Empowerment, shall be covered within the said sub-quota.

Athough the administrative Ministries/Departments are responsible for implementation of these Directives, the Department of Public Enterprises also takes follow-up action on the recommendations made by the Parliamentary Committee on Welfare of Scheduled Castes and Scheduled Tribes and National Commission for SCs/STs/OBCs. The CPSEs have been advised by DPE to make vigorous efforts to wipe out the backlog vacancies to improve the representation of Scheduled Castes/ Scheduled Tribes/OBCs in the services, particularly in Group 'A' & 'B' posts. CPSEs have also been advised to invariably associate an officer of appropriate level belonging to SC/ST with their Departmental Promotion Committee/Selection Board.

The present quota for providing reservation for candidates belonging to Scheduled Castes, Scheduled Tribes and OBCs as well as other categories of persons entitled to reservation of vacancies (where recruitment is on All-India basis) through open competition is shown below:

Table 6.2

Quota for Reservation

Category	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%

Annexure 6.2 sums up the position regarding representation of Scheduled Castes and Scheduled Tribes in CPSEs as on 1.1.1980 and the comparative position as on the first day of the year 2011 and 2012.

Group 'A' : Managerial/Executive Level

Group 'B' : Supervisory Level

Group 'C': Workmen/Clerical Level

Group 'D': Semi-skilled/Unskilled

The representation of SCs/STs in Group 'A' posts has been rising steadily and has increased from 2.90% and 0.66% as on 1.1.1980 to 14.63% and 5.39% respectively as on 1.1.2012. Similarly, in regard to Group 'B' posts the representation of SCs/ STs has risen from 5.12% and 1.36% as on 1.1.1980 to 14.54% and 7.44% respectively as on 1.1.2012 (Annexure 6.2 and Statement 26).

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

DPE has also extended instructions vis-à-vis the scheme for reservation for Ex-servicemen in CPSEs through the administrative Ministries/ Departments. Instructions streamlining the procedure for recruitment of Ex-servicemen have been also issued with a view to augment their in-take in CPSEs. Such CPSEs, which are in a position to offer agencies/dealerships, have been advised to reserve quota of such agencies/dealership for allotment to Ex-servicemen.

DPE has also issued draft Presidential Directive on 22.4.1991 to all the administrative Ministries/Departments concerned with the CPSEs for employment of physically handicapped persons in CPSEs. With the enactment of the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995, the reservation to physically handicapped persons stood extended to identified Group 'A' and 'B' posts to be filled through Direct Recruitment. As per the Act, not less than 3% posts shall be reserved for Persons with Disabilities of which 1% each shall be reserved for persons suffering from (i) blindness or low vision (ii) hearing impairment and (iii) locomotor disability or cerebral palsy. All CPSEs have, accordingly, been advised to comply with the provisions of the Act.

Annexure 6.1

Classification of CPSEs as on 31.3.2012

Sl. No.	Name of the CPSEs	Schedule	Honding/ Subsidiary	Category
1	AIR INDIA LTD.	A	H	Others
2	AIRPORTS AUTHORITY OF INDIA LTD.	A	H	Miniratna-I
3	BEML LTD.	A	H	Miniratna-I
4	BHARAT BHARI UDYOG NIGAM LTD.	A	H	Others
5	BHARAT ELECTRONICS LTD.	A	H	Navratna
6	BHARAT HEAVY ELECTRICALS LTD.	A	H	Navratna
7	BHARAT PETROLEUM CORPN. LTD.	A	H	Navratna
8	BHARAT SANCHAR NIGAM LTD.	A	H	Miniratna-I
9	CENTRAL WAREHOUSING CORPN.	A	H	Miniratna-I
10	COAL INDIA LTD.	A	H	Maharatna
11	CONTAINER CORPORATION OF INDIA LTD.	A	H	Miniratna-I
12	DEDICATED FRIGHT CORRIDOR CORP. OF INDIA LTD.	A	H	Others
13	ELECTRONICS CORPN. OF INDIA LTD.	A	H	Others
14	ENGINEERS INDIA LTD.	A	H	Miniratna-I
15	FERTILIZERS & CHEMICALS (TRAVANCORE) LTD.	A	H	Others
16	FOOD CORPN. OF INDIA	A	H	Others
17	GAIL (INDIA) LTD.	A	H	Navratna
18	HEAVY ENGINEERING CORPN. LTD.	A	H	Others
19	HINDUSTAN AERONAUTICS LTD.	A	H	Navratna
20	HINDUSTAN COPPER LTD.	A	H	Miniratna-I
21	HINDUSTAN PAPER CORPORATION LTD.	A	H	Miniratna-I
22	HINDUSTAN PETROLEUM CORPN. LTD.	A	H	Navratna
23	HMT LTD.	A	H	Others
24	HOUSING & URBAN DEV. CORPN. LTD.	A	H	Miniratna-I
25	I T I LTD.	A	H	Others
26	INDIAN OIL CORPORATION LTD.	A	H	Maharatna
27	IRCON INTERNATIONAL LTD.	A	H	Miniratna-I
28	KIOCL LTD.	A	H	Miniratna-I
29	KONKAN RAILWAY CORPORATION LTD.	A	H	Others
30	M M T C LTD.	A	H	Miniratna-I
31	MAHANAGAR TELEPHONE NIGAM LTD.	A	H	Navratna
32	MAZAGON DOCK LTD.	A	H	Miniratna-I
33	MECON LTD.	A	H	Miniratna-II
34	MUMBAI RAILWAY VIKAS CORPORATION LTD.	A	H	Others
35	NATIONAL ALUMINIUM COMPANY LTD.	A	H	Navratna
36	NATIONAL BLDG. CONSTN. CORPN. LTD.	A	H	Others
37	NATIONAL FERTILIZERS LTD.	A	H	Miniratna-I
38	NATIONAL TEXTILE CORPN. LTD.	A	H	Others
39	NEYVELI LIGNITE CORPN. LTD.	A	H	Navratna
40	NHPC LTD.	A	H	Miniratna-I
41	NMDC Ltd.	A	H	Navratna
42	NORTH EASTERN ELECTRIC POWER CORPORATION LTD.	A	H	Others
43	NTPC LTD.	A	H	Maharatna
44	OIL & NATURAL GAS CORPORATION LTD.	A	H	Maharatna

Sl. No.	Name of the CPSEs	Schedule	Honding/ Subsidiary	Category
45	OIL INDIA LTD.	A	H	Navratna
46	ONGC VIDESH LTD.	A	S	Miniratna-I
47	POWER FINANCE CORPORATION	A	H	Navratna
48	POWER GRID CORPORATION OF INDIA LTD.	A	H	Navratna
49	RAIL VIKAS NIGAM LTD.	A	H	Others
50	RAILTEL CORPORATION INDIA LTD.	A	H	Miniratna-I
51	RASHTRIYA CHEMICALS AND FERTILIZERS LTD.	A	H	Miniratna-I
52	RASHTRIYA ISPAT NIGAM LTD.	A	H	Navratna
53	RITES LTD.	A	H	Miniratna-I
54	RURAL ELECTRIFICATION CORPN. LTD.	A	H	Navratna
55	SECURITY PRINTING & MINTING CORPN. INDIA LTD.	A	H	Miniratna-I
56	SHIPPING CORPORATION OF INDIA LTD.	A	H	Navratna
57	SJVN LTD.	A	H	Miniratna-I
58	STATE TRADING CORPN. OF INDIA LTD.	A	H	Miniratna-I
59	STEEL AUTHORITY OF INDIA LTD.	A	H	Maharatna
60	TELECOMMUNICATIONS CONSULTANTS (INDIA) LTD.	A	H	Miniratna-I
61	THDC LTD.	A	H	Miniratna-I
62	ANDREW YULE & COMPANY LTD.	B	H	Others
63	BALMER LAWRIE & CO. LTD.	B	S	Miniratna-I
64	BBJ CONSTRUCTION COMPANY LTD.	B	S	Others
65	BHARAT COKING COAL LTD.	B	S	Others
66	BHARAT DYNAMICS LTD.	B	H	Miniratna-I
67	BHARAT HEAVY PLATE & VESSELS LTD.	B	S	Others
68	BHARAT PUMPS & COMPRESSORS LTD.	B	H	Miniratna-II
69	BRAHAMPUTRA CRACKERS & POLYMER LTD.	B	S	Others
70	BRAHMAPUTRA VALLEY FERTILIZER CORPN. LTD.	B	H	Others
71	BRAITHWAITE & CO. LTD.	B	H	Others
72	BRIDGE & ROOF CO.(INDIA) LTD.	B	H	Miniratna-I
73	BRITISH INDIA CORPORATION LTD.	B	H	Others
74	BURN STANDARD COMPANY LTD.	B	H	Others
75	CEMENT CORPN. OF INDIA LTD.	B	H	Others
76	CENTRAL COALFIELDS LTD.	B	S	Miniratna-I
77	CENTRAL ELECTRONICS LTD.	B	H	Others
78	CENTRAL MINE PLANNING & DESIGN INSTITUTE LTD.	B	S	Miniratna-II
79	CHENNAI PETROLEUM CORPORATION LTD.	B	S	Miniratna-I
80	COCHIN SHIPYARD LTD.	B	H	Miniratna-I
81	COTTON CORPN. OF INDIA LTD.	B	H	Others
82	DREDGING CORPN. OF INDIA LTD.	B	H	Miniratna-I
83	EASTERN COALFIELDS LTD.	B	S	Others

Sl. No.	Name of the CPSEs	Schedule	Honding/ Subsidiary	Category
84	ENGINEERING PROJECTS (INDIA) LTD.	B	H	Miniratna-II
85	ENNORE PORT LTD.	B	H	Miniratna-I
86	FERTILIZER CORPN. OF INDIA LTD.	B	H	Others
87	GARDEN REACH SHIPBUILDERS & ENGINEERS LTD.	B	H	Miniratna-I
88	GOA SHIPYARD LTD.	B	H	Miniratna-I
89	HANDICRAFTS & HANDLOOM EXPORTS CORP. OF INDIA LTD.	B	H	Others
90	HINDUSTAN CABLES LTD.	B	H	Others
91	HINDUSTAN FERTILIZER CORPN. LTD.	B	H	Others
92	HINDUSTAN NEWSPRINT LTD.	B	S	Miniratna-I
93	HINDUSTAN ORGANIC CHEMICALS LTD.	B	H	Others
94	HINDUSTAN SHIPYARD LTD.	B	H	Others
95	HINDUSTAN STEELWORKS COSTN. LTD.	B	H	Others
96	HINDUSTAN VEGETABLE OILS CORPN. LTD.	B	H	Others
97	HLL LIFECARE LTD.	B	H	Miniratna-I
98	HMT (INTERNATIONAL) LTD.	B	S	Miniratna-II
99	HMT MACHINE TOOLS LTD.	B	S	Others
100	HMT WATCHES LTD.	B	S	Others
101	INDIA TOURISM DEV. CORPN. LTD.	B	H	Miniratna-I
102	INDIA TRADE PROMOTION ORGANISATION	B	H	Miniratna-II
103	INDIAN DRUGS & PHARMACEUTICALS LTD.	B	H	Others
104	INDIAN RAILWAY CATERING AND TOURISM CORPN. LTD.	B	H	Miniratna-I
105	INDIAN RAILWAY FINANCE CORPORATION LTD.	B	H	Others
106	INDIAN RARE EARTHS LTD.	B	H	Others
107	INDIAN RENEWABLE ENERGY DEVT.AGENCY LTD.	B	H	Others
108	INSTRUMENTATION LTD.	B	H	Others
109	M S T C LTD.	B	H	Miniratna-I
110	MADRAS FERTILIZERS LTD.	B	H	Others
111	MAHANADI COALFIELDLS LTD.	B	S	Miniratna-I
112	MANGALORE REFINERY & PETROCHEMICALS LTD.	B	S	Miniratna-I
113	MINERAL EXPLORATION CORPN. LTD.	B	H	Others
114	MISHRA DHATU NIGAM LTD.	B	H	Miniratna-I
115	MOIL LTD.	B	H	Miniratna-I
116	NATIONAL HANDLOOM DEVELOPMENT CORPORATION LTD.	B	H	Others
117	NATIONAL JUTE MANUFACTURES CORPORATION LTD.	B	H	Others
118	NATIONAL PROJECTS CONSTRUCTION CORPN. LTD.	B	H	Others
119	NATIONAL SEEDS CORPN. LTD.	B	H	Miniratna-I
120	NATIONAL SMALL INDUSTRIES CORPN. LTD.	B	H	Miniratna-II
121	NORTHERN COALFIELDS LTD.	B	S	Miniratna-I
122	NUMALIGARH REFINARY LTD.	B	S	Miniratna-I

Sl. No.	Name of the CPSEs	Schedule	Honding/ Subsidiary	Category
123	ORISSA MINERAL DEVELOPMENT COMPANY LTD.	B	S	Others
124	P E C LTD.	B	H	Miniratna-II
125	PAWAN HANS HELICOPTERS LTD.	B	H	Miniratna-I
126	PROJECTS & DEVELOPMENT INDIA LTD.	B	H	Miniratna-I
127	SCOOTERS INDIA LTD.	B	H	Others
128	SOUTH EASTERN COALFIELDS LTD.	B	S	Miniratna-I
129	TYRE CORPORATION OF INDIA LTD.	B	H	Others
130	URANIUM CORPORATION OF INDIA LTD.	B	H	Others
131	WAPCOS LTD.	B	H	Miniratna-I
132	WESTERN COALFIELDS LTD.	B	S	Miniratna-I
133	ANDAMAN & NICOBAR ISL. FOREST & PLANT. DEV. CORP. LTD	C	H	Others
134	ARTIFICIAL LIMBS MFG. CORPN. OF INDIA	C	H	Others
135	BENGAL CHEMICALS & PHARMACEUTICALS LTD.	C	H	Others
136	BHARAT PETRO RESOURCES LTD.	C	S	Others
137	BHARAT WAGON & ENGG. CO. LTD.	C	H	Others
138	BIECCO LAWRIE & CO. LTD.	C	H	Others
139	BISRA STONE LIME COMPANY LTD.	C	S	Others
140	BROADCAST ENGG. CONSULTANTS INDIA LTD.	C	H	Miniratna-II
141	CENTRAL COTTAGE INDUSTRIES CORPN. OF INDIA LTD.	C	H	Others
142	CENTRAL INLAND WATER TRANSPORT CORPN. LTD.	C	H	Others
143	CENTRAL RAILSIDE WAREHOUSING CO. LTD.	C	S	Others
144	EdCIL (INDIA) Ltd.	C	H	Miniratna-II
145	FCI ARAVALI GYPSUM & MINERALS (INDIA) LTD.	C	H	Miniratna-II
146	FERRO SCRAP NIGAM LTD.	C	S	Miniratna-II
147	HINDUSTAN ANTIBIOTICS LTD.	C	H	Others
148	HINDUSTAN INSECTICIDES LTD.	C	H	Others
149	HINDUSTAN PHOTO FILMS MANUFACTURING CO. LTD.	C	H	Others
150	HINDUSTAN PREFAB LTD.	C	H	Others
151	HINDUSTAN SALTS LTD.	C	H	Others
152	HMT BEARINGS LTD.	C	S	Others
153	HMT CHINAR WATCHES LTD.	C	S	Others
154	HOOGHLY DOCK AND PORT ENGINEERS LTD.	C	H	Others
155	HOTEL CORPN. OF INDIA LTD.	C	S	Others
156	HSCC (INDIA) LTD.	C	H	Miniratna-II
157	JUTE CORPN. OF INDIA LTD.	C	H	Others
158	KARNATAKA ANTIBIOTICS & PHARMACEUTICALS LTD.	C	H	Others
159	NAGALAND PULP & PAPER COMPANY LTD.	C	S	Others
160	NATIONAL BACKWARD CLASSES FINANCE & DEVP.CO.	C	H	Others
161	NATIONAL FILM DEV. CORPN. LTD.	C	H	Miniratna-II

Sl. No.	Name of the CPSEs	Schedule	Honding/ Subsidiary	Category
162	NATIONAL HANDICAPPED FINANCE & DEVPT. CORPN.	C	H	Others
163	NATIONAL MINORITIES DEVP. & FINANCE CORPN.	C	H	Others
164	NATIONAL RESEARCH DEVELOPMENT CORPN.	C	H	Others
165	NATIONAL SAFAI KARAMCHARIS FINANCE & DEVPT. CORPN	C	H	Others
166	NATIONAL SCHEDULED CASTES FINANCE & DEVP. CORPN.	C	H	Others
167	NATIONAL SCHEDULED TRIBES FINANCE & DEVP. CORPN.	C	H	Others
168	NEPA LTD.	C	H	Others
169	NORTH EASTERN HANDICRAFTS & HANDLOOM DEV. CORPN. LTD.	C	H	Others
170	NORTH EASTERN REGIONAL AGRI. MARKETING CORP. LTD.	C	H	Others
171	RAJASTHAN ELECTRONICS AND INSTRUMENTS LTD.	C	H	Miniratna-II
172	RICHARDSON & CRUDDAS(1972) LTD.	C	H	Others
173	STATE FARMS CORPORATION OF INDIA LTD.	C	H	Others
174	STCL LTD.	C	S	Others
175	TRIVENI STRUCTURALS LTD.	C	H	Others
176	TUNGABHADRA STEEL PRODUCTS LTD.	C	H	Others
177	HINDUSTAN FLUOROCARBONS LIMITED	D	S	Others
178	INDIAN MEDICINES & PHARMACEUTICAL CORPN. LTD.	D	H	Miniratna-II
179	ORISSA DRUGS & CHEMICALS LTD.	D	S	Others
180	RAJASTHAN DRUGS & PHARMACEUTICALS LTD.	D	H	Others
181	AIR INDIA AIR TRANSPORT SERVICES LTD.	UC	S	Others
182	AIR INDIA CHARTERS LTD.	UC	S	Others
183	AIR INDIA ENGINEERING SERVICES LTD.	UC	S	Others
184	AIRLINE ALLIED SERVICES LTD.	UC	S	Others
185	ANTRIX CORPORATION LTD.	UC	H	Miniratna-I
186	ASSAM ASHOK HOTEL CORPN. LTD.	UC	S	Others
187	BALMER LAWRIE INVESTMENTS LTD.	UC	H	Others
188	BEL OPTRONICS DEVICES LTD.	UC	S	Others
189	BHARAT BROADBAND NETWORK LTD.	UC	H	Others
190	BHARAT IMMUNOLOGICALS & BIOLOGICALS CORP. LTD.	UC	H	Others
191	BHARAT PETRO RESOURCES JPDA	UC	S	Others
192	BHARATIYA NABHIKIYA VIDYUT NIGAM LTD.	UC	H	Others
193	BHARTIYA RAIL BIJLEE CO. LTD.	UC	S	Others
194	BHEL ELECTRICAL MACHINES LTD.	UC	S	Others
195	BIOTECHNOLOGY INDUSTRY RESEARCH ASSISTANCE COUNCIL	UC	H	Others
196	BIRDS JUTE & EXPORTS LTD.	UC	S	Others
197	CERTIFICATION ENGINEERS INTERNATIONAL LTD.	UC	S	Others
198	CHHATTISHGARH SURGUJA POWER LTD.	UC	S	Others
199	COASTAL KARNATAKA POWER LTD.	UC	S	Others
200	COASTAL MAHARASHTRA MEGA POWER LTD.	UC	S	Others

Sl. No.	Name of the CPSEs	Schedule	Honding/ Subsidiary	Category
201	COASTAL TAMIL NADU POWER LTD.	UC	S	Others
202	CREDA HPCL BIOFUEL LTD.	UC	S	Others
203	DGEN TRANSMISSION COMPANY LTD.	UC	S	Others
204	DONYI POLO ASHOK HOTEL LTD.	UC	S	Others
205	EASTERN INVESTMENT LTD.	UC	S	Others
206	EXPORT CREDIT GUARANTEE CORPN.OF INDIA LTD.	UC	H	Others
207	FRESH & HEALTHY ENTERPRISES LTD.	UC	S	Others
208	GAIL GAS LTD.	UC	S	Others
209	GHOGARPALLI INTEGRATED POWER COMPANY LTD.	UC	S	Others
210	HLL BIOTECH LTD.	UC	H	Others
211	HOOGHLY PRINTING COMPANY LTD.	UC	S	Others
212	HPCL BIOFUELS LTD.	UC	S	Others
213	IDPL (TAMIL NADU) LTD.	UC	S	Others
214	INDIA INFRASTRUCTURE FINANCE CO. LTD.	UC	H	Others
215	INDIAN OIL-CREDA BIOFUELS LTD.	UC	S	Others
216	INDIAN VACCINE CORP. LTD.	UC	H	Others
217	IRCON INFRASTRUCTURE & SERVICES LTD.	UC	S	Others
218	IRRIGATION & WATER RESOURCES FINANCE CORPORATION LTD.	UC	H	Others
219	J & K MINERAL DEVELOPMENT CORPN. LTD.	UC	S	Others
220	JAGDISHPUR PAPER MILLS LTD.	UC	S	Others
221	KANTI BIJLEE UTPADAN NIGAM LTD.	UC	S	Others
222	KARNATAKA TRADE PROMOTION ORGANISATION	UC	S	Others
223	KUMARAKRUPPA FRONTIER HOTELS LTD.	UC	H	Others
224	LOKTAK DOWNSTREAM HYDROELECTRIC CORPORATION LTD.	UC	S	Others
225	MADHYA PRADESH ASHOK HOTEL CORPN. LTD.	UC	S	Others
226	MAHANADI BASIN POWER LTD.	UC	S	Others
227	MILLENNIUM TELECOM LTD.	UC	S	Others
228	MJSJ COAL LTD.	UC	S	Others
229	MNH SHAKTI LTD.	UC	S	Others
230	NATIONAL INFORMATICS CENTRE SERVICES INCORPORATED	UC	H	Others
231	NHDC LTD.	UC	S	Others
232	NLC TAMIL NADU POWER LTD.	UC	S	Others
233	NMDC POWER LTD.	UC	S	Others
234	NMDC-CMDC LTD.	UC	H	Others
235	NTPC ELECTRIC SUPPLY COMPANY LTD.	UC	S	Others
236	NTPC HYDRO LTD.	UC	S	Others
237	NTPC VIDYUT VYAPAR NIGAM LTD.	UC	S	Others
238	NUCLEAR POWER CORPN. OF INDIA LTD.	UC	H	Others
239	ORISSA INTEGRATED POWER LTD.	UC	S	Others

Sl. No.	Name of the CPSEs	Schedule	Honding/ Subsidiary	Category
240	PFC CAPITAL ADVISORY SERVICE LTD.	UC	S	Others
241	PFC CONSULTING LTD.	UC	S	Others
242	PFC GREEN ENERGY LTD.	UC	S	Others
243	PONDICHERRY ASHOK HOTEL CORPN. LTD.	UC	S	Others
244	POWER EQUITY CAPITAL ADVISORS PVT. LTD.	UC	S	Others
245	POWER SYSTEM OPERATION CORPORATION LTD.	UC	S	Others
246	PRIZE PETROLEUM COMPANY LTD.	UC	S	Others
247	PUNJAB ASHOK HOTEL COMPANY LTD.	UC	S	Others
248	RANCHI ASHOK BIHAR HOTEL CORPN. LTD.	UC	S	Others
249	REC POWER DISTRIBUTION CO. LTD.	UC	S	Others
250	REC TRANSMISSION PROJECT CO. LTD.	UC	S	Others
251	RITES INFRASTRUCTURE SERVICES LTD.	UC	H	Others
252	SAIL JAGADISHPUR POWER PLANT LTD.	UC	S	Others
253	SAIL REFRCTORY COMPANY LTD.	UC	S	Others
254	SAKHIGOPAL INTEGRATED POWER COMPANY LTD.	UC	S	Others
255	SAMBHAR SALTS LTD.	UC	S	Others
256	SETHUSAMUDRAM CORPN. LTD.	UC	H	Others
257	TAMIL NADU TRADE PROMOTION ORGANISATION	UC	S	Others
258	TATIYA ANDHRA MEGA POWER LTD.	UC	S	Others
259	UTKAL ASHOK HOTEL CORPN. LTD.	UC	S	Others
260	VIGNYAN INDUSTRIES LTD.	UC	S	Others

Annexure 6.2

Representation of SCs/STs/OBCs in CPSEs

Group	Total No. of employee	Representation of SCs/STs			
		SCs No.	%age	STs No.	%age
(1)	(2)	(3)	(4)	(5)	(6)
As on 1.1.1980 (Based on information furnished by 177 enterprises)					
Group 'A'	93,984	2,726	2.90	623	0.66
Group 'B'	97,756	5,003	5.12	1,329	1.36
Group 'C'	12,74,581	2,30,505	18.08	98,329	7.71
Group 'D'	3,53,981	79,167	22.36	38,083	10.76
(Excluding Safai Karamcharis)					
Total	**18,20,302**	**3,17,401**	**17.44**	**1,38,364**	**7.60**
Group 'D'	36,030	23,309	64.69	1,492	4.14
(Safai Karamcharis)					
Grand Total	18,56,332	3,40,710	18.35	1,39,856	7.53

Group	Total No. of Employees	Representation of SCs/STs/OBCs				
		SCs No.	%	STs No.	%	OBCs No.
1	2	3	4	5	6	7
As on 1.1.2011 (Based on information furnished by 207 Enterprises)						
Group 'A'	209292	30416	15.53	11198	5.35	20901
Group 'B'	209086	31149	14.90	13521	6.47	19336
Group 'C'	737273	141422	19.18	64575	8.76	101809
Group 'D' (Excluding Safai karamcharis)	244192	49694	20.35	28849	11.81	37956
Total	**1399843**	**252681**	**18.05**	**118143**	**8.44**	**180002**
Group 'D' (Safai Karamcharis)	10419	7858	**75.42**	302	**2.90**	330
Grand Total	1410262	260539	18.47	118445	8.40	180332

Group	Total No. of Employees	Representation of SCs/STs/OBCs				
		SCs No.	%	STs No.	%	OBCs No.
1	2	3	4	5	6	7
As on 1.1.2012 (Based on information furnished by 214 Enterprises)						
Group 'A'	197013	28819	14.63	10630	5.39	22259
Group 'B'	151870	22077	14.54	11297	7.44	14162
Group 'C'	519050	101106	19.47	53024	10.21	88685
Group 'D' (Excluding Safai karamcharis)	198538	39941	20.11	27246	13.72	37060
Total	1066471	191943	17.99	102197	9.58	162166
Group 'D' (Safai Karamcharis)	9668	6478	**66.99**	275	**2.85**	330
Grand Total	1076139	198421	18.44	102472	9.52	162496

Chapter-7

Delegation of Enhanced Financial Powers to CPSEs

The Board of Directors of a CPSE exercises the delegated powers subject to broad policy guidelines issued by Government from time to time. The Government has granted enhanced powers to the Boards of Maharatna, Navratna, Miniratna and other profit making enterprises.

Keeping in view the pledge made in the then National Common Minimum Programme (NCMP) that full managerial and commercial autonomy will be devolved to successful profit making companies operating in a competitive environment, the Government reviewed the powers delegated to the Board of Directors of Navratna, Miniratna and other profit making CPSEs and substantially enhanced the delegated powers in August 2005.

7.1 Maharatna Scheme

2.1.1 The Government has introduced Maharatna scheme in February, 2010 with the objective to delegate enhanced powers to the Boards of identified large sized Navratna CPSEs so as to facilitate expansion of their operations, both in domestic as well as global markets.

7.1.1 Eligibility criteria for grant of Maharatna status

The CPSEs fulfilling the following criteria are eligible to be considered for grant of Maharatna status:-

(a) Having Navratna status

(b) Listed on Indian stock exchange, with minimum prescribed public shareholding under SEBI regulations

(c) An average annual turnover during the last 3 years of more than ₹ 25,000 crore

(d) An average annual net worth during the last 3 years of more than ₹15,000 crore

(e) An average annual net profit after tax during the last 3 years of more than ₹ 5,000 crore

(f) Significant global presence or international operations.

7.1.2 Delegation of powers to Maharatna CPSEs

The Maharatna CPSEs in addition to having Navratna powers have been delegated additional powers in the area of investment in joint ventures/subsidiaries and human resources development. The Maharatna CPSEs can invest ₹ 5000 crore in one project (₹ 1,000 crore for Navartna CPSEs) and create below Board level posts upto E-9 level (E-6 for Navratna CPSEs).

7.1.3 Maharatna CPSEs

The Government has conferred Mahratna status to 5 CPSEs namely, (i) Indian Oil Corporation Limited, (ii) NTPC Limited, (iii) Oil & Natural Gas Corporation Limited and (iv) Steel Authority of India Limited in May, 2010 and (v) Coal India Limited in April, 2011.

7.2 Navratna scheme

7.2.1 The Government introduced the Navratna scheme in July, 1997 to identify and delegate enhanced powers to CPSEs having comparative advantage and the potential to become global players.

7.2.2 Eligibility Criteria for Grant of Navaratna Scheme

As per the criteria laid down by the Government, Miniratna Category – 1 and Schedule 'A' CPSEs, which have obtained 'excellent' or 'very good' rating under the Memorandum of Understanding system in three of the last five years, and have a composite score of 60 or above in the six selected performance parameters are eligible to be considered for grant of Navratna status.

7.2.3 Delegation of Powers to Navratna CPSEs

The powers delegated to the Boards of Navratna CPSEs are as under: -

(i) **Capital Expenditure :-** The Navratna CPSEs have the powers to incur capital expenditure on purchase of new items or for replacement, without any monetary ceiling.

(ii) **Technology Joint Ventures and Strategic Alliances:-** The Navratna CPSEs have the powers to enter into technology joint ventures or strategic alliances and obtain, by purchase or other arrangements, technology and know-how.

(iii) **Organization Restructuring:-** The Navratna CPSEs have the powers to effect organizational restructuring including establishment of profit centers, opening of offices in India and abroad, creating new activity centers, etc.

(iv) **Human Resources Management:-** The Navratna CPSEs have been empowered to create and wind up all posts up to E-6 level and make all appointments up to this level. The Boards of these CPSEs have further been empowered to effect internal transfers and re-designation of posts. The Board of Directors of Navratna CPSEs have the power to further delegate the powers relating to Human Resource Management (appointments, transfer, posting, etc.) of below Board level executives to sub-committees of the Board or to executives of the CPSE, as may be decided by the Board of the CPSE.

(v) **Resource Mobilization: -** These CPSEs have been empowered to raise debt from the domestic capital markets and for borrowings from international market, subject to condition that approval of RBI/Department of Economic Affairs, as may be required, should be obtained through the administrative Ministry.

(vi) **Joint ventures and Subsidiaries** :- The Navratna CPSEs have been delegated powers to establish financial joint ventures and wholly owned subsidiaries in India or abroad with the stipulation that the equity investment of the CPSE should be limited to the following: -

i. Rs. 1000 crore in any one project,

ii. 15% of the net worth of the CPSE in one project,

iii. 30% of the net worth of the CPSE in all joint ventures/ subsidiaries put together.

