सत्यमेव जयते

मंत्री
भारी उद्योग एवं लोक उद्यम
भारत सरकार, नई दिल्ली-110 011
MINISTER OF
HEAVY INDUSTRIES & PUBLIC ENTERPRISES
GOVERNMENT OF INDIA
NEW DELHI-110 011

Foreword

संतोश मोहन देव
SONTOSH MOHAN DEV

The Public Enterprises Survey for the year 2006-07 is the 47th Survey being laid in the Parliament. It presents an overview of the performance of the Central Public Sector Enterprises (CPSEs). The CPSEs, as a group, performed well on all the parameters of turnover, profit, networth and market capitalization. This was despite the volatility in international prices of crude oil faced by the Oil Marketing Companies(OMCs). The share of the OMCs in the total turnover of all CPSEs is more than 50 per cent. The international crude oil prices fluctuated over a high range during 2006-07. The Administrative Price Mechanism (APM) for major petroleum products (except for PDS Kerosene and domestic LPG) was dismantled w.e.f. 1.4.2002. It was, however, reintroduced restraining the "pass through" of higher crude price to domestic consumers. This has had adverse impact on the profit margins of oil CPSEs, despite the grant of subsidy by the Government by way of oil bonds amounting to Rs. 24,121 crore during 2006-07.

2. The CPSEs constitute a very important segment of the corporate sector in India. Its share in the total corporate taxes stood at around 26 per cent. In terms of 'gross block', the investment in all CPSEs grew by 9.49 per cent during 2006-07 (over 2005-06). Both the 'power' and 'mining' (including oil exploration) sectors saw high growth in investment of 13.9 per cent and 10.72 per cent respectively. This was followed by investment in the manufacturing CPSEs that grew by 8.05 per cent. In terms of sources of investment, the share of Central Government that was 37.78 per cent in 2004-05 declined to 35.81 per cent in 2006-07. The share of financial institutions (and others), on the other hand, went up from 39.89 per cent in 2004-05 to 45.56 per cent in 2006-07. This only exhibits the greater confidence of the banks in CPSEs. A significant portion of investment is being made also from internal resources. The 'reserves and surplus' alone, out of the internal resources of all the CPSEs put together, stood at Rs. 416494.25 crore in 2006-07.

3. Of the 217 operating CPSEs during 2006-07, 156 were profit making CPSEs and 59 CPSEs were loss making. One CPSE neither incurred loss nor earned profit and another CPSE did not furnish information being under closure. The reasons for sickness vary from case to case. A good many of these are units/companies that were taken over from the private sector on social considerations. Some of these were set up in the public sector, but suffered losses on account of APM as well as high overhead costs. A select few, on the other hand, have suffered on account of liberalization and stiff competition in the market. The Government continues to make

a determined effort to turn around most of these units, specially in view of the growing opportunities in the market.

4. The latest problem faced by CPSEs is the high rate of attrition. The Government, therefore, set up the Second Pay Revision Committee for the non-unionised supervisors and executives holding posts below the Board level, under the Chairmanship of Justice (Retd) M. Jagannadha Rao. The Report is keenly awaited for its recommendations. The government decided in January, 2008 to merge 50% of Industrial Dearness Allowance (IDA) with the existing basic pay in respect of employees in profit making CPSEs w.e.f. 1.1.2007 following the IDA pattern of pay scales of 1997 level. This will benefit around 14 lakh employees in CPSEs all over the country. This will also cover employees on the IDA pattern in the Food Corporation of India. Further, Government authorised the 7th round of negotiation for the unionized employees.

5. The outlook of CPSEs is bright. I am sure CPSEs will play an important role in helping the country achieve a double-digit GDP growth in the years ahead.

(Sontosh Mohan Dev)
Minister of Heavy Industries and Public Enterprises

February 1st, 2008
New Delhi

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भारत सरकार
GOVERNMENT OF INDIA
भारी उद्योग एवं लोक उद्यम मंत्रालय
MINISTRY OF HEAVY INDUSTRIES AND PUBLIC ENTERPRISES
लोक उद्यम विभाग
DEPARTMENT OF PUBLIC ENTERPRISES
केन्द्रीय कार्यालय परिसर, ब्लाक नं. 14, लोदी रोड
Kendriya Karyalaya Parisar, Block No. 14, Lodi Road
नई दिल्ली/New Delhi-1100 003

Preface

R. C. PANDA
Secretary

The Estimates Committee of the Parliament in its 73rd Report (1959-60) 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 which should provide the Government appraisal of the performance of the Central Public Sector Enterprises (CPSEs). Accordingly, the first Public Enterprises Survey(Annual Report) was prepared by the erstwhile Bureau of Public Enterprises under the Ministry of Finance (now Department of Public Enterprises in the Ministry of Heavy Industries and Public Enterprises) in 1960-61 giving a consolidated picture of the performance of CPSEs. The present one is the 47th Survey Report of CPSEs in the series.

2. The Public Enterprises Survey covers only those enterprises which have been established by the Government of India (GOI) as government companies under Section 617 of the Companies Act, and wherein the equity holding of the GOI is more than 50 per cent. It also includes Statutory Corporations established under specific Statutes of the Parliament. The Survey does not, however, cover departmental undertakings and banking institutions as well as enterprises where equity holding of the GOI is 50 per cent or less.

3. India opted for the democratic socialistic framework after Independence. This allowed for the role of both the public and the private sectors in the economic development of the country. Investments in the CPSEs have been the result of the plan provision under the Five Year Plans. The CPSEs have been established largely in areas that are delineated under the Central (or the Concurrent) List of the Constitution of India. Public sector investment in our Plan models is assumed to bridge the gap between the required investment in the economy (for the overall development of the country) and the investment forthcoming from the private sector.

4. While economic reasons have been the guiding force behind such investments, the social considerations have also influenced the setting up of CPSEs. As such, all the CPSEs are not the results of greenfield investment, as some of them have been taken over (nationalized) from the private sector. A good many CPSEs saw dilution of equity holding of the Government over the years on account of joint venture or privatization.

5. The number of public enterprises, falling within the scope of the Survey as on 31.3.2007 was 247 (excluding 7 Insurance Companies). During 2006-07, 13 CPSEs were closed or merged with other CPSEs or else ceased to be public sector enterprise. Out of these 13 enterprises, one enterprise namely Bharat Ophthalmic Glass Ltd., has been closed due to the order of the High Court of Kolkatta, 9 subsidiary companies

namely NTC (APKK&M) Ltd, NTC (DPR) Ltd, NTC (Gujarat) Ltd, NTC (MP) Ltd, NTC (MN) Ltd, NTC (SM) Ltd, NTC (TN & P) Ltd, NTC (UP) Ltd. and NTC (WBABO) Ltd. have been merged with NTC (Holding Company) Ltd. as per restructuring/revival plan sanctioned by the BIFR vide order dated 17.5.2006. Indian Strategic Petroleum Reserves Ltd. has been transfered to Oil Industry Development Board on 9.5.2006 and IBP Co. Ltd. merged with Indian Oil Corporation Ltd. Semi Conductor Complex has been restructured by the Department of Space, and has been converted into a Society i.e. Semi Conductor Laboratory w.e.f. 8.11.2005.

6. During the year, 15 new public sector enterprises namely Air India Engineering Services Ltd., India Infrastructure Finance Co. Ltd., Brahmaputra Cracker and Polymer Ltd., Bharat Petro Resources Ltd., Bharat Petro Resources JPDA, Coastal Andhra Power Ltd., Bokaro-Kodarma-Maithon Transmission Company Ltd., Byrnihat Transmission Company Ltd., East North Inter-Connection Co. Ltd., Coastal TamilNadu Power Ltd., Jharkhand Integrated Power Ltd., Orissa Integrated Power Ltd., REC Transmission Projects Co. Ltd., Vaishali Power Connectivity Co. Ltd. and Indian Vaccine Corporation Ltd. have been added in the list of CPSEs for the Survey Report as per the information received from the concerned administrative Ministries/Departments. Among the newly added CPSEs Brahmaputra Cracker and Polymer Ltd., Byrnihat Transmission Company Ltd. and Parbati Koldam Transmission Company Ltd. have not furnished data as their first annual accounts will be due next year i.e. as on 31.3.2008. Therefore, these 3 enterprises have been kept out of the analysis in the current year Survey Report. These companies have been, however, indicated in the list of CPSEs under construction.

7. The name of Bharat Earth Movers Ltd has undergone change during the year 2006-07 and is known now as BEML Ltd. Further, Balmer Lawrie Investments Ltd. and Hindustan Prefab Ltd. have been shifted from the Department of Disinvestments and the Ministry of Urban Employment and Poverty Alleviation respectively to the administrative control of the Ministry of Petroleum and Natural Gas and the Ministry of Housing and Poverty Alleviation respectively. Out of the 20 CPSEs shown under construction last year, 3 enterprises namely Fresh and Healthy Enterprises Ltd., Security Printing and Minting Corporation of India Limited and Tehri Hydro Development Corporation Ltd. became operational during the year. The break up of 254 enterprises (including Insurance Companies) as on 31.3.2007 is given below:

	CPSEs (no.)
1. Enterprises under construction	30
2. Operating Enterprises	217
3. Insurance Companies	7

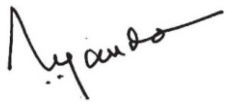
The Public Enterprises Survey, 2006-07, therefore, provides the analysis mainly in respect of 217 operating CPSEs.

8. The present Survey incorporates the final audited figures of most of those enterprises whose accounts were treated as provisional in the Public Enterprises Survey, 2005-06. The figures relating to the year 2005-06 as appeared in the last year's Survey have accordingly undergone revision in this Survey.

9. The data for the Public Enterprises Survey are compiled from the Annual Reports and Accounts furnished directly by the CPSEs. The data are compiled, analyzed and presented in three separate volumes. Volume-I - contains broad performance appraisal of CPSEs at the aggregate level in terms of investment, productivity, international operations etc., Volume-II - contains the performance appraisal of the CPSEs in different cognate groups and at the level of individual enterprise and Volume-III - contains balance sheet, profit and loss account as well as important management ratios of each CPSE. Important financial and accounting terms used in the Survey are as per schedule VI of the Companies Act, 1956 unless otherwise defined in the "glossary of terms" on the last page of Volume-I.

10. The chapter on 'Research & Development' is a new addition in this Survey. Research & Development contribute handsomely towards reducing cost and introducing new products, which are essential for enhancing competitiveness in the market. The data sheet/schedules for collection on CPSEs was significantly improved, and submission of the same was made online. This was very well received by the CPSEs. The Department of Public Enterprises acknowledges the cooperation extended by all the CPSEs, Ministries/ Departments in providing the requisite data/information. The Department also acknowledges the contribution of Industry Information System Division of National Informatics Center (NIC) for designing the (new) online data input sheet as well as the programmes for collection and compilation of information. The efforts put in by all the officers and staff of the Department and especially the Survey Team for finalizing this Survey Report are also acknowledged.

11 I may also mention that the Public Enterprises Survey is available on-line and may be accessed on www.dpe.nic.in. Suggestions to improve the Public Enterprises Survey are welcome.



(DR. RAMESH CHANDRA PANDA)
Secretary to the Government of India
Ministry of Heavy Industries and Public Enterprises

February 1st, 2008
New Delhi

1 PERFORMANCE OVERVIEW

1.1 Introduction

Alongwith the rest of the economy, the CPSEs performed extremely well in 2006-07. The CPSEs, as such, performed well on all the parameters of turnover, profits, networth and market capitalization on the stock exchange.This was despite the problem faced by the oil CPSEs who were not allowed to raise the selling price in the same proportion as the increase in the input/ crude prices and had to share the impact of rise in input price alongwith the subsidy burden on the Government.

The Central Public Sector Enterprises (CPSEs) as a group are engaged in the production and supply of a wide range of products and services. These include basic goods like steel, cement and chemicals; capital goods like pressure vessels, boilers and drilling rigs; and intermediate goods like electricity and gas. They also render a large number of services, such as, telecommunications, trading, tourism, warehousing etc.

A large number of these 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 units such as Indian Petrochemicals Corporation Ltd., Modern Food Industries Ltd., Hindustan Zinc Ltd., Bharat Aluminum Company, Maruti Udyog Ltd. etc. on the other hand, which were CPSEs earlier, ceased to be CPSEs after their 'privatization'.

A number of CPSEs belong to the category of limited companies and have been established with the approval of the Government under the Companies Act, 1956. CPSEs in the category of 'corporations' like the Food Corporation of India, the Life Insurance Corporation etc. have been established with the specific central legislations. While the company form of CPSEs function according to the Articles of Association and are registered under the Companies Act, the Corporation form of CPSEs have their objectives and scope defined in the concerned legislation.

On the eve of the First Five Year Plan there were 5 CPSEs with a total (financial) investment of Rs. 29 crore. Both the number of enterprises and the investment in CPSEs recorded an overwhelming increase over the years, especially so after the Second Five Year Plan. As on 31st March, 2007, there were a total of 247 CPSEs (excluding 7 insurance companis) out of which 217 enterprises were in operation and 30 enterprises were under construction.

Major highlights of performance of CPSEs during the year 2006-07 are shown in Box 1. The macro view of performance of CPSEs for the last ten years may be seen at Box 2.

BOX-1

HIGHLIGHTS

- The **cumulative (financial) investment** in 244 CPSEs was Rs. 421089 crore as on 31.3.2007 compared to Rs. 403706 crore as on 31.3.2006, recording an increase of Rs.17383 crore in 2006-07 over 2005-06 i.e. a growth of 4.31%.
- The total **turnover** of all CPSEs during 2006-07 was Rs.964410 crore compared to Rs.837295 crore in the previous year showing a growth of 15.18%.
- **Net Profit** of all CPSEs stood at Rs. 81550 crore in 2006-07 compared Rs. 69536 crore in 2005-06 showing a growth of 17.28 %. The **dividend** declared by the CPSEs went up to Rs.26805 crore in 2006-07 compared to Rs.22886 crore during 2005-06, showing an increase of 17.12%.
- The **interest** paid by CPSEs increased from Rs. 23708 crore in 2005-06 to Rs. 27069 crore during 2006-07 showing a growth rate of 14.18 percent. However, interest as percentage of gross profit that was 33.90% in 1997-98 has declined to 15.20% in 2006-07.
- **Reserves and surplus** of all CPSEs went up from Rs. 359181 crore in 2005-06 to Rs. 416494 crore in 2006-07, showing an increase of 15.96%. The **net worth** of all CPSEs during 2006-07 went up to Rs. 452995 crore compared to Rs. 397275 crore in the previous year registering a growth of 14.03%.
- **Corporate Tax** (direct tax provision and dividend tax) went up from Rs. 27585 crore in 2005-06 to Rs.38435 crore in 2006-07 showing a growth of 39.33%. Payment of corporate tax as percentage of total corporate tax stood at 26.24% in 2006-07.
- **Foreign exchange earnings** by exports of goods and services increased from Rs. 45954 crore in 2005-06 to Rs. 65620 crore in 2006-07 showing a growth of 42.79%.
- **The 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 has gone up from Rs.125456 crore in 2005-06 to Rs.147635 crore in 2006-07 i.e. by Rs.22179 crore or by 17.68%.
- As many as 44 **CPSEs are listed on the stock exchanges** of India, out of which 5 CPSEs were not traded during 2006-07. Since IBP Co. Ltd. has been merged with Indian Oil Corporation, the trading in this script has been discontinued.
- **Total Market capitalization** (M-Cap) of 38 CPSEs, based on the stock price in Mumbai Stock Exchange as on 31.3.2007, was Rs.653924 crore. M-Cap of all listed CPSEs as a percentage of BSE M-Cap was 18.35 percent as on 31.3.2007.
- There were 16.14 lakh (excluding casual workers and contract labour) people employed in 244 CPSEs; nearly one fourth of the employed persons comprised managerial and supervisory cadres.

BOX-2

MACRO VIEW OF CENTRAL PUBLIC SECTOR ENTERPRISES

(Rs. in crore)

Particulars	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
No. of operating enterprises	236	235	232	234	231	226	230	227	226	217
Capital employed	249855	265093	302947	331372	389934	417160	452336	504407	585484	665124
Turnover	276002	310179	389199	458237	478731	572833	630704	744307	837295	964410
Net Worth	134443	148064	160674	171406	225472	241846	291828	341595	397275	452995
Profit before Dep., Int., Tax & EP (PBDITEP)	53062	56495	62212	69287	89550	101691	127320	142554	150262	178083
Depreciation	15856	16768	19942	20520	26360	28247	31251	33147	34848	33138
DRE/Prel. Exps. Written Off	-	-	-	-	-	905	1025	986	992	5843
Profit before Int., Tax & EP (PBITEP)	37206	39727	42270	48767	63190	72539	95039	108420	114422	139102
Interest	17990	20025	20233	23800	24957	23921	23835	22869	23708	27069
Profit before Tax & EP (PBTEP)	19216	19702	22037	24967	38233	48618	71144	85550	90714	112033
Tax Provisions	5634	6499	7706	9314	12255	17499	22134	21662	24370	34330
Net Profit before EP	-	-	-	-	-	31119	49010	63889	66344	77702
Net Extra Ordi. Items & Prior Period AdJ.	-	-	-	-	-	-1225	-3933	-1075	-3192	-3847
Net Profit	13582	13203	14331	15653	25978	32344	52985	64964	69536	81550
Profit of profit making CPSEs	20279	22508	24633	28494	36432	43316	61606	74432	76382	89773
Loss of loss incurring CPSEs	6697	9305	10302	12841	10454	10972	8522	9003	6845	8223
Profit making CPSEs (No.)	134	126	126	123	120	119	139	143	160	156
Loss Incurring CPSEs (No.)	100	107	105	110	109	105	89	73	63	59
CPSEs Making no profit/no loss	2	2	1	1	2	2	2	-	1	1
Operating CPSEs not furnished information (No.)	-	-	-	-	-	-	-	-	2	1
Dividend	3609	4932	5455	8260	8068	13769	15288	20718	22886	26805
Dividend Tax	464	537	790	842	8	1193	1961	2852	3215	4105
Retained Profit	9509	7734	8086	6551	17902	17382	35835	41394	43435	50640
Dividend Payout Ratio	26.6	37.4	38.1	52.8	31.06	42.57	28.80	31.89	32.91	33.28

1.2 Aggregate Balance Sheet of CPSEs

Table 1.1 below shows the sources and amount of funds / capital available to the CPSEs during the last three years. It showed further improvement in 2006-07 as the funds available went up to Rs. 1011347 crore, from the earlier levels of Rs. 906204 crore in 2005-06 and Rs. 793939 crore in 2004-05. While 'reserves and surplus' showed an increase of 15.96 per cent, 'long term loans' increased by 4.63 percent during 2006-07 over 2005-06. In absolute terms, 'reserves and surplus' went up to 416494 crore in 2006-07 from the earlier levels of Rs. 359181 crore in 2005-06 and to Rs.310118 crore in 2004-05. Long term loans equally went up to Rs. 289460 crore in 2006-07 from the earlier levels of Rs. 276658 crore in 2005-06 and Rs.231485 crore in 2004-05.

In terms of utilization of funds, while there was a growth of 10.11 per cent in 'gross block' and an increase of 17.90 per cent in 'net current assets' in 2006-07, 'investments' (outside their own units) grew by 10.26 per cent in 2006-07 over 2005-06. Such investments of CPSEs , which were 38.02 percent of reserves & surplus during 2005-06, decreased marginaly to 36.16 per cent of reserves and surplus in 2006-07. Accumulated losses (the debit balance / Profit & Loss Account) of all CPSEs (both loss making and turnaround CPSEs), on the other hand that was Rs. 83725 crore in 2004-05 and Rs.84687 crore in 2005-06, further went up to Rs. 89421 crore in 2006-07.

Table 1.1

Aggregate Balance Sheet of Public Sector Enterprises

(Rs. in crore)

S. No.	Particulars	2006-07	2005-06	2004-05
SOURCES OF FUNDS				
(i)	Shareholders Fund (a+b+c)	548123.31	486228.57	434162.85
	a. Paid-up Capital	125322.66	120844.14	117550.93
	b. Share Application Money	6306.40	6203.72	6494.13
	c. Reserves & Surplus	416494.25	359180.71	310117.79
(ii)	Long Term Loans	289459.66	276657.67	231484.82
(iii)	Deferred Tax Liability	46391.33	41061.85	35166.90
(IV)	Other Funds	127373.04	102255.61	93124.11
	Total (i+ii+iii+iv)	**1011347.34**	**906203.70**	**793938.68**
APPLICATION OF FUNDS				
(i)	Gross Block	684587.44	621713.69	569247.85
(ii)	Less: Depreciation	344267.11	311968.23	279865.78
(iii)	Net Block	340320.33	309745.46	289382.07
(iv)	Capital Work in Progress	98404.24	93394.28	79997.31
(v)	Investments (Financial)	150584.77	136575.34	119887.50
(vi)	Net Current Assets	325512.20	276095.51	215401.80
(vii)	Deferred Revenue Expenditure	4187.29	3436.27	4266.05
(viii)	Deferred Tax Asset	2917.73	2270.26	1279.30
(ix)	Profit & Loss Account (Dr)	89420.78	84686.58	83724.65
	Total (iii to ix)	**1011347.34**	**906203.70**	**793938.68**

Note: Dr= Debit Balance /Accumulated losses from previous years.

1.3 Pattern of Real Investment

Table 1.2 below shows sector-wise aggregate real investment comprsing 'gross block' and 'capital work in progress' in CPSEs during the last two years. The share of 'manufacturing' CPSEs was the highest at 26.95 percent followed by 'mining' (25.33%), 'electricity' (24.11%) and 'services' (23.43%) (Fig 1.1). In terms of national income/GDP classification, the share of 'the industrial CPSEs' (i.e. manufacturing, mining and electricity) was the largest at 76.39 per cent followed by 'the service sector CPSEs' (23.42%) during 2006-07.

Table 1.2

Pattern of Real Investment / Gross Block in CPSEs

(Rs. in crore)

Sl. No.	Sector	Investment in terms of Gross Block* as on		Growth rate over the previous year	Investment as % of Total, as on 31.3.07
		31.3.2007	31.3.2006		
1.	Agriculture	93	90	3.43	0.01
2.	Mining	198321	179123	10.72	25.33
3.	Manufacturing	211028	195303	8.05	26.95
4.	Electricity	188806	165771	13.90	24.11
5.	Services	183410	174106	5.34	23.42
6.	Enterprises Under-Construction	1333	714	86.61	0.17
	Grand Total	782991	715107	9.49	100

* including capital work in progress.

1.3.1 Top Ten Enterprises in terms of Gross Block / investment:

Total real investment/'gross block' in top ten enterprises accounted for 73.76 percent of the total investment equal to Rs.577501.36 crore as on 31.3.2007. ONGC Limited, BSNL and NTPC are the top three CPSEs in terms of real investment (Table 1.3). As a category, the oil CPSEs have the lion's share in (real) investment.

Table 1.3

Top Ten Enterprises in terms of Real Investment / Gross Block during 2006-07

(Rs. in crore)

Sl. No.	Name of the Enterprise	Investment in terms of Gross Block	Share of Total Real Investment (%)
1.	Oil & Natural Gas Corporation Ltd.	129984	16.60
2.	Bharat Sanchar Nigam Ltd.	123851	15.82
3.	NTPC Ltd.	74406	9.50
4.	Indian Oil Corporation Ltd.	63625	8.13
5.	Power Grid Corporation of India Ltd.	47895	6.12
6.	Steel Authority of India Ltd.	32385	4.14
7.	Nuclear Power Corpn. of India Ltd.	32611	4.16
8.	National Hydroelectric Power Corpn.ltd.	27456	3.51
9.	Bharat Petroleum Corpn. Ltd.	21162	2.70
10.	Hindustan Petroleum Corpn. Ltd.	24126	3.08
	Total Top Ten	577501	73.76
	Total Gross Block*	782992	100.00

*including capital work in progress.

1.3.2 Financial Investment in CPSEs

The cumulative financial investment (comprising paid-up capital, share application money pending allotment and long term loans) in all CPSEs, as on 31.3.2007, was Rs. 421089 crore as against Rs. 403706 crore as on 31.3.2006 showing an increase of Rs. 17383 crore or a growth of 4.31 per cent. While investment declined during this period in 'manufacturing' by (-) Rs.2196 crore and 'mining' by (-) Rs.12507 crore,it went up in 'agriculture' (Rs.103 crore), 'electricity' (Rs.15194 crore) and 'services' (Rs.16202 crore)(Fig 1.2). The cognate groups, under each of these sectors, which recorded a decline in investment during 2006-07 as compared to the previous year have been Coal and Lignite by (-) Rs.1663 crore, Crude Oil by (-) Rs. 551 crore, Steel by (-) Rs.516 crore, Petroleum by (-) Rs.3625 crore, Chemicals and Pharmaceuticals by (-) Rs.221crore, Transportation Equipments by (-) Rs.863 crore, Consumer Goods by (-) Rs.1603 crore and Textiles by (-) Rs.11492 crore, Trading and Marketing by (-) Rs.53 crore, Contract and Construction Services by (-) Rs.3607 crore and Telecommunications by (-)Rs.1746 crore. The decline in investment was on account of either repayments of long term loans by the profit making companies or the financial restructuring of sick/loss making CPSEs or merger of some enterprises with other CPSEs.

Table 1.4
Financial Investment in CPSEs

(Rs. in crore)

SI No.	Sector/Cognate Group	Cumulative Net Investment as on		Investment (Net) during 2006-07	% Share as on 31.3.07
		31.3.2007	31.3.2006		
1	2	3	4	5(3-4)	6
I. Agriculture					
1	Agro Based Industries	181.49	78.59	102.90	0.04
	Sub Total	**181.49**	**78.59**	**102.9**	**0.04**
II. Mining					
2	Coal & Lignite	20755.59	22418.37	-1662.78	4.93
3	Crude Oil	17365.71	17916.88	-551.17	4.12
4	Other Minerals & Metals	3920.74	3902.85	17.89	0.93
	Sub Total	**42042.04**	**44238.10**	**-2196.06**	**9.98**
III. Manufacturing					
5	Steel	15553.36	16069.48	-516.12	3.69
6	Petroleum (Refinery & Marketing)	25787.43	29412.05	-3624.62	6.12
7	Fertilizers	19277.94	15064.98	4212.96	4.58
8	Chemicals & Pharmaceuticals	4108.85	4330.10	-221.25	0.98
9	Heavy Engineering	6139.57	4830.49	1309.08	1.46
10	Medium & Light Engineering	7252.49	6960.67	291.82	1.72
11	Transportation Equipment	2425.84	3289.26	-863.42	0.58
12	Consumer Goods	6329.32	7932.64	-1603.32	1.50
13	Textiles	8744.39	20236.61	-11492.22	2.08
	Sub Total	**95619.19**	**108126.28**	**-12507.09**	**22.71**

Pattern of Real Investment/ Gross Block in CPSEs As on 31.3.2007

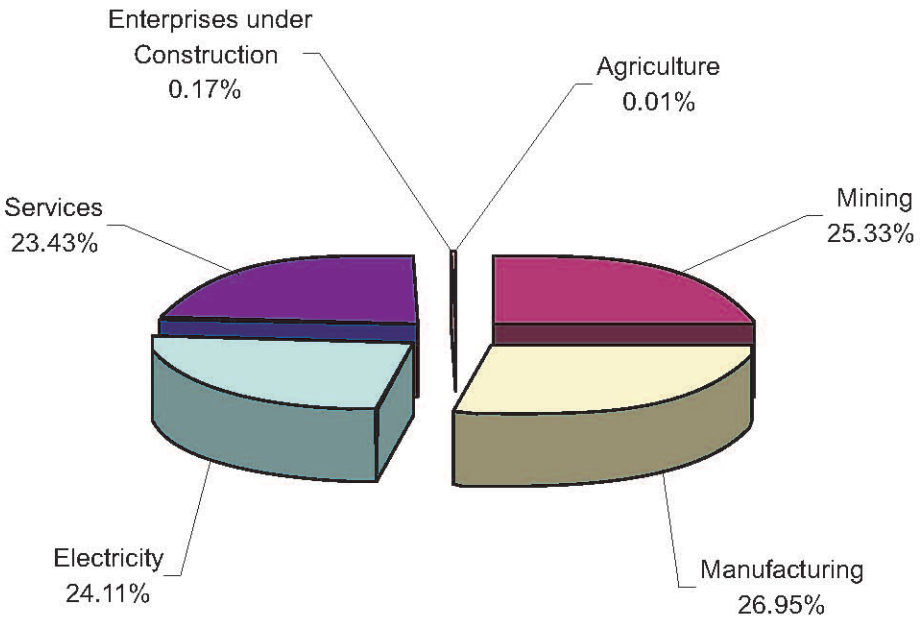


Fig. 1.1

Pattern of Financial Investment in CPSEs As on 31.3.2007

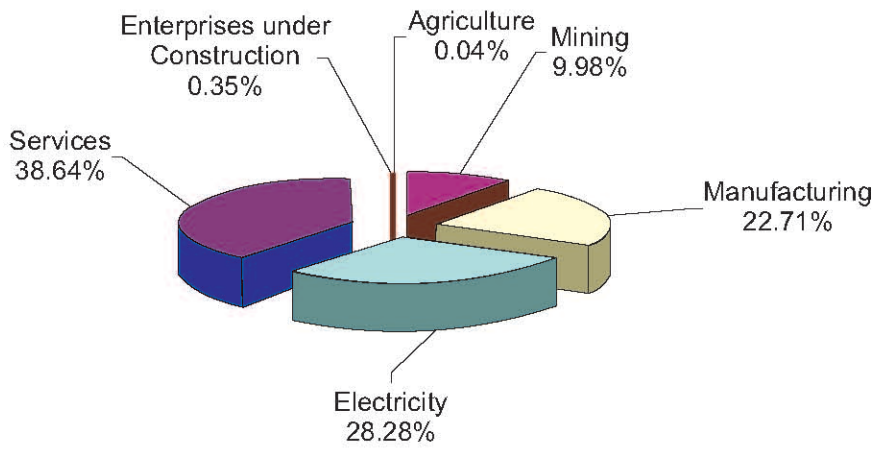


Fig. 1.2

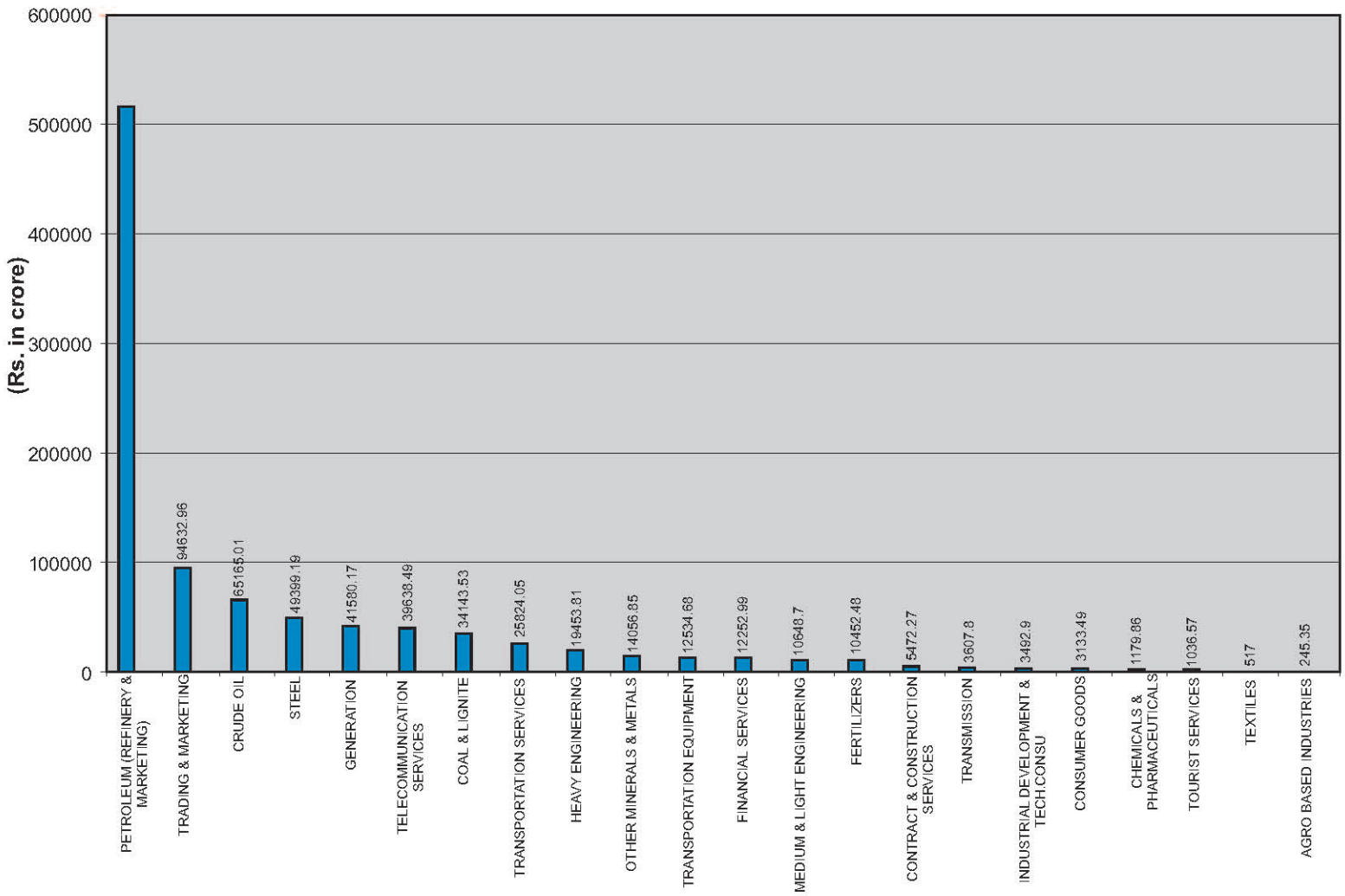

Turnover of CPSEs As on 31.3.2007
(Cognate Groups)
(Rs. in crore)
600000
500000
400000
300000
200000
100000
0
PETROLEUM (REFINERY & MARKETING)
TRADING & MARKETING
CRUDE OIL
STEEL
GENERATION
TELECOMMUNICATION SERVICES
COAL & LIGNITE
TRANSPORTATION SERVICES
HEAVY ENGINEERING
OTHER MINERALS & METALS
TRANSPORTATION EQUIPMENT
FINANCIAL SERVICES
MEDIUM & LIGHT ENGINEERING
FERTILIZERS
CONTRACT & CONSTRUCTION SERVICES
TRANSMISSION
INDUSTRIAL DEVELOPMENT & TECH.CONSU
CONSUMER GOODS
CHEMICALS & PHARMACEUTICALS
TOURIST SERVICES
TEXTILES
AGRO BASED INDUSTRIES
94632.96
65165.01
49399.19
41580.17
39638.49
34143.53
25824.05
19453.81
14056.85
12534.68
12252.99
10648.7
10452.48
5472.27
3607.8
3492.9
3133.49
1179.86
1036.57
517
245.35

Fig. 1.3

1	2	3	4	5(3-4)	6
IV. Electricity					
14	Generation	96692.13	85799.38	10892.75	22.96
15	Transmission	22401.80	18099.65	4302.15	5.32
	Sub Total	**119093.93**	**103899.03**	**15194.90**	**28.28**
V. Services					
16	Trading & Marketing	11381.49	11434.94	-53.45	2.70
17	Transport Services	12455.09	7958.21	4496.88	2.96
18	Contract & Construction Services	6767.24	10374.03	-3606.79	1.61
19	Industrial Deveplopment & Tech.consultancy Services	849.76	698.97	150.79	0.20
20	Tourist Services	148.70	146.34	2.36	0.04
21	Financial Services	112089.29	95131.06	16958.23	26.62
22	Telecommunication Services	18997.48	20743.23	-1745.75	4.51
	Sub Total	**162689.05**	**146486.78**	**16202.27**	**38.64**
VI. Under Construction					
23	Enterprises Under Construction	1463.02	876.75	586.27	0.35
	Sub Total	**1463.02**	**876.75**	**586.27**	**0.35**
	Total	**421088.72**	**403705.53**	**17383.19**	**100.00**

1.4 Turnover in CPSEs

A perusal of Table 1.3 reveals that gross sales/ turnover of CPSEs have been robust during 2006-07. The agro based enterprises performed the best in terms of growth with 42.04 per cent growth during the year, followed by the manufacturing (20.06%), electricity (19.59%), mining (11.62%) and service CPSEs (9.16%). This growth rate, when seen in conjunction with the high growth rates achieved in the previous year is indeed significant (Fig 1.3).

Amongst the various cognate groups, the growth in turnover of consumer goods was the highest (89%), followed by tourist services (54%), agro based industries (42%), transportation equipment (30%), heavy engineering (29%), contract & construction services (23%), chemicals & pharmaceutical (21%), financial services (20%), power generation (20%), crude oil (19%), petroleum (17%), trading & marketing (17%), minerals & metals (14%), power transmission (14%), fertilizers (12%), medium & light engineering (11%), industrial development and technical consultancy services (8%) and transportation services (1%). The high growth in turnover of tourist services has been on account of higher occupancy rates in hotels, which reflects reflects the overall growth of the economy. High growth in heavy engineering / electrical and transport equipment highlight growth in the capital goods sector.

However, the CPSEs under the cognate groups of textiles (-14%), telecommunication services (-5%) and coal & lignite (-1%), witnessed a negative growth in turnover during 2006-07 over 2005-06. Overall, there was a 15.18 per cent growth in the turnover of CPSEs during 2006-07 over 2005-06, which is better than the growth rate (11.86 per cent) achieved in the previous year.

Table 1.5

Group-wise Turnover of CPSEs

(Rs. in Crore)

S. No.	Sector/ Cognate Group	Turnover		% Change over the previous year
		2006-07	2005-06	
(I)	**Agriculture**			
	1.1 Agro Based Industries	245	173	42.04
	Sub Total:	**245**	**173**	**42.04**
(II)	**Mining**			
	2.1 Coal & Lignite	34144	34607	-1.34
	2.2 Crude Oil	65165	54989	18.51
	2.3 Other Minerals & Metals	14057	12384	13.51
	Sub Total:	**113365**	**101980**	**11.16**
(III)	**Manufacturing**			
	3.1 Steel	49399	41742	18.34
	3.2 Petroleum (Refinery & Marketing)	515942	441744	16.80
	3.3 Fertilizers	10452	9364	11.62
	3.4 Chemicals & Pharmaceuticals	1180	975	21.02
	3.5 Heavy Engineering	19454	15038	29.37
	3.6 Medium & Light Engineering	10649	9560	11.39
	3.7 Transportation Equipment	12535	9619	30.32
	3.8 Consumer Goods	3133	1660	88.81
	3.9 Textiles	517	604	-14.37
	Sub Total :	**623261**	**530305**	**17.53**
(IV)	**Electricity**			
	14 Generation	41580	34633	20.06
	15 Transmission	3608	3153	14.43
	Sub Total :	**45188**	**37786**	**19.59**
(V)	**Services**			
	16 Trading & Marketing	94633	81212	16.53
	17 Transportation Services	25824	25528	1.16
	18 Contract & Construction Services	5472	4453	22.90
	19 Industrial Deveploment & Tech. Consult.	3493	3246	7.61
	20 Tourist Services	1037	671	54.38
	21 Financial Services	12253	10185	20.30
	22 Telecommunication Services	39638	41756	-5.07
	Sub Total :	**182350**	**167051**	**9.16**
	Grand Total :	**964410**	**837295**	**15.18**

Profit of profit making CPSEs As on 31.3.2007

(Cognate Groups)

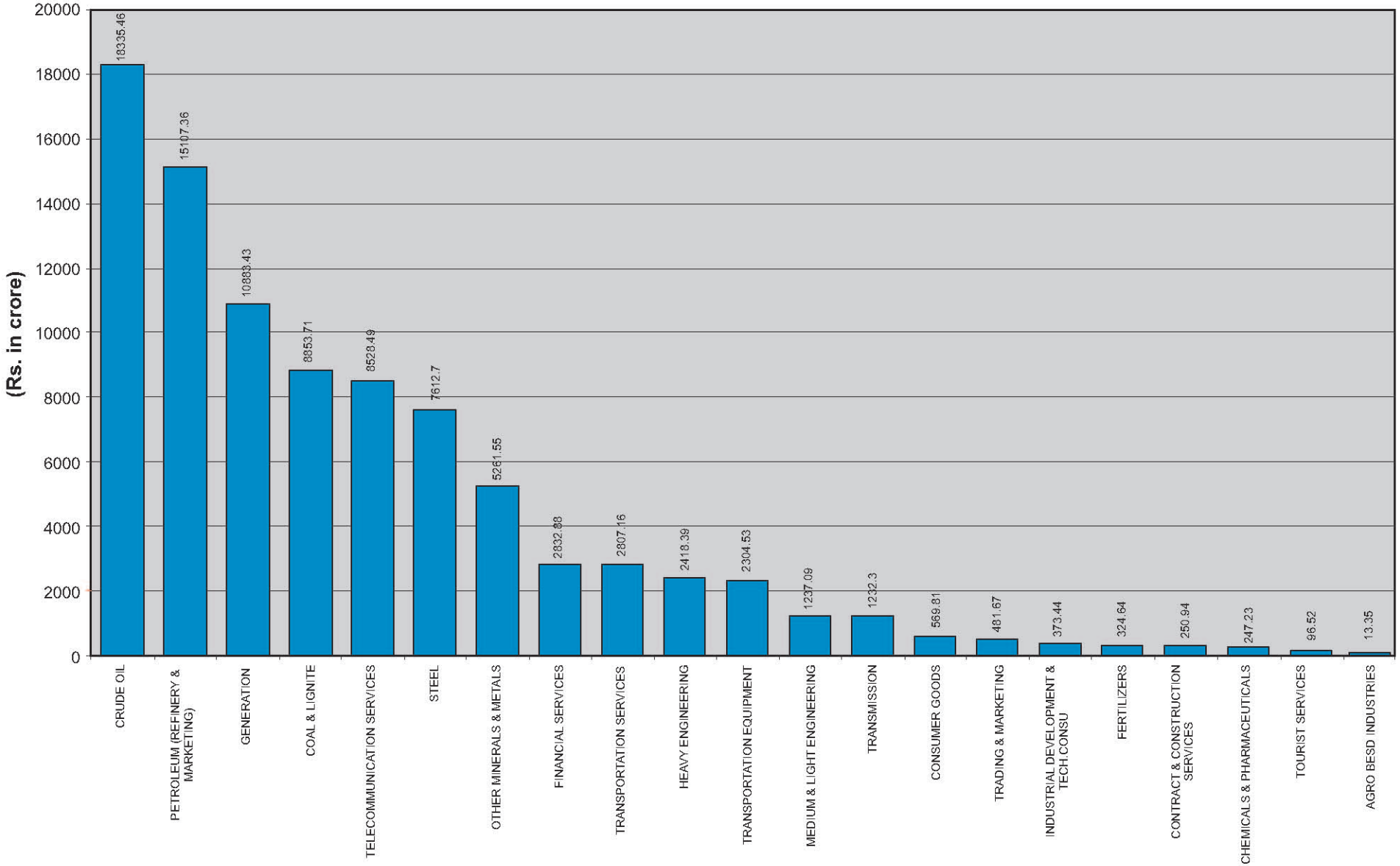


Fig. 1.4

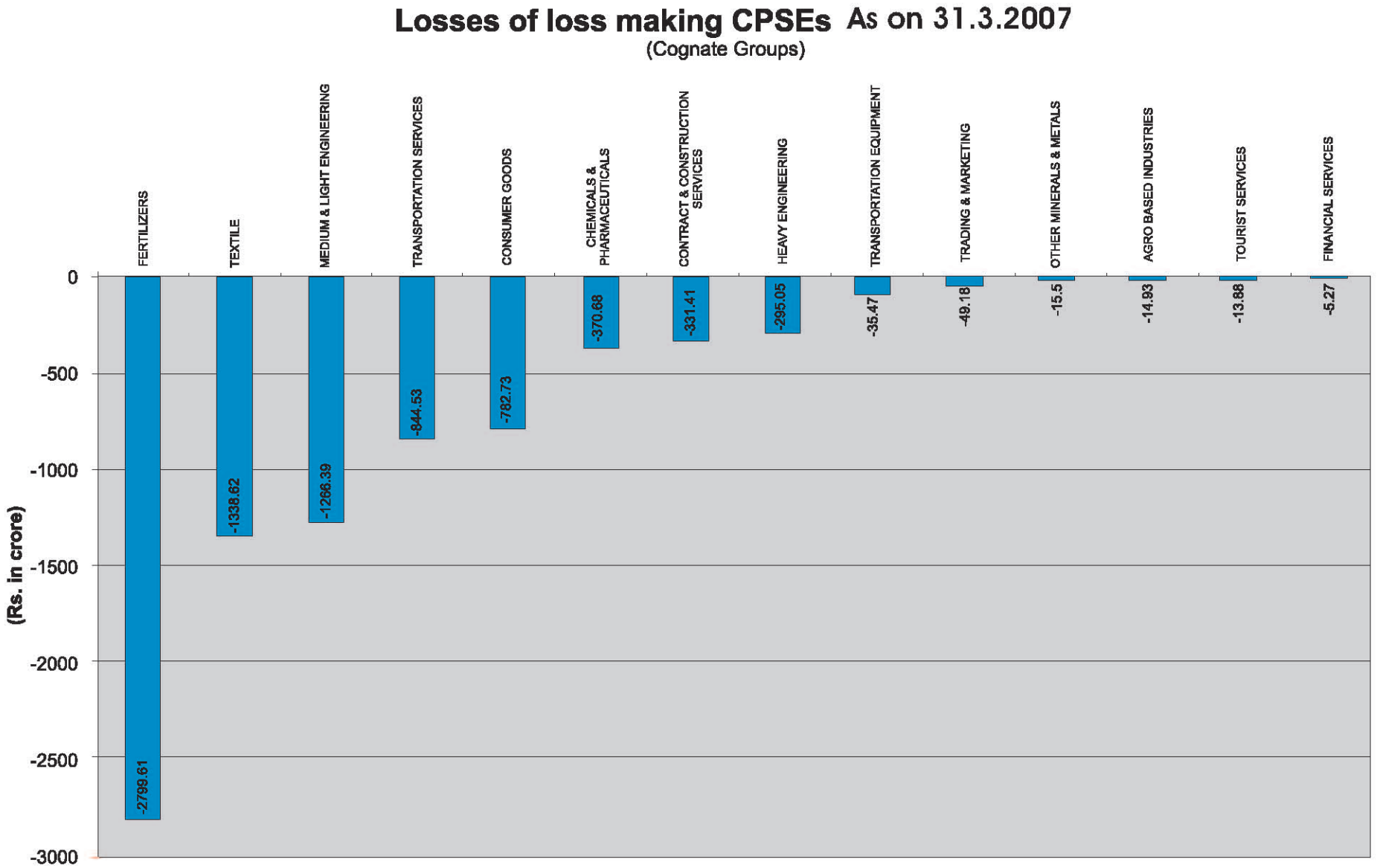

Losses of loss making CPSEs As on 31.3.2007
(Cognate Groups)
(Rs. in crore)
0
-500
-1000
-1500
-2000
-2500
-3000
FERTILIZERS
-2799.61
TEXTILE
-1338.62
MEDIUM & LIGHT ENGINEERING
-1266.39
TRANSPORTATION SERVICES
-844.53
CONSUMER GOODS
-782.73
CHEMICALS & PHARMACEUTICALS
-370.68
CONTRACT & CONSTRUCTION SERVICES
-331.41
HEAVY ENGINEERING
-295.05
TRANSPORTATION EQUIPMENT
-35.47
TRADING & MARKETING
-49.18
OTHER MINERALS & METALS
-15.5
AGRO BASED INDUSTRIES
-14.93
TOURIST SERVICES
-13.88
FINANCIAL SERVICES
-5.27

Fig. 1.5

1.5 Aggregate Profit & Loss of CPSEs

The net profit of all CPSEs went up from Rs. 69536 crore in 2005-06 to Rs. 81550 crore in 2006-07, showing a growth of 17.28 per cent. Sector-wise analysis of aggregate profit and loss of CPSEs shows that all the sectors except agriculture sector earned profit during 2006-07.The profit of profit making CPSEs (Fig 1.4) stood at Rs. 89773 crore in 2006-07 compared to Rs. 76382 crore in 2005-06. The loss of loss making CPSEs, on the other hand, was Rs. 8223 crore in 2006-07 and Rs. 6845 crore in 2005-06 (Fig 1.5). The losses of loss making CPSEs include the accounting losses of the closed/non-operating CPSEs, such as, Fertilizer Corporation of India Limited, Hindustan Fertilizer Corporation Limited, Bird Jute & Exports Limited, National Instruments Limited etc.

The cognate group-wise analysis shows that agro-based industries, fertilizers, chemicals & pharmaceuticals, medium & light engineering, consumer goods, textiles and contract & construction services recorded losses, The agro based industries, the chemicals and pharmaceutical and contract & construction services groups also reduced their losses by about 93 per cent, 72 per cent and 58 per cent respectively during 2006-07 over 2005-06 (Table 1.6).

The remaining cognate groups have showed profits during 2006-07. The heavy engineering group recorded highest increase in profits by 117% during 2006-07 over the previous year followed by transportation equipments (111%), petroleum (61%), steel (43%), torurist services(34%), other minerals and metals (30%), fertilizer (24%), transmission (22%), trading and marketing (21%), generation (20%), financial services (9%), crude oil (9%), coal and lignite (8%) and industrial development and financial services (5%).

Table 1.6
Net Profit/Loss of CPSEs

(Rs. in crores)

S. No.	Sector/Cognate Group	Net Profit/Loss(-) 2006-07	Net Profit/Loss(-) 2005-06	% Change over the previous year
(1)	(2)	(3)	(4)	(5)
(I) Agriculture				
	1.1 Agro Based Industries	-1.58	-21.31	-92.59
	Sub Total :	**-1.58**	**-21.31**	**-92.59**
(II) Mining				
	2.1 Coal & Lignite	8853.71	8215.72	7.77
	2.2 Crude Oil	18335.46	16770.16	9.33
	2.3 Other Minerals & Metals	5246.05	4039.23	29.88
	Sub Total :	**32435.22**	**29025.11**	**11.75**
(III) Manufacturing				
	3.1 Steel	7612.7	5307.2	43.44
	3.2 Petroleum (Refinery & Marketing)	15107.36	9411.17	60.53
	3.3 Fertilizers	-2474.77	-1990.11	24.35
	3.4 Chemicals & Pharmaceuticals	-123.45	-436.74	-71.73
	3.5 Heavy Engineering	2123.34	976.56	117.43
	3.6 Medium & Light Engineering	-29.3	-30.89	-5.15
	3.7 Transportation Equipment	2209.06	1044.5	111.49
	3.8 Consumer Goods	-212.92	143.15	-248.74
	3.9 Textiles	-1338.62	792.6	-268.89
	Sub Total :	**22873.40**	**15217.44**	**50.31**

(1)	(2)	(3)	(4)	(5)
(IV)	**Electricity**			
	4.1 Generation	10883.43	9078.79	19.88
	4.2 Transmission	1232.3	1009.38	22.08
	Sub Total :	**12115.73**	**10088.17**	**20.10**
(V)	**Services**			
	5.1 Trading & Marketing	432.49	357.81	20.87
	5.2 Transportation Services	1962.63	2527.8	-22.36
	5.3 Contract & Construction Services	-80.47	-190.36	-57.73
	5.4 Industrial Deveplopment & Tech.consu	373.44	355.65	5.00
	5.5 Tourist Services	82.64	61.84	33.64
	5.6 Financial Services	2827.62	2604.2	8.58
	5.7 Telecommunication Services	14126.84	15226.71	-7.22
	Sub total :	**19725.19**	**20943.65**	**-19.22**
	Grand Total :	**81549.61**	**69536.12**	**17.28**

1.6 Financial 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 1.6). In terms of effective tax rate or 'tax provision to profit before tax', the tax burden on CPSEs that improved significantly in 2004-05 and 2005-06, got worse in 2006-07 (Fig 1.7). The interest burden on CPSEs measured as 'interest to gross profit', on the hand, has been continuously showing a decline and has improved the profitability of CPSEs (Fig 1.8) The turnover per employee has been also continuously rising over the years (Fig1.9)

BOX-3
Financial Ratio

(In per cent)

Particulars	97-98	98-99	99-00	00-01	01-02	02-03	03-04	04-05	05-06	06-07
Sales to Capital employed	110.46	117.01	128.47	138.28	122.77	137.32	139.43	147.56	143.01	145.00
PBDITEP to Capital employed	21.24	21.31	20.54	20.91	22.97	24.38	28.15	28.26	25.66	26.77
PBTEP to Net worth	14.29	13.31	13.72	14.57	16.96	20.10	24.38	25.04	22.83	24.73
PBDITEP to Turnover	19.23	18.21	15.98	15.12	18.71	17.75	20.19	19.15	17.95	18.47
PBITEP to Capital employed	14.89	14.99	13.95	14.72	16.21	17.39	21.01	21.49	19.54	20.91
PBITEP to Turnover	13.48	12.81	10.86	10.64	13.20	12.66	15.07	14.57	13.67	14.42
PBTEP to Turnover	6.96	6.35	5.66	5.45	7.99	8.49	11.28	11.49	10.83	11.62
Net Profit to Turnover	4.92	4.26	3.68	3.42	5.43	5.65	8.40	8.73	8.30	8.46
Net Profit to Capital Employed	5.44	4.98	4.73	4.72	6.66	7.75	11.71	12.88	11.88	12.26
Net Profit to Net Worth	10.10	8.92	8.92	9.13	11.52	13.37	18.16	19.02	17.50	18.00
Dividend payout	26.57	37.36	38.06	52.77	31.06	42.57	28.85	31.89	32.91	32.87
Tax Provision to PBT	29.32	32.99	34.97	37.31	32.05	35.99	31.11	25.32	26.86	30.64
Interest to Gross Pfrofit	33.90	35.45	32.52	34.35	27.87	23.52	18.72	16.04	15.78	15.20

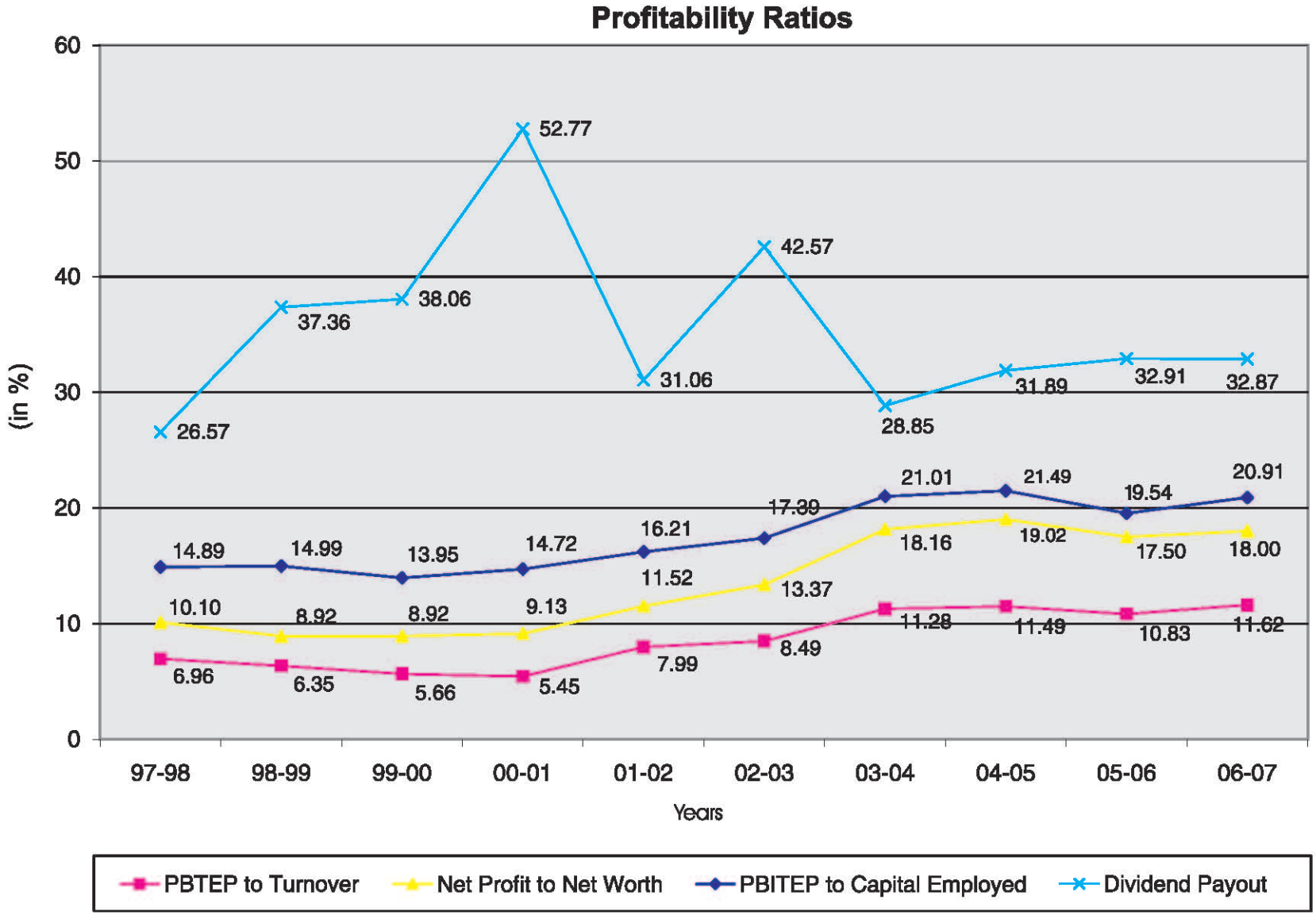

Profitability Ratios
60
50
40
30
20
10
0
(in %)
52.77
42.57
38.06
37.36
31.06
28.85
31.89
32.91
32.87
26.57
21.01
21.49
20.91
19.54
17.39
16.21
14.89
14.99
13.95
14.72
18.16
19.02
17.50
18.00
11.52
13.37
10.10
8.92
8.92
9.13
11.28
11.49
10.83
11.62
7.99
8.49
6.96
6.35
5.66
5.45
97-98
98-99
99-00
00-01
01-02
02-03
03-04
04-05
05-06
06-07
Years
PBTEP to Turnover
Net Profit to Net Worth
PBITEP to Capital Employed
Dividend Payout

Fig. 1.6

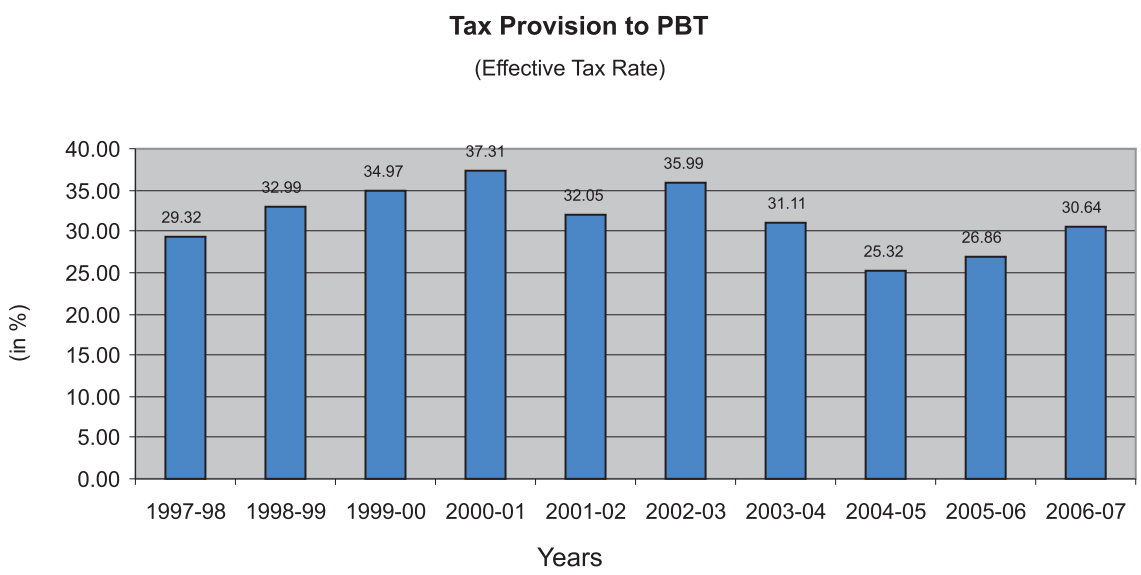

Tax Provision to PBT
(Effective Tax Rate)
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
(in %)
29.32
32.99
34.97
37.31
32.05
35.99
31.11
25.32
26.86
30.64
1997-98
1998-99
1999-00
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
Years

Fig. 1. 7

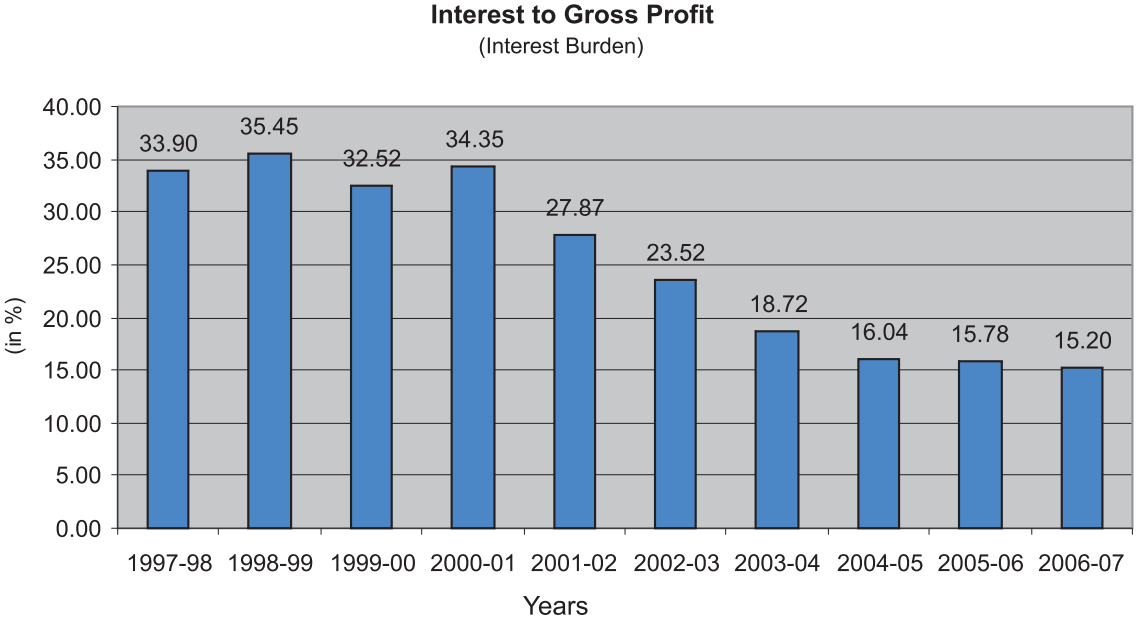

Interest to Gross Profit
(Interest Burden)
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
(in %)
33.90
35.45
32.52
34.35
27.87
23.52
18.72
16.04
15.78
15.20
1997-98
1998-99
1999-00
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
Years

Fig. 1. 8

1.7 Top Ten Profit & Loss Making CPSEs

Table 1.7 and Table 1.8 provide the list of the top ten profit making and top ten loss making CPSEs. ONGC Ltd., BSNL and IOC Ltd. ranked first second and third amongst the profit making CPSEs, which coincides with the cognate group wise performance as discussed in the paragraph above. Equally significant to note is that these ten companies accounted for 62.76 per cent of the total profits of all profit making CPSEs. Amongst the loss making companies, the fertilizer companies led the rest. The total net loss of these ten CPSEs amounted to Rs. 6236 crore during 2006-07 which is as high as 75.84% of the total net loss of loss making enterprises. This includes accounting losses of closed/non-operating CPSEs as well.

Table 1.7
Top Ten Profit Making CPSEs

(Rs. in crore)

Sl No.	Name of the CPSEs	Net profit 2006-07	%age share
1.	Oil & Natural Gas Corpn. Ltd.	15642.92	17.42
2.	Bharat Sanchar Nigam Ltd.	7805.87	8.70
3.	Indian Oil Corporation Ltd.	7499.47	8.35
4.	National Thermal Power Corporation Ltd.	6864.71	7.65
5.	Steel Authority of India Ltd.	6202.29	6.91
6.	Coal India Ltd.	2822.81	3.14
7.	Bharat Heavy Electricals Ltd.	2414.70	2.69
8.	GAIL (INDIA) Ltd.	2386.67	2.66
9.	National Aluminium Company Ltd.	2381.38	2.65
10.	National Mineral Development Corpn. Ltd.	2320.21	2.58
	Total	56341.03	62.76

Table 1.8
Top Ten Loss Making CPSEs

(Rs. in crore)

Sl No.	Name of the CPSEs	Net Loss 2006-07	%age share
1.	Fertilizer Corporation of India Ltd.	(-) 1432.59	17.42
2.	Hindustan Fertilizer Corporation Ltd.	(-)1065.14	12.95
3.	National Jute Manufacturers Corporation Ltd.	(-)794.49	9.66
4.	Hindustan Photofilms Manufacturing Co. Ltd.	(-)653.06	7.94
5.	National Textile Corporation Ltd	(-)535.80	6.52
6.	Air India Ltd.	(-)447.93	5.45
7.	ITI Ltd.	(-)405.26	4.93
8.	Indian Drugs & Pharmaceuticals Ltd.	(-)351.16	4.27
9.	Hindustan Cables Ltd.	(-)310.68	3.78
10.	Indian Airlines Ltd.	(-)240.29	2.92
	Total	(-)6236.40	75.84

1.8 Contribution of CPSEs to the Economy

The share of value edition in CPSEs as per cent of revised GDP (at market price) stood at 8.23 per cent in 2006-07 and 8.21 per cent in 2005-06. Different components of value addition in CPSEs are shown in table 1.9. The share of 'indirect taxes & duties (net of subsidies), in net value addition of CPSEs, during 2006-07 was 33.16 per cent and that of net profit (36.39%), salaries & wages (17.08%), interest (8.79%) and rent, royalty and cess (4.58%)(Fig 1.10).

Table 1.9
Components of Net Value Addition in CPSEs

(Rs in crore)

Sl No	Net Value Addition	2006-07	%	2005-06	%
1.	Net Profit (before Tax & EP)	112033	36.39	90714	35.00
2.	Interest	27069	8.79	23708	9.15
3.	Indirect Taxes & Duties (net of subsidies)	102086	33.16	86894	33.53
4.	Salaries & Wages	52580	17.08	46841	18.08
5.	Rent, royalty and cess	14092	4.58	10995	4.24
	Total:	307860	100.00	259152	100.00

1.9 Contribution to the Central Exchequer

CPSEs contribute to the Central Exchequer by way of dividend payment, interest on government loans and taxes & duties. Taxes & duties constituted the largest component of this contribution (85.92%) followed by dividend payment (12.74%) and interests (1.34%) (Fig 1.11). While the share of taxes and duties and interest has gone up, the share of dividend has come down in this contribution; although, in absolute terms all the three components have shown increase during 2006-07 over 2005-06 (Table 1.10).

Table 1.10
Contribution to the Central Exchequer

(Rs in crore)

Particulars	2006-07	2005-06	2004-05
I. On Investment by CPSEs			
1. Dividend	18825.68	15200.85	15200.85
2. Interest	1975.08	138.22	731.67
Total (I)	**2080076**	**15339.07**	**15932.52**
II. Taxes and Duties(Central)			
1. Excise Duty	64026.92	53278.48	44262.34
2. Customs Duty	11048.26	8601.18	10431.95
3. Corporate Tax	31997.93	26046.69	23613.61
4. Dividend Tax	383.12	3242.94	2742.48
5. Sales Tax	2817.25	5026.70	4487.80
6. Other Duties & Taxes	16654.04	13920.87	9132.97
Total (II)	126927.54	110116.86	94671.15
Grand Total (I+II)	**147728.30**	**125455.93**	**110603.67**

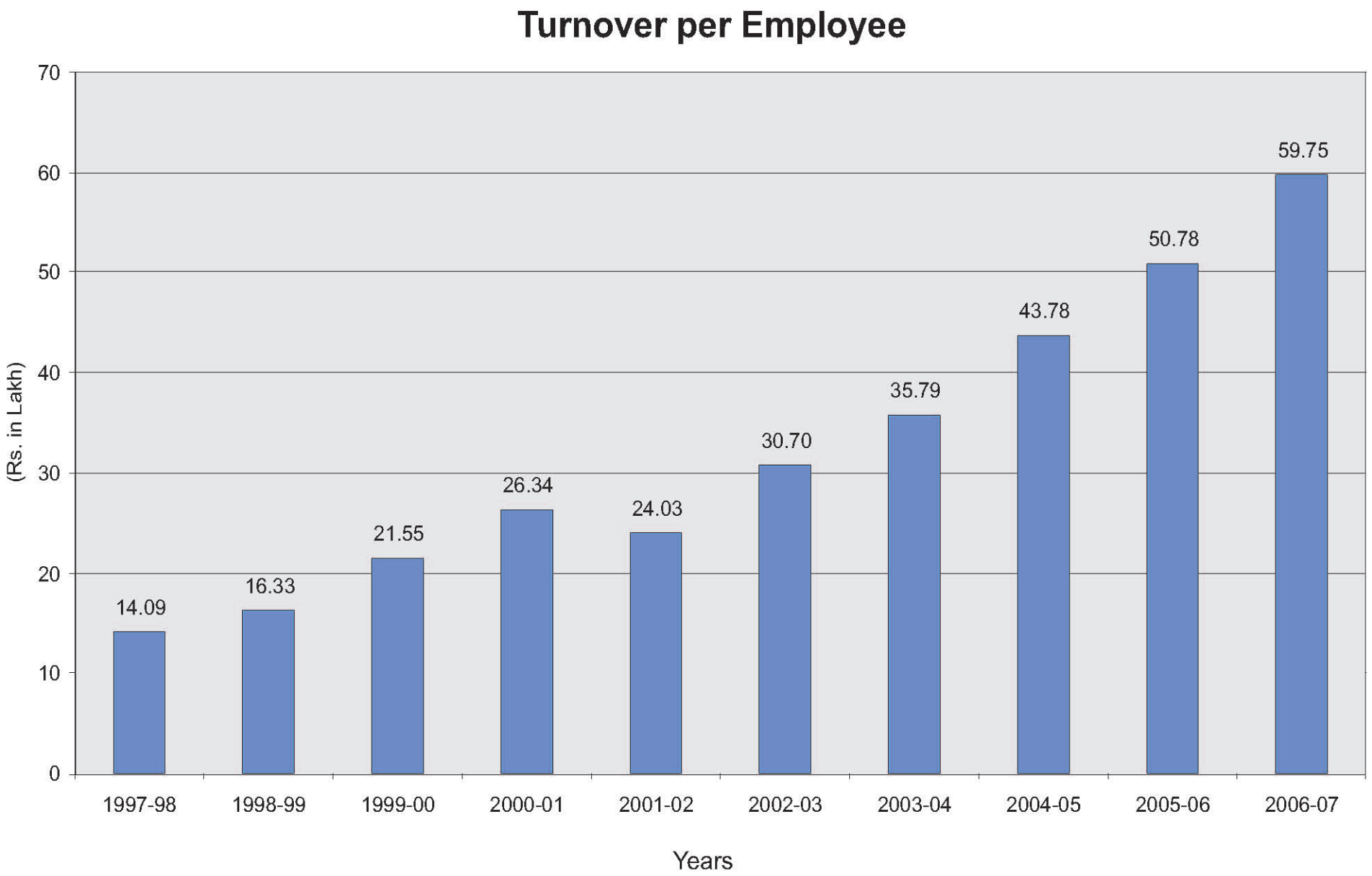

Turnover per Employee
70
60
50
40
30
20
10
0
(Rs. in Lakh)
14.09
16.33
21.55
26.34
24.03
30.70
35.79
43.78
50.78
59.75
1997-98
1998-99
1999-00
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
Years

Fig. 1.9

Net Value Addition by CPSEs

(at market price)

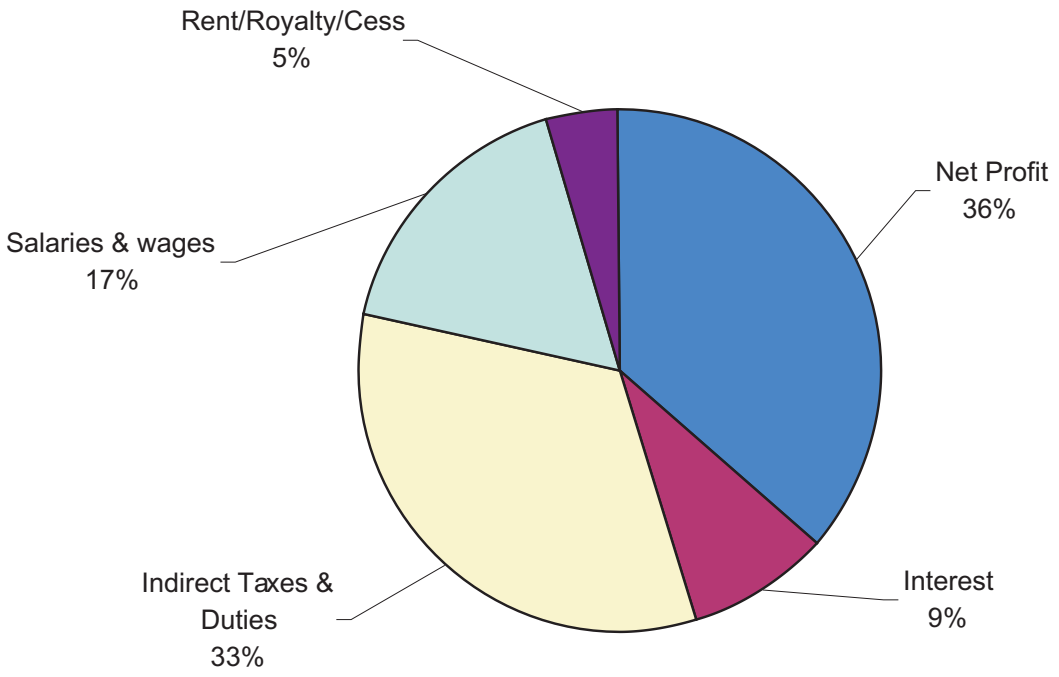


Fig. 1.10

Contribution of CPSEs

(to Central Exchequer during 2006-07)

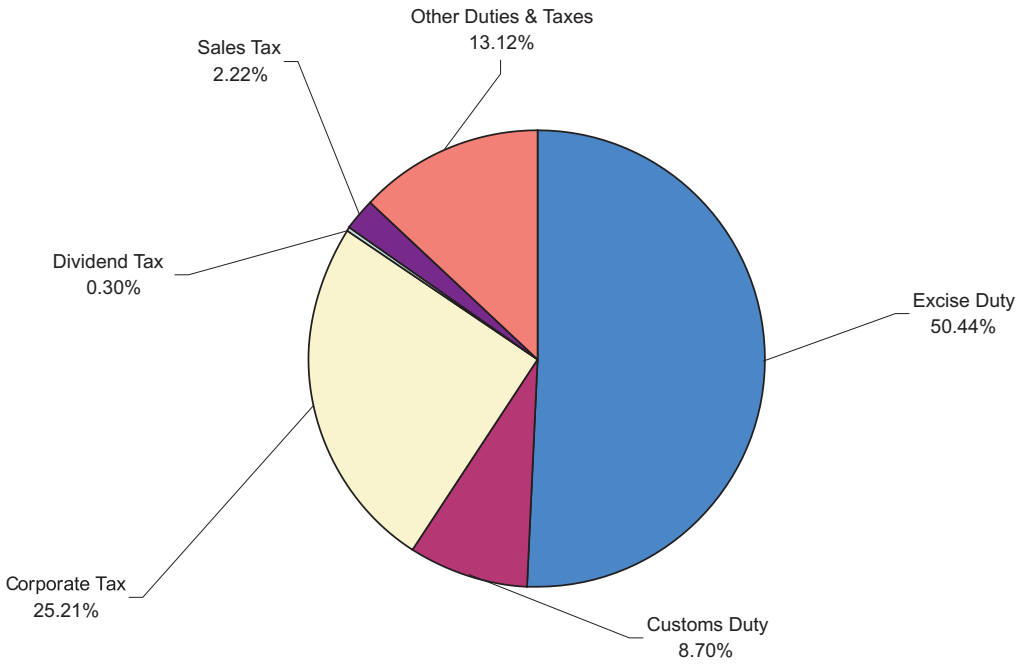


Fig. 1.11

1.10 Disinvestment

Disinvestment of Government equity in CPSEs began in 1991-92. Till 1999-2000, disinvestment was primarily through sale of minority shares in small lots. From 1999-2000 till 2003-04, the emphasis of disinvestment changed in favour of strategic sale. At present, the emphasis is 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). The proceeds from disinvestment from April 1991 to November 2005 amounted to Rs.47,671.62 crore.

The National Common Minimum Programme (NCMP) outlines the present policy of the Government with respect to CPSEs. The salient features of this policy are as follows:

(i) The Government is committed to a strong and effective public sector whose social objectives are met by its commercial functioning. But for this, there is need for selectivity and a strategic focus. The Government is pledged to devolve full managerial and commercial autonomy to successful, profit-making companies operating in a competitive environment.

(ii) Generally, profit-making companies will not be privatized. All privatizations will be considered on a transparent and consultative case-by-case basis. The Government will retain existing "Navratna" companies in the public sector while these companies raise resources from the capital market. All efforts will be made to modernize and restructure sick public sector companies and revive sick industry. The chronically loss-making companies will either be sold-off, or closed, after all the workers have got their legitimate dues and compensation. The Government will induct private industry to turn around companies that have potential for revival.

(iii) The Government believes that privatization should increase competition, not decrease it. It will not support the emergence of any monopoly that only restricts competition. It also believes that there must be a direct link between privatization and social needs, for example, the use of privatization revenues for designated social schemes. Public sector companies and nationalized banks will be encouraged to enter the capital market to raise resources and offer new investment avenues to retail investors.

The Government vide its decision dated 27. 1. 2005 constituted a "National Investment Fund" (NIF) into which the proceeds from disinvestment of Government equity in CPSEs would be channelised. NIF would be maintained outside the Consolidated Fund of India and would be professionally managed by selected Public Sector Mutual Funds for providing sustainable returns without depleting the corpus. As high as 75 per cent of the annual income of NIF will be used to finance selected social sector schemes to promote education, health and employment. The residual 25 per cent of the annual income of NIF will be used to meet the capital investment requirements of profitable and revivable CPSEs.

1.11 Revival of Sick PSEs

Sickness in CPSEs has been a continuing concern of the Government. The reasons for sickness 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 social consideration for protecting employment of workers in early seventies could not be modernized quickly. British India Corporation, Bird Jute & Exports and NTC belong to this group. Besides textile Companies, there are other enterprises as well which were taken over from the private sector but could not be modernized. These include engineering and refractory enterprises such as Andrew Yule & Co, Bharat Wagons & Engineering, Biecco Lawrie, Praga Tools, Burn Standard, Braithwaith & Co., Richardsan and Crudass Ltd., drug companies like Bengal Chemicals & Pharmaceuticals Ltd., transportation/ shipping companies like Hooghly Dock & Port Engineering Ltd., Central Inland Water Transport Corpn. and consumer goods companies like Tyre Corporation of India and Hooghly Printing Co. Ltd.

The other group of sick companies (other than taken over) are greenfield companies. These became sick on account of obsolete technology, high input cost, high overhead cost and the adminstrative price mechanism. These include fertilizer companies such as Fertilizer Corporation of India, Hindustan Fertilizer Corporation, Pyrites, Phosphates and Chemicals Ltd., chemicals and drugs companies like Indian Drugs & Pharmaceuticals Ltd., Hindustan Insecticides Ltd., and Hindustan Antibiotics Ltd. etc.

Some companies have been set up for serving national objectivies like the development of backward areas. The Nagaland Pulp & Paper Company Ltd., Manipur State Drugs & Pharmaceuticals Ltd., North Eastern Regional Agricultural Marketing Corporation Limited are examples of such enterprises. These companies have been suffering from losses from inception on account of inadequte infrastruture etc.

In addition to the above reasons, some common problems faced/ being faced by sick and loss making CPSEs include adverse market/ administrative prices, stiff competition, weak marketing strategies, low capacity utilization and high interest rates.

Attempts have, therefore, been made to overcome "sickness" in these CPSEs through various policy initiatives. The Statement on Industrial Policy (1991), the different Budget Speeches over the years and other policy pronouncements by the Government have addressed this issue from time to time.

A company is termed sick if at the end of any financial year, it has accumulated net losses equal to or exceeding its entire net worth. Such industrial company is required to be referred to BIFR for formulation of rehabilitation/ revival plan. The problem of sickness in CPSEs is addressed ultimately by the administrative Ministries/ Departments in the Government by evolving appropriate need based strategy concerning a particular PSE. As many as 75 sick industrial CPSEs were registered with BIFR upto 30.6.2007; out of these 5 enterprises have been declared no longer sick and the cases of another 4 CPSEs have been dropped due to their net worth becoming positive.

The Government, moreover, set up a Board for Reconstruction of Public Sector Enterprises (BRPSE) in December, 2004 to advise the Government inter-alia on the measures to be taken to restructure/revive PSEs (both industrial and non-industrial), including cases where disinvestments or closure or sale are justified. The concerned administrative Ministries are required to refer the proposals of their CPSEs identified as 'sick' for consideration of the BRPSE. Till 31.10.2007 BRPSE has made recommendations in respect of 47 CPSEs, and Government has approved the proposals of 28 cases including two CPSEs namely Bharat Ophthalmic Glass Limited and Bharat Yantra Nigam Limited for closure. The total cost involved in restructuring of 28 CPSEs is about Rs. 8285 crore that is, cash assistance of Rs. 1955 crore and non-cash assistance of Rs. 6330 crore. In addition, the Government has sanctioned revival proposal of Nagaland Pulp and Paper company Limited as a CPSE.

1.12 Board Structure of CPSEs

The Department of Public Enterprises (DPE) formulates policy guidelines on the Board structure of Central Public Sector Enterprises (CPSEs) and advises on the shape and size of their organizational structure. 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 full time Functional Directors in CPSEs are determined as per the schedule of the concerned enterprise.

Proposals received from the administrative Ministries/Departments for categorization/ upgradation of PSEs are examined in DPE in consultation with PESB. During 2006-07, DPE considered 14 proposals relating to categorization of PSEs in appropriate schedules. As a result, 2 CPSEs were categorized in appropriate schedules, 6 CPSEs were upgraded to higher schedule, one CMD was granted personal upgradation and 2 new posts of Functional Directors were created.

As on 31.3.2007, there were 247 CPSEs, of which 54 are in Schedule 'A', 77 are in Schedule 'B', 48 are in Schedule 'C' and 6 are in

Schedule 'D'. The rest (62) are covered under the uncategorized category. The details of the Board level posts (whole time) in the categorized CPSEs (Table 1.11).

Tabel 1.11
Position of Board Level Executives

Schedule	Chief Executive		Whole Time Director	
	2006	2007	2006	2007
Schedule A	52	54	-	-
Schedule B	87	77	194	201
Schedule C	54	48	209	181
Schedule D	07	06	68	67
Total	200	185	471	449

1.13 Professionalisation of Boards

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

The proposals for appointment of non-official Directors are initiated by the concerned Administrative Ministries/Departments. In so far as Navratna and Miniratna CPSEs are concerned, the selection of non-official Directors is made by the Search Committee consisting of Chairman (PESB), Secretary (DPE), Secretary of the administrative Ministry/Department of the CPSE, Chief Executive of the concerned CPSE and non-official Members. In the case of remaining CPSEs (other than Navratna/Miniratna CPSEs), Public Enterprises Selection Board (PESB) makes the selection of non-official Directors. The concerned Administrative Ministry/Department appoints the non-official Directors on the basis of recommendations of Search Committee/PESB after obtaining the approval of competent authority, i.e. Appointments Committee of Cabinet (ACC).

1.14 Wages/ Salaries and Employees Welfare

The Department of Public Enterprises functions as nodal Department inter-alia, in respect of policy relating to wage settlements of unionized employees, pay revision of non-unionized supervisors and executives holding posts below the Board level as well as at the Board level. The Department renders advice to the administrative Ministries/ Departments and the CPSEs in matters relating to the wage policy and revision in the scales of pay of the executives. The CPSEs are largely following Industrial Dearness Allowance (IDA) pattern scales of pay and in some cases Central Dearness Allowance (CDA) pattern scales of pay.

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 that as and when a new CPSE is created or established, IDA pattern and related scales of pay should be adopted ab-initio. There are 247 CPSEs (excluding Banks, Insurance Companies and newly setup CPSEs) under the administrative control of the Central Government. They employ approximately 16.14 lakh workmen, clerical staff and executives. Out of this, around 96.39 % of the workmen and executives are on IDA pattern and related scales of pay. The last pay revision for the IDA executives and non-unionized supervisors was done w.e.f 1.1.97 for a period of ten years based on the recommendations of Justice Mohan Committee.

Central Dearness Allowance (CDA)

CDA pattern pay scales are applicable to some of the clerical staff, unionized cadres and executives of the 69 CPSEs who were on the rolls of these companies as on 1.1.1986 and upto 31.12.1988 and were in receipt of CDA pattern pay

scales during that time. In pursuance of the Supreme Court direction dated 3.5.1990 read with the subsequent directions dated 28.8.1991, IDA pattern and related scales of pay have been introduced in these CPSEs with effect from 1.1.1989.

Out of 69 CPSEs (covered under HPPC), at present there are 58 CPSEs, which are following both CDA and IDA pattern scales of pay. As per the recommendations of the High Power Pay Committee and Supreme Court directives thereon, the employees following CDA pattern of scales of the Central Public Sector Enterprises would get pay revision only as and when similar changes are effected for the Central Government employees. Accordingly, the recommendation of 5th Pay Commission w.e.f. 1.1.1996 had also been extended to the employees of CPSEs following CDA pattern of scales.

Pay Revision for Executives

The last pay revision for the IDA executives and non-unionized supervisors was done w.e.f 1.1.97 for a period of ten years based on the recommendations of Justice Mohan Committee and consequent DPE O.M dated 25.6.99. For the employees following CDA pattern pay, their pay scales are governed by the recommendations of the Central Pay Commission and Government decisions thereon for the Government employees. The benefits allowed to Government employees are also extended to them as per the Supreme Court directions.

As per the recommendations of the High Power Pay Committee and Supreme Court directive thereon, the employees following CDA pattern of scales of the Central Public Sector Enterprises would get pay revision only as and when similar changes are effected for the Central Government employees.

The Second Pay Revision Committee 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 with effect from 01.01.2007 has been constituted on 30.11.2006 vide the Gazette of India Notification dated 01.12.2006. The pay revision committee is headed by Mr. Justice MJ Rao, Retired Judge, Supreme Court of India as Chairman. Mr Nitish Sengupta, Mr PC Parekh and Mr RSSLN Bhaskarudu are Members. Secretary and Joint Secretary, Department of Public Enterprises are ex-officio Member and Secretary of the Committee respectively. The committee will submit their report within a period of 18 months.

Employees Welfare

The CPSEs have been model employers and provided various kinds of facilities to their employees besides a high salary, such as, housing. This is specially so in regard to projects located in green field areas, away from the towns and cities. Besides housing, the CPSEs have provided in their townships facilities like recreation centers/sports club, health care, education, shopping complex etc.

1.15 Employment

As on 31.3.2007 the 247 CPSEs employed over 16.14 lakh people (excluding casual workers). Nearly one-fourth of the manpower comprises managerial and supervisory cadres. The CPSEs have thus a highly skilled workforce, which is the basic strength of CPSEs. The CPSEs, in turn, provide lifetime employment to their employees. The CPSEs, however, operate under dynamic market conditions. While some CPSEs may face shortage of people, the others may have excess of manpower. The Government, therefore, initiated a Voluntary Retirement Scheme to help these enterprises to shed excess manpower.

Table 1.12
Employment and Average Annual Emoluments

Year	No. of Employees (in lakh)	Average Annual Per capita Emoluments (Rs.)	% increase in Average Annual Emoluments
Annual Emoluments			
2001-02	19.92	193554	(-)11.89
2002-03	18.66	225986	16.76
2003-04	17.62	248481	9.95
2004-05	17.00	286112	15.14
2005-06	16.49	284123	(-) 6.95
2006-07	16.14	325738	14.65

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. Government have improved upon the said scheme and introduced new schemes of VRS on 5.5.2000 and again on 6.11.2001. As per the available information, about 5.87 lakh employees opted for Voluntary Retirement Scheme (VRS), till 31.3.2007.

A good many CPSEs, to-day, are faced with a high rate of 'attrition' as employees are leaving to join other organizations on account of higher salaries being offered elsewhere. The total number of employees in CPSEs that was 16.49 lakhs in 2005-06 came down further to 16.14 in 2006-07.

1.16 Counseling, Retraining and Redeployment (CRR)

Considering the emerging need to have safety net, Government had established National Renewal Fund (NRF) in February, 1992 broadly to cover the expenses of VRS and to provide retraining to the workers in the organized sector. However, in the backdrop of on going restructuring exercises in the central enterprises, focus was given on the need of CPSEs. The NRF was abolished in February, 2000. The retraining activity was administered by Department of Industrial Policy & Promotion till 31st March, 2001. The scheme for Counseling, Retraining and Redeployment (CRR) of rationalized employees of CPSEs is under implementation by Department of Public Enterprises since 2001-02.

The main elements of the CRR programme are Counseling, Retraining and Redeployment. A new element of sensitization programme has also been included under CRR programme. The Nodal Training Agencies implementing the CRR scheme are required to counsel VRS optees, develop curriculum /materials, impart training, prepare feasibility reports, do market surveys and interface with credit institutions. CPSEs are, however, the key to the success of the scheme. They are supposed to extend all possible support for the welfare of the separated employees by clearing their compensation/ dues before release.

1.17 Memorandum of Understanding

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 ensure a level playing field to the public sector enterprises vis-à-vis the private corporate sector.

MoU is aimed at providing greater autonomy to public sector enterprises vis-à-vis the control of the government. The 'management' of the enterprise is, nevertheless, made accountable to the government through promise for performance or 'performance contract'. The government, nevertheless, continues to have control over these enterprises through setting targets in the beginning of the year and by 'performance evaluation' at the end of the year.

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 -1.13 provides a summary of the performance of MoUs signing CPSEs as reflected in their MoU rating during the last five years.

Table: 1.13
Performance Rating of CPSEs

Rating	2002-03	2003-04	2004-05	2005-06	2006-07
Excellent	46	54	45	44	45
Very Good	21	21	31	36	31
Good	12	10	12	14	12
Fair	16	11	10	08	06
Poor	02	00	01	00	00
Total	97	96	99	102	94

1.18 Market Capitalisation of CPSEs Stocks

There were 44 CPSEs listed on the stock exchanges of India as on 31.03.2007; 5 CPSEs were, however, not being traded during 2006-07. During the year under review, IBP Ltd merged with Indian Oil Corporation Limited. Hence trading in this script was discontinued. Power Finance Corporation made an Initial Public Offer (IPO) during 2006-07 at a price of Rs 85/- per share and this share was listed in National Stock Exchange of India and Mumbai Stock Exchange. Thus there were 38 CPSEs which were being traded as on 31.03.2007 on the stock exchanges of India.

The total market capitalization of these 38 CPSEs based on stock prices on Mumbai Stock Exchange (including IBP) as on 31.03.2006 was Rs 653924 crore . Market Capitalisation of these 38 CPSEs (including Power Finance Corporation) as on 31.03.2007 was Rs 650671 crore. There was, therfore, a decrease in market capitalization of CPSEs by 0.50% (Rs.3253 crore) as on 31.03.2007 over market capitalization as on 31.03.2006. During this period, the market capitalization of Mumbai Stock Exchange increased by 17.30% and Sensex increased by 15.89%. The Oil CPSEs that constituted 49.17% share of market capitalization as on 31.3.2006 slipped to 43.92% of total market capitalization of CPSEs as on 31.03.2007. Stocks of CPSEs in the cognate groups of trading, steel, metal and minerals, transportation services, engineering (heavy & light) , power and power equipment and financial & other services have shown better results in terms of market capitalization. Cognate groups, such as, chemicals and pharmaceuticals, fertilizers, consultancy and telecom, on the other hand, have shown declining share in market capitalization. M_Cap of all listed CPSEs as a percentage of BSE M_Cap declined from 21.64% as on 31.03.2006 to 18.35% as on 31.3.2007. Atable showing closing price of listed CPSEs in BSE as on 31.3.2006 and 31.3.2007 (as well as M_Cap on these dates) is given at Annex. 1.1

1.19 Ranking of CPSEs

Since all the public sector enterprises are not listed on the stock exchange an attempt has been made to rank the public sector enterprises on seven parameters of (a) sales(net of excise duty), (b) percentage of change in sales over the previous year, (c) net profit (adjusted net profit), (d) percentage of change in net profit over the previous year, (e) return on equity (f) earning per share (EPS) and (g) dividend payout ratio. The composite ranking of CPSEs during 2006-07 based on these parameters is given at Annex.1.2

Annex. - 1.1

Computation of Growth in Market Capitalization of Listed CPSEs
from 2006 to 2007

S. No.	Name of the CPSE	BSE Closing Market price as on 31.03.2006	BSE Closing Market price as on 31.03.2007	Market Capitalization as on 31.03.2006 *(Rs. in crore)*	Market Capitalization as on 31.03.2007 *(Rs. in crore)*	% Increase in Mkt Cap in 2007
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	MMTC Ltd	637.30	2237.00	3186.50	11185.00	251.01%
2	State Trading Copr. Of India Ltd.	170.00	144.75	510.00	434.25	-14.85%
3	Hindustan Copper Ltd.	58.30	83.05	5299.18	7881.03	48.72%
4	Steel Authority Of India Ltd.	83.30	114.10	34406.23	47127.86	36.97%
5	National Mineral Dev. Corporation Ltd.	2200.00	1980.00	29075.20	26167.68	-10.00%
6	National Aluminium Company Ltd.	293.30	233.15	18897.61	15022.09	-20.51%
7	Neyvelli Lignite Corpn Ltd.	75.05	50.40	12591.21	8455.66	-32.84%
8	Maharashtra Elecktrosmelt Ltd.	89.35	92.40	214.44	221.76	3.41%
9	Container Corporation of India Ltd.	1446.30	1908.50	9399.50	12403.34	31.96%
10	Shipping Corporation of India	169.35	174.35	4780.75	4921.90	2.95%
11	Dredging Corporation of India Ltd.	609.50	475.90	1706.60	1332.52	-21.92%
12	Bharat Electronics Ltd.	1321.70	1501.00	10573.60	12008.00	13.57%
13	HMT Ltd.	70.65	71.70	3411.83	3462.54	1.49%
14	Andrew Yule & Company Ltd.	24.20	22.35	141.01	130.23	-7.64%
15	Scooter India Ltd.	26.20	21.30	112.63	91.59	-18.68%
16	Bharat Earth Movers Ltd.	1480.45	1083.60	5458.42	3995.23	-26.81%
17	NTPC Ltd.	134.00	149.75	110489.16	123475.76	11.75%
18	Bharat Heavy Electricals Ltd.	2246.95	2260.75	54996.35	55334.12	0.61%
19	Oil & Natural Gas Corporation Ltd.	1309.50	878.15	186725.53	187826.63	0.59%
20	Chennai Petroleum Corporation Ltd.	220.40	187.90	3283.96	2799.71	-14.75%
21	GAIL (India) Ltd.	318.25	264.55	26912.81	22371.67	-16.87%
22	Mangalore Refinery and Petrochemicals Ltd.	42.50	33.85	7487.65	5964.67	-20.34%
23	Hindustan Petroleum Corpn. Ltd.	322.90	246.70	10944.37	8361.65	-23.60%
24	Bharat Petroleum Corpn. Ltd.	426.05	302.25	15403.41	10927.55	-29.06%
25	Indian Oil Corporation Ltd.	584.15	399.60	68229.30	46673.68	-31.59%
26	Bongaigaon Refinery & Petrochemicals Ltd.	65.55	40.90	1309.82	817.26	-37.61%
27	I.B.P. Ltd. (B)	562.75	407.95	1246.49	0.00	-100.00%
28	Rashtriya Chemicals and Fertilizers Ltd.	36.85	35.05	2032.98	1933.67	-4.88%
29	Hind Organic Chemicals Ltd.	37.20	34.15	250.24	229.73	-8.20%
30	Bharat Immunological & Biological Corpn. Ltd.	14.45	11.14	62.40	48.10	-22.92%
31	Fertilizer & Chemicals (Travancore) Ltd.	27.50	20.30	975.62	720.18	-26.18%

(1)	(2)	(3)	(4)	(5)	(6)	(7)
32	National Fertilisers Ltd.	39.20	27.55	1923.07	1351.55	-29.72%
33	Madras Fertilizers Ltd.	15.00	9.20	243.21	149.17	-38.67%
34	Engineers (I) Ltd.	860.05	452.55	4830.04	2541.52	-47.38%
35	Mahanagar Telephone Nigam Ltd.	183.80	146.70	11579.40	9242.10	-20.18%
36	ITI Ltd.	68.30	37.85	4016.04	2225.58	-44.58%
37	Balmer Lawrie Investments Ltd.	121.00	88.05	268.62	195.47	-27.23%
38	Balmer Lawrie & Co. Ltd.	582.55	410.70	948.97	669.03	-29.50%
39	Power Finance Corpn.	0.00	104.30	0.00	11971.24	N.a.
	Total			653924	650671	
	Increase in Market capitalisation of CPSEs				-0.50%	
	TOTAL MARKET CAPITALISATION IN BSE			3022189.70	3545041.21	
	Increase in Market capitalisation of BSE				17.30%	
	SENSEX			11279.96	13072.10	
	INCREASE IN SENSEX				15.89%	
	% of M-Cap of CPSEs over BSE M_Cap			21.64%	18.35%	

Remarks

(a) 1. Hindustan Fluorocarbon Ltd., 2. Hindustan Photo Film Corpn Ltd., 3. India Tourism Development Corpn, 4. IRCON International 5. Kudurmukh Iron Ore have not been traded . Hence not considered.

(b) IBP has merged with IOC . Hence increase/decrease in Market Capitalisation is not comparable

(c) Power Finance Corporation has been listed on 23.02.2007. Hence, increase in market capitalisation can not be computed.