(vii) **Mergers and acquisitions**:- The Navratna CPSEs have been delegated powers for mergers and acquisitions subject to the conditions that (i) it should be as per the growth plan and in the core area of functioning of the CPSE, (ii) conditions/limits would be as in the case of establishing joint ventures/subsidiaries, and (iii) the Cabinet Committee on Economic Affairs would be kept informed in case of investments abroad. Further, the powers relating to Mergers and Acquisitions are to be exercised in such a manner that it should not lead to any change in the public sector character of the concerned CPSEs.

(viii) **Creation/Disinvestment in subsidiaries**:- The Navratna CPSEs have powers to transfer assets, float fresh equity and divest shareholding in subsidiaries subject to the condition that the delegation will be in respect of subsidiaries set up by the holding company under the powers delegated to the Navratna CPSEs and further to the proviso that the public sector character of the concerned CPSE (including subsidiary) would not be changed without prior approval of the Government and such Navratna CPSEs will be required to seek Government approval before exiting from their subsidiaries.

(ix) **Tours abroad of functional Directors**: - The Chief Executive of Navratna CPSEs have been delegated powers to approve business tours abroad of functional directors up to 5 days' duration (other than study tours, seminars, etc.) in emergency under intimation to the Secretary of the administrative Ministry.

The above mentioned delegation of powers is subject to the following conditions and guidelines:-

(a) The proposals must be presented to the Board of Directors in writing and reasonably well in advance, with an analysis of relevant factors and quantification of the anticipated results and benefits. Risk factors if any, must be clearly brought out.

(b) The Government Directors, the Financial Directors and the concerned Functional Director(s) must be present when major decisions are taken, especially when they pertain to investments, expenditure or organizational/ capital restructuring.

(c) The decisions on such proposals should, preferably, be unanimous.

(d) In the event of any decision on important matters not being unanimous, a majority decision may be taken, but at least two thirds of the Directors should be present, including those mentioned in (b) above, when such a decision is taken. The objections, dissents, the reasons for over-ruling them and those for taking the decision should be recorded in writing and minuted.

(e) No financial support or contingent liability on the part of the Government should be involved.

(f) These CPSEs will establish transparent and effective systems of internal monitoring, including the establishment of an Audit Committee of the Board with membership of non-official Directors.

(g) All the proposals, where they pertain to capital expenditure, investment or other matters involving substantial financial or managerial commitments or where they would have a long term impact on the structure and functioning of the CPSE, should be prepared by or with the assistance of professionals and experts and should be appraised, in suitable cases, by financial institutions or reputed professional organizations with expertise in the areas. The financial appraisal should also preferably be backed by an involvement of the appraising institutions through loans or equity participation.

(h) The exercise of authority to enter into technology joint ventures and strategic alliances shall be in accordance with the Government guidelines as may be issued from time to time.

(i) The Boards of these CPSEs should be restructured by inducting at least four non-official Directors as the first step before the exercise of the enhanced delegation of authority.

(j) These public sector enterprises shall not depend upon budgetary support or Government guarantees. The resources for implementing their programmes should come from their internal or through other sources, including the capital markets. However, wherever Government guarantee is required under the standard stipulations of external donor agencies, the same may be obtained from the Ministry of Finance through the administrative Ministry. Such Government guarantee shall not affect the Navratna status. Further, budgetary support to implement Government sponsored projects of national interest and Government sponsored Research & Development projects will not disqualify CPSEs from retaining their Navratna status. However, for such projects, investment decisions will be taken by the Government and not by the CPSE concerned

7.2.4 Presently, there are 16 Navratna CPSEs as under:

(i) Bharat Electronics Limited

(ii) Bharat Heavy Electricals Limited

(iii) Bharat Petroleum Corporation Limited
(iv) GAIL (India) Limited
(v) Hindustan Aeronautics Limited
(vi) Hindustan Petroleum Corporation Limited
(vii) Mahanagar Telephone Nigam Limited
(viii) National Aluminium Company Limited
(ix) Neyveli Lignite Corporation Limited
(x) NMDC Limited
(xi) Oil India Limited
(xii) Power Finance Corporation Limited
(xiii) Power Grid Corporation of India Limited
(xiv) Rashtriya Ispat Nigam Limited
(xv) Rural Electrification Corporation Limited
(xvi) Shipping Corporation of India Limited

7.3 Miniratna scheme

In October 1997, the Government, in order to make promising profit making CPSEs more efficient and competitive, decided to grant enhanced autonomy and delegation of financial powers 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.

7.3.1 Eligibility Criteria for Miniratna Status

The eligibility conditions and criteria are:

(i) Category-I CPSEs should have made profit in the last three years continuously, the pre-tax profit should have been ₹ 30 crores or more in at least one of the three years and should have a positive net worth.

(ii) Category-II CPSEs should have made profit for the last three years continuously and should have a positive net worth.

(iii) These CPSEs shall be eligible for enhanced delegated powers provided they have not defaulted in the repayment of loans/interest on any loans due to the Government.

(iv) These public sector enterprises shall not depend upon budgetary support or Government guarantees.

(v) The Boards of these CPSEs should be restructured by inducting at least three non-official Directors as the first step before the exercise of enhanced delegation of authority.

(vi) The administrative Ministry concerned shall decide whether a Public Sector Enterprise fulfilled the requirements of a Category-I/Category-II company before the exercise of enhanced powers.

7.3.2 Delegation of Powers to Miniratna CPSEs:

The delegation of decision-making authority available at present to the Boards of these Miniratna CPSEs is as follows:

(i) Capital Expenditure

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

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

(ii) Joint ventures and subsidiaries:

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

(b) Category II CPSEs: To establish joint ventures and subsidiaries in India with the stipulation that the equity investment of the CPSE in any one project should be 15% of the networth of the CPSE or ₹ 250 crore, whichever is less. The overall ceiling on such investment in all projects put together is 30% of the networth of the CPSE.

(iii) Mergers and acquisitions :- The Board of Directors of these CPSEs have the powers for mergers and acquisitions, subject to the conditions that (a) it should be as per the growth plan and in the core area of functioning of the CPSE, (b) conditions/limits would be as in the case of establishing joint ventures/subsidiaries, and (c) the Cabinet Committee on Economic Affairs would be kept informed in case of investments abroad. Further, the powers relating to Mergers and Acquisitions are to be exercised in such a manner that it should not lead to any change in the public sector character of the concerned CPSEs.

(iv) Scheme for HRD :- To structure and implement schemes relating to personnel and human resource management, training, voluntary or compulsory retirement schemes, etc. The Board of Directors of these CPSEs have the power to further delegate the powers relating to Human Resource Management (appointments, transfer, posting, etc.) of below Board level executives to sub-committees of the Board or to executives of the CPSE, as may be decided by the Board of the CPSE.

(v) Tour abroad of functional Directors: - The Chief Executive of these CPSEs have the power to approve business tours abroad of functional directors up to 5 days' duration (other than study tours, seminars, etc.) in emergency, under intimation to the Secretary of the administrative Ministry.

(vi) Technology Joint Ventures and Strategic Alliances:- To enter into technology joint ventures, strategic alliances and to obtain technology and know-how by purchase or other arrangements, subject to Government guidelines as may be issued from time to time.

(vii) Creation/Disinvestment in subsidiaries :- To transfer assets, float fresh equity and divest shareholding in subsidiaries subject to the condition that the delegation will be in respect of subsidiaries set up by the holding company under the powers delegated to the Miniratna CPSEs and further to the proviso that the public sector character of the concerned CPSE (including subsidiary) would not be changed without prior approval of the Government, and such Miniratna CPSEs will be required to seek Government approval before exiting from their subsidiaries.

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

Presently (as on 15.11.2012), there are 68 Miniratna CPSEs (51 Category-I and 16 Category-II). The list of these 68 Miniratna CPSEs is enclosed at **Annex 1**.

7.4 Other profit making CPSEs

Those CPSEs 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 CPSEs'.

7.4.1 Delegation of Powers

These CPSEs have been delegated enhanced powers as under:-

(i) **Capital Expenditure:-** These CPSEs have the power to incur capital expenditure up to ₹ 150 crore or equal to 50% of the Net worth, whichever is less. The above delegation is subject to the following conditions:

(a) inclusion of the project in the approved Five Year and Annual Plans and outlays provided for;

(b) the required funds can be found from the internal resources of the company and extra budgetary resources (EIBR) and the expenditure is incurred on schemes included in the capital budget approved by the Government.

(ii) Tours abroad of functional Directors :- The Chief Executive of these CPSEs have the power to approve business tours abroad of functional directors up to 5 days' duration (other than study tours, seminars, etc.) in emergency, under intimation to the Secretary of the administrative Ministry. 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.

7.5 Policy on Acquisition of Raw Material Overseas by CPSEs

The availability of adequate quantities of raw materials is a pre-requisite for growth. There is also a strategic perspective as some countries have already taken the lead in acquiring sources of raw material assets globally. Overseas investments are currently undertaken by CPSEs either under powers delegated to their Boards or with the approval of CCEA through the mechanism of Empowered Committee of Secretaries (ECS). Shortcomings in the present system include delays in decision making, lack of coordinated & inter-sectoral approach and absence of government funding.

On the basis of recommendations of National Manufacturing Competitiveness Council (NMCC), inter-ministerial consultations and approval of the Cabinet, DPE has notified the Policy for acquisition of Raw Material assets abroad by CPSEs in October, 2011.

The broad features of this Policy are as following.

- Policy applicable to CPSEs in Agriculture, Mining, Manufacturing and Electricity sectors having a three year record of making net profits.
- CPSEs to examine proposals, undertake due diligence and obtain approval of Board of Directors in a transparent manner.
- Powers delegated to the Boards of Maharatna and Navratna enhanced and enhanced powers available only for acquisition of raw material assets abroad.
- Coordinating Committee of Secretaries (CCoS) headed by the Cabinet Secretary to be constituted. Proposals (i) where the administrative Ministry/CPSE requests for a coordinated view and (ii) involve Government funds to be put up before the CCoS.
- CCoS to facilitate quick and coordinated decision making, coordinate grant of concessional credit to foreign enterprise/Government, recommend Government funding and decide about the nature of the Government funding on case to case basis.
- The CCoS to be serviced by the DPE and separate cell to be created in DPE. DPE authorized to hire additional personnel, accommodation and procure equipments necessary for making this cell operational. Additional annual budgetary outlay of ₹ 1.5 crore per annum to be provided to DPE.
- CPSE/Ministry to submit proposal to the DPE which will convene a meeting of the CCoS. CPSE/Ministry to nominate a nodal officer.
- Recommendations of CCoS to be placed before CCEA by the DPE.
- Existing Empowered Committee of Secretaries (ECS) mechanisms shall continue to function. Ministries presently not having ECS proposed to be authorized to have appropriate ECS mechanism.
- The Ministry of External Affairs and its Missions abroad to be associated right from the beginning of the process.
- The Government to, in due course, consider constituting a dedicated, Sovereign Wealth Fund.

The following actions have been taken by DPE in this regard.

(i) Circulation of the approved policy to all stakeholders.

(ii) Issuance of guidelines prescribed by Ministry of External Affairs (MEA) and its advisory to its Missions abroad after consultations with MEA.

(iii) Constitution of Coordinating Committee of Secretaries after approval of Cabinet Secretariat.

(iv) Allocation of financial resources for running the separate Cell.

(v) Initiating the process of recruitment of manpower for separate cell and release of advertisement in newspapers inviting applications and holding of selection interviews.

List of Miniratna CPSEs

(A) Miniratna Category - I CPSEs

1. Airports Authority of India
2. Antrix Corporation Limited
3. Balmer Lawrie & Co. Limited
4. Bharat Dynamics Limited
5. BEML Limited
6. Bharat Sanchar Nigam Limited
7. Bridge & Roof Company (India) Limited
8. Central Warehousing Corporation
9. Central Coalfields Limited
10. Chennai Petroleum Corporation Limited
11. Cochin Shipyard Limited
12. Container Corporation of India Limited
13. Dredging Corporation of India Limited
14. Engineers India Limited
15. Ennore Port Limited
16. Garden Reach Shipbuilders & Engineers Limited
17. Goa Shipyard Limited
18. Hindustan Copper Limited
19. HLL Lifecare Limited
20. Hindustan Newsprint Limited
21. Hindustan Paper Corporation Limited
22. Housing & Urban Development Corporation Limited
23. India Tourism Development Corporation Limited
24. Indian Railway Catering & Tourism Corporation Limited
25. IRCON International Limited
26. KIOCL Limited
27. Mazagaon Dock Limited
28. Mahanadi Coalfields Limited
29. Manganese Ore (India) Limited
30. Mangalore Refinery & Petrochemical Limited
31. Mishra Dhatu Nigam Limited
32. MMTC Limited
33. MSTC Limited
34. National Fertilizers Limited
35. National Seeds Corporation Limited
36. NHPC Limited
37. Northern Coalfields Limited
38. Numaligarh Refinery Limited
39. ONGC Videsh Limited
40. Pawan Hans Helicopters Limited
41. Projects & Development India Limited
42. Railtel Corporation of India Limited
43. Rashtriya Chemicals & Fertilizers Limited
44. RITES Limited
45. SJVN Limited
46. Security Printing and Minting Corporation of India Limited
47. South Eastern Coalfields Limited
48. State Trading Corporation of India Limited
49. Telecommunications Consultants India Limited
50. THDC India Limited
51. Western Coalfields Limited
52. WAPCOS Limited

(B) Miniratna Category-II CPSEs

53. Bharat Pumps & Compressors Limited
54. Broadcast Engineering Consultants (I) Limited
55. Central Mine Planning & Design Institute Limited
56. Ed.CIL (India) Limited
57. Engineering Projects (India) Limited
58. FCI Aravali Gypsum & Minerals India Limited
59. Ferro Scrap Nigam Limited
60. HMT (International) Limited
61. HSCC (India) Limited
62. India Trade Promotion Organisation
63. Indian Medicines & Pharmaceuticals Corporation Limited
64. MECON Limited
65. National Film Development Corporation Limited
66. National Small Industries Corporation Limited
67. PEC Limited
68. Rajasthan Electronics & Instruments Limited

Chapter-8

MoU System in CPSEs

The Memorandum of Understanding (MoU) as applicable to public sector enterprises is a negotiated agreement between the government and the management of the enterprise specifying clearly the objectives of the agreement and the obligations of both the parties. It was first introduced in France in two phases, that is, as 'contracts de programme' in 1970 and as 'contracts enterprise' in 1979 consequent to the recommendations of the Simon Nora Committee Report (1967). The MoU system is intended to ensure a level playing field to the public sector enterprises *vis-à-vis* the private (corporate) sector.

MoU system in India was first introduced in 1986 on the basis of the recommendations of the Arjun Sengupta Committee Report (1984). The Committee laid emphasis on medium term contract between the Government and the Central Public Sector Enterprises (CPSEs) and recommended a five-year agreement that may be reviewed annually. Moreover, since the CPSEs have been set up as part of the national/central plan, the Committee favoured MoUs especially in respect of CPSEs in the core sectors of steel, coal, power, petroleum, fertilizer and petro-chemicals.

8.1 Autonomy and Accountability

The 'management' of the enterprise is made accountable to the government through promise for performance or 'performance contract'. The government however continues to have control over these enterprises, through 'a priori supervision' by 'setting targets' in the beginning of the year and through a posteriori 'performance evaluation' at the end of the year. In order to grant autonomy to public sector enterprises *vis-à-vis* control of the government, the Arjun Sengupta Committee identified three areas of Government-PSE interaction, namely (a) price fixation, (b) investment planning and (c) financial management. In regard to price fixation the Committee observed that price control/ administered price/ retention price may be retained only in areas where the nature of product so justifies. While fixing prices for products of CPSEs operating under monopoly conditions, the Committee recommended that these should be benchmarked with international prices. It further stated that wherever CPSEs are operating under competitive market conditions, the CPSEs should be left on their own to fix the price of their output. The gradual dismantling of Administered Price Mechanism (APM) since 1991 has helped these enterprises to fix the output prices on market principles. In regard to autonomy for investment planning, greater powers were subsequently delegated to the Board of Directors as recommended by the Committee. The Board of Directors of MoU signing CPSEs can therefore sanction capital expenditure without the prior approval of the government, especially so if the required funds could be found from the internal resources of the enterprise. In regard to financial management especially with reference to 'auditing', the Arjun Sengupta Committee was of the view that subsequent to evolving of appropriate accounting standards by the Comptroller and Auditor General of India (CAG), supplementary audit by CAG for the non-core sector should be given up. In the case of the enterprises in the core sector, however, the Committee recommended that company audit by the CAG may continue.

The Committee further observed that ministries should not interfere in areas of decision making which are within the delegated powers of CPSEs. Accordingly numerous 'administrative controls' emanating from different 'government circulars' issued over the years and pertaining to public sector enterprises were dispensed consequent to the review exercises undertaken in the Department of Public Enterprises in 1996 and in 2000.

8.2 MoU System: Process and Principles'

The process of finalizing the MoUs starts with the issue of detailed Guidelines by the Department of Public Enterprises (DPE) on the basis of which the CPSEs submit their draft MoUs after approval by the respective Boards and the Administrative Ministries. The draft MoUs indicate various performance targets on a five point scale for the ensuing financial year. These draft MoUs are then discussed, improved and finalized during the MoU negotiation meetings. The Task Force on MoU set up by DPE provides the oversight during the MoU negotiations. The MoU negotiations meetings are attended by the Chief Executives of the CPSEs, Senior Officers from the administrative Ministries and the representatives of the nodal Government agencies such as Planning Commission and Ministry of Statistics & Programme Implementation.

8.2.1 Task Force and Syndicates

The MoU Task Force comprises former Civil Servants, ex-CMDs of the Public Enterprises, finance professionals, domain experts and academics. They are selected by DPE. Currently, there are 68 Task Force (TF) members who are divided into sector-wise Syndicate Groups. Each Syndicate consists of 6 members normally. One of the members of the Syndicate acts as the Convener. The rich experience and knowledge of the TF members in different fields provides the necessary technical input and enables the Syndicate in fixing realistic targets. The DPE issues the Minutes of MoU negotiation meetings to the CPSEs (and the Ministry/Department concerned) for finalizing the MoUs which are authenticated in the DPE to ensure that those are in accordance with the decisions on targets as agreed upon during the meetings. Subsequently, all MoUs have to be signed before 31st March for implementation during the succeeding financial year.

8.2.2 High Power Committee on MoU

The High Power Committee (HPC) on MoU is a Committee of Secretaries (COS) set up by the Government as the Apex Committee to assess the performance of MoU signing CPSEs with reference to the commitments made by them in the MoU and also to assess how far the Administrative Ministries/Departments have been able to give the necessary support as committed by them in the MoU. HPC is headed by the Cabinet Secretary. Secretary, Department of Public Enterprises is the Member-Secretary of this Committee. The other members comprise of Finance Secretary, Secretary (Expenditure),Secretary (Planning Commission), Secretary(Statistics & Programme Implementation). Chairman Public Enterprises Selection Board, Chief Economic Advisor, Department of Economic Affairs, Chairman Tariff Commission and Secretary (Performance Management). The HPC on MoU has been, from time to time, giving directions in regard to the determination of the principles and parameters for evaluating the performance of CPSEs.

8.3 Aims and Objectives of MoU system in CPSEs

The aims and objectives of the MoU system are broadly the followings :

(a) To improve the performance of public sector enterprises by increasing autonomy of the management of the Company.

(b) To remove the fuzziness in goals and objectives of public sector enterprises.

(c) To evaluate the performance of management through objective criteria

(d) To provide incentive for better performance in future.

The incentives under the present system take two forms, namely 'monetary' and 'non-monetary' incentives. As per the Second Pay Revision Committee recommendations (for the executives of CPSEs) *vide* DPE OM No. 2(70)/08-DPE (WC)-GL-XV/08 dtd. 26.11.2008, the variable Performance Related Pay (PRP) would be payable in the case of profit making CPSEs at 100 % eligibility levels if the CPSE achieves the MoU rating as "Excellent". If the CPSE's MoU is rated as "Very Good", the eligibility of PRP would be 80% of the basic pay. In respect of "Good" and "Fair" ratings, the eligibility levels would be 60% and 40% of basic pay respectively. However, there will be no PRP irrespective of the profitability of CPSE, in case it is rated as "Poor". The non-monetary incentives comprise the MoU Awards. These awards are also an expression of commitment of the policy makers to the MoU system. While excellent performing CPSEs are awarded with the MoU Excellence Awards, the remaining excellent performing CPSEs are recognized with Excellence Merit Certificates.

8.4 MoU Targets and Performance Evaluation

Performance evaluation at the end of the year indicates the extent to which the mutually agreed Targets agreed upon at the beginning of the year were achieved by the enterprise.

8.4.1 Setting of MoU Targets

The exercise of fixing MoU targets involves the following steps:

(i) Preparation of MoU Guidelines, which are issued by DPE in the month of October/ November.

(ii) Submission of draft MoU by CPSEs directly and subsequently through administrative Ministry on the basis of the MoU guidelines.

(iii) Examination of draft MoUs by the MoU Division and preparation of critiques to be circulated to the Task Force Members.

(iv) Fixing of dates and venue for MoU negotiation meetings that starts from January/February.

(v) Holding the MoU negotiation meetings to finalize the MoUs in the presence of the Task Force (January – March) each year.

(vi) Preparation and circulation of the Minutes.

(vii) Submission of the draft MoU by the CPSE on the basis of Minutes.

(viii) Evaluation of MoU by the Task Force Members as submitted by CPSE and vetted by DPE.

(ix) All MoUs have to be signed before 31st March of every year.

8.4.2 MoU Methodology and Evaluation

The MoU system was revamped in 1989 and was modeled on 'the signaling system' using the five-point scale of performance measurement, that is, 'excellent', 'very good', 'good', 'average' and 'poor'. This was further refined in 2004-05 utilising 'the balance score card' methodology. Under the current MoU Guidelines, equal weights (50% + 50%) are assigned to 'financial' and 'non-financial' parameters 0% financial and 60% non-financial for section 25 CPSEs and sick & Loss making CPSEs as targets to be achieved at the end of year. The 'financial' parameters are both in the form of absolute values, such as gross margins (profits) and turnover as well as in terms of ratios. The 'non-financial' parameters (also called dynamic parameters) are of three kinds, namely, dynamic parameters, sector specific mandatory parameters and enterprise specific parameters. 'Non-financial parameters' (also called dynamic parameters) include project implementation quality of products and services, customer satisfaction, extent of globalization etc. Similarly, while the 'sector-specific' parameters refer to macroeconomic factors like change in demand and supply, price fluctuations, variation in interest rates etc, (that are, factors beyond the control of the management), the 'enterprise-specific' parameters relate to issues such as safety and pollution etc. Each of these performance targets for MoUs are framed on the five point scale. Corporate Social Responsibility,(5% weightage),R&D (5% weightage) Sustainable Development(5% weightage), HRM (5% weightage), are mandatory MoU Parameters.

Comprehensive Guidelines with Templates for objective evaluation has been issued for these elements of MoU. It is stipulated that non financial parameters should be consistent with the proposed Annual Plan/Annual Budget and Corporate Plan of the CPSE. Major ongoing projects being monitored by the

Ministry of Statistics and Programme Implementation are to be included as MoU parameters. Listing by CPSEs has been incentivized in MoU. Investment Plans and CAPAX of top selected CPSEs for the year have been rewarded under the MoU framework.

Adoption of innovative practices is included as a new parameter with some weightage in the MoU. DPE will discuss and deliberate on the meaning, scope and implementation of best innovative practices and issue instructions for the compliance by CPSEs.

The 'composite score' that is finally arrived at is thus an index of the performance of the enterprises. The rating of the 'composite score' is done in the following manner:

MoU Composite Score	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

8.5 Coverage of CPSEs under the MoU system

The MoU system that was started with four CPSEs signing MoU in the year 1986-87 increased its coverage to 195 CPSEs in the year 2012-13. Table 8.1 below provides the coverage of CPSEs over the years under the MOU system.

Year	No. of MOU's signed	Year	No. of MOU's signed
1987-88	4	2005-06	102
1991-92	72	2006-07	113
2001-02	104	2007-08	144
2002-03	100	2008-09	147
2003-04	96	2009-10	197
2004-05	99	2010-11	202
		2011-12	197
		2012-13	195

* Until 2008-09, only Independent/Holding (Companies) CPSEs were signing MoUs with their respective Ministries. However, from 2009-10, the Subsidiary Companies of CPSEs have been signing MoUs with their Holding CPSEs, under the aegis of the MoU Task Force constituted by the Department of Public Enterprises.

8.6 MoU ratings of CPSEs

MoU rating of CPSEs during the last five years is shown in the Table 8.2 below:

Table 8.2

MoU Ratings

Rating	2007-08	2008-09	2009-10	2010-11	2011-12
Excellent	55	47	74	67	76
Very Good	34	34	30	44	39
Good	15	25	20	24	33
Fair	08	17	20	24	25
Poor	00	01	01	02	0
Total	112	124	145	161	175

Chapter-9

Research & Development

The competitive and challenging business environment demands continuous up-gradation and development of products, processes and services for sustained growth. Research and Development (R&D) contribute substantially towards achieving these goals. In the face of rapid technological advancements, various products and services have a very short product life cycle. R&D, in this respect, helps phase out products (& services) through introduction of new designs and technologies and improvement in quality.

While a number of CPSEs have in-house R&D facilities, the others have gone for sponsored research through collaboration with Universities and reputed R&D institutions. Sponsored research is cost effective and is suited to CPSEs who cannot afford to incur expenditure on in-house research. There is also a greater awareness of Intellectual Property Rights (IPR) and 'patenting' of new knowledge gained and discoveries made in the process of R&D.

The National Research Development Corporation (NRDC), a CPSE, is actively engaged in promoting, developing and commercializing technologies, knowhow, patent and processes generated through national R&D institutions, thus helping individual enterprises and institutions acquire IPR/ Patents for commercial use.

Technological collaboration with leading companies of the world has been another approach adopted by CPSEs for upgrading their technological know-how.

R&D activities in CPSEs

The following paragraphs explain briefly the various R&D activities being undertaken by the different CPSEs in the different cognate groups of manufacturing and services sectors.

9.1 Coal

9.1.1 Central Mine Planning & Design Institute Ltd. (CMPDI)

A total of twelve projects of R&D and S&T projects were completed by CMPDI, Ranchi during 2011-12. These projects are related to Coal Bed Methane, Coal Mine Methane ,Ground Penetrating Radar (for detection of old unapproachable water logged working) , high resolution seismic monitoring (for early detection of slope failure) and development and use of fly ash based pesticides.

9.1.2 Neyveli Lignite Corporation Ltd.(NLC)

A Research study was conducted in collaboration with Central Electro Chemical Research Institute (CECRI), Karaikudi and the result was found successful. Based on that a project proposal was submitted on "Development of customized Organic Coatings for corrosion protection of special mining equipments at Neyveli Lignite Mines", which was approved by the Ministry of Coal.

A bench scale production facility was erected at CARD to establish the production of zeolite from fly ash based on the study conducted in association with IIT Kharagpur. Since the Zeolite is in the powder form, a new project has been initiated to pelletize the powder form of Zeolite to overcome some difficulties in water treatment.

A collaborative project with VIT/Vellore is in progress to utilize the Bottom ash from thermal plants as partial replacement of sand in construction activities. Unburnt Carbon is separated from bottom ash using 'Air density separator'. It is observed that the mixture with bottom ash gives good strength and the results are encouraging.

A joint R&D project was taken up with National Institute of Technology/Tiruchirapalli to study preventive measures for erosion-corrosion problems in Storm Water Control pumps. Suitable coatings to withstand corrosion were identified by lab tests and three pumps were coated and the performance was evaluated. In phase-II of the study, three more pumps were coated. Some coated areas were removed due to local cavitations and the problem was further studied by NIT/Tiruchirapalli in detail.

An air dispersion model has been developed by VIT/Vellore, which is able to predict the patterns of distribution of air pollutants in and around Neyveli.

9.2 Electricity

9.2.1 NHPC Ltd.

Specific areas in which R&D was carried out during the year include:

Techniques to stop seepage in reservoirs/structures.

Development of a hard coating facility for which the DPR was prepared.

Computational fluid dynamics analysis of fluid flowing through the surge and pressure shafts of the Teesta-V Power Station and Dam-Spillway of Subansiri H.E. Project was accompalished.

A National Perspective Plan (NPP), namely,'Development of Silt erosion resistant material for turbine of hydro generators'was prepared.

R&D in 'Tunneling in water charged zones under high hydrostatic pressure' was undertaken, sponsored by CPRI.

9.2.2 NTPC Ltd.

NTPC Energy Technology Research Alliance (NETRA), a research and development wing of the Company, focuses on areas of efficiency improvement ,cost reduction, renewable and alternative energy, climate change and scientific support to utilities. In order to provide support to the power stations, projects like Artificial Intelligence based plant performance advisory system, real–time advisory system, development and trails of robotic inspection devices at stations, development of PDC-RDM based expert system (analyzer) for online monitoring and advisory system for transformer conditioning , maintaining boiler water chemistry , monitoring CO_2 utilisation through mineralization of fly ash etc. have been successfully completed and deployed/tested at stations.

Research Advisory Council (RAC) comprising eminent scientists and experts from India and abroad is also in place in the Company to steer high-end research. Scientific Advisory Council (SAC) with Regional Executive Directors and Station Heads as its members, provides directions for improving plant performance and reducing the cost of generation. Meetings of both the Advisory Councils were held during the year where members deliberated on various project activities and gave guidelines for implementation of suggestions.

Further 116 patents applications filed are in advance stage of processing. NETRA provides scientific support to all NTPC stations as well as other Utilities to improve their performance. NETRA has entered into MoU with National Metallurgical Laboratory, Jamshedpur for collaborative research in the area of Metallurgy. NTPC is fully aligned to the needs of adapting emerging technologies and upgrading the technologies through R&D.

9.3 Crude Oil

9.3.1 Oil and Natural Gas Corporation Ltd. (ONGC)

Specific areas in which R&D was carried out are:

Feasibility study of using composite material for fencing of oil and gas wells, pipelines for handling highly corrosive oil and oil field effluents and tanks for oil storage .

Studies on the structural characterisation of gas hydrates using Raman Spectroscopy.

Studies on the thermodynamics and kinetics of methane hydrate formation and diccociation under varying subsurface conditions.

Soil classification and evaluation of soil design parameters using PCPT data with emphasis on application in Indian waters.

A total of 120 R&D projects were completed by IOGPT in the areas of well completion , Artificial lift system, sand control, water shut off, stimulation, process facilities design &optimisation, Deep water production and subsea technology.

Under the Science &Technology International partnership agreement between the goverments of India & Canada, Carbon Management & Sustainability Group has undertaken an R&D project on solar thermal application towards low carbon initiative titled "Substitution of natural gas by solar thermal energy". This first of its own kind project, aims at replacing natural gas based heating of crude by a combination of solar and natural gas based heating combination, saving effectively thereby a part of natural gas.