Annex. - 1.2

Ranking of CPSEs during 2006-07

CPSE	Net Sales 06-07	% of Change in Net Sales	Net Profit/ Loss(-) 06-07	% of Change in Net P/L	Return on Equity 06-07	EPS 06-07	Dividend Payout Ratio 06-07	Composite Rank	Rank
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Hindustan Petroleum Corpn. Ltd.	3	35	13	4	66	29	18	168	1
Bharat Petroleum Corpn. Ltd.	2	31	11	2	63	26	35	170	2
Hindustan Aeronautics Ltd.	15	19	20	41	5	12	61	173	3
Bharat Heavy Electricals Ltd.	11	29	7	43	27	11	53	181	4
Indian Oil Corporation Ltd.	1	41	3	36	43	22	39	185	5
Oil & Natural Gas Corporation Ltd.	4	47	1	79	36	20	11	198	6
Steel Authority of India Ltd.	6	38	5	34	13	49	65	210	7
National Aluminium Company Ltd.	17	36	9	37	17	32	69	217	8
NTPC Electric Supply Company Ltd.	104	1	104	1	1	4	5	220	9
Mahanadi Coalfieldls Ltd.	30	61	15	77	15	19	13	230	10
National Mineral Development Corpn. Ltd.	25	63	10	51	9	8	75	241	11
Antrix Corporation Ltd.	60	14	54	27	6	3	77	241	12
P E C Ltd.	23	39	72	19	21	9	60	243	13
State Trading Corpn. of India Ltd.	13	6	56	17	51	35	67	245	14
Numaligarh Refinary Ltd.	16	27	33	53	23	68	32	252	15
Container Corporation of India Ltd.	35	34	28	48	30	10	68	253	16
South Eastern Coalfields Ltd.	20	105	18	49	18	34	15	259	17
STCL Ltd.	50	4	83	21	7	16	80	261	18
ONGC Videsh Ltd.	37	2	21	31	22	57	94	264	19
Chennai Petroleum Corporation Ltd.	9	52	35	68	44	31	36	275	20
Electronics Corpn. of India Ltd.	51	23	50	8	25	67	54	278	21
NTPC Ltd.	7	40	4	67	75	66	20	279	22
RITES Ltd.	65	28	53	65	34	5	30	280	23
Northern Coalfields Ltd.	22	89	16	85	38	17	16	283	24
GAIL (India) Ltd.	12	66	8	87	46	36	28	283	25
Bharat Electronics Ltd.	27	65	27	59	24	13	76	291	26
NTPC Vidyut Vyapar Nigam Ltd.	52	7	93	22	40	86	4	304	27
Oil India Ltd.	19	95	12	94	39	18	29	306	28
Indian Railway Finance Corporation Ltd.	42	42	38	64	61	48	14	309	29
Coal India Ltd.	74	82	6	29	42	78	7	318	30
National Bldg. Constn. Corpn. Ltd.	48	46	59	10	2	62	93	320	31
Narmada Hydroelectric Dev. Corpn. Ltd.	55	3	37	3	81	93	58	330	32
Manganese Ore(India) Ltd.	69	33	49	71	19	28	63	332	33
Balmer Lawrie & Co. Ltd.	49	86	61	40	31	30	37	334	34
Mangalore Refinary & Petrochemicals Ltd.	8	56	36	44	58	88	48	338	35
Export Credit Guarantee Corpn.of India Ltd.	61	70	39	28	33	77	31	339	36
BEML Ltd.	41	49	42	76	52	24	62	346	37
India Tourism Dev. Corpn. Ltd.	64	15	60	30	8	55	115	347	38
Western Coalfields Ltd.	24	92	29	112	41	41	10	349	39
M M T C Ltd.	10	22	51	72	74	40	85	354	40
National Informatics Centre Services Incorporated	89	12	67	33	32	7	114	354	41
IRCON International Ltd.	47	25	57	81	87	15	44	356	42
Central Coalfields Ltd.	26	93	32	103	11	71	22	358	43

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Satluj Jal Vidyut Nigam Ltd.	46	48	26	42	71	95	34	362	44
Shipping Corporation of India Ltd.	31	84	22	93	54	33	55	372	45
Bongaigaon Refinery & Petrochemicals Ltd.	18	87	44	84	59	61	21	374	46
Goa Shipyard Ltd.	83	21	66	15	60	51	78	374	47
Power Finance Corporation	29	37	23	90	82	64	49	374	48
Cochin Shipyard Ltd.	57	8	64	7	53	84	102	375	49
Rural Electrification Corpn. Ltd.	39	30	31	98	65	65	47	375	50
National Seeds Corpn. Ltd.	82	18	82	9	28	73	90	382	51
Power Grid Corporation of India Ltd	33	58	19	61	83	87	42	383	52
HMT (International) Ltd.	99	5	111	16	99	45	8	383	53
Indian Rare Earths Ltd.	71	50	62	38	47	70	46	384	54
Tamil Nadu Trade Promotion Organisation	109	26	97	14	35	1	106	388	55
Kumarakruppa Frontier Hotels Ltd.	121	121	90	35	4	14	6	391	56
M S T C Ltd.	36	115	63	80	20	6	73	393	57
Dredging Corpn. of India Ltd.	62	62	43	82	64	21	59	393	58
Engineering Projects (India) Ltd.	54	43	80	57	73	80	9	396	59
Indian Railway Catering & Tourism Corpn. Ltd.	67	13	76	89	16	59	84	404	60
Mahanagar Telephone Nigam Ltd.	21	104	30	69	100	56	25	405	61
Garden Reach Shipbuilders & Engineers Ltd.	58	116	52	25	29	60	66	406	62
Rashtriya Ispat Nigam Ltd.	14	74	17	78	48	90	96	417	63
Broadcast Engg.consultants India Ltd.	100	111	101	13	10	38	45	418	64
Hindustan Newsprint Ltd.	72	85	70	20	72	82	19	420	65
Water & Power Consultancy Services(india) Ltd.	84	54	84	56	49	23	71	421	66
Airports Authority of India Ltd.	38	109	25	63	62	46	81	424	67
Indian Oil Technologies Ltd.	119	10	117	5	12	52	113	428	68
Rashtriya Chemicals and Fertilizers Ltd.	34	57	47	91	85	91	24	429	69
Bharat Sanchar Nigam Ltd.	5	98	2	101	90	50	92	438	70
Housing & Urban Dev. Corpn. Ltd.	40	59	40	66	93	99	43	440	71
National Hydroelectric Power Corpn. Ltd.	44	72	24	55	103	107	38	443	72
Central Warehousing Corpn.	59	64	55	54	94	53	64	443	73
Maharashtra Elektrosmelt Ltd.	77	45	77	100	26	69	51	445	74
Mazagon Dock Ltd.	103	120	46	11	14	72	87	453	75
Engineers India Ltd.	63	117	48	88	76	39	23	454	76
Mishra Dhatu Nigam Ltd.	78	32	74	23	77	97	79	460	77
Karnataka Antibiotics & Pharmaceuticals Ltd.	85	17	99	60	80	37	88	466	78
Nuclear Power Corpn. of India Ltd.	32	90	14	97	95	98	41	467	79
National Fertilizers Ltd.	28	76	45	39	91	92	97	468	80
Rajasthan Drugs & Pharmaceuticals Ltd.	95	20	110	70	50	47	89	481	81
Neyveli Lignite Corpn. Ltd.	43	99	34	107	97	85	27	492	82
Hindustan Latex Ltd.	75	60	78	104	67	54	56	494	83
Central Cottage Industries Corpn. of India Ltd.	87	16	109	12	92	96	83	495	84
National Handloom Development Corpn. Ltd.	68	11	115	18	107	109	72	500	85
Certification Engineers International Ltd.	107	102	96	108	45	25	17	500	86
BEL Optronics Devices Ltd.	92	55	91	46	37	79	101	501	87
North Eastern Electric Power Corpn. Ltd.	53	94	41	75	98	104	40	505	88
Educational Consultants (India) Ltd.	98	108	105	74	56	42	26	509	89
Hindustan Paper Corporation Ltd.	56	81	58	45	84	101	91	516	90
Donyi Polo Ashok Hotel Ltd.	120	71	119	62	55	94	2	523	91
Cotton Corpn. of India Ltd.	45	113	79	83	102	75	33	530	92
Ennore Port Ltd.	88	69	71	6	88	103	107	532	93

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Artificial Limbs Mfg. Corpn. of India	94	100	98	99	3	43	103	540	94
Bharat Dynamics Ltd.	66	110	69	115	96	89	3	548	95
Rajasthan Electronics and Instruments Ltd.	91	53	107	86	68	58	86	549	96
HSCC (India) Ltd.	106	101	92	106	69	27	50	551	97
Pawan Hans Helicopters Ltd.	79	67	89	118	108	106	1	568	98
India Trade Promotion Organisation	90	114	65	109	86	2	104	570	99
Indian Renewable Energy Devt. Agency Ltd.	80	77	68	73	104	105	70	577	100
Sponge Iron India Ltd.	93	51	100	52	101	108	74	579	101
Vignyan Industries Ltd.	101	106	114	32	57	83	100	593	102
FCI Aravali Gypsum & Minerals (India) Ltd.	97	96	94	111	79	63	57	597	103
Central Mine Planning & Design Institute Ltd.	81	68	106	26	106	100	110	597	104
Uranium Corporation of India Ltd.	73	79	73	102	109	113	52	601	105
Karnataka Trade Promotion Organisation	117	9	116	121	89	44	105	601	106
Rail Vikas Nigam Ltd.	112	24	102	24	121	121	109	613	107
Mumbai Railway Vikas Corporation Ltd.	114	44	88	110	70	81	108	615	108
Projects & Development India Ltd.	96	91	87	95	78	76	98	621	109
National Backward Classes Finance & Development Corporation	102	103	75	47	111	111	117	666	110
Ferro Scrap Nigam Ltd.	86	80	112	117	117	74	82	668	111
Hooghly Printing Company Ltd.	116	112	120	114	105	102	12	681	112
National Safai Karamcharis' Finance & Development Corporation	113	75	103	50	115	119	119	694	113
National Scheduled Tribes Finance & Development Corporation	111	118	85	58	110	110	121	713	114
National Minorities Devp. & Finance Corpn.	105	88	86	96	114	118	118	725	115
Kudremukh Iron Ore Co. Ltd	76	119	81	119	119	117	95	726	116
National Handicapped Finance & Development Corporation	118	78	108	92	113	116	120	745	117
Indian Medicines & Pharmaceutical Corporation Limited	110	83	118	116	112	114	99	752	118
Telecommunication Consultants (India) Ltd.	70	107	113	120	120	112	112	754	119
National Research Devp. Corpn.	115	73	121	105	116	115	111	756	120
National Scheduled Castes Finance & Development Corporation	108	97	95	113	118	120	116	767	121

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 Rs. 715108 crores in 2005-06 to Rs. 782992 crores in 2006-07, showing an increase of Rs. 67884 crore or an increase of 9.49 percent over the previous year. In terms of share in *'gross fixed capital formation' (GFCF)* of the country, however, the share of gross block in CPSEs shows a decline over the years. The share of gross block of CPSEs as per cent of GFCF during 2006-07 stood at 5.58 percent (Table 2.1).

Table 2.1

Growth in real investment / Gross Block

Year	Accumulated Gross Block * in CPSEs (Rs. crore)	Gross Block during the year (Rs. crore)	Growth over the previous year (in %)	GFCF^, in the economy during the year (Rs. crore)	Gross Block in CPSEs, as % of GFCF (3)/(5)*100
(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	822786	6.38
2005-06	715108	65863	10.14	1000760	6.58
2006-07	782992	67884	9.49	1216552	5.58

*including capital work in progress; ^ Gross Fixed Capital Formation.

Growth in Financial Investment

The aggregate financial investment in CPSEs comprising paid-up share capital, share application money pending allotment and long term loans (excluding internal resources) grew from Rs.29 crore in 5 enterprises at the commencement of the First Five Year Plan in 1950-51 to Rs. 421089 crore in 244 enterprises on 2006-07 at the end of the Tenth Five Year Plan (Table 2.2). The financial investment during 2006-07 over 2005-06 increased by Rs. 17383 crore or by 4.31%.

Table 2.2

Growth in (Financial) Investment #

Particulars	Total Investment (Rs. in crore)	Enterprises (Nos.)
(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
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

(1)	(2)	(3)
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 (31.03.2007)	421089	244[1]

As in the Balance Sheet

2.2 Components of Financial Investment

The structure of financial investment in CPSEs has undergone very little change during the Tenth Plan Period (Table 2.3). While the share of paid-up capital in total (financial) investment was 32.57 percent during 2002-03, it declined marginally to 29.76 percent in 2006-07. The share of long-term loans, on the other hand, went up from 66.56 percent in 2002-03 to 68.74 percent in 2006-07.

Table 2.3
Components of Financial Investment

(Rs. in crore)

Year ending	Paid-up Capital	Share application money	Long term loans	Investment (3+4+5)
(1)	(2)	(3)	(4)	(5)
As on 31.3.2003	109306	2933	223408	335647
	(32.57)	(0.87)	(66.56)	(100)
As on 31.3.2004	111874	7087	231033	349994
	(31.96)	(2.02)	(66.01)	(100)
As on 31.3.2005	117551	6494	233894	357939
	(32.84)	(1.81)	(65.34)	(100)
As on 31.3.2006	120844	6204	276658	403706
	(1.54)	(29.93)	(68.53)	(100)
As on 31.3.2007	125323	6306	289460	421089
	(29.76)	(1.50)	(68.74)	(100)

2.3 Sources of Financial Investment

While the major share in equity of CPSEs is that of the Central Government, State Governments, holding companies (which are themselves CPSEs), financial institutions, banks and private parties (both Indian and foreign) have been also contributing towards the investment of these enterprises in the form of both equity and loan.

Table 2.4
Sources of Investment

(Rs. in crore)

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		

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
E+L	135225	3379	39982	29971	142787	6494	357939
% of Total	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	36.44	0.90	10.70	7.20	43.22	1.54	100.00
As on 31.3.2007							
Equity (E)	105121	3438	11488	1733	3543		
Loan (L)	45651	117	19067	36303	188322		
E+L	150772	3555	30555	38036	191865	6306	421089
% of Total	35.81	0.84	7.26	9.03	45.56	1.50	100.00

A perusal of 'sources of investment' shows a significant change in the share holding pattern of CPSEs over the period (Table 2.4). Whereas the share of Central Government stood at 37.78 per cent in 2004-05, it declined to 35.81 per cent in 2006-07. 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 45.56 per cent in 2006-07. In a way this shows the greater confidence of FIs and banks in the CPSEs. The share of 'foreign parties' has also shown an increase from 8.37 per cent in 2004-05 to 9.03 per cent in 2006-07.

2.4 Plan investment in CPSEs

Plan outlay in CPSEs, constituting internal resources (IR), extra-budgetary resources (EBR) and Budgetary Support showed a continuous increase in absolute terms, during the Tenth Plan. Accordingly, the plan outlay in CPSEs went up from Rs. 59189.79 crore in 2002-03 to Rs. 96921.80 crores in 2006-07 (Table 2.5). The respective shares of IR, EBR and Budgetary Support have, nevertheless, undergone a change. While the share of IR went up from 55.51 per cent of plan outlay in 2002-03 to 60.85 per cent in 2006-07, the share of Budgetary Support came down from 8.98 percent in 2002-03 to 5.43 percent in 2006-07. In absolute terms, the internal resources (IR) amounted to Rs. 58981.57 crores in 2006-07.

Table.2.5
Plan Investment during the Tenth Five Year Plan

(Rs. in crore)

Year	Internal Resources	Extra Budgetary Resources	Budgetary support	Plan Outlay
2002-03	32858.83	21017.05	5313.91	59189.79
	(55.51)	(35.51)	(8.98)	(100)
2003-04	31103.29	26855.66	5014.46	62973.41
	(49.39)	(42.65)	(7.96)	(100)
2004-05	32222.46	26006.52	5090.24	63319.22
	(50.89)	(41.07)	(8.04)	(100)
2005-06	42143.53	35723.30	4271.70	82138.53
	(51.31)	(43.49)	(5.20)	(100)
2006-07	58981.57	32676.47	5263.76	96921.80
	(60.85)	(33.71)	(5.43)	(100)

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 the Tenth Plan period. Accordingly, it went up from Rs. 27176.50 crores in 2002-03 to Rs. 58620.83 crores in 2006-07 (Table 2.6). In terms of respective shares of the different components of IR, namely, 'depreciation' and 'retained profit' as well, there has been a significant change. Whereas the share of 'depreciation' in IR declined from 48.79 per cent in 2002-03 to 33.52 per cent in 2006-07, the share of 'retained profit' in IR went up from 50.07 per cent in 2002-03 to 60.71 per cent in 2006-07.

Table 2.6
Internal Resources of CPSEs
(Tenth Five Year Plan)

(Rs. in crore)

Year	No. of CPSEs generated IR	Depreciation	DRE written off	Retained Profit	Total
2002-03	129	26477.41	619.18	27176.50	54273.29
		(48.79)	(1.14)	(50.07)	(100.00)
2003-04	151	30526.72	769.20	44116.90	75412.77
		(40.48)	(1.02)	(58.50)	(100.00)
2004-05	149	32477.42	537.62	50847.60	83862.62
		(38.73)	(0.64)	(60.63)	(100.00)
2005-06	163	34540.93	797.96	50248.20	85587.06
		(40.36)	(0.93)	(58.71)	(100.00)
2006-07	156	32361.89	5568.22	58620.83	96550.94
		(33.52)	(5.77)	(60.71)	(100.00)

2.5 Pattern of investment

Table 2.7 below shows cognate group-wise aggregate real investment in CPSEs during the last two years. The share of 'manufacturing' CPSEs was the highest at 26.95 percent followed by 'mining' (25.33%), 'electricity' (24.11%) and 'services' (23.42%). In terms of national income/ GDP classification, the share of 'the industrial CPSEs' comprising manufacturing, mining and electricity was the largest at 76.39 per cent followed by 'the service sector CPSEs' (23.42%) in 2006-07.

Table 2.7
Pattern of Real Investment / Gross Block in CPSEs

(Rs. in crore)

Sl. No.	Cognate Group	Investment in terms of Gross Block as on		Growth rate over the previous year	As % of total investment, as on 31.3.07
		31.3.2007	31.3.2006		
1	Agriculture	93.45	90.35	3.43	0.01
2	Mining	198320.79	179123.10	10.72	25.33
3	Manufacturing	211027.74	195302.52	8.05	26.95
4	Electricity	188806.20	165771.43	13.90	24.11
5	Services	183410.28	174106.11	5.34	23.42
6	Enterprises under-construction	1333.22	714.46	86.61	0.17
	Grand Total	782991.68	715107.97	9.49	100

2.6 Top Ten Enterprises in terms of Gross Block / investment:

Total real investment in terms of 'gross block' of top ten enterprises accounted for 73.76 percent of the total gross block equal to Rs.577501.36 crore as on 31.3.2007. ONGC Limited leads the list of top ten CPSEs in terms of real investment (Table 2.8).

Table 2.8

Top Ten Enterprises in terms of Real Investment / Gross Block during 2006-07

(Rs. in crore)

Sl. No.	Name of the Enterprise	Investment in terms of Gross Block	Share of Total Real Investment (%)
1.	Oil & Natural Gas Corporation Ltd.	129983.79	16.60
2.	Bharat Sanchar Nigam Ltd.	123850.65	15.82
3.	NTPC Ltd.	74405.68	9.50
4.	Indian Oil Corporation Ltd.	63625.56	8.13
5.	Power Grid Corporation Of India Ltd.	47895.41	6.12
6.	Steel Authority Of India Ltd.	32384.79	4.14
7.	Nuclear Power Corpn. Of India Ltd.	32611.29	4.16
8.	National Hydroelectric Power Corpn.ltd.	27456.34	3.51
9.	Bharat Petroleum Corpn. Ltd.	21162.25	2.70
10.	Hindustan Petroleum Corpn. Ltd.	24125.6	3.08
	Total Top Ten	577501.36	73.76
	Total Gross Block*	782991.68	100.00

*including capital work in progress.

2.7 State-wise distribution of investment:

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 (17.12 percent), U.P. (6.80 percent), Andhra Pradesh (6.44 percent), Tamil Nadu (6.27 percent) and Gujarat (6.24 percent), who led in terms of investment in CPSEs in 2007. These changes, in good measure, have occurred mainly on account of higher investments in oil exploration (e.g Mumbai High), power projects and telecommunications over the years vis-a-vis investments in steel, heavy engineering and coal mining in the earlier years. Some differences have occurred due to bifurcation of states like Bihar into Bihar and Jharkhand, Madhya Pradesh into Madhya Pradesh and Chhatisgarh and Uttar Pradesh into Uttar Pradesh and Uttranchal. In absolute terms, however, there has generally been increase in investments in most states.

Table 2.9

State-Wise Distribution of Gross Block^

Sl. No	State / Union Territory	Gross Block (Rs. in crore)				% share of Gross Block			
		1977	1987	1997	2007	1977	1987	1997	2007
1.	Andhra Pradesh	390.70	6761.52	19486.16	50461.72	3.41	9.94	6.85	6.44
2.	Arunachal Pradesh	-	-	1489.20	4047.89	0.00	0.00	0.52	0.52
3.	Assam	312.90	3808.72	12448.89	37183.23	2.73	5.60	4.38	4.75
4.	Bihar	2509.10	6969.2	19982.51	18081.23	21.91	10.24	7.03	2.31
5.	Chhattisgarh				24042.66	-	-	-	3.07
6.	Delhi	400.70	1928.48	15014.81	26455.78	3.50	2.83	5.28	3.38
7.	Goa	3.30	35.27	144.57	512.22	0.03	0.05	0.05	0.07
8.	Gujarat	523.40	3197.79	20092.87	48841.68	4.57	4.70	7.07	6.24
9.	Haryana	142.70	649.69	4352.25	21596.68	1.25	0.95	1.53	2.76
10.	Himachal Pradesh	11.80	527.43	4720.54	20392.89	0.10	0.78	1.66	2.60
11.	Jammu & Kashmir	5.70	117.84	6413.36	12858.55	0.05	0.17	2.26	1.64
12.	Jharkhand	-	-	-	22870.50	-	-	-	2.92
13.	Karnataka	268.20	1721.52	6439.48	32725.62	2.34	2.53	2.26	4.18
14.	Kerala	274.10	1074.44	3991.76	19143.72	2.39	1.58	1.40	2.44
15.	Madhya Pradesh	1492.70	8571.69	21503.52	35881.51	13.04	12.60	7.56	4.58
16.	Maharashtra	630.30	10905.09	54854.07	134036.07	5.50	16.02	19.29	17.12
17.	Manipur	-	139.68	148.31	1020.69	0.00	0.21	0.05	0.13
18.	Meghalaya	-	4.27	53.43	211.93	0.00	0.01	0.02	0.03
19.	Mizoram	-	-	30.03	-	-	-	0.01	-
20.	Nagaland	-	78.17	465.36	955.31	0.00	0.11	0.16	0.12
21.	Orissa	646.50	4637.65	17101.40	36692.73	5.65	6.81	6.01	4.69
22.	Punjab	197.80	641.02	2077.85	10740.73	1.73	0.94	0.73	1.37
23.	Rajasthan	227.10	780.95	6065.94	18706.21	1.98	1.15	2.13	2.39
24.	Sikkim		0.55	241.13	2967.20	0.00	0.00	0.08	0.38
25.	Tamilnadu	466.90	3018.82	13539.28	49090.86	4.08	4.44	4.76	6.27
26.	Tripura		160.83	830.54	1258.04	0.00	0.24	0.29	0.16
27.	Uttar Pradesh	376.20	3913.96	20767.92	53252.52	3.29	5.75	7.30	6.80
28.	Uttaranchal	-	-	-	14998.31	-	-	-	1.92
29.	West Bengal	768.30	4524.94	18677.33	36450.49	6.71	6.65	6.57	4.66
30.	Andaman & Nicobar Islands	-	9.89	27.10	223.27	0.00	0.01	0.01	0.03
31.	Chandigarh	-	4.06	289.30	110.01	0.00	0.01	0.10	0.01
32.	Pondicherry	-	8.53	30.40	275.12	0.00	0.01	0.01	0.04
33.	Others & unallocated	1802.80	3859.87	13082.21	46906.31	15.74	5.67	4.60	5.99
	Total :	11451.20	68051.87	284361.52	782991.68	100.00	100.00	100.00	100.00

^ as on 31st March of each financial year.

3 PRICE POLICY IN CPSEs

While price of 'primary commodities', such as, agricultural products and minerals is observed to be determined by the market forces of demand and supply, the price of' 'manufactures' and 'services' is determined/ administered 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 in the market and the elasticity of demand. Given the elasticity of demand for the product a monopolist is able to charge a higher mark-up compared to a competitive firm; the mark-up being the difference between the average revenue and the marginal cost per unit of output.

In a monopoly market, a public sector enterprise may fix the price that maximizes the mark-up as well as the gross profits. That may not happen, however, since the government may intervene to moderate the price and reduce the mark-up in the interest of consumers and the user industries/sectors. In general, the governments fix/ administer the price of goods (and services) produced by public sector entities based on (a) the true costs 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, (d) below the costs to stimulate demand under conditions of excess/unutilized capacity and (e) different prices/ multi-tariffs to include discounts for purchase of larger volumes or for various other incentives. The price policy may also be guided by considerations of the need to encourage consumption (e.g. fertilizer) and to discourage consumption (e.g. petroleum products).

The prices of goods and services produced by the public sector enterprises in India, for long, have been determined by the Government under the administered price regime (APM). The APM, in most cases, has been governed by the true cost of production (plus a reasonable return on investment). The Government may obtain the cost estimates either from 'the management' or from 'an expert body'. In the case of central public sector enterprises 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 on prices. The public sector enterprises have, therefore, been not free to fix the prices on their own and charge monopoly prices even when enjoying the monopoly status. There have, moreover, been situations when even though the Bureau of Industrial Costs and Prices (BICP) gave its recommendations the prices were not raised commensurately and in time, leading to troubles for the management.

Quite often even the moderated prices of public sector enterprises have been found to be above the international prices and higher than those charged by the private sector in the domestic market. This may indicate, on the one hand, higher overhead costs in public sector enterprises arising from better wages, housing and medical facilities etc; on the other, it may point to technological obsolescence and inefficiencies in these enterprises. The BICP, in this respect, has been recommending through its reports measures for cost reduction and improvement in efficiency in these enterprises. In the wake of post-1991 economic liberalization, moreover, industries in the 'core sector' are no more the exclusive preserve of the public sector. Consequently, a good many central public sector enterprises (CPSEs) have ceased to be monopolies and they face intense competition in the market. The Government has gradually dismantled the administered price mechanism (APM) in most products and the CPSEs have been given the independence to fix the (competitive) prices on their own.

Moreover, while the Government in earlier years depended on the BICP for arriving at the cost estimates for determining the normative (fair) price of outputs, the recent years have seen establishment of various 'price regulatory commissions for regulating prices in the best

interests of both the consumers and the producers. The writ of these regulatory commissions is not restricted to the public sector enterprises alone; rather it extends to the private sector enterprises as well. The Government, on its part, continues to be sensitive to the needs of the poor and the impact of rise in price of 'the core sector' on the Wholesale Price Index (WPI). Any rise in price level that is not acceptable to the Government is moderated through a combination of measures such as, control on prices, grant of subsidies, lowering of customs duties, excise and sales tax. Price determination of Petroleum products, in this respect, is of special interest. The paragraphs below briefly discuss the pricing system in respect of the core sector, where the central public sector enterprises are the major players.

3.1 Steel

Price determination of steel products was decontrolled in 1992. Accordingly, the CPSEs, namely, SAIL and its subsidiary companies are free to determine prices of their products on their own. There is neither any subsidy policy in respect of the basic raw-materials/ inputs required for manufacturing of steel. Supply of steel to the Government Departments and other CPSEs is also made against tender invitations and on competitive basis. As per Government directives, however, these CPSEs offer rebates for supplies made to National Small Industries Corporation and the different State Small Industries Corporations which are refunded to the CPSEs by the Joint Plant Committee (JPC). The Government, on its part, makes all attempts to ensure adequate availability of steel at stable prices in the domestic market through various policy initiatives.

3.2 Coal

The Central Government was empowered under the Colliery Control Order, 1945 read with the Essential Commodities Act, 1955 to fix the grade-wise and colliery wise prices of coal. Pricing of all grades of coal has, however, been completely deregulated after the Colliery Control Order, 2000 that was notified w.e.f. 1st January, 2000 rescinding the Colliery Control Order, 1945. Accordingly, the coal companies are competent to fix grade-wise prices for coal produced by them on their own based on cost of production, landed cost of imported coal as well as demand and supply scenario. Prices of different grades of coal were last revised on 16th June, 2004; thereafter no revision of coal price has taken place.

The public sector coal companies, namely, Coal India Ltd. and its subsidiaries started selling part of their production under e-auction scheme, from the year 2004-05, to the intending buyers (both traders and consumers). The floor price for such sale of coal under e-auction was kept at 120% of the notified price. The sale of coal under e-auction scheme had to be discontinued soon after as per directives of the Supreme Court. Sale of coal under e-auction has been replaced by e-price booking whereby the prices are fixed at 130% of the notified price for all intending buyers, barring National Consumers Co-operative Federation (NCCF) and state undertakings in respect of which price is fixed at 120% of the notified price. Sale of coal to consumers in the core sector is also at the notified price only. The extant pricing policy in regard to coal supplied to power and other sectors is under examination of the Government.

3.3 Power

The Electricity Regulatory Commission Act was enacted in 1998 for creation of Regulatory Commissions at the Centre and in the States, with powers 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 for ensuring grid discipline.

Further power sector reforms in recent years necessitated the enactment of the Electricity Act, 2003 repealing the ERC Act, 1998. (Currently, the regulatory powers of CERC constituted under the ERC Act, 1998 have been retained in respect of regulation/determination of tariff of the CPSEs involved in generation and inter transmission). The provisions of the Electricity Act, 2003 serve to consolidate the laws relating to generation, transmission, distribution, trading and use of electricity. The Act is aimed at taking measures conducive to development of electricity industry, promoting competition therein, protecting interest of the consumers and supply of electricity to all areas, rationalization of electricity tariff, ensuring

transparent policies regarding subsidies, promotion of efficient and environmentally benign policies, constitution of Central Electricity Authority, Regulatory Commissions and establishment of Appellate Tribunal as well as for matters connected therewith or incidental thereto.

In exercise of power conferred under Section 178 of the Electricity Act, 2003, the CERC regulates/determines tariff of the CPSEs engaged in generation and inter-state transmission of power. In compliance with Section 3 of the Electricity Act 2003, the Central Government notified the National Electricity Policy (NEP) in February, 2005. In continuation to NEP, furthermore, the Central Government notified the Tariff Policy on 6.1.2006. As per the Electricity Act, 2003, the Regulatory Commission is to be guided by the Tariff Policy of the Government of India for determining the tariff applicable to generating companies and for transmission. It also requires regulators to continue with the systems of setting norms for operations which would provide incentive for efficiency in operations. In furtherance of the objectives of the Electricity Act, 2003 the Rural Electricity Policy was also announced by the Government of India in August, 2006. The pricing policy of nuclear power in the country and the associated tariffs are regulated by the Government of India in accordance with the provisions of the Atomic Energy Act, 1962.

3.4 Petroleum Products

Administered Pricing Mechanism (APM) for major petroleum products was dismantled w.e.f. 1.4.2002, except for PDS Kerosene and domestic LPG. The subsidies by the Government on PDS Kerosene and domestic LPG were also to be given on a specified flat rate basis in the post-APM era. After providing for the specified/ flat rate subsidy, the retail prices were to vary as per changes in the international oil prices. The subsidies from budget were based on international prices of Kerosene and LPG prevailing in Arab Gulf market during the month of March, 2002 i.e. $23.65 per barrel and $ 194 per MT respectively. The Government also decided that subsidy at 1/ 3rd level of 2002-03 will be allowed till 31.3.2007 @ Rs. 22.58 per 14.2 KG domestic LPG cylinder and 82 paise per litre of PDS Kerosene. These subsidies were, moreover, to be phased out in three to five years. The Government has, however, further extended the subsidy schemes for a period of three more years i.e. from 1.4.2007 to 31.3.2010 at the same rates as followed from 2004-05 onwards.

In regard to auto fuel (MS/HSD) the Government earlier allowed limited freedom to Oil Marketing Companies (OMCs) to revise retail prices within a band of +/- 10% of the mean of rolling average of last 12 months and last 3 months international C&F prices. In case of breach of this band, matter had to be taken up with Ministry of Finance for modulation in excise duty rates.The idea behind this has been to share the burden of price increase between the various stakeholders i.e. the Government, OMCs and the consumers. In fact the oil and gas producing CPSEs within the Country have been made party to this burden sharing and they have been giving discount price vis-a-vis respective products to the OMCs. Prices, based on this mechanism were revised for the first time w.e.f 1.8. 2004. Price revision on fortnightly basis based on the aforesaid mechanism could not be, however, implemented due to steep increase in international crude prices. The Government re-introduced the price control on petrol and diesel and restrained the "pass through" of the international prices to domestic consumers.

The Government subsequently set up the Rangarajan Committee in 2005 to look into the various aspects of pricing and taxation of petroleum products and to rationalize their prices. Based on the recommendation of the Committee, the Government changed the methodology and switched over to pricing of petrol and diesel on trade parity basis, which is a weighted average of import parity and export parity prices in the ratio of 80:20. The trade parity concept was implemented w.e.f. 16.6. 2006.

International prices of crude oil and petroleum products have remained high and volatile since 2004, on account of tight supply position. The sharp increase in oil prices has a major impact on the Indian economy, as 79 per cent of the (annual) crude oil requirement is imported. Crude oil prices continued to fluctuate over a high range during 2006-07. Despite the increase in international prices, the selling prices of petrol and diesel were not revised until

June, 2006. The retail price of PDS Kerosene has not been revised since March, 2002 and LPG prices have been increased only marginally by Rs. 20/- per cylinder on two occasions since April, 2002. The retail prices of PDS Kerosene and domestic LPG are the lowest among our neighbouring countries.

With a view to ease the financial burden on the Oil Marketing Companies (OMCs) arising from controlled/administered domestic prices of petrol, diesel, PDS kerosene and domestic LPG against spiraling crude oil and petroleum product prices in the international market, the Government finally raised the prices of petrol and diesel marginally by Rs. 4 per litre and Rs. 2 per litre respectively on 6.6. 2006. Later in the year, in view of decline in international crude oil prices and to ease the inflationary pressures, the increase in petrol and diesel prices was rolled back twice, that is, on 30.11.2006 and on 16.2.2007 (a reduction of Rs.2 per litre of MS and Re. 1 per litre of HSD). However, since then international prices have resumed their upward trend without there being any change in domestic prices. Prices of SKO and LPG for domestic consumption have remained unchanged during the year. During 2006-07, the Government also issued Oil Bonds worth Rs. 24,121 crore to the OMCs to compensate them for losses suffered by them on account of inadequate pass-through (under realization) of prices to the consumers.

The Government also reduced the customs duty on petrol and diesel from 10% to 7.5% in line with the recommendation made by the Rangarajan Committee w.e.f. 14.6.2006. Furthermore, consequent to enactment of Finance Bill 2006, LPG (Domestic) became "Declared Goods" under Central Sales Tax Act and the maximum rate of sales tax/state-VAT payable on such declared goods is 4% effective from 19.4.2006 across States and Union Territories. This reduced the sales tax levied by States to 4% as against state-VAT rate of 12.5% levied by most States. While the ad-valorem rates of excise duty on petrol and diesel have been revised from 8% to 6% w.e.f. 1.3.2007, the education cess on petroleum products has been increased from 2% to 3%. Selling prices of other petroleum products like Naptha, Aviation Turbine Fuel and Furnace Oil etc. are fixed by oil companies based on commercial considerations and taking in to account the international prices of product for the relevant period.

The Government has also set up the Petroleum & Natural Gas Regulatory Board to oversee and regulate refining, processing, storage, transportation, distribution, marketing and sale of petroleum products and natural gas in all parts of the country. The Board began its operations with effect from 25.6.2007.

3.5 Fertilizers

All varieties of fertilizers, except urea, were removed from price and distribution control in August, 1992. Urea is, however, the main nitrogenous fertilizer constituting about 60% of the total fertilizer consumption in the country. It is covered under statutory price (and partial distribution) control and is sold to the farmers at the notified sale price. An ad-hoc concession was started for P&K fertilizers in October, 1992 to arrest the rising prices of other fertilizers,. Currently, the Government administers a full fledged concession scheme on sale of P&K fertilizers. The Government of India, furthermore, 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 Supper 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 & marketing/ distribution and MRP) is also given by the Government in the form of subsidy on imported phosphatic and potassic fertilizers.

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 was paid as subsidy to the urea units. Under the RPS, retention price used to be determined unit-wise, which varied from unit to unit depending upon the technology, feedstock used, level of capacity utilization, power consumption, distance to be covered for sourcing of feedstock/raw-materials etc. Although the RPS achieved its objective of increasing investment in the fertilizer industry and thereby created new capacities and enhanced fertilizer production (along with increased use of chemical fertilizers), the pricing scheme was criticized on the grounds of being in the nature of 'cost plus' devoid of any incentives for achieveming of better operational efficiency.

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 is to encourage efficiency based on the usage of the most efficient feedstock, state-of-art technology etc. NPS is being implemented in stages. Stage-I was for I 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 and will continue till 31.3.2010.

The important features of the Stage-III Policy are (a) resumption of production by units under shutdown and (b) conversion of non-gas based units to NG/LNG. Resumption of production by urea units currently not in production, viz, RCF-Trombay-V, FACT-Cochin and Duncans Industries Limited (DIL)-Kanpur is allowed based on natural gas/LNG/CBM/Coal gas. Upon resumption, the base concession rate of these units will be the Stage-II concession rate of the group to which they belonged, or their own concession rate updated till 31.3.2003 for all costs and thereafter adjusted for the feedstock changeover, whichever is lower. Under the policy for 'conversion of non-gas based units to NG/LNG', all functional Naphtha and FO/LSHS based units will be converted to gas based within a period of 3 years. Thereafter, Government will not subsidize the high cost urea produced by the non-gas based urea units. In order to provide incentives for conversion to gas, there will be no mopping up of energy efficiency for a fixed period of 5 years for Naphtha based as well as for FO/LSHS based units. Capital subsidy will be considered for FO/LSHS based units for which Department of Fertilizers will notify a separate scheme in consultation with Department of Expenditure (DOE), Ministry of Finance.

With a view to encourage setting up of fertilizer plants abroad in countries where gas is available in abundance and is much cheaper through Joint Ventures (JV), 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.

3.6 Pharmaceuticals

Prices of pharmaceutical products in CPSEs is fixed based on the Drugs Price Control Order (DPCO), 1995. As per DPCO, pharmaceutical products are categorized as Scheduled and Non-Scheduled formulations. Prices of Scheduled products are fixed by the National Pharmaceutical Pricing Authority (NPPA); the Maximum Retail Prices (MRP) of Scheduled formulations are fixed and revised as per announcement/notification by the Government of India.

In case of Non-scheduled formulations, prices are fixed by the managements of CPSEs on cost plus basis. On 27.7.2006, the Government approved the proposal with regard to preferential purchase of 102 drugs/ pharmaceuticals exclusively the pharma CPSEs and their subsidiaries by the Government Departments, CPSEs and autonomous bodies of the Central Government at NPPA approved/certified rates minus discounts up to 35%.The preferential purchase policy will remain valid for a period of 5 years.

4 HUMAN RESOURCE DEVELOPMENT AND WELFARE MEASURES

Effective utilization of human resources is one of the most important policy objectives before an organization. It has special significance in the management of central public sector enterprises (CPSEs) as they employ a large workforce. Successful operation of these enterprises to a large extent depends on the skills and capabilities of the workforce. Due to advancement in the information technology and telecommunications, moreover, there have been significant changes in the financial and production techniques and management methods. This has led to improvement in every sphere of public sector activity and increased productivity per worker. Human resources development is accorded higher priority in CPSEs.

4.1 Organisational Structure in CPSEs

The Department of Public Enterprises formulates policy guidelines on the Board structure of Central Public Sector Enterprises and advises on the shape and size of organizational structure of these enterprises. The CPSEs are categorized in four Schedules namely 'A', 'B', 'C' and 'D' schedules based on various quantitative, qualitative and other factors. The quantitative factors are: investment, capital employed, net sales, profit before tax, number of employees, number of units and value added per employee. Qualitative factors are: national importance, complexities of problems, level of technology, prospects for expansion and diversification of activities and competition from other sectors, etc. The other factor relates to the 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 the administrative Ministries/Departments for categorization /upgradation of CPSEs are considered in DPE in consultation with Public Enterprises Selection Board (PESB). During 2006-07, DPE examined 14 proposals relating to categorization of CPSEs in appropriate schedules as well as upgradation of CPSEs/ personal upgradation and creation of posts in CPSEs etc. As a result, 2 CPSEs were categorized in appropriate schedules, 6 CPSEs were upgraded to higher schedules, one CMD was granted personal upgradation and 2 new posts of Functional Directors were created.

As on 31.3.2007, there were 247 CPSEs. Out of 247 CPSEs 54 CPSEs are in Schedule 'A', 77 CPSEs are in Schedule 'B', 48 CPSEs are in Schedule 'C' and 6 CPSEs are in Schedule 'D'. The rest are covered under the uncategorized category. The details of the Board level posts (whole time) in the categorized CPSEs are given in the table 4.1:

Table 4.1

Schedule	Chief Executive		Whole Time Director	
	2006	2007	2006	2007
Schedule A	52	54	-	-
Schedule B	87	77	194	201
Schedule C	54	48	209	181
Schedule D	07	06	68	67
Total	200	185	471	449

4.2 Corporate Governance and CPSES

Corporate Governance as a concept has generated extensive debate during the last few years due to the fast changing economic scenario all over the world. The term Corporate Governance includes the policies and procedures adopted by a

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

All listed companies in India (including listed CPSEs) are covered by the SEBI guidelines. To further improve Corporate Governance in India, SEBI revised the code of Corporate Governance based upon the recommendations of N.R. Narayana Murthy Committee set up in 2002. Clause 49 of SEBI guidelines mandates a listed company to comply with the various provisions relating to corporate governance. The Organization for Economic Cooperation and Development (OECD), which is a forum of the Governments of 30 democracies also took initiatives to address governance issues and it suggested principles of Corporate Governance. India is not a member of OECD. In September 2005, the OECD circulated guidelines on Corporate Governance of State-owned enterprises. These guidelines cover issues like (i) ensuring an effective legal and regulatory framework for State-owned enterprises; (ii) the State acting as an owner; (iii) equitable treatment of shareholders; (iv) relations with stakeholders; (v) transparency and disclosures; and (vi) responsibilities of the Boards of State-owned enterprises.

The post-1991 period of economic liberalization has witnessed significant changes in the public sector policy. The areas reserved for 'public sector' were reduced. The CPSEs were expected to be independent of Government support and depend more and more on internal resources and concentrate on improvement in operations as efficiency and functions on commercial lines.

In pursuance of the Industrial Policy Statement of 24.7.1991, moreover, detailed guidelines on composition of Board of Directors were issued by the Department of Public Enterprises (DPE) in March 1992. These guidelines inter-alia provided that at least one-third of the Directors on the Board of a CPSE should be non-official Directors. The Navratna and Miniratna schemes evolved by the Government in 1997, furthermore provided that these CPSEs should set up Audit Committees. Based on the SEBI guidelines, instructions were issued by DPE in November 2001 stating that at least half of the Board of listed CPSEs with executive Chairman should be Independent Directors.

The present policy of the Government towards Central Public Sector Enterprises is enunciated in the National Common Minimum Programme (NCMP). Among other things, NCMP commits (i) to devolve full managerial and commercial autonomy to successful, profit-making companies operating in a competitive environment and (ii) public sector companies will be encouraged to enter the capital market to raise resources and offer new investment avenues to retail investors.

4.2.1 Guidelines on Corporate Governance

The Government has enhanced the powers delegated to Navratna, Miniratna and other profit making PSEs and more CPSEs are being granted Navratna status. As a result the public accountability of the CPSEs has increased. In this context, Government has approved the implementation of Guidelines on Corporate Governance for CPSEs. These guidelines have been formulated by DPE keeping in view relevant laws, instructions and procedures. The views of various stakeholders such as administrative Ministries/ Departments, CPSEs, nodal Ministries/ Departments like Company Affairs, Finance (Expenditure), Comptroller and Auditor General (C&AG), Securities and Exchange of Board of India (SEBI), Institute of Chartered Accountants of India (ICAI), Institute of Company Secretaries of India (ICSI), Institute of Cost & Works Accountants of India (ICWAI), National Foundation for Corporate Governance (NFCG), Institute of Public Enterprise, etc. were taken into account while formulating these Guidelines.

These guidelines are applicable to listed as well as un-listed CPSEs and cover issues like composition of Boards, Audit Committee, Subsidiary companies, disclosures, Code of conduct and ethics, risk management and compliance.

Composition of Board

In respect of the Board composition, these Guidelines provide that the number of functional Directors should not exceed 50% of the actual strength of the Board and the number of Government nominee Directors shall be restricted to maximum of two. In case of listed CPSEs with executive chairman, the number of non-official Directors shall be at least 50% of Board members. In case of unlisted CPSEs 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. As in clause 49 of Listing Agreement Prescribed by SEBI, relevant clauses have been incorporated in these guidelines to ensure 'independence' of non-official Directors and avoid potential conflict. 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 in a year, and all relevant information is required to be given to the Board. Further, the Board will 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 will undertake suitable training programmes for its new Board members.

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 Chairman of the Audit Committee to be independent Director. The Audit Committee has been given extensive powers with regard to financial matters of company, and should meet at least 4 times in a year.

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 the financial statements of the subsidiary. All significant transactions and arrangements of subsidiary are required to be brought to the attention of Board of Directors of holding company.

Disclosures

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

Compliance

It has also been mandated in the Guidelines that there will be a separate section on Corporate Governance in Annual Report of company 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.

Implementation and Grading

The DPE will grade CPSEs on the basis of their compliance with Guidelines and such grading will be used for MOU Awards.

All CPSEs are required to implement these Guidelines on Corporate Governance for one year and suitable adjustments will thereafter be made in these Guidelines in the light of experience gained. Keeping in view the importance of State level Public Enterprises, all States have also been advised to implement these Guidelines.

4.3 Professionalization of Boards of CPSEs

The 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 DPE 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

As regards selection and appointment of non-official Directors on the Boards of CPSE, the following eligibility criteria is being adopted:-

(a) Age: - 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.

(b) Qualification: - Minimum qualification for part time non official Directors would be graduate degree from a recognized university.

(c) Experience:- Persons of eminence with proven track record from industry, business or agriculture. CMD/ MD in corporate sector/PSE; Professor level in an academic institution or professionals of repute like eminent Chartered Accountants/Cost Accountants at the level of Directors of Institutes/Heads of Department; persons having experience of not less than 10 years at the level of Joint Secretary and above in the Government.

The proposals for appointment of non-official Directors are initiated by the concerned Administrative Ministries/Departments. In so far as Navratna and Miniratna CPSEs are concerned, the selection of non-official Directors is made by the Search Committee consisting of Chairman (PESB), Secretary (DPE), Secretary of the administrative Ministry/Department of the CPSE, Chief Executive of the concerned CPSE and non-official Members. In the case of remaining CPSEs (other than Navratna/Miniratna CPSEs), Public Enterprises Selection Board (PESB) makes the selection of non-official Directors. The concerned Administrative Ministry/Department appoints the non-official Directors on the basis of recommendations of Search Committee/PESB after obtaining the approval of competent authority, i.e. Appointments Committee of Cabinet (ACC).

The Navratna scheme provides that the Boards of these companies should be professionalised by inducting a minimum of 4 non-official Directors before their Boards can exercise the enhanced powers. Similarly, in the case of Miniratna CPSEs also the induction of minimum 3 non-official Directors is pre-condition for the exercise of delegated powers under the Miniratna Scheme.

During the last two and half years, the Search Committee and Public Enterprises Selection Board have recommended the names of approximately 380 persons for appointment as non-official Directors on the Boards of CPSEs.

The Department Related Parliamentary Standing Committee (DRPSC) on Industry has been reviewing the progress of professionalistion of Boards of CPSEs. The Committee has observed that there were large number of vacant positions of non-official Directors on the Boards

of CPSEs and there has been considerable delay in their appointments.

The DRPSC on Industry in its 168th report (May 2005) and 198th report (May 2007) have made a number of recommendations for positioning of requisite number of non-official Directors on the Boards of CPSEs in a time-bound manner which are under consideration of the Government.

4.4 Wage & Salary Policy

The Department of Public Enterprises functions as nodal Department in respect of policy relating to wage settlements of unionized employees, pay revision of non-unionized supervisors and executives holding posts below the Board level as well as at the Board level. The Department renders advice to the administrative Ministries/ Departments and the CPSEs in matters relating to the wage policy and revision in the scales of pay of the executives. The CPSEs are largely following Industrial Dearness Allowance (IDA) pattern scales of pay and in some cases Central Dearness Allowance (CDA) pattern scales of pay.

4.4.1 Industrial Dearness Allowance (IDA)

Government policy relating to pay scales and pay pattern states that all employees of the CPSEs should be on IDA pattern and related scales of pay. Instructions had been issued by the DPE in July, 1981 and July, 1984 to all the administrative Ministries that as and when a new CPSE is created or established, IDA pattern and related scales of pay should be adopted ab-initio. There are 217 CPSEs (excluding Banks, Insurance Companies and newly setup CPSEs) under the administrative control of the Central Government. They employ approximately16.14 lakh workmen, clerical staff and executives. Out of this, around 96.39% of the workmen and executives are on IDA pattern and related scales of pay.

Pay Revision for Executives/ non-unionised supervisors

The last pay revision for the IDA executives and non-unionized supervisors was done w.e.f 1.1.97 for a period of ten years based on the recommendations of Justice Mohan Committee.

Second Pay Revision Committee

The Second Pay Revision Committee for the revision of scales of pay of Board level and below Board level executives including non-unionised supervisors of CPSEs following Industrial Dearness Allowance (IDA) pattern scales of pay w.e.f. 1.1.2007 has been constituted vide the Government of India Resolution dated 30.11.2006. The Pay Revision Committee is headed by Justice M.Jagannadha Rao, retired Judge, Supreme Court of India as Chairman. Dr. Nitish Sengupta (Economist & former Member Secretary, Planning Commission, Government of India), Shri P.C. Parakh (former Secretary, Department of Coal, Government of India) and Shri R.S.S.L.N. Bhaskarudu (former Managing Director, Maruti Udyog Ltd. & ex-Chairman, Public Enterprises Selection Board) are Members. Secretary and Joint Secretary, Department of Public Enterprises are ex-officio Member and Secretary of the Committee, respectively. The Committee has time to make its recommendations within a period of 18 months.

The Committee will work out a comprehensive pay package for the Board level, below Board level and non unionized supervisors, that is suitably linked to promoting efficiency, productivity and economy through rationalization of structures, organizations, systems and processes as well as promoting functional and operational autonomy within the Public Sector Enterprises with a view to leveraging economy, responsibility, transparency, discipline, accountability, assimilation of technology and research and development. 16 meetings of 2nd Pay Revision Committee have taken place by September 2007, at Delhi, Kolkatta, Ranchi, Hyderabad, Bhubaneswar and Mumbai.

Wage Revision for Workmen under IDA pattern

In respect of workmen following IDA pattern scales of pay, the managements of CPSEs have freedom to negotiate revision of pay scales for the workmen within certain stipulated conditions. The Sixth round of wage negotiation to be entered into between managements and the

workers' unions was to come to effect from 1.1.1997 for 10-year periodicity and 1.1.2002 for five-year periodicity respectively.

Policy on 7th Round Wage negotiations

DPE vide its OM dated 9.11.2006 has issued the policy guidelines for the 7th Round of Wage Negotiations (which falls due 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.

Judgement of Supreme Court on pay revision.

The Supreme Court in Transfer petition No. 8 of 2000 in A.K. Bindal and others vs Union of India has passed the landmark Judgement on 25.4.2003 in case of pay revision of sick CPSEs referred to BIFR. The Supreme Court observed that the employees of the Government Companies are not civil servants and therefore, they have no legal right to claim that government should pay their salary. It also observed that economic viability or financial capacity of the employer Company should be taken into consideration in the matter of revision of the pay scales of the employees. The Supreme Court further, observed that there is no legal or constitutional infirmity in DPE OM dated 19.7.1995 stipulating that for the sick PSEs registered with the BIFR, pay revision and grant of other benefits will be allowed only if it is decided to revive the unit and the revival package should include the enhanced liability on this account.

4.4.2 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 companies as on 1.1.1986 and upto 31.12.1988 and were in receipt of CDA pattern pay scales during that time. A High Power Pay Committee (HPPC) was appointed by the Government in pursuance of the Supreme Court directions dated 12.3.1986 which submitted its Report to the Government on 24.11.1988. Its recommendations have been implemented in these CPSEs. In pursuance of the Supreme Court direction dated 3.5.1990 read with the subsequent directions dated 28.8.1991, IDA pattern and related scales of pay have been introduced in these CPSEs with effect from 1.1.1989. Out of 69 CPSEs (covered under HPPC), at present there are 58 CPSEs, which are following both CDA and IDA pattern scales of pay. As per the recommendations of the High Power Pay Committee and Supreme Court directives thereon, the employees following CDA pattern of scales of the Central Public Sector Enterprises would get pay revision only as and when similar changes are effected for the Central Government employees. Accordingly, the recommendation of 5th Pay Commission w.e.f. 1.1.1996 had also been extended to the employees of CPSEs following CDA pattern of scales. In addition, the employees of CPSEs following CDA pattern have also been allowed the benefit of merger of 50% of DA with basic pay w.e.f 1.4.2004. This benefit has been allowed to the employees of CPSEs that are not loss making and are in a position to absorb the additional expenditure on account of merger of DA with basic pay from their own resources without any budgetary support from the Government.

4.5 Executives Development Programmes

Out of around 16.14 lakh employees in CPSEs (excluding Casual Workers) nearly one fourth of the total are in supervisory and management cadres. To improve the quality of manpower and to upgrade their knowledge and skills, the PSEs have taken various steps like research and development(R&D) and organizing training programmes. Besides, in-house training programmes, the CPSEs depute their executives for various training programmes being organized by the premier Management/Training Institutes in India and abroad**.**

The CPSEs design their own human resources development programmes to upgrade the skills and knowledge of middle and senior level executives by giving them training in India and abroad. These efforts of CPSEs are being supplemented by some of the premier management / training institutes of the country. The CPSEs are sending their executives to Institutes recommended by the Department of Public Enterprises(DPE). During 2006-07,

training programmes were conducted by CMC Limited, Jawaharlal Nehru Institute for Development, National Productivity Council, Institute of Company Secretaries, the Institute of Cost and Works Accountants of India, Institute of Public Enterprise (Hyderabad); National Institute of Financial Management, (Faridabad,) Institute of Chartered Accountants of India, Indian Society for Training and Development, Institute of Company Secretaries of India etc.

In addition to above programmes, the executives of CPSEs undertook various long term and short term management development training courses conducted by International Centre for Promotion of Enterprises (ICPE) Slovenia, which is an inter governmental organization. During these management development training courses, the participants also get an opportunity to interact with several important organizations concerned with economic development in Slovenia and other Western European countries. The inputs and knowledge acquired helps them in improving their management capabilities particularly in the context of economic liberalization and globalization of the Indian economy. ICPE conducts full year MBA Course every year. In addition, ICPE also conducts short duration courses, such as, Total Quality Management, Public Policy and Management, Sustainable Development and Advanced Management Programme.

The participants for the above courses have to be senior/middle management executives with at least 15 years experience from Public Sector Enterprises in India. The DPE circulates these course programmes to CPSEs for nominating Executives who fulfill the qualification/ experience prescribed for these Courses. Nomination of candidates for these courses are being made by the concerned CPSE, and names of eligible candidates are forwarded by DPE to ICPE for final selection.

4.6 Voluntary Retirement Scheme (VRS)

In the present market scenario, in view of the ongoing restructuring in the industries including CPSEs , several measures for reforms and restructuring of CPSEs have been taken up by the Government. Right sizing of man power in the CPSEs is one of thee measures adopted. Restructuring of manpower may lead to redundancy. In this context, it has been the constant endeavor of the Government to safeguard the interest of the employees in CPSEs.

In the process, the Voluntary Retirement Scheme, which was initially announced in October,1988 for the first time was further liberalized and a comprehensive package was notified vide DPE's O.M dated 5th May,2000 so as to cater to the need of the CPSEs to meet their objectives and also to protect the interest of the workers affected due to various forms of restructuring.

Difficulties were being faced by the enterprises where the wage revision effective from 1st January,1992 or 1997,as the case may be ,could not be effective. This leads to the hardships to the employees involved in the enterprises. The Voluntary Retirement Scheme was modified 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. These increases in VR compensation are to be computed based on the existing pay of the employees. The VRS/VSS ex-gratia in respect of CDA pattern employees at 1986 scales of pay has been enhanced by 50% vide DPE's OM dated 26.10.2004. These liberalizations in the compensation package would help the sick and loss making enterprises in downsizing their manpower.

Beginning with the introduction of the Voluntary Retirement Scheme initially in October 1988 till March 2007 about 5.87 lakh employees have been released under VRS.

VRS in CPSEs that can sustain VRS on their own

Financially sound enterprises who have to reduce their workforce in order to remain competitive may 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 for every completed year of service. However, such compensation will not exceed the salary for the balance period of service left.

VRS in marginally profit making or loss making and sick CPSEs

Marginally profit making or loss making CPSEs have been permitted to introduce an improved VRS based on Gujarat model. Under this model an employee will receive compensation as follows:-

(i) 35 days salary for each completed year of service; and

(ii) 25 days salary per year of service for the balance of service left until superannuating subject to some conditions.

The Model known as DHI (Department of Heavy Industry) model, available to employees of sick and unviable CPSEs is to allow ex-gratia payment equivalent to 45 days for each completed year of service or the salary for the remaining months of service left, whichever is less. However, all those who have completed not less than 30 years of service, are eligible for a maximum of 60(sixty) months salary as compensation subject to the amount not exceeding the salary for the balance period of service left.

The VRS optees in CPSEs which are marginally profit /loss making or sick /unviable can opt for either of the Gujarat model or DHI model.

4.7 Scheme of Counseling, Retraining and Redeployment (CRR)

Restructuring of enterprises is a global phenomenon, particularly in the context of liberalized economy. There has been thrust laid on restructuring the central public sector enterprises both at macro as well as at micro level. In the process, rationalization of manpower has also become a necessity. But this affects in some cases the interest of the workers. As such, the policy of the Government has been to implement reforms with a human face and provide adequate safety net for the affected workers.

Considering the emerging need to have safety net, the Government had established National Renewal Fund (NRF) in February, 1992 to cover broadly the expenses of VRS and to provide retraining to the workers in the organized sector. However, in the backdrop of the on going restructuring exercises, emphasis was given to the needs of CPSEs. The NRF was abolished in February, 2000. The retraining activity was earlier administered by the Department of Industrial Policy & Promotion untill 31.3.2001. The scheme for Counselling, Retraining and Redeployment (CRR) of rationalized employees of CPSEs is under implementation by the Department of Public Enterprises since 2001-02.

The scheme for Counselling, Retraining and Redeployment (CRR), inter-alia, aims for the followings:

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

While the main elements of the CRR programme are Counselling, Retraining and Redeployment, a new element of sensitization programme has also been included under CRR programme.

Counselling helps the rationalized employees to absorb the trauma of leaving the organization, to properly manage their funds including compensation and to motivate them to face the challenges and to re-join the productive process. Similarly, **retraining** strengthens their skill/expertise. Selected training institutes impart need-based training of 20 days / 30 days / 40 days modules. The faculty support is both internal and external, and the approach is to provide classroom lectures as well as field experience. In the process, trainees interact with experts from

various fields and are being helped in preparation/finalization of project reports. The retraining should lead to **redeployment** mostly through self-employment. In the present scheme, the objective is to maximize the rate of self-employment. The Nodal Training Agencies implementing CRR, provide need-based support, linkage with credit institutions and follow up with the retrained personnel.

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

For monitoring the CRR programme, the in-built mechanism involves field visits and inspections by the concerned officers of DPE. Coordination Committees at local level have also been formed. The Scheme also provides for inter-ministerial Review Committee under Secretary, Department of Public Enterprises with members from concerned Governments/agencies/CPSEs.

The Nodal Training Agencies are required to counsel VRS optees, impart training and reorientation, develop curriculum /materials, prepare feasibility report and do market survey, do post training follow up, interface with credit institutions, provide support in self employment, have regular liaison with CPSEs, and convene meetings of Coordination Committee etc.

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

A Plan fund of Rs. 8 crore was allocated initially during 2001-02, which was enhanced to Rs.10 crore during 2002-03 and 2003-04. The plan fund substantially increased to Rs. 30 crore during 2004-05 and 2005-06 and further enhanced to Rs. 31.50 crore during 2006-07. During 2006-07, 31 Nodal Training Agencies were operating with 102 Employees Assistance Centres (EACs) all over the country. Year wise number of persons trained under the scheme is shown below:-

Year	No. of persons trained
2001-02	8064
2002-03	12066
2003-04	12134
2004-05	28003
2005-06	32158
2006-07	34576
Total	127001

This scheme is being continued in the 11th Plan Period. A fresh set of guidelines have hoverver, been issued as on 5.11.2007.

The list of operating Nodal Training Agencies implementing the CRR scheme is given at Annex. 4.1.

4.8 Employment under Reserved Categories

The Personnel and Recruitment Policies of the Public Enterprises are formulated by the management of respective Public Sector Enterprises. However, on the matters of general importance, policy guidelines are issued by the Government to the enterprises which are to be kept in view by the latter while framing their individual corporate policies.

Apart from having formal Presidential Directives issued to Public Sector Enterprises by the concerned administrative Ministries so as to ensure reservation in regard to employment for Scheduled Castes, Scheduled Tribes and Other Backward Classes (OBCs), on the same lines as applicable to the Central Government Ministries/ Departments, the Department of Public Enterprises also keeps a watch on the reservation policies in the recruitment by calling for Annual Reports from the PSEs and also by taking necessary follow-up action after scrutinizing these reports. However, in the case of details of implementation, the Public Enterprises generally follow the instructions from Department of

Personnel & Training. A comprehensive Presidential Directive incorporating all important instructions on reservation for SCs and STs, that was issued on 25th April, 1991 to all administrative Ministries / Departments concerned for formal issuance to the Public Enterprises. Subsequently, changes and modifications are circulated to PSEs through their administrative Ministries/ Departments for information and compliance.

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 providing reservation of 27% of vacancies in favour of Other Backward Classes (OBCs) in Civil Posts and Services under the Government of India. 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 forwarding these instructions to the Public Sector Enterprises through their administrative Ministries for compliance. A comprehensive Presidential Directive incorporating all instructions was prepared by the Department of Public Enterprises and issued to all administrative Ministries vide DPE's OM dated 27th July, 1995 for formal issuance to the PSEs under their control, as well as for compliance under the relevant Article of the Articles of Association/ Section of the relevant Act.

Athough the administrative Ministries/ Departments concerned have been made formally 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 PSEs have been advised by this Department to make vigorous efforts to wipe out the backlog vacancies so as to improve the representation of Scheduled Castes/Scheduled Tribes/OBCs in the services, particularly in Group 'A' & 'B' posts. Public Enterprises 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 reservation for candidates belonging to Scheduled Castes, Scheduled Tribes and OBCs where recruitment is on All-India basis through open competition as well as other categories of persons entitled to reservation of vacancies is indicated below:

Category	Groups		
	'A' & 'B'	'C'	'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%

The position regarding representation of Scheduled Castes and Scheduled Tribes in Public Sector Enterprises as on 1.1.1971 (the earliest data available) and the comparative position as on the first day of the year 1980, 2005, 2006 and 2007 is given at Annex. 4.2.

It may, however, be noted from Annexure 4.2 that as on 1.1.2007 there has been improvement in the representation of both Scheduled Castes and Scheduled Tribes in Group 'A' and Group 'B' posts over the years. 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 13.09% and 4.61% respectively as on 1.1.2007. 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 13.51% and 6.34% respectively as on 1.1.2007. Though the overall percentage of representation of SC/ST in services is adequate, the representation in Group 'A' and Group 'B' is not yet satisfactory. This is for the reasons that the private sector companies that were taken over by the Government, and

account for a significant percentage of total employment in the public sector, did not necessarily have any scheme of reservation for Scheduled Castes/Scheduled Tribes. The shortfall in the representation of Scheduled Castes/ Schedule Tribes in Group 'A' and Group 'B' posts in Public Enterprises is also on account of non-availability of suitable Scheduled Castes and Scheduled Tribes candidates in technical disciplines. Most of the Public Enterprises being in the manufacturing/ production sector, have preponderance of technical posts in Group 'A' and 'B' services. The representation of OBCs in Group 'A' and 'B' posts as on 1.1.2007 is 6.84% and 8.58% respectively. Though the representation of OBCs in all Groups 'A', 'B', 'C' and 'D' posts has improved, the overall percentage of OBCs in services is not satisfactory.

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

Department of Public Enterprises have extended the scheme for reservation for Ex-servicemen to the Public Enterprises through the administrative Ministries/ Departments, and instructions streamlining the procedure for recruitment of Ex-servicemen have been issued so as to augment the in-take in the services of public enterprises. Such PSEs, 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 to all the administrative Ministries/ Departments concerned with the PSEs for employment of physically handicapped persons in PSEs on 22.4.1991 incorporating all instructions issued on the subject. With the enactment of the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995, the reservation to physically handicapped persons stood extended to identified Group 'A' and 'B' posts filled through Direct Recruitment. As per the Act, not less than 3% 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 PSEs have been advised to comply with the provisions of the Act.

Annex. 4.1

List of Nodal Agencies implementing CRR Scheme for CPSEs

Sl. No.	Name of Agency
1.	ASSOCHAM, Delhi
2.	CIPET , Chennai
3.	CIPET, Bhubaneshwar
4.	CIPET, Amritsar
5.	CIPET, Hajipur
6.	CIPET, Guwahati
7.	Central Leather Research Institute, Chennai
8.	Centre for Development of Advanced Computing, Mohali
9.	CMC Ltd.
10.	Electronics Service & Training Centre, Ramnagar
11.	Indian Council of Small Industries, Kolkata
12.	Institute of Entrepreneurship Development, Patna.
13.	Institute of Labour Development, Jaipur
14.	KIIT, Bhubaneswar
15.	Madhya Pradesh Consultancy Organisation, Bhopal
16.	MITCON, Pune
17.	NISIET, Hyderabad
18.	National Productivity Council, New Delhi
19.	National School of Computer Education, Kolkata
20.	National Small Industries Corpn Ltd., New Delhi
21.	NITRA, Ghaziabad
22.	Small Industries Service Institute, Bangalore
23.	Small Industries Service Institute, Chennai
24.	Small Industries Service Institute, Coimbatore
25.	Small Industries Service Institute, Indore
26.	Small Industries Service Institute, Kanpur
27.	Small Industries Service Institute, Kolkata
28.	Small Industries Service Institute, Patna.
29.	Small Industries Service Institute, Raipur
30.	U.P. Industrial Consultants Ltd., Kanpur
31.	Academy Suburbia, Kolkata

Annex. 4.2

Position regarding representation of Scheduled Castes and Scheduled Tribes in Public Sector Enterprises

Group	Total No. of employees	Representation of SCs/STs			
		SCs No.	%age	STs No.	%age
As on 1.1.1971 (Based on information furnished by 85 enterprises)					
Group 'A'	31,311	163	0.52	53	0.17
Group 'B'	35,751	549	1.54	57	0.16
Group 'C'	3,51,347	19,302	5.59	4,519	1.29
Group 'D' (Excluding Safai Karamcharis)	1,29,220	20,626	15.96	7,680	5.94
Total	5,47,629	40,640	7.42	12,309	2.25
Group 'D' (Safai Karamcharis)	5,551	4,547	81.75	77	1.39
Grand Total	5,53,180	45,187	8.17	12,386	2.24
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' (Excluding Safai Karamcharis)	3,53,981	79,167	22.36	38,083	10.76
Total	18,20,302	3,17,401	17.44	1,38,364	7.60
Group 'D' (Safai Karamcharis)	36,030	23,309	64.69	1,492	4.14
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.	%age	STs No.	%age	OBCs No.	%age
As on 1.1.2006 (Based on information furnished by 201 enterprises)							
Group 'A'	164267	20864	12.70	5874	3.57	11023	6.71
Group 'B'	162167	21695	13.37	10121	6.24	13730	8.46
Group 'C'	677143	131933	19.48	64125	9.46	112939	16.67
Group 'D' (excluding SafaiKaramcharis)	237096	53087	22.39	29878	12.60	43899	18.51
Total	1240673	227579	18.34	109998	8.86	181591	14.63
Group 'D' (Safai Karamcharis)	13398	10610	79.19	232	1.73	417	3.11
Grand Total	1254071	238189	18.99	110230	8.78	182008	14.51

Group	Total No. of employees	Representation of SCs/STs/OBCs					
		SCs No.	%age	STs No.	%age	OBCs No.	%age
As on 1.1.2007 (Based on information furnished by 210 enterprises)							
Group 'A'	1,91,299	25,058	13.09	8,835	4.61	13,098	6.84
Group 'B'	1,69,191	22,860	13.51	10,739	6.34	14,526	8.58
Group 'C'	6,65,996	1,28,352	19.27	63,809	9.58	1,08,653	16.31
Group 'D' (excluding Safai Karamcharis)	2,31,640	50,142	21.64	37,012	15.97	49,960	21.56
Total	1258126	226412	17.99	120395	9.56	186237	14.80
Group 'D' (Safai Karamcharis)	14,553	11,509	79.08	439	3.01	476	3.27
Grand Total	12,72,679	2,37,921	18.69	1,20,834	9.49	1,86,713	14.67

Note :– Group 'A' : Executive level, Group 'B' : Supervisory level, Group 'C' : Workmen/Clerical level, Group 'D' : Semi-skilled/Unskilled labour

Annex. 4.3

Statement Showing Total Employees, Salaries, Wages and other Benefits Received by the Employees of Central Public Sector Enterprises

(Rs. in crores)

Sl	Enterprise Group No.	Number of Employees		Salaries & Wages and other Benefits Including Bonus	
		2006-07	2005-06	2006-07	2005-06
1.	Agro Based Industries	4350	4514	60.47	56.79
2.	Coal & Lignite	457218	467422	10848.61	10430.43
3.	Crude Oil	42421	44236	2753.46	1599.48
4.	Other Minerals & Metals	35539	36322	1136.21	1015.89
5.	Steel	152920	160489	5943.62	4955.03
6.	Petroleum (Refinery & Marketing)	65418	63212	5042.20	3949.01
7.	Fertilizers	15240	15688	570.31	516.82
8.	Chemicals & Pharmaceuticals	7475	7989	233.16	198.38
9.	Heavy Engineering	50421	51860	2534.07	2032.06
10.	Medium & Light Engineering	68601	70044	1761.39	1669.23
11.	Transportation Equipment	65913	65437	2097.59	1789.68
12.	Consumer Goods	28629	10827	617.91	280.14
13	Textiles	22814	42586	374.21	481.95
14	Generation	56996	57311	1906.02	1570.07
15.	Transmission	7427	7101	349.93	263.36
16.	Trading & Marketing	55661	57079	1614.17	1550.87
17.	Transportation Services	64153	63753	4151.48	3875.97
18.	Contract & Construction Services	17354	17191	370.73	331.70
19.	Industrial Deveplopment & Tech. Consultancy Services	12604	13167	699.42	632.72
20.	Tourist Services	4821	4866	127.98	107.19
21.	Financial Services	8530	8942	252.79	198.96
22.	Telecommunication Services	369356	378274	9133.87	9335.29
23.	Enterprises Under Construction	308	245	0.00	0.00
	Grand Total :	1614169	1648555	52579.60	46841.02

Annex. 4.4

Statement showing Commodity Group-wise Employment,Gross Block,Cost of Production and Labour Content in CPSEs during 2006-07

Sl. No.	Commodity Group	No. of Employees	Gross Block (Rs. in crore)	Gross Block per Employee (Rs. in thousands)	Cost of Production (Rs. in crore)	Labour Content (Rs. in crore)	Labour Content as % of cost of Prodcution
1	Agro Based Industries	4350	92.13	211.79	260.87	60.47	23.18
2	Coal & Lignite	457218	39476.62	863.41	25977.71	10848.61	41.76
3	Crude Oil	42421	129492.73	30525.62	42295.82	2753.46	6.51
4	Other Minerals & Metals	35539	13477.04	3792.18	6426.24	1136.21	17.68
5	Steel	152920	39206.49	2563.86	33624.79	5943.62	17.68
6	Petroleum (Refinery & Marketing)	65418	121087.91	18509.88	472588.89	5042.20	1.07
7	Fertilizers	15240	10445.83	6854.22	13156.12	570.31	4.33
8	Chemicals & Pharmaceuticals	7475	1345.78	1800.37	1492.61	233.16	15.62
9	Heavy Engineering	50421	4762.81	944.61	15626.89	2534.07	16.22
10	Medium & Light Engineering	68601	7382.69	1076.18	10641.10	1761.39	16.55
11	Transportation Equipment	65913	6370.82	966.55	14916.19	2097.59	14.06
12	Consumer Goods	28629	4693.98	1639.59	3592.33	617.91	17.20
13	Textiles	22814	646.17	283.23	2425.81	374.21	15.43
14	Generation	56996	103290.91	18122.48	32680.35	1906.02	5.83
15	Transmission	7427	29014.84	39066.70	2625.54	349.93	13.33
16	Trading & Marketing	55648	2846.04	511.44	96411.55	1613.79	1.67
17	Transportation Services	64166	29762.86	4638.42	27024.60	4151.86	15.36
18	Contract & Construction Services	17354	4474.93	2578.62	5802.20	370.73	6.39
19	Industrial Deveplopment & Tech.consultancy Services	12604	729.00	578.39	3202.92	699.42	21.84
20	Tourist Services	10077	236.96	235.15	984.05	205.27	20.86
21	Financial Services	3274	844.97	2580.85	8574.17	175.50	2.05
22	Telecommunication Services	369356	134616.50	3644.63	36324.98	9133.87	25.14
23	Enterprises Under Construction	308	289.43	9397.08	0.00	0.00	**********
	Grand Total :	1614169	684587.44	4241.11	856655.73	52579.60	

Annex. 4.5

Per Capita Emoluments of Public Sector Emplyoees in Relation to increase in Average All-India Consumer Price Index (1960=100)

Year	Employ. (in lakhs) (excl. Casual & daily rated workers)	Emoluments (Rs. in crore)	Per Capita Emoluments (Rupees)	%age increase over 1971-72 per capita	Average Index	Percentage increase over 1971-72
1971-72	7.01	415	5920	-	192	-
1972-73	9.32	541	5805	1.94	207	7.81
1973-74	13.44	749	5573	5.86	250	30.21
1974-75	14.32	1060	7402	25.03	317	65.10
1975-76	15.04	1352	8983	51.74	313	63.02
1976-77	15.75	1408	8940	51.01	301	56.77
1977-78	16.38	1646	10048	69.73	324	68.75
1978-79	17.03	1908	11210	89.36	331	72.40
1979-80	17.75	2213	12468	110.61	360	87.50
1980-81	18.39	2619	14239	140.52	401	108.85
1981-82	19.39	3133	16158	172.94	451	134.90
1982-83	20.24	3649	18029	204.54	486	153.13
1983-84	20.72	4485	21549	264.00	547	184.92
1984-85	21.07	5126	24328	310.95	582	203.13
1985-86	21.54	5576	25887	337.28	620	222.92
1986-87	22.11	6371	28820	386.82	674	251.04
1987-88	22.14	7193	32537	449.61	736	283.23
1988-89	22.09	8683	39415	565.79	803	318.23
1989-90	22.36	9742	43665	637.58	855	345.31
1990-91	22.19	10912	49179	730.73	951	395.31
1991-92	21.79	12311	56508	854.52	1079	461.98
1992-93	21.52	13983	64983	997.69	1185	517.1
1993-94	20.70	14913	72043	1116.94	1272	562.50
1994-95	20.62	17015	82517	1293.87	1402	630.21
1995-96	20.52	21931	106876	1705.34	1542	703.13
1996-97	20.08	22219	110662	1769.29	1687	778.65
1997-98	19.59	25385	129582	2088.89	1803	839.06
1998-99	19.00	26254	138179	2234.10	2039	961.98
1999-00	18.06	30402	168339	2743.56	2109	998.44
2000-01	17.40	38223	219672	3610.67	2190	1440.62
2001-02	19.92	38556	193554	3169.49	2284	1089.58
2002-03	18.66	42169	225986	3717.33	2375	1136.98
2003-04	17.62	43919	248481	4097.31	2467	1184.89
2004-05	17.00	48629	286053	4731.97	2561	1236.98
2005-06	16.49	46841	284057	4698.26	2674	1292.71
2006-07	16.14	52580	325774	5402.94	2853	1385.94

Annex. 4.6

Breakup of Total Women Employment in CPSEs during 2006-07

Sl. No.	Commodity Group	Managerial & Supervisory	Non-Exectives	Total
1.	Agro Based Industries	39	245	284
2.	Coal & Lignite	2120	23382	25502
3.	Crude Oil	1295	960	2255
4.	Other Minerals & Metals	290	1857	2147
5.	Steel	1207	7557	8764
6.	Petroleum (Refinery & Marketing)	2492	2053	4545
7.	Fertilizers	275	626	901
8.	Chemicals & Pharmaceuticals	114	434	548
9.	Heavy Engineering	1125	1405	2530
10.	Medium & Light Engineering	1900	10070	11970
11.	Transportation Equipment	991	1521	2512
12.	Consumer Goods	497	812	1309
13.	Textiles	165	919	1084
14.	Generation	1317	2516	3833
15.	Transmission	251	156	407
16.	Trading & Marketing	1015	906	1921
17.	Transportation Services	4115	2616	6731
18.	Contract & Construction Services	389	513	902
19.	Industrial Deveplopment & Tech.consultancy Services	645	304	949
20.	Tourist Services	184	313	497
21.	Financial Services	489	269	758
22.	Telecommunication Services	7959	43736	51695
	Grand Total :	28874	103170	132044

5 PRODUCTIVITY IN CPSEs

The Central Public Sector Enterprises(CPSEs) are technologically complex identities characterized by large scale production. These are capital intensive industries promising higher productivity per unit of input/hour. Both endogenous and exogenous factors influence 'productivity'. While the basket of endogenous factors may constitute of better technology, quality of labour, scale of output and management practice, the exogenous factors may 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 goods and services. A comparison with the peer groups or over time throws light on if 'productivity' is high or low, or whether there is improvement/deterioration in condition during the period under consideration. Some of the important measurements of 'productivity' are capacity utilization, inventory in relation to sales and use of energy in the enterprise. The paragraphs below discuss each of these measurements of productivity in relation to CPSEs.

5.1 CAPACITY UTILIZATION

Capacity utilization is one of the several indicators for measuring efficiency of any unit. Various factors, such as, state of the plant and machinery, technology used, inventory management, management practice, work ethics and external environment affect capacity utilization.

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

The detailed enterprises-wise statement, indicating the unitwise major products and the capacity utilization, for the last three years is given at the end of this Volume (Statement No. 18). The paragraphs below discuss cognate group-wise rated capacity of the enterprises and extent of utilization.

5.1.1 Steel

Six public sector enterprises furnished the information for the year 2006-07. Information on capacity utilization in respect of these five units is given below.

S. No.	Name of enterprises	Product(s)	Capacity utilization (%)		
			2006-07	2005-06	2004-05
1.	Mishra Dhatu Nigam Ltd.	Super Alloys	49.00	45.00	46.00
2.	Maharashtra Eletrosmelt Limited	Silico Manganese	106.69	98.24	98.32
3.	Rashtriya Ispat Nigam Ltd.	Saleable Steel	124.00	122.00	119.00
		Bars	124.00	123.00	121.00
		Wire Rods	124.00	123.00	119.00
		Liquid Steel	120.00	120.00	119.00
4.	Sponge Iron India Ltd.	Sponge Iron	92.00	81.00	96.00
5.	Ferro Scrap Nigam Ltd.	Recovery of scrap	98.46	99.66	98.07
6.	Steel Authority of India Ltd.	Crude Steel	101.23	101.09	-
		Tatal Saleable Steel	109.91	105.28	104.00

Capacity utilization has improved in 2006-07 in respect of 5 CPSEs and it has declined in respect of one CPSE as compared to 2005-06.

Mishra Dhatu Nigam Ltd. produced 1337 MT of alloys during 2006-07 as against the production of 1215 MT in the previous year.

Rashtriya Ispat Nigam Ltd. produced 36.06 lakh tonnes of liquid steel and 32.90 lakh tonnes of saleable steel during 2006-07 as against the production of 36.03 lakh tonnes of liquid steel and 32.37 lakh tonnes of saleable steel during the previous year. The production of bars and wire rods was 8.78 lakh tonnes and 10.55 lakh tonnes in 2006-07 respectively as compared to 8.73 lakh tonnes and 10.43 lakh tonnes during the previous year.

Sponge Iron India Limited produced 55,194 tonnes of 'sponge iron' during the year 2006-07 as compared to 48,302 tonnes during the previous 2005-06.

Ferro Scrap Nigam Limited, processed 11.52 MT tonnes of scrap during the year 2006-07, as compared to 11.66 MT during the previous year.

Maharashtra Elektromselt Limited produced 50,371 tonnes of Silico Manganese during the year 2006-07 as compared to 46,712 tonnes during the previous year.

Steel Authoritys of India Ltd. produced 13503 thousand tonnes of crude steel and 12581 thousand tonnes of total saleable steel in 2006-07 as compared to 13471 thousand tonnes of crude steel and 12050 thousand tonnes of total saleable steel in 2005-06

5.1.2 Minerals and Metals

Six public sector enterprises furnished the information for the year 2006-07. Information in respect of capacity utilization of these enterprises is given below:

S. No.	Name of enterprises	Product(s)	Capacity utilization (%)		
			2006-07	2005-06	2004-05
1.	Bharat Refractories Ltd.	Bricks, Masses & Fireclay	58.76	53.28	48.32
2.	Hindustan Copper Ltd.	KCC-Cathodes	82.30	65.10	37.70
		ICC-Cathodes	86.40	96.40	75.80
		Taloja-Copper Rods	71.20	58.20	45.70
3.	Indian Rare Earths Ltd.	Ilmenite	83.00	98.00	90.00
		Rutile	56.00	73.00	68.00
		Zircon	78.00	105.00	97.00
4.	Kudremukh Iron Ore Ltd.	Iron Ore Concen.	0.00	58.00	65.00
		Iron Ore Pellets	18.00	81.00	95.00
5.	Manganese Ore (India) Ltd.	Manganese Ore	100.00	106.78	125.09
		Elect. Mon Diox	100.00	130.10	112.30
		Ferro Manganese	100.00	61.70	103.25
6.	National Aluminium Co. Ltd.	Alumina Hydrate	93.70	101.00	100.06
		Cast Metal	104.00	104.00	105.59

While the capacity utilization has improved in 2006-07 in respect of 2 CPSEs as compared to 2005-06, it declined in respect of 4 CPSEs.

Bharat Refractories Limited produced 79,632 units (bricks, fireclay and masses) in the year 2006-07 as against the output of 72,199 units during the previous year.

National Aluminium Company Ltd. produced 14.75 lakh MT of alumina hydrate during the year 2006-07 as against 15.90 lakh MT during the previous year. The production of cast metal was 3.59 lakh tones, same as in the previous year.

Hindustan Copper Ltd. produced 39785 tonnes of cathode and 42745 tonnes of cast copper rods during 2006-07 as compared to 36087 tonnes of cathode and 34918 tonnes of cast copper rods during the previous year respectively.

Manganese Ore India Ltd. produced 10.47 lakh tonnes of manganese ore during 2006-07 against the production of 8.64 lakh tonnes during the previous year.

Indian Rare Earths Ltd. produced 384814 tonnes ilmenite, 13481 tonnes rutile and 18771 tonnes zircon during the year 2006-07. The corresponding figures for the previous year were 453606, 17510 and 25269 tonnes respectively.

Kudremukh Iron Ore Co. Ltd. produced 0.63 million tonnes of iron ore pellets during 2006-07 as compared to 2.834 million tonnes in 2005-06. Since the mining activities at Kudremukh have been stopped w.e.f 31.12.2005, there was no production of Iron Ore Concentrate during the year 2006-07.

FCI Aravali Gypsum and Minerals Limited excavated 858881 tonnes of Gypsum during the year 2006-07 as compared to 827026 tonnes in the previous year.

5.1.3 Coal and Lignite

Six enterprises furnished the information for the year 2006-07. Information on capacity utilization in these enterprises for the last 3 years is given below.

S. No.	Name of enterprises	Product(s)	Capacity utilization (%)		
			2006-07	2005-06	2004-05
1.	Bharat Coking Coal Ltd.	Raw Coal	60.95	59.50	45.47
2.	Northern Coalfields Ltd.	Coal	106.95	105.63	100.00
3.	South Eastern Coalfields Ltd.	Coal	108.58	119.72	108.71
4.	Western Coalfields Ltd.	Coal	112.59	116.37	112.59
5.	Neyveli Lignite Corpn. Ltd.	Lignite	87.56	85.15	89.86
6.	Coal India Limited	Coal	99.06	109.78	74.12

While the capacity utilization improved in respect of 3 CPSEs in 2006-07 as compared to 2005-06, it declined in respect of 3 CPSEs.

Northern Coalfields Limited produced 52.16 MT of Coal during the year 2006-07 as compared to 51.52 MTe in the previous year.

Bharat Coking Coal Limited produced 24.205 MT of Raw Coal during the year 2006-07 as compared to 23.311 MT during the year 2005-06.

South Eastern Coalfields Limited produced 143.63 McuM of Coal during the year 2006-07 as compared 137.34 McuM during the previous year.

Western Coalfields Limited produced 43.212 MT of Coal during the year 2006-07 as compared to 43.204 MT in the previous year.

Neyveli Lignite Corporation Ltd. produced 21.014 MT of lignite during 2006-07 as compared to 20.435 MT during the previous year.

Coal India Limited produced 10.50 MT of Coal in 2006-07 as compared to 11.00 MT in 2005-06.

5.1.4 Power

Five public sector enterprises furnished the information for the year 2006-07. Information in respect of capacity utilization of these enterprises for the last 3 years is given below.

While the capacity utilization improved in respect of 3 CPSEs in 2006-07 as compared to 2005-06, it declined in respect of one CPSE.

Satluj Jal Vidyut Nigam Limited generated 6014.480 MU of power during 2006-07 as against 4055.168 MU during the previous year.

Neyveli Lignite Corporation produced 15786.58 MU of power during 2006-07 as compared to 16242.43 MU during the previous

year. The major reason for reduction in power generation is restricted lignite supply from April, 2006 to December, 2006 from Mine-II on account of non-availability of land.

S. No.	Name of enterprises	Product(s)	Capacity utilization (%) 2006-07	2005-06	2004-05
1.	NTPC Limited	PLF	89.43	87.54	87.51
2.	Neyveli Lignite Corporation Ltd. TPS-I, II & III	Power Gross (MU)	72.37	74.46	76.77
3.	Nuclear Power Corporation of India Ltd.	Electricity from Nuclear Energy	63.00	74.00	76.00
4.	Satluj Jal Vidyut Nigam Ltd.	Power Generation	92.22	61.68	85.21
5.	Tehri Hydro-Develop. Corporation	PLF	86.00	0.00	0.00

Nuclear Power Corporation of India Ltd. generated 18634 MUs of electricity during the year 2006-07 as compared to 17136 MUs of electricity in the previous year.

NTPC Limited produced 188.674 BUs of electricity during the year 2006-07 as compared to 170.88 BUs in the year 2005-06.

Tehri Hydro Development Corporation started commercial production during the year 2006-07 and produced 89.6 MW of power.

5.1.5 Petroleum

Nine public sector enterprises furnished information for the year 2006. Information in respect of capacity utilization of these enterprises for the last 3 years is given at next page.

While the capacity utilization improved in respect of 2 CPSEs in 2006-07 as compared to 2005-06 in respect of 6 CPSEs, it declined.

Bharat Petroleum Corporation Ltd. refined 19.78 MMT crude in 2006-07 as compared to 17.24 MMT crude in 2005-06.

Bongaigaon Refinery and Petrochemicals Ltd. refined crude throughput of 2.067 MMT during 2006-07 as against 2.356 MMT during the previous year. The company had shut down DMT and PSF plants in the year 2006-07 due to economic reasons.

Chennai Petroleum Corporation Ltd. processed 10402 TMT of crude during the year 2006-07 as against 10362 TMT processed during the previous year.

GAIL (India) Ltd. produced 10.26 lakh MT of LPG during 2006-07 as against a production of 10.42 lakh MT during the previous year. It also produced 353921 MT polymers as compared to 311469 MT in previous year.

Mumbai refinery of Hindustan Petroleum Corporation Ltd. processed 7.419 MMT of crude oil and Visakh refinery processed 9.244 MMT during the year 2006-07 as compared to 6.248 MMT and 7.574 MMT respectively during the previous year

The combined throughput processed by the seven refineries of the Indian Oil Corporation Ltd. during the year 2006-07 was 44 million tonnes as against the throughput of 38.52 million tones in the previous year. The overall capacity utilization during 2006-07 was 102.7% as compared to 93.2% during the previous year.

NRL produced 2092 TMT of value added products in 2006-07 as compared to 1715 TMT in the previous year.

ONGC produced 27.89 MMT of crude oil in 2006-07 as compared to 26.19 MMT in the previous year. The production of value added products was 3.238 MMT in 2006-07 as compared to 3.364 MMT in the previous year.

MRPL has processed 12.53 MT of crude in 2006-07 as compared to 12.11 MT in 2005-06.

S. No.	Name of enterprises	Product(s)	Capacity utilization (%) 2006-07	2005-06	2004-05
1.	Baharat Petroleum Corpn. Ltd.	Crude	101.44	88.41	104.04
2.	Bongaigaon Refinery and Petrochemicals Ltd.	Crude	88.00	100.26	98.35
		DMT	0.00	21.44	52.40
		PSF	0.00	27.59	67.99
3.	Chennai Petroleum Corpn. Ltd.	Crude	99.06	98.70	85.00
4.	GAIL (India) Ltd.	LPG	87.81	89.17	93.67
		Polymers	110.00	101.00	100.00
5.	Hindustan Petroleum Corporation Ltd	Mumbai - Crude	135.00	113.61	111.20
		Visakh- Crude	123.00	101.00	104.30
6.	Indian Oil Corporation Ltd.	Barauni - Crude	91.20	92.60	84.70
		Gujarat- Crude	94.60	84.30	85.40
		Guwahati- Crude	83.90	86.40	100.20
		Haldia - Crude	97.30	91.70	90.30
		Mathura - Crude	111.00	99.20	79.80
		Panipat- Crude	125.80	108.40	106.50
		Digboi - Crude	90.20	94.60	100.20
7.	Numaligarh Refinery Limited	LPG, MS, ATF, SKO, HSD	83.46	71.09	68.07
8.	ONGC Limited	Crude	91.00	94.50	96.00
9.	Mangalore Refinery Petrochemicals Limited	Crude	129.00	125.00	122.00

5.1.6 Fertilizers

Five public sector enterprises furnished information for the year 2006-07. Information in respect of capacity utilization of these enterprises during the last 3 years is given at next page.

While the capacity utilization improved in respect of all 4 CPSEs in 2006-07 as compared to 2005-06 except for few individual units.

Fertilizer & Chemicals (Travancore) Ltd. produced 183490 MT of Ammonium Sulphate, 721202 MT of Factamfos 20:20 and 41327 MT Caprolatum in 2006-07 as compared to 172986 MT of Ammonium Sulphate, 745902 MT of Factamfos 20:20 and 38666 MT Caprolatum in 2005-06.

Namrup-II and III units of Brahmaputra Valley Fertilizer Corporation Ltd. produced 0.61 lakh MT and 2.47 lakh MT urea respectively during the year 2006-07 as compared to 0.28 lakh MT and 2.06 lakh MT during the previous year. The capacity utilization of Namrup-II plant continued to be 50% due to restriction in supply of Natural Gas.

Madras Fertilizers Ltd. produced 2.81 lakh tonne of ammonia, 4.73 lakh of tonne urea and 0.57 lakh tonne of NPK during 2006-07. The corresponding production figures for the previous year were 2.27 lakh tonne of ammonia, 3.68 lakh tonne of urea and 2.08 lakh tonnes of NPK. The major reason for lower production of NPK was due to raw material limitation on account of paucity of funds.

National Fertilisers Ltd. produced 33.50 lakh MT of urea during 2006-07 as against the production of 33.43 lakh MT during the previous year.

Thal unit of Rashtriya Chemicals and Fertilizers Ltd. produced 18.53 lakh MT Urea and 10.79 lakh MT ammonia during the year 2006-07 as against 16.85 lakh MT Urea and 9.82 lakh MT ammonia during the previous year. The Trombay unit produced 2.11 lakh tonne of ammonia, 4.83 lakh tonne Suphala and 0.35 lakh tones ANP during the year. The production and capacity utilization were affected due to inadequate natural gas supply and shut down due to damage to Prilling tower.

S. No.	Name of enterprises	Product(s)	Capacity utilization (%) 2006-07	2005-06	2004-05
1.	Brahmaputra Valley Fertilizer Corporation Ltd	Urea - Namrup-II	50.83	33.99	0.00
		Urea - Namrup-III	91.59	76.51	75.21
2.	Fertilizers & Chemicals (T) Ltd.	Caprolatum	83.00	77.00	90.00
		Factamfos 20:20	114.00	118.00	88.00
3.	Madras Fertilizers Ltd.	Ammonia	81.20	65.50	86.80
		Urea	97.30	75.70	97.20
		NPK	6.80	24.80	39.70
4.	National Fertilizers Ltd.	Urea - Nangal	100.60	100.30	103.10
		Urea-Panipat	99.40	98.40	103.90
		Urea-Bhatinda	100.00	101.30	104.90
		Urea-Vijaipur I	101.20	106.00	107.10
		Urea-Vijaipur II	112.70	107.10	109.20
5.	Rashtriya Chemicals and Fertilizers Ltd.	Thal -Urea	109.00	105.00	99.00
		Thal - Ammonia	109.00	107.00	103.00
		Trombay Ammonia	71.00	85.00	75.00
		Trombay Suphala	161.00	47.00	99.00
		Trombay ANP	10.00	62.00	65.00

5.1.7 Chemicals and Pharmaceuticals

Thirteen public sector enterprises furnished information. The details of capacity utilization in respect of these enterprises during the last 3 years are given at next page.

While the capacity utilization in respect of 9 CPSEs has increased in 2006-07 as compared to 2005-06, it declined in respect of 2 CPSEs.

Bengal Chemicals & Pharmaceuticals Ltd. produced 2509.7 KL pheneol, 349 KL hair oil, 28.69 crores tablets, 489.5 lakh capsules and 79.7 MT ointment during 2006-07. The comparative figures for the previous year were 2804.8 KL, 450.2 KL, 18.42 crores, 265.8 lakh and 57.3 MT respectively.

Hindustan Antibiotics Ltd. produced 1215 lakh tablets, 575 lakh capsules and 82.36 lakh IV fluids during 2006-07. The comparative figures for the previous year were 703 lakhs, 348 lakhs and 59.61 lakhs respectively. The production of Aniline, Phenol and Acetone in HOC Ltd. during the year was 7100, 40733 & 25463 MT respectively as compared to previous year's production of 12355, 28753 & 18253 MT respectively.

Hindustan Insecticides Ltd. produced 4495 MT of DDT (Tech) during the year 2006-07 as compared to 4429 MT of DDT (Tech) in the previous year.

Hindustan Salts Limited produced 16332 MT of salt, 299 MT of liquid bromine and 1714 MT of rock salt in the year 2006-07 as compared to 2383 MT of salt, 302 MT of liquid

Indian Drugs and Pharmaceuticals Ltd. produced 417 million tablets, 28.4 million capsules and 42 KL of liquid orals during 2006-07 as against 159 million tablets, 16 million capsules and 30 KL of liquid orals during the previous year.

Karnataka Anitbiotics and Pharmaceuticals Ltd. produced 1568 lakh tablets and 182 lakh capsules during 2006-07 as compared to 829 lakh and 185 lakh respectively during the previous year.

Projects & Development India Ltd. produced 220 MT of Catalyst in 2006-07 as compared to 59 MT Catalyst in 2005-06.

Rajasthan Drugs and Pharmaceuticals Ltd. produced 602.20 million tablets during 2006-07 as compared to 641.43 million tablets during previous year. The production of liquids has increased to 356.32 KL during 2006-07 from 332.44 KL of previous year.

Sambhar Salts Ltd. produced 192553 MT of common salt and 35640 MT of processed Salt in 2006-07. The figures in 2005-06 were 190596 MT and 3352 MT respectivelybromine and 1871 MT

S. No.	Name of enterprises	Product(s)	Capacity utilization (%) 2006-07	2005-06	2004-05
1.	Bengal Chemicals & Pharmaceuticals Ltd.	Phenol	83.66	93.49	98.16
		Hair Oil	43.63	56.27	87.45
		Tablet	191.27	122.80	68.33
		Capsule	97.90	53.16	64.88
		Ointment	132.83	95.50	116.17
2.	Bharat Immunologicals & Biologicals Corpn. Ltd.	Oral Polio Vaccine	-	11.70	119.60
3.	Hindustan Antibiotics Ltd.	Vials	26.68	36.85	50.45
		Tablets	41.78	30.51	47.52
		Capsules	19.17	13.13	24.92
		IV Fluids	54.99	49.68	69.87
4.	Hindustan Fluorocarbons Ltd.	PTFE	49.00	46.00	70.00
5.	Hindustan Insecticides Ltd.	DDT Technical	70.85	69.81	64.42
		Malathian (Technical)	72.27	52.94	32.22
		Endosulfan Tech	75.81	16.62	27.81
6.	HOC Ltd.	Aniline	28.00	49.00	64.00
		Phenol	101.83	71.89	121.01
		Hyd. Peroxide	84.00	70.00	95.00
		Acetone	103.34	74.08	123.88
		Acids	-	64.00	77.00
		Nitro products	23.00	40.00	47.00
7.	Hindustan Salts Ltd.	Liquid Bromine	66.44	67.11	72.44
8.	Indian Drugs and Pharmaceuticals Ltd.	Tablets	22.00	8.40	17.00
		Capsules	6.60	3.70	8.10
		Liquid Orals	5.10	3.70	4.20
9.	Karnataka Antibiotics and Pharmaceuticals Ltd.	Capsules	48.00	49.00	132.00
		Liquids/Parenterals	112.00	114.00	87.00
		Tablets	116.00	61.00	57.00
		Dry Powder Vials	76.00	89.00	103.00
10.	Projects & Development (I(Ltd.	Catalyst	17.46	4.68	28.73
11.	Rajasthan Drugs and Pharmaceuticals Ltd.	Tablets	125.45	213.81	126.05
		Capsules	174.70	78.16	72.96
		Powder	117.58	116.64	61.34
		Liquids	89.08	83.11	82.10
		Vials	50.06	21.12	39.33
12.	Orissa Drugs & Pharmaceuticals Limited	Tablets	30.53	19.66	4.26
		Capsules	54.09	21.27	4.42
13.	Sambhar Salts Ltd.	Procssed Salt	36.46	27.36	30.51

of rock salt in the year 2005-06. The production of PTFE in HFL during the year 2006-07 was 245 MT as compared to 228 MT in the previous year.