ONGC along with TERI has been also carrying out R&D in the field of Microbial Enhanced Oil Recovery, Paraffin Degrading Bacteria and Flow Assurance for the last 4-5 years.

9.3.2 Oil India Ltd.(OIL)

Specific areas in which R&D activities have been carried out include:

Surface geochemical exploration using adsorbed soil gas method.

A collaborative project has been taken up with TERI to develop a bacterial strain and nutrient suitable for paraffin control and MEOR jobs for our fields from *in-situ* sources. For isolation of the bacterial strain, samples from different reservoirs have been collected & isolation work has been successfully carried out.

In order to explore the possibility of exploiting any Shale Gas and Tight Gas deposits, a strategic project has been undertaken with the objective of establishing the resource potential in operational areas in Assam-Arakan and Rajasthan basins by engaging an external consultant

9.4 Petroleum

9.4.1 Bharat Petroleum Corporation Limited (BPCL)

R&D programmes during the year continued to provide a competitive advantage to the business operations through development and commercialization of cost effective and competitive products and processes such as :

Hydrogen management for distillate production.

Fuel additive for high octane MS.

Corrosion inhibitor additive for gasoline-ethanol blends.

Bharat Metal Cutting Gas additive.

Fuel oil blending schemes at Refineries.

Process simulation models for optimization.

9.4.2 Chennai Petroleum Corpn. Ltd.(CPCL)

CPCL's R&D is aimed at increasing the efficiency and reliability of the refinery processes and continues to extend support to various Refinery units like FCC, Hydrocracker, DHDS and Lube units with process and feed optimization studies.

CPCL's R&D center has carried out extensive isomerisation pilot plant studies to successfully develop a model for supporting the commercial ISOM unit. Studies were initiated on Bio fuels also by conducting several high-pressure pilot plant trials on thermo chemical conversion of Algae. CPCL's R&D centre also entered into research cooperation with Indian Institute of

Petroleum (IIP), Dehradun for the development of process for low sulfur fuel oil through Extraction route as an alternate to hydro treating which is expensive and complex.

9.4.3 Hindustan Petroleum Corporation Limited (HPCL)

R&D in the Company provides support to the Refineries and Marketing divisions for operational improvement, absorption of new technologies, developing innovative & path breaking technologies and license technologies. HPCL has taken the initiative for setting up its world class Green R&D Centre at Bangalore with a total cost of ₹ 550 crores. The project is being executed in a phased manner with a Phase-1 capital investment of ₹ 312 crores. Nine research labs which include Crude Evaluation & Fuels Research , Hydro- processing ,FCC/RFCC, Catalysis, Bio-processes,Process Modelling and Simulation, Standard Testing, Analytical labs and Centre for Excellence in Nano Technology are being established under Phase-1. HPCL has also undertaken collaborative R&D projects with premier research institutes such as IIT, Kanpur, IIT, Madras, IISC, Bangalore. IIT, Delhi. TERI, NewDelhi, NIT, Calicut, CIMFR, Dhanbad, GITAM University, Vishakhapatnam , Korea Institute for Energy Research-Korea in the areas of process intensification, Nano catalyst ,CO_2 capture and utilization , Hydrogen production and storage, improved Lubricant and adsorptive separations.

9.4.4 Indian Oil Corporation (IOC)

Two units based on the technologies developed by IOC R&D Centre were successfully commissioned in Bongaigaon Refinery in 2011-12, one being the DHDT for production of diesel and the other being Isomerisationonit for production of MS. 15 patents were filed; six patents were granted, which includes two Indian, One U.K.,One U.S.A,One Chinese and One Singapore Patent. In the lubricant technology development area, the R&D Centre developed 154 product formulations during the year and obtained 63 approvals from original Equipment Manufacturers (OEMs)/ customers. Pipeline research group were successfully employed to develop IPIG and CPIG Technologies to inspect pipelines. During the year impetus was given to research work in the areas of Bio-fuels and Bio-energy with the execution of a Memorandum of Agreement with the Department of Bio-technology,Govt. of India for setting up an advanced Bio-energy Research Centre. In solar thermal area, tri-partite MOC has been signed with IIT-Rajasthan and BHEL

9.5 Other Minerals & Metals

9.5.1 Manganese Ore (India) Ltd.

Specific areas in which R&D activities have been carried out are:

Inception of Load Haul & Dump machine (LHD) tyre in underground mines for development & stopping operations.

Optimization of stope designs for safety & productivity improvement.

Hydro-geological studies for underground mining operations at Kandri Mine.

Increase level of interval (from exiting 30 Meters to 45 Meters) for rapid mining operations; Independent high speed shaft sinking operation for underground mining for 650 mtr at Balaghat Mine, (hydrological studies & stress monitoring is going on at the site for safety of the project).

Commissioning of PLC driven compressors in Kandri, Ukwa & Gumgaon Mine for energy saving and studies of reclamation of waste dumps and investigations for other environmental protection measures.

Collaborative research studies for use of overburden material for consolidated hydraulic stowing operation for the underground mining operation with Visvesvaraya National Institute Technology, Nagpur.

Development of alternative mining methods and support systems for underground mines; installation additional indigenously developed IMB plant of 100000 TPA capacity for secondary recovery of manganese ore from the rejects of integrated manganese beneficiation plant and dumps at Balaghat Mine and a study for beneficiation of low grade ore/ fines is in progress.

9.5.2 National Aluminum Co. Ltd. (NALCO)

NALCO's In-house R&D units located at its Refinery & Smelter Complexes have been recognized by DSIR. Further, NALCO is setting up of its world class Research & Technology Centre at Bhubaneswar with an investment of Rs. 88 crore with Technical Consultancy from Aluminpro, Canada and EPCM Consultancy from DCPL, Kolkata. Implementation of various activities of NRTC (Nalco Research & Development Centre) is in progress.

Alumina Plant

Studies to establish the effect of fine seed addition on granulometry and to develop it as a tool to control granulometry.

Studies to establish Solubility of CaO from different sources of Lime.

Studies related to use of CAIS as filter aid.

Studies to establish impact of over flocculation in settler Overflow.

Commercialization of high temperature resin developed in-house.

Impurity Identification and salt removal studies starting with V2O5.

Installation of heating bundles in pre desilication tank.

Preparation of Low Alpha Special alumina for ceramic Use.

Study on impact of surface mined Bauxite on process.

Laboratory scale studies were carried out along with the suppliers of various flocculants for use in High Rate thickeners and Deep cone washers of New stream.

Smelter Plant

Development of chequered sheet as a new variety of rolled product.

Development of a process for production of High purity metal (HP-2 grade) first time in two pots of Potline-IV.

Bench scale studies on Impact of butt quantity & quality on anode quality .

Six sigma projects on Reduction of iron in anode completed successfully.

Characterization of baked anodes for process monitoring.

Metallographic studies of cast products & tibor rods, inclusion analysis of molten aluminium metal are being carried out regularly for product quality improvement.

Fuel oil saving by use of magnetic resonators in cast house furnace

Pots started with alternate supply of cathode blocks, reprocessed rejected paste & indigenously developed ramming paste are being monitored for their performances.

Slot cutting machine for anodes commissioned in carbon plant. Slotted anodes are being used in pot line-I & II.

Bench scale studies carried out on impact of spent pot lining carbon on anode quality.

Bench scale studies continuing on Effect of high softening point pitch on anode quality.

Trials continuing with nonwetting castable in tapping ladles.

Melt loss is being monitored in cast house furnaces.

The Company has entered into collaboration with JNARDDC, Nagpur for the development of high speed extrusion alloys, development of glaze tiles and foam based light weighted aggregates from red mudand . It has also entered into collaboration with IIT, Kharagpur for the process of manufacturing ceramic tiles from Fly ash.

9.6 Steel

9.6.1 Mishra Dhatu Nigam Limited (MIDHANI)

Midhani Research and Development (R&D) is centered around development of new alloys like 11-10-T PH, Superni 740, 304 HCu Titanium STA Rings, Superni 708 etc. for strategic sectors. Product development such as Ti castings, investment cast products, near net shape, close die forging etc. resulted in the development of precision Ti-castings and titanium filters for the Navy and complex thin walled castings for aerospace applications. Midhani is devoting its core competence for manufacturing of alloys tailor-made to suit the specific stringent requirements of customers for their critical applications.

9.6.2 Steel Authority of India Ltd.(SAIL)

The Research and Development Centre for Iron & Steel (RDCIS) at Ranchi pursued altogether 107 R&D projects in 2011-12, out of which 69 projects were planned for completion. Achieving a target compliance of 104%, RDCIS completed 72 projects during the year. The Centre also filed 34 patents and 34 copyrights in 2011-12. As many as 85 technical papers (34 international) were published and 161 papers (95 international) were presented during the year. In addition, RDCIS undertook contract research work and provided significant consultancy services and know-how to organizations outside SAIL, yielding an external earning of 280.27 lakhs

9.7 Fertilizer

9.7.1 Rashtriya Chemicals and Fertilizers Ltd. (RCF)

RCF took up the following major R&D projects during the year:

Development of MICROLA & liquid bio fertilizers for nitrogen fixation in soil for Bihar state as per guidelines of state Agricultural department.

MOU with Institute of Chemical Technology (ICT),Matunga to carry out collaborative research for improvement in common areas of operations.

Development of process for production of zindacted urea and boronated has been taken up by the company & is expected to be completed by December, 2012.

9.8 Heavy Engineering

9.8.1 Bharat Heavy Engineering Limited (BHEL)

BHEL's products and systems are technology intensive and the Company emphasizes on R&D/technology development in its endeavor to realize its strategic aspiration of becoming engineering conglomerate. Accordingly BHEL pursued the strategy of in-house product development by encouraging innovation in line with the "Decade of Innovations (2010-2020)" declared by Govt. of India. As a major step towards this, the company updated its R&D policy. During 2011-12, BHEL invested Rs 1,198 crore on R&D efforts – 22% higher than the previous year. BHEL's efforts for encouraging innovation have resulted in raising BHEL's IPR capital tally to 1786 with highest ever IPRs (351 no.) filed during 2011-12. A growth of 15% has been recorded in turnover of ₹ 9,832 crore from in-house developed products and services.

In order to facilitate advanced R&D activities in focused areas with state-of-the-art facilities and specialized manpower, BHEL has established 13 Centers of Excellence which include eight Centres of Excellence at Corporate R&D Hyderabad. In addition to the existing centres of Excellence for Simulators, Computational Fluid Dynamics, Permanent Magnet Machines and Robotics and Machine Dynamics, BHEL has established four new Centres of Excellence during the year in the areas of Advance Fabrication Technology, Coal Research Centre, Nano Technology application and UHV lab for GIS development.

An MoU has been signed with Indian Institute of Science (IISc), Bangalore, covering a broad area of joint research opportunities to facilitate BHEL to engage in collaborative research. This aims at accelerating the pace of development and demonstration of new products, systems and concepts. 'R&D Advisory Council' has been formed with eminent scientists and dignitaries from Govt. of India to advise BHEL on R&D strategies for growth and to enable it face the new challenges in the market.

In addition to Corporate R&D Division, BHEL has four specialized Institutes, *viz.*, Welding Research Institute at Trichy, Ceramic Technological Institute at Bangalore, Hydro Lab at Bhopal and Pollution Control Research Institute at Haridwar

9.9 Medium & Light Engineering

9.9.1 Bharat Electronics Ltd.(BEL)

Focused attention was given during the year for planning and reviewing of development of technology modules and products. New projects initiated during 2011-12 include development of Software Defined Radio (SDR) for Navy/Air Force, Solid State Coastal and Surface Surveillance radars, Point to Multi-point Radio, Uncooled Thermal weapon Sight, Tablet PC, integrated anti-submarine Warfare Complex,Torpedo Defence System, Upgraded Indegenous Forward Observer Simulator,Remotely Operated Vehicle and Thermal Imaging Camera for Flycatcher Radar.

9.9.2 Electronics Corporation of India Ltd.

Specific areas in which R&D was carried out during the year are:

Airborne Satcom Terminals and Large Earth Station Antennae

IGBT based High Voltage DC Power Supplies

RF Seekers

C4I and Checkout systems for Missile Programs

Weather Radars

Electronic Voting Machines

Solid State Video Recorder

Electrical Sub-Station Automation systems

De-duplication technologies and crypto analysis

Enterprise wide Access Control System Software

Migration of software to Linux platform

9.9.3 Central Electronics Ltd. (CEL)

CEL has established the manufacturing facilities to produce CZT Substrates & produced and delivered 300 Substrate to SSPL in 3 yers as schedule, upgraded the process to improve specifications in collaboration with SSPL. In order to encounter the terrorism against public property and human life, a project was conceptualized and has been successfully competed.Based on this project,CEL has participated in various tenders of Indian Railways,MHA,MOD,BSF,CIF,CRPF,PoliceDepatments of States & other Govt. establishments.

9.10 Transportation Equipment

9.10.1 Cochin Shipyard Ltd.(CSL)

R&D activities of CSL were mainly focused on development of suitable welding procedures for Marine grade Aluminum fabrication. Concerted efforts were put in place for the development of weld procedures with double pulsing power sources which helped in producing defect free and excellent weld joints in Marine grade Aluminum. These efforts in R&D are driven by need to find solutions for the fabrication of aluminum superstructure. Some of the R&D projects identified for taking up in the near future include automation of pipe fabrication by the adoption of Orbital Welding, introduction of virtual reality weld simulators for welder training and study on distortion control in Aluminum welded panels.

9.10.2 BEML

The R&D Unit of BEML has designed and developed a number of high technology products and aggregates for Construction & Mining, Rail & Metro and Defence sectors as per customer requirements. BEML has launched the following products / projects during the year:

Mining &Construction :

(a) BE450LC - 45 ton class – Hydraulic Excavator

(b) BE220R - 22 ton class - Rail – Road Hydraulic Excavator

(c) BL9H - Back Hoe Loader with BS-III compliant engine & improved aesthetics

(d) BL200-1 - Wheel Loader with BS-III compliant engine & improved aesthetics

(e) BD355-1 - Dozer with BS-III compliant Electronic Engine & Transmission

(f) BD155 - Dozers with BEML Electronic Engine

(g) BG605A - Articulated version of BG605 Motor Grader·

(h) BH100 - Dump truck with MTU Engine & Allison Transmission.

Metro &Rail :

(a) 8-Wheeler Overhead Equipment Inspection Car for Indian Railways.

(b) Stainless Steel ACEMU for Indian Railways.

9.11 Consumer Goods

9.11.1 HLL Lifecare Limited

The company's corporate R &D centre is implementing R&D projects, both in-house and in collaboration with different national institutions namely, IIT Kanpur, IIT Mumbai, Sree Chitra ThirunalI Institute for Medical Science & Technology Thiruvananthapuram, Regional Cancer Centre, Thiruvananthapuram.

The Company’s R&D Centre received funding assistance of ₹ 19.75 lakh from Department of Science and Technology (DST) during the year for the project ‘Bioprospecting for antimycrobacterial natural products inder the Fast Track Scheme’. The new state-of -the art R&D infrastructure is in the final stages of completion. The centre will have three verticals of operations namely Pharma, Medical devices and Diagnostics divisions.

9.11.2 Security Printing and Minting Corporation of India Ltd.(SPMCIL)

The Company undertook R&D activities during the year at BNP, Dewas, CNP, Nashik, ISP, Nashik, SPM, Hoshangabad, IGM, Kolkata, IGM, Mumbai in the areas of manufacturing process improvement and information technology. The Company has furthermore, initiated efforts for adoption of newer technology of manufacturing of banknote paper by setting-up a JV company in the name of Bank Note Paper Mill India Pvt. Ltd.

MoU system in CPSEs and R&D

R&D has been included as a compulsory element under the "non-financial parameters" under the MoU system in CPSEs with a 5% weightage attached to it. In order to remove ambiguity and bring uniformity of approach, guidelines have been issued specifying scope of activities under R&D. The guidelines are a charter on activities, projects, expenditure, documentation and monitoring of initiatives by CPSEs. The salient features of the Guidelines on Research & Development for CPSEs are as under:

(i) 'Research' is original and planned investigation undertaken with the prospect of gaining new scientific or technical knowledge and understanding. 'Development' is the application of research findings or other knowledge to a plan or design for the production of new or substantially improved materials, devices, products, processes, systems or services prior to the commencement of commercial production or use.

(ii) 'Scientific Research and Development' shall mean systematic investigation and search in the field of technology natural or applied science (including agriculture).

(iii) R&D policy of the CPSE should align with its Vision and Mission and based on this policy the CPSE must develop R&D Manual and R&D Plan.

(iv) R&D plans should contain details about implementation as well as procedures and methodologies for monitoring results and modalities of concurrent and final evaluation.

(v) The expenditure on R&D as a percentage of PAT will have 50% weight in total marks of 5. The prescribed minimum amount for expenditure under R&D will be 0.5 per cent of PAT of the previous year for Miniratna and other CPSEs and minimum 1 per cent of PAT for Navratna/ Maharatna CPSEs.

(vi) CPSE should create a mechanism/process for planning/ monitoring at Apex level to decide on R&D activities on long term/short term basis. The Sub-committee of the Board (on R&D) will be responsible for periodic monitoring and review of R&D activities

(vii) R&D projects have to be based on stable and permanent mechanism for implementation; baseline organizational survey (before and after the project); project identification in line with business needs and core activities; specification of outcomes extracted from the project; setting timeline and mileposts; collaboration and synergizing with Universities/institutions/Research laboratories; outsourcing and scheme for incentives and rewards.

(viii) Evaluation of the performance of the R&D project will have to be based on its objectives, scope, deliverables and benefits (techno-commercial). The list of R&D projects/ activities with target values/performance indicators will be submitted by the CPSE to Task Force each year. The Task Force will approve 3-5 projects or add any other R&D projects with performance indicators. The evaluation/rating of the selected projects done by Research Advisory Committee of the CPSE or any independent expert will be considered by the Task Force for awarding MoU score against R&D projects.

(ix) The Department of Public Enterprises will create a National R&D Hub which will act as a Think Tank and undertake/facilitate nation-wide compilation, documentation and creation of database; advocacy; research; training, publication, promotional activities ,etc.

Chapter-10

Mega and Major Projects under Implementation

There were altogether 581 projects under implementation in the central sector as on 31.3.2012. Out of these 581 projects, 186 projects were Mega projects (each costing ₹ 1,000 crore and above) and 395 Major projects (each costing between ₹ 150 crore and ₹ 1000 crore). The total estimated cost of these 581 projects works out to be ₹ 8,62,711.94 crores. The total expenditure incurred on 581 projects until 31.03.2012 stands at ₹ 3,93,981.33 cores, which is 45.67% of the total estimated cost of these projects.

Out of these 581 projects in the central sector, 173 projects (costing ₹ 500 crores and above) belonged to Central Public Sector Enterprises (CPSEs). Of these 173 projects, 126 were Mega projects and 47 were Major projects (costing between ₹ 500 crore and ₹ 1000 crore). The total original cost in respect of these 173 projects of CPSEs stood at ₹ 4,88,877.43 crore, while the revised / estimated completion cost is equal to ₹ 5,45,450.15 crore, showing a cost overrun of around 12%.

Sector wise status of these Mega and Major projects of CPSEs indicating the names of projects, their location, capacity, date of approval, date of commissioning together with anticipated date of completion and cost of the project (original and anticipated) as per the data received from 'Project Implementation Status Report of Central Sector Projects' published by of Ministry of Statistics and Programme Implementation discussed in the paragraphs below. The capacity of projects have, however, been obtained from the respective CPSEs.

10.1 Atomic Energy

There were 5 projects in the atomic Energy sector under implementation as on 31.3.2012. The total estimated completion cost of these projects stood at ₹ 46,386.29 crores and the expenditure incurred on these projects till March 2012 was ₹ 21,460.84 crores. These projects belonged to the Nuclear Power Corporation of India Limited, Uranium Corporation of India Ltd. and Bhavini Limited, and cost above ₹ 500 crore. Project wise detail is given as under:—

10.1.1 Nuclear Power Corporation of India Limited (NPCL)

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	Kudankulam App, Kudankulam, Tamil Nadu	MW 2 x 1000	Dec-01	Dec-08 (N.R.)	13171 -15824
2.	Kakrapar Atomic Power Project- 3 & 4, Gujrat	MW 2 x 700	Oct-09	Dec-15 (11/2016)	11459 -11459
3.	Rajasthan Atomic Power Project-7 & 8, Rjasthan	MW 2 x 700	Oct-09	Dec-16 (03/2017)	12320 -12320

10.1.2 Uranium Corporation of India Limited (UCIL)

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	Uranium Ore Mine & Processing Plant at Tummaalapalle, Andhra Pradesh	3000 TPD	Sep-07	Apr-11 (12/2012)	1106.29 -1106.29

10.1.3 Bhavini Limited

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	Prototype Fast Breeder Reactor, Kalpakkam, Tamil Nadu	MWe 500	9/2003	9/2010 (01/2012)	3492.00 (5677.00)

10.2 Civil Aviation

There were 5 projects in the civil aviation sector under implementation, as on 31.3.2012. The total estimated completion cost of these projects stood at ₹ 5,611.07 crore and the expenditure incurred on these projects till March 2012 was ₹ 4128.55 crore. Out of the 5 projects, 2 were in Mega category, 3 in Major category. All these projects belonged to Airport Authority of India Limited. Details of the 3 projects costing above ₹ 500 crore is given as under :

10.2.1 Airport Authority of India Limited

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	Dev. of Kamraj Domestic Ter-Ph-II & Exp. Anna Int. Ter. Bldg. (KI), Tamil Nadu	1 x 16.84 ML	08/2008	01/2011 (01/2012)	1808.00 (2015.00)
2.	Constn of Integrated Passenger Ter. Bldg. NSCBI Airport, West Bengal	20 Million Passanger p.a.	8/2208	05/2011 (10/2012)	1942.51 (2325.00)
3.	Gagan Project, Multi State	Satellite Navigations	09/2008	06/2013 (06/2013)	626.00 (626.00)

10.3 Coal

There were 51 projects in the coal sector under implementation, as on 31.3.2012. The total estimated completion cost of these projects stood at ₹ 38,348.40 crores and the expenditure incurred on these projects till March 2012 was ₹ 13,381.72 crore. Out of these 51 projects, 10 were in Mega category, 41 in Major category. These projects belonged to Bharat Cooking Coal Limited, Central Coal Fields Limited, Eastern Coal Fields Limited, South-Eastern Coal Fields Limited, Mahanadi Coal Fields Limited, Northern Coal Fields Limited, Singareni Colliers Company Limited and Neyveli Lignite Corporation Ltd. The details of 15 projects costing above ₹ 500 crore is given below :

10.3.1 Bharat Cooking Coal Limited (BCCL)

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	Moonidih XV Seam UG, Dhanbad, Jharkhand	1.5 MTY	08/2011	04/2015 (04/2015)	1230.27 (1230.27)

10.3.2 Central Coalfields Limited (CCL)

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	Magadh OC (CCL),	20 MTY	07/2006	07/2012 (03/2016)	469.78 (706.40)
2.	Rajrappa RCE OCP Jharkhand	[3 MTY]	12/2009	03/2016 (03/2016)	510.85 (510.85)

10.3.3 Neyveli Lignite Corporation (NLC)

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	TPS-II Expansion Cuddalore Tamil Nadu	MW 2 x 250	10/2004	06/2009 (03/2013)	2030.78 (3027.00)
2.	Barsingsar TPS Bikaner Rajasthan	MW 2 x 125	12/2004	06/2009 (01/2012)	1114.18 (1868.71)
3.	Tuticorin Thermal Power Project, Tamil Nadu	MW 2x500	05/2008	03/2012 (03/2014)	4904.54 (4909.54)
4.	Neyveli New Thermal Power Project, Tamil Nadu	MW 2 x 500	06/2011	12/2015 (12/2015)	5907.11 (5907.11)

10.3.4 Northern Coalfields Limited (NCL)

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	Krishnashila (NCL), Uttar Pradesh	4 MTY	05/2006	03/2010 (03/2013)	789.88 (741.62)
2.	Amlohri EPR (NCL), Madhya Pradesh	10 MTY	05/2006	3/2014 (03/2016)	1352.04 (1143.54)
3.	Block-B OCP NCL Madhya Pradesh	3.5MTY	06/2006	03/2012 (03/2015)	746.04 (535.10)
4.	Khadia Expansion Open Cast Project, Uttar Pradesh	6 MTPA	06/2011	03/2018 (03/2018)	1131.28 (1131.28)

10.3.5 South-Eastern Coal Fields Limited (SFCL)

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	Gevra Expansion OCP Corba Chhattisgarh	[25 MTY]	07/2005	03/2010 (03/2014)	1667.55 (2675.67)
2.	Dipka Expansion OCP Korba Chhattisgarh	20 MTY	07/2005	03/2010 (03/2014)	1268.53 (1943.66)
3.	Kusmunda Expn. OCP Chattisgarh	10 MTY	06/2006	03/2013 (03/2013)	737.65 (1188.31)

10.4 Fertilisers

There were 6 projects in the fertilisers sector under implementation as on 31.3.2012. The total estimated completion cost of these projects stood at ₹ 5,317.40 crore and the expenditure incurred on these projects till March 2012 was ₹ 2,197.80 crore. Of these, 3 were in Mega category and 3 in Major category. All these projects belonged to National Fertilisers Limited. The details of the 3 projects costing above ₹ 500 crore is given as under :

10.4.1 National Fertiliser Limited

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	Bathinda-Ammonia Plant Feedstock Changeover Project.Bathinda Punjab	5.115 MT	01/2010	01/2013 (01/2013)	1294.19 (1294.19)
2.	Panipat-Ammonia Plant Feedstock Changeover Project Panipat Haryana	5.115 MT	01/2010	01/2013 (01/2013)	1292.84 (1292.84)
3.	Nangal-Ammonia Plant Feedstock Project Rupnagar Punjab	4.785LMT	01/2010	01/2013 (01/2013)	1478.63 (1478.63)

10.5 Steel

There were 16 projects under implementation in the steel sector, as on 31.3.2012. The total estimated completion cost of these projects stood at ₹ 71,412.35 crore and the expenditure incurred on these projects till March 2012 was₹ 39,595.77 crores. Out of these 16 projects, 6 were in Mega category and 10 in Major category. These projects belonged to NMDC, RINL and SAIL. The details of the 10 projects costing above ₹ 500 crore is given as under :

10.5.1 National Mineral Development Corporation(NMDC)

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1	Bailadila Iron Ore Deposit-11(B) Chhattisgarh	7.0 MTPA	01/2007	12/2011 (10/2012)	295.89 (607.17)
2.	7.0 MTPA Kumarswamy Iron Ore Mine, Bellary, Karnataka	7.0 MTPA	02/2011	05/2013 (05/2013)	898.55 (898.55)
3.	1.2 MTPA Pellet Plant Donimalai, Bellary, Karnataka	1.2 MTPA	04/2011	N.A. (04/2013)	572.00 (572.00)

10.5.2 Rastriya Ispat Nigam Limited (RINL)

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	Expansion of Liquid Steel Capacity from 3 MT to 6.3 MT V'patnam Andhra Pradesh	3.3 MT	10/2005	10/2009 (10/2012)	8692.00 (12291.00)

10.5.3 Steel Authority of India (SAIL)

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	Rebuilding of Coke Oven Battery No. 1 & 2 (Bokaro Steel Plant), Bokaro Jharkhand	0.57 MTPA	10/2007	N.A (02/2012)	500.90 (500.90)
2.	Expansion of Bokaro Steel Plant, Jharkhand	4.61 MTPA	01/2008	N.A. (10/2012)	3316.00 (6325.00)
3.	Expansion of IISCO Steel Plant, West Bengal	2.50 MTPA	02/2008	N.A. (12/2012)	14443.00 (16408.00)
4.	Expansion of Rourkela Steel Plant, Orissa	4.2 MTPA	09/2008	11/2013 (03/2013)	11812.00 (11812.00)
5.	Expansion of Bhilai Steel Plant, Chhattisgarh	7.00 MTPA	09/2008	N.A. (09/2013)	5185.00 (17265.00)
6.	Expansion of Durgapur Steel Plant, West Bengal	2.20 MTPA	06/2009	12/2012 (03/2013)	2875.00 (2875.00)

10.6 Petrochemicals

There was only one Mega project in the Petrochemicals sector, as on 31.3.2012. The total estimated completion cost of this project stood at ₹ 8,920.00 crore and the expenditure incurred on these projects till March 2012 was ₹ 4,510.51 crore. This belonged to Brahmaputra Cracker & Polymer Limited. Detail of the project is given as under:—

10.6.1 Brahmaputra Cracker & Polymer Limited

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	Assam Gas Cracker Project, Assam	220 KTPA	04/2006	12/2013 (12/2013)	5460.61 (8920.00)

10.7 Petroleum

There were 69 projects in the petroleum sector under implementation, as on 31.3.2012. The total estimated completion cost of these projects stood at ₹ 1,57,357.14 crore and the expenditure incurred on these projects till March 2012 was ₹ 71,663.61 crore. Out of these 69 projects, 34 were in Mega category and 35 in Major category. These projects belonged to BRPL, BPCL, GAIL, HPCL, IOCL, NFL and ONGC. The details of the 49 projects costing above ₹ 500 crore is given as under :

10.7.1 Bharat Petroleum Corporation Limited (BPCL)

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	Hydrocracker Revamp & Setting up a new CCR at Mumbai Refinery, Maharashtra	1.20 MMTPA	04/2008	04/2013 (04/2013)	825.00 (1827.00)

10.7.2 Bongaigaon Refinery Petroleum Ltd. (BRPL)

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	Diesel Hydro Treatment Project,BRPL, Dhaligaon, Bongaigaon, Assam	1 x 2.7 MMTPA	06/2006	09/2009 (N.R.)	1431.91 (1690.13)

10.7.3 Chennai Petroleum Corporation Limited

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	EURO-IV DHDT Tamil Nadu	1.8 MMTPA	09/2008	N.A (N.R)	2615.69 (2615.69)

10.7.4 Gas Authority of India Limited (GAIL)

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	Bawana Nangal Pipe Line Project Multi State	501.50 KM	11/2007	12/2011 (03/2012)	1816.07 (1385.00)
2.	Compressor Stations (Kailaras & Chainsa) Multi State	54 MMSCMD	11/2007	04/2011 (04/2012)	1167.00 (798.00)
3.	Kochi Koottanad Banglore Manglore Pipeline PH II, Multi State	1112 KM	06/2009	12/2012 (04/2013)	2915.00 (2300.00)
4.	Dhabol-Bangalore Pipeline Project Phase-II Multi State	549 KM	06/2009	03/2012 (08/2012)	4543.43 (2300.00)
5.	Jagdishpur-Haldia Pipeline Project Phase-I Multi State	944 KM	07/2009	03/2012 (07/2015)	7596.18 (7596.18)
6.	BNPL SPURLINE (Uttranchal & Punjab), Multi State	163 KM	12/2009	07/2012 (03/2013)	540.92 (460.70)
7.	Petrochemical Complex-II at Vijaypur and Pata, Multi State	410 KTA	08/2010	02/2014 (02/2014)	8140.00 (8140.00)
8.	100 MW Commercial Wind Energy Generation Projects Either, Multi State	115 MW	05/2011	N.A. (03/2012)	616.00 (616.00)