ODCL produced 457.97 lakh tablets and 129.82 lakh capsules in 2006-07 as compared to 294.85 lakh tablets and 51.05 lakh capsules in 2005-06.

5.1.8 Heavy Engineering

Seven public sector enterprises furnished information. Information in respect of these enterprises during the last 3 years is given below.

S. No.	Name of enterprises	Product(s)	Capacity utilization (%) 2006-07	2005-06	2004-05
1.	Bharat Heavy Electricals Ltd.	Boilers, valves & Auxiliaries	171.00	190.00	128.00
		Power Transformers	107.00	93.00	93.00
		Traction Machines	90.00	92.00	80.00
		Hydro & Thermal TG set	118.00	65.00	45.00
2.	Bharat Heavy Plate & Vessels Limited	Process plants, Cryogenics, etc	38.31	20.80	25.89
3.	Bharat Wagon & Engineering Co. Ltd.	Wagon	51.48	28.10	17.60
4.	Braithwaite & Co. Ltd.	Steel Castings	64.80	46.86	41.06
		Structurals	7.40	27.00	43.30
5.	Burn Standard Co. Ltd.	Basic Brics	60.59	77.56	82.28
		DBM/Rock Sinter	278.26	205.05	201.77
6.	Heavy Engineering Corporation Ltd.	Steel Castings	11.40	10.90	9.20
		Forging & Forged Rolls	32.50	29.70	19.80
7.	Tungabhadra Steel Products Ltd.	Hydro Mech. Eqpts. & steel structurals	1.10	1.30	4.70
		Hydel Power Generation	65.40	88.40	32.30

While the capacity utilization improved in respect of 3 CPSEs in 2006-07 as compared to 2005-06, it declined in respect of 1 CPSE.

BHEL has an annual capacity to manufacture 229500 MT of boiler and boiler auxiliaries, the production of which was 392711 MT during 2006-07 as against the production of 320773 MT in the previous year. The production of power transformers was 18783 MVA as against 14847 MVA in the year 2005-06.

Bharat Wagon & Engineering Co. Ltd. manufactured 1132.50 FWU Wagons and 1.41 MT Structurals in 2006-07 as against 702.50 FWU Wagons and 10.50 MT Structurals in 2005-06.

Braithwaite & Co. Ltd. preduced 1154 Bogies, 173 Couplers, 222 turns structurals and 2268 tones steel castings in 2006-07. The figures in 2005-06 were 998, 72, 809 and 1640 respectively.

Burn Standard Co. Ltd. produced 2712.50 FWU Rolling stock, 9452 tones Basic Bricks, 99756 tones Crude Magnesite, 9399 Calcined Magnesite, 1254 Bogies, 1444 Cupplers, 60360 tones DBM/ Rock Sinter in 2006-07.

Heavy Engineering Corporation Ltd. Produced steel castings (medium & heavy) equal to 3316 tons during 2006-07 as against the previous year's production of 3171 tons. The production of forging and rolls was 3120 tons during the year 2006-07 as compared to 2851 tons in the previous year.

Tungabhadra Steel Products Ltd. produced 91 MT hydro mechanical equipments & steel structurals and 32.81 lakh units of hydel power during the year 2006-07 as compared to 104 MT and 44.36 lakh units in the previous year.

5.1.9 Medium and Light Engineering

Sixteen public sector enterprises furnished information. Information in respect of these enterprises during the last 3 years is below.

While the capacity utilization improved in respect of 8 CPSEs in 2006-07 as compared to 2005-06, it declined in respect of 8 CPSEs.

The Tea Division of Andrew Yule and Co. Ltd. produced 93.16 lakh Kg of tea during the year with a capacity utilization of 83% as against the production and capacity utilization of 89.61 lakh Kg and 80% during the previous year. It produced 5,58,000 transformers and 36,130 regulators in 2006-07 as compared to 4,87,300 transformers, and 19,219 regulators in 2005-06.

Balmer Lawrie & Co. Limited produced 35.95 lakh barrels, 0.32 lakh MT of grease and lubricants and 4810 MT of leather chemicals during the year 2006-07 as compared to 37.93 lakh barrels, 0.34 lakh MT of grease and lubricants and 4658 MT of leather chemicals in the previous year.

Biecco Lawrie & Co. Limited produced 1401 control and switchgear and blended 2253 KL of lube oil in 2006-07 as compared to 1247 and 3864 in the previous year.

S. No.	Name of enterprises	Product(s)	Capacity utilization (%)		
			2006-07	2005-06	2004-05
(1)	(2)	(3)	(4)	(5)	(6)
1.	Andrew Yule and Co. Ltd.	Regulators	19.53	9.38	13.51
		Tea	83.18	80.02	77.09
		Transformers	101.48	89.26	117.55
2.	Balmer Lawrie & Co. Limited	Barrels & Drums	91.00	100.00	93.00
		Greases & Lubricants	45.00	48.00	48.00
		Leather Chemicals	144.00	155.00	136.00
3.	Bharat Dynamics Ltd.		43.00	45.00	47.00
4.	Bharat Pumps and Compressors Ltd.	Pumps/compressors	17.03	17.30	27.84
		Gas Cylinders	23.59	18.42	14.92
5.	Biecco Lawrie Ltd.	Control & Switchgear	101.89	90.69	82.47
		Lube oil blending	22.53	38.64	41.38
6.	Central Electronics Ltd.	Solar PV Moduls	86.00	106.00	107.00
7.	HMT MT Limited	Machine Tools	66.74	73.84	56.62
8.	HMT Limited	Tractors	64.00	79.00	70.00
9.	HMT Bearings Ltd.	Ball and Roller Bearings	30.00	33.00	34.00
10.	HMT Watches Ltd.	Watches and components	8.53	7.17	4.60
11.	HMT Chinar Watches	Watches	15.40	9.67	1.10
12.	Praga Tools Limited	Machines	49.00	56.00	59.00
13.	Instrumentation Ltd.	Telecom products	8.29	32.50	36.40
		Process Control Valves	48.17	76.60	72.96
		Safety relief valves	7.10	8.00	7.30
14.	Rajasthan Electronics and Instruments Ltd.	Electronic Milk Analyzers	167.00	158.00	123.00
		Electronic Energy Meters	0.00	0.40	0.52
		SPV Modules	60.00	43.00	79.00

(1)	(2)	(3)	(4)	(5)	(6)
15.	Richardson and Cruddas (1972) Ltd.	Process Plant Equipment - Mulund	41.83	11.01	8.07
		Structurals	26.58	28.35	13.36
		Hand pump - Chennai	0.13	4.90	28.15
16.	Vignyan Industries Ltd.	Steel Castings	84.00	94.00	158.00

Bharat Pumps and Compressors Ltd. produced 66 pumps and compressors as against its installed capacity of 306. The corresponding production in the previous year was 73. It produced 14153 gas cylinders in 2006-07 as against 11621 in 2005-06.

The HMT Ltd. (holding company) produced 6401 tractors during the year 2006-07 as against 7902 during the previous year. HMT Bearings Ltd. produced 7.09 lakh nos. bearings as compared to 8.34 in the previous year. The HMT Machine Tools Ltd. produced 653 machine tools as compared to 587 in the previous year. The production of watches and components by HMT Watches Ltd. was 5.55 lakh as compared to 4.66 in the previous year. HMT Chinar Watches Ltd. produced 77,000 watches as compared to 48000 during the previous year.

Instrumentation Ltd. in the category of telecom products (RAX/SBM RAXhas provided 6387 lines against the installed capacity of 77000 lines during the year 2006-07 as compared to 25000 lines in the previous year. The production of process control valves and safety relief valves was 3,613 and 142 respectively in 2006-07 as compared to 5,750 and 160 in the previous year.

Rajasthan Electronics and Instruments Ltd. produced 7514 electronic milk analyzers and 1195 SPV modules systems during the year 2006-07. The corresponding figures for the previous year were 7111 and 865 respectively.

Richardson and Cruddas produced 1238 MT process plant equipment during 2006-07 against 326 MT in the previous year.

5.1.10 Transportation Equipment

Ten public sector enterprises furnished information. Information in respect of capacity utilization for these enterprises during the last 3 years is given below.

S. No.	Name of enterprises	Product(s)	Capacity utilization (%) 2006-07	2005-06	2004-05
1.	BEML Limited	EM Equipment	69.00	53.00	46.00
		Railway Products	121.00	76.00	86.00
2.	Central Inland Water Transport Corprn. Ltd.		99.00	88.00	56.00
3.	Cochin Shipyard Ltd.	Ship	121.00	74.00	42.00
4.	Garden Reach Shipbuilders and Engineers Ltd.	Shipbuilding fabrication	64.00	93.00	54.00
5.	Goa Shipyard Ltd.	Shipbuilding	88.00	65.91	53.43
6.	Hindustan Aeronautics Ltd.	Military and Civil Engg. Equipments Standard Man hours	101.00	97.00	95.00
7.	Hindustan Shipyard Ltd.		62.00	53.00	42.00
8.	Hoogly Dock & Port . Engineers Ltd		8.00	2.27	29.00
9.	Mazagon Dock Ltd.	Ship construction	93.43	79.41	75.85
10.	Scooters India Ltd.	3-Wheelers	91.89	94.74	77.96

While the capacity utilization improved in respect of 8 CPSEs increased in 2006-07 as compared to 2005-06, it has declined in respect of 2 CPSEs.

Cochin Shipyard Ltd. built 181395 DWT of ships during the year 2006-07 as compared to 110206 DWT in the previous year.

Garden Reach Shipbuilding and Engineers Limited built 2068 tonnes of ships during 2006-07 as against 2998 tonnes in the previous year.

Hindustan Aeronautics Ltd. achieved the Standard Man Hours (SMH) output of 270 during 2006-07 as compared to 260 in the previous year.

Goa Shipyard Limited produced 5.14 standard ship units in 2006-07 as compared to 3.86 Standard ship units in the previous year.

Mazagon Dock Ltd. constructed 10.99 ship units during the year 2006-07 with capacity utilization of 93.43% as against 9.34 ship units with capacity utilization of 79.41% during the previous year.

Scooters India Ltd. produced 15162 three-wheeler scooters during 2006-07 as against 15632 in the previous year.

BEML Limited produced 483 nos. of railway products and 1039 nos. of EM products in 2006-07 as compared to 302 nos. of railway products and 802 nos. of EM products in 2005-06.

5.1.11 Consumer Goods

Eight public sector enterprises furnished information. Information relating to capacity utilization for these enterprises during the last 3 years is given below.

S. No.	Name of enterprises	Product(s)	Capacity utilization (%) 2006-07	2005-06	2004-05
1.	Cement Corpn. of India Ltd.	Cement - Rajban	96.46	99.32	84.62
		Cement - Tandur	69.70	61.75	51.92
		Cement - Borejan	68.18	64.82	60.16
2.	Hindustan Latex Ltd.	Contraceptive/ Condoms	105.30	98.90	138.00
		Blood Bag	110.00	77.00	175.00
		Copper T	50.54	62.00	104.00
3.	Hindustan Newsprint Ltd.	Newsprint	113.00	113.00	112.00
4.	Hindustan Paper Corpn.	NPM-Writing & printing paper	105.20	106.40	106.30
		CPM- Writing & printing paper	103.20	100.60	91.00
5.	Hindustan Photofilms Mfg. Co. Ltd.	Cine Products, X-Ray Films, etc.	1.93	2.12	2.43
6.	Hindustan Vegitable Oils Corpn. Ltd.		44.00	47.00	55.00
7.	NEPA Ltd.	Newsprint	47.85	35.17	24.60
8 .	Tyre Corporation of India Ltd.	Automotive Tyre	67.00	67.00	27.00

While the capacity utilization of 3 CPSEs improved during 2006-07, it decreased in respect of 3 units. The capacity utilization of 2 units in 2006-07 was at the same level as compared to 2005-06.

The three units of Cement Corporation of India Ltd. produced 10.23 lakh MT cement during the year 2006-07 as compared to a production of 9.42 lakh MT during the previous year.

Hindustan Latex Limited produced 1089 million pieces of condoms during the year 2006-07 as compared to 990 million pieces in the previous year.

The combined production of writing & printing paper by the Nagaon and Cachar Mills of Hindustan Paper Corporation Ltd. during the year 2006-07 was 208315 MT as compared to 207068 MT during the previous year.

Hindustan Newsprint Ltd. produced 112565 MT of newsprint during 2006-07 as against 113000 MT during the previous year.

Hindustan Photofilms Manufacturing Co. Ltd., produced 0.649 Sq. M of film during the year 2006-07 as against 0.713 M. Sq. M during the previous year.

NEPA Ltd. produced 42110 MT of newsprint during 2006-07 as against 30955 MT during the previous year.

Tyre Corporation of India produced 15622 MT automotive tyres as compared to 15558 MT during the previous year.

5.1.12 Textiles

Capacity utilization in respect of National Textile Corporation Limited during the last 3 years is given in the Table below.

S. No.	Name of enterprises	Product(s)	Capacity utilization (%) 2006-07	2005-06	2004-05
1.	NTC Ltd.	Yarn	80.80	79.61	80.24
		Cloth	67.55	80.02	70.46

NTC Limited produced 380.38 yarn spindles and 163.62 looms during the year 2006-07 as compared to a production of 376.19 and 194.91 during the previous year.

5.1.13 Macro Picture of Capacity Utilization

The consolidated position of capacity utilization for the last 3 years is given below:

Description	2006-07	2005-06	2004-05
Units which have recorded 75% or more capacity utilization	98(55)	90(51)	94(53)
Units which have recorded 50% or more but less than 75%	30(17)	35(20)	30(17)
Units which have recorded less than 50% capacity utilization	50(28)	52(29)	52(30)
Total	178(100)	177(100)	176(100)

(Figures in brackets show percentages.)

It may be observed from the table above that 98 units recorded capacity utilization of 75% and more during 2006-07 as compared to 90 units in 2005-06.

5.2 MANAGEMENT OF INVENTORIES IN PUBLIC ENTERPRISES

5.2.1 Overall analysis

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 this chapter to present an overview, cognate group-wise analysis and a company-wise position of inventory.

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 44 days cost of production/turnover as on 31.3.2007. The overall position of inventory management during the last 11 years is depicted in the Table 5.2.1 below:

Table 5.2.1

Year ending	Value of Inventory (Rs. in crore)	Cost of Prodn./ Turnover (Rs. in crore)	Inventory in No. of days Cost of Prodn./ 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	102403	850074	44

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, the public sector enterprises operating in Industrial Development and Technical Consultancy Services, Tourist Services, Financial Services as well as Section 25 Cos. have also been excluded from the review in this chapter.

5.2.2 Group-wise Analysis

The public enterprises have been grouped into various cognate groups depending upon the nature of their activities. The analysis of inventory management is based on these groupings. The inventory position in each of the cognate groups for the last two years is indicated in the Table 5.2.2 at next page:

Table 5.2.2

Cognate Group	Inventory as on 31.3.2006		Inventory as on 31.3.2007	
	Value (Rs. in crore)	No. of days Cost of Production/ Turnover	Value (Rs. in crore)	No. of days Cost of Production/ Turnover
(A) Agriculture Sector				
1. Agro-based Industries	66.50	141	79.53	118
Total	66.50	141	79.53	118
(B) Electricity Sector				
1. Power Generation	2886.12	30	3321.91	29
2. Power Transmission	180.24	21	184.13	19
Total	3066.36	30	3506.04	29
(C) Manufacturing Sector				
1. Chemicals & Pharmaceuticals	194.93	50	192.23	47
2. Consumer Goods	1355.83	210	1468.97	149
3. Fertilizers	1328.76	42	1702.69	47
4. Heavy Engineering	3944.71	113	4440.60	104
5. Medium & Light Engineering	2496.95	96	2594.32	89
6. Petroleum(Refinery & Mktg.)	48174.83	41	49264.16	35
7. Steel	7626.81	90	8085.27	88
8. Textiles	27.27	8	193.82	29
9. Transportation Equipments	9518.83	363	14263.45	349
Total	74668.92	54	82205.51	49
(C) Mining Sector				
1. Coal & Lignite	3256.64	47	3603.41	51
2. Crude Oil	3502.55	38	3635.55	31
3. Other Minerals & Metals	1457.24	84	1505.44	86
Total	8216.43	46	8744.40	43
(C) Services Sector				
1. Contract & Construction Services	533.20	44	3165.99	211
2. Telecommunications and Information Technology Services	2927.95	26	2650.66	24
3. Trading and Marketing Services	672.51	7	997.00	8
4. Transportation Services	733.44	10	1054.54	15
Total	4867.10	17	7868.19	24
Grand Total	**90885.31**	**46**	**102403.67**	**44**

In Agriculture sector, the level of inventory in terms of number of days cost of production/turnover has come down from 141 days as on 31.3.2006 to 118 days as on 31.3.2007. In Electricity sector also the level of inventory which was 30 days cost of production/turnover as on 31.3.2006 has marginally come down to 29 days cost of production/turnover as on 31.3.2007. In Manufacturing sector, there is a decrease in the level of inventory from 54 days cost of production as on 31.3.2006 to 49 days cost of production/ turnover as on 31.3.2007. In case of Mining sector the level of inventory in terms of number of days cost of production/turnover has reduced from 46 days as on 31.3.2006 to 43 days as on 31.3.2007. However, in the case of Services sector, the level of inventory, which was 17 days cost of production/ turnover as on 31.3.2006 has gone up to 24 days cost of production/turnover as on 31.3.2007.

It is observed that there is marginal reduction in the level of inventory in terms of number of days cost of production/turnover in the sectors viz. Agro-Based Industries, Power Generation, Power Transmission, Chemicals & Pharmaceuticals, Consumer Goods, Heavy Engineering, Medium & Light Engineering, Petroleum (Refinery & Marketing), Steel, Transportation Equipments, Crude Oil and Telecommunications & Information Technology Services. The level of inventory has gone up in sectors like Fertilizers, Textiles, Coal & Lignite, Other Minerals & Metals, Trading & Marketing Services and Transportation Services. The cognatge group-wise analysis is given in subsequent paragraphs.

5.2.2.1 Agro-Based Industries

The value of inventory held by 4 companies belonging to this group was Rs.79.53 crore at the end of 2006-07 as compared to Rs.66.50 crore at the end of the previous year. The level of inventory has decreased to the level of 118 days cost of turnover at the end of 2006-07 as compared to 141 days cost of turnover at the end of previous year. Details of inventory held by these enterprises are given in the Table 5.2.3 below:

Table 5.2.3

S. No.	Name of the Company	Inventory (Rs. in crore)		Inventory/Cost of Turnover (No. of days)	
		2005-06	2006-07	2005-06	2006-07
1.	Andaman & Nicobar lsI. Forest & Plantation	0.89	0.94	151	88
2.	National Seeds Corpn. Ltd.	12.50	14.35	44	34
3.	North Eastern Regn. Agri. Mktg. Corpn. Ltd.	0.17	0.45	9	11
4.	State Farms Corpn. of India Ltd.	52.94	63.79	329	318
	Total	66.50	79.53	141	118

Of the 4 enterprises under this group, 3 could reduce the level of inventory during 2006-07 as compared to the previous year while in remaining one enterprise there has been increase in the level of inventory.

5.2.2.2 Power Generation

The value of inventory held by 6 power generating companies as on 31.3.2007 was Rs.3321.91 crore as compared to Rs.2886.12 crore at the end of previous year. The level of inventory was 29 days cost of turnover as on 31.3.2007 as against 30 days cost of turnover as on 31.3.2006. The company wise break-up of inventory is given in the Table 5.2.4 at next page:

Table 5.2.4

S. No.	Name of the Company	Inventory (Rs. in crore)		Inventory/Cost of Turnover (No. of days)	
		2005-06	2006-07	2005-06	2006-07
1.	National Hydroelectric Power Corpn. Ltd.	144.97	324.93	33	68
2.	National Thermal Power Corpn. Ltd.	2340.51	2510.19	32	28
3.	North Eastern Electric Power Corpn. Ltd.	68.37	69.60	30	31
4.	Nuclear Power Corpn. of India Ltd.	267.74	356.31	27	36
5.	Satluj Jal Vidyut Nigam Ltd.	63.32	58.71	17	13
6.	Narmada Hydro Electric Development Corpn. Ltd.	1.21	2.17	1	1
Total		2886.12	3321.91	30	29

Of the 6 enterprises under this group, 2 could reduce the level of inventory during 2006-07 as compared to the previous year while in case of 3 enterprises there has been increase in the level of inventory. It remained unchanged in the case of Narmada Hydro Electric Development Corporation Ltd.

5.2.2.3 Power Transmission

The value of inventory held by 2 power transmission companies as on 31.3.2007 was Rs.184.13 crore as compared to Rs.180.24 crore at the end of previous year. The level of inventory was 19 days cost of turnover as on 31.3.2007 as against 21 days cost of turnover as on 31.3.2006. The company-wise break-up of inventory is given in the table 5.2.5 below:-

Table 5.2.5

S. No.	Name of the Company	Inventory (Rs. in crore)		Inventory/Cost of Turnover (No. of days)	
		2005-06	2006-07	2005-06	2006-07
1.	Power Grid Corporation of India Ltd.	180.24	184.13	21	19
2.	NTPC Electric Supply Co. Ltd.	0.00	0.00	0	0
	Total	180.24	184.13	21	19

Of the 2 enterprises under the Power Trasmission Group, Power Grid Corporation of India Ltd. could reduce the level of inventory during the year 2006-07 while NTPC Electric Supply Co. Ltd. did not hold any inventory.

5.2.2.4 Chemicals & Pharmaceuticals

The value of inventory held by 14 enterprises belonging to this group as on 31.3.2007 was Rs.191.65 crore representing 47 days cost of production as compared to Rs.194.93 crore representing 51 days cost of production as on 31.3.2006. The company wise inventory position for the last two years is given in Table 5.2.6 at next page:-

Table 5.2.6

S. No.	Name of the Company	Inventory (Rs. in crore)		Inventory/Cost of Production (No. of days)	
		2005-06	2006-07	2005-06	2006-07
1.	Bengal Chem. & Pharmaceuticals Ltd.	11.82	15.35	77	91
2.	Bharat Immunologicals & Biologicals Corpn. Ltd.	0.54	0.25	7	14
3.	Hindustan Antibiotics Ltd.	18.31	14.69	71	51
4.	Hindustan Insecticides Ltd.	47.28	56.57	80	109
5.	Hindustan Fluorocarbons Ltd.	4.62	2.54	65	37
6.	Hindustan Organic Chemicals Ltd.	76.31	62.67	61	44
7.	Hindustan Salts Ltd.	1.04	0.90	44	32
8.	Indian Drugs & Pharmaceuticals Ltd.	6.15	6.15	6	6
9.	Indian Medicines & Pharmaceuticals Corp. Ltd.	2.40	2.40	-	-
10.	Karnataka Antibiotics & Pharma. Ltd.	15.38	17.87	71	55
11.	Orissa Drugs & Chemicals Ltd.	0.11	0.36	14	71
12.	Projects & Development India Ltd.	5.91	3.78	69	42
13.	Rajasthan Drugs & Pharm. Ltd.	2.70	6.40	38	58
14.	Sambhar Salts Ltd.	2.36	1.72	84	54
	Total	194.93	191.65	51	47

Of the 14 public enterprises, 7 could reduce the level of inventory during 2006-07 as compared to the previous year while in case of 6 enterprises there has been increase in the level of inventory. It remained unchanged in the case of Indian Drugs & Pharmaceuticals Ltd.

5.2.2.5 Consumer Goods

12 companies belonging to the consumer goods group held an inventory valued at Rs.1468.97 crore representing 149 days cost of production during the year 2006-07 as against an inventory valued at Rs.1355.83 crore held by them during the previous year representing 210 days cost of production. The company-wise position is given in Table 5.2.7 below:

Table 5.2.7

S. No.	Name of the Company	Inventory (Rs. in crore)		Inventory/Cost of Production (No. of days)	
		2005-06	2006-07	2005-06	2006-07
(1)	(2)	(3)	(4)	(5)	(6)
1	Artificial Lims Mfg. Co. of India.	13.28	13.19	85	92
2.	Cement Corpn. of India Ltd.	88.64	101.81	106	137
3.	Hindustan Latex Ltd.	31.53	50.84	60	71
4.	Hindustan Newsprint Ltd.	68.20	70.69	90	94
5.	Hindustan Paper Corpn. Ltd.	161.34	160.76	91	92

(1)	(2)	(3)	(4)	(5)	(6)
6.	Hindustan Photo Films Manfg. Co. Ltd.	12.02	16.17	7	9
7.	Hindustan Vegetable Oils Corpn. Ltd.	2.29	1.79	22	26
8.	Hooghly Printing Co. Ltd.	0.44	.09	34	8
9.	Nagaland Pulp & Paper Mills Ltd.	0.03	0.03	01	01
10.	NEPA Ltd.	13.16	12.83	46	36
11.	Security Printing & Minting Corpn. of India	957.94	1038.41	0	297
12.	Tyre Corpn. of India Ltd.	1.61	2.36	7	10
	Total	1355.83	1468.97	210	149

The level of inventory has decreased in 2 enterprises during 2006-07 and increased in 9 enterprises. In the case of Nagaland Pulp & Paper Mills Ltd., the level of inventory remained unchanged. Security Printing & Minting Corporation of India Ltd. has been included in this group for the first time for working-out level of inventory.

5.2.2.6 Fertilizers

There were 8 companies engaged in the production of fertilizers. The value of inventory held by them as on 31.3.2007 was Rs.1702.69 crore representing 47 days cost of production as compared to an inventory of Rs.1328.77 crore representing 42 days cost of production at the end of the previous year. Company-wise analysis of inventory is given in Table 5.2.8 below:

Table 5.2.8

S. No.	Name of the Company	Inventory (Rs. in crore)		Inventory/Cost of Production (No. of days)	
		2005-06	2006-07	2005-06	2006-07
1.	Brahmaputra Valley Fertilizer Corpn. Ltd.	48.03	45.50	75	47
2.	Fertilizers & Chem. (Travancore) Ltd.	259.97	346.16	62	75
3.	Fertilizer Corpn. of India Ltd.	42.94	42.33	12	11
4.	Hindustan Fertilizer Corpn. Ltd.	22.61	21.03	9	7
5.	Madras Fertilizers Ltd.	202.47	177.21	61	50
6.	National Fertilizers Ltd.	324.49	348.20	35	35
7.	Pyrites, Phosphates & Chemicals Ltd.	1.91	1.91	0	0
8.	Rashtriya Chemicals & Fertilizers Ltd.	426.34	720.25	54	72
	Total	1328.76	1702.69	42	47

The level of inventory decreased in 4 enterprises during 2006-07 and increased in case of 2 enterprises. It remained unchanged in 2 enterprises.

5.2.2.7 Heavy Engineering

The value of inventory held by the 8 public enterprises belonging to this group except the two holding companies viz. BBUNL and BYNL which do not have any inventory holding, was Rs.4440.60 crore representing 104 days cost of production as on 31.3.2007 as against a total inventory valued at Rs.3944.71 crore representing 113 days cost of production as on 31.3.2006. The value of inventory held by individual enterprises together with the level of

inventory in terms of number of days cost of production for the last two years is given in Table 5.2.9 below:

Table 5.2.9

S. No.	Name of the Company	Inventory (Rs. in crore)		Inventory/Cost of Production (No. of days)	
		2005-06	2006-07	2005-06	2006-07
1.	Bharat Heavy Electricals Ltd.	3744.37	4217.67	116	106
2.	Bharat Heavy Plate & Vessels Ltd.	55.31	45.50	123	83
3.	Bharat Wagon & Engg. Co. Ltd.	6.19	5.21	63	45
4.	Braithwaite & Co. Ltd.	15.94	15.89	140	111
5.	Burn Standard Company Ltd.	22.81	27.31	30	37
6.	Heavy Engineering Corpn. Ltd.	92.58	122.94	111	147
7.	Triveni Structurals Ltd.	5.05	5.11	37	36
8.	Tungabhadra Steel Products Ltd.	2.46	0.97	25	8
	Total:	3944.71	4440.60	113	104

Of the 8 public enterprises, 6 could reduce the level of inventory during 2006-07 as compared to the previous year while in the case of 2 companies there has been increase in the level of inventory.

5.2.2.8 Medium & Light Engineering

The value of inventory held by 24 enterprises in this group as on 31.3.2007 was Rs.2594.32 crore representing 89 days cost of production as compared to Rs.2496.95 crore representing 96 days cost of production as on 31.3.2006. The company-wise inventory position for the last two years is depicted in the Table 5.2.10 below:

Table 5.2.10

S. No.	Name of the Company	Inventory (Rs. in crore)		Inventory/Cost of Production (No. of days)	
		2005-06	2006-07	2005-06	2006-07
(1)	(2)	(3)	(4)	(5)	(6)
1.	Andrew Yule & Co. Ltd.	21.76	25.38	42	39
2.	Antrix Corpn. Ltd.	0.00	0.00	0	0
3.	Balmer Lawrie & Co. Ltd.	79.96	80.28	25	24
4.	Bharat Dynamics Ltd.	454.53	338.92	335	313
5.	Bharat Electronics Ltd.	1037.14	1246.35	142	147
6.	BEL Optronics Devices Ltd.	12.01	12.75	108	89
7.	Bharat Pumps & Compressors Ltd.	25.91	41.26	104	127
8.	Biecco Lawrie Ltd.	7.99	9.33	69	73
9.	Central Electronics Ltd.	15.81	21.55	61	64
10.	Electronics Corpn. of India Ltd.	76.82	65.56	45	33

(1)	(2)	(3)	(4)	(5)	(6)\
11.	Hindustan Cables Ltd.	29.12	31.43	36	37
12.	HMT Bearings Ltd.	9.61	8.39	104	96
13.	HMT Chinar Watches Ltd.	5.48	7.05	63	59
14.	HMT Ltd.	37.54	32.87	47	41
15.	HMT Machine Tools Ltd.	129.90	113.45	123	99
16.	HMT Watches Ltd.	49.30	45.80	105	65
17.	I.T.I Ltd.	412.14	425.48	72	68
18.	IDPL (Tamilnadu) Ltd.	3.99	2.99	458	346
19.	Instrumentation Ltd.	60.63	58.72	92	81
20.	National Instruments Ltd.	1.56	1.56	212	212
21.	Praga Tools Ltd.	4.02	4.20	64	54
22.	Rajasthan Electronics & Instruments Ltd.	7.09	7.78	45	42
23.	Richardson & Cruddas (1972) Ltd.	10.73	4.67	55	20
24.	Vignyan Industries Ltd.	3.91	5.55	61	95
	Total	2496.95	2594.32	96	89

Of the 24 pubic enterprises, 16 could reduce the level of inventory during 2006-07 as compared to the previous year while in the case of 6 companies there has been increase in the level of inventory. Antrix Corporation Ltd. did not hold any inventory. In case of National Instruments, there was no change in the level of inventory. Semi-Conductor Complex Ltd. which belonged to this group has since been converted in a society during 2006-07.

5.2.2.9 Petroleum (Refinery & Marketing)

There are 8 companies operating in petroleum (Refinery & Marketing) group as on 31.3.2007. These companies have inventory valued at Rs.49264.16 crore as on 31.3.2007 as compared to Rs.48174.83 at the end of previous year. The level of inventory was 41 days cost of turnover as on 31.3.2006 as against 35 days cost of turnover as on 31.3.2007. The company-wise details of inventory are presented in the Table 5.2.11 below:

Table 5.2.11

S. No.	Name of the Company	Inventory (Rs. in crore)		Inventory/Cost of Turnover (No. of days)	
		2005-06	2006-07	2005-06	2006-07
1	Bharat Petroleum Copn. Ltd.	9044.77	8661.26	39	29
2.	Bongaigaon Refinery & Petrochemicals Ltd.	720.90	715.36	42	41
3.	Chennai Petroleum Corpn. Ltd.	3149.10	3214.77	45	40
4.	GAIL (India) Ltd.	483.19	552.36	12	12
5.	Hindustan Petroleum Corpn. Ltd.	7810.29	8098.40	39	32
6.	Indian Oil Corpn. Ltd.	24277.79	24702.69	48	40
7.	Mangalore Refinery & Petrochemicals Ltd.	1890.70	2498.27	24	28
8.	Numaligarh Refinery Ltd.	798.09	821.05	50	38
	Total	48174.83	49264.16	41	35

The value of inventory has decreased in 6 enterprises during 2006-07 as compared to the previous year and increased in one enterprise. In case of one enterprise, the level remained unchanged. IBP Co. Ltd. and Kochi Refineries Ltd. belonging to this group have been merged with their holding companies Indian Oil Corporation Ltd. and Bharat Petroleum Corporation Ltd. respectively.

5.2.2.10 Steel

The value of inventory held by 6 companies was Rs.8085.27 crore at the end of 2006-07 as compared to Rs.7626.81 crore held by them at the end of 2005-06. The level of inventory has come down from 90 days cost of production at the end of the previous year to 88 days cost of production at the end of 2006-07. The company-wise position is indicated in the Table 5.2.12 below:

Table 5.2.12

S. No.	Name of the Company	Inventory (Rs. in crore)		Inventory/Cost of Production (No. of days)	
		2005-06	2006-07	2005-06	2006-07
1.	Ferro Scrap Nigam Ltd.	7.82	10.72	29	36
2.	Maharashtra Elektrosmelt Ltd.	68.29	65.03	136	123
3.	Mishra Dhatu Nigam Ltd.	118.84	148.24	264	281
4.	Rashtriya Ispat Nigam Ltd.	1216.45	1203.24	76	69
5.	Sponge Iron India Ltd.	5.35	6.57	46	48
6.	Steel Authority of India Ltd.	6210.06	6651.24	92	91
	Total	7626.81	8085.27	90	88

The value of inventory has decreased in 3 enterprises during 2006-07 as compared to the previous year and increased in 3 enterprises.

5.2.2.11 Textiles

There are 5 companies in textile sector as on 31.3.2007. The value of inventory held by companies belonging to this group was Rs.193.82 crore at the end of 2006-07 as compared to Rs.27.27 crore at the end of previous year. The level of inventory was 29 days cost of production during the year 2006-07 as against 8 days at the end of previous year. All the subsidiary companies of National Textile Corporation Ltd. have been merged with the holding company during the year 2006-07. The company wise details of inventory are given in the Table 5.2.13 below:

Table 5.2.13

S. No.	Name of the Company	Inventory (Rs. in crore)		Inventory/Cost of Production (No. of days)	
		2005-06	2006-07	2005-06	2006-07
1.	Birds, Jute & Exports Ltd.	0.57	0.53	1	0
2.	British India Corpn. Ltd.	26.53	22.73	222	189
3.	Brushware Ltd.	0.04	0.04	365	292
4.	National Jute Manufacturers Corpn. Ltd.	0.13	0.00	0	0
5.	National Textile Corpn. Ltd.	0	170.52	-	41
	Total	27.27	193.82	8	29

Of the 5 Enterprises, 3 could reduce the level of inventory during the year 2006-07 as compared to previous year. National Jute Manufactures Corporation Ltd. did not hold any inventory during 2006-07.

5.2.2.12 Transportation Equipments

10 public enterprises are engaged in the production of transportation equipments. The value of inventory held by these companies was Rs.14263.45 crore during the year 2006-07 as against Rs.9518.83 crore during 2005-06. The level, which was 363 days cost of production at the end of previous year, has gone down to 349 days cost of production at the end of 2006-07. The company-wise details are given in the Table 5.2.14 below:

Table 5.2.14

S. No.	Name of the Company	Inventory (Rs. in crore)		Inventory/Cost of Production (No. of days)	
		2005-06	2006-07	2005-06	2006-07
1.	Bharat Earth Movers Ltd.	649.08	729.27	130	124
2.	Central Inland Water Transport Corpn. Ltd.	10.14	1.75	56	22
3.	Cochin Shipyard Ltd.	304.76	307.32	259	148
4.	Garden Reach Shipbuilders & Engrs. Ltd.	802.99	720.32	488	466
5.	Goa Shipyard Ltd.	74.36	47.27	113	75
6.	Hindustan Aeronautics Ltd.	4809.74	7222.52	328	307
7.	Hindustan Shipyard Ltd.	155.37	132.06	184	101
8.	Hooghly Dock & Port Engineers Ltd.	83.69	79.73	673	277
9.	Mazagon Dock Ltd.	2587.59	4975.58	1710	999
10.	Scooters India Ltd.	41.11	47.44	94	94
	Total	9518.83	14263.45	363	349

Of the 10 enterprises, 9 could reduce the level of inventory during 2006-07 as compared to the previous year. In case of Scooters India Ltd., there has been no change in the level of inventory.

5.2.2.13 Coal & Lignite

The value of inventory held by 9 public enterprises belonging to this group as on 31.3.2007 was Rs.3630.41crore as compared to Rs.3256.64 crore at the end of previous year. The level of inventory was 51 days cost of production as on 31.3.2007 as compared to 47 days cost of production at the end of previous year. Company-wise details are given in Table 5.2.15 below:

Table 5.2.15

S. No.	Name of the Company	Inventory (Rs. in crore)		Inventory/Cost of Production (No. of days)	
		2005-06	2006-07	2005-06	2006-07
(1)	(2)	(3)	(4)	(5)	(6)
1	Bharat Coking Coal Ltd.	520.99	521.89	57	58
2	Central Coalfields Ltd.	715.84	812.64	83	88
3	Coal India Ltd.	31.3	23.69	11	16

(1)	(2)	(3)	(4)	(5)	(6)
4	Eastern Coalfields Ltd.	404.49		43	42
5	Mahanadi Coalfields Ltd.	190.5	263.60	36	42
6	Neyveli Lignite Corpn. Ltd.	358.45	455.49	71	89
7	Northern Coalfields Ltd.	224.56	225.72	29	27
8	South Eastern Coalfields Ltd.	522.74	508.13	36	44
9	Western Coalfields Ltd.	287.77	363.97	32	35
	Total	3256.64	3603.41	47	51

The value of inventory has decreased in 3 enterprises during 2005-06 as compared to the previous year and increased in 6 enterprises.

5.2.2.14 Crude Oil

There are 3 companies operating in Crude Oil sector as on 31.3.2007. These companies had inventory valued at Rs.3635.55 crore as on 31.3.2007 as compared to Rs.3502.55 crore at the end of previous year. The level of inventory was 38 days cost of production as on 31.3.2006 as against 31 days cost of production as on 31.3.2007. The company-wise details of inventory are presented in the Table 5.2.16 below:

Table 5.2.16

S. No.	Name of the Company	Inventory (Rs. in crore)		Inventory/Cost of Production (No. of days)	
		2005-06	2006-07	2005-06	2006-07
1.	ONGC Videsh Ltd.	65.12	193.77	21	37
2.	Oil & Natural Gas Corpn. Ld.	3038.49	3033.76	38	30
3.	Oil India Ltd.	398.94	408.02	44	42
Total		3502.55	3635.55	38	31

The value of inventory has increased in one enterprise during 2005-06 as compared to the previous year and decreased in case of 2 enterprises.

5.2.2.15 Other Minerals & Metals

The value of inventory held by the companies operating in this group during the year 2006-07 was Rs.1505.44 crore representing 86 days cost of production. At the end of 2005-06, the value of inventory was Rs.1457.24 crore representing 84 days cost of production. The company-wise details are presented in the Table 5.2.17 below:

Table 5.2.17

S. No.	Name of the Company	Inventory (Rs. in crore)		Inventory/Cost of Production (No. of days)	
		2005-06	2006-07	2005-06	2006-07
(1)	(2)	(3)	(4)	(5)	(6)
1	Bharat Refractories Ltd.	23.14	31.24	54	58
2	FCI Aravali Gypsum & Minerals (I) Ltd.	0.19	0.51	2	7
3	Hindustan Copper Ltd.	371.99	408.54	165	113

(1)	(2)	(3)	(4)	(5)	(6)
4	Indian Rare Earths Ltd.	76.15	48.29	106	66
5	J&K Mineral Dev. Corpn. Ltd.	0.01	0.01	1	23
6	Kudremukh Iron Ore Co. Ltd.	170.95	190.21	85	191
7	Manganese Ore (India) Ltd.	59.88	31.32	113	52
8	National Aluminium Co. Ltd.	591.58	634.96	79	84
9	National Mineral Dev. Corpn. Ltd.	126.59	126.74	40	45
10	Uranium Corporation of India Ltd.	36.76	33.62	58	49
	Total	1457.24	1505.44	84	86

Of the 10 public enterprises, 4 could reduce the level of inventory during 2006-07 as compared to the previous year while in case of 6 companies there was increase in the level of inventory.

5.2.2.16 Contract & Construction Services

There were 11 public sector enterprises operating in the Contract & Construction Services group. Of the 11 companies, Mumbai Railway Vikas Corpn. Ltd. did not hold any inventory. The value of inventory held by 10 companies in this group was Rs.3165.99 crore as on 31.3.2007 as compared to Rs. 533.20 crore held by them at the end of previous year. The level of inventory increased from 44 days cost of turnover to 211 days cost of turnover during the said poried. The company-wise details are given in the Table 5.2.18 below:

Table 5.2.18

S. No.	Name of the Company	Inventory (Rs. in crore)		Inventory/Cost of Turnover (No. of days)	
		2005-06	2006-07	2005-06	2006-07
1.	BBJ Construction Co. Ltd.	13.88	18.49	92	100
2.	Bridge & Roof Co. (India) Ltd.	257.52	309.53	201	203
3.	Hindustan Prefab Ltd.	0.38	0.46	16	7
4.	Hindustan Steelworks Constn. Ltd.	2.97	1.63	3	1
5.	IRCON (International) Ltd.	42.35	89.43	15	22
6.	Konkan Railway Corpn. Ltd.	15.77	12.74	9	7
7.	Mineral Exploration Corpn. Ltd.	9.20	4.96	43	24
8.	Mumbai Railway Vikas Corpn. Ltd.	0.00	0.00	0	0
9.	National Bldg. Constn. Corpn. Ltd.	121.42	155.60	36	39
10.	National Projects Constn. Corpn. Ltd.	69.71	7.12	44	4
11.	Rail Vikas Nigam Ltd.	0.00	2566.03	0	1,43211
	Total	533.20	3165.99	44	211

Of the 11 enterprises in this group, 5 could reduce their level of inventory, in 4 enterprises it was increased and in one it remained unchanged during 2006-07 as compared to previous year. While there was no inventory held by Mumbai Railway Vikas Corpn. Ltd., the Rail Vikas Nigam Ltd. belonging to this group held inventory for the first time during 2006-07.

5.2.2.17Telecommunications and Information Technology Services

There were 4 public sector enterprises operating in this group. Millennium Telecom Ltd. did not hold any inventory during 2006-07. Mahanagar Telephone Nigam Ltd., Bharat Sanchar Nigam Ltd. and RailTel Corporation India Ltd., belonging to this group held an inventory valued at Rs.2650.66 crore as on 31.3.2007 as compared to Rs.2927.95 crore held by them at the end of the previous year. Level of inventory has come down from 26 days cost of turnover during 2005-06 to 24 days cost of turnover in 2006-07. The company-wise details are given in the Table 5.2.19 below:

Table 5.2.19

S. No.	Name of the Company	Inventory (Rs. in crore)		Inventory/Cost of Turnover (No. of days)	
		2005-06	2006-07	2005-06	2006-07
1.	Bharat Sanchar Nigam Ltd.	2789.22	2428.47	28	26
2.	Mahanagar Telephone Nigam Ltd.	137.82	221.28	9	16
3.	RailTel Corporation India Ltd.	0.91	0.91	6	3
4.	Millennium Telecom Ltd.	0.00	0.00	0	-
	Total	2927.95	2650.66	26	24

Of the 4 enterprises in Telecommunications & Information Technology Services group, 2 could reduce the level of inventory during 2006-07 as compared to the previous year while in one enterprise there was increase in the level of inventory. No inventory was held by Millennium Telecom Ltd.

5.2.2.18 Trading & Marketing Services

There were 14 companies in the Trading & Marketing Services group during the year 2006-07. Three companies namely Food Corpn. of India, Cotton Corpn. of India and Jute Corpn. of India have been excluded for the purpose of analysis as these corporations keep stocks as deliberate policy. As such, the analysis covers the remaining 11 companies only. These 11 companies held inventory valued at Rs.997.00 crore representing 8 days cost of turnover at the end of 2006-07 as compared to an inventory of Rs. 672.51 crore representing 7 days cost turnover at the end of previous year. The company-wise details are given in the Table 5.2.20 below:

Table 5.2.20

S. No.	Name of the Company	Inventory (Rs. in crore)		Inventory/Cost of Turnover (No. of days)	
		2005-06	2006-07	2005-06	2006-07
(1)	(2)	(3)	(4)	(5)	(6)
1.	Central Cottage Industries Corpn. Ltd.	5.76	5.85	30	20
2.	Central Warehousing Corpn.	5.07	2.98	3	2
3.	Handicrafts & Handlooms Exports Corpn. Ltd.	3.25	2.01	1	10
4.	H.M.T. (International) Ltd.	0.16	1.10	4	13
5.	India Trade Promotion Organization	0.06	0.06	0	0
6.	Karnataka Trade Promotion Organisation	0.00	0.00	0	0
7.	MMTC Ltd.	249.13	177.69	6	3

(1)	(2)	(3)	(4)	(5)	(6)
8.	MSTC Ltd.	7.57	65.94	1	8
9.	North Eastern Handicrafts & Handlooms Corpn. Ltd.	1.21	1.74	48	68
10.	NTPC Vidyut Vyapar Nigam Ltd.	0.74	0.46	1	0
11.	PEC Ltd.	68.54	146.63	7	12
12.	STCL Ltd.	0.90	31.36	1	11
13.	State Trading Corpn. Ltd.	330.12	561.18	17	14
14.	Tamilnadu Trade Promotion Organization	0.00	0.00	0	0
	Total	672.51	997.00	7	8

Of the 14 enterprises in this group, 5 could reduce the level of inventory during 2006-07 as compared to the previous year while in 6 enterprises there has been increase in the level of inventory. The level of inventory remained unchanged in one enterprise. No inventory was held by Tamilnadu Trade Promotion Organization and Karnataka Trade Promotion Organization.

5.2.2.19 Transportation 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 Rs.1054.54 crore as on 31.3.2007 as compared to an inventory valued at Rs.733.44 crore at the end of previous year. The level of inventory has increased from 10 days cost of turnover during the previous year to 15 days cost of turnover in the current year. The company-wise details are given in the Table 5.2.21 below:

Table 5.2.21

S. No.	Name of the Company	Inventory (Rs. in crore)		Inventory/Cost of Turnover (No. of days)	
		2005-06	2006-07	2005-06	2006-07
1.	Air India Ltd.	461.36	735.13	19	32
2.	Air India Air Transport Services Ltd.	0.00	0.00	0	0
3.	Air India Charters Ltd.	11.88	9.12	10	5
4.	Airline Allied Services Ltd.	8.07	9.21	6	10
5.	Airports Authority of India	13.76	25.45	2	3
6.	Container Corpn. of India Ltd.	4.73	4.61	1	1
7.	Dredging Corpn. of India Ltd.	10.48	25.59	8	14
8.	Ennore Port Ltd.	4.79	4.79	19	17
9.	Fresh & Healthy Enterprises Ltd.	0.00	0.06	-	5
10.	Indian Airlines Ltd.	117.98	135.24	7	-
11.	Pawan Hans Helicopters Ltd.	30.14	34.49	67	69
12.	Shipping Corpn. of India Ltd.	70.25	73.85	7	7
	Total	733.44	1054.54	10	15

In the Transportation Services Sector, out of 12 enterprises, 2 could reduce the level of inventory during 2006-07 as compared to the previous year while in 6 enterprises there has been increase in the level of inventory. The level of inventory remained unchanged in 3 enterprises. No inventory was held by Air India Transport Services Ltd.

5.3 ENERGY CO0NSERVATION

Energy to-day is an essential input in all the production activities. Rapid increase in energy demand and its consumption in the industrial and services sectors have resulted in the overall shortage of energy. Energy conservation has assumed considerable importance. Since setting up of additional capacity is not only capital intensive but also time consuming. In comparison, the additional investments required for energy conservation measures is much less and the energy so released is available within a short period.

The industrial sector has a major role to play in energy conservation since it is the major consumer of energy. The manufacturing sector, in particular, can achieve substantial savings in the consumption of energy through adopting energy efficient methods. The main reasons identified for higher consumption of energy are obsolete technology, lower capacity utilization, casual monitoring of energy consumption, lower automation, low quality of raw material and poor operating and maintenance practice.

Energy conservation measures taken by some of the major public sector enterprises during the year 2006-07 are given below:

5.3.1 Steel

The specific energy consumption in Rashtriya Ispat Nigam Limited went up from 6.08 Gcal/tLS in 2005-06 to 6.15 GcaltLS in 2006-07 due to poor quality of raw material used for the production of Sinter & Hot metal. The various energy initiatives taken by the Company during the year are mentioned below:

(i) Sp. Heat consumption in Coke oven decreased 629 M.cal/ton of dry coal charged in 2005-06 to 600 M.cal/ton of dry coal charged in 2006-07 by improving thermal regime of Batteries.

(ii) Sp. Heat consumption in SP decreased from 34 M.cal/ton of Gross Sinter in 2005-06 to 32 M.cal/ton of Gross Sinter in 2006-07 by optimizing mixed gas Calorific Value.

(iii) Sp. Heat consumption in SMS decreased from 35 M.cal/tLS in 2005-06 to 34 M.cal/ tLS in 2006-07 by optimizing mixer operation.

(iv) Sp.Heat consumption in LMMM decreased from 491 M.cal/ton of bloom in 2005-06 to 466 M.cal/ton of bloom in 2006-07 by regrouping of burners in Zone 1 & 2.

(v) Sp. Heat consumption in Bar Mill decreased from 22 M.cal/ton of billet in 2005-06 to 21 M.cal/ton of billet in 2006-07 by improving furnace performance.

(vi) Sp.Heat consumption In MMSM decreased from 344 M.cal/ton of boom in 2005-06 to 337 M.cal/ton of boom in 2006-07 by optimizing furnace parameters.

(vii) Sp.Heat consumption in TPP decreased from 746 M.cal/ton of High Pressure Steam in 2005-06 to 733M.cal/ton of High Pressure Steam in 2006-07 by improving boiler feed water temperature.

(viii) LD as recovery from LD Converters in the year 2006-07 was 345.3 Million NM3.

(ix) Recovery power from Back pressure Turbine in the year 2006-07 was 101914 MWH.

(x) Recovery power from Gas Expansion Turbine in the year 2006-07 was 90627 MWH.

Energy cost as a percentage of cost of production was accordingly reduced from 49% in 2005-06 to 42.8% in 2006-07.

The Mishra Dhatu Nigam Limited consumed 2973 KWH/Tonne of production in 2006-07 as compared to 3013 KWH/Tonne in 2005-06. The various energy conservation measures undertaken by the company during 2006-07 are mentioned below:

(i) Widening of Vendor base for LPG in ever increasing price trend situation, e.g. Indian Oil Petronas, SHV energy, Aegis Logistics Ltd., as additional vendors.

(ii) Constant monitoring of LPG consumption and buying on monthly basis based on firm production plans through competitive tenders

(iii) Production in campaigns

(iv) Educating the work force at all levels on the cost of LPG and consumption patterns.

(v) Constant review and revision of maximum demand vs. actual demand for minimizing power costs

The cost of power as percentage of the cost of production came down from in 4.72% in 2005-06 to 3.49% in 2006-07.

In the case of Sponge Iron India Limited energy consumption was brought down to 110 Kwh per unit of production in 2006-07 from 118 Kwh in 2005-06. The company generated 56,38,280 Kwh units of power from waste gases of sponge iron kilns during the year and Rs.2/- was saved on every Kwh generated and utilised in the plant. The energy cost as percentage of the cost of production came down from 3.66% in 2005-06 to 2.90% in 2006-07.

The energy cost in the case of Hindustan Copper Limited was reduced from 15.78% in 2005-06 to 10.84% of the cost of production in 2006-07. Some of the energy conservation measures undertaken by the company during the year 2006-07 are as mentioned below:

(i) Petroleum Conservation Research Association (PCRA) was appointed for undertaking energy audit in all the units of HCL. CRA have completed the audits and have submitted their recommendations. The recommendations of PCRA towards energy conservation are at various stages of implementation.

(ii) The company has introduced an "Energy Policy" for giving the energy conservation efforts a formal momentum. The Energy Policy has set out specific objectives like improving Energy efficiency, Securing reliable energy supply at the most competitive rate, encouraging energy conservation culture amongst employees, etc. The policy has set a target of 2% reduction in energy cost in the first year.

5.3.2 Minerals And Metals

In the case of Kudremukh Iron Ore Company Ltd. however, the consumption of electricity per tonne of pellets during 2006-07 went up to 132.31 kwh as against 37.53 kwh in the previous year. This was due to switching over to use of Hematite ore from Magnetite ore consequent to stoppage of mining activities at Kudremukh on 31.12.2005 and operation of Ball Mill-I and II for grinding of ore sourced from outside.

The table below gives the details of energy consumption per tonne of production in respect of National Aluminum Company Limited:

Description	Alumina		Aluminium	
	2006-07	2005-06	2006-07	2005-06
Power(KWH/MT)	348	337	14953	14728
Fuel Oil (KG/MT)	78	77	80	84
Coal (KG/MT)	626	636		

5.3.3 Coal & Lignite

The details of energy consumption per unit of output of coal in respect of South Eastern Coalfields Limited are given below:

Energy consumption	Coal output per tonne	
	2006-07	2005-06
Electricity (KWH)	10.53	11.08
Diesel	0.66	0.67

The details of the major energy conservation measures undertaken by the company during the year 2006-07 are mentioned below:

(i) Demand controllers have been installed at various points of supply to reduce maximum demand.

(ii) Energy efficient lamps have been used for underground lighting of low voltage

(iii) Stage pumping has been eliminated by providing bore hole in J&K Area Mines.

(iv) Ventilation stopping were made in many mines of Sohagpur and Hasdeo Areas.

The company is also implementing the following proposals for reduction in consumption of energy:

(i) Bore holes as per requirement, wherever feasible will be drilled for reduction in length of mine dewatering pipelines and elimination of stage pumping.

(ii) In UG mine bulk head incandescent lamps fitting will be replaced with well glass type CFL fitting. The sodium vapor lamps and mercury vapor lamps used in the colony street lights will be replaced with CFL lamps.

The company has also informed that it was able to earn a bonus of Rs. 1.80 crore by ensuring power factor above 0.95 at various points of supply.

The details of energy consumption per unit of production in respect of Western Coalfields Limited are given below:

	2006-07	2005-06
Power(KWH/ton)	14.05	13.86
Coal + OB (KWH/CUM)	4.48	4.06

The major energy conservation measures undertaken during the year 2006-07 by the Western Coalfields Limited are mentioned below:

(i) Replacement of over rated motors

(ii) Addition of 5450 KVAR Capacitor to improve and maintain the Power Factor at 0.95

(iii) Staggering of pumping operations

(iv) Availing night rebate from MSEB

(v) Load shedding on domestic feeder

(vi) Reorganization of pumping/eliminating stage pumping

(vii) Replacing high watt luminaries by energy efficient luminaire (Chandrapur, Nagpur, Pench)

(viii) Installation of bunker at Sarni UG

The energy cost was 8.6% of the cost of production in 2006-07 as compared to 7.9% in 2005-06.

The major initiatives taken by the Central Coalfields Limited for energy conservation during the year 2006-07 are as under.

(i) Energy (Power & HSD) audit and bench marking by CMPDIL, Ranchi for Piparwar Opencast Project of Piparwar Area and KDH opencast Project of NK Area. Power & HSD consumption audit of all the mines i.e. Kathara, Govindpur, Jarangdih Open Cast Projects, Govindpur, Jarangdih, Swang underground mines as well as Kathara & Swang Washeries by Petroleum Conservation Research Association (Eastern Region), Kolkata.

(ii) Load Demand management by improving Load factor & restriction of maximum demand by staggering of loading during peak hours.

(iii) Installation & commissioning of three new HSD Dispensing units along with three numbers of 20 KL underground tanks at Ashoka Project which reduced the to & fro movement by three Kilometers, resulting in conservation of HSD.

(iv) Installation & commissioning of new HSD Dispensing units alongwith 70 KL underground tank at KDH opencast Project causing a saving of two Kilometers to & fro movement of Dumpers, which also led to conservation of HSD.

(v) For Lubricant Conservation & Operational improvement of HEMM, CIL R & D Board has approved a scheme which is being jointly undertaken by CCL & Indian School of Mines University, Dhanbad.

The specific energy consumption of Northern Coalfields Limited was 2.07 KWH per cum. for the year 2006-07 as compared to 2.08 KWH per cum. in 2005-06. The following energy conservation measures were taken up by the company during the year 2006-07:

(i) Time switches have been installed in street lights, mines, residential areas at Nigahi, Jayant, Dudhichua, Amlohri, Bina, Khadia, Jhingurda Projects and CWS of NCL.

(ii) Compact fluroscent lamps have been installed at Bina, Dudhichua, Jayant, Nigahi, Jhingurda Projects and CWS of NCL.

(iii) Additional capacitor banks have been installed at Kakri and Janyant Projects for improvement of power factor.

(iv) Additional Solar Powered lamps have been installed at Dughichua Project to conserve energy.

The energy cost came down 7.42% of the total cost of production in the year 2006-07 as compared to 8.03% in the previous year.

The details of energy consumption per unit of production in respect of Neyveli Lignite Corporation Limited are given below:

	2006-07	2005-06
Lignite(Kg/Kwhr)	1.164	1.163
Oil(ml/Kwhr)	1.695	1.684
Power(Kwhr/T)	37.81	37.38

The important energy conservation measures taken by the Neyveli Lignite Corporation Ltd. during the year 2006-07 are given below:

(i) Energy audit was carried out by CFRI, Nagpur in TPS-I and their recommendations for energy savings are being implemented in phased manner.

(ii) Microprocessor based variable frequency, variable voltage drive system is installed in the service building elevator in TPS-I Expn. Replacing the conventional drives resulting in energy savings as well as reliable and smooth operation.

(iii) Bifurcation arrangements introduced in TPS-II in the Lignite Handling for filling up of lignite boilers have resulted in optimizing the running hours of booker and re-claimers and thus less auxiliary power consumption.

(iv) Annunciation systems using incandescent bulbs have replaced with LEDs based system in the BWE - 1573, BWE-1447, BWE-1448 and New Tripper 232 as an energy saving measure.

(v) Timers were provided for street lights with programme particularly to suit the seasonal requirement.

(vi) Rearrangement and clubbing of loads on 25 MVA, 230/11 KV Transformer in Sub-station were done during low loading periods like Conveyor shifting, re-routing and during overhaul etc. resulted in optimum utilization of loading capacity and saving of energy.

(vii) PLC instruments are introduced for control and annunciation circuit of Tripper Cars and Conveyor drives.

(viii) Solar lighting system with energy saving CFL fittings were installed in some of the conveyor and Administrative Office areas.

(ix) Energy efficient electrical luminars like CFL fittings, Electronic chokes are installed in place of conventional lights, which resulted in considerable power savings.

(x) Synthetic overhead tanks are being installed in the Township in phased manner and thereby achieved reduced pumping hours and conservation of water.

(xi) The electro-magnetic energy meters approximately 1000 Nos. were replaced with Electronic energy meters for proper accounting and to avoid mis-use of power.

The energy cost of lignite as percentage of the cost of production was 76.7% in 2006-07 as compared to 82.02% in the year 2005-06.

5.3.4 Power

The details of various measures undertaken by the Nuclear Power Corporation of India Limited in 2006-07 are given below:

(A) Energy Conservation Measures Undertaken:

Conservation of energy has been given high priority in all the operating Power Plants (NPPs) of NPCIL. The following measures were continued to be taken at the operating Nuclear Power Plants (NPPs) for the conservation of energy:

(i) Energy Conservation Committees have been formed in all the operating NPPs. These committees meet periodically to review the auxiliary consumption in respective stations

and suggest measures for energy conservation.

(ii) Energy Audit, by an expert agency, was carried out at one of the operating station. Based on the results an action plan has been prepared for implementation. Energy audits at other NPCIL stations in the current year are in offing.

(iii) Continuous efforts are put in to reduce heavy water, steam, light water and compressed air leaks and the consumption of the same is closely monitored. Also consumption of various gases viz. hydrogen, nitrogen, helium etc. is also closely monitored and corrective actions, if required, are promptly taken.

(iv) Number of running equipment has been optimized. During shutdown, minimum number of equipment are kept operating to ensure savings on energy consumption.

(v) Replacement of tube light/lamps with energy efficient lamps, proper maintenance of the vehicles to achieve fuel efficiency and various other energy conservation measures are taken up on priority. During off hours, lighting requirement is optimized in the canteen and maintenance shops and other similar areas essentially to achieve energy savings.

(B) Additional Initiatives taken for reduction of consumption of energy:

(i) "Energy Conservation Day" was celebrated on 14th Dec, 2006 at all our stations to create awareness towards energy conservation among officers, employees and their families.

(ii) Various programmes were arranged at station on the same day which includes a talk on energy conservation measures and related activities, sharing tips for energy conservation, painting competition and exhibition of energy efficient equipment in Atomic Energy Schools.

(iii) The continued trend of monitoring of heavy water and light water collections during reactor operations, has helped the stations in taking appropriate remedial measures.

(C) Impact of measures at A and B above reduction of energy consumption.

The company has informed that the measures taken as mentioned above have resulted in substantial energy savings. There has been a reduction in the auxiliary consumption at stations over the previous years. The consumption of oil, gas etc. has substantially reduced over the previous year. There was substantial reduction in dematerialized water consumption due to faster detection and correction of steam leaks.

5.3.5 Petroleum

Energy consumption per unit of output in respect of Chennai Petroleum Corporation Limited are given below:

	2006-07	2005-06
Electricity(KWH/MT)	62.01	62.86
Furnace Oil(Kg/MT)	47.96	48.52
FCCU Coke(Kg/MT)	3.40	3.58
Fuel Gas (KG/MT)	10.12	10.82

The following major energy conservation measures were undertaken during the year 2006-07.

(i) Commissioned seven numbers of Variable Frequency Drives and achieved significant saving in power.

(ii) Replacement of around 2000 faulty steam traps to improve condensate recovery.

(iii) Secondary seals provided for six crude tanks to reduce evaporation loss.

(iv) Agreement entered into with M/s.Shell Global International through Center for High Technology (CHT) to undertake study for margin improvement, energy and loss reduction and improving operational performance at Manali Refinery.

(v) An in-house team of Officers comprising of three full-time coordinators and 28 part-time members has been formed to work with the experts of M/s Shell Global during the improvement assessment phase. The study will commence from mid July 2007. The

implementation of accepted proposals will start from October 2007 onwards.

(vi) The Energy index for the year was 76.1 MBTU/BBL/NRGF as against 78.6 achieved in the year 2005-06.

The details of energy consumption per unit of output in respect of GAIL India Limited (unit-wise) are as under:

Unit	2006-07	2005-06
LPG Recovery Plant, Vijaipur	6.02	5.85
LPG Recovery Plant, Vaghodia	1.60	2.31
LPG Recovery Plant, Gandhar	5.14	5.24
LPG Recovery Plant, Usar	15.98	13.59
LPG Recovery Plant, Lakwa	35.30	37.12
UPPC, Pata	19.04	22.69

The energy conservation measures undertaken by the GAIL India Limited are mentioned below:.

(i) Modification in lighting systems by installing energy efficient lighting devices and controls at Hazira, Vijaipur, Usar, Jhabua and various stations of JLPL have resulted in over 8 Lakh KWH energy savings with a corresponding cost saving of around Rs. 40 Lakh in the year 2006-07.

(ii) Implementation of Variable Frequency Drive (VFD) system at GPU, Usar for cooling water pump & Hot Oil Circulation pumps has resulted in recurring annual energy savings of 209302 KWH. The total cost saving achieved in year 2006-07 is Rs. 9 Lakh.

(iii) Use of Non conventional source of Energy has been promoted across the organization. In this effort. Solar based lighting equipments & water heaters has been installed at Gandhar & Loni and flow computers at Vadodara which resulted in total recurring annual energy saving of 481 KWH.

(iv) Installations of additional P.F improvement equipments and maintaining P.F. in the range of 0.95 to 1.0 at various stations of JLPL: Yearly savings of Rs 20.6 lacs has been achieved.

(v) Improvement in LPG Recovery is achieved by utilizing redundant LEF column condenser in series with existing LPG condenser at LPG plant Vaghodia. This modification helped in recovering 3.35% more LPG from feed gas as compared to the FYK-2005-06. The average LPG recovery increased to 80.20 (MT of LPG per MMSCM of gas processed) in the FY-2006-07 after the modification against 77.60in the FY-2005-06. Cost involved in the implementation of this scheme was in the tune of Rs. 13 lakh and it attracted savings in the tune of Rs. 4.95 Cr. Over the financial year.

(vi) Installation of Energy efficient motors at Vijaipur and revised operation philosophy of Gas after Cooler Fan at Hazira has resulted in annual energy saving of about 19500 KWH with corresponding cost saving of approximately Rs. 1.0 Lacs.

The following additional investments and proposals are being implemented for reduction in consumption of energy.

(i) Variable speed drive (VSD) for process and Lube Oil cooler of DVPL compressors have been taken up for implementation at an estimated cost of Rs 17.0 lakh which will result into cost reduction.

(ii) Non conventional source of Energy based solar lighting, equipments & water heaters are under implementation at Vijaipur, Khera, Hazira and various stations of JLPL & HVJ.

(iii) Energy efficient UPS system in place of Old thyristor based UPS is under implementation at Viujaipur at an estimated investment of Rs. 71 lakh with corresponding expected saving of 28.0 lakh per annum.

(iv) Lighting systems modification by installing energy efficient lighting devices and controls at various stations of JLPL, HVJ is being taken up in phased manner.

The details of energy consumption per unit of production in respect of Hindustan Petroleum Corporation Limited(HPCL) are given below:

	2006-07	2005-06
Electricity(KWH/tonne)	38.81	39.81
Liquid Fuel(Tonnes/TMT)	36.16	39.92
Gas Fuel (Tonnes/TMT)	11.13	10.18
Coke Fuel(Tonnes/TMT)	7.04	6.76

The Mumbai and Visakh Refineries of HPCL accorded highest priority to energy conservation and undertook the following major energy conservations measures.

Mumbai Refinery

(i) Improved heater / boiler efficiency by periodic surveys, cleaning and decoking of the tubes.

(ii) Improved condensate recovery by 4T/hr by replacing steam traps and cleaning of naphtha stabilizer re-boiler.

(iii) Repaired/replaced primary and secondary seals of six floating roof storage tanks to reduce emission losses.

(iv) Carried out study of LNG firing in heaters/ boilers based upon economic consideration/ environmental norms.

(v) Carried out Steam leak survey by CHT nominated team and steam leak performance was found excellent.

(vi) Organized Oil Conservation Fortnight during January 15to 31, 2006 to generate mass awareness in public for conservation of petroleum products. During the fortnight, several activities like free PUC check up for vehicles, display of oil conservation posters & slogan/quiz drawing competitions in various schools in Chembur area were conducted.

Visakh Refinery

(i) Conducted comprehensive energy audit/ hydrogen loss survey during the year.

(ii) Reduced steam leaks approx 2.5T/hr by installing MST 21traps on copper tracing lines.

(iii) Improved CDU/VDU heater efficiency by on-line furnace tubes chemical cleaning.

(iv) Carried out Steam leak survey by CHT nominated team and steam leak performance was found excellent.

(v) Organized Oil Conservation Fortnight during January 15 to 31, 2006 to generate mass awareness in public for conservation of petroleum product. During the fortnight, several activities like free PUC check up for vehicles, display of oil conservation posters & slogan/quiz drawing competitions in various schools at Vizag.

The energy cost in respect of HPCL came down to 5.97% of the cost of production in 2006-07 as compared to 6.29% in 2005-06.

The details of energy consumption per unit of production in respect of Indian Oil Corporation Limited are as under:

	2006-07	2005-06
Electricity(KWH/MT)	66.171	62.802
Liquid Fuel(MT/MT)	0.036	0.033
Fuel Gas (MT/MT)	0.038	0.036
Natural Gas (MT/MT)	0.008	0.009

The increase in energy cost in 2006-07 over 2005-06 is mainly due to increase in fuel costs. The company undertook the following major energy conservation schemes during 2006-07:

(i) Heat recovery from IO (Intermediate Oil) to tempered water at Haldia, heat recovery from NSU bottom for steam generation at Panipat.

(ii) Flare gas recovery at Mathura refinery.

(iii) Routing of hot RCO to DCU at Guwahati, hot RCO to VDU at Gujarat

(iv) Condensate Recovery at Guwahati refinery

(v) All above schemes and other operational improvements resulted in fuel savings o around 24000 MT/year.

5.3.6 Fertilizers

The details of energy consumption per unit of production in respect of Brahamputra Valley Fertilizers Corporation Limited are given below:

	2006-07	2005-06
Namrup - II (Rs./MT)	6623	8186
Namrup - III(Rs./MT)	3870	3797

The consumption of energy per unit of production for Namrup-II is high as the plant is running at 50% of its capacity due to BG supply limitation. The company has undertaken the following major Energy conservation schemes undertaken during 2006-07:

(i) Utilization of Purge Gas as Fuel in Primary Reformer of Nam-III.

(ii) Excess SMG Firing in Primary reformer in Primary Reformer of Nam-III

(iii) Direct supply of Ammonia by-passing intermediate storage in Nam-III

(iv) Design change of first stage intercooler of Synthesis Gas Compressor in Ammonia-III

(v) Installation of process condensate stripping in Ammonia-II.

(vi) Installation of HP (45 ata) Steam Vent valve with improved design in Urea-III.

(vii) Replacement of electrical driven NG booster compressor with new steam driven centrifugal compressor in Ammonia-II.

(viii) Installation of PRDS valve in Ammonia-III plant.

Beside the above, a comprehensive Energy Audit of Namrup-III plants were done by M/s. RERI (The Energy and Resources Institute) New Delhi and its suggestions are being studied for implementation. The energy cost as percentage of cost of production came down to 29.49% (Namrup-II) and 55.27% (Namrup-III) for the year 2006-07 as compared to 32.60% and 50.67% for the year 2005-06.

The details of energy consumption per unit of production in respect of National Fertilizers Limited (unit-wise) are as under:

	Gcal/MT Urea	
Unit	2006-07	2005-06
Nangal	9.507	9.566
Panipat	9.976	9.864
Bathinda	9.616	9.640
Vijaipur-I	5.756	5.795
Vijaipur-II	5.415	5.488

In respect of Panipat Unit, the increase in the specific energy consumption is due to certain unforeseen break down ~~in the plant duri~~ng 2006-07.

As an energy conservation measure, the National Fertilizers Limited had installed Pre-concentrator in both streams of Urea plant at its Vijaynagar-I unit.

Energy consumption per unit of production in respect of Rashtriya Chemicals & Fertilizers Limited was 6.506 Mkcal/MT for the year 2006-07 as compared to 6.505 Mkcal/MT for the year 2005-06. The major schemes implemented for Energy Conservation during the year 2006-07 are given below.

(A) Ammonia I Plant:- Variable Frequency Drive for motors of both the Ammonia transfer pumps has been installed. Savings achieved is to the tune of Rs. 2.5 lacs/year.

(B) Methanol:

(i) Installation and Commissioning of Hydrogen Gas Recovery Unit in August 2006 to recover hydrogen from Purge gas resulting into enhancement of production of Methanol by 8 to 10 MT per day. This has saved energy in the form of Hydrogen being wasted.

(ii) Rewinding of MUG 'B' motor with 15% enhanced capacity in May 2006 resulted in sustained higher plant load.

(iii) Installation of energy friendly 65 Nos. of Metal Halide fitting as energy saving measure.

(C) Ammonia V:

(i) Ammonia-V Plant was revamped during the year 2006-07 for reducing specific energy consumption required for production of ammonia.

(D) Suphala:

(i) Interconnection of slurry transfer lines so that only one pump can be run instead of two pumps for transferring slurry to both DBN & RHS sides, thus saving electrical energy to the tune of 45 KW per hour.

(ii) Interconnection of BL Pit effluent line & Grinding Pit effluent line to Scrubbing Tank thus saving energy by running only one pump instead of two.(Energy saving 35 KW)

(iii) Installation of Decanter for recovery of Nutrients from waste water being sent to Effluent Treatment Plant. This has also helped in reduction in effluent quantity and water conservation.

(E) HPNA Plant:

(i) Improvement of Power factor by taking capacitor bank in line leading to annual saving to the tune of 580 kWH of electrical energy per day.

(ii) Replacement of UPS battery bank for better reliability

(iii) Replacement of energy efficient tube light fitting in place of conventional fitting leading to reduction in energy consumption to the tune of 30%

(F) Steam Generation Plant:

(i) Installation and Commissioning of WTP DCS system in April 2006 resulting in reliable plant operations, proper monitoring of parameters and reduction in chemical consumption.

(ii) Steam Trap and insulation survey of steam line have been carried out for reducing loss of thermal energy through high pressure steam lines.

(G) Ammonium Bicarbonate plant:- Utilization of excess steam condensate after cooling, resulting in Zero DM water import leading to DM water saving to the tune of 20 M3/day since Jan 2007

(H) Sulphuric Acid Plant :- New Economizer is provided on gas inlet line to IAT. This has resulted in increase of steam production by about 2MT /hr. This has also resulted in decrease in gas temp to IAT, increasing its absorption efficiency:

The energy cost in respect of Madras Fertilizers Limited was 75.89% of the cost of production in 2006-07 as compared to 60.85% in 2005-06. The higher energy consumption was due to low load operations and low capacity utilization. The details of energy conservation measures undertaken during the year 2006-07 are mentioned below:

(A) AMMONIA PLANT

(i) Excess purge gas was lined up to HDS flare thru' 1" line thereby cutting LPG totally to HDS flare. 20% reduction in LPG consumption effected.

(ii) Modification of hydrogen FT and lining up to Pre-reformer resulted in a saving of 5 KL of naphtha per day.

(iii) Modification of jacket Steam line to fuel header has increased reliability.

(iv) Interconnection of fuel naphtha & fuel gas line modifications in Reformer platform has resulted in improved flame pattern and saving of fuel naphtha to the tune of 3 KL/day.

(v) Using K 1602 excess air to 110 ATA soot blower to 4th pass improved the furnace draft and steam saving

(B) UREA PLANT

(i) Removal of 3 Nos. Carbamate Booster Pump has resulted in a saving of 40 KW/hr.

(ii) Stoppage of both J-171 Pumps by increasing the concentrated vacuum has resulted in a saving of 20 KW/hr.

(iii) By reducing the HP of both ID and FD fans in PCS resulted in better quality of Urea and a power saving of 20 KW/hr.

(C) UTILITY PLANT

(i) Stoppage of PSA Unit Air Compressor and 3 Nos. Screw Air Compressor by substituting excess K 1602 Air has saved to the tune of 910 KW/hr.

(ii) Modification of Cooling Water Return Header had increased flow of Cooling Water preventing fouling and Cooling water temperature dropped by 2.4 C

5.3.7 Chemicals & Pharmaceuticals

The details of energy consumption per unit

of production in respect of Hindustan Antibiotics Limited is as under:

	Benzathine Penicillin	
	2006-07	2005-06
Power(Kwh/BU)	48.47	51.12
Fuel Oil (kg/BU)	14.76	15.29

During the year the company has taken various Energy Conservation measures to reduce the generation and distribution cost of various utilities. Some of the measures undertaken are:-

(i) Rationalization of steam distribution network

(ii) Good Housekeeping measures

- Prompt rectification of leakages in the network of steam, chilled water, compressed air, brine etc.
- Regular maintenance of steam traps
- Regular rectification of Insulation of steam headers, chilled water lines, brine lines etc.
- Monitoring pumping pressures for chilled water and tower water in the range of 2.5 to 3.5 kg/cm2(g).
- Monitoring chilled water temperature in the rage of 9 C to 10 C

(iii) Monitoring analysis of utilities generation vis-à-vis Energy Consumption in production plans by the way of daily and monthly Energy audit and taking corrective measures.

(iv) Streamlining the operation of chilled water pumps and tower water pumps to reduce operation cost.

(v) Small instrument air compressor is being used to cater the requirement for process as well as for instrument, in place of Demag compressor after suspension of operations cost.

(vi) Rationalization of chilled water generation & distribution system so that entire factory requirement (after suspension of operations by RPGLS) is met by only one generation system.

(vii) Installation of Variable speed Drive for chilled water pump, Drinking water pump, Boiler No. 1 and 4 FD fan

The energy cost in respect of HAL was 12.74% of the cost of production in 2006-07 as compared to 13.56% in 2005-06.

The details of energy consumption per unit of output in respect of Hindustan Organic Chemicals Limited is given below:

	2006-07	2005-06
Power(Rs./MT)	1347	1207
Fuel(Rs./MT)	1831	1417

The important energy conservation schemes undertaken by Hindustan Organic Chemicals Limited during the year 2006-07 are mentioned below:

(A) Rasayani Unit:

The company replaced water pumps and electrical motors of optimum size thereby saving Rs. 13 lakhs per annum.

(B) Kochi Unit:

(i) Energy Audit was conducted at Kochi Unit though outside agency and the measures suggested will be implemented in the future,

(ii) Installation of one Variable Frequency Drive on the raw water p ump at Kochi unit to save electrical energy. About 16,000 kwh of energy saved in the current year. Total expected saving is about 65,000 kwh per year.

The details of the energy conservation measures undertaken by the Karnataka Antibiotics & Pharmaceuticals Limited during the year 2006-07 are as under.

(i) Compressed air leakage from the pipe joints and valves set right after minimizing the bends.

(ii) a. Power factor improvement bank incorporated to the Motor Control Centres (MCC) to improve the power factor at the substation and MCC supply level of AC plant in Non Parenteral Area.

b. Use of energy efficient compact fluorescent lamps in the Production area and utilities.

c. Replacement of 34 watts fluorescent lamps in production area (DPP1) to

minimize the power consumption which are energy efficient and eco- friendly.

(iii) Boiler condensate water collected and reused for boiler as feed water.

(iv) Washing area, washed water collected has been reused for vaccum pump (water type) and cooling tower.

(v) Reverse Osmosis plant rejects collection and usage for AC condenser/water for injection coolant done and planned to utilize for compressor cooling also.

(vi) For the better energy efficiency and utilization, most of the high capacity continuous running works variable frequency drives were installed.

5.3.8 Engineering

The consumption of power and fuel as percentage of cost of production in respect of Bharat Heavy Electricals Limited (BHEL)was 1.77% in 2006-07 as compared to 1.90% in the year 2005-06.

Energy conservation is an important thrust area in BHEL. During the year 2006-07 savings due to implementation of projects in the areas of Energy Conservation was Rs. 7 crore as against a saving of Rs. 6 crore in the year 2005-06. The various thrust areas identified for conservation of energy are:

(i) Load planning for reduction in maximum demand of power.

(ii) Maximum use of daylight.

(iii) Modification of lighting system using Energy Efficient Lamps.

(iv) Optimum utilization of Furnaces.

(v) Arresting leakage in Compressed Air Piping, Steam Piping and electrical system.

(vi) Use of alternate fuel.

(vii) Providing variable speed drives for motors on machines.

In addition, Energy Conservation awareness week was celebrated between 7-14 December, 2006 at the units, townships, schools and adopted villages.

The energy consumption per lakh rupees worth of output in respect of Bharat Electronics Limited is given below:

	2006-07	2005-06
Electricity	142	161
HSD Oil	11234	12441
Petrol	1500	1688
LPG	5700	6270

The major energy conservation measures undertaken by the Bharat Electronics Limited during the year 2006-07 were:

(i) Replacement with Energy Efficient Light Fittings

(ii) Introduction of Cyclic timers for Bore wells

(iii) Replacement with energy efficient screw chillers

(iv) Arresting of Compressor air line leakages

(v) Replacement with Energy Efficient Motors

(vi) Replacement with Energy Efficient Transformers

(vii) Commissioning of 2.5 MW wind mill

(viii) Solar water heaters for canteen applications

The energy cost in respect of BEL was 0.75% of the total cost of production in 2006-07 as compared to 0.85% in 2005-06.

The details of energy consumption per unit of output in respect of Heavy Engineering Corporation Limited is given below:

	2006-07	2005-06
Electricity	9.2%	14.6%
Coal	5.9%	8.2%
Diesel	0.5%	0.7%

The major steps taken to conserve the energy during the year are as follows:

(i) Reduction in maximum Demand of Power by proper load planning.

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

(iii) The use of energy efficient high pressure sodium vapor lamps/Tup lights.

(iv) Use of producer gas instead of LPG.

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

(vi) Reduction in fuel consumption by providing ceramic lining in Furnaces and by installing

(vii) Switching off un loaded transformers to save power.

(viii) Switching of unwanted lights, fans and idle machines.

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

(x) Monitoring the opening of Burners in heating and heat treatment furnaces for optimum utilization of producer gas.

(xi) Synchronization of the operation of compressor units for optimum utilization of compressor air.

(xii) Provision of Transparent Sheets at roof tops of production shops so as to utilize sunlight for illumination.

5.3.9 Transportation Equipment

The energy cost in respect of Cochin Shipyard Limited was 1.26% of the cost of production in 2006-07 as compared to 1.93% in 2005-06. The steps taken for energy conservation measures by the Cochin Shipyard Limited during the year 2006-07 are given in next column:

(i) Modified capacity control system of 2 Nos. Main Air Compressors and controlled the loading / unloading valve.

(ii) The operating voltage of lighting circuit is reduced by changing the tap setting of transformer.

(iii) Provided changeover switch for Variable Frequency Drive between 2 Nos. 50hp industrial Water Pumps.

(iv) Provided safety relays at the primary side of welding sets for controlling the switching ON of the sets thereby eliminating the no load losses.

(v) Rain water harnessing for industrial purposes thereby reducing the use of metered water and operation of water pumps.

(vi) Portable compressors have been installed in many isolated locations and where continuous requirement is not needed.

(vii) Leakages in the compressed air distribution system and other gas lines are regularly monitored and rectified.

(viii) Limiting the long travel operation and also making use of pallets for handling group materials optimize energy consumption for cranes.

(ix) Optimization of use of lights and fans.

(x) Provided time switches for street lighting for optimum use.

(xi) Power factor is continuously monitored & maintained near unity p.f.

(xii) Created awareness among all employees and displayed energy saving stickers for optimum use of electrical equipments.

The details of consumption of energy per unit of production in respect of Mazagon Dock Limited are given below:

	2006-07	2005-06
Electricity (Kwh/crore)	7610.90	25237.93
HSD (Litres/crore)	19.22	46.29

The details of major energy conservation measures undertaken by the Mazagoan Dock Limited during the year 2006-07 are mentioned in next column:

(1) To stimulate the latent cost consciousness at all levels of various sections / departments of the company, "Cost reduction Groups" (CRGs) were identified. The CRGs have been assigned the task of evolving strategies, methodology, drawing up plans of action, setting out the targets for savings, interacting with various departments, monitoring implementation of the proposed cost saving methods in a time frame, measuring the savings derived in monetary value and continuously updating the strategies to realize the potential savings in key result areas. The progress of the CRGs and their achievement are reviewed periodically at appropriate levels.

(2) The reduction in energy cost and reduction in consumption of energy per unit of production has been achieved successfully. This was possible, inspite of increase in production, by taking actions such as spreading energy conservation awareness in the company and implementing steps to conserve electricity and diesel, A few of these are enumerated below:-

(i) Welding is the main activity of this organization. Energy saving devices are fitted on welding equipments which switch off the equipment when not in use for more than 3 minutes.

(ii) Halogen lamps used for lighting are being replaced by the less power consuming metal halide lamps.

(iii) Fibre-glass sheets have been fitted on the top of the roof of most of the workshops. This allows sunlight to enter into the workshops during the day time, eliminating use of high bay fittings.

(iv) Diesel engines are regularly overhauled to ensure efficient running.

(v) Speciality lubricants are also used for efficient running of the diesel engines in the shipyard.

The consumption of energy per unit of SSU (standard ship unit) in the case of Goa Shipyard Limited was 31.71 for the year 2006-07 as compared to 43.01 in the year 2005-06. The details of major energy conservation measures undertaken during the year 2006-07 are mentioned below:

(i) New capacitor bank is added to Powerhouse (East) to improve and maintain Power Factor at 0.85 and above

(ii) All relays, breakers, meters are calibrated to maintain optimum efficiency and reduce energy losses.

(iii) Oil of HT transformers is filtered to improve insulation and break down voltage, which in turn improve efficiency of transformers and reduce various losses.

(iv) Replacement of 55% of vapour lamps to energy efficient sodium vapours lamps for industrial lighting purpose.

The energy cost in respect of Scooters India Limited was 0.022% of the cost of production in 2006-07 as compared to 0.023% in 2005-06. The following major energy conservation measures were undertaken during the year 2006-07.

(i) Control of MD (maximum demand) during FY 2006-07 and it remained below 3300 KVA (Avg. 3100 KVA during FY 2006-07) in spite of increase in load due to New Paint Shop.

(ii) Planning for full capacity utilization of Heat Treatment shop, New Paint Shop, Die Casting & Foundry shop.

(iii) Optimum utilization of compressed air for production and monitoring, in order to arrest leakage of compressed air & plugging of surplus air outlets.

(iv) Replaced conventional high fixtures (HPMV) by energy efficient light fixtures (MH).

(v) Installation of Energy Monitoring System for analyzing the electrical data for energy conservation.

5.3.10 Consumer Goods

The details of energy consumption per unit of production in respect of Hindustan Newsprint Limited is as under:

	2006-07	2005-06
Electricity (Kwh/MT)	1653	1749
Coal (MT/MT)	1.42	1.45
Furnace Oil (Ltr/MT)	20.1	20.76

The major energy conservation schemes undertaken by the Hindustan Newsprint Limited during the year 2006-07 are mentioned below:

(i) Replaced three old and low efficiency pumps in pulp mills:

(ii) Replaced 17 nos. of low efficient dynodrives by energy efficient motors and variable frequency drives in Chipper House, CMP & CP plants and resulted in a power saving of 68 KW.

(iii) Energy saving in 970 KW wood Chipper motor by replacing the rotor resistance starting system with fully automatic slip regulator with flux compensated magnetic amplifier with a power saving of 42 KW.

(iv) Switching over from the three stage refining to two stage refining in Chemi-Mechanical pulping plant since September 2006 on continuous basis. This could bring down the specific energy consumption of chemi-mechanical pulp from 1353 in 2005-06 to 1149 in 2006-07. The resulted energy saving is 98 Lakh units and energy cost saving of Rs. 295 Lakhs during the year.

(v) During the year 5540 MT of wood fines and 816 MT of sludge from de-inking plant were burnt in FBC Boilers and this resulted in saving of 3900 MT of coal.

(vi) Four Solar Water heaters were installed in the residential quarters of senior officers.

(vii) Bio gas plant utilizing kitchen waste was commissioned in Senior Officers' hostel, which saves one cylinder of cooking gas every month.

(viii) Energy Audit of compressed air generation and distribution network was carried out and modified the distribution network partially, as per the proposed scheme, to reduce distribution losses.

(ix) Installed variable frequency drive for air compressor of Boiler Ash handling system and resulted in a power saving of 21 KW.

The energy consumption per unit of production in respect of Hindustan Paper Corporation Limited was 30.90 Giga Joules/mt for the year 2006-07 as compared to 29.82 Giga Joules/mt for the year 2005-06. The major energy conservation commissioned during 2005-06 are mentioned below:

(A) Nagaon Paper Mill

(i) 132 KW LT motor fitted in col 2 tower dilution pump at pulp mill by replacing 250 KW HT motor.

(ii) Installation of de-superheating valve in line stopping original superheating pump.

(iii) Installation of auto On/Off switch for cooling tower fans.

(iv) Installation of auto combustion control in all three of boilers.

(v) Diversion of paper machine A.C. cooling water to cooling tower of utility area for recycles.

(B) Cachar Paper Mill

(i) Replacement of 50 nos. mercury vapour lamps with metal halide lamps in paper machine are and replacement of 130 nos. mercury vapour lamps with metal halide lamps in other area of the mill in 2nd phase.

The consumption of energy per unit of production Hindustan Photo Films Manufacturing Co. Limited was Rs. 68.53 per Sq.m. in respect of for the year 2006-07 as compared to Rs. 62.81 per Sq.m. for the year 2005-06. The increase is due to the reduced volume of production, consequent to the prevailing situation in the company. The company, neverthless undertook the following energy measures during the year 2006-07.

Electrical Energy conservation:

(i) The power factor was always maintained above 0.95 by installing power capacitors according to the requirement.

(ii) Energy efficient copper chokes were installed and maintained.

(iii) Heater and lighting loads were regulated.

(iv) Power transformers were utilized to the optimum level.

(v) Preventive maintenance schedule was strictly followed to improve the efficiency of motors and other equipments.

(vi) Plant blowers / machineries were run only for the required time by proper monitoring of the production schedule.

(vii) The cold storage compressor was effectively operated with the help of Automatic Control Circuit.

(viii) The Plant operations were sustained with reduced level of maximum demands.

(ix) Street lights and security lights were effectively utilized with the help of timer circuits.

(x) Low capacity compressor put into service in main plant for the reservation of the in process material.

The savings achieved due to the above measures was to the tune of Rs. 16 Lakhs.

Thermal Energy Conservation:

(i) Combustion control in Boiler and Hot Water Generator was maintained at reduced level of excess air.

(ii) The blow down level was optimized by monitoring the feed water and blow down water quality.

(iii) The Boilers and Hot water generator operation was optimized by staggered production schedules.

(iv) Strict follow-up of preventive maintenance activities was done.

The savings achieved due to the above measures was to the tune of Rs. 4 Laks.

The details of consumption of energy per unit of production in the case of Tyre Corporation of India Limited is given below:

	2006-07	2005-06
Power (Kwh)	1046	1032
Coal (MT)	1.230	1.166

Energy cost as percentage of cost of production was 33% for the year 2006-07 as compared to 36% in the previous year. The energy cost is high since the company is doing 100% jobbing work for other private tyre companies and major input cost like basic Raw Materials are being supplied by the jobbers. The energy conservation measures undertaken during 2006-07 by the company are mentioned below:

(i) Reduction of Boiler Blow-down by use of DM water in Boiler.

(ii) Use of Evaporative Cooling Tower in place of Refrigerator Water.

(iii) Replacement of the service water (pond water) by soft water circulated through cooling towers to improve the efficiency of Air Compressors cooling system.

(iv) New Capacitor Banks have been installed to improve the power factor.

(v) Old Compressor machine have been replaced with more efficient machine for compresses air system operation.

(vi) Old Pumps / Motors have been replaced with higher efficiency Pumps / Motors.

(vii) Energy Audit has been conducted by an outside expert. On the basis of their recommendations various energy saving scheme are being implemented in phased manner.

The Central Public Sector Enterprises (CPSEs) are conscious of the need to conserve energy and have been taking various steps for efficient use of energy. Regular maintenance of plant & machinery, replacement of energy inefficient equipments, effective recovery of waste-heat, prevention of leakage, modifications in the design of plant/machinery and other equipment, energy audit and creation of awareness among employees are the areas that needs renewed emphasis.

5.4 Steps Taken for Productivity Improvement

Some more measures taken by the Government and the management of the public enterprises to improve the performance of public enterprises are as under:

- Strengthening of MOU system
- Periodic performance review by the administrative Ministries and Inter Ministerial Committee.
- Delegation of enhanced powers to Board of Directors of Navratna, Miniratna PSEs and other profit making PSEs.
- Professionalisation of Board of Directors and induction of eminent persons as Independent Directors.
- Setting up of Board for Reconstruction of Public Sector Enterprises (BRPSE) to consider inter alia revival/restructuring of sick and loss making CPSEs
- Training and human resource development.
- Diversification of product-mix.
- Technology upgradation, research and development.
- Better house keeping and improved maintenance management practices
- Greater emphasis on energy conservation.
- Export promotion.
- Improved inventory control.

6 RESEARCH AND DEVELOPMENT

Lower cost per unit of output is one of the indicators of efficiency and a source of competitiveness for a firm. Research and Development (R&D) contribute handsomely towards achieving these attributes. R&D also enables a firm or an enterprise to phase out products in view of 'the product life cycle hypotheses' through introducing new designs and introduction of new products and services.

A number of CPSEs have 'in-house' research and development (R&D) facilities. Increased uses of computers have significantly improved the sophistication of these facilities. There is, moreover, 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 helping different individuals enterprises and institutions to acquire rights over IPR/ "patents" for commercial use as well as help them in getting new discoveries innovations petented. The main mandate of NRDC is that of closing the gap between the 'innovation chain' and conversion of the same into products for commercial use.

The CPSEs who are not in a position to have 'in-house' facility, but need to have competitive edge in the market can adopt this route for acquiring new knowledge. The CPSEs can also go for "sponsored research" through collaborating with Universities and reputed R&D institutions. Sponsored research is much more cost effective and is suited to CPSEs who cannot afford to incur expenditure on "in-house" research. Technological collaboration with leading companies of the world has been another approach adopted by CPSEs for upgrading their technological "know-how".

The CPSEs, during the past several years, have been focusing on different areas of (applied) research, on development of new products, process and systems and on doing research for quality up gradation and cost reduction. The paragraphs below provide an overview of R&D activities undertaken by CPSEs, in their respective cognate groups.

6.1 POWER

6.1.1 NTPC Ltd.

Main areas of R&D

To provide scientific services to various power stations and help them in increasing power availability and reliability through technical back up, solving problems, carrying out failure analysis, providing specialized scientific services through state-of-art instruments as well as carrying out applied research in various areas.

Achievements/Patents

(i) Provided technical support to the stations in terms of condition monitoring, failure analysis, corrosion studies, such as, Condition monitoring of FRF at Simhadri, Turbine lubricating oils of RGPPL, TG oil of Badarpur, Generator transformer of Talcher Thermal; Condenser tubes of Badarpur; High Conductivity of DM water at Badarpur;

(ii) Prepared the Action plan for the performance improvement of cooling towers at Talcher Kaniha, Vindhyachal, Rihand,

(iii) Solved the problem of fouling and corrosion in CW system at Talcher.

(iv) Studied the extent of corrosion in condenser tubes and CW system at Ennore and suggested remedial measures.

(v) R&D provided Consultancy for acid cleaning of boilers including oxide characterization & solvent selection and condition assessment/ failure analysis of water wall tubes, economizer tubes, HP evaporator tubes, for at IP Station, Delhi; Panipat Thermal station, Haryana; Lehra Mohabbat Station, Punjab; Muzzaffarpur station, Ropar (PSEB), Bokaro etc.

6.1.2 NATIONAL HYDROELECTRIC POWER CORPORATION LIMITED (NHPCL)

Main areas of R&D

(i) Solar Power as an alternative source

To promote environmental friendly use of solar energy, solar heating and solar lighting equipment, are being considered for remote locations where grid power is has limitations or either not available or fulfill through DG sets. A pilot project for 25kWp Solar Power Plant & Stand alone streetlights for Nimmo Bazgo Hydroelectric Project of NHPC investigation schemes was undertaken by R&D Division to promote green power. The 20 nos. stand alone street light and 25 kWp solar power plant was successfully commissioned on 17th January 2007. Efforts are being made to identify the suitable locations for use of Solar Power at NHPC Projects.

(ii) Ecological Study of Teesta River

Ecological study of Teesta River at Teesta Stage-V Hydroelectric Project and Teesta Stage-V reservoir was awarded to NEERI, Nagpur. Literature study and field visit have been completed by NEERI, in line with the required ecological study. Final report has been completed by NEERI, Nagpur incorporating observations of UNFCCC's CDM Meth panel 19th meeting report & UNESCO workshop report. Stage-II study to be taken up subsequently.

(iii) Cooperation/Coordination between IRTCES, China & NHPC

MOU for co-operation between IRTCES, China and NHPC has been signed on 28.11.2006. IRTCES, China and IWHR have been identified some research field and projects related with hydroelectric projects which are being scrutinized to obtain the best option to sort out the problems faced by NHPC projects.

(iv) Computational Fluid Dynamics Software Lab

CFD is extensively applied in the design of components in the water path like spiral casing, stay vanes, guide vanes, runner blades and draft tube and accurate prediction of losses and design analysis aid in optimization of the performance of the hydro turbines. For establishing CFD lab, Technical specifications of the software and hardware have been finalized in co-ordination with IT Division.

6.2 CHEMICALS & PHARMACEUTICALS

6.2.1 Hindustan Organic Chemicals Limited

Main areas of R&D

(i) Studies for enhancement of aniline production capacity under plant conditions.

(ii) Studies on reutilization of spent copper chromite catalyst for commercial purpose.

(iii) Pilot studies to prepare toluidines from nitro toluenes in vapour phase.

(iv) Studies on process development for the preparation of P-menthane from Di-pentene on lab scale.

6.3 CONSUMER GOODS

6.3.1 Nepa Limited

The Company's lab is recognized by DSIR and remains heart of the organisation.

Achievements/Patents

(i) Inspite of not having a De inking plant, the company was able to improve the brightness of its paper by 4 to 50 by its own R&D efforts.

(ii) The Company was also able to change its furnish mix which resulted in overall reduction in production cost.

6.3.2 Hindustan Latex Ltd.

Main areas of R&D

(i) Develop new low modus latex formulation with liquid accelerator system.

(ii) Introduce new products like Super Dotted Extra-time Condoms, Baggy Ribbed condoms, Warming Gel etc.

(iii) Develop new latex formulation with single accelerator.