10.7.5 Hindustan Petroleum Corporation Limited (HPCL)

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	Resitement of Marketing Installation at Vishakhapatnam, Andhra Pradesh.	White oil-168 TKL Black oil-94 TKL LPG-88 TMTPA	1/2009	09/2011 (03/2012)	756.00 (898.00)
2.	Diesel Hydrotreator Project at Vikash Refinery Andhra Pradesh	Quality upgradation	03/2009	09/2011 (03/2012)	3597.00 (2730.00)
3.	Diesel Hydrotreator Project at Mumbai Refinery, Maharashtra	Quality upgradation	03/2009	09/2012 (05/2012)	3284.00 (2174.00)
4.	Integrated Sugar, Ethanol, Cogen Power Plant at Sugauli and Lauriya,Bihar	2x20 MW	06/2009	12/2010 (N.R.)	613.54 (727.88)

10.7.6 Indian Oil Corporation Limited (IOCL)

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	Paradip Refinery Project, Orissa	15 MMTPA	02/2009	11/2012 (06/2013)	29777.00 (30426.00)
2.	Paradip-Raipur-Sambalpur-Ranchi Pipeline, Multi State	1065 KM	08/2009	09/2012 (09/2012)	1793.00 (1400.00)
3.	Integrated Crude Oil Handling Facilities at Paradip, Orissa Subsea pipeline	2 SPM70 KM	12/2009	06/2012 (06/2012)	1492.33 (1300.00)
4.	De-Bottlenecking of SMPL , Maharashtra	21-25 LMMTPA enhancement	12/2009	N.A. (N.A.)	1584.00 (1584.00)
5.	Fluidized Catalytic Cracking Unit (FCCU) Revamp at Mathura Refinery, Uttar Pradesh	1.3 to 1.5 MMTPA enhancement	07/2010	01/2013 (01/2013)	1000.00 (1000.00)

10.7.7 Mangalore Refinery and Petrochemicals Limited

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	MRPL Phase-III Expansion Karnataka	3 MMTPA	08/2008	01/2012 (10/2012)	12412.00 (12160.26)
2.	Polypropylene Unit Karnataka	440 MTPA	05/2009	07/2012 (07/2012)	1803.78 (1803.78)

10.7.8 Numaligarh Refinery Limited

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	Wax Project Assam	50 TMTPA	06/2010	12/2013 (12/2013)	576.60 (576.60)

10.7.9 Oil & Natural Gas Corporation Limited (ONGC)

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	IOR Lakwa-Lakhmani Assam	3.06 MMT Oil	09/2001 (03/2014)	03/2007 (663.69)	345.10
2.	IOR Geleki (ONGCL) Geleki, Assam	4.76 MMT Oil	09/2001	03/2007 (03/2017)	390.09 (1674.11)
3.	DEV of G1 and GS 15 (ONGCL) – Multi State	0.98 MMT Oil, 5.92 BCM Gas	04/2003	04/2006 (06/2012)	429.82 (2218.01)
4.	Development of C-Series Fields, Maharashtra	0.98 MMT Oil, 5.92 BCM Gas	08/2006	12/2008 (04/2013)	3195.16 (2800.00)
5.	Development of B-22 Clister Fields, Mumbai, Maharashtra	2.46 MMT Oil, 6.56 BCM Gas	01/2007	09/2010 (04/2013)	2323.40 (2920.82)
6.	Construction of New Process Complex MHN Maharashtra	Processing of oil & gas produced from MH North Field	01/2007	05/2010 (07/2012)	2853.29 (6326.40)
7.	Offshore Grid Interconnectivity Project in Mumbai High Mumbai, Maharashtra	Installation of ESP for augmenting Liquid withdrawal	01/2007	03/2010 (05/2013)	740.02 (740.02)
8.	Development of B-193 Cluster Fields Maharashtra	5.57 MMT Oil, 5.12 BCM Gas	06/2007	08/2010 (12/2013)	3248.78 (5633.44)
9.	Construction of 12 Off –Shore Supply Vessels (OSV), Multi State	Replacement of old supply vessels with new vessels- 12 Nos.	06/2007	09/2011 (12/2012)	736.65 (736.65)
10.	Development of B-46 Cluster Field Maharashtra	1.68 MMm3 condensate, 5.27 BCM Gas	06/2007	07/2010 (07/2012)	1436.21 (1436.21)
11.	Mumbai High South Redevelopment Ph-2 Maharashtra	18.31 MMT Oil, 2.70 BCM Gas	10/2007	05/2010 (03/2013)	5713.03 (8813.41)

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
12.	Heera Reconstruction Maharashtra (Completed on 31.03.2012)	Revamping of facilities of Platforms under Neelam Field	05/2008	04/2010 (03/2012)	706.70 (706.70)
13.	Revamping of Win Platform at MH Asset Maharashtra	Revamping of facilities of WIN Platform	05/2008	05/2010 (05/2012)	333.40 (656.51)
14.	North Tapti Gas Field Development Multi State	4.12 BCM Gas	07/2008	03/2011 (10/2012)	589.70 (755.76)
15.	Additional Gas Processing Units at URAN Maharashtra	Setting up of additional processing facility	10/2008	12/2011 (01/2013)	1797.35 (977.00)
16.	Mumbai High North Development Phase-II Maharashtra	17.35 MMT Oil, 2.98 BCM Gas	01/2009	09/2012 (09/2013)	7133.39 (6855.93)
17.	Assam Renewal Project for Group A Assam	Revamping of old facilities of Lakwa & Lakhmani fields and Moran CTF	03/2009	03/2013 (03/2014)	2465.15 (2378.86)
18.	Construction of one Multipurpose Support Vessel Multi State	Construction of one Multipurpose Support Vessel to assist operations	01/2010	03/2013 (11/2013)	723.64 (723.64)
19.	Additional Development of D-1 Field Multi State	8.296 MMT Oil	01/2010	06/2012 (12/2012)	2163.64 (2163.64)
20.	Development of Cluster-7 Fields Multi State	9.73 MMT Oil & cond, 4.52 BCM Gas	03/2010	03/2013 (04/2013)	3241.03 (3241.03)
21.	Development of WO-16 Cluster Fields Multi State	2.83 MMT Oil & cond, 8.58 BCM Gas	06/2010	01/2014 (01/2014)	2523.00 (2523.00)
22.	102 MW Wind Power Project, Rajasthan	Harness 102 MW of wind power	07/2010	06/2012 (04/2013)	1106.00 (1106.00)
23.	Ahmedabad Redevelopment Gujarat	5.85 MMT Oil, 0.86 BCM Gas	11/2010	12/2014 (12/2014)	1916.10 (1916.10)
24.	Mehesana Redevelopment Gujarat	19.79 MMT Oil	11/2010	04/2015 (04/2015)	3823.00 (3823.00)
25.	Ankleswar Redevelopment Gujarat	2.48 MMT Oil, 6.03 BCM Gas	11/2010	12/2014 (12/2014)	2189.63 (2189.63)
26.	Conversion of RIG Sagar Samrat to Mobile offshore Production Unit (MOPS), Maharashtra	To deploy as a mobile processing unit at WO-16 Project	03/2011	05/2013 (05/2013)	861.79 (861.79)

10.8 Power

There were 103 projects in the power sector under implementation, as on 31.3.2012. The total estimated completion cost of these projects stood at ₹ 2,27,630.53 crore and the expenditure incurred on these projects till March 2012 was ₹ 1,05,245.81crore. Out of these 103 projects, 59 were in Mega category and 44 in Major category. These projects belonged to NHPC, NTPC, NEEPCO, PGCIL, SJVNL, and THDC. The details of the 75 projects costing above ₹ 500 crore is given as under :

10.8.1 National Hydro-Electric Power Corporation

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1	Parbati HEP Himachal Pradesh	4 x 200 MW	09/2002	09/2009 (07/2014)	3919.59 (5524.00)
2	Subansiri Lower HEP Arunachal Pradesh	8 x 250 MW	09/2003	09/2010 (12/2015)	6285.33 (10667.00)
3	Tessta Low Dam Stage III Hydroelectrical Power Project West Bengal	4 x 33 MW	10/2003	03/2007 (05/2012)	768.92 (1628.40)
4	Chamera, Stage-III Himachal Pradesh	231 MW	08/2005	08/2010 (04/2012)	1405.63 (2084.00
5	URI HEP Stage-II J&K	240 MW	08/2005	08/2009 (02/2013)	1729.79 (1794.00)
6	Tessta Low Dam HEP Stage-IV West Bengal	4 x 40 MW	09/2005	09/2009 (06/2013)	1061.38 (1501.80)
7	Parbati HEP Stage-III Himachal Pradesh	520 MW	10/2005	10/2010 (01/2013)	2304.52 (2716.00)
8	Nimoo Bazgo Hydroelectric Project J&K	3 x 15 MW	08/2006	08/2010 (01/2013)	611.01 (936.00)
9	Chutak Hydroelectric Project J&K	4 x 11 MW	08/2006	02/2011 (NR)	621.26 (621.28)
10	Kishan Ganga HEP J&K	1 x 110 MW	07/2007	01/2016 (11/2016)	2238.67 (3642.00)

10.8.2 National Thermal Power Corporation (NTPC)

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	Koldam HEP Bilaspur Himachal Pradesh	4 x 200 MW	10/2002	04/2009 (03/2013)	4527.15 -4527.2
2.	Barh STPP Stage-I Bihar	3 x 660 MW	12/2003	12/2009 (12/2014)	8692.97 -8693
3.	Sipat STPP Stage-I Bilaspur Chhattisgarh	3 x 660 MW	12/2003	12/2009 (04/2012)	8323.39 -8323.4
4.	Loharinag-Pal HEP Uttaranchal	4 x 150 MW	06/2006	11/2011 (12/2012)	2895.1 -2895.1

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
5.	Tapovan-Vishnugad HEP Uttaranchal	4 x 130 MW	11/2006	03/2013 (06/2014)	2978.48 -2978.5
6.	Simhadri STPP Stage-II Andhra Pradesh	2x500 MW	08/2007	NA (03/2012)	5103.39 -5038.8
7.	Bongaigaon Thermal Power Project Assam	3x250 MW	01/2008	NA (11/2014)	4375.35 -4375.4
8.	Barh STPP Stage-II Bihar	2x660 MW	02/2008	NA (01/2014)	7341.04 -7341
9.	Mouda STPP, Maharashtra	2 x 500 MW	11/2008	08/2012 (03/2013)	5459.28 -6010.9
10.	Vindhyachal STTP Stage-IV Madhya Pradesh	2 x 500 MW	01/2009	10/2012 (03/2013)	5915 -5915
11.	Rihand STTP Stage-III Uttar Pradesh	5 x 500 MW	01/2009	10/2012 (03/2013)	6230.81 -6230.8

10.8.3 North East Electric Power Corporation

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	Tuirial HE Project Aizwal Mizoram	2 X 30 MW	07/1998	07/2006 (01/2014)	368.72 -913.63
2.	Kameng Hydroelectric Project West Kameng Arunachal Pradesh	4 x 150 MW	12/2004	05/2013 (06/2016)	2496.9 -2496.
3.	Pare Hydro Electric Project Papum Pare Arunachal Pradesh	2 x 55 MW	12/2008	08/2012 (08/2013)	573.99 -573.99
4.	Tripura Gas Based Power Project Tripura	100 MW	07/2009	NA (07/2013)	421.01 -623.44
5.	Tuirial Hydro Electric Project, Mizoram	60 MW	01/2011	Jan-14 (01/2014)	913. -913.63

10.8.4 Power Grid Corporation of India Limited

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	Kaiga 3 and 4 Transmission system Karnataka	759 CKM	03/2005	12/2007 (Uncertain)	596.45 (1007.16)

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
2.	Kudankulam-APP Trans System(PGCIL) Tamil Nadu	1836 CKM	05/2005	09/2008 (NR)	1779.29 (1779.29)
3.	Transmission SY. Associated with Barh Gener. Project Bihar	2465CKM	12/2005	09/2009 (06/2012)	3779.46 (3779.46)
4.	Transmission System Associated with Parbati-III HEP Himachal Pradesh	508 CKM	07/2006	01/2010 (12/2012)	557.24 (557.24) RCE Under approval
5.	Western Region Strengthening Scheme-II Gujarat	6965 CKM	07/2006	07/2010 (12/2012)	5221.23 (5221.23)
6.	Eastern Region Strengthening Scheme-I, Multi State	1552 CKM	10/2006	10/2009 (05/2012)	975.96 (975.96)
7.	Supplementary Transmission Associated with DVC and Maithon RBC Multi State	2152 ckm	08/2008	08/2012 (03/2013)	2360.95 (2360.95)
8.	765 KV Pooling Station & Network with DVC and Maithon RBC Multi State	2050 CKM	08/2008	08/2012 (03/2013)	7075.33 (7075.33)
9.	Tr. System Associated with Mundra Ultra Mega Project Multi State	3694 CKM	10/2008	10/2012 (11/2013)	4824.12 (4824.12)
10.	Transmission System Associated with Sasan Ultra Mega Power Project Multi State	2150 CKM	12/2008	12/2012 (12/2012)	7031.88 (7031.88)
11.	Western Region Strengthening Scheme-X Multi State	14 CKM	02/2009	02/2012 (03/2012)	664.96 (664.96)
12.	Northern Region System Strengthening Scheme-XV Multi State	246 CKM	02/2009	11/2011 (12/2012)	520.48 (520.48)
13.	Northern Region System Strengthening Scheme-XVIII Multi State	330 CKM	02/2009	11/2011 (12/2012)	509.66 (509.66)
14.	North-East North Western Inter-connector I Project Multi State	5073 CKM	02/2009	08/2013 (09/2014)	11130.19 (11130.19)
15.	765 KV System for Central Part of Northern Grid Part-I Multi State	904 CKM	02/2009	02/2012 (06/2012)	1347.32 (1347.32)
16.	765 KV System for Central Part of Northern Region Grid Part-II Multi State	NA	07/2009	06/2012 (06/2012)	1736.36 (1736.36)
17.	765 KV System for Central Part of Northern Grid Part-III Multi State	456 CKM	11/2009	05/2012 (05/2012)	1075.12 (1075.12)
18.	System Strengthening in NR Sasan & Mundra Multi State	1378 CKM	12/2009	08/2012 (08/2012)	1216.83 (1216.83)
19.	Trans. System Associated with Pallatana GBPP & BPTS Multi State	1405 CKM	02/2010	12/2012 (12/2012)	2144.00 (2144.00)
20.	Transmission System of Vindhyachal-IV and Rihad-III Gen Project Multi State	1665 CKM	03/2010	11/2012 (06/2013)	4672.99 (4672.99)

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
21.	Northern Region Transmission Strengthening Scheme Multi State	468 CKM	03/2010	11/2012 (11/2012)	965.58 (965.58)
22.	Trans System for Development of Pooling Stn. In NR Part of West Bengal and Transfer of Power from Bhu West Bengal	454 CKM	04/2010	01/2015 (01/2015)	4404.57 (4404.57)
23.	Northern Region System Strengthening Scheme XVI, Multi State	404 CKM	07/2010	07/2013 (07/2013)	752.64 (752.64)
24.	Eastern Region Transmission System-III, Multi State	754 CKM	07/2010	11/2012 (12/2013)	1272.80 (1272.80)
25.	Northern Region System Strenthening Scheme XXI, Multi State	837 CKM	08/2010	04/2013 (04/2013)	1677.57 (1677.57)
26.	Transmission System for Phase-I Gen Project In Orissa-Part A Orissa	693 CKM	09/2010	03/2013 (03/2013)	2074.86 (2074.86)
27.	Transmission System Associated with Krishna Patnam Part-A Andhra Pradesh	582 CKM	12/2010	08/2013 (08/2013)	779.21 (779.21)
28.	Establishment of Pooling Stations at Rajgarh and Raipur for IPP Generation Projects in Chhattisgarh, Chhatisgarh	527 CKM	12/2010	08/2013 (08/2013)	1719.52 (1719.52)
29.	Transmission System for Phase-I Gen. Project in Orissa-B, Orissa	1118 CKM	12/2010	12/2013 (12/2013)	2743.19 (2743.19)
30.	Trans System For Phase-I Gen. Project In Orissa-C, Multi State	1248 CKM	03/2011	03/2014 (03/2014)	2569.25 (2569.25)
31.	Tranmission system for Transfer of Power from Gen. Proj. in Sikkim to NR/WR Part-B, Multi State	799 CKM	03/2011	11/2013 (11/2013)	1585.12 (1585.12)
32.	Establishment of Pooling Stations at Champa and Raigarh for IPP Generation Project in Chhattisgarh, Chhattisgarh	547 CKM	05/2011	05/2014 (05/2014)	1961.87 (1961.87)
33.	Common System Associated with ISGS Projects in Krishnapatnam of Andhra Pradesh, Andhra Pradesh	749 CKM	08/2011	08/2014 (08/2014)	1637.34 (1637.34)
34.	Integration of Pooling Station in Chhattisgarh with Central Part of WR for IPP Generation Projects IN (N18000110), Multi State	740 CKM	08/2011	12/2013 (12/2013)	1391.97 1391.97)
35.	Transmission system for IPP Generation Projects in MP and Chhattisgarh, Multi State	557 CKM	09/2011	12/2013 (12/2013)	1366.34 (1366.34)
36.	Common System Associated with Coastal Ener. Gen. Private Limited and Indbarath Power Madras Limited, Tuticorin, Tamil Nadu	1188 CKM	09/2011	09/2014 (09/2014)	1940.13 (1940.13)

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
37.	Transmission System for Phase-I Generation Projects in Jharkhand and West Bengal, Part-A, Jharkhand	396 CKM	10/2011	11/2013 (11/2013)	558.26 (558.26)
38.	Transmission System Strengthening in Western Part of WR for IPPS Generation Projects in Chhattisgarh, Chhattisgarh	1337 CKM	11/2011	07/2014 (07/2014)	2127.51 (2127.51)
39.	Transmission System for Connectivity of ESSAR Power Gujarat Ltd., Gujarat	500 CKM	12/2011	02/2014 (02/2014)	552.44 (552.44)
40.	Tr. System for Phase-I Generation Projects in Jharkhand and West Bengal-Part-A2., Multi State	695 CKM	12/2011	08/2014 (08/2014)	2422.66 (2422.66)
41.	System Strengthening in North/West Part of WR for IPP Projects in Chhattisgarh Part-E, Chhattisgarh	640 CKM	12/2011	08/2014 (08/2014)	1746.65 (1746.65)
42.	System Strengthening in Raipur-Wardha Corridor for IPP Projects in Chhattisgarh, Chhattisgarh	760 CKM	01/2012	01/2015 (01/2015)	1422.85 (1422.85)
43.	System Strengthening in Wardha-Aurangabad Corridor for IPP Projects in Chhattisgarh, Chhattisgarh	712 CKM	02/2012	02/2015 (02/2015)	1310.85 (1310.85)
44.	Transmission system Associated with Krishnanpatnam UMPP-Part-B, Andhra Pradesh	609 CKM	02/2012	10/2014 (10/2014)	1927.16 (1927.16)
45.	WR-NR HVDC Interconnector for IPP Projects in Chhattisgarh, Chhattisgarh	2001 CKM	03/2012	06/2015 (06/2015)	9569.76 (9569.76)

10.8.5 Satluj Jal Vidyut Nigam Limited (SJVNL)

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	Rampur HEP Shimla,Himachal Pradesh	412 MW	1/2007	1/2012 (09/2013)	2047.03 (2047.03)

10.8.6 Tehri Hydro Development Corporation Limited

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	Koteshwar HEP Tehri,Uttaranchal	4 x 100 MW	04/2000	04/2005 (03/2012)	1301.56 (2283.68)
2.	Tehri Pumped Storage Plant, Uttar Pradesh	4X250 MW	07/2006	07/2010 (02/2016)	1657.00 (2978.86)

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
3.	Vishnugad Pipalkoti Hydroelectric Project Uttaranchal	4X111 MW	08/2008	07/2014 (05/2016)	2491.58 (3422.44)

10.9 Shipping & Ports

There were 26 projects in the Shipping & Ports sector under implementation, as on 31.3.2012. The total estimated completion cost of these projects stood at ₹ 19858.90 crore and the expenditure incurred on these projects till March 2012 was ₹ 5264.48 crore. Out of these 26 projects, 6 were in Mega category and 20 in Major category. These projects belonged to Ennore Port Ltd., RVNL and SCI. The details of the 5 projects of Shipping Corporation of India whose costing above ₹ 500 crore is given as under :

10.9.1 Shipping Corporation of India (SCI)

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	Acquisition of 6 Nos. of 57000 DWT Handymax Bulk Carriers Mumbai Maharashtra	6 x 57000 DWT	11/2007	03/2012 (04/2012)	1061.96 (1082.06)
2.	Acquisition of 4 Nos. of 80655 DWT Panamax Bulk Carriers Mumbai Maharashtra	4 x 80665 DWT	08/2008	09/2012 (09/2012)	1066.91 (968.35)
3.	Acquisition of 4 Nos. of 82000 DWT Kamsavmax Bulk Carriers from M/s Jiangsu Eastern Heavy Industries Maharashtra	4X82000 DWT	08/2010	12/2012 (12/2012)	612.72 (627.64)
4.	Acquisition of Two(2) Nos. of 317000 DWT Very Large Crude Carriers from M/s. Jiangsu Rongsheng Heavy Maharashtra	2X317000 DWT	10/2010	02/2014 (02/2014)	966.46 (994.82)
5.	Acquisition of Three (3) Nos. of 6500 TEU Cellular Container Vessels from M/s. STX Ship Building Co. Ltd. Maharashtra	3X6500 TEU	10/2010	12/2013 (12/2013)	1028.10 (1028.10)

10.10 Telecommunication

There were 22 projects in the Shipping & Ports sector under implementation, as on 31.3.2012. The total estimated completion cost of these projects stood at ₹ 11910.44 crore and the expenditure incurred on these projects till March 2012 was ₹ 3901.72 crore. Out of these 22 projects, 2 were in Mega category and 20 in Major category. These projects belonged to BSNL, MTNL. The details of the 7 projects costing above ₹ 500 crore are given as under:

10.10.1 Bharat Sanchar Nigam Limited (BSNL)

Sl. No.	Project/Location	Capacity	Date of approval	Date of commissioning – Original / Estimated	Cost (₹ in crore) – Original / Estimated
1.	Execution of Telecom Network Requirement of Defence Forces Multi State	Telecom Network	05/2006	03/2009 (N.A.)	1077.00 (1077.00)
2.	Implementation of FTTH, The State of The Art Access Network, Procurement of GPON Equipment Multi State	GPON Equipment	12/2007	03/2010 (10/2010)	952.88 (952.88)
3.	GSM Equipment of 1867000 Lines (2G) 383000 Lines (3G) Gujrat Phase V.1 Telecom Circle Gujarat	1867000 Lines (2G) 383000 Lines (3G)	08/2008	08/2009 (06/2012)	868.00 (868.00)
4.	GSM Equipment of 3125K Lines (2G) and 625K Lines (3G) Ph-5.1 Maharashtra	3125K Lines (2G) and 625K Lines (3G)	09/2008	09/2009 (03/2012)	1799.94 (1799.94)
5.	GSM Equipment of 1900000 Lines (2G) 335500 Lines (3G) Kerala Phase V.1 Telecom Circle Kerala	1900000 Lines (2G) 335500 Lines (3G)	01/2009	01/2010 (03/2012)	848.70 (848.70)
6.	GSM Equipment of 1500000 Lines (2G) 264700 Lines (3G)Andhra Pradesh Phase V.1 Telecom Circle Andhra Pradesh	1500000 Lines (2G) 264700 Lines (3G)	01/2009	01/2010 (03/2012)	922.91 (922.91)
7.	GSM Equipment of 1625000 Lines (2G) 325000 Lines (3G) MP Phase V.1 Telecom Circle Madhya Pradesh	1625000 Lines (2G) 325000 Lines (3G)	11/2009	11/2010 (03/2012)	916.70 (930.60)

Chapter-11

CPSEs Under Construction

There are some Central Public Sector Enterprises (CPSEs) which have yet to go on regular production on a commercial scale as they are at construction stage. Many of these CPSEs are subsidiary companies set up by (Holding) CPSEs. Some of these subsidiary companies are 'shell companies' which have been set up to facilitate the establishment of Ultra Mega Power Projects (UMPP) or similar other Projects. Many of the 'shell companies' amongst the CPSEs are subsidiary companies of PFCL.

There were altogether 35 CPSEs 'under construction' as on 31.03.2012, as against 28 CPSEs as on 31.03.2011. While four CPSEs 'under construction' existing in 2010-11 have been left out from the current list of 2011-12, 11 CPSEs have been added to this list. The reasons for excluding the four enterprises are mentioned in the Table 11.1 below:

Table 11.1

Sl. No.	Name of The Enterprise	Reason for Exclusion
1.	BHEL Electrical Machines Limited	Became operational in 2011-12
2.	Bihar Drugs & Organic Chemicals Ltd.	Closed by its Holding Company (SAIL)
3.	CREDA-HPCL Biofuels Ltd	Became operational in 2011-12
4.	HPCL-Biofuels Ltd.	Became operational in 2011-12

11.1 Status of CPSEs under construction

The 35 under construction CPSEs comprise of 20 such CPSEs which are subsidiary companies (set up by the different Holding CPSEs) and 9 CPSEs are Shell Companies (set up by Power Finance Corporation Ltd./PFC Consulting Ltd.). Only six (6) are independent companies set up by the Government. While the total 'authorized capital' of theses 26 CPSEs (except 9 shell companies) stood at ₹ 20079.35 crores, their aggregate paid up capital stood at ₹ 8,041.53 crores as on 31.03.2012. Brief detail of these enterprises showing their status, date of incorporation, authorized capital and paid up capital are given in Table 11.2 below:

Table 11.2

(₹ in Crore)

S.No. CPSE	Status	Year of incorporation	Authorised Capital	Paid up up Capital
1. Air India Engineering Services Ltd.	Subsidiary	2004	10.00	0.05
2. Bharat Broadband Network Limited	Independent Company	2012	1000.00	0.05
3. Bharat Petro Resources - JPDA Limited	Subsidiary	2006	15.00	15.00
4. Bharatiya Nabhikiya Vidyut Nigam Limited	Independent Company	2003	5000.00	3952.85
5. Bhartiya Rail Bijlee Company Limited	Subsidiary	2007	1606.00	688.46
6. Biotechnology Industry Research Assistance Council	Independent Company	2012	1.00	0.10
7. Brahamputra Cracker and Polymer Limited	Subsidiary	2007	2000.00	861.55
8. Dedicated Freight Corridor Corporation of India Limited	Independent Company	2006	4000.00	774.29
9. HLL Biotech Limited	Subsidiary	2012	0.10	0.01
10. Indian Oil-CREDA Biofuels Limited.	Subsidiary	2009	400.00	16.00
11. Irrigations and Water Resources Finance Corporation Ltd.	Independent Company	2008	1000.00	102.32
12. Jagdishpur Paper Mills Ltd	Subsidiary	2008	5.00	0.05
13. Loktak Downstream Hydroelectric Corporation Ltd	Subsidiary	2009	230.00	98.46
14. Mahanadi Basin Power Limited	Subsidiary	2011	0.05	0.05
15. MJSJ Coal India Limited	Subsidiary	2008	200.00	70.10
16. MNH Shakti Limited	Subsidiary	2008	100.00	85.10
17. NLC Tamil Nadu Power Limited/Tuticorin	Subsidiary	2006	1800.00	500.00
18. NMDC Power Limited	Subsidiary	2011	0.05	0.05

19. NMDC-CMDC Limited	Subsidiary	2008	4.00	3.04
20. NTPC Hydro Ltd.	Subsidiary	2002	500.00	121.36
21. PFC Green Energy Limited	Subsidiary	2011	1200.00	4.99
22. Power Equity Capital Advisors Private Limited.	Subsidiary	2008	0.10	0.05
23. Punjab Ashok Hotel Corporation Ltd.	Subsidiary	1998	3.00	2.50
24. RITES Infrastructure Services Ltd.	Subsidiary	2010	5.00	0.05
25. SAIL Jagadishpur Power Plant Ltd.	Subsidiary	2011	0.05	0.05
26. Sethusamudram Corporation Limited	Independent Company	2004	1000.00	745.00
Total			**20079.35**	**8041.53**

The status of each of these enterprises and the projects being executed by them are discussed below.

11.1.1 Air India Engineering Services Ltd.

Air India Engineering Service Limited (AIESL), a wholly owned subsidiary company of the erstwhile Air India Ltd. was incorporated on 11.03.2004. The authorized capital and paid up capital of the company as on 31.03.2012 was Rs. 10 crore and ₹ 0.05 crore.The main objectives of the company are (i) to carry on the business activities of providing engineering services to aircraft and to provide the services of repairing, maintaining, servicing and refurbishing of aircrafts and all components and parts thereof, (ii) to carry on the business activities of providing engineering services of aircraft engines, auxiliary power units and the services of repairing, maintaining, servicing and refurbishing of aircraft engines, auxiliary power units and all parts and all components thereof and (iii) to carry on the business of providing engineering services, repairing and maintaining services of any nature for aircraft, flying machines, helicopters, dirigibles, balloons, aerial conveyances and their engines, auxiliary power units and all components and parts of any of the foregoing in any part of the world. (iv) to undertake, render and provide, whether by itself or in association with other carriers or entities, all services and facilities as are necessary or desirable for the operation of air transport services in any part of the world including but not limited to engineering services, maintenances, servicing and repairing of aircraft, flying machines, aerial conveyances and any engines, auxiliary power units, components, parts, all kinds of vechicles, machinery and equipment and to undertake, render and provide training of personnel, technical or otherwise.

11.1.2 Bharat Broadband Network Limited (BBNL):

Bharat Broadband Network Limited (BBNL) was incorporated on 25.02.2012 as a Special Purpose Vechicle (SPV) to carry on the business of establishment, management and operation of National Optical Fiber Network (NOFN) with a view to provide high speed broadband connectivity to all Gram Panchayats by extending the existing and future optical fiber network and to provide access to bandwidth in a non-discriminatory manner to all eligible service providers. The network is proposed to be completed in 2 years time. The project will be funded by Universal Service Obligation Fund (USOF). BBNL obtained the Certificate of Commencement of Business on 09.04.2012. The authorized share capital of the company is ₹ 1000 crores. The BBNL has been incorporated with the subscription of ₹ 5 Lacs (50000 equity share of ₹ 10/- each).