(iv) Develop metalised BOPP-based laminate for packing of Condoms.

(v) Develop water-based condom lubricant as a substitute for Silicon oil.

(vi) Study the feasibility of using transparent ZnO for latex formulation.

(vii) Manufacturing Condoms with low protein content.

(viii) Set up Rapid Test Kit manufacturing facility.

(ix) Develop Liquid Oral Capsules formulations.

(x) Develop New-generation Women Health Care Products.

11. Develop Autologus Blood Bags.

Achievements/Patents

(i) Developed new latex formulation with improved BV and low modulus.

(ii) Introduced three new products -Moods Gel Personal Lubricant, Crezendo Vibrator Ring & Moods XXX three-in-one condoms (flared head with dots & ribs).

(iii) Installed filter press to separate Silica from the waste steam of vulcanizing section to reduce the ETP load.

(iv) Developed three cost-effective substitutes: (1) Tamol NN 8906 instead of Darwan-1; (2) 3-Ply laminate of the structure 12 micron PET/9 micron A1/50 micro SPE; (3) LLDPE-based 4-Ply laminate of the structure 12 micron PET/18-20 micron PE/ 9 micron A1/30 micron LLDPE.

(v) Completed the feasibility evaluation of pre-vulcanized Latex in RRT machine (for plain Mould).

(vi) Developed Formulations for Antiretroviral for controlling HIV.

(vii) Developed New-generation Oral Contraceptive Pills.

(viii) Developed Twin-Track Automatic Primary Packing Machine.

(ix) Developed TOTM-based Blood Bags for preserving Platelets up to 5 days.

6.4 HEAVY ENGINEERING

6.4.1 Heavy Engineering Corprn. Ltd. (HEC)

Main areas of R&D

(i) Technology up gradation and

(ii) Development of various systems

Achievements/Patents

(i) Coke quenching car was supplied to Rourkela Steel Plant with special feature which will enable coke produced having moisture content less than 4%. This has been indigenously developed and first time supplied to any of Steel Plant in India.

(ii) Mould oscillating m/c which is used in continuous casting m/c in B.S.L. Bokaro having very stringent quality requirement and which was an import substitute has been manufactured and supplied.

(iii) 2nd set of Folding Cum Vertical Repositioning Platform (FCVRP) whose total weight was 892 tons was supplied to Indian Space Research Organization (ISRO) SHAR.

(iv) CNC Single Column Vertical milling machine model : BVS-45/70 NM

The machine with features like C-axis for positioning as well as 3rd feed axis, hydraulic clamping of all axes movement, higher rapid traverse rate 6000 mm/min, Ram head with live spindle for milling, online diameter measuring systems, coolant through arrangement, parking station for tool holders, angular milling attachment SINUMERIK 840D CNC system, infinitely variable table speed, simultaneous 2-axes feed, accurate positioning control and in-process gauging has been developed by in-house Design and R&D activities of HMTP its machine tools unit.

(v) CNC Deep Hole Boring M/c model : BDH 140N

The machine has been designed for solid drilling of diameter 250 mm and counter boring up to diameter 350 mm to 6000 mm boring depth in ingots/slag/forging having 400 BHN hardness. The machine is having swing over bed 1400 mm, 100 KW AC spindle motor is provided for spindle rpm 800 and maximum 16 KNm spindle torque. Contact pressure of 100 KNm can be provided by guide carriage and 100 to 1300 liters of coolant can be supplied during machining. All the machine functions are through SINUMERIK 840D CNC system. The machine has been developed by in-house Design and R&D activities of HMTP.

(vi) Single Pass Under Floor Wheel Lathe model : LUW 175B

Single pass Under Floor Wheel Lathe has been designed to meet single pass machining requirement of railways for high productivity and ease of operation.

6.4.2 BHEL

Main Areas of R&D

BHEL's technology policy promotes a judicious mix of indigenous efforts and selective collaborations in essential areas. The company continuously upgrades its technology and products to contemporary standards. BHEL is one of the few companies worldwide involved in the development of Integrated Gasification Combined Cycle (IGCC) technology which will usher in clean coal technology. BHEL has set up Asia's first 6.2 MW IGCC power plant with a indigenously designed pressurized fluidized bed gasifier. Presently, development efforts are underway to set up a 125 MW IGCC power plant.

Achievements/Patents

(i) BHEL has also filed 119 patents and copyrights, during 2006-07.

(ii) During 2005-06 and 2006-07, the R&D spend has doubled and the turnover of Rs 2,720 Crores achieved in 2006-07 through products & services developed in-house has tripled.

6.5 MEDIUM AND LIGHT ENGINEERING

6.5.1 Central Electronics Limited (CEL)

Main areas of R&D

I. Cadium Zinc Telluride (Czt) Single Crystal Substrates for Night Vision Devices (Focal Plane Array)

PHASE I

Established the manufacturing facilities to produce CZT Substrates with a funding of Rs. 414 lakhs from Defence Research & Development Organisation (DRDO).

To convert laboratory scale technology developed at SSPL to commercial scale.

Produced and delivered 300 Substrates to SSPL in three years as scheduled.

PHASE II

Upgrade the process to improve specifications in collaboration with SSPL.

To produce 75 Substrates first year with old specifications and 300 per year for next four years with total funding of Rs. 1400 lakhs from DRDO (2006-2011).

II. Cost Reduction Measures in Solar Cells & Modules Area

Under S&T Plan Scheme of DSIR, CEL has taken initiative for reduction in consumption of Silicon by using thinner wafers and higher yield.

6.5.2 ITI Limited (ITI)

ITI is a pioneer in the development of secure communication systems in the country indigenously. With a market share of 100% in this segment, the Company remains an unchallenged leader.

Achievements/Patents

1. Encryption - Secure Communication

Networks in the country requiring highly secure communication equipment have been the beneficiaries of the Encryption System supplied by ITI, which has been catering to their critical requirements for several years.

In a design, which is the first of its kind ever attempted in India, the Company has developed Cryptography at high bit rates. This is the secrecy equipment for securing the transmission media for transporting STM-4 (Synchronous Transfer Mode).

The innovation is totally indigenous and designed to secure the bandwidth optical fiber as well as satellite media for the communication requirement. The uniqueness of this technology can be seen from the fact that it is available indigenously and uses proprietary algorithm for encryption, doing away with any dependence an imported solutions. It has been made possible by way of high frequency PCB designs and signal processing circuitry. The system uses optical fiber amplifiers to cover repeater-less distances.

This equipment has a huge market potential for development in the networks of commercial service providers because of the

increasing requirement of secure communications over the transmission media.

2. STM-1 Converter

STM-1 Optical to Electrical and Electrical to Optical Converter which works at 155.520 Mbps data rates meeting stringent specifications. Hitherto the product was being imported by the users. The innovation termed as an excellent import substitute, provides outstanding flexibility in the installation, testing and maintenance of communication equipment at STM-1 data rates. Developed with a focus on life-time service after sales, the product is user-friendly and first of its kind in India.

3. ITI has successfully inducted STM-1 and STM-4 crypto devices in the customer networks.

4. Encryption equipment for STM-1.

ITI has developed Encryption equipment for STM-1 to work on hired media.

5. MIL PCM Secrecy

Field trials were successfully completed for ruggedised version of 2 Mbps MIL PCM as well as encryption equipment.

6.6 PETROLEUM

6.6.1 BRPL

Main areas of R&D

(i) BRPL in collaboration with IOC (R&D) carried out field trial-run in DCU & CCU plants for production of Needle coke of improved quality using suitable blend of feedstock. Based on the study, BRPL has started regular production of Needle coke, which is an import substitute product.

(ii) Diesel produced at BRPL from Assam Crude Oil does not meet BS-II specification and is despatched to Gwuahati and Barauni Refinery for further processing in their DHDT plants. Study was carried out to optimise the yields of diesel streams from Assam Crude Oil and blend Kero-I/Kero-II to the BS-II HSD pool so as to minimise the production non-BS-II diesel.

(iii) BRPL is producing a special grade BS-II diesel having pour point -12oC by adding pour point depressant.

(iv) Through an in-house study, Light Diesel Oil (LDO) quality has been improved for better customer satisfaction.

6.6.2 Indian Oil

Main areas of R&D

The R&D centre provides significant support to the Indian Oil Group Refineries in product, quality improvement, evaluation of catalyst and additives, health assessment of catalyst, material failure analyses and troubleshooting.

Achievement/Patents

The R&D centre developed INDMAX, a hallmark technology for maximization of LPG and light distillates from refinery residue

Pioneering studies establishing that bio-diesel produce from Jatropha Seats at par with that produce from vegetable oil. The centre has also studied the entire value chain from Jatropha plantation beginning with bio-diesel produced by the Jatropha seeds.

6.7 STEEL

6.7.1 Steel Authority of India Ltd. (SAIL)

SAIL has its R&D centre for iron and steel Centre (RDCIS) at Ranchi.

Main areas of R&D

The main emphasis of R&D is on cost reduction, product development, quality improvement, energy conservation and automation.

Achievements/Patents

(i) Several new products were developed and commercialized namely DMR 249 Gr. A, SpadeM-1Steel as per CDA 99 specification, FE 415 Gr. TMT rebar with micro-alloying, high strength corrosion resistance roof bolt grade bars and grade bars.

(ii) During the year, 198 technical papers were published/presented and 31 patents were filed (including 6 from SAIL Plants) and 29 copyrights (including 4 from SAIL Plants).

(iii) The Scientists from RDCIS won nine national-level awards.

6.8 TRANSPORTATION EQUIPMENT

6.8.1 Hindustan Aeronautics Ltd. (HAL)

HAL has 9 R&D centres collocated with the production divisions and strife to bring out new products, upgrade existing products and develop indigenous systems as alternative to imports.

Main areas of R&D

The main R&D projects are Intermediate Jet Trainer(IJT), Light Combat Aircraft(LCA)-Tejas, Weapon System Integration(WSI) of ALH and Light Combat Helicopter (LCH).

Achievements/Patents

The company has formed a technological park at HAL premises, Bangalore to encourage engineering design, competence build up based on PPP mode.

6.8.2 Container Corporation of India Limited (CONCOR)

Achievements/Patents

(i) Design of new container flat wagons BLC (40' length) and BLL (45' length) having lower height has been developed and procured for transportation of containers. Both the (BLC and BLL) wagons are designed for running at a speed of 100 KMPH. These freight wagons operated on Indian Railways at a speed of 100 KMPH for the first time . Thus CONCOR was a pioneer in starting freight operation on Indian Railways at a speed of 100 KMPH. Ever since their induction in 1998, transits and turnaround times have been considerably reduced and service reliability improved. Present holding of all type of wagons is 8,918. The plan is to acquire new wagons and phase out old railway owned rolling stock.

(ii) e- filling and e-billing has been developed to facilitate the EXIM trade at ICD/ Tughlakabad.

6.8.3 Dredging Corporation of India Limited (DCI)

Achievements/Patents

- During July 2005, DCI has entered MOU with IIT Chennai, regarding study for reduction of time taken by the dredged material, to fill the hopper with some equipment. A final report was submitted by IIT Chennai on 26.07.07. Based on the numerical and experimental investigations IIT Chennai has suggested some improvements thereby decreasing the dredger turn around time.
- During July 2005, DCI has entered MOU with IIT Chennai, regarding study on DCI survey launch to improve the stability of the launch and utilize its services at other projects by some modifications. The study is in progress. However they stated that since vessel has to cover entire area in the harbour with systematic straight line, power steering units should be installed. They also suggested improving the vessel performance by inducting twin engine for powering limited head room.

6.8.4 Goa Shipyard Ltd.(GSL)

GSL has the unique distinction of having in-house design capacity and capability to carry out basic design of ships. The design of Naval Offshore Patrol Vessels and 90m offshore Patrol Vessels has been successfully model tested. The performance of Fast Patrol Vessels and Advanced Offshore Patrol Vessels designed, constructed and delivered to Indian Coast Guard is satisfactory.

6.9 COAL AND LIGNITE

The R&D activities in Coal sector is administered through an apex body namely, Standing Scientific Research Committee (SSRC) with Secretary (Coal) as its Chairman. The other members of this apex body include Chairman of CIL, CMDs of CMPDI, SCCL and NLC, Director of concerned CSIR laboratories, representatives of Department of S&T, Planning Commission and educational institutions amongst others. The main functions of SSRC are to plan, programme, budget and oversee the implementations of research projects and seek application of the findings of the R&D work done.

The SSRC is being assisted by three Standing Sub-committees, each dealing with one of the three relevant major areas of research viz. (i) Production, Productivity & Safety (ii) Coal Beneficiation & Utilisation (iii) Environment & Ecology.

CMPDI acts as the Nodal Agency for co-ordination of research activities in the coal sector which involves identification of Thrust Areas for research activities, identification of agencies which can take up the research work in the identified fields, processing the proposals for Government approval, monitoring the progress of implementation of the projects, preparation of budget estimates, disbursement of funds etc.

6.9.1 Coal India Limited (CIL)

R&D Board headed by Chairman, CIL oversees the functioning of "in-house" R&D. CMPDI acts as the Nodal Agency for co-ordination of research activities funded by CIL R&D Board.

6.9.2 Neyveli Lignite Corporation Ltd., (NLC)

Centre for Applied Research & Development (CARD) is the in house R&D Centre of Neyveli Lignite Corporation and has been recognized by the Department of Science & Technology since 1975.

Main areas of R&D

(i) CARD is carrying out various research works on lignite utilization, diversification, product development, by-product utilization wasteland reclamation etc.

(ii) CARD is also carrying out various environmental monitoring of air, water and soils. It is rendering analytical services to various units of NLC and other outside industries with its well-established analytical facilities.

Achievements/Patents

A Patent has been granted to NLC Ltd., on 01-08-2006 by Regional Patent Office Chennai for "Process for the production of 'Humi Gold" (A salt of Humic Acid)"

6.10 CRUDE OIL

6.10.1 ONGC Ltd.

Main areas of R&D

i) Exploration, Discoveries of Oil and Gas

ii) Discoveries of Coal Bed Methane (CBM)

iiii) Underground Coal Gasification

iv) Processing of Gas Hydrate

Achievements/Patents

(a) During 2006-07, ONGC has made 22 discoveries out of which 9 are new hydrocarbon finds (5 in onland; 3 in deepwater including one of ultra deepwater; in shallow water) and thirteen are new pools

(b) The initiative taken for shallow gas exploration started giving dividend. In Cambay basin Olpad field gave fruitful results and confirmed shallow gas bearing reservoirs at a shallow depth.

(c) Based on the analysis of data an area of 6 sq km in Parbatpur block in Jharia has been identified for early development of CBM production.

6.11 OTHER MINERALS AND METALS

6.11.1 National Mineral Development Corporation Ltd. (NMDC)

Main areas of R&D

(i) NMDC undertakes product and technology development in relation to ore and minerals for enhanced customer satisfaction.

(ii) Up-gradation of processing technology for better productivity.

(iii) Development of technology for utilisation of mine wastes.

(iv) Development of other value added products.

Achievements/Patents

(i) US patent granted for the process for preparing Amorphous silica from Kimberlite tailings.

(ii) US patent granted for the process for preparing detergent builder Zeolite-A from Kimberlite tailings (Pub no. US 2006-01 40853 A1).

(iii) US patent granted for the process for the utilisation of Kimberlite solid waste as source of silica for the preparation of sodium silicate-filed.

6.11.2 Indian Rare Earth Limited

The Company has been carrying out research and development works at the research centres of IRERC, Kollam RED, Udyogmandal and RRL.

Main areas of R&D

(a) Test works were carried out for mineral beneficiation and development of suitable flow sheets for recovery of VHM from the tails of OSCOM and MK.

(b) Experiments were carried out to recover uranium from UNRC cake from NFC and produce nuclear grade ADU.

Achievement/Patents

(i) Development of Rare earth Phosphate as Thermal Insulator and machinable ceramics.6.13 Industrial & Technology Consultancy Services

6.12 CONTRACT AND CONSTRUCTION SERVICES

6.12.1 Hindustan Prefab Limited (HPL)

Maina area of R&D

Innovative construction technology

Achievements/Patents

Currently engaged in housing project in the State of Chhattisgarh to ensure quick and quality construction.

6.12.2 Bridge & Roof Co. Ltd.

Main areas of R&D

The Company has been developing new products and Technologies in diversified areas such as Furnaces and Heaters, LSTK Projects, Cross-country Pipeline, Highways and Expressways, Bailey bridge, Railway Wagons, Main Boiler for Thermal Power Stations, Metro Rail at Delhi, Storage Silos for Alumina, Water Supply and Sewerage Systems, Flyovers and etc.

6.13 Industrial & Technical Consultancy Services

6.13.1 MECON Ltd.

The R & D Division was formally set up within MECON during 1985-86. R & D Division was formally recognized by the Department of Scientific and Industrial Research, Govt. of India in June, 1986, as an "in-house R & D unit" and has been getting renewal of recognition after every three years.

Main areas of R&D

(a) Research in the core sector steel production

(b) Development of crucial identified problems.

Achievements/Patents

(i) 6-Hi Cold Rolling Mill.

(ii) Design and Setting up of "Geotechnical Centrifuge Facility" at IIT Bombay.

(iii) Micro climate conditioning unit for defence personnel.

(iv) Heating Gloves and Socks for Defence Personnel.

(v) Thermoelectric Cold Chain Chest Operated by Vehicular battery.

(vi) On-line Opacity Monitor.

(vii) Anti-Tank Missile.

(viii) Confocal microscope. And specifically for Steel Plants:-

(ix) Optical Setting Projector for alignment of finishing mill guides.

(x) Optical Setting Device for alignment of Entry Roller Guides.

(xi) Laser Line Projection System for plate mills.

(xii) Laser Based Positioning System for Alignment of Coke Oven Service Machines.

(xiii) MECON has 32 patents to its credit.

6.13.2 Central Mine Planning & Design Institute Ltd. (CMPDIL)

Serving as nodal agency for all S&T schemes funded by Ministry of Coal as well as R&D schemes funded by R&D Board of CIL. CMPDI, also takes up applied research in the field of mining, beneficiation, utilisation, environment, exploration, etc.

Main areas of R&D

(i) Geomatics

(ii) Ventilation & Gas survey in mines

(iii) Controlled Blasting

(iv) Performance evaluation of new explosives

(v) Mining Electronics

(vi) Mine capacity Assessment

(vii) Mine Support Design, Rock Mass Rating (RMR)

(viii) Non-Destructive Testing

6.13.3 Engineers India Limited (EIL)

R&D activities are undertaken at EIL's R&D Centre in Gurgaon and in association with research organizations like IIP, IOC(R&D), CHT, IIT- Delhi, IICT, etc..

Main areas of R&D

R&D initiatives in EIL relate to adaptation/assimilation and optimization of acquired technologies and betterment of open art technologies and development of new processes & equipment design.

Achievements/Patents

- Commercial application of the Diesel Hydrotreating Technology developed in association with IOC(R&D) at Bongaigaon Refinery
- Commercial application of Claus Tail Gas Treatment Technology at Bongaigaon Refinery
- Catalytic Degasing of sulphur using EIL developed CATDEGAS catalyst at Mumbai Refinery
- Demonstration Plant for membrane based removal of carbon dioxide from natural gas at Hazira, ONGC
- Demonstration of super critical propane recovery process for propane deasphalting extraction plant at Mumbai Refinery
- Development of Regenerative Process for removal of SO2 from Flue gases
- Besides, two process patents, one for sulphur dioxide removal from gases and the other for recovery of ethane/propane along with one product patent for improved design of distributor tray for trickle bed reactor were filed in 2006-07.

6.13.4 National Research Development Corporation (NRDC)

NRDC maximises the benefits of Public Funded Research through Licensing indigenous technologies to industry for commercial exploitation and execute turn-key projects abroad based on indigenous technologies.

Main areas of R&D Work

- Sponsors time bound research for a few selected projects on the basis of market potential and technology supply considerations.
- Provides financial assistance for filing the patent applications in order to protect inventions, emanating from Universities and Academic Institutes and also caters to request received from various R&D Institutes for conducting state-of-the art searches. Apart from this the Corporation conducts various seminars for creating awareness regarding IPR.
- Provides techno-commercial support to promising inventions so that the inventors are able to up-grade their inventions into saleable technology for commercial production.
- Provides Angel funding by way of equity participation to companies, which prima facie have the potential to develop into significant technical and commercial contributors.
- Provide value-addition to the promising technologies for quick and effective utilisation of the technology through developing Basic Engineering Design packages and conducting market surveys for accessing the demand.
- Corporation participates / organizes exhibitions, get-togethers, workshops, trade fairs etc. to provide information on indigenous technologies to industry at home and abroad.
- The Corporation signs MOU / MOA / Representative agreements / cooperation agreements with various foreign agencies for promotion of Indigenous technologies
- The Corporation has introduced a Knowledge Management System for proper evaluation and value addition of the technologies developed at various R&D institutes for making a complete technology package, which can be then offered to the industry for quick and effective utilisation.

7 MOU SYSTEM

7.1 Background

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. It was first introduced in France in two phases, that is, as '*contracts de programme'* in 1970 and as *'contracts d' Enterprise'* in 1979 consequent to the Simon Nora Committee Report (1967). The main purpose of the MoU system is 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 as a result 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.

7.2 Performance Contract

In view of the technologically complex nature of these enterprises, the need for co-ordination between the various production units and operation under dynamic market conditions, the CPSEs cannot afford external interference in their day to day functioning. Delay in approvals, for instance, has led to technological obsolescence and cost overruns. MoU is, therefore, aimed at providing greater autonomy to public sector enterprises vis-à-vis the control of the government. The 'management' of the enterprise is, nevertheless, made accountable to the government through promise for performance or 'performance contract'. The government, nevertheless, continues to have control over these enterprises through a priori supervision, that is, 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. 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. While fixing prices for products of CPSEs operating *under monopoly conditions,* the committee recommended these should be benchmarked with international prices. The gradual dismantling of Administered Price Mechanism (APM) since 1991 onward has helped these enterprises to fix the output prices increasingly on market principles without the need to seek the approval of the government.

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 Committee was of the view that subsequent to evolving of appropriate accounting standards, 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 with consequent to the review exercises undertaken in the Department of Public Enterprises in 1996 and in 2000.

7.3 Performance Evaluation under the MoU System

Performance evaluation at the end of the year indicates the extent to which the mutually agreed targets and objectives were achieved. The methodology of performance evaluation has, however, undergone several changes over the years as discussed below.

MoU Evaluation recommended by Sengupta Committee.

The Arjun Sengupta Committee favoured appropriate financial return on all enterprises to be measured in terms of the financial ratio of *Gross Margin on Assets;* for 'service enterprises' it recommended the financial ratio of *Gross Margin on Sales.* In case of enterprises in the 'core sector' and operating under 'price control' (administered price mechanism), the Committee favoured normative financial return measurable in terms of the financial ratio of *Net Profit on Net Worth*. The Committee also attached importance to non-financial criterion like increase in productivity, technical dynamism and project implementation. No weights were, however, assigned to the different parameters.

Signaling system and Performance Evaluation

The extant MoU system prevalent since 1986 was revamped in 1989, and it moved closer to the "signaling system" of the Pakistani and the Korean model as developed by Prof. Leroy P. Jones (Director, Public Enterprises Programme, Boston University). 'Performance contract' under the MoU system, furthermore, got delinked from the medium-term agreement as recommended by Arjun Sengupta Committee. Under the new MoU system that was implemented from the financial year of 1989-90, performance evaluation came to be based on the *annual targets* agreed upon between the government and the CPSEs. Another novel feature of the new system has been finalization of MoU under the overall supervision of a third party, namely, the MoU Task Force constituted by the Department of Public Enterprises. The MoU Task Force is independent of both the administrative ministry and the CPSE.

In order to distinguish 'excellent performance' from 'poor performance' under the new system, (five) different targets are finalised against each of the evaluation parameters. On a 5-point scale these are shown as (1) for 'excellent', (2) for 'very good', (3) for 'good', (4) for 'fair' and (5) for 'poor'. The targets are fixed in two stages of (a) determining the basic target and (b) determining the percentage difference *or the spread* between one (target) level of performance and another. Each of the parameters is, furthermore, assigned weights to distinguish a more important evaluation parameter from a less important parameter (evaluation criterion). The final performance evaluation or 'the composite score' is arrived at by adding the weighted score of the actual achievements (at the end of the year) against each of the parameters, in comparison to the targets that have been finalized (in the beginning of the year) on a 5-point scale.

Under the existing MoU Guidelines of the Department of Public Enterprises (Government of India), moreover, *the basic target* is graded as '*Good' (having a score of 3)*. These ought not to be less than the (actual) achievements of the previous year. (Under the Korean system of MoU, however, the trend growth rate, is worked out for the industry and the industry average forms the basis of the basic target. The respective grade above and below the basic target, in turn, is based on the standard deviation of the average trend growth rate in that industry group). If, however, a CPSE is operating at 'full capacity utilization', *the basic (MoU) target* is placed in *'Very Good'* column (having a score of 2). *Difference in target values* between 'Very Good' and 'Good'; 'Good' and 'Fair' and 'Fair' and 'Poor' columns is uniform at 5%. The *difference* between '*Excellent*' and '*Very Good'* targets is however, significantly higher than 5%. (>5% to 10%) and is left to the discretion of the MoU Task Force.

The 'composite score' is thus an index of the performance of the enterprises. The *grading* of the 'composite score' is done in the following manner:

MoU Composite Score	Grading
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

While both the French and the Korean systems of MoUs draw a distinction between the performance evaluation of the *enterprise* and those of the *management,* it is not so in the Indian case. The MoU system in India evaluates the performance of the enterprise; evaluation of the management is incidental as no concession is allowed for the exigencies of macro-economic factors outside the control of the management; no revision is either allowed for the targets that have been finalized in the beginning of the year.

7.4 NCAER study on MoU and Performance Evaluation

The Department of Public Enterprises assigned a study to the National Council of Applied Economic Research (NCAER) in 2003 to examine afresh the choice of criteria for performance evaluation and the allocation of weight to the different parameters. The NCAER finally came up with the following Principal Components of parameters for performance evaluation:

Principal Components of Parameters	Weight (%)
I. Financial Parameters	50
II. Non- financial Parameters	50
(i) Dynamic Parameters	30
(ii) Enterprise-specific Parameters	10
(iii) Sector-specific Parameter	10

While the performance evaluation under the earlier system allocated 60% weight to 'financial parameters' and 40% weight to 'non-financial parameters', the NCAER recommended equal weights (50%) to both 'financial' and 'non-financial' parameters. In this respect it is similar to the 'balanced score card' approach of performance evaluation. The 'non-financial parameters' were further sub-divided into 'dynamic parameters', 'enterprise-specific parameters' and 'sector-specific parameters'. Whereas the 'static/financial' parameters generally relate to profit related, size related and productivity related parameters, the 'dynamic' parameters refer to *project implementation*, *investment in R&D* and *extent of globalization* etc. Similarly, while the 'sector-specific' parameters refer to macro-economic factors like change in demand and supply, price fluctuations, variation in interest rates etc. beyond the control of the management, the 'enterprise-specific' parameters relate to issues such as safety and pollution etc.

Moreover, while the above mentioned *principal components* were recommended to be the same for all CPSEs, the individual items/ suggested as criteria for performance evaluation under each of these principal components were indicated to be different for different CPSEs classified as (a) 'social sector',(b) 'financial sector', (c) 'trading and consulting sector' and (d) 'other than financial trading/consulting and social sector'. Besides the above, *the new approach allowed discretion to the Task Force to change the weights* of the different criteria included under 'dynamic', 'enterprise-specific' and 'sector-specific' parameters depending on their perception of the CPSE under consideration. The recommendations of the NCAER were subsequently accepted by the Government and the new methodology for setting up performance targets came into force since financial year 2004-05.

7.5 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 MoU after getting them approved by the respective Boards and the Administrative Ministries. The draft MOUs indicate the (five) 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 of the Task Force Syndicates. The Department of Public Enterprises organizes these meetings, which is chaired by the Convener of the Task Force. Altogether there are eleven separate Syndicates for the different groups of CPSEs. Each Syndicate comprises the Convenor and six members and are also the MoU Task Force members. Each Syndicate conducts the negotiations, which are attended by the Chief Executives of the CPSEs, Senior Officers from the administrative Ministries and the representatives of the nodal Government agencies namely, Planning Commission, Ministry of Finance and Ministry of Statistics and Programme Implementation.

7.6 MoU Task Force

The MoU Task Force members who work as the honorary members of the various Syndicates are selected by the DPE and comprise former Civil Servants, CMDs of the Public Enterprise, financial and technical professionals, Management Experts and academics. The rich experience and knowledge of the TF members in different fields provides the necessary technical input and enables in fixing more 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 arrived during the meeting. Subsequently, all MoUs have to be signed before 31st March for implementation during the succeeding financial year.

7.7 High Power Committee

The High Power Committee (HPC) 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 Cabinet Secretary. Secretary, Department of Public Enterprises is the Member-Secretary of this Committee. The other members comprise , Finance Secretary, Secretary (Expenditure), Secretary (Planning Commission), Secretary (Statistics & Programme Implementation). Chairman Public Enterprises selection Board Chief Economic Advisor Ministry of Finance and Chairman Tariff Commission. The Apex Committee of Secretaries 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.

7.8 Coverage and status of MoU negotiation meetings

The MoU system that was started with four CPSEs signing MoU in the year 1986-87 increased its coverage to 143 CPSEs in the year 2007-08. The table below provides the coverage of CPSEs over the years under the MOU system.

Year	MOUs signed	Year	MOUs signed
1987-88	4	1998-99	108
1988-89	11	1999-00	108
1989-90	18	2000-01	107
1990-91	23	2001-02	104
1991-92	72	2002-03	100
1992-93	98	2003-04	96
1993-94	101	2004-05	99
1994-95	100	2005-06	102
1995-96	104	2006-07	113
1996-97	110	2007-08	143*
1997-98	108		

*These are all 'holding' or independent companies. Almost all CPSEs have been covered under the MoU system in 2007-08, since the subsidiary CPSEs sign MoUs separately with their holding companies.

7.9 Performance of the MoU signing CPSEs

MoU score for the year 2006-07 (on the basis of audited data) is given at Annex.7.1. The CPSEs who could not send their self eveluation Report may be seen at Annex. 7.2. List of CPSEs who signed the MoU for the year 2007-08 is

given at Annex. 7.3. MoU rating during the last five years shown in the table below:.

MoU Signing CPSEs

(in no.)

Rating	2002-03	03-04	04-05	05-06	06-07
Excellent	46	54	45	44	45
Very Good	21	21	31	36	31
Good	12	10	12	14	12
Fair	16	11	10	08	06
Poor	02	00	01	00	00
Total	97	96	99	102	94

7.10 Excellence Awards under the MoU system

Performance evaluation under the MoU system is followed by 'performance incentive'. The incentive system takes two forms, namely, *monetary and non-monetary*. MoU scores have implications for monetary incentive as performance related payments are based on them. The non-monetary incentive is in the form of MoU Excellence Award and MoU Excellence Certificate.

7.11 Old System of Excellence Awards (upto 2005-06)

Under the extant system, the top 10 excellent performing CPSEs are awarded with 'MoU Excellence Certificates and Trophy' and other excellent performing CPSEs are awarded with 'Merit Certificates'. The top ten CPSEs are ranked on the basis of their MoU composite score, irrespective of which sector/syndicate they belong. MoU award was given for the first time by Government of India for the year 1987-88 and 1989-90 and, selected CPSEs were awarded on 11th August, 1990 by the then Prime Minister. Thereafter, the award ceremony was not held for many years. The High Power Committee of Secretaries on MoU (HPC) took a decision on 10th March, 1995 to give special award to the top ten excellent performing CPSEs and give certificate of merits to all excellent performing CPSEs. As a sequel to the said decision, MoU award for the year 1998-99 was given by the Prime Minister on 1st April, 2000. For the year 2001-02, the award was given by the President of India on 5th April, 2003. For the year 2002-03, the award was given by the Prime Minister of India on 4th September, 2004. The MoU award ceremony for the year 2003-04 was held on 10th January, 2006 and the awards were given by the Vice President of India. For the year 2004-05 and 2005-06, the awards were given by the Hon'ble Prime Minister on 8th March, 2007.

7.12 Principles for MoU Excellence Awards

The basic principles for selecting the Top 10 CPSEs for MoU Excellence Awards as laid down by HPC in its meeting dated 10th March 1995 are the following:

(i.) The profit of the CPSE in the year should be higher compared to the previous year.

(ii.) It should not be loss-making enterprise.

(iii.) The composite score of the CPSE should not be more than 1.50.

7.13 New system of Excellence Awards (w.e.f. 2006-07 onwards)

The High Power Committee (HPC) on MoU during its meeting held on 15th December, 2006 decided to constitute a Committee under the Chairmanship of Shri N.K. Sinha to review the existing system of MoU Excellence Awards to CPSEs. The HPC considered the N.K.Sinha Committee report in July, 2007 and decided that the total number of Excellence Awards will be 12, that is, one from each of 10 Syndicates, one from the listed CPSEs, one from amongst the turnaround sick and loss making enterprises. All other excellent performing CPSEs will get merit certificates. The three basic principles for selection of CPSEs for MoU Excellence Awards as laid down by HPC in its meeting dated 10th March, 1995 will continue. Once the MoUs are signed between the CPSEs and the Departments, no revision of targets will be permitted. Compliance of corporate governance should also be included as one of the criteria for consideration of the awards in all the 3 categories from 2007-08 onwards.

Annex.7.1

Composite Scores of the MoU signing CPSEs (2006-07)

S.No.	CPSE	MOU Score	Rating
(1)	(2)	(3)	(4)
I. Petorleum			
(i)	Bharat Petroleum Corporation Ltd.	1.09	Excellent
(ii)	Balmer Lawrie & Company Ltd.	1.36	Excellent
(iii)	GAIL (I) Ltd.	1.39	Excellent
(iv)	Oil & Natural Gas Corporation Ltd.	1.60	Very Good
(v)	Oil India Ltd.	1.69	Very Good
(vi)	Indian Oil Corporation Ltd.	2.74	Good
(vii)	Hindustan Petroleum Corporation Ltd.*	2.85	Good
II. Energy			
(i)	Power Grid Corpn. of India Ltd.	1.00	Excellent
(ii)	Nuclear Power Corpn. of India Ltd.	1.47	Excellent
(iii)	NTPC Ltd.*	1.62	Very Good
(iv)	Satluj Jal Vidyut Nigam Limited	1.72	Very Good
(v)	North Eastern Elec. Power Corpn. Ltd.	1. 97	Very Good
(vi)	Coal India Ltd.	1.99	Very Good
(vii)	National Hydro electric Power Corp. Ltd.	2.22	Very good
(viii)	Neyveli Lignite Corpn. Ltd.	2.64	Good
(ix)	Tehri Hydro Development Corpn. Ltd.	4.24	Fair
III. Industrial Sector			
(i)	Hindustan Aeronautics Limited	1.00	Excellent
(ii)	Bharat Heavy Electricals Ltd.	1.00	Excellent
(iii)	Hindustan Latex Limited	1.07	Excellent
(iv)	Hindustan Paper Corporation Ltd.	1.17	Excellent
(v)	Bharat Earth Movers Ltd.	1.36	Excellent
(vi)	Bharat Dynamics Limited	2.72	Good
(vii)	Karnataka Antibiotics & Pharm. Ltd.	2.21	Very Good
(viii)	Ferro Scrap Nigam Ltd.	3.48	Good
(ix)	Scooters India Limited	3.87	Fair
IV. Mining & Metals			
(i)	Manganese Ore (India) Ltd.	1.04	Excellent
(ii)	Steel Authority of India Ltd.	1.07	Excellent
(iii)	Mineral Exploration Corpn. Ltd.	1.26	Excellent
(iv)	National Aluminum Co. Ltd.	1.40	Excellent
(v)	National Mineral Dev. Corpn. Ltd,	1.427	Excellent
(vi)	Mishra Dhatu Nigam Ltd.	1.47	Excellent

(1)	(2)	(3)	(4)
(vii)	Hindustan Copper Ltd.	1.59	Very Good
(viii)	Rashtriya Ispat Nigam Ltd.	1.64	Very Good
(ix)	Indian Rare Earths Limited	1.96	Very Good
(x)	Uranium Corpn. of India Limited	2.90	Good
(xi)	Sponge Iron India Limited	2.938	Good
(xii)	Kudremukh Iron Ore Co. Ltd.	4.15	Fair
V. Electonics & Communication			
(i)	Electronics Corpn. of India Ltd.	1.43	Excellent
(ii)	Rajasthan Electronics & Instruments Ltd.	1.47	Excellent
(iii)	Bharat Electronics Ltd.*	1.51	Very Good
(iv)	Mahanagar Telephones Nigam Ltd.	1.89	Very Good
(v)	Central Electronics Limited	1.97	Very Good
(vi)	RailTel Corpn. of India Ltd.	2.15	Very good
(vii)	Bharat Sanchar Nigam Ltd.	2.45	Very Good
(viii)	Telecommunication Consultants. (I) Ltd.	3.47	Good
(ix)	ITI Ltd.	4.00	Fair
VI. Transport			
(i)	Container Corpn. of India Ltd.	1.06	Excellent
(ii)	Shipping Corpn. of India Ltd.	1.35	Excellent
(iii)	Goa Shipyard Limited	1.43	Excellent
(iv)	Cochin Shipyard Ltd.	1.46	Excellent
(v)	Airport Authority of India Ltd.	1.48	Excellent
(vi)	Ennore Port Ltd.	1.54	Very Good
(vii)	Garden Reach Shipbuilders & Engg. Limited	1.69	Very Good
(viii)	Mazagaon Dock Ltd.	1.77	Very Good
(ix)	Mumbai Railway Vikas Corpn. Ltd.	1.84	Very Good
(x)	Dredging Corpn. of India Ltd.	2.00	Very Good
(xi)	Konkan Railway Corpn. Limited	2.02	Very Good
VII. Trading & Service Sector			
(i)	State Trading Corpn. Ltd.	1.00	Excellent
(ii)	MMTC Ltd.	1.22	Excellent
(iii)	PEC Limited	1.24	Excellent
(iv)	Central Warehousing Corporation	1.37	Excellent
(v)	MSTC Limited	1.85	Very Good
(vi)	National Handlooms Dev. Corpn. Ltd.	2.16	Very Good
(vii)	India Trade Promotion Organisation	2.42	Very Good
(viii)	Cotton Corporation of India Ltd.	3.32	Good
(ix)	Handicraft and Handloom Exports Corporation Ltd	4.31	Fair

(1)	(2)	(3)	(4)
VIII. Fertilizer & Agro Industries			
(i)	Rashtriya Chem. & Fertilizers Ltd.	1.17	Excellent
(ii)	National Fertilizers Ltd.	1.22	Excellent
(iii)	National Seeds Corporation	1.43	Excellent
(iv)	FCI Aravali Gypsum & Minerals (I) Ltd.	1.44	Excellent
(v)	State Farms Corporation of India	1.98	Very Good
(vi)	North Eastern Regional Agricultural Marketing Corpn. Ltd.	4.08	Fair
IX. Consultancy			
(i)	National Building Construction Corpn. Ltd.	1.00	Excellent
(ii)	National Projects Construction Corpn. Ltd.	1.00	Excellent
(iii)	National Research Dev. Corpn. of India Ltd.	1.06	Excellent
(vi)	Water & Power Consultancy Services Ltd.	1.10	Excellent
(v)	Engineering Projects (I) Ltd.	1.16	Excellent
(vi)	RITES Limited	1.28	Excellent
(vii)	Projects & Development India Ltd.	1.31	Excellent
(viii)	IRCON International Ltd.	1.32	Excellent
(ix)	MECON Ltd.	1.60	Very Good
(x)	National Small Industries Corporation	2.35	Very Good
(xi)	HSCC (India) Ltd.	2.50	Very Good
(xii)	Educational Consultants (I) Ltd.	2.93	Good
X. Financial Services			
(i)	Power Finance Corpn.	1.00	Excellent
(ii)	Rural Electrification Corpn. Ltd.	1.00	Excellent
(iii)	Indian Railway Finance Corpn. Ltd.	1.00	Excellent
(iv)	National BC Fin. & Dev. Corporation	1.00	Excellent
(v)	National Minorities Fin. & Dev. Corpn.	1.17	Excellent
(vi)	Export Credit Guarantee Corpn. (I) Ltd.	1.19	Excellent
(vii)	National SC Fin. & Dev. Corporation	1.93	Very Good
(vii)	National Safai Karamchari's Fin. & Dev. Corpn.	1.96	Very Good
(ix)	Indian Renewable Energy Dev. Agency Ltd.	2.65	Good
(x)	National ST Fin. & Dev. Corporation	3.32	Good

* Provisional

Annex. 7.2

CPSEs who did not submit MOU Performance Evaluation Report for 2006-07

S.No.	Name of CPSE
1.	Bharat Immunologicals & Biologicals Corporation Ltd.
2.	HMT Ltd.
3.	Indian Medicine Pharmaceutical Corporation Ltd.
4.	Antrix Corporation Ltd.
5.	Central Inland Water Transport Corporation Ltd.
6.	Hindustan Shipyard Ltd.
7.	Hooghly Dock & Port Engineers Ltd.
8.	Indian Airlines Ltd.
9.	Artificial Limbs Manufacturing Corporation Ltd.
10.	Central Cottage Industries Corporation(I) Ltd.
11.	Hindustan Steelworks Construction Ltd.
12.	India Tourism Development Corporation Ltd.
13.	Indian Railway Catering & Tourism Corpn. Ltd.
14.	North Eastern Handicrafts & Handlooms Dev. Corporation Ltd.
15.	Brahmputra Valley Fertilizer Corporation Ltd.
16.	Broadcast Engineering Consultants (I) Ltd.
17.	Housing & Urban Development Corporation
18.	National Film Development Corpn. Ltd.
19.	Englineers India Limted

Annex.7.3

CPSEs who signed MOUs for the year 2007-08

S.No.	Name of CPSE
1.	Bharat Petroleum Corporation Limited
2.	Balmer Lawrie & Co. Limited
3.	GAIL (India) Limited
4.	Hindustan Petroleum Corporation Limited
5.	Indian Oil Corporation Limited
6.	Oil India Limited
7.	Oil & Natural Gas Corporation Ltd.
8.	North Eastern Electric Power Corporation Ltd.
9.	NTPC Ltd.
10.	Neyveli Lignite Corporation Ltd.
11.	Nuclear Power Corporation of India Ltd.
12.	National Hydroelectric Power Corporation Ltd.
13.	Power Grid Corporation of India Limited
14.	Satluj Jal Vidyut Nigam Limited
15.	Tehri Hydro Development Corpn. Ltd.
16.	Bharitya Nabhikiya Vidyut Nigam Ltd.
17.	Coal India Limited
18.	Bharat Heavy Electricals Limited
19.	Bharat Earth Movers Limited
20.	Bharat Dynamics Limited
21.	Bharat Ophthalmic Glass Ltd.
22.	Bharat Refractories Ltd.
23.	Hindustan Aeronautics Limited
24.	Scooters India Limited
25.	HMT Ltd.
26.	Heavy Engineering Corporation Ltd.
27.	Bharat Bhari Udyog Nigam Ltd.
28.	Bharat Yantra Nigam Limited
29.	Instrumentation Limited
30.	Andrew Yule & Co. Ltd.
31.	National Instruments Limited
32.	Hindustan Paper Corporation Ltd.
33.	NEPA Ltd.
34.	Hindustan Latex Ltd.
35.	Tyre Corporation of India Ltd.
36.	Hindustan Photofilms Manu. Co. Ltd.
37.	Security Printing and Minting Corp. India Ltd.

S.No.	Name of CPSE
38.	Bharat Immunological and Biological Ltd.
39.	Cement Corporation of India
40.	Hindustan Antibiotics Ltd.
41.	Hindustan Salts Ltd.
42.	Indian Medicine Pharmaceutical Corp. Ltd.
43.	Hindustan Insecticides Ltd.
44.	Bengal Chemicals & Pharma. Ltd.
45.	Hindustan Organics Ltd.
46.	Ferro Scrap Nigam Limited
47.	National Handloom Dev. Corpn. Ltd.
48.	NTC (Holding) Ltd.
49.	British India Corporation Limited
50.	Hindustan Vegetable Oil Corpn. Ltd.
51.	Indian Rare Earths Limited
52.	Kudremukh Iron Ore Co. Limited
53.	Manganese Ore India Limited
54.	Mishra Dhatu Nigam Limited
55.	National Mineral Development Corpn. Limited.
56.	National Aluminum Co. Limited
57.	Mineral Exploration Corpn. Limited
58.	Rashtriya Ispat Nigam Limited
59.	Steel Authority of India Limited
60.	Uranium Corporation of India Limited
61.	Hindustan Copper Ltd,
62.	Sponge Iron India Limited
63.	Bharat Electronics Limited
64.	Bharat Sanchar Nigam Limited
65.	Electronics Corporation of India Limited
66.	Central Electronics Limited
67.	Mahanagar Telephone Nigam Limited
68.	Rajasthan Electronics & Instrument Limited
69.	Rail Tel Corporation of India Limited
70.	Telecommunication Consultants India Limited
71.	ITI Ltd
72.	Hindustan Cables Ltd,
73.	Semiconductor Complex Ltd
74.	National Informatics Center Services Incorporated
75.	Airport Authority of India Limited
76.	Cochin Shipyard Limited
77.	Container Corporation of India Limited
78.	Garden Reach Shipbuilders & Engineers Limited

S.No.	Name of PSE
79.	Goa Shipyard Limited
80.	Hindustan Shipyard Limited
81.	Hooghly Dock & Port Engineers Ltd.
82.	Konkan Railway Corporation of India Limited
83.	Mazagaon Dock Limited
84.	Mumbai Railway Vikas Corporation Limited
85.	Shipping Corporation of India Ltd.
86.	Ennore Port Limited
87.	Air India Ltd.
88.	Pawan Hans Helicopters Limited
89.	Indian Airlines Limited.
90.	Sethusamudram Corporation Ltd.
91.	Rail Vikas Nigam Ltd.
92.	Central Cottage Industries Corpn of India Ltd.
93.	Cotton Corporation of India Limited
94.	Handicrafts & Handlooms Export Corpn of India Ltd.
95.	Hindustan Steelworks Construction Limited
96.	India Trade Promotion Organization
97.	Indian Tourism Development Corporation
98.	MMTC Limited
99.	MSTC Limited
100.	PEC Limited
101.	State Trading Corporation of India Limited
102.	North Eastern Handicraft & Handlooms Development Corporation Limited.
103.	Antrix Corporation Ltd.
104.	Brahamputra Valley Fertilizer Corpn. Limited
105.	FCI Aravali Gypsum & Minerals (India) Ltd.
106.	National Seeds Corporation
107.	National Fertilizers Limited
108.	Rashtriya Chemicals & Fertilizers Limited
109.	State Farms Corporation
110.	North Eastern Regional Agricultural Marketing Corporation Ltd.
111.	FACT Limited
112.	Madras Fertilizers Limited
113.	Andaman & Nicobar Isl. Forest & Plantation Dev. Corpn. Ltd
114.	Central Warehousing Corporation
115.	Food Corporation of India
116.	Broadcast Engg. Consultants India Limited
117.	Educational Consultants (India) Ltd.
118.	National Research Development Corporation

S.No.	Name of PSE
119.	Engineering Projects (I) Limited
120.	HSCC (India) Limited
121.	IRCON International Limited
122.	MECON Limited
123.	National Small Industries Corporation
124.	National Building Construction Corporation Ltd.
125.	Engineers India Limited
126.	RITES Limited
127.	Water & Power Consultancy Services (India) Ltd.
128.	Projects & Development India Limited
129.	National Projects Construction Corporation Limited
130.	Hindustan Prefab Ltd.
131.	Export Credit & Guarantee Corporation of India Ltd.
132.	Housing & Urban Development Corporation
133.	Indian Renewable Energy Development Agency
134.	Indian Railway Finance Corporation Ltd.
135.	National Scheduled Caste Finance & Development Corporation
136.	National BC Finance & Development Corporation
137.	National Minorities Finance & Development Corporation
138.	National Film Development Corporation Ltd.
139.	Power Finance Corporation
140.	Rural Electrification Corporation
141.	National Scheduled Tribes Finance & Development Corporation
142.	National Handicapped Finance & Development Corporation
143.	National Safai Karmcharis Finance & Development Corporation

8 DELEGATION OF ENHANCED FINANCIAL POWER TO CPSEs

Under the Articles of Association, the Board of Directors of CPSEs enjoy certain amount of financial powers and autonomy in respect of recruitment, promotion and other service conditions of below Board level employees. The Board of Directors of a CPSE exercises the delegated powers subject to broad policy guidelines issued by the Government from time to time. The Government has granted enhanced powers to the Boards of Navratna, Miniratna and other profit making enterprises.

Keeping in view the pledge made in the National Common Minimum Programme (NCMP) that full managerial and commercial autonomy will be devolved to successful profit making companies operating in a competitive environment, 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.