11.1.3 Bharat PetroResources JPDA Ltd

Bharat PetroResources JPDA Ltd. was incorporated as a wholly owned subsidiary company of Bharat PetroResources Ltd. (BPRL). This company was formed as a Special Purpose Vehicle (SPV) as required under the terms on which the Block JPDA 06-103-East Timore in Joint Petroleum Development Area (JPDA) between East Timore and Australia was awarded to the consortium led by Oilex Ltd. in which BRPL was a partner, to carry out exploration activities relating to the said block. In the Joint Venture business of exploration of Oil and Gas in JPDA between East Timor and Australia, the Company is having Participating Interest (PI) of 20% in the block JPDA 06-103. The other consortium members are Videocon Industries Ltd and GSPC holding 20% PI each, Pan Pacific and Japan Energy holding 15% PI each and Oilex holding 10% PI in the said block. The authorized share capital and paid up share capital of the Company stood at ₹ 15 crore each as on 31.03.2012. During the year the Company has registered a loss of an amount Rs. 1.96 Crores. Non-current Assets and non-current liabilities of the company as on 31.03.2012 are ₹ 80.89 Crores and ₹ 74.45 Crores respectively.

11.1.4 Bharatiya Nabhikiya Vidyut Nigam Limited

Bharitiya Nabhikiya Vidyut Nigam Ltd. (BHAVINI) was incorporated in October, 2003. The company is responsible for construction, commissioning and operation of 500 MWe Prototype Fast Breeder Reactor Project at Kalpakkam, Tamil Nadu as well as future Fast Breeder Reactors (FBR). The project has reached advanced stage of construction with 86 % of physical progress. Recently, Government has also approved the revised cost of Prototype Fast Breeder Reactors (PFBR) at ₹ 5,677 crores and revised the time schedule i.e. by September 2014 and commercial operation by March 2015. The authorized capital of the company, as on 31.3.2012, is ₹ 5000 crore. During the year 2011-12 ₹ 905 crores was received as equity, and total equity capital as on 31.03.2012 stood at ₹ 3,952.85 crores. Total manpower on the rolls of BHAVINI was 429.

11.1.5 Bhartiya Rail Bijlee Company Limited

To meet the power requirement for electric traction and non-traction, Indian Railways and NTPC Ltd. have entered into a Joint Venture (JV), namely Bhartiya Rail Bijlee Company Limited (BRBCL), with the aim of establishing and operating power projects in India. In BRBCL, the equity participation of NTPC and Indian Railway is in the ratio of 74:26. The company was incorporated on 22.11.2007 with an authorized capital of ₹ 1,606 crores. The total equity capital as on 31.03.2012 stood at ₹ 688.46 crores. The debt-equity ratio of the company is 7:3. The debt has been tied up with PFC & REC in the ratio of 6:4. BRBCL has taken up various activities related to setting up of a 1000 MW Coal Based Thermal Power Project (4x250 MW) at Nabinagar Block of Aurangabad District in Bihar. As per the agreement, 90% of power generation will be allocated to the Indian Railways and the balance 10% will be allocated to Bihar State Electricity Board. In order to set up the project, 1600 acres of land is required. Land acquisition started in 2008 and physical possession of 1168 acres private land and 160 acres govt. land (total=1328 acres) has been received till March 2012. Land acquisition for the balance 269 acres land is under progress.

11.1.6 Biotechnology Industry Research Assistance Council (BIRAC)

Biotechnology Industry Research Assistance Council (BIRAC), a 'Not-for-Profit Company' of Government of India was registered under section 25 of the Companies Act, 1956 on 20.03.2012, with its registered office in Delhi. BIRAC is a private limited company set up as a Department of Biotechnology's interface agency, which serves as a single window for the emerging biotech industries. BIRAC is guided by a Board of Directors comprising senior professionals, academicians, policy makers and industrialists. BIRAC aims to become a dynamic organisation, applying unique methodologies for nurturing the high risk projects which hold potential for commercialization. BIRAC would like to position itself as organisation nurturing and promoting innovation led research and will play an important role as facilitator and not merely service provider. The authorized share capital of the company was at ₹ 1 crore and paid up share capital stood at ₹ 0.1 crore as on 31.03.2012..

11.1.7 Brahmputra Cracker and Polymer Limited

Brahmputra Cracker and Polymer Limited (BCPL), was incorporated on 08.01.07 as a subsidiary of GAIL with equity participation from GAIL (70%), OIL (10%), Govt. of Assam (10%) and NRL (10%), for setting up 2,80,000 MT Gas Cracker Project at Lepet kata, District Dibrugarh, Assam. The authorized capital of the company has been increased from ₹ 1200 crores to ₹ 2,000 crores as on 31.03.2012. The paid up share capital stood at ₹ 861.55 crores. The project witnessed cost and time overrun due to various unavoidable reasons and Cabinet Committee on Economic Affairs (CCEA) has approved a revised project cost of ₹ 8,920 crores on November 2011 as against the original cost of ₹ 5460.61 Crores. Overall physical progress till financial year 2011-12 was 67.67%, out of which about 32% is attributed to this year alone.

11.1.8 Dedicated Freight Corridor Corporation of India Limited

DFCCIL was incorporated on 30.10.2006 and received the Certificate of Commencement of Business on 03.11.2006 from the RoC NCT of Delhi and Haryana. DFCCIL is a Schedule-'A' CPSE under the administrative control of Ministry of Railways. DFCCIL is a Special Purpose Vehicle created to undertake planning and development, mobilization of financial resources, construction, maintenance and operation of Dedicated Freight lines covering about 3338 route kms on Eastern Corridor and Western Corridor of Indian Railways. In its first phase, DFCCIL will be constructing two corridors-the Western DFC and Eastern DFC. The Eastern Corridor, starting from Ludhiana in Punjab will pass through the states of Haryana, Uttar Pradesh, Bihar, and Jharkhand and terminate at Dankuni in West Bengal. The Western Corridor will traverse the distance from Dadri to Mumbai, passing through the states of Delhi, Haryana, Rajasthan, Gujarat and Maharashtra.

The authorized share capital of the company is ₹ 4000 crores and the paid up share capital of the company as on 31.03.2012 was ₹ 774.29 Crores. The Government of India holds 100% of the equity share.

11.1.9 HLL Biotech Limited

HLL Biotech Limited is a subsidiary of HLL Lifecare Limited with its registered office in Thiruvananthapuram at Kerala. The main objective of the company is to carry on the business of manufacture and sale of all biological preparations including prophylactic and therapeutic vaccines, pharmaceutical products, preparations and services, anti-Sera and plasma and hormonal products. The authorised share capital and paid up capital of the company are ₹ 0.10 crore and ₹ 0.01 crore respectively as on 31.03.2012.

11.1.10 Indian Oil-CREDA Biofuels Limited.

Indian Oil-CREDA Biofuels Limited (ICBL) is a Joint Venture (JV) company of Indian Oil Corporation Limited (IOCL) and Chattisgarh State Renewable Energy Development Agency (CREDA). It is engaged in carrying out energy crop plantation and maintenance, on wasteland of Chattisgarh. ICBL intends to produce bio-fuel from multiple feedstocks. The company is engaged in carrying out plantation activities for Jatropha plants adopting best agricultural practice.The authorized share capital of the company was ₹ 400 crores and the paid up share capital stood at ₹ 16 crores as on 31.03.2012.

11.1.11 Irrigations and Water Resources Finance Corporation Ltd.

Irrigation and Water Resources Finance Corporation Limited (IWRFC) was set up on 29.03.2008 with an initial paid up capital of Rs. 100 crores contributed by the Government of India . The main objective of the company is to mobilise the large resources to fund the irrigation projects. During the year 2011-12, authorised share capital of the company was at ₹ 1000 crores and paid up share capital is ₹ 102.32 crores at the end of the financial year.

11.1.12 Jagdishpur Paper Mills Limited

Jagdishpur Paper Mills Limited was incorporated on 08.05.2008 as a subsidiary of Hindustan Paper Corporation Ltd. The matter of Land Allotment is being taken up with Uttar Pradesh State Industrial Development Corporation. A sum of ₹ 195 lakhs was paid to M/s. UPSIDC by HPC on behalf of the company towards EMD for allotment of 62.59 acres of land for the project during the year. The authorized capital and paid up capital of the company are ₹ 5 crore and ₹ 0.05 crore respectively, as on 31.3.2012.

11.1.13 Loktak Downstream Hydroelectric Corporation Limited

Loktak Downstream Hydroelectric Corporation Ltd. (LDHCL) was incorporated as a Joint Venture (JVC) company of NHPC Ltd. (74% shareholding) and Government of Manipur (26% shareholding) on 23.10.2009, with an authorized share capital of 230 crores.The paid up share capital of the company stood at ₹ 98.46 crores as on 31.03.2012. Its registered office is at Loktak Power Station, Komkeirap, Manipur. The objective of the company is to plan, promote and develop hydroelectric power generation in Manipur.

11.1.14 Mahanadi Basin Power Limited

Mahanadi Basin Power Limited (MBPL) is a wholly owned subsidiary of Mahanadi Coalfields Limited (MCL). MBPL was incorporated in 02.12.2011. The Commencement of Business Certificate was issued by RoC on 06.02.2012. The authorized capital and paid up capital of the company are ₹ 0.05 crore each, as on 31.3.2012. The company would be inviting proposal to develop, operate and maintain the proposed power project of 2x800 MW capacities Super Critical Thermal Power Plant at Sundargarh District in Orissa.

11.1.15 MJSJ Coal Limited

MJSJ Coal Ltd. was incorporated on 13.08.2012 as a Joint Venture (JV) company between Mahanadi Coalfields Ltd. (60% share), JSW Steel Ltd. (11% share), JSW Energy Ltd. (11% share), Shyam Metallics & Energy Ltd. (9%share) and Jindal Stainless Ltd. (9% share). The company has been formed in respect of Gopalprasad OCP (Western part of Gopalprasad) and Utkal-A of Talcher Coalfield. The normative capacity of the project is 15.00 MTY and peak capacity is 20.00 MTY. The project is located at south central part of Talcher Coalfield. The authorised share capital stood at ₹ 200 crores whereas it's paid up share capital stood at ₹ 70.10 Crores as on 31.03.2012.

11.1.16 MNH Shakti Limited

MNH Shakti Limited is a subsidiary company of Mahanadi Coalfields Limited, which was incorporated on 16.07.2008. It is a JV with 70% stake of Mahanadi Coalfields Limited (MCL), 15% stake of Neyveli Lignite Corporation Limited (NLC) and 15 % stake of Hindalco Limited (HIL). The total area of land acquired for this project is 1914.063 hectres (excluding land required for Resettlement site and Residential colony) and involves villages of Rampur, Malda and Patrapalli in Jharsuguda district (in West Bengal) and villages of Talabira and Khinda in Sambalpur District (in Orissa). The project comprises of 994.5 Ha of coal bearing area, out of which mineable coal reserve is 553.98 M.Te. (in Ib seam and Rampur seam). Most of the coal is of F&G grade, which is suitable for Thermal Power Plants. With ultimate capacity of 20 MTY, the mine will have a life of 34 years while the authorized share capital of the company was ₹ 100 crores, the paid up share capital of the company stood at ₹ 85.10 crores as on 31.03.2012.

11.1.17 NLC Tamil Nadu Power Limited

NLC Tamil Nadu Power Limited (NTPL) was set up in the year 2006. It is a JV company of NLC Ltd. and TNEB for establishing a 2 x 500 MW power plant at Tuticorin, Tamil Nadu at an estimated cost of ₹ 4909.54 crores. The land for the project (and colony) measuring 127.465 hectres has been allotted by VO Chidambaranar Port Trust (VOCPT) and long term Lease Agreement for 30 years has been entered into between the Company and VOCPT, The contract for the main plant package of Steam Generator, Turbo Generator and Electrostatic Precipitator, has been awarded to BHEL. Civil construction, structural fabrication and mechanical erection works are in progress. Drum lifting for both the units were completed in September 2011. The Ministry of Coal has given coal linkage to this project from Mahanadi Coalfields Limited (MCL) and MCL has issued Letter of Assurance to supply 3 million ton of "F" grade coal per annum for this project. While the authorized capital was ₹ 1,800 crores and the paid up capital stood at ₹ 500 crores as on 31.03.2012.

11.1.18 NMDC Power Limited

NMDC Power Limited was incorporated as a Special Purpose Vehicle (SPV) on 12.12. 2011 as a wholly owned subsidiary company of NMDC Ltd. The company was set up for the purpose for captive power supply to the 3-MTPA integrated steel plant being constructed at Nagamar at Chattisgarh. Both the authorized share capital and the paid up capital stood at ₹ 0.05 crore each as on 31.03.2012.

11.1.19 NMDC-CMDC Limited

NMDC-CMDC Limited was incorporated on 19.06.2008. It is a subsidiary company of NMDC Limited and a Joint Venture (JV) Company of NMDC and Chattisgarh Mineral Development Corporation Limited (CMDC) with equity participation in the ratio of 51:49. While the authorized capital of the company is ₹ 4 crores, the paid capital of the company stood at ₹ 3.04 crores as on 31.03.12. Its registered office is at Raipur, Chattisgarh. Since no mining operation has yet started, there is no commercial activity going on. After obtaining various Statutory Clearances such as Environment Clearances, Forest Clearance from IBM/DGMS/SPCB etc. the development of mine will take place.

The company has entered into an agreement with Chattisgarh State Housing Board and has made a payment of ₹ 154.69 lacs towards its first installment.

11.1.20 NTPC Hydro Limited

NTPC Hydro Limited was incorporated on in 2002, for hydroelectric power generation. It is a wholly owned subsidiary of National Thermal power Corporation Ltd. (NTPC) with its corporate offices at New Delhi. The authorised and paid up share capital stood at ₹ 500 crores and ₹ 121.36 crores respectively as on 31.03.2012. The company is presently executing two projects, namely, Lata Tapovan Hydro Electric Project (171 MW) located in Chamoli District of Uttarakhand and Ramman Hydro Electric Project, Stage-III (120 MW) located in Darjelling District of West Bengal and West Sikkim district of Sikkim. The projects undertaken by the company are in construction stage.

11.1.21 PFC Green Energy Limited

The company was incorporated on 30.03.2011, as a wholly owned subsidiary of Power Finance Corporation Limited to provide finance and financial support to the renewable energy sector like solar, wind, small hydro, bio mass etc. The Certificate of Commencement of Business was obtained by the company on 30.07.2011. The company has applied to RBI for registration as a Non-Banking Finance Company (NBFC). The authorized capital and paid up capital of the company stood at ₹ 1200 crores and ₹ 4.99 crores respectively as on 31.03.2012.

11.1.22 Power Equity Capital Advisors Private Limited

Power Equity Capital Advisors Private Limited (PECAP) has been set up as a company under the Companies Act, 1956 on 25.03.2008. As an advisory PECAP was incorporated to provide advisory services related to equity investments in Indian power sector, where PFC holds 30% of the total issued and paid up equity share capital. Consequent upon transfer of 70% stake in PECAP to PFC, PECAP has become wholly owned subsidiary of PFC on 11.10.2011.

While the authorized share capital of the company was at ₹ 0.10 crore, the paid up share capital stood at ₹ 0.05 crore as on 31.03.2012.

11.1.23 Punjab Ashok Hotel Co. Ltd.

Punjab Ashok Hotel Co. Ltd. is a Joint Venture (JV) between India Tourism Development Corporation Limited and Punjab Tourism Development Corporation Ltd. It was incorporated on 11.11.1998. The authorized and paid up capital were ₹ 3.00 crore and ₹ 2.50 crore respectively as on 31.3.2012. The equity contribution is in proportion of 51:49 between Indian Tourism Development Corporation and Punjab Tourism Development Corporation Limited respectively. While the registered office is in Chandigarh, the corporate office is located at Anandpur Sahib in Punjab. The main objectives of the company are to own, manage, construct-purchase and operate hotels, restaurants, motels as well as to establish, manage transport units for tourism in Punjab.

11.1.24 RITES Infrastructure Services Limited

RITES Infrastructure Services Limited (RISL) was incorporated on 27.4.2010 as a wholly owned subsidiary of RITES Ltd. The main objectives of the company are development of infrastructure projects, operation & maintenance of Multi-Functional Complexes (MFCs) at/in the vicinity of identified or prescribed premises of Railway Stations and on sites assigned by the Ministry of Railways. The paid up share capital of company is ₹ 0.05 crores against the authorised capital of ₹ 5 crores. The company is executing the work of development, operation and maintenance of Multi-functional complexes at 20 railway stations which have been identified by the Ministry of Railways (MOR). The Holding Company (RITES Ltd.) has been into constructing Multi-Functional Complexes (MFCs), on behalf of the RISL. During the year under review physical works of construction and services connections at three stations have been completed and eleven other stations are in advanced stages.

11.1.25 SAIL Jagadishpur Power Plant Limited

SAIL Jagadishpur Power Plant Limited (SJPPL) is wholly owned subsidiary of Steel Authority of India Limited (SAIL). The company has been created as a Special Purpose Vehicle (SPV) for installation of about 1050 MW capacity gas based combined cycle power plant at Jagdishpur in Distt Sultanpur. The main objectives of the company are to install, operate and maintain Power Plant at Jagdishpur in the State of Uttar Pradesh for supplying power to various units of SAIL and its associated units/facilities. The authorized capital and paid up capital of the company, were ₹ 0.05 crore each as on 31.3.2012.

The authorized capital and paid up capital of the company, as on 31.3.2012, are ₹ 0.05 crore each.

11.1.26 Sethusamudram Corporation Limited

Sethusamudram Corporation Limited (SCL) was incorporated in the year 2004 to develop and operate a navigation channel along the territorial waters of India for connecting Gulf of Mannar with Palk Bay, named as Sethusamudaram Channel to enable better movement of various shipping within the territorial waters of India. The prestigious Sethusamudram Ship Channel project was sanctioned by Government of India on 01.06.2005. Dredging is the major component of the project accounting for about two third of the project cost. The total length of the channel is 167 kms. Dredging is required for a length of 89 Km in two stretches, viz. Adam's Bridge area and Palk Bay/Palk Strait area. The designed depth of the channel is 12 m below chart datum. The company is in construction stage in implementing the Sethusamudram Ship channel project. The total cost of the project sanctioned by Government of India is ₹ 2,427.40 crores. Out of this sanctioned amount, the company has incurred capital cost of ₹ 829.01 crores as on 31.03.2012. The company has an authorized capital of ₹ 1,000 crores while ₹ 745 crores has been subscribed by the various stakeholders. Government of India has contributed ₹ 495 crores towards equity capital, V.O. Chidambaranar Port Trust and Shipping Corporation of India have contributed Rs. 50 crores each. The remaining ₹ 150 crores has been contributed by Dredging Corporation of India, Chennai Port Trust, Ennore Port Limited, Visakhapatnam Port Trust and Paradip Port Trust has contributed ₹ 30 crores each.

11.2 Shell Companies

The objective of 'shell companies' are to undertake preliminary studies and to facilitate tie-ups of inputs, linkages and clearances for the projects such as water, land and environment clearance; Appointment of Bid Process Management Consultant for preparation and evaluation of documents (RFQ/RFP) for selection of developer through International Competitive Bidding (ICB) etc.

The Power Finance Corporation Limited (PFCL) was selected as the Nodal Agency for the development of such mega power projects by the Central Electricity Authority (CEA). There are nine (9) Shell companies set up by Power Finance Corporation

Ltd./ PFC Consulting Ltd. While the total 'authorized capital' and paid up capital of theses nine CPSEs stood at ₹ 0.45 crore each respectively as on 31.03.2012. Brief detail of these enterprises showing their status, date of incorporation, authorized capital and paid up capital are given in Table 11.3 below:

Table 11.3

(₹ in Crore)

S.No.	CPSE	Status	Year of incorporation	Authorised Capital	Paid up up Capital
1.	Chattisgarh Sarguja Power Limited	Subsidiary	2006	0.05	0.05
2.	Coastal Karnataka Power Limited	Subsidiary	2006	0.05	0.05
3.	Coastal Maharashtra Mega Power Limted	Subsidiary	2006	0.05	0.05
4.	Coastal Tamil Nadu Power Limited	Subsidiary	2007	0.05	0.05
5.	DGEN Transmission Co. Ltd.	Subsidiary	2011	0.05	0.05
6.	Ghogharpalli Integrated Power Company Limited	Subsidiary	2008	0.05	0.05
7.	Orissa Integrated Power Limited	Subsidiary	2006	0.05	0.05
8.	Sakhigopal Integrated Power Company Limited	Subsidiary	2008	0.05	0.05
9.	Tatiya Andhra Mega Power Limited	Subsidiary	2009	0.05	0.05
	Total			**0.45**	**0.45**

A brief description of these shell companies is given below.

11.2.1 Chhattisgarh Surguja Power Limited

Chhattisgarh Surguja Power Ltd. (CSPL) was established in February 2006 as a wholly owned subsidiary (and a shell company) of Power Finance Corporation Ltd. for the development of Ultra Mega Power Project (UMPP) in Chhattisgarh. Both authorized capital and paid up capital of the company are Rs. 0.05 crore each as on 31.3.2012. On behalf of the proposed UMPP, CSPL has been established to undertake preliminary studies and to facilitate tie-ups of inputs, linkages and clearances for the projects such as water, land and environment clearance; Appointment of Bid process Management Consultant for preparation and evaluation of documents (RFQ/RFP) for selection of developer through International Competitive Bidding (ICB).

11.2.2 Coastal Karnataka Power Limited

Coastal Karnataka Power Limited (CKPL) was incorporated in February, 2006 under the Companies Act, 1956 as a wholly owned subsidiary (and a shell company) of Power Finance Corporation Limited for the development of Tadri Ultra Mega Power Project (UMPP) in Karnataka. The authorized capital and paid up capital of the company, as on 31.3.2012, are ₹ 0.05 crore each. On behalf of the proposed Ultra Mega Power Project at Tadri, CKPL has been established to undertake preliminary studies and to facilitate tie-ups of inputs, linkages and clearances for the projects such as water, land and environment clearance as well as appointment of 'bid process' Management Consultant for preparation and evaluation of documents (RFQ/RFP) for selection of developer through International Competitive Bidding (ICB).

11.2.3 Coastal Maharashtra Mega Power Limited

Coastal Maharashtra Mega Power Ltd. (CMMPL), was incorporated in March, 2006 under the Companies Act, 1956 as a wholly owned subsidiary (and a shell company) of Power Finance Corporation Ltd. to facilitate the development of Ultra Mega Power Project at Sindhudurg Distric in Maharashtra. The authorized capital and paid up capital of the company as on 31.3.2012 are ₹ 0.05 crore each. On behalf of the proposed Ultra Mega Power Project (UMPP), CMMPL has been established to undertake preliminary studies and to facilitate tie-ups of inputs, linkages and clearances for the projects such as water, land and environment clearance as well as appointment of 'bid process' Management Consultant for preparation and evaluation of documents (RFQ/RFP) for selection of developer through International Competitive Bidding (ICB).

11.2.4 Coastal Tamil Nadu Power Limited

Coastal Tamil Nadu Power Limited (CTNPL) was incorporated in January, 2007 under the Companies Act, 1956 as a wholly owned subsidiary (and a shell company) of Power Finance Corporation Limited for the development of Cheyyur Ultra Mega Power Project (UMPP) in state of Tamilnadu. The authorized capital and paid up capital of the company as on 31.3.2012 are ₹ 0.05 crore each. On behalf of the proposed Ultra Mega Power Project at Cheyyur, CTNPL is to undertake preliminary studies and to obtain necessary clearances and tie up inputs including water, land and power selling arrangements etc., for proposed power project prior to award of the project to the successful bidder.

11.2.5 DGEN Transmission Co. Ltd.

DGEN Transmission Company Limited (formerly known as DGEN and Uttrakhand Transmission Company Limited) was incorporated on 15.11.2011, as a wholly owned subsidiary of PFC Consulting Limited for the development of the Transmission capacity in India and to bring potential investors through tariff based competitive bidding process. Presently, company is associated with DGEN TPS (1200MW) of Torrent Power Ltd. The authorized capital and paid up capital of the company were ₹ 0.05 crore each as on 31.3.2012.

11.2.6 Ghogarpalli Integrated Power Company Limited

Ghogarpalli Integrated Power Company Limited (GIPCL) was incorporated on 22.05.2008, as a wholly owned subsidiary of Power Finance Corporation Ltd. to facilitate the development of Ultra Mega Power Project (UMPP) at Ghogarpalli in Orissa. The authorized capital and paid up capital of the company are ₹ 0.05 crore each, as on 31.3.2012. GIPCL has been established to undertake preliminary studies and to facilitate tie-ups of inputs, linkages and clearances for the projects such as water, land and environment clearance as well as appointment of Bid process Management Consultant for preparation and evaluation of documents (RFQ/RFP) for selection of developer through International Competitive Bidding (ICB) for the UMPP.

11.2.7 Orissa Integrated Power Limited

Orissa Integrated Power Limited (OIPL) is a wholly owned subsidiary of Power Finance Corporation Limited for the development of Sundergarh Ultra Mega Power Project (UMPP) in Orissa. OIPL has been established to undertake preliminary studies and to facilitate tie-ups of inputs, linkages and clearances for the projects such as water, land and environment clearance, appointment of bid process Management Consultant for preparation and evaluation of documents (RFQ/RFP) for selection of developer through International Competitive Bidding (ICB) for the UMPP.It was incorporated on 24.08.2006. The authorized capital and paid up capital of the company stood at ₹ 0.05 crore each as on 31.03.2012.

11.2.8 Sakhigopal Integrated Power Company Limited

Sakhigopal Integrated Power Company Limited (SIPCL) is a SPVs and a wholly owned subsidiary of Power Finance Corporation Limited. It was incorporated on 21.5.2008 under the Companies Act, 1956 for the development of Ultra Mega Power Project (UMPP) in Orissa. The authorized capital and paid up capital of the company were ₹ 0.05 crore each as on 31.3.2012. SIPCL has been established to undertake preliminary studies and to facilitate tie-ups of inputs, linkages and clearances for the projects such as water, land and environment clearance as well as appointment of bid process Management Consultant for preparation and evaluation of documents (RFQ/RFP) for selection of developer through International Competitive Bidding (ICB) for the UMPP.

11.2.9 Tatiya Andhra Mega Power Limited

Tatya Andhra Mega Power Limited (TAMPL) is one of the SPVs and a wholly owned subsidiary of Power Finance Corporation Limited. It was incorporated on 17.4.2009 for the development of Ultra Mega Power Project (UMPP) in Andhra Pradesh. The authorized capital and paid up capital of the company were ₹ 0.05 crore each as on 31.3.2012. TAMPL has been established to undertake preliminary studies and to facilitate tie-ups of inputs, linkages and clearances for the projects such as water, land and environment clearance as well as appointment of bid process Management Consultant for preparation and evaluation of documents (RFQ/RFP) for selection of developer through International Competitive Bidding (ICB) for the development of UMPP.

Chapter-12

Revival and Restructuring of sick/loss making CPSEs

As the Central Public Sector Enterprises (CPSEs) opterate under dynamic market conditions, it is quite natural to see ups-and-downs in their performance. Some CPSEs have, however, been incurring losses continuously for the last several years. The accumulated loss in many of these cases has exceeded their net worth. Under the provisions of Sick Industrial Companies (Special Provision) Act 1985, the CPSEs have to be referred to Board for Industrial and Financial Reconstruction (BIFR) on their becoming sick/insolvent.

The Government, furthermore, constituted the Board for Reconstruction of Public Sector Enterprises (BRPSE) in 2004 as an advisory body for the revival and restructuring of sick and loss making CPSE's. Since 2004, there has been significant improvement in the overall condition of these enterprises. In comparison to 90 sick CPSEs in March 2005, there were 66 sick CPSEs in March 2012 (Table-12.1), out of which 44 CPSEs were registered with BIFR.

Table 12.1

Sick & Loss making CPSEs

(2004–05 to 2011-12)

Year	No.of sick CPSEs*	Accumulated losses of sick CPSEs* (` in crore)	No. of sick CPSEs**	No. of Loss making CPSEs, during the year	Aggregate Loss, during the year (₹ in crore)
(1)	(2)	(3)	(4)	(5)	(6)
2004–05	90	82352	81	73	9003
2005–06	81	83554	75	63	6845
2006–07	74	89064	83	61	8526
2007–08	46	72820	78	54	10303
2008–09	46	68577	73	55	14621
2009-10	46	62828	69	59	16231
2010-11	45	65146	63	62	21817
2011-12	44	116265	—	63	27602

*Note: *As per the definition of BIFR   **As per the definition of BRPSE*

12.1 Reasons for Losses and Sickness in CPSEs

The reason for losses and sickness in CPSEs varies from enterprise to enterprise. In some cases, the cause of sickness is historical; textile companies which were taken over from the private sector on soico-economic considerations like protecting employment of workers in early seventies could not be modernized quickly. British India Corporation, Bird Jute & Exports and National Textile Corporation (NTC) belonged to this group. Besides these (textile) companies, there have been other enterprises that were taken over from the private sector but could not be modernized. These include engineering and refractory enterprises like Bharat Wagons & Engineering, Praga Tools, Burn Standard, Braithwaite & Co., Richardsan and Crudass Ltd; pharmaceutical companies like Bengal Chemicals & Pharmaceuticals Ltd., transportation / shipping companies like Central Inland Water Transport Corporation and Hooghly Dock & Port Engineering Ltd. and consumer goods companies like Tyre Corporation of India and Hooghly Printing Co. Ltd.

The other group of sick companies (other than those taken over) are green-field companies. These became sick over the years on account of inadequate job orders, high man power cost, lack of finance, technological obsolescence, high input costs and competition from cheap imports. These included companies like Heavy Engineering Corporation, Fertilizer Corporation of India and Hindustan Antibiotics Ltd. Some of the loss making companies, such as, Jute Corporation of India and Cotton Corporation of India have had macro-economic objectives to serve like procuring agricultural goods from farmers at minimum support prices (MSP) etc. In addition to the above reasons, the other problems common to most sick and loss making CPSEs have been poor debt-equity structure, weak marketing strategies and slow decision-making process. Attempts have, therefore, been made to overcome "sickness" in these CPSEs through various policy initiatives.

12.2 Sick Industrial Companies (Special Provisions) Act, 1985 (SICA)

The Sick Industrial Companies (Special Provision) Act, 1985 (SICA) brought the CPSEs under its purview in 1991 (made effective from 1992). Under the provisions of SICA, the CPSEs (with at least five years of registration) whose accumulated losses are equal to or have exceeded their net worth may be referred to the BIFR. Reference to BIFR grants immunity from legal sanctions to the company arising from proceedings from execution of decree against property, suit for recovery of money and suit for enforcement of guarantor in respect of loans etc. The BIFR, on examination, may either sanction suitable revival/ rehabilitation schemes (in case of enterprises which are viable) or recommend closure (in respect of enterprises considered unviable). During the period of the last twenty years, that is, between 1992 to 2011, 63 CPSEs have been referred to BIFR (Table12.2). There were no references made to BIFR between 2008 to 2012. Year-wise registration of CPSEs with BIFR is given below:

Table 12.2

Registration of CPSEs with BIFR

Year	No. of CPSEs	Year	No. of CPSEs
1992	30*	2003	2
1993	2*	2004	4*
1994	4*	2005	2
1995	1	2006	1
1996	2	2007	1
1997	3	2008	0
1998	3	2009	0
1999	3	2010	0
2000	3	2011	0
2001	2	2012	0
2002	3	Total	63 #

*Note: *This includes the subsidiaries of NTC, which have been merged into one company and registered again in 2008 after merger.*

Since Mandya National Paper Mills Limited has been wound up, Jessop & Co. Ltd. has been privatized, U.P. Drugs and Pharmaceuticals Limited has been transferred to the U.P. Government, all the nine subsidiaries of NTC (Holding) Ltd. merged with NTC (Holding), Indian Iron and Steel Co. Limited, Bharat Refractories Limited (BRL) and Maharashtra Elektrosmelt Limited have merged with SAIL, and Praga Tools Ltd. merged with HMT Ltd, these CPSEs have not been included in the list of BIFR referred CPSEs.

Although a total number of 63 CPSEs have been referred to BIFR (uptil 2007), there are only 44 CPSEs that are in operation. Out of the remaining 19 CPSEs, 18 CPSEs are closed and one has ceased to be a CPSE. (Their cases however, continue to be listed in BIFR). Two CPSEs namely Vignyan Industries Limited and North Eastern Regional Agricultural Marketing Corporation Limited have since been declared 'No Longer Sick'. In addition, Bharat Immunologicals and Biologicals Corporation Limited, Hindustan Salts Limited, Projects and Development India Ltd., Hindustan Insecticides Limited and Hindustan Organic Chemicals Limited have been dropped by the Board from the list of 'sick industrial CPSEs' on their net worth becoming positive. Cases of four CPSEs have been declared as 'non-maintainable' by the Board, as either the matter had become time barred for reference to the Board or on account of the net worth of the CPSE becoming positive or the CPSE was found not fulfilling the conditions of being industrial company as defined under SICA or on some other grounds. Moreover, one of these companies, namely, Manipur State Drugs and Pharmaceuticals Limited has been closed. Table 12.3 below shows the status of the 63 sick industrial CPSEs, registered with BIFR, as on 31.3.2012.

Table 12.3

Status of CPSEs registered with BIFR

(as on 31.03.2011)

Sl. No.	Particulars	Number
1.	Revival Scheme sanctioned by BIFR	14
2.	Revival Scheme sanctioned by AAIFR	1
3.	Declared no longer sick	2
4.	Dropped on net worth becoming positive	5
5.	Dismissed as non-maintainable	4
6.	Deregistered with BIFR / Others	2
7.	Winding up recommended and closed	14
8.	Winding up recommended	5
9.	Winding up notice issued	1
10.	Failed and re-opened	1
11.	Draft Rehabilitation Scheme (DRS) awaited	13
12.	Remanded by AAIFR	1
	Total	**63**

BIFR has already disposed of 48 cases of CPSEs either through sanctioning revival schemes (15 cases) or declaring 'no longer sick' (2 cases) or dropping due to net worth becoming positive (5 cases) or dismissing the cases as non-maintainable (4 cases) or deregistered with BIFR / Others (2 cases) or recommending winding up (19 cases) or winding up notice issued (one case) (Annex-12.1). BIFR is yet to take a view in regard to 15 cases of CPSEs. The process of sanctioning of revival / rehabilitation schemes as well as the process of appointment of Official Liquidator (OL) for winding up of CPSEs by BIFR have, however, been slow on account of involvement of multiple agencies.

12.3 Strategies for revival / restructuring of sick CPSEs

Some of the strategies adopted for restructuring / revival of sick CPSEs are mentioned below:

(i) Financial restructuring: Financial restructuring involves investment in CPSEs by the Government in the form of equity participation, providing loan (plan/non-plan)/grants and/or write-off of past losses as well as changing the debt equity ratio. Measures such as waiver of loan/ interest/ penal interest, conversion of loan into equity, conversion of interest including penal interest into loan, moratorium on payment of loan/ interest, Government guarantee, sale of fixed assets including excess land, sacrifices by State Government, one-time settlement (OTS) with banks/financial institutions, etc.

(ii) Business restructuring: Business restructuring involves change of management, hiving off viable units from CPSEs for formation of separate company, closure of unviable units, formation of joint ventures by induction of partners capable of providing technical, financial and marketing inputs, change in product mix, improving marketing strategy, etc. on case to case basis.

(iii) Manpower rationalization: Salaries and wages are often a major component of cost for an enterprise. In order to shed excess manpower, CPSEs have often resorted to Voluntary Retirement Scheme (VRS) from time to time. In case of CPSEs found unviable and where a decision has been taken to close the unit, it is the Voluntary Separation Scheme (VSS) that is introduced. Retrenchment of employees is adopted only as the last resort and in exceptional circumstances.

12.4 Board for Reconstruction of Public Sector Enterprises (BRPSE)

The Government constituted the Board for Reconstruction of Public Sector Enterprises (BRPSE) vide its Resolution dated 6th December, 2004 as an advisory body to address the task of strengthening, modernizing, reviving and restructuring of Central Public Sector Enterprises (CPSEs), and to advise the Government on strategies, measures and schemes related to them.

The Board comprises a Chairman in the rank of Minister of State, three non-official Members and three official Members, namely, Secretary, Department of Expenditure, Secretary, Department of Disinvestment and Secretary, Department of Public Enterprises (DPE). In addition, Chairman, Public Enterprises Selection Board, Chairman, Standing Conference on Public Enterprises and Chairman, Oil and Natural Gas Corporation Limited are permanent invitees to the meetings of BRPSE. Secretary to the Government in the Administrative Ministry/ Department concerned with the PSE taken up for consideration by the Board is a Special Invitee. There is a full-time Secretary for BRPSE in the rank of Additional Secretary to the Government of India. The Board is located in the Department of Public Enterprises (DPE). DPE provides the necessary secretarial assistance to the Board.

For the purpose of making a reference to BRPSE, a company is considered ‘sick’ if it has accumulated losses in any financial year equal to 50% or more of its average net worth during 4 years immediately preceding such financial year, and/or is a company within the meaning of Sick Industrial Companies (Special Provisions) Act, 1985 (SICA). The concerned Administrative Ministries/ Departments are required to send proposals of their CPSEs identified as ‘sick’ for consideration of BRPSE. The Board is expected to make its recommendations within 2 months of the date of receipt of the complete proposal from the Administrative Ministry/Department. Other loss making CPSEs may be considered by the Board either *suo moto* or upon reference by the administrative. Ministry, if it is of the opinion that revival/ restructuring is necessary for checking its incipient sickness (incurring loss for two consecutive years) and making the CPSE profitable.

12.4.1 Revival Package of sick CPSEs

As per the definition of sick CPSEs given above and the performance evaluation of CPSEs, cases of 67 sick CPSEs have been referred to BRPSE up to October 2012. Out of which, the Board has made recommendations in respect of 62 cases. In addition, the Board has also recommended to the Government for according “in-principle” approval for rescinding its earlier decision to close the units of Fertilizers Corporation of India (FCIL) and Hindustan Fertilizers Corporation Ltd. (HFCL) and to explore new options for their revival. Further five (5) cases of CPSEs, namely Nagaland Pulp & Paper Co., Hindustan Fertilizer Corporation Ltd. (HFCL), Fertilizer Corporation of India Ltd. (FCIL), Birds Jute & Exports Ltd., and ITI Ltd. have been returned to the concerned administrative Ministries/Departments for further examination. Out of these, revival proposal for 4 CPSEs namely, Nagaland Pulp & Paper Co., ITI, HFCL and FCIL have been approved directly by the Government on the basis of the proposals submitted by the concerned Administrative Ministries.

Out of these 62 cases, the Government has approved, 43 revival proposals of CPSEs till October 2012, envisaging a total assistance of ₹ 26,977 crore (including ₹ 4740 crore as cash assistance and ₹ 22,237 crore as non-cash assistance) and winding up of two (2) enterprises, namely, Bharat Opthalmic Glass Ltd. and Bharat Yantra Nigam Ltd. The enterprise-wise details of cash and non-cash assistance in respect of approved proposals are given at Annex-12.2.

The approval of the Government in respect of the aforesaid 45 PSEs fall under the following broad categories;

S. No.	Category	No. of CPSEs
1	Revival through restructuring package as a PSE	28
2	Revival through joint venture/ Disinvestment	8
3	Revival through merger/takeover	7
4	Closure	2
	Total	**45**

Out of the 45 cases approved by the Government till October, 2012, 15 were approved during 2005-06, 11 cases were approved during 2006-07, 5 cases were approved during 2007-08, 5 cases were approved during 2008- 09, 3 cases were approved in 2009-10, 2 cases were approved during 2010-11, 3 cases have been approved during 2011- 12 and 1 case was approved in 2012-13 (upto October, 2012).

12.4.1.1 Revival through Merger, Transfer, Takeover

The Government approved the transfer of Bharat Heavy

Plates and Vessels Ltd. to BHEL on 26.11.2007 and merger of Bharat Refractories Ltd. with SAIL on 24.4.2008. The Government approved on 20.10.2005 merger of Praga Tools Ltd. with HMT Machine Tools Ltd. The Government also approved on 7.2.2008 transfer of Bharat Wagon & Engineering Co. Ltd. (BWEL) from D/o Heavy Industries to M/o Railways. The Government also approved on 24.12.2009 the transfer of administrative control of Hindustan Shipyard Ltd. from M/o Shipping to M/o Defence. The Government further approved on 10.6.2010 the transfer of Refractory Unit (at Salem) of Burn Standard Company Ltd.(BSCL) to SAIL under M/o Steel and the transfer of administrative control of BSCL(excluding Refractory unit at Salem) and Braithwaite and Company Ltd. from D/o Heavy Industry to M/o Railways.

12.4.1.2 Revival/restructuring during 2011-12

During the period between November 2011 to October 2012, the Board recommended revival of HMT Ltd. and North Eastern Handicrafts & Handlooms Development Corporation Ltd.

The Board also reviewed, during this period, the status of implementation of revival package sanctioned by the Government in case of 15 CPSEs as mentioned below:

1. Hindustan Shipyard Ltd.
2. National Textile Corporation Ltd.
3. Heavy Engineering Corporation Ltd
4. Bharat Wagon & Engineers Ltd.
5. Central Electronics Ltd.
6. Fertilizers & Chemicals Travancore Ltd.
7. Hindustan Copper Ltd.
8. Konkan Railway Corporation Ltd.
9. Scooters India Ltd.
10. Instrumentation Ltd.
11. HMT Machine Tools Ltd.
12. Hindustan Organic Chemicals Ltd.
13. Eastern Coalfields Ltd.
14. Tungabhadra Steel Products Ltd.
15. National Jute Manufactures Corporation Ltd.

The Board also reviewed the progress vis-à-vis its recommendations in respect of 6 CPSEs as mentioned below:

1. Indian Drugs & Pharmaceuticals Ltd.
2. IDPL (Tamil Nadu) Ltd.
3. Bihar Drugs & Organic Chemicals Ltd.
4. Madras Fertilizers Ltd.
5. Brahmaputra Valley Fertilizers Corporation Ltd.
6. Bharat Coking Coal Ltd.

In addition, the Board also reviewed, suo moto, the performance of Hindustan Paper Corporation Ltd. and Central Cottage Industries Corporation of India Ltd., which have been incurring losses continously in the previous two years.

12.4.2 Attracting talent to sick/loss making CPSEs

Based on the recommendations of BRPSE, furthermore, the Government has issued guidelines for retaining/attracting Managerial Talent in sick and loss making CPSEs for which revival plan has been appropved. Accordingly, if any incumbent Board level executive contributes exceedingly well in the turn around of the company, his tenure maybe extended to 65 years of age and a lump-sum incentive may be given up to maximum of Rs. 10 lakh out of the profits of the CPSE besides usual pay, allowances and perks attached to the post.

12.5 Revival of Fertilizer PSUs

In addition, the Government had also given 'in principle' approval to explore the possibility of revival of Hindustan Fertilizer Corporation Ltd. and Fertilizer Corporation of India Ltd. subject to the confirmed availability of gas. The Government had established an Empowered Committee of Secretaries (ECoS) with the mandate to evaluate all options of revival of closed units of FCIL and HFCL, and make suitable recommendations for consideration of the Government. The Government finally approved the Draft Rehabilitation Scheme (DRS) on 4.8.2011 for revival of HFCL and FCIL envisaging a non-cash assistance of ₹ 16731.55 crores and waiver of tax implication in this regard. cash infusion for revival will be made by public sector and private sector companies.

12.6 Performance of sick CPSEs

The performance of 43 sick CPSEs approved for revival by the Government, during the five-year period from 2006-07 to 2010-11 is given in Annex-12.3**.** Out of the 43 CPSEs, 24 CPSEs have posted profit in 2010-11.

12.6.1 Turnaround Sick CPSEs

The Government issued guidelines for declaring a sick CPSE as "turnaround CPSE" in January 2011. These guidelines, inter alia, define a turnaround CPSE as one which was in the list of sick CPSEs of BRPSE and which has shown profit in each of the three preceding accounting years and has a positive net worth after implementation of the revival package. Accordingly, 15 such CPSEs have been declared "turnaround CPSEs" as shown at Annex-12.4

Details on the CPSEs Registered with BIFR
(on 31.03.2012)

Sl. No.	Case No. and year of reference	CPSEs	Date of Orders
(1)	(2)	(3)	(4)
I.	**Declared 'No Longer Sick'**		
1.	512/1992	Vignyan Industries Ltd., Tarkere (Karnataka)	27.5.2003
2.	503/1997	North Eastern Regional Agri. Marktg. Corpn., Guwahati (Assam)	20.8.2001
II.	**Dropped (Positive Networth)**		
3.	502/1997/ 503/1998	Bharat Immunologicals&Biologicals Corporation Limited, BulandSahar (Uttar Pradesh)	1.8.2002
4.	502/2000	Hindustan Salts Limited, Jaipur (Rajasthan)	22.8.2005 / 15.12.2008
5.	521/1992	Projects and Development India Ltd., Dhanbad (Jharkhand)	26.3.2004 / 19.4.2006
6.	501/2004	Hindustan Insecticides Ltd., New Delhi (Delhi)	18.9.2007
7.	501/2005	Hindustan Organic Chemicals Limited, Rasayani, Raigad (Maharashtra)	21.11.2005 / 28.05.2008
III.	**Dismissed as 'Non-maintainable'**		
8.	502/1992 / 601/1998	Nagaland Pulp & Paper Co. Ltd., Mokokchung, (Nagaland)	13.11.1995 / 25.5.2007
9.	504/1997	Manipur State Drugs & Pharmaceuticals Ltd., Imphal (Manipur) **$$**	17.11.1997
10.	502/2002	Central Coalfields Ltd., Ranchi (Jharkhand)	29.11.2002
11.	517/1992/ 504/2002	BieccoLawrie Limited, Kolkata (West Bengal) @	27.3.2003
IV.	**Scheme Sanctioned by AAIFR**		
12.	502/1999	Hindustan Vegetable Oils Corpn. Ltd., New Delhi (Delhi) @	7.12.2001 / 23.07.2008
V.	**Revival Scheme sanctioned**		
13.	518/1992	The British IndiaCorpn. Ltd., Kanpur, (Uttar Pradesh) @	17.12.2002/ 29.11.2007
14.	523/1992	Tyre Corporation of India Ltd., Kolkata (West Bengal) @	20.2.1997 / 10.3.2008 / 19.05.2009 / 21.12.2009 / 03.03.2010
15.	528/1992	Braithwaite & Co. Ltd., Kolkata (West Bengal) @	17.10.1995 / 29.6.2006
16.	531/1992	National Instruments Ltd., Kolkata (West Bengal)%	1.10.2002 / 13.5.2008 / 04.08.2008
17.	506/1993	National Jute Manufactures Corporation Ltd. Kolkata (West Bengal)	8.7.2004 / 24.11.2008 / 05.03.2009 / 31.3.2011
18.	509/1993	Instrumentation Ltd., Kota (Rajasthan)	23.12.1998 / 24.05.2006 / 01.10.2009
19.	507/1994	Hindustan Fluorocarbons Ltd., Hyderabad (Andhra Pradesh) @	24.7.2003
20.	501/1996	Cement Corporation of India Ltd., New Delhi (Delhi)	05.12.2005 / 21.3.2006 / 17.06.2008
21.	501/1997	Hindustan Antibiotics Limited, Pune (Maharashtra)	5.6.2007 / 14.10.2008
22.	501/1998/ 501/2000	Eastern Coalfields Limited, Burdwan (West Bengal) @ 12.6.2007 *	01.06.1998/ 2.11.2004 /
23.	504/1995 / 502/2001	Bharat Coking Coal Ltd., Dhanbad (Jharkhand)	11.2.2004 / 18.05.2009 / 28.10.2009
24.	501/2003	Andrew Yule and Company Ltd., Kolkata (West Bengal) @	20.8.2007/ 30.10.2007
25.	503/2004	Bharat Heavy Plates and Vessels Limited, Visakhapatnam (Andhra Pradesh)	6.10.2005 / 29.08.2008 / 25.03.2009 / 21.10.2010
26.	501/2006	HMT Machine Tools Limited, Bangalore (Karnataka)	2.11.2006 / 12.6.2008
VI.	**Winding up Recommended**		
27.	507/1992	TriveniStructurals Ltd. , Allahabad (Uttar Pradesh)	5.6.2003
28.	511/1992	Heavy Engineering Corpn. Ltd., Ranchi (Jharkhand)	6.7.2004
29.	514/1992	Orissa Drugs & Chemicals Ltd., Bhubaneswar (Orissa)	8.4.2003
30.	503/1995	Hindustan Photofilms Mfg. Co. Ltd., Ootacamund (Tamilnadu)	30.1.2003

Sl. No.	Case No. and year of reference	CPSEs	Date of Orders
(1)	(2)	(3)	(4)
31.	502/1996	Maharashtra Antibiotics & Pharma. Ltd., Nagpur (Maharashtra) $$	4.7.2000 / 16.12.2008 / 17.06.2010
VII.	**CPSEs recommended for winding up and have been 'closed' $$**		
32.	505/1992	Bharat Gold Mines Ltd., Kolar Gold Fields (Karnataka)	12.6.2000
33.	506/1992	Tannery and Footwear Corporation of India Ltd., Kanpur (Uttar Pradesh)	14.2.1995
34.	508/1992	Cycle Corporation of India Limited, Kolkata (West Bengal) @	10.7.2000
35.	510/1992	Mining and Allied Machinery Corporation Ltd. , Durgapur (West Bengal)	29.6.2001
36.	513/1992	National Bicycle Corporation of India Ltd., Mumbai (Maharashtra) @	20.12.1993
37.	520/1992	Bharat Process and Mechanical Engineers Ltd., Kolkata (West Bengal) @	22.7.1996
38.	524/1992	Weighbird India Limited, Kolkata (West Bengal) @	17.2.1997
39.	526/1992	Bharat Brakes & Valves Ltd., Kolkata (West Bengal) @	27.9.2002
40.	527/1992	Cawnpore Textiles Ltd., Kanpur (Uttar Pradesh) @	19.1.1995
41.	529/1992	Smith Stanistreet& Pharmaceuticals Ltd., Kolkata (West Bengal) @	3.12.2001
42.	532/1992	Bharat Ophthalmic Glass Ltd., Durgapur (West Bengal)	19.6.2003
43.	504/1994	Southern Pesticides Corporation Limited, Hyderabad (Andhra Pradesh)	1.11.2001
44.	506/1994	Rayrolle Burn Ltd., Kolkata (West Bengal) @	13.7.2001
45.	503/1999	Pyrites, Phosphates & Chemicals Ltd., Rohtash (Bihar)	20.11.2002
VIII.	**Winding up Notice Issued**		
46.	503/505/2002	Hindustan Cables Ltd., Kolkata (West Bengal)	21.03.2003/ 25.07.2008
IX.	**Others / Abated / Deregistered from BIFR**		
47.	501/1992	Bharat Pumps & Compressors Ltd., Allahabad (Uttar Pradesh)	6.2.2007
48.	519/1992	The Elgin Mills Co. Ltd., Kanpur (Uttar Pradesh) @ $$	13.3.2007
X.	**Draft Revival Scheme (DRS) Awaited**		
49.	503/1992	Indian Drugs and Pharmaceuticals Limited, Gurgaon (Haryana)	28.3.2006 / 29.9.2008
50.	504/1992	Scooters India Ltd., Lucknow (Uttar Pradesh)	1.7.2000 / 17.06.2010
51.	509/1992	Richardson &Crudass (1972) Ltd., Mumbai (Maharashtra) @	24.9.2007 / 04.09.2008 / 27.05.2009 / 10.09.2009
52.	515/1992	Fertilizers Corpn. of India Ltd., New Delhi (Delhi)	2.4.2004 / 12.11.2010
53.	516/1992	Hindustan Fertilizer Corpn. Ltd., New Delhi (Delhi)	1.2.2007 / 05.12.2008 / 26.03.2009 / 19.10.2009
54.	588/1994	Burn Standard Co. Ltd., Kolkata (West Bengal) @	16.4.2007 / 30.9.2008 / 12.11.2009
55.	502/1998	NEPA Ltd., Nepanagar (Madhya Pradesh)	29.5.2007 / 15.05.2008 / 26.02.2009 / 11.09.2009 / 21.6.2010
56.	501/1999	Birds Jute and Exports Ltd., Kolkata (West Bengal) @	24.6.2004 / 07.08.2008
57.	501/2001	Bharat Wagon &Engg. Co. Limited , Patna (Bihar) @	11.2.2004 / 25.11.2008 / 24.06.2009 / 16.11.2009
58.	504/2004	ITI Limited, Bangalore (Karnataka)	3.10.2005 / 27.11.2008 / 23.02.2009 / 30.12.2009
59.	505/2004	Tungabhadra Steel Products Limited, Tungabhadra Dam (Karnataka)	4.8.2005 / 11.12.2006 / 09.03.2009 / 24.08.2009
60.	502/2005	HMT Bearings Limited, Hyderabad (Andhra Pradesh)	13.2.2006 / 23.04.2009 / 12.11.2009
61.	501/2007	Madras Fertilizer Ltd., Chennai (Tamilnadu)	02.04.2009 / 15.10.2009
XI.	**Failed & Reopened**		
62.	533/1992	Bengal Chemicals & Pharmaceuticals Ltd., Kolkata (West Bengal) @	31.3.1995 / 03.02.2009
XII.	**Remanded by AAIFR**		
63.	538/1992	Bengal Immunity Limited, Kolkata (West Bengal) @ $$	25.2.2003 / 31.1.2011

@ Taken over PSEs (23) $$ since closed (18) % No More a CPSE (1)

Cash and Non-cash Assistance approved by the Government in respect of BRPSE recommended proposals upto 31.10.2012

Sl. No.	Name of the CPSE	Assistance (₹ in Crore)		
		Cash #	Non-Cash @	Total
	Department of Heavy Industries			
1	Hindustan Salts Ltd.	4.28	73.30	77.58
2	Bridge & Roof Co. (India) Ltd.	60.00	42.92	102.92
3	BBJ Construction Co. Ltd.	—	54.61	54.61
4	HMT Bearings Ltd.	7.40	43.97	51.37
5	Praga Tools Ltd.	5.00	209.71	214.71
6	Heavy Engineering Corporation Ltd.	102.00	1116.30	1218.30
7	Cement Corporation of India Ltd.	184.29	1267.95	1452.24
8	Richardson & Cruddas Ltd.	-	-	-
9	Tungabhadra Steel Products Ltd.	-	-	-
10	Bharat Ophthalmic Glass Ltd. ##	9.80	—	9.80
11	Bharat Pumps and Compressors Ltd.	3.37$	153.15	156.52$
12	HMT Machine Tools Ltd.	723.00	157.80	880.80
13	Bharat Heavy Plate Vessels Ltd.	—	—-	—$$
14	Andrew Yule & Co. Ltd.	87.06	457.14	544.20
15	Instrumentation Ltd.	48.36	549.36	597.72$$$
16	Bharat Yantra Nigam Ltd.##	3.82	7.55	11.37
17	Tyre Corporation of India Ltd.	—	1018.45	1018.45&&
18	NEPA Ltd.	234.18	634.94	869.12
19	Scooters India Ltd.	—	—	—****
	Ministry of Mines			
20	Hindustan Copper Ltd.	—	612.94	612.94
21	Mineral Exploration Corporation Ltd.	-	104.64	104.64
	Ministry of Shipping			
22	Central Inland Water Transport Corporation Ltd.	73.60	280.00	353.60
23	Hooghly Dock &Port Engineers Ltd.	148.08	628.86	776.94
	Ministry of Defence			
24	Hindustan Shipyard Ltd.	452.68	372.22	824.90
	Ministry of Steel			
25	MECON Ltd.	93.00**	23.08	116.08
26	Bharat Refractories Ltd.	—	479.16	479.16
	Ministry of Textiles			
27	NTC including its subsidiaries	39.23	-	39.23
28	British India Corporation Ltd.	338.04	108.93	446.97
29	National Jute Manufactures Corporation Ltd.	517.33	6815.06	7332.39
	Department of Pharmaceuticals			
30	Hindustan Antibiotics Ltd.	137.59	267.57	405.16
31	Bengal Chemicals & Pharmaceuticals Ltd.	207.19	233.41	440.60

Sl. No.	Name of the CPSE	Assistance (₹ in Crore)		
		Cash #	Non-Cash @	Total
	Department of Chemicals & Petrochemicals			
32	Hindustan Organic Chemicals Ltd.	250.00	110.46	360.46
33	Hindustan Insecticides Ltd.	-	267.29	267.29
	Department of Fertilizers			
34	Fertilizers & Chemicals (Travancore) Ltd.	-	670.37	670.37
	Department of Scientific & Industrial Research			
35	Central Electronics Ltd.	-	16.28	16.28
	Department of Coal			
36	Eastern Coal Fields Ltd.	—*	—*	—*
	Department of Agriculture & Co-operation			
37	State Forms Corporation of India Ltd.	21.21	124.42	145.63
	Ministry of Railways			
38	Konkan Railway Corporation Ltd.	857.05	3222.46	4079.51
39	Bharat Wagon &Engineering Company Ltd.	49.45	258.73	308.18
40	Braithwaite & Company Ltd.	4.00	280.21	284.21
41	Burn Standard Company Ltd.@@@	75.43	1139.16	1214.59
	Ministry of Water Resources			
42	National Projects Construction Corporation Ltd.	—	219.43***	219.43***
	Ministry of Housing & urban Poverty Alleviation			
43	Hindustan Prefab Ltd.	—	128.00	128.00
	Ministry of Information & Broadcasting			
44	National Film Development Corporation Ltd.	3.00	28.40	31.40
	Ministry of Petroleum & Natural Gas			
45	Biecco Lawrie Ltd.	—	59.60	59.60
	Total	4739.44	22237.83	26977.27

Cash Assistance may involve budgetary support through equity/loan/grants.

@ Non-cash Assistance may involve waiver of interest, penal interest, GOI loan, Guarantee fee, conversion of loan into equity/ debentures etc.

Government have approved closure/winding up of these CPSEs.

* The revival plan approved by the Government inter alia envisaged non-cash assistance of Rs. 2470.77crore and waiver of service charges of ₹ 14 crore per annum from 2004-05 from Coal India Ltd.

$ In addition ONGC and BHEL would extend cash support to the extent of ₹ 150 crore and ₹ 20 crore respectively.

** Excludes continuation of 50% interest subsidy not exceeding ₹ 6.50 crore per annum on VRS loans.

$$ Cabinet approved “in principle” the takeover of BHPV by BHEL with the direction that the valuation of BHPV be carried out prudently on the basis of established principles and if the takeover is not found feasible, the matter be brought back before the Cabinet.

&& Parliament had approved the Tyre Corporation of India Ltd. (Disinvestment of Ownership) Bill 2007 for changing the public sector Enterprises Character of the company. Disinvestment after cleaning the balance sheet.

*** In addition Govt. had also approved the conversion of cumulative interest due & accrued on GOI loan as on the date of conversion into equity capital and further written down to 10% of value.

$$$ Interest free mobilization advance of Rs.30 crore from BHEL for technological up-gradation and diversification which would be repaid through supplies to be made to BHEL against their orders. Interest free advance of ₹ 25 crore from BHEL to ILK at the beginning of each year for the next three years from 2008-09 which will be adjusted against supplies to BHEL in the same year.

@@@ Transferred from D/o Heavy Industry. Refractory Unit of Burn Standard Co. Ltd. was transferred to SAIL under Ministry of Steel.

**** Transfer of entire Govt. equity to suitable identified strategic partner, continue extension of salary support and in principle approval of cleaning the balance sheet at the time of seeking final approval for induction of strategic partner.

Annex-12.3

Performance of 43 CPSEs Approved For Revival
(2006-07 to 2010-11)

(₹ in Crore)

Sl. No.	Name of the Ministry/ Department/ CPSE	Date of approval of Govt.	Net profit					Net worth as on
			2006-07	2007-08	2008-09	2009-10	2010-11	31.3.11
	Department of Heavy Industry							
1	Hindustan Salts Ltd.	4.5.2005	-0.43	0.03	0.64	0.03	-0.49	21.94
2	Tyre Corporation of India Ltd.	19.4.2007/ 6.11.2008	-47.93	-49.22	541.15*	-14.66	-13.23	27.99
3	HMT Bearings Ltd.	3.11.2005	-7.16	-20.72	-11.07	-15.31	-21.32	-64.74
4	Praga Tools Ltd.**	20.10.2005	91.92	—	—			
5	Bharat Pumps & Compressors Ltd.	7.12.2006	19.11	30.47	18.56	25.65	9.53	141.24
6	Tungabhadra Steel Products Ltd.	2.6.2006	-37.5	-20.45	-18.44	-25.76	-26.12	-311.06
7	NEPA Ltd.	6.9.2012	-44.47	-37.67	-46.08	-55.32	-70.40	-490.69
8	Richardson & Cruddas Ltd.	9.3.2006	-30.72	-59.6	-30.3	-27.38	-21.55	-342.51
9	Cement Corporation of India Ltd.	9.3.2006	166.61*	40.89	52.55	52.74	27.13	-185.36
10	HMT Machine Tools Ltd.	1.2.2007	-149.78	-40.5	-37.17	-45.80	-93.06	-111.92
11	Heavy Engineering Corporation Ltd.	15.12.2005	2.86	7.01	18.37	44.03	38.14	-177.23
12	Bharat Heavy Plate & Vessels Ltd.	26.11.2007	-34.7	-26.73	96.36	-8.60	8.78	-229.76
13	Instrumentation Ltd.	11.2.2009	-27.8	-33.37	282.59*	333.62*	-36.56	23.34
14	Andrew Yule & Co. Ltd.	22.2.2007	-89.57	5.33	29.36	75.38	41.32	124.14
15	BBJ Construction Co. Ltd.	16.6.2005	1.22	1.62	2.53	2.76	3.60	25.47
16	Bridge & Roof Co. (India) Ltd.	25.8.2005	4.47	6.18	21.68	42.00	57.68	214.61
17	Scooters India Ltd.	19.5.2011		-22.47	-27.65	-28.01	-17.11	-48.04
	Ministry of Textiles							
18	British India Corporation Ltd.	9.6.2011	-13.4	31.27*	-44.02	-42.63	-50.82	-267.25
19	National Textiles Corporation Ltd.	2.5.2005	-530.05	-510.19	4179.45*	103.13*	1304.24*	1730.21
20	National Jute Manufactures Corporation Ltd.	19.3.2010/ 25.11.2010		-505.17	-583.67	6784.31*	-129.44	-183.43
	Department of Fertilizers							
21	Fertilizers & Chemicals Travancore Ltd	30.3.2006	-124.73	8.97	42.95	-103.84	-49.33	142.48
	Department of Pharmaceuticals							
22	Hindustan Antibiotics Ltd.	9.3.2006	200.49*	-20.71	-22.09	-44.68	-42.42	-129.56
23	Bengal Chemicals & Pharmaceuticals Ltd.	21.12.2006	-4.69	-10.69	-3.52	-10.54	-9.16	14.16
	Department of Chemicals &Petrochemicals							
24	Hindustan Organic Chemicals Ltd.	9.3.2006	17.04	13.61	-25.28	-72.58	25.72	90.26
25	Hindustan Insecticides Ltd.	27.7.2006	5.66	6.52	2.71	3.06	1.58	85.13
	Ministry of Coal							
26	Eastern Coalfields Ltd.	5.10.2006	110.6	-1029.93	-2109.09	333.40	106.57	-5908.97

Sl. No.	Name of the Ministry/ Department/ CPSE	Date of approval of Govt.	Net profit					Net worth as on
			2006-07	2007-08	2008-09	2009-10	2010-11	31.3.11
	Ministry of Steel							
27	MECON Ltd.	8.2.2007	20.38	33.32	65.89	82.62	93.68	227.39
28	Bharat Refractories Ltd.#	24.4.2008	-15.32	4.43	7.37	-10.88	22.16	NA
	Ministry of Shipping							
29	Central Inland Water Transport Corporation Ltd.	1.12.2005	263.07*	1.18	-114.81	-1.82	-4.68	-32.69
30	Hoogly Dock &Port Engineers Ltd.	13.10.2011		-51.89	-52.72	-54.42	-10.50	28.98
	Department of Defence Production							
31	Hindustan Shipyard Ltd.@@	24.12.2009/ 23.3.2011	300.93*	11.34	-140.01	2.32	55.00*	-628.01
	Department of Agriculture &Cooperation							
32	State Farms Corporation of India Ltd.	3.1.2008	0.3	12.29	9.77	21.53	29.87	158.16
	Ministry of Mines							
33	Mineral Exploration Corporation Ltd.	27.7.2006	59.57*	6.11	1.24	14.46	11.95	138.07
34	Hindustan Copper Ltd.	26.6.2007	313.94	246.46	-10.31	154.68	224.10	1238.97
	Ministry of Water Resources							
35	National Projects Construction Corporation Ltd.	26.12.2008	-76.56	-36.62	-24.34	31.29	29.70	-44.81
	Ministry of Railways							
36	Konkan Railway Corporation Ltd.	4.12.2008	-233.28	-145.79	-80.1	11.63	1.83	1556.87
37	Braithwaite and Co. Ltd.	29.12.2005	0.57	0.55	1.5	1.75	6.18	16.83
38	Bharat Wagons & Engineering Co. Ltd.	26.6.2008/	-24.14	-13.62	-8.63	-9.04	-9.99	-16.26
		7.2.2008/						
		2.7.2009						
39	Burn Standard Company Ltd.##	10.6.2010	-151.86	-151.29	-157.59	-136.36	*1165.68	56.81
	Department of Scientific& Industrial Research							
40	Central Electronics Ltd.	3.8.2006	2.85	1.02	1.29	0.12	-17.25	22.43
	Ministry of Housing &Urban Poverty Alleviation							
41	Hindustan Prefab Ltd.	20.8.2009	-14.63	-13.75	7.75	2.47	4.61	10.14
	Ministry of Petroleum & Natural Gas							
42	Biecco Lawrie Ltd.	25.4.2011	2.31	3.22	2.23	1.73	3.75	-2.55
	Ministry of Information & Broadcasting							
43	National Film Development Corporation Ltd.	16.9.2010	-5.27	-2.76	-11.13	-7.13	1.69	19.14

*Includes extra-ordinary income, with drawl of provisions, etc; **merged with HMT Machine Tools Ltd.
merged in SAIL ; ## Transferred from D/o Heavy Industry.

Annex-12.4

Turnaround Sick CPSEs and their Performance
(2008-09 to 2010-2011)

(₹ in Crore)

Sl. No.	Name of the Ministry/ Department/CPSE	Net profit		
		2008-09	2009-10	2010-11
	Department of Heavy Industry			
1	Bharat Pumps & Compressors Ltd.	18.56	25.65	9.53
2	Cement Corporation of India Ltd.	52.55	52.74	27.13
3	Heavy Engineering Corporation Ltd.	18.37	44.03	38.14
4	Andrew Yule & Co. Ltd.	29.36	75.38	41.32
5	BBJ Construction Co. Ltd.	2.53	2.76	3.60
6	Bridge & Roof Co. (India) Ltd.	21.68	42.00	57.68
	Department of Chemicals & Petrochemicals			
7	Hindustan Insecticides Ltd.	2.71	3.06	1.58
	Ministry of Steel			
8	MECON Ltd.	65.89	82.62	93.68
	Department of Agriculture & Cooperation			
9	State Farms Corporation of India Ltd.	9.77	21.53	29.87
	Ministry of Mines			
10	Mineral Exploration Corporation Ltd.	1.24	14.46	11.95
11	Hindustan Copper Ltd.	-10	155	224
	Ministry of Railways			
12	Braithwaite and Co. Ltd.	1.5	1.75	6.18
	Department of Scientific &Industrial Research			
13	Central Electronics Ltd.	1.29	0.12	-17.25
	Ministry of Housing &Urban Poverty Alleviation			
14	Hindustan Prefab Ltd.	7.75	2.47	4.61
	Ministry of Railways			
15	Konkan Railway Corporation	-80	12	2

Chapter-13

Disinvestment and Listing on Stock Exchanges

The policy of 'disinvestment' in Central Public Sector Enterprises (CPSEs) has evolved over the years. Disinvestment of government equity in CPSEs began in 1991-92. The Industrial Policy Statement of 1991 stated that the Government would divest part of its holdings in select CPSEs. Broadly, the objectives of divestment have been to raise resources, encourage wider public participation and bring in greater market accountability. The chronology of evolution of the policy on disinvestment since 1991-92, with their distinct features is shown at Annex-13.1.

13.1 Disinvestment Commission

From 1991-92 to 1996-97, disinvestment in CPSEs was handled by the Department of Public Enterprises (DPE). DPE vide its resolution dated 23.8.1996, constituted a Public Sector Disinvestment Commission for a period of three years with Mr. G.V. Ramakrishna as its full time Chairman. The term of the Commission was further extended till 30.11.1999. The Commission submitted its report on 58 CPSEs.

The Commission was reconstituted in July, 2001 for a period of two years with Dr. R.M. Patil as its (part time) Chairman. The term of this Commission was subsequently extended till October, 2004. The reconstituted Commission submitted its reports on 41 CPSEs, including review cases of earlier Commission's recommendations on 4 CPSEs. The term of the commission expired on 31.10. 2004 and the Commission was wound up.

13.2 Department of Disinvestment

During1997-98, the subject matter of 'disinvestment in CPSEs' was brought under Department of Economic Affairs (Ministry of Finance). Subsequently, the Department of Disinvestment was constituted in the Ministry of Finance in December, 1999 with the following functions assigned to it:

(i) All matters relating to disinvestment of Central Government equity from Central Public Sector Undertakings.

(ii) All matters relating to sale of Central Government equity through offer for sale or private placement in the erstwhile Central Public Sector Undertakings.*

(iii) Matters relating to decisions on the recommendations of the Disinvestment Commission on the modalities of disinvestment, including restructuring.

(iv) Matters relating to implementation of disinvestment decisions, including appointment of advisers, pricing of shares, and other terms and conditions of disinvestment.

(v) Disinvestment Commission.

(vi) Central Public Sector Undertakings for purposes of disinvestment of Government equity only.

(vii) Financial Policy in regard to the utilization of the proceeds of disinvestment channelized into the National Investment Fund.

**Note: All other post disinvestment matters, including those relating to and arising out of the exercise of Call option by the Strategic partner in the erstwhile Central Public Sector Undertakings, shall continue to be handled by the administrative Ministry or Department concerned, where necessary, in consultation with the Department of Disinvestment.*

13.3 Evolution of Disinvestment Policy

The policy of disinvestment has largely evolved through the policy statements of Finance Ministers in their Budget Speeches. It may be construed to be an integral part of the reforms triggered post-1990's economic crisis. In brief the policy on disinvestment can be divided into three phases, viz.,

(i) 1991 to 1999: When the focus was on disinvestment of minority shareholding in favour of financial institutions.

(ii) 1999-2000 to 2003-04: In the period the focus was on disinvestment through strategic sale.

(iii) Since 2004-05: The focus is on disinvestment of minority stakes in the domestic market to the general public in conjunction with issue of fresh equity by the company.

13.4 Current Policy on Disinvestment

The current policy on disinvestment envisages to develop people's ownership of Central Public Sector Enterprises to share in their wealth and prosperity while ensuring that the Government equity does not fall below 51% and Government retains management control:-

Keeping in view the objective of disinvestment policy, the following approach to disinvestment has been adopted:

(i) Already listed profitable CPSEs (not meeting mandatory shareholding of 10%) are to be made compliant by 'Offer for Sale' by Government or by the CPSEs through issue of fresh shares or a combination of both.

(ii) Unlisted CPSEs with no accumulated losses and having earned net profit in three preceding consecutive years are to be listed.

(iii) Follow-on public offers would be considered in respect of profitable CPSEs having 10 per cent or higher public ownership, taking into consideration the needs for capital investment of CPSE, on a case by case basis and Government could simultaneously or independently offer a portion of its equity shareholding in conjunction.

(iv) Each CPSE has different equity structure; financial strength; fund requirement; sector of operation etc., factors that do not permit a uniform pattern of disinvestment. Therefore, disinvestment is considered on merits and on a case-by-case basis.

(v) CPSEs have been permitted to use their surplus cash to buyback their shares as well as one CPSE may buy the shares of other CPSEs from the Government.

13.5 Current Policy on Loss Making CPSEs

The Board for Reconstruction of Public Sector Enterprises (BRPSE) has been mandated to examine loss-making/sick CPSEs for revival/restructuring for their turnaround and advise the Government on disinvestment/closure/sale in full or part, in respect of chronically loss-making/sick CPSEs that cannot be revived. As such if efforts to revive fail and the Government decides for privatization, then the Department of Disinvestment will take up such cases for strategic sale.

13.6 Advantages of Listing

There are inherent advantages in the listing of shares of profitable CPSEs on the stock exchanges as it triggers multilayered oversight mechanism to enhance corporate governance as well as provides for level playing field to CPSEs vis-á-vis private companies in regard to accessing the resources through the capital market. The process enhances shareholder value in the listed CPSEs in the following ways:-

(a) The listed companies are mandated by Company Law/ SEBI/ Stock Exchanges to comply with higher level of disclosures. This will bring greater transparency and credibility;

(b) With the induction of independent directors, management accountability, competencies and performance are enhanced.

(c) Investor centric research provides on a regular basis a third party professional assessment of risks as well as future prospects to management to help it benchmark its business model with the industry.

(d) Daily trading volume and prices work as a barometer for the management and operate as a concurrent source of feedback with regard to the impact of managerial decisions as well as shop floor developments. The higher levels of public scrutiny promotes ethical conduct of business and improves corporate culture; and

(e) Expectations of investors (shareholders) will bring productive pressure upon the management to motivate it to perform efficiently to unlock the true value of the enterprise and also to strive to stand tall amongst the sector.

Listing of profitable CPSEs on the stock exchanges with a mandatory public ownership of at least 10% shareholding has been observed to increase significantly the value of the Enterprise and Government's residual shareholding as well as that held by the public post-listing. Listing provides development of people-ownership of CPSEs, thus encourage participation and sharing the prosperity of CPSEs.

13.7 Disinvestment From 2004-05 Till January 2012

Chronology of the evolution of the policy on disinvestment since 1991-92 is given at Annex.13.1. A brief review of disinvestment in various CPSEs since 2004-05 is given below:

National Thermal Power Corporation Limited (NTPC): NTPC Limited had proposed an Initial Public Offering (IPO) through issue of fresh equity of 5.25% of the fully diluted post issue equity of the company. Government on 12th July, 2004 approved disinvestment of 5.25% equity of NTPC out of Government's shareholding in conjunction with the IPO by the company. The IPO was completed in October 2004. An amount of ₹ 2684.07 crore was realized by the Government.

Maruti Udyog Limited (MUL) (Not a CPSU): Government on 2nd September, 2005 approved the proposal for disinvestment of 8% equity in Maruti Udyog Limited. In January 2006 Government sold 8% equity of the company out of its residual shareholding of 18.28% to public sector institutions and public sector banks; through a differential pricing method. Government realized ₹1567.60 crore from this sale. In March 2006 0.01% equity of the company was sold to the employees of the company and the Government realized an amount of ₹ 2.08 crore. Government on 21st December 2006 decided that the Government may disinvest its entire residual shareholding of 10.27% in Maruti Udyog Limited. The shareholding of 10.27% was disinvested in May 2007 though the differential pricing method to Indian Public Sector Financial Institutions, Public Sector Banks and Indian Mutual Funds. The Government realized ₹ 2277.62 crore from this disinvestment.

Power Grid Corporation of India Limited (PGCIL): Government on 8th February, 2007 approved disinvestment of 5% equity of the company out of Government's shareholding along with the fresh issue of equity of 10% of the pre-issue paid-up capital of PGCIL. The IPO was completed in October 2007 and Government realized an amount of ₹ 994.82 crore.

Rural Electrification Corporation Limited (REC): Government on 8th February, 2007 approved disinvestment of 10% equity of the company out of Government's shareholding along with the fresh issue of equity of 10% of the pre-issue paid-up capital of REC. The IPO was completed in March 2008 and the Government realized an amount of ₹ 819.63 crore.

NHPC Limited: Government on 8th February, 2007 approved disinvestment of 5% equity of the company out of Government's shareholding along with the fresh issue of equity of 10% of the pre-issue paid-up capital of NHPC Ltd. The IPO was completed in August 2009 and Government realized an amount of ₹ 2012.85 crore.

Oil India Limited: Government on 30th August, 2007 approved disinvestment of 10% equity of the company out of Government's shareholding along with the fresh issue of equity of 11% of the post-issue paid-up capital of Oil India Limited and Government to simultaneously disinvest 10% equity in favour of IOC, HPCL and BPCL in the ratio of 2:1:1, at the market discovered price. The IPO was completed in September 2009 and Government realized an amount of Rs 2247.046 crore.

National Thermal Power Corporation Limited (NTPC): Government offered 5% pre Issue paid-up capital of NTPC Limited out of Government's shareholding through follow-on public offering in February 2010 and realized an amount of ₹ 8480.10 crore.

Rural Electrification Corporation Limited (REC): Government offered 5% pre Issue paid-up capital of REC Limited out of Government's shareholding in conjunction with issue of fresh equity of 15% by the Company through a follow-on public offering in March 2010 and Government realized an amount of ₹ 882.52 crore.

NMDC Limited (NMDC): Government offered 8.38% pre Issue paid-up capital of NMDC Limited out of Government's shareholding through follow-on public offering in March 2010 and realized an amount of Rs 9930.42 crores.

SJVN Limited (SJVNL): Government offered 10.03% pre Issue paid-up capital of SJVN Limited out of Government's shareholding through an Initial Public Offering in May 2010 and realized an amount of ₹ 1062.74 crore.

Engineers India Limited (EIL): Government offered 10% pre Issue paid-up capital of Engineers India Limited out of Government's shareholding through a follow-on public offering in July 2010 and realized an amount of Rs 960 crore.

Coal India Ltd. (CIL): Government offered 10% pre Issue paid-up equity capital of Coal India Ltd. out of Government's shareholding though an initial public offering in October 2010 and realized and amount of ₹ 15,199 crore.

Power Grid Corporation of India Ltd. (PGCIL): Government offered 10% pre Issue paid-up capital of Power Grid Corporation of India Limited out of Government's shareholding in conjunction with issue of fresh equity of 10% by the Company through a follow-on public offering in November 2010 and realized an amount of ₹ 3,721.17 crore.

MOIL Limited (MOIL): Government offered 10% pre Issue paid-up equity capital of MOIL Ltd. out of Government's shareholding in conjunction with 5% each by Government of Maharashtra and Government of Madhya Pradesh and realized an amount of ₹ 618.74 crore.

Shipping Corporation of India Limited (SCIL): Government offered 10% pre Issue paid-up capital of Shipping Corporation of India Limited out of Government's shareholding in conjunction with issue of fresh equity of 10% by the Company through a follow-on public offering and realized an amount of ₹ 582.45 crore.

Power Finance Corporation (PFC): Government offered 5% pre-issue paid-up capital of Power Finance Corporation Ltd. out of Government's shareholding in conjunction with issue of fresh equity of 15% by the Company through a follow-on public offering and realized an amount of ₹ 1144.55 crore.

Oil & Natural Gas Corporation of India Limited (ONGC): In March 2012 Government disinvested 4.91% paid-up equity capital of the Company by way of Offer for Sale of Shares by Promoters through Stock Exchange Mechanism and realized an amount of ₹ 12,749.50 crore.

National Building Construction Corporation Limited (NBCC): In March/April 2012 Government disinvested 10% paid-up equity capital of the Company out of Government's shareholding through initial public offering and realized an amount of ₹ 124.97 crore.

The disinvestment target for the year has been indicated as ₹ 30,000 crore in the Budget 2012-13.

The summary of disinvestment receipts since 1991-92 till date is at Annex-13.2.

13.8 National Investment Funds

In January 2005, the Government decided to constitute a "National Investment Fund" (NIF) into which the realisation from sale of minority shareholding of the Government in profitable CPSEs would be channelised. The Fund was to be maintained outside the Consolidated Fund of India. The income from the Fund is to be used for the following broad investment objectives: -

(a) Investment in social sector projects which promote education, health care and employment;

(b) Capital investment in selected profitable and revivable Public Sector Enterprises that yield adequate returns in order to enlarge their capital base to finance expansion/ diversification.

Corpus of NIF: The corpus of the Fund has remained at ₹ 1814.45 crore being the proceeds from the disinvestment in Power Grid Corporation and Rural Electrification Corporation. The income generated on the same during 2009-10 was ₹ 110.57 crores and during 20101-11 was ₹ 128.95 crores.

Use of Disinvestment Proceeds: In view of the difficult economic situation caused by the global slowdown of 2008-09 and a severe drought that was likely to adversely affect the 11th Plan growth performance, Government in November 2009 decided to give one time exemption for utilization of proceeds from disinvestment of CPSEs for a period of three years - from April 2009 to March 2012. This has been extended to April 2013. It was decided that disinvestment proceeds during this period would be available in full for investment in specific social sector schemes decided by Planning Commission/Department of Expenditure. The status quo ante would be restored from April 2013. However, the existing corpus of the NIF should continue to be managed by the Fund Managers. Accordingly till march 2013 the disinvestment proceeds are being used for funding the capital expenditure under the social sector schemes of the Government, namely:-

(i) Mahatma Gandhi National Rural Employment Guarantee Scheme

(ii) Indira Awas Yojana

(iii) Rajiv Gandhi Gramin Vidyutikaran Yojana

(iv) Jawaharlal Nehru National Urban Renewal Mission

(v) Accelerated Irrigation Benefits Programme

(vi) Accelerated Power Development Reform Programme

Chronology of the evolution of the policy on disinvestment since 1991-92

Date	Event
● 1991-92 Interim Budget	Government announced its intention to divest upto 20% of Government equity in selected CPSEs in favour of public sector institutional investors.
● Industrial Policy Statement dated 24.7.1991	In the case of selected enterprises, part of Government holdings in the equity share capital of the enterprises will be disinvested in order to provide further market discipline to the performance of public enterprises.
● Rangarajan Committee-April,1993	It emphasized the need for substantial disinvestment and stated that while the percentage of equity to be divested should not be more than 49% for industries explicitly reserved for the public sector, it should be either 74% or 100% for others.
● Budget speech-1998-1999	Government has also decided that in the generality of cases, the Government shareholding in public sector enterprises will be brought down to 26 per cent. In cases of public sector enterprises involving strategic considerations, The Government will continue to retain majority holding. The interest of workers shall be protected in all cases.
● Budget speech-1999-2000	Government strategy towards public sector enterprises will continue to encompass a judicious mix of strengthening strategic units, privatizing nonstrategic ones through gradual disinvestment of strategic sale and devising viable rehabilitation strategies for weak units.
● Cabinet decision dated 16.3.1999	Central Public Sector Enterprises (CPSEs) have been classified into strategic and non-strategic areas for the purpose of disinvestment. Strategic CPSEs would be those in the areas of: (a) Arms and ammunitions and the allied items of defense equipment, defense air-crafts and warships; (b) Atomic energy (except in the areas related to the operation of nuclear power and applications of radiation and radio-isotopes to agriculture medicine and non-strategic industries); (c) Railway transport. All other CPSEs were to be considered as nonstrategic. For the non-strategic CPSEs, it was decided that the reduction of Government stake to 26% would not be automatic. Decision in regard to the percentage of disinvestment i.e., Government's stake going down to less than 51% or to 26% would be taken on the following considerations : (a) Whether the industrial sector requires the presence of the public sector as a countervailing force to prevent concentration of power in private hands; and (b) Whether the industrial sector requires a proper regulatory mechanism to protect the consumer interest before Public Sector Enterprises are privatized.
● Budget speech 2000 - 2001	Government announced its decision to reduce its stake in the non-strategic PSUs even below 26%, if necessary. There would be increasing emphasis on strategic sale and the entire proceeds from disinvestment/privatization would be deployed in social sector, restructuring of PSUs and retirement of public debts.
● Decision dated 23.6.2000	In order to secure the presence of the public sector as a Countervailing force, the Government took the decision of not going for disinvestment of GAIL, IOC and ONGC, and retaining them as flagship companies.
● Decision dated 7.9.2002	Central Public Sector Enterprises (CPSEs), Central Government owned Cooperative Societies (where Government's ownership is 51% or more) should not be permitted to participate in the disinvestment of other CPSEs as bidder. If in some specific cases any deviation from these restrictions is considered desirable in public interest, the Ministry/Department concerned may bring an appropriate proposal for consideration of the Core Group of Secretaries on Disinvestment.

• Budget Speech 2003-2004	Details about the already announced Disinvestment Fund and Asset Management company, to hold residual shares post disinvestment, shall be finalized early in 2003-2004.
• Budget Speech 2004-2005 (July 2004)	Disinvestment and privatization are useful economic tools. Government will selectively employ these tools, consistent with the declared policy. Government will establish a Board for Reconstruction of Public Sector Enterprises (BRPSE). The Board will advise the Government on the measures to be taken to restructure PSEs, including cases where disinvestment or closure or sale is justified. The disinvestment revenues will be part of the Consolidated Fund of India. While presenting the Budget for 2005-2006, report to the House the manner in which the said revenues have been or will be applied for specified social sector schemes.
• Decision dated 27.1.2005	(i) Government decided, in principle, to list large, profitable Public Sector Enterprises (PSEs) on domestic stock exchanges and to selectively sell a minority stake in listed, profitable PSEs while retaining at least 51% of the shares alongwith full management control so as not to disturb the Public Sector character of the companies. (ii) Government has also decided to constitute a "National Investment Fund" into which the realization from sale of minority shareholding of the Government in profitable PSEs would be channelized. The Fund would be maintained outside the Consolidated Fund of India. The income from the Fund would be used for the following broad investment objectives:— (a) Investment in social sector projects which promote education, healthcare and employment; (b) Capital investment in selected profitable and revivable Public Sector Enterprises that yield adequate returns in order to enlarge their capital base to finance expansion/ diversification.
• Decision dated 25.11.2005	Government decided, in principle, to list large, profitable CPSEs on domestic stock exchanges and to selectively sell small portions of equity in listed, profitable CPSEs (other than the Navratnas)

Summary of Receipts from Disinvestment 1991-92 to January 2012

Year	Budgeted receipt (₹ crore)	Receipts through sale of minority shareholding in CPSEs (₹ crore)	Recepits through sale of majority shareholding of one CPSE to another CPSE (₹ crore)	Receipts through Strategic sale (₹ crore)	Receipts from other related transactions (₹ crore)	Receipts from sale of residual shareholding in disinvested disinvested CPSes/ companies (₹ crore)	Total receipts (₹ crore)	Transactions
1991-92	2,500	3,037.74	-	-	-	-	3,037.74	Minority shares sold in Dec, 1991 and Feb, 1992 by auction method in bundles of "very good", "good" and "average" companies
1992-93	2,500	1,912.51	-	-	-	-	1,912.51	Shares sold separately for each company by auction method.
1993-94	3,500	-	-	-	-	-	-	Equity of 6 companies sold by auction method but proceeds received in 94-95.
1994-95	4,000	4,843.10	-	-	-	-	4,843.10	Shares sold by auction method.
1995-96	7,000	168.48	-	-	-	-	168.48	Shares sold by auction method.
1996-97	5,000	379.67	-	-	-	-	379.67	GDR -VSNL
1997-98	4,800	910.00	-	-	-	-	910.00	GDR -MTNL
1998-99	5,000	*5371.11	-	-	-	-	5,371.11	GDR-VSNL; Domestic offerings of CONCOR and GAIL; Cross purchase by 3 Oil sector companies i.e. GAIL, ONGC and IOC.
1999-00	10,000	*1479.27	-	105.45	275.42		1,860.14	GDR-GAIL; Domestic offering of VSNL; capital reduction and dividend from BALCO; Strategic sale of MFIL.
2000-01	10,000	-	1,317.23	554.03	-	-	1,871.26	Sale of KRL, CPCL and BRPL to CPSEs; Strategic sale of BALCO and LJMC.
2001-02	12,000	-	-	3,090.09	2,567.60		5,657.69	Strategic sale of CMC, HTL, VSNL, IBP, PPL, hotel properties of ITDC and HCI, slump sale of Hotel Centaur Juhu Beach, Mumbai and leasing of Ashok Bangalore; Special dividend from VSNL, STC and MMTC; sale of shares to VSNL employees.
2002-03	12,000	-	-	2,252.72	1,095.26	-	3,347.98	Strategic sale of HZL, IPCL, hotel properties of ITDC, slump sale of Centaur Hotel Mumbai Airport, Mumbai; Premium for renunciation of rights issue in favour of SMC ; Put Option of MFIL; Sale of shares to employees of HZL and CMC.

Year	Budgeted receipt (₹ crore)	Receipts through sale of minority shareholding in CPSEs (₹ crore)	Recepits through sale of majority shareholding of one CPSE to another CPSE (₹ crore)	Receipts through Strategic sale (₹ crore)	Receipts from other related transactions (₹ crore)	Receipts from sale of residual shareholding in disinvested disinvested CPSes/ companies (₹ crore)	Total receipts (₹ crore)	Transactions
2003-04	14,500	12,741.62	-	342.06	-	2,463.73	15,547.41	Strategic sale of JCL; Call Option of HZL; Offer for Sale of MUL, IBP, IPCL, CMC, DCI, GAIL and ONGC; Sale of shares of ICI Ltd.
2004-05	4,000	2,700.06	-	-	64.81	-	2,764.87	Offer for Sale of NTPC and spill over of ONGC; sale of shares to IPCL employees.
2005-06	No target fixed	-	-	-	2.08	1,567.60	1,569.68	Sale of MUL shares to Indian public sector financial institutions & banks and employees.
2006-07	No target fixed	-	-	-	-	-		
2007-08	No target fixed	1,814.45	-	-	-	2,366.94	4,181.39	Sale of MUL (₹ 2366.94 cr)shares to public sector financial institutions, public sector banks and Indian mutual funds and sale of PGCIL (₹ 994.82 cr) and REC (₹ 819.63 cr) shares through Offer for Sale.
2008-09	No target fixed	-	-	-	-	-		
2009-10	No target fixed	23,552.93	-	-	-	-	23,552.93	(₹ 2012.85 - NHPC, ₹ 2247.05 - OIL and NTPC - 8480.098, REC ₹ 882.52, ₹ 9330.42 NMDC,)
2010-11	40,000	22,144.21	-	-	-	-	22,144.21	₹ 1062.74 SJVN, EIL 959.65, COAL INDIA 15199 CR; PGCIL 3721.17, MOIL 618.75; SCI 582.45
2011-12	40,000	13,894.05	-	-	-	-	13,894.05	₹ 1144.55 PFC: ₹ 12749.50 ONGC.
2012-13	30,000	124.97					124.97	₹ 124.97 NBCC
G.Total		95,074.17	1,317.23	6,344.35	4,005.17	6,398.27	113,139.19	

*Note: * Out of ₹ 5371.11, ₹ 4184 crore constitute from cross purchase of share of ONGC, GAIL and IOC.*
*** Out of ₹ 1479.27, ₹ 459.27 crore constitute from cross purchase of share of ONGC, GAIL and IOC.*

Guidelines for Listing on BSE

Listing means admission of securities to dealings on a recognized stock exchange. The securities may be of any public limited company, Central or State Government, quasi governmental and other financial institutions/corporations, municipalities, etc.

The objectives of listing are mainly to :

- provide liquidity to securities;
- mobilize savings for economic development;
- protect interest of investors by ensuring full disclosures.

The Bombay Stock Exchange (BSE) has a dedicated Listing Department to grant approval for listing of securities of companies in accordance with the provisions of the Securities Contracts (Regulation) Act, 1956, Securities Contracts (Regulation) Rules, 1957, Companies Act, 1956, Guidelines issued by SEBI and Rules, Bye-laws and Regulations of BSE.

BSE has set various guidelines and forms that need to be adhered to and submitted by the companies. These guidelines will help companies to expedite the fulfillment of the various formalities and disclosure requirements that are required at various stages of Public Issues :

- Initial Public Offering;
- Further Public Offering;
- Preferential Issues;
- Indian Depository Receipts;
- Amalgamation;
- Qualified Institutions Placements.

A company intending to have its securities listed on BSE has to comply with the listing requirements prescribed by it. Some of the requirements are as under :

I Minimum Listing Requirements for New Companies;

II Minimum Listing Requirements for Companies already Listed on other Stock Exchanges;

III Minimum Requirements for Companies Delisted by BSE seeking relisting on BSE;

IV Permission to Use the Name of BSE in an Issuer Company's Prospectus;

V Submission of Letter of Application;

VI Allotment of Securities;

VII Trading Permission;

VIII Requirement of 1% Security;

IX Payment of Listing Fees;

X Compliance with the Listing Agreement; and

XI Cash Management Services (CMS) - Collection of Listing Fees.

[I] Minimum Listing Requirements for New Companies

The following eligibility criteria have been prescribed effective August 1, 2006 for listing of companies on BSE, through Initial Public Offerings (IPOs) & Follow-on Public Offerings (FPOs):

1. Companies have been classified as large cap companies and small cap companies. A large cap company is a company with a minimum issue size of Rs. 10 crore and market capitalization of not less than Rs. 25 crore. A small cap company is a company other than a large cap company.

   a. In respect of Large Cap Companies

      i. The minimum post-issue paid-up capital of the applicant company (hereinafter referred to as "the Company") shall be Rs. 3 crore;

      ii. The minimum issue size shall be Rs. 10 crore; and

      iii. The minimum market capitalization of the Company shall be Rs. 25 crore (market capitalization shall be calculated by multiplying the post-issue paid-up number of equity shares with the issue price).

   b. In respect of Small Cap Companies

      i. The minimum post-issue paid-up capital of the Company shall be Rs. 3 crore;

      ii. The minimum issue size shall be Rs. 3 crore;

      iii. The minimum market capitalization of the Company shall be Rs. 5 crore (market capitalization shall be calculated by multiplying the post-issue paid-up number of equity shares with the issue price);

      iv. The minimum income/turnover of the Company shall be Rs. 3 crore in each of the preceding three 12-months period;

      v. The minimum number of public shareholders after the issue shall be 1000; and

      vi. A due diligence study may be conducted by an independent team of Chartered Accountants or Merchant Bankers appointed by BSE, the cost of which will be borne by the company. The requirement of a due diligence study may be waived if a financial institution or a scheduled commercial bank has appraised the project in the preceding 12 months.

2. For all companies :

   a. In respect of the requirement of paid-up capital and market capitalization, the issuers shall be required to include in the disclaimer clause forming a part of the offer document that in the event of the market capitalization (product of issue price and the post issue number of shares) requirement of BSE not being met, the securities of the issuer would not be listed on BSE.

   b. The applicant, promoters and/or group companies, shall not be in default in compliance of the listing agreement.

   c. The above eligibility criteria would be in addition to the conditions prescribed under SEBI (Disclosure and Investor Protection) Guidelines, 2000.

[II] Minimum Listing Requirements for Companies already Listed on Other Stock Exchanges

The listing norms for companies already listed on other stock exchanges and seeking listing at BSE, made effective from August 6, 2002, are as under:

1. The company shall have a minimum issued and paid up equity capital of ₹ 3 crore.
2. The company shall have a profit making track record for the preceding last three years. The revenues/profits arising out of extra ordinary items or income from any source of non-recurring nature shall be excluded while calculating the profit making track record.
3. Minimum net worth shall be ₹ 20 crore (net worth includes equity capital and free reserves excluding revaluation reserves).
4. Minimum market capitalisation of the listed capital shall be at least two times of the paid up capital.
5. The company shall have a dividend paying track record for at least the last 3 consecutive years and the dividend should be at least 10% in each year.
6. Minimum 25% of the company's issued capital shall be with Non-Promoter shareholders as per Clause 35 of the Listing Agreement. Out of above Non-Promoter holding, no single shareholder shall hold more than 0.5% of the paid-up capital of the company individually or jointly with others except in case of Banks/Financial Institutions/Foreign Institutional Investors/Overseas Corporate Bodies and Non-Resident Indians.
7. The company shall have at least two years listing record with any of the Regional Stock Exchanges.
8. The company shall sign an agreement with CDSL and NSDL for demat trading.

[III] Minimum Requirements for Companies Delisted by BSE seeking Relisting on BSE

Companies delisted by BSE and seeking relisting at BSE are required to make a fresh public offer and comply with the extant guidelines of SEBI and BSE regarding initial public offerings.

[IV] Permission to Use the Name of BSE in an Issuer Company's Prospectus

Companies desiring to list their securities offered through a public issue are required to obtain prior permission of BSE to use the name of BSE in their prospectus or offer for sale documents before filing the same with the concerned office of the Registrar of Companies.

BSE has a Listing Committee , comprising of market experts, which decides upon the matter of granting permission to companies to use the name of BSE in their prospectus/offer documents. This Committee evaluates the promoters, company, project , financials, risk factors and several other aspects before taking a decision in this regard.

Decision with regard to some types/sizes of companies has been delegated to the Internal Committee of BSE.

[V] Submission of Letter of Application

As per Section 73 of the Companies Act, 1956, a company seeking listing of its securities on BSE is required to submit a Letter of Application to all the stock exchanges where it proposes to have its securities listed before filing the prospectus with the Registrar of Companies.

[VI] Allotment of Securities

As per the Listing Agreement, a company is required to complete the allotment of securities offered to the public within 30 days of the date of closure of the subscription list and approach the Designated Stock Exchange for approval of the basis of allotment.

In case of Book Building issues, allotment shall be made not later than 15 days from the closure of the issue, failing which interest at the rate of 15% shall be paid to the investors.

[VII] Trading Permission

As per SEBI Guidelines, an issuer company should complete the formalities for trading at all the stock exchanges where the securities are to be listed within 7 working days of finalization of the basis of allotment.

A company should scrupulously adhere to the time limit specified in SEBI (Disclosure and Investor Protection) Guidelines 2000 for allotment of all securities and dispatch of allotment letters/share certificates/credit in depository accounts and refund orders and for obtaining the listing permissions of all the exchanges whose names are stated in its prospectus or offer document. In the event of listing permission to a company being denied by any stock exchange where it had applied for listing of its securities, the company cannot proceed with the allotment of shares. However, the company may file an appeal before SEBI under Section 22 of the Securities Contracts (Regulation) Act, 1956.

[VIII] Requirement of 1% Security

Companies making public/rights issues are required to deposit 1% of the issue amount with the Designated Stock Exchange before the issue opens. This amount is liable to be forfeited in the event of the company not resolving the complaints of investors regarding delay in sending refund orders/share certificates, non-payment of commission to underwriters, brokers, etc.

[IX] Payment of Listing Fees

All companies listed on BSE are required to pay to BSE the Annual Listing Fees by 30th April of every financial year as per the Schedule of Listing Fees prescribed from time to time.

[X] Compliance with the Listing Agreement

Companies desirous of getting their securities listed at BSE are required to enter into an agreement with BSE called the Listing Agreement, under which they are required to make certain disclosures and perform certain acts, failing which the company may face some disciplinary action, including suspension/delisting of securities. As such, the Listing Agreement is of great importance and is executed under the common seal of a company. Under the Listing Agreement, a company undertakes, amongst other things, to provide facilities for prompt transfer, registration, sub-division and consolidation of securities; to give proper notice of closure of transfer books and record dates, to forward 6 copies of unabridged Annual Reports, Balance Sheets and Profit and Loss Accounts to BSE, to file shareholding patterns and financial results on a quarterly basis; to intimate promptly to the Exchange the happenings which are likely to materially affect the financial performance of the Company and its stock prices, to comply with the conditions of Corporate Governance, etc.

The Listing Department of BSE monitors the compliance by the companies with the provisions of the Listing Agreement, especially with regard to timely payment of annual listing fees, submission of results, shareholding patterns and corporate governance reports on a quarterly basis . Penal action is taken against the defaulting companies.

[XI] Cash Management Services (CMS)-Collection of Listing Fees

In order to simplify the system of payment of listing fees, BSE has entered into an arrangement with HDFC Bank for collection of listing fees from 141 locations all over the country.

Chapter-14

Performance of Public Sector Insurance Companies

Since the opening up of the insurance sector in 1999, the number of participants in the sector has been steadily going up. From six (6) insurers in the year 2000, the number of players has gone up to 48 insurers operating in life, non-life and reinsurance segments (as on 31st March 2012). As many as eight (8) insurance companies (life and non-life insurance) are functioning in the public sector. These enterprises are Life Insurance Corporation of India, National Insurance Company Limited, New India Assurance Company Limited, Oriental Insurance Company Limited, United India Insurance Company Limited, General Insurance Corporation of India, Agriculture Insurance Company of India Limited and Export Credit Guarantee Corporation of India. These public sector insurers are offering a variety of insurance policies ranging from Life Insurance to Crop Insurance.

14.1 Life Insurance Corporation of India (LIC)

Life Insurance Corporation of India (LIC) was established in the year 1956 as a Statutory Corporation under Section 3 of the Life Insurance Corporation Act, 1956 to carry out life insurance business in India. The objective of establishing the Corporation was spreading life insurance more widely and in particular in the rural areas, with a view to reach all insurable persons in the country and providing them with adequate financial cover at a reasonable cost.

LIC has 8 Zonal Offices, 113 Divisional Offices, 2048 Branch Offices and 1204 Satellite offices throughout the length and breadth of the country. The staff strength of LIC is 1.19 lakh and it had an agency force of 12.78 lakh as on 31.03.2012.

LIC offers a wide variety of products to fulfill the needs of different segments of the society. There are 50 different plans on offer as on 31.03.2012 including three new plans introduced during the year.

One of the main objectives of LIC is to reach all insurable persons in the country and to provide them with adequate financial cover. During the year 2011-12, LIC completed 294.89 lakh policies for Sum Assured of ₹ 4, 50,957.95 crore under first insurance. The ratio of first insurance to the total business completed for the year comes to 82.55% and 88.62% in terms of number of policies and Sum Assured respectively.

Life Insurance Corporation of India operates in 12 countries abroad through its Branch Offices and Joint Venture Companies. LIC has Branch Offices in Fiji, Mauritius and UK. It operates in Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, U.A.E., Kenya, Nepal and Sri Lanka through its Joint Venture Companies.

The Life Fund stood at ₹ 12, 83,990.72croreas on 31.03.2012. The Corporation made payments of ₹ 8,564.40 crore under Death Claim cases, ₹ 63,347.90 crore under Maturity Claims and ₹ 5,281.27 crore under annuities.

In addition to above, performance in other significant parameters in the Financial Year 2011-12 are shown in Table 14.1 below:—

Table 14.1

Performance of LIC during the year 2011-12

Sl. No.		
1	Individual Policies Sold (Nos. in crore)	3.57
2	Market Share in terms of number of Policy	80.90%
3	Total Premium Income (₹ in crore)	202802.90
4	Total Income(₹ in crore)	287315.38
5	Total No. of Death Claims settled (in Lacs)	7.13
6	Total No. of Maturity Claims settled(in Lacs)	178.56

14.1.1 Janashree BimaYojana (JBY)

The JanashreeBimaYojana (JBY) was launched in August 2000. The Scheme has replaced Social Security Group Insurance Scheme (SSGIS) and Rural Group Life Insurance Scheme (RGLIS). The premium for the scheme is ₹ 200/- per member per annum, 50 per cent of which is met out of Social Security Fund. The balance premium is borne by the member and / or Nodal Agency. Persons between age 18 years and 59 years are eligible for entering into scheme. There are 46 identified occupations that can be covered under JBY.

Table 14.2

Benefits under Janashree BimaYojana:

Sl No.		Amount (Rs.)
1.	Natural Death	30,000/-
2.	On death or total permanent disability due to accident	75,000/-
3.	On partial permanent disability due to accident	37,500/-

A free add-on benefit for the children of the members of JANASHREE BIMA YOJANA is provided under the scheme in the form of a scholarship at the rate of ₹ 100/- per month. Itis given to maximum two children studying between IX to XII standard payable half yearly on 1st July and 1st January each year. During the financial year 2011-2012 scholarships were disbursed to 20, 90,972 children amounting to ₹ 180.05 crore.

Table 14.3

Lives covered & claims settled in JBY for last 5 years are as follows:

Year	Total Lives	Claims	
		No.	Amount (₹ In Crore)
2007-2008	1,21,35,174	43,203	125.94
2008-2009	1,62,60,662	47,554	200.29
2009-2010	1,84,43,217	41,217	133.37
2010-2011	2,09,78,825	45,463	146.92
2011-2012	2,20,56,435	63,471	206.06

As on 31.03.2012, about 2.20 crore persons have been covered under the Scheme.

14.1.2 Aam Admi Bima Yojana (Aaby)

AAM ADMI BIMA YOJANA (AABY), a new Social Security Scheme for rural landless households was launched on 2nd October, 2007. The benefits under this scheme are shown in the Table as below. The head of the family or one earning member in the family aged between 18-59 years, of rural landless household is covered under the scheme. The premium of Rs. 200/- per person per annum is shared equally by the Central Government and the State Government.

Table 14.4

Benefits under Aam Admi Bima Yojana:

Sl. No.		Amount (₹)
1.	Natural Death	30,000/-
2.	On death due to accident / permanent total disability due to accident (loss of 2 eyes or 2 limbs **OR** loss of one eye & one limb)	75,000/-
3.	On partial permanent disability due to accident (loss of one eye or one limb)	37,500/-

A free add-on benefit for the children of the members of AAM ADMI BIMA YOJANA is provided under the scheme in the form of a scholarship at the rate of Rs. 100/- per month is given to maximum two children studying between IX to XII Standard payable half yearly on 1st July and 1st January each year. During the financial year 2011-2012 scholarships were disbursed to 4,44,750 children amounting toRs. 47.25 crore.

A total of 2,02,58,390 rural landless households have been provided insurance cover under the Scheme as on 31.03.2012.

Table 14.5

Lives covered & claims settled in AABY are as follows:

Year	Lives Covered	No. of Claims settled	Amount of Claims settled (₹ In Crore)
2007-2008	42,61,156	-	-
2008-2009	71,71,556	20,680	64.79
2009-2010	1,30,45,666	38,493	125.52
2010-2011	1,77,47,480	40,780	131.53
2011-2012	2,02,58,390	61,056	197.85

14.2 Non-Life Insurance Companies

The General insurance industry was nationalized in 1972 and 107 insurers were amalgamated and grouped into four Companies – National Insurance Co. Ltd., The New India Assurance Co. Ltd., The Oriental Insurance Co. Ltd. and United India Insurance Co. Ltd. The four entities were set up as subsidiaries of General Insurance Corporation of India (GIC) which also played the role of Re-insurer. As a part of liberalization process, with the enactment of IRDA Act, 1999, it became necessary to nominate Indian Re-Insurer under Insurance Act, 1938. GIC was, therefore, notified as Indian Re-Insurer on 3rd November, 2000 under Section 35 of GIBNA Act, 1972. Through enactment of the General Insurance Business (Nationalization) Amendment Act, 2002, the four PSGICs were delinked from GIC and the holdings of GIC in the four Public Sector General Insurance Companies (PSGICs) were transferred to the Government. Presently, all the four Public Sector General Insurance Companies are Board run Companies.

The detailed particulars of the four Public Sector General Insurance Companies are as follows:—

14.2.1 National Insurance Company Limited:

- Incorporated in 1906
- Headquarter in Kolkata
- 21 Foreign & 11 Indian companies amalgamated at the time of nationalization in 1972
- Paid-up share capital is Rs.100 Crores
- Gross Direct Premium Income (GDPI) in 2011-12 was Rs.7815.69 Crores against GDPI of Rs.6,245 crores in 2010-11 showing a growth of 25.15% against a growth of 34.42% in the previous year
- Incurred claim Ratio is 87.50% for the year 2011-12 against 97% in 2010-11
- Profit After Tax was Rs.324.76 crores in 2011-12 against Rs.75 crores in 2010-11
- 1,341 offices including Micro offices
- 15,468 employees
- Foreign operations in Nepal

- “AAA/STABLE” rating by CRISIL

14.2.2 The New India Assurance Company Limited:

- Incorporated in 1919
- Headquarter at Mumbai
- 32 Foreign & Indian companies amalgamated at the time of nationalization in 1972
- Paid-up share capital is Rs.200 crores
- Gross Direct Premium Income (GDPI) in 2011-12 is Rs.10,074crores against GDPI of Rs. 8,226 Crores in 2010-11 showing a growth of 22.47% against a growth of 15.87% in the previous year.
- Incurred claim Ratio is 90% for the year 2011-12 against 101% in 2010-11.
- Profit After Tax is Rs. 179.31crores in 2011-12 against Rs. (-)422 crores in 2010-11
- 1,207offices
- 19,328 employees
- The Company operates through a network of 19 Branches, 7 Agencies, 3 Subsidiary Companies and 4 Associate Companies in 20 countries
- **“A-”**(excellent) rating from AM Best & Co.(Europe)

14.2.3 The Oriental Insurance Company Limited:

- Incorporated in 1947
- Headquarter at New Delhi
- 10 Indian & 12 Foreign companies merged at the time of nationalization in 1972
- Paid-up share capital is Rs.100 Crores
- Gross Direct Premium Income (GDPI) in 2011-12 was Rs.6,195 crores against GDPI of Rs.5,570 Crores in 2010-11 showing a growth of 11.22% against a growth of 14.73% in the previous year
- Incurred claim Ratio is 85% for the year 2011-12 against 88% in 2010-11
- Profit After Tax was Rs.253 crores in 2011-12 against Rs.55 crores in 2010-11
- 1,193 offices
- 15,043 employees
- Foreign operations in Nepal, Dubai & Kuwait
- ‘B++”(very good) rating from AM Best & Co.(Europe)

14.2.4 United India Insurance Company Limited:

- Incorporated in 1938
- Headquarter at Chennai
- 12 Indian companies, 4 cooperative societies & Indian operations of 5 foreign companies merged at the time of nationalization in 1972
- Paid-up share capital is Rs.150 crores
- Gross Direct Premium Income (GDPI) in 2011-12 was Rs.8,179.29 crores against GDPI of Rs.6376.66 Crores in 2010-11 showing a growth of 28.27% against a growth of 21.71% in the previous year
- Incurred claim Ratio is 79.46% for the year 2011-12 against 86% in 2010-11
- Profit After Tax was Rs.386.79crores in 2011-12 against 131 crores in 2010-11
- Dividend for the year 2011-12 is Rs.78 crores
- 1,476 offices
- 16,927 employees
- Rated iAAA by ICRA

The above Public Sector General Insurance Companies provide coverage for insurance other than Life such as, Fire, Marine (Cargo & Hull), Motor, Workmen’s Compensation, Personal Accident, Aviation, Engineering, Liability, Health, etc.

The Public Sector General Insurance Companies witnessed a growth rate of 22.13% during 2011-12 collecting a total premium of Rs.32,264 crores against Rs.26,418 Crores during 2010-11. The market share of the Public Sector General Insurance Companies stood approximately at 58% in 2011-12. Motor and Health Insurance have been the major drivers of growth.

Strategic alliances spearhead the retail focus of the companies through tie-up arrangements with automobile manufacturers, banks and other entities with large distribution network.

Besides providing cover through traditional policies, the PSGICs are continually evolving themselves to provide tailor made policies to suit the changing / emerging needs of the customers. Some of the covers specially designed for the benefit of rural and social sector are:—

- Insurance of fishermen
- Plantation Insurance
- Calf rearing Insurance Scheme
- Insurance of Drip Irrigation – Multi periled lift Insurance Policy
- Emu bird Insurance
- Elephant Insurance
- Farmers Package Insurance
- Ganna Kamgar BimaYojana
- Gopal Raksha Scheme

The Public Sector General Insurance Companies (PSGICs) have various policies to provide insurance cover to the poor for reconstruction of their houses in case of natural calamities like fire, flood, cyclone, earthquake etc.

Policies like GraminSuraksha Micro Policy, Farmers Package Policy, Hut Insurance Policy, Tribal Package Policy, Uni-Micro Policy. Long Term House Policy to cover houses constructed under Weaker Section Housing Scheme for a period of 10 years is also available.

14.3 General Insurance Corporation of India (GIC)

The General Insurance Corporation of India (GIC) was set up as a Government company under the General Insurance Business (Nationalisation) Act, 1972 for the purpose of superintending, controlling and carrying on the business of 'General Insurance'. The GIC was authorized to carry out the general insurance business through its four subsidiaries viz. National Insurance Company Ltd., New India Assurance Company Ltd., Oriental Insurance Company Ltd. and United India Insurance Company Ltd. With the notification of the General Insurance Business (Nationalisation) Amendment Act, 2002, the GIC was designated as the 'Indian Reinsurer' on 3rd November, 2000 and its supervisory role over its subsidiaries ended. The ownership of these subsidiaries companies now rests with the Government of India.

General Insurance Corporation of India (GIC Re) is a leading global reinsurance and risk solution provider with its Registered Office of the Corporation in Mumbai and liaison offices in New Delhi, Kolkata and Chennai to cater to the needs of clients in these metro cities. As the 'Indian Reinsurer with a global footprint', GIC Re provides reinsurance support for all the general insurance companies (non-life) in India. Internationally, GIC Re leads the reinsurance programmers of insurance companies in SAARC region, African countries and in the Middle East. Apart from reinsurance business, GIC Re continues to participate in the share capital of Kenindia Assurance Company Ltd. (Kenya), India International Insurance Pte Ltd., Singapore, East Africa Re and Asian Reinsurance Corporation, Bangkok. It also holds 35% share in Agriculture Insurance Company of India Ltd.

GIC Re is expanding its global presence. During 2011-12, international business contributed to 44% to its revenue. GIC Re has 4 overseas offices with branch Offices in London, Dubai and Malaysia and a Representative Office in Moscow. GIC Re has an 'Eventual Reinsurer' status in Brazil. It is also reinsuring life insurance risks in India and Takaful (Shariah-compliant insurance). GIC Re also manages Marine Hull Pool, Indian Terrorism Insurance Pool and India Motor Third Party Insurance Pool for Commercial vehicles on behalf of Indian Insurance industry. The Motor Third Party Insurance Pool for Commercial vehicles was dismantled on 31st March 2012 and w.e.f 1.4.2012, GIC Re is the administrator of the new Indian Motor Third Party Declined Risk Insurance Pool.GIC Re has been selected as the Manager for Nat Cat Pool promoted by the Federation of Afro-Asian Insurers & Reinsurers(FAIR)

GIC Re is financially strong as reflected by its high grade ratings from credit rating agencies. It is rated A- (Excellent) by A M Best & AAA (In) by CARE. GIC Re is also the 5th largest aviation reinsurer globally. During the year 2011-12, the net premium of the GIC Re was ₹ 12558.24 crores as against ₹ 10512.57 crorein the previous year. The net incurred claims were at ₹ 13986.41 crores i.e.,123.6 % as against ₹ 8625.87 crores in the previous year i.e., 90.4%. Catastrophic losses in Thailand, Japan, New Zealand, Australia; loss provisioning on the dismantling of the Motor Pool and the Regulator IRDA instructing to settle liabilities of the Motor Pool on Ultimate Liability, resulted in GIC Re incurring loss after tax amounting to ₹ 2468.75 crores as on 31st March 2012 compared to Profit after tax of ₹ 1033.41 crores as on 31st March 2011. The total assets and networth as on 31st March 2012 was ₹ 53730.92 crores and ₹ 7690.51 crores, respectively.The present paid up capital of the Corporation is ₹ 430.00 crores.

14.4 Agriculture Insurance Company of India Limited (AICIL)

The Agriculture Insurance Company of India Limited (AICIL) was registered under the Companies Act 1956, with equity participation from General Insurance Corporation of India (35%), NABARD (30%), and four Public Sector General Insurance Companies (i.e., National, New India, Oriental & United India combined 30% @8.75% each). The paid up share capital of the company is Rs. 200 crore against an authorized share capital of ₹ 1500 crore. It has been set up with the objective to implement various Crop Insurance Schemes of Government of India likely to be introduced from time to time and other insurance products relating to agriculture. The company has commenced its business with effect from 1.4.2003 with transfer of Crop Insurance Business from General Insurance Corporation of India.

The primary product i.e. "National Agricultural Insurance Scheme" (NAIS) introduced by Ministry of Agriculture is being implemented from Rabi 1999-2000 season which replaced the former product i.e., Comprehensive Crop Insurance Scheme (CCIS) and is presently available in 24 States and 2 Union Territories. AICIL is the sole implementing agency for NAIS. All categories of farmers i.e., both, loanee and non loanee, share croppers, tenant farmers irrespective of the size of their holding can participate in the Scheme. The main objective of the scheme is to protect the farmers against the losses suffered due to crop failure on account of natural calamities, such as drought, flood, hailstorm, cyclone, fire, pest/ diseases, etc., so as to indemnify the losses and restore the credit worthiness of the loanee farmers for the ensuing season.

The Scheme envisages coverage of all crops including cereals, millets, pulses, oilseeds and annual commercial and horticulture crops in respect of which past yield data is available. At present 70 different Food and Oilseed crops are covered during Kharif and Rabi seasons. Among the annual commercial/ horticultural crops, cotton, sugarcane, potato, chilly, ginger, turmeric, onion, garlic, jute, tapioca, banana, pineapple, brinjal, coriander, cumin, fennel, French bean, isabgul, fenugreek and tomato have been brought under insurance coverage. Flat premium rates of 3.5% of sum insured for bajra and oilseeds, 2.5% for other crops during Kharif seasons and 1.5% for wheat and 2% for other crops during Rabi seasons are charged. In case the actuarial rates are less than prescribed flat premium rates mentioned above, the lower rate is applicable for food crops and oilseeds. In case of annual commercial and horticulture crops only actuarial rates are charged and with effect from Kharif 2011 season, AICIL is responsible for all the claims under such crops. At present, 10% subsidy in premium is allowed for small and marginal farmers, shared equally by central and state government. The Scheme operates on the basis of 'Area Approach' for widespread calamities.

Claims are automatically calculated based on shortfall in the current season yield obtained from crop cutting experiments conducted by State Governments under General Crops Estimation

Survey (GCES) as compared to threshold yield. All the claims are settled through the banking network. The Company is making efforts to bring the remaining States/ UTs into the fold of NAIS.

During Kharif 2011 & Rabi 2011-12, 1.56 crore farmers were insured covering 2.17 crore hectare cropped area for sum insured of Rs. 31,588 crore against premium of Rs. 960 crore. Claims amounting to Rs. 373.32 crore out of the reported claims of Rs. 1300.20 crore has so far been settled benefitting 15.16 lac farmers. Since the inception of the scheme and until Rabi 2011-12, about 1,919 lakh farmers have been insured, covering an area of 290 million hectares for a sum insured value of Rs. 2,53,222 crore, against a premium of Rs. 7,564 crore. Claims to the tune of about Rs. 24,192 crore have been reported benefiting nearly 503 lakh farmers

The unit of insurance may be Gram Panchyat, Mandal, Hobli, Circle, Phirka, Block, and Taluka etc., to be decided by the respective State / UT Government. As envisaged in scheme, as many as 14 States /UTs have already lowered down the size of unit areas to Village / Gram Panchayat or equivalent level in order to make the scheme more efficacious and reflective of crop losses.

The government announced a pilot on an improved version of NAIS, namely Modified NAIS w.e.f. Rabi 2010-11 seasons for experimentation in 50 districts. The modified version has many improvements viz. Insurance Unit for major crops are village panchayat or other equivalent unit; in case of prevented / failed sowing claims upto 25 percent of the sum insured is payable, post-harvest losses caused by cyclonic rains are assessed at farm level for the crop harvested and left in 'cut & spread' condition upto a period of 2 weeks; individual farm level assessment of losses in case of localized calamities, like hailstorm and landslide; on-account payment up to 25% of likely claim as advance, for providing immediate relief to farmers in case of severe calamities; threshold yield based on average yield of past seven years, excluding upto two years of declared natural calamities; minimum indemnity level of 70 percent is available (instead of 60 percent in NAIS); and premium rates are actuarial supported by up-front subsidy in premium, which ranges from 25 percent to 75 percent, equally shared by Centre and States. Insurer is responsible for the claims liabilities.

AICIL implemented MNAIS during Rabi 2010-11 in 32 Districts across 12 States. During Kharif 2011, the pilot was implemented by AIC in 31 districts across 13 States and during Rabi 2011-12 in 37 districts across 16 States. The pilot is being continued during Kharif 2012 season. The coverage so far under MNAIS is as under:—

Table 14.6

Coverage under Modified NAIS

(₹ in 00,000)

Sl. No.	Particulars	Rabi 2010-11	Kharif 2011	Rabi 2011-12
1	Farmers covered	336724	417831	597177
2	Sum Insured	66679	102748	15119
3	Farmers' premium	2271	4424	5664
4	Claims	1596	7528	Yet to be reported

Apart from the above two yield guarantee insurance products, the Government of India has introduced another Pilot namely, Pilot Weather Based Crop Insurance Scheme (WBCIS) with effect from Kharif 2007. The Scheme operates on an actuarial basis with premium subsidy contribution from Union and State Governments. AICIL has since implemented the scheme in various States during all previous Kharif and Rabi seasons starting Kharif 2007. WBCIS is a parametric insurance product designed to provide insurance protection to the cultivator against adverse weather incidence during the cultivation period, such as deficit & excess rainfall, frost, heat (temperature), relative humidity, wind speed etc., which are deemed to adversely impact the crop yield. Crops and 'Reference Unit Areas (RUA)' are notified before the commencement of the season by the State Govt. Each RUA is linked to a Reference Weather Station (RWS), on the basis of which payout/ claims are processed. The payouts are made on the basis of adverse variations in the current season's weather parameters as measured at Reference Weather Station (RWS). Claim under WBCIS is area based and automatic.

During the year 2011-12, the Scheme was implemented in 14 States namely Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Orissa, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu, Uttrakhand, Uttar Pradesh and West Bengal spread over 1425 Tehsils / blocks of 109 districts for the major crops during Kharif and 1842 Tehsils / Blocks of 137 districts during Rabi crop season and covered more than 83 lakh farmers on a cropped covering 114 lakh hectares for a sum insured of Rs. 15026 crore. AIC is implementing WBCIS for more than 30 different crops, including perennial horticultural crops like Apple, Mango, Grapes, Cashew Nut, Pepper, Pomegranate, Orange, Sweet orange, and Banana etc.

The coverage so far under WBCIS is as under:—

Table 14.7

Coverage under Weather Based CIS

(₹ in 00,000)

Sl. No.	Particulars	Kharif 2009	Rabi 09-10	Kharif 2010	Rabi 2010-11	Kharif 2011	Rabi 11-12
		2009-10		2010-11		2011-12	
1	Farmers	1134219	873352	3915052	2822499	5263734	3110499
2	Sum Insured	198931	197636	443943	524668	834181	668418
3	Farmers' premium	5641	3998	13067	11452	27181	14617
4	Claims	15315	13790	15008	28869	38870	50302*

Besides the above, AICIL has designed various other crop insurance products to cater to the diverse needs of farming community. These are Coconut Palm Insurance Scheme (CPIS) in collaboration with Coconut Board and implementing State Governments, Rainfall Insurance Scheme-Coffee (RISC) in collaboration with Coffee Board, Rubber Plantation Insurance, Bio-Fuel Plants Insurance, Grapes Insurance, Mango Weather Insurance, Potato Contract Farming Insurance, Pulpwood Tree Insurance, Rabi Weather Insurance, and VarshaBima/ Rainfall Insurance.

During the financial year 2011-12, the Company has recorded a gross premium of Rs.2577 crore and net premium of Rs.1357 crore, as against net claims incurred of Rs.1026 crore.

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BEFORE STATEMENT & APPENDIX

Statements and Appendices

Statements and Appendices