8.1 Navratna scheme

Under this scheme, the Government has delegated enhanced powers to CPSEs having comparative advantage and the potential to become global players. Presently, there are 12 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) Indian Oil Corporation Limited

(viii) Mahanagar Telephone Nigam Limited

(ix) NTPC Limited

(x) Oil & Natural Gas Corporation Limited

(xi) Power Finance Corporation Limited

(xii) Steel Authority of India Limited

The powers presently 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) Organizational 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 creation and wind up all posts up to non-Board level Directors and made 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 provison 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 Executives 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 above, when such a decision is taken. The objections, dissents, the reasons for over-ruling them and those for taking the decision should be recorded in writing and minuted.

e) No financial support or contingent liability on the part of the Government should be involved.

f) These CPSEs will establish transparent and effective systems of internal monitoring, including the establishment of an Audit Committee of the Board with membership of non-official Directors.

g) All the proposals, where they pertain to

capital expenditure, investment or other matters involving substantial financial or managerial commitments or where they would have a long term impact on the structure and functioning of the CPSE, should be prepared by or with the assistance of professionals and experts and should be appraised, in suitable cases, by financial institutions or reputed professional organizations with expertise in the areas. The financial appraisal should also preferably be backed by an involvement of the appraising institutions through loans or equity participation.

h) The exercise of authority to enter into technology joint ventures and strategic alliances shall be in accordance with the Government guidelines as may be issued from time to time.

i) The Boards of these CPSEs should be restructured by inducting at least four non-official Directors as the first step before the exercise of the enhanced delegation of authority.

j) These public sector enterprises shall not depend upon budgetary support or Government guarantees. The resources for implementing their programmes should come from their internal resources or through other sources, including the capital markets. However, wherever Government guarantee is required under the standard stipulations of external donor agencies, the same may be obtained from the Ministry of Finance through the administrative Ministry. Such Government guarantee shall not affect the Navratna status. Further, budgetary support to implement Government sponsored projects of national interest and Government sponsored Research & Development projects will not disqualify CPSEs from retaining their Navratna status. However, for such projects, investment decisions will be taken by the Government and not by the CPSE concerned.

8.2 Miniratna scheme

In October, 1997, the Government had also decided to grant enhanced autonomy and delegation of financial powers to some other profit making companies subject to certain eligibility conditions and guidelines to make them efficient and competitive. These companies, called Miniratnas, are in two categories, namely, Category- I and Category-II. 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 Rs.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 in three years continuously and should have a positive net worth.

(iii) These CPSEs shall be eligible for the enhanced delegated powers provided they have not defaulted in the repayment of loans/ interest payment on any loans due to the Government.

(iv) These public sector enterprises shall not depend upon budgetary support or Government guarantees.

(v) The Boards of these CPSEs should be restructured by inducting at least three non-official Directors as the first step before the exercise of enhanced delegation of authority.

(vi) The administrative Ministry concerned shall decide whether a Public Sector Enterprise fulfilled the requirements of a Category-I/ Category-II company before the exercise of enhanced powers.

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 Rs. 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 Rs. 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 Rs. 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 Rs. 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 provison 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

8.3 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'. These CPSEs have been delegated enhanced powers as under:-

(i) Capital Expenditure:

These CPSEs have the power to incur capital expenditure up to Rs. 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.

9 PURCHASE PREFERENCE POLICY

9.1 Background

The *Purchase Preference Policy* was introduced in January, 1992 replacing the earlier policy of the *Price Preference Policy* of CPSEs prevalent since 1971. Under the erstwhile *Price Preference Policy* "price preference" not exceeding 10% was admissible to products and services produced by a CPSE and being offered on sale to another CPSE. In exceptional circumstances, moreover, where a public sector enterprise required "price preference" of more than 10%, the purchasing Ministry/Department and the concerned selling CPSE were to endeavour to reach an agreement through negotiations. In case no agreement materialized, the matter could be referred to the Government.

The *Price Preference Policy* was reviewed in 1991 consequent to economic liberalization. It was decided to replace the *Price Preference Policy* of CPSEs by the *Purchase Preference Policy* in favour of the selling CPSEs. Under the new policy, introduced in 1992, if the price quoted by a CPSE was within 10% of the lowest valid bid price (L-1) in a tender, other things being equal, the preference in purchases had to be accorded to the CPSE at L-1 price. The underlying objective of this policy was to enable CPSEs to adjust to the new environment of competition in the wake of 'globalization' (i.e falling tariffs / custom duties) and 'liberalized industrial policy'(i.e. pruning the list of industries reserved exclusively for the public sector).

The *Purchase Preference Policy* was initially introduced for a period of three years in 1992 but was subsequently extended with certain modifications. The amendment dated 14.6.2002 stipulated that if the price quoted by the public sector enterprise is within 10% of the lowest price in a tender, other things being equal, purchase preference 'may' be granted to the CPSE concerned at the lowest valid price bid. This was applicable upto 31.3.2004. The purchase preference policy was again reviewed by the Government on 13th October, 2004, and besides extending it beyond 31.3.2004 for a period of one year i.e. up to 31.3.2005, it was decided to make further detailed review of the policy. The policy was accordingly extended vide O.M. dated 26.10.2004 up to 31.3.2005.

Purchase Preference Policy has, however, been adversely commented on the grounds that it favours the CPSEs that are in the business of selling their goods and services to another CPSE; it does not benefit the CPSEs who are engaged in buying; rather, it restricts their freedom to that extent; enough period has been provided to CPSEs engaged in selling their products and services to another CPSE since 1992 for adjustment in the wake of competition arising from economic liberalization. It has been accordingly suggested that the *Purchase Preference Policy* may be either withdrawn, should be restricted to weak/sick CPSEs alone or the price margin for purchase preference be restricted to 5%.

In view of the directions of the Government dated 13.10.2004, the *Purchase Preference Policy* was last reviewed by the Government on 30.6.2005 and it was decided to extend it for a further period of three years beyond 31.3.2005 with following modifications/conditions:

(i) Purchase Preference Policy may be continued for a period of 3 years, with clear stipulation that it will be terminated with effect from 31.3.2008;

(ii) Each Ministry should be asked to make a list of PSEs that would require purchase preference support. If there is no possibility of making a positive list, each Ministry may attempt a negative list of PSEs which may not require purchase preference support;

(iii) *Purchase Preference Policy* support should be extended to contracts of the value not exceeding Rs.100 crore. If civil works are included as a part of contract for supply of

goods and/or if the contract is a turnkey contract, such contracts will also be covered by the *Purchase Preference Policy*, subject to the condition that the total value of the contract does not exceed Rs. 100 crore;

(iv) Exemption may be granted to the Ministry of Power from the *Purchase Preference Policy*, subject to the condition that Ministry of Power will place certain orders upon BHEL on a negotiated basis price benchmarked through competitively bid projects every year. Ministry of Power and Ministry of Heavy Industries should work out, at the beginning of the year, the number and value of the orders to be placed upon BHEL during the financial year;

(v) *Purchase Preference Policy* will apply only to PSEs and their subsidiaries (i.e. where PSE owns 51%), but not to a joint venture owned by a PSE and a private sector partner;

(vi) PSEs should be subject to the same qualification process as any other bidder. If the PSE does not meet the minimum qualifications, it should be subject to disqualification. However, in suitable cases, the purchasers/clients may not insist upon the condition of "net worth" from the list of minimum qualifications;

(vii) If the PSE which has had the benefit of the *Purchase Preference Policy* fails to perform, it should also be subject to payment of liquidated damages or any penalty included in the contract.

Based on the above decision of the Government, *Purchase Preference Policy* was further extended for a period of another 3 years vide Department of Public Enterprises' O.M. dated 18.7.2005, having the sunset clause for its termination on 31.3.2008.

9.2 Consideration by Supreme Court of India

In view of the writ petitions of M/s Caterpillar India Pvt. Limited (CIPL). filed in the various High Courts of the country against the *Purchase Preference Policy*, implemented by the Coal India Limited and its subsidiary companies, which were subsequently transferred to the Supreme Court of India at the request of Bharat Earth Movers Limited (BEML) and clubbed together into one, the Appex Court while disposing of the transferred petitions made the following observations:

(a) Industry-wise assessment to be done by the concerned Ministries and in case of cost effectiveness is achieved by any PSEs there may not be any need for extending preference to such PSEs. Such examination should be done on the line as to whether any preference is at all called for and the extent of margin of preference to be allowed, which would also ensure level playing field for others.

(b) Further, while splitting the tenders, the minimum quantity/amount should be so fixed as to ensure that it is rational and there is no element of uncertainty. In other words, there should not be any rigid / inflexible purchase preference policy without examination as to whether such protection is necessary form a particular PSE;

(c) Present practice of allowing uniform margin of 10% over the L-1 bidder, as purchase preference to CPSEs, has to be reviewed and margin should be fixed PSE specific by the concerned Ministry on a rational basis;

(d) The overall impact of such preference to be allowed on foreign direct investment has also to be assessed/considered.

The Supreme Court of India through its judgement dated 18.5.2007 had given the following directions:

(a) The exercise, as noted above, shall be undertaken by the concerned Ministry of the Central Government within a period of 4 months from the date of judgement;

(b) The interim arrangements operative presently shall continue till a fresh reconsideration is made by the concerned departments of the Government of India;

(c) The interim orders shall not be restricted to the petitioners, appellant and the respondents. It shall only be binding on the parties who

are L-1 and L-2 in the concerned transaction. While fixing the norms, the capacity to delivery of the concerned PSEs and the competitors has also to be taken note of.

9.3 Review of the extant Purchase Preference Policy

In deference to the directions of the Supreme Court of India the Department of Public Enterprises processed the matter in consultation with various Ministries/Departments. The following proposals were approved by the Government :

(i) To reiterate the earlier decision dated 30.6.2005 of the Government that Purchase Preference Policy for Products and Services of CPSEs will be terminated with effect from 31.3.2008;

(ii) To clarify that the preferential purchase policies framed for the specific sectors by the concerned Ministries/Departments within the relevant Act of Parliament or otherwise do not come within the purview of the decision at (i) above. The concerned Ministries / Departments may independently evolve/review preferential policies for the sectors of their concern, as per their requirement; and

(iii) To communicate the above decisions to the Supreme Court of India.

Thus, the purchase preference policy for products and services of CPSEs in general will continue in its present form till 31.3.2008.

10 ENTERPRISES UNDER CONSTRUCTION AND PROJECTS UNDER IMPLEMENTATION

10.1 Performance of Enterprises under Construction

There are some Central Public Sector Enterprises (CPSEs), which are at construction stage and have yet to go into regular production on commercial scale. As on 31.3.2006, there were 20 such enterprises. Out of these, four enterprises namely, Fresh Healthy Enterprises Ltd., Indian Strategic Petroleum Corpn. Ltd., Tehri Hydro Development Corpn. Ltd. and Security Printing and Minting Corpn. Ltd. have come into operations during the year 2006-07. During the year, fourteen more enterprises have been added to the list. As such, as on 31.3.2007, there were 30 enterprises under construction. The date of incorporation and authorized capital of theese enterprises is given below:

S.No.	Name of enterprise	Year of Incorporation	Authorised Capital (Rs. in lakh)
1	Indian Vaccine Corporation Ltd.	1988	0
2	Bihar Drugs & Organic Chemicals Ltd.	1994	200
3	Punjab Ashok Hotel Co. Ltd.	1998	300
4	Guru Gobind Singh Refineries Ltd.	2000	600000
5	IL Power Electronics Ltd.	2000	100
6	Instrumentation Control Valves Ltd.	2000	425
7	Instrumentation Digital Control Ltd.	2000	125
8	NTPC Hydro Ltd.	2002	50000
9	Parbati Koldam Transmission Co.	2002	—
10	Pipavav Power Development Corp. Ltd.	2003	1000
11	Bharatiya Nabhikiya Vidyut Nigam Ltd.	2003	500000
12	Sethusamudram Corpn. Ltd.	2004	100000
13	Air India Engineering Services Ltd.	2006	1000
14	Akaltara Power Ltd.	2006	5
15	Bharat Petro Resources Ltd.	2006	100
16	Bharat Petro Resources JPDA Ltd.	2006	—
17	Coastal Andhra Power Ltd.	2006	5
18	Coastal Gujarat Power Ltd.	2006	5
19	Coastal Karnataka Power Ltd.	2006	5
20	Coastal Maharashtra Mega Power Ltd.	2006	5
21	Orissa Integrated Power Ltd.	2006	5
22	REC Transmission Projects Ltd.	2006	5
23	Sasan Power Ltd.	2006	5

S.No.	Name of enterprise	Year of Incorporation	Authorised Capital (Rs. in lakh)
24	Vaishali Power Generating Co. Ltd.	2006	10000
25	Bokaro-Kodarma-Maithon Transmission Company Limited	2007	5
26	Brahmaputra Cracker & Polymer Ltd.	2007	—
27	Byrnihat Transmission Co. Ltd.	2007	—
28	Coastal Tamil Nadu Power Ltd.	2007	5
29	East North Interconnection Co. Ltd.	2007	5
30	Jharkhand Integrated Power Ltd.	2007	5

The paragraphs below discuss the current status of each of the enterprises and the projects being executed by them.

10.1.1 Indian Vaccines Corporation Ltd.

The Indian Vaccines Corporation Limited (IVCOL) was incorporated on 28.3.1988 March 1988 with 67% share holding by Govt. of India (as a joint venture company of Department of Biotechnology), Indian Petrochemicals Corporation Ltd. (IPCL) and Pasteur Merieux Serums and Vaccines (PMSV), France to undertake research and development as well as manufacture of viral vaccines. Due to problems arising out of change in product mix and technology transfer, the company is on hold since February, 1992.

10.1.2 Bihar Drugs & Organic Chemicals Limited (BDOC)

Bihar Drugs & Organic Chemicals Limited (BDOC) was set up in 1994 as a wholly owned subsidiary of the Indian Drugs & Pharmaceuticals Limited to manufacture Acetic Acid and other related products.

The Company's Registered, Corporate/ Head Office and the manufacturing unit are located at Muzaffarpur, Belagarh (Bihar). Since April, 1995, the company has not made any production. A revival package of the company was under consideration of the IDPL/Government of India.

As on 31.3.2007 There were 6 employees on the roll of the company.

The company has not furnished annual report and accounts since 2001-02.

10.1.3 Punjab Ashok Hotel Company Ltd.

Punjab Ashok Hotel Co. Ltd. is a joint venture between India Tourism Development Corporation Limited and Punjab Tourism Development Corporation Ltd. It was incorporated on 11.11.1998 with an authorized capital of Rs. 3 crores. The equity contribution of Rs. 2.50 crore is in the ratio of 51 : 49 between Indian Tourism Development Corporation and Punjab Tourism Development Corporation Limited respectively. The registered office is in Chandigarh in the state of Punjab. The unit is located at Anandpur Sahib in the State of Punjab.

The main objectives of the company are to own, manage, construct-purchase and operate hotels, restaurants, motels etc and to establish, manage transport unit etc. to develop tourism in Punjab.

10.1.4 Guru Gobind Singh Refineries Ltd.

Guru Gobind Singh Refineries Ltd. is a wholly owned subsidiary of Hindustan Petroleum Corporation Limited (HPCL). Since the implementation of this project needed mobilization of huge financial resources, induction of a Joint Venture Partner was considered vital to accelerate the implementation process. HPCL entered into a Joint Venture Agreement(JVA) with a partner of International repute viz. M/s Mittal Investments S.a.r.l (MI) on March 2, 2007 for execution of this project at current core capital cost of Rs. 17,200 crores.

As per the JVA, both the partners viz. HPCL and MI shall hold 49% equity stake each in the company and the balance 2% would be held by Financial Institutions(s).

The refinery configuration & cost estimate for execution of the 9 MMTPA refinery and its associated facilities have been finalized during the year. The refinery has been configured for processing heavy and sour crude to take advantage of the price differentials vis-a-vis light and sweet crude. The refinery will be capable of meting the Euro-IV quality norms for transport fuels. The Nelson Complexity Index(NCI), which is a measure of the refinery's capability to upgrade low value heavy crude to high value products, is quite high at 9.6 vis-à-vis its peers. The major products from the refinery would be LPG, Naphtha, MS, HSD, Kerosene, Jet Fuel, Polypropylene, Coke etc. The refinery shall cater to the demand of the States of Punjab, J&K, Himachal Pradesh, Delhi and parts of Haryana and Rajasthan.

SBI Capital Markets Limited(SBICAP) have carried out the financial appraisal for the project and are the lead managers for debt syndication requirements for the project. The overall financial, liquidity and profitability parameters of the project are robust.

A green belt having various species of trees and a width of approx. 125 meters along the refinery boundary, covering an area of 120 hectares, is under development through the State Forest Department.

As on 31.3.2007 There were 28 employees on the rolls of the company.

10.1.5 IL Power Electronics Limited

IL Power Electronics Limited was incorporated on 12.9.2000 with the objective to take over the business of Jaipur Unit of Instrumentation Ltd., Kota. The authorized capital and paid up capital as on 31.3.2007 was Rs. 1.00 crore and Rs.0.02 crore respectively.

No commercial activity has been carried out during the period. Since the expression of interest was not received for the Jaipur Unit, it was integrated with the main unit of Kota in 2002-03, as per the directives of the Department of Heavy Industry. The company will therefore be wound up. Govt. of India has been requested for the permission.

10.1.6 Instrumentation Control Valves Ltd.

Instrumentation Control Valves Ltd. was incorporated on 16.11.2000 with the registered office at Kolkata to do business in India and abroad relating to Control Valves, and also to do business related to manufacturing, storing, packing, distributing, transporting, converting, repairing, installing, maintaining and trading of all kinds of Control Valves.

The authorized and paid-up capital as on 31.3.2007 were Rs. 4.25 crore and Rs. 0.03 crore respectively. The company has yet to start business and no commercial activities have taken place.

10.1.7 Instrumentation Digital Controls Ltd.

Instrumentation Digital Controls Ltd. (IDCL) was incorporated on 12.9.2000 to contribute globally to the society through broad ranging activities in the area of Measurement, Automation Control and information for all sectors of economy covering all types of Process Industries including power, energy, steel, fertilizers, hydrocarbon etc.

The authorized capital as on 31.3.2007 was Rs. 1.25 crore. No commercial activities took place during the year.

As per restructuring plan, assets and liabilities of Manufacturing Dvn. of P-DDC Unit of Instrumentation Ltd. were to be transferred to IDCL. As no Expression of Interest was received for P-DDC Unit, the manufacturing facilities of P-DDC Unit was integrated with Kota Unit of Instrumentation Ltd. during 2002-03. The company is thus to be wound up. Government of India has been requested for permission.

10.1.8 NTPC Hydro Ltd

NTPC Hydro Ltd. was incorporated in December, 2002 with an objective to engage in hydro electric power generation. It is a wholly

owned subsidiary company of NTPC Ltd. In order to augment the hydro capacity addition and to give exclusive thrust to small and medium sized hydro electric power projects upto 250 MW capacity, this subsidiary was formed.

The authorized and paid up share capital of the company as on 31.3.2007 was Rs.500 crores and Rs.38.16 crore respectively.

NHL's maiden venture is Lata Tapovan Hydro Electric Power Project (3 x 57 = 171 MW) in the State of Uttaranchal. Techno-economic clearance and environmental clearance have already been obtained. Land acquisition activities for the project are in progress and the implementation activities of this project have been initiated. The project is scheduled for commissioning by March, 2012. The annual power generation from this project is estimated at approximately 869 MU.

NHL's subsequent venture is Rammam Stage-III Hydro Electric Power Project (3 x 40 = 120 MW) located in Darjeeling district of West Bengal. The techno-economic clearance has been obtained. Land acquisition activities have also been initiated. Annual generation from this project is estimated at approximately 467.50 MU. 85% of the power generated from this project shall be given to West Bengal State Electricity Board and the balance 15% will remain with NHL.

10.1.9 Parbati Koldam Transmission Co.

Parbati Koldam Transmission Company was incorporated in the year 2002 as a subsidiary company of Power Grid Corporation of India Ltd., a Govt. of India undertaking to facilitate joint venture arrangements in the transmission sector. Upon signing of joint venture agreements, the control of this subsidiary company is to be transferred to successful joint venture arrangements. Since transactions have not been materialized, the accounts of the company have not been considered for evaluation.

10.1.10 Pipavav Power Development Company Limted

Pipavav Power Development Company Limited (PPDCL) was incorporated on 20.12.2001 as a wholly owned subsidiary company of NTPC with a view to develop Pipavav Power Project in the state of Gujarat with the association of Govt. of Gujarat. For development of Pipavav Power Plant by a 50:50 Joint Venture Company of NTPC and GPCL, an MOU was signed by NTPC with GPCL and Gujarat Electricity Board on 20.2.2004. The registered and Corporate office of the Company in situated in Delhi. The Company does not have any other office/unit.

The authorized and paid up capital of the Company as on 31.3.2007 were Rs. 10 crore and Rs. 0.37 crore respectively.

Studies relating to Environment Impact Assessment Study, Techno-economic study, Seismic Study etc. have already been carried out. NTPC was engaged for selection of suitable fuel for the project based on techno-economic consideration. Since confirmation on coal mine allocation was not forthcoming, NTPC applied for long term coal linkage for fuel tie up. The Govt. of Gujarat however decided to develop Pipavav Project with a strategic partner on fast track basis using imported coal or other suitable fuel. Subsequently, NTPC decided to dissociate itself from the Project and finally they have been allowed to do so. The necessary process has been initiated to settle dues of NTPC with GPCL / Govt. of Gujarat and thereafter, steps for winding up of Pipavav Power Development Company Limited or transferring the shares as the case may be, shall be taken up.

10.1.11 Bharatiya Nabhikiya Vidyut Nigam Ltd.

Bharitiya Nabhikiya Vidyut Nigam Ltd. (BHAVINI) was incorporated in October, 2003. The authorized capital and paid up capital of the company as on 31.3.2006 was Rs. 5000 crore and Rs. 393.15 crore respectively. The company is responsible for construction, commissioning and operation of 500 MW Prototype Fast Breeder Reactor Project at Kalpakkam, Tamil Nadu as well as future Fast Breeder Reactors

The progress of the project is as under:-

- Clearance for construction of Reactor Vault upto EL 26.715m was given by Atomic Energy Regulatory Board on 12.5.2006.
- The bottom shield construction has been completed.

- The inner wall and outer wall has been completed upto EL 26m and EL 24m respectively.
- Fabrication and erection of safety Vessel Support Embedment has been completed.
- Construction of the Service Building has been completed up to roof level.
- The excavation of Turbine building has been completed.
- Fabrication of Safety vessel and mounting of Thermal insulation panels on its outer surface have been successfully completed.
- Purchase orders and work orders worth Rs.1925 crore have been committed.

There were 227 employees on the rolls of the company as on 31.3.2007.

10.1.12 Sethusamudram Corporation Ltd.

Sethusamudram Corporation Ltd. (SCL) was incorporated on 6.12.2004, as a public limited company under the Companies Act, 1956. Consequent to Central Government's contribution towards equity of the company, the Corporation became a CPSE.

With a view to reduce the distances between the Eastern and Western Coast of India and to improve navigation within the territorial waters of India, a navigation channel, named Sethusamudram Channel, connecting the Gulf of Mannar to Bay of Bengal through Adam's Bridge, Palk Bay and Palk Strait has been envisaged to enable ships (upto a definite DWT) moving between the east and the west coast of India to traverse through Indian territorial waters without the need to go around Sri Lanka.

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 kms. Stretch. The dredging work was divided in to 4 parts, viz. A, B, C and D. The dredging work of E3-E4 in Palk Strait (work-D), involving a quantity was awarded to Dredging Corporation of India in 2005. Out of total quantity to be dredged in Adam's Bridge, only a marginal quantity 0.45 m. cum. was completed at the end of the year.

The authorized and share capital of the company as on 31.3.2006 was Rs. 1000 crore and Rs. 315.68 crore respectively. The capital cost of Sethusamudram Ship Channel Project has been worked out to be Rs. 2427.40 crore.

The total quantity to be dredged in Palk Bay/Palk Strait is 34.45 m. cum and the total quantity dredged as per-dredge and post dredge surveys conducted is 8.38 m. cum. as on 31.3.2007. The quantity completed represents 62% on the quantity to be dredged in E3-E$ stretch and about 25% of the total quantity to be dredged in Palk Strait. Out of total quantity to be dredged in Adam's Bridge, only a marginal quantity 0.45 m. cum was completed at the end of the year.

As on 31.3.2007 there were 33 employees on the rolls of the company.

10.1.13 Air India Engineering Services Ltd.

Air-India (A-I) has hived off its maintenance division into a separate company, namely, Air-India Engineering Services Ltd. with an authorized capital of Rs.1000 lakh and paid-up capital of Rs. 5 lakh. The new venture has been registered with the Registrar of Companies and the transfer of the staff from Air India to the new company is currently underway. Air-line is also seeking infusion of funds for the new company from strategic partners.

10.1.14 Akaltara Power Ltd.

Akaltara Power Limited was incorporated on 10.2.2006 as a wholly owned subsidiary of the Power Finance Corporation to develop Akaltara Ultra Mega Power Project in the state of Chattisgarh. The Authorised Share Capital of the Company is Rs.5 lakh.

There was no progress during the year due to some unresolved issues like land acquisition, site selection etc. with the State Govt. of Chattisgarh.

10.1.15 Bharat Petroresources Ltd.

Bharat PetroResources Limited was incorporated as a wholly owned subsidiary company of Bharat Petroleum Corporation Limited, a Govt. of India undertaking on

17.10.2006. The company obtained the certificate of commencement of business on 5.12.2006. The registered office of the company is in Mumbai. There are currently four directors on the Board of the company. As there were no transactions during 2006-07, the Ministry of Corporate Affairs have been requested for extension of the financial year from the date of incorporation to 31.3.2008.

10.1.16 Bharat PetroResources JPDA Ltd.

Bharat Petro Resources JPDA Limited was incorporated as a wholly owned subsidiary company of Bharat PetroResources Ltd. (BPRL), a Govt. of India Undertaking on 28.10.2006. The company obtained the certificate of commencement of business on 1.12.2006. The registered office of the company is in Mumbai. There are currently three directors on the Board of the company. The authorised share capital and paid up capital of the Company is Rs.100 lakh and Rs. 5 lakh respectively. As there were no transactions during 2006-07, Ministry of Corporate Affairs have been requested for extension of financial year from the date of incorporation to 31.3.2008.

10.1.17 Coastal Andhra Power Ltd.

Coastal Andhra Power Limited was incorporated on 24th August, 2006 as a wholly owned subsidiary of the Power Finance Corporation to develop Krishnapatnam Ultra Mega Power Project in State of Andhra Pradesh. The authorised share capital and paid up capital of the Company is Rs. 5 lakh.

During the year, the bid process for Krishnapatnam Ultra Mega Power Project was under process.

10.1.18 Coastal Gujarat Power Ltd.

Coastal Gujarat Power Limited was incorporated on 10th February, 2006 as a wholly owned subsidiary of the Power Finance Corporation so as to develop Mundra Ultra Mega Power Project in State of Gujarat. The authorised share capital and paid up capital of the Company is Rs. 5 lakh.

During the year, the tariff based International Competitive Bidding process for Mundra Ultra Mega Power Projects was completed and the Letter of Interest was issued to the successful bidder. Coastal Gujarat Power Ltd. was subsequently transferred to Tata Power Company Ltd. on 22nd April, 2007.

10.1.19 Coastal Karntaka Power Limited

Coastal Karntaka Power Limited was incorporated on 10th February, 2006 as a wholly owned subsidiary of the Power Finance Corporation to develop Tadri Ultra Mega Power Project in State of Karnataka. The authorised share capital and paid up capital of the Company is Rs. 5 lakh.

During the year, there was no progress due to resistance from the local residents.

10.1.20 Coastal Maharashtra Mega Power Ltd.

Coastal Maharashtra Power Limited was incorporated on 1st March, 2006 as a wholly owned subsidiary of the Power Finance Corporation to develop Girye Ultra Mega Power Project in State of Maharashtra. The authorised share capital and paid up capital of the Company is Rs. 5 lakh.

During the year, there was no progress due to resistance from the local residents.

10.1.21 Orissa Integerated Power Limited

Orissa Integerated Power Limited was incorporated on 24th August, 2006 as a wholly owned subsidiary of Power Finance Corporation for Ultra Mega Power Project in State of Orissa. The authorised share capital and paid up capital of the Company is Rs. 5 lakh. Upon signing of joint venture agreements, the control of this subsidiary company is to be transferred to successful joint venture arrangements.

10.1.22 REC Transmission Projects Ltd.

REC Transmission Projects Limited was incorporated on 8.1.2007 as a subsidiary company of Rural Electrification Co. Ltd., a Govt. of India undertaking. It received its commencement of business certificate on 5.2.2007. The main objective of the company is to promote, organize or carry on the business of consultancy services and /or project implementation in any field of activity relating to the transmission and distribution of electricity in India or abroad.

The newly formed company has already taken up the task of selection of developer for two transmission projects entrusted by REC. The technical consultants and bid process consultants have already been appointed. Subsequently, two project specific SPVs namely (i) North Karanpura Transmission Co. Ltd. And (ii) Talcher-II Transmission Projects Co. Ltd. have also been formed in the financial year 2007-08. These SPVs would be merged with the Transmission Service Provider of the transmission system after the developer is granted license by CERC.

10.1.23 SASAN Power Limited

SASAN Power Limited was incorporated on 10.2.2006 as a wholly owned subsidiary of the Power Finance Corporation to develop Ultra Mega Power Project near Sasan village in Tehsil Singrauli of Sidhi District of Madhya Pradesh. The authorised share capital and paid up capital of the Company is Rs. 5 lakh.

The tariff based International Competitive Bidding process for Sasan Ultra Mega Power Projects was completed during the year and Letter of Interest have been issued to the successful bidder. Sasan Power Ltd. was transferred to Reliance Power Ltd. on 7th August, 2007.

10.1.24 Vaishali Power Generating Co. Ltd.

The company has been incorporated on 6th September 2006 as a joint venture of NTPC Ltd. and Bihar State Electricity Board(BSEB), with the object to acquire establish, operate and maintain Muzaffarpur Thermal Power Plant(2x110 MW) in Muzaffarpur District of Bihar. Presently NTPC holds 51 % and BSEB is holding 49% equity stake in the Company.

A Memorandum of Agreement was entered into between Government of Bihar, Bihar State Electricity Board and NTPC on 26.12.2005 for carrying out all the work related to refurbishment, renovation and modernization including studies to be undertaken in relation to the Muzaffarpur Thermal Power Station(MTPS). As per agreement Vaishali Power Generating Company Ltd. took-over assets of MTPS on the transfer value based on depreciated book value subject to physical verification of assets as on date of transfer, free from all encumbrances and charges. As per the MOA, the cost of carrying out R&M and refurbishment work including studies etc. has been estimated at Rs. 350 crore, which will be financed out of grant already available with the Government of Bihar under the "Rashtriya SAM Vikas Yojana" of Government of India.

In terms of MOA and with a view to give effect to the transfer of MTPS, the Government of Bihar has issued transfer Notification viz. Bihar Electricity Reform (Transfer of Muzaffarpur Thermal Power Station) Scheme, 2006 on 8th September 2006. A Power Purchase Agreement (PPA) had also been entered into on 22nd August 2006, on behalf of the Company, between the BSEB and NTPC Ltd.

Further, a five party Memorandum of Understandings were entered into amongst the Bharat Heavy Electricals Limited, NTPC Limited, Bihar State Electricity Board, Govt. of Bihar and the Ministry of Power, Govt. of India for the purpose of carrying out RLA, R&M & LE of MTPS. It is expected that Unit-II of the MTPS would be synchronized shortly. The Company has awarded consultancy contract for R&M work of Unit-I to the NTPC Consultancy wing and the R&M work will be awarded to BHEL.

10.1.25 Bokaro-kodarma-maithon Transmission Company Limited

Bokaro-Kodarma-Maithon Transmission Company Limited was incorporated on 31st January, 2007 as a wholly owned subsidiary of the Power Finance Corporation so as to develop transmission system for Evacuation System for:

- Maithon RB (1000 MW).
- Kodarma (1000 MW).
- Mejia (1000 MW).
- Bokaro Extn. (500 MW).

The authorised share capital and paid up capital of the Company is Rs. 5 lakh.

10.1.26 Brahmaputra Cracker & Polymer Ltd.

Brahmaputra Cracker & Polymer Ltd. was incorporated on 08.1.2007 under the

Companies Act, 1956, as a joint venture of GAIL (as main promotor with equity participation of 70%), OIL, NRL and Assam Industrial Development Corporation (Govt. of Assam) (with equity participation of 10% each). The certificate of commencement of business was received on 12.9.2007. The company shall finalise its first Annual Accounts for the period ended 31.3.2008.

10.1.27 Byrnihat Transmission Co. Ltd.

Byrnihat Transmission Co. Ltd. was incorporated on 23.3.2006 as a subsidiary company of Power Grid Corporation of India Ltd., a Govt. of India undertaking to facilitate joint venture arrangements in transmission sector. Upon signing of joint venture agreements, the control of this subsidiary company is to be transferred to successful joint venture arrangements. Since transactions have not been materialized, the accounts of the company could not be considered.

10.1.28 Coastal Tamil Nadu Power Limited

Coastal Tamil Nadu Power Limited was incorporated on 9th January, 2007 as a wholly owned subsidiary of the Power Finance Corporation to develop Ultra Mega Power Project in the State of Tamil Nadu. The authorised share capital and paid up capital of the Company is Rs. 5 lakh.

Upon signing of joint venture agreements, the control of this subsidiary company is to be transferred to successful joint venture arrangements.

10.1.29 East-North Interconnection Company Limited

East-North Interconnection Company Limited was incorporated on 1.2.2007 as a wholly owned subsidiary of the Power Finance Corporation to develop transmission system for enabling import of North Eastern Region / Eastern Region surplus by Northern Region. Upon signing of joint venture agreements, the control of this subsidiary company is to be transferred to successful joint venture arrangements. The authorised share capital and paid up capital of the Company is Rs. 5 lakh.

10.1.30 Jharkhand Integrated Power Ltd.

Jharkhand Integrated Power Limited was incorporated on 2nd January, 2007 as a wholly owned subsidiary of the Power Finance Corporation to develop Tilaiya Ultra Mega Power Project in the State of Jharkhand. The authorised share capital and paid up capital of the Company is Rs. 5 lakh.

During the year, the bid process for Tilaiya Ultra Mega Power Project in Jharkhand is under process.

10.2 Projects Under Implementation in operating Enterprises

A number of projects of central public sector enterprises are presently under implementation. Based on the report brought out by the Ministry of Statistics & Programme implementation, Government of India for the quarter ending 31st March, 2007, it is noticed that there were 81 projects each costing Rs. 500 crore and above, under implementation stage. Project wise details are furnished at Annex. 10.1.

Annex. 10.1
Projects Under Implementation in operating Enterprises

SI. No.	Project Name	Capacity	Date of Approval Original (Revised)	Date of Commissioning Original (Revised) (Anticipated)	Cost (Rs. in crore) Original (Revised) (Anticipated)
(1)	(2)	(3)	(4)	(5)	(6)
NUCLEAR POWER CORPORATION OF INDIA LIMITED					
1.	KAIGA 3 & 4 UNITS (NPCIL), KAIGA	MW 2×220	5/2001 (-)	10/2009 (-) [9/2007]	4213.00 (-) [3282.00]
2	KUDANKULAM APP (NPCIL)	MW 2×1000	12/2001 (-)	12/2008 (-) [12/2008]	13171.00 (-) [13171.00]
3.	RAJASTHAN ATOMIC POWER PROJECT 5&6 (NPCIL)	MWE 2×220	4/2002 (-)	2/2008 (-) [2/2008]	3072.00 (-) [3072.00]
BHAVINI LIMITED					
4.	FAST BREEDER REACTOR URANIUM ORE PROCESSING MILL (UCIL)	MWE 500	9/2003 (-)	6/2006 (-) [6/2007]	343.26 (-) [343.26]
SOUTH-EASTERN COAL FIELDS LIMITED					
5.	DIPKA EXPANSION OCP		7/2005 (-)	3/2010 (-) [3/2010]	1268.53 (-) [1268.53]
6.	GEVRA EXPANSION OCP		7/2005 (-)	3/2010 (-) [3/2010]	1667.55 (-) [1667.55]
7.	KUSMUNDA EXPANSION OCP	20 MTY	6/2006 (-)	3/2011 (-) [3/2011]	737.65 (-) [737.65]
EASTERN COAL FIELDS LIMITED					
8.	RAJMAHAL OLP EXPANSION PROJECT	6.5 MTY (10.5 TO 17.0 MTY)	1/2006 (-)	3/2009 (-) [11/2009]	650.06 (-) [650.06]
NORTHERN COAL FIELDS LIMITED					
9.	KRISHNASHILA	4 MTY (4MTY)	5/2006 (-)	3/2010 (-) [3/2010]	789.88 (-) [789.88]
10.	AMLOHRI EPR	4 TO 10 MTY	5/2006 (-)	3/2014 (-) [3/2014]	1352.04 (-) [1352.04]
11	BLOCK-B OCP	3.5 MTY	6/2006 (-)	6/2011 (-) [6/2011]	746.04 (-) [746.04]

(1)	(2)	(3)	(4)	(5)	(6)
NEVELI LIGNITE CORPORATION					
12.	EXPANSION OF MINE-II	10.5 MTPA TO 15.0 MTPA 4.5 MTPA	10/2004 (-)	6/2006 (-) [6/2009]	2161.28 (-) [2161.28]
13.	EXPANSION OF TPS-II	1470 MW TO 1970 MW 2×250 MW	10/2004 (-)	6/2009 (-) [6/2009]	2030.78 (-) [2030.78]
14.	BARSINGSAR TPS	2×125MW (NLC) {2×125 MW)	12/2004 (-)	6/2009 (-) [6/2009]	1114.18 (-) [1114.18]
NATIONAL ALUMINUM COMPANY LIMITED (NALCO)					
15	2ND PHASE EXPANSION OF NALCO MINE, REFINERY, SMELTER AND CC		10/2004 (-)	12/2008 (-) [12/2008]	4091.51 (-) [4091.51]
STEEL AUTHORITY OF INDIA LIMITED (SAIL)					
	BHILAI STEEL PLANT				
16.	INSTALLATION OF SLAB CSASTLER, RH DEGASSER & LADLE FURNACE		7/2005 (-)	9/2007 (-) [11/2007]	520.76 (-) [520.76]
	RASTRIYA ISPAT NIGAM LIMITED (RINL)				
17.	EXPANSION OF LIQUID STEEL CAPACITY	FROM 3 MT TO 6.3 MT (3.3 MT)	10/2005 (-)	10/2009 (-) [10/2009]	8692.00 (-) [8692.00]
BONGAIGAON REFINAERY PETROLEUM LIMITED					
18.	DIESEL HYDROGEN TREATMENT PRJECT	2.7 MMTPA	6/2006 (-)	9/2009 (-) [10/2009]	1431.9 (-) [1431.91]
GAS AUTHORITY OF INIDA LIMITED					
19.	DAHEJ-HAZIRA-URAN PIPELINE PROJECT (GAIL)		12/2002 (-)	7/2005 (-) [5/2007]	1416.00 (-) [1521.23]
20	DABHOL - PANVEL PIPE LINE	12.5 MCM	1/2006 (-)	7/2007 (-) [4/2008]	1143.54 (-) [1326.25]
HINDUSTAN PRTROLEUM CORPORATION LIMITED					
21.	GREEN FUELS & EMISSION CONTROL (HPCL)		10/2202 (-)	4/2005 (-) [11/2007]	1152.00 (-) [1850.00]
22.	CLEAN FUELS PROJECT AT VISAKH REFINERY (HPCL)		4/2003 (-)	5/2006 (-) [8/2007]	1635.00 (-) [2147.79]
23.	MDPL PROJECT		4/2004 (-)	8/2007 (-) [5/2007]	1623.84 (-) [1746.86]
INDIAN OIL CORPORATION LIMTED					
24.	PARADIP-HALDIA CRUDE OIL PIPLINE		3/2004 (-)	3/2006 (-) [6/2007]	1178.00 (-) [1140.00]

(1)	(2)	(3)	(4)	(5)	(6)
25.	INSTALLATION OF FACILITIES FOR IMPROVEMENT IN DIESEL QUALITY		11/2005 (-)	4/2009 (-) [12/2009]	1876.00 (-) [2869.00]
26.	PANIPAT-NAPHTA CRACKER PROJECT	14×22.5 MW	4/2006 (-)	9/2009 (-) [11/2009]	12138.00 (-) [14438.96]
27.	EXPANSION OF PANIPAT REFINERY	FROM 20 TO 15 MMTPA [15 MMTPA]	6/2005 (-)	3/2008 (-) [12/2008]	806.00 (-) [806.00]
28.	RESIDUE UPGRADATION AND MS/HSD QUALITY IMPROVEMENT PROJECT	2.1 MMTPA	1/2007 (-)	1/2010 (-) [1/2010]	569300 (-) [5693.00]
OIL & NATURAL GAS CORPORATION LIMITED					
29.	IOR GELEKI (ONGCL)	MMT 3.94	9/2001 (-)	3/2007 (-) [3/2011]	390.09 (-) [834.90]
30.	MUMBAI HIGH SOUTH DEVELOPMENT)ONGCL)		10/2001 (-)	7/2007 (-) [12/2008]	5255.97 (-) [6579.25]
31.	DEVELOPMENT OF BASSEIN EAST (ONGCL)		4/2003 (-)	3/2006 (-) [3/2008]	985.17 (-) [1688.38]
32.	DEV OF GI & GS-15 (ONGCL)		4/2003 (-)	3/2005 (-) [3/2007]	429.82 (-) [1262.93]
33.	C2-C3 & LPG RECOVERY FROM LNG, DAHEJ (ONGC)		12/2003 (-)	6/2006 (-) [6/2008]	900.92 (-) [1493.49]
34.	ADDL DEV. OF BASIN FIELD & INST. OF 2ND BOSTER COMPRESSOR		3/2004 (-)	1/2008 (-)	1770.69 (-)
35.	ADDITIONAL DEVELOPMENT HEERA PART-2 {2.645 MMT OIL AND 0.736 BCM GAS]		1/2005 (-)	4/2007 (-) [9/2007]	569.07 (-) [569.07]
36.	ADITIONAL DEVELOPMENT OF A-1 LAYER, L-II RESERVOIR MHN {3.49 MMT OIL AND 0.79 BCM GAS}		4/2005 (-)	12/2006 (-) [9/2007]	910.53 (-) [910.53]
37.	HEERA AND SOUTH HEERA REDEVELOPMNET PROJECT {10.865 MML OF OIL AND 21.665 BCM GAS}		9/2006 (-)	6/2010 (-) [6/2010]	2305.30 (-) [2305.30]
38.	DEVELOPMENT OF C-SERIES FIELDS {15.14 BCM GAS AND 6.13 MML OF OIL}		8/2006 (-)	12/2008 (-) [12/2008]	3195.16 (-) [3195.16]
KOCHI REFINERIES LIMITED					
39	CRUDE OIL RECEIPT FACILITIES		382004 (-)	5/2007 (-) [5/2007]	622.82 (-) [821.00]

(1)	(2)	(3)	(4)	(5)	(6)
NORTH EAST ELECTRIC POWER CORPORATION					
40.	TUIRIAL HYDRO ELECTRIC PROJECT (NEEPCO)	MW 2×30	7/1998 (-)	7/2006 (-) [3/2009]	368.72 (-) [687.80]
41	KAMENG HYDROELECTRIC PROJECT	MWE 4×150	12/2004 (-)	12/2009 (-) [3/2011]	2496.90 (-) [2496.90]
NATIONAL HYDRO-ELECTRIC POWER CORPORATION					
42.	DULHASTI HYDEROELECTRIC PROJECT (NHPC)	MWE 3×130	11/1982 (7/1989)	11/1990 (3/2001) [3/2007]	183.45 (3559.77) [4982.62]
43.	LOKTAK D/S HYDRO ELECTRIC PROJECT (NHPC)	MW 3×30	12/1999 (-)	6/2006 (-) [-]	578.62 (-) [578.62]
44.	TEESTA HYDRO ELECTRIC PROJECT STAGE-V (NHPC)	MW 3×170	2/2000 (-)	2/2007 (-) [1/2008]	2198.04 (-) [2198.04]
45.	PARBATI HYDRO ELECTRIC PROJECT (NHPC)	MW 4×200	9/2002 (-)	9/2009 (-) [9/2009]	3919.59 (-) [3919.59]
46.	SUBANSIRI LOWER H.E.P. (NHPC)	MW 8×250	9/2003 (-)	9/2010 (-) [1/2012]	6285.33 (-) [6285.33]
47.	SEWA-II HYDRO ELECTRIC PROJECT (NHPC)	MW 3×40	9/2003 (-)	9/2007 (-) [12/2008]	665.46 (-) [665.46]
48.	TESSTA LOW DAM STAGE-III (NHPC)	MW 4×33	10/2003 (-)	3/2007 (-) [9/2008]	768.92 (-) [768.92]
49.	CHAMERA STAGE-III	MW 231	8/2005 (-)	8/2010 (-) [8/2010]	1405.63 (-) [1405.63]
50.	TEESTA LOW DAM HEP (STAGE-IV)		9/2005 (-)	9/2009 (-) [9/2009]	1061.38 (-) [1061.38]
51.	PARBATI HEP STAGE-III	MW 520	10/2005 (-)	10/2010 (-) [11/2010]	2304.56 (-) [2304.56]
52.	URI HE.E.P. STAGE-II	MW 240	8/2005 (-)	11/2009 (-) [11/2009]	1729.29 (-) [1724.79]
53.	CHUTAK HYDRO ELECTRIC PROJECT	MW 44	8/2006 (-)	2/2011 (-) [2/2011]	621.26 (-) [621.26]
54.	NIMOO BAZGO HYDRO ELECTRIC PROJECT	MW 45	8/2006 (-)	8/2010 (-) [8/2010]	611.01 (-) [611.01]
TEHRI HYDRO DEVELOPMENT CORPORATION LIMITED					
55.	THERI DAM & H.P.P. (THDCL)	MW 4×250	3/1994 (-)	3/1999 (-) [3/2007]	2963.66 (-) [6672.88]
56.	KOTESHWAR HYDRO ELECTRIC PROJECT (THDCL)	MW 4×100	4/2000 (-)	4/2005 (-) [6/2010]	1301.56 (-) [1301.56]

(1)	(2)	(3)	(4)	(5)	(6)
57	TEHRI PUMPED STORAGE PLANT	MW 1000	7/2006 (-)	6/2011 (-) [6/2011]	1657.00 (-) [1657.00]
NATIONAL THERMAL POWER CORPORATION					
58	KOLDAM HYDRO ELECTRIC PROJECT (NTPC)	MW 4×200	10/2002 (-)	4/2009 (-) [4/2009]	4527.15 (-) [4527.15]
59	VINDHYACHAL STPP ST-III (NTPC)	MW 2×500	2/2003 (-)	8/2007 (-) [8/2007]	4125.00 (-) [4201.50]
60	KAHAL GAON STPP STAGE - II PHASE-II (NTPC)	MW 500×1	5/2004 (-)	5/2007 (-) [5/2007]	5868.31 (-) [5868.37]
61	SIPAT STPP STAGE-I (NTPC)	MW 660×3	12/2003 (-)	12/2009 (-) [12/2009]	8323.39 (-) [8323.39]
62	SIPAT STPP STAGE-II (NTPC)	MW 500×2	11/2003 (-)	12/2007 (-) [12/2007]	4039.67 (-) [4039.67]
63	BARH STPP	MW 660×3	12/2003 (-)	12/2009 (-) [11/2010]	8692.97 (-) [8692.97]
64	LOHARINAG PALA HEP	MW (4×150) (4×150)	`6/2006 (-)	11/2011 (-) [10/2011]	2895.10 (-) [2895.10]
65	KORBA STPP STAGE-III	MW 500×1	8/2006 (-)	2/2010 (-) [2/2010]	2448.50 (-) [2448.49]
66	FARAKKA STPP STAGE-III	MW 500×1	7/2006 (-)	8/2010 (-) [8/2010]	2570.44 (-) [2570.44]
67.	TAPOVAN-VISHNUGAD HEP	MW 130×4	11/2006 (-)	3/2013 (-) [3/2013]	2978.48 (-) [2978.48]
68.	NATIONAL CAPITAL THERMAL POWER PROJECT STAGE	MW 490×2	10/2006 (-)	4/2010 (-) [4/2010]	5135.33 (-) [5135.33]
POWER GRID CORPORATION OF INDIA LIMITED					
69.	TRANSMISSION SYSTEM ASSOCIATED WITH BARH GENERATION PROJECT	MW 660×3	12/2005 (-)	9/2009 (-) [9/2009]	3779.46 (-) [3779.46]
70.	TR. SYSTEM ASSOCIATED WITH TALA HEP. (P. GRID)	CKM 2612	6/2003 (-)	6/2006 (-) [-]	1980.70 (-) [2483.88]
71.	SIPAT TRANSMISSION SYSRTEM STAGE -I	CKM 743 MVA 920	12/2003 (-)	2/2007 (-) [5/2007]	1454.79 (-) [1997.75
72.	VINDHYACHAL STAGE-III TRANSMISSION SYSTEM	MVA 620	7/2004 (-)	7/2207 (-) [7/2007]	596.47 (-) [692.41]
73.	SIPAT STAGE-II TRANSMISSION SYSTEM		8/2004 (-)	8/2007 (-) [8/2007]	601.90 (-) [635.00]

(1)	(2)	(3)	(4)	(5)	(6)
74.	NEYVELI-II TRANSMISSION SYSTEM		1/2005 (-)	12/2007 (-) [12/2007]	691.83 (-) [778.05]
75.	KAIGA 3 & 4 TRANSMISSION SYSTEM		3/2005 (-)	12/2007 (-) [12/2007]	596.45 (-) [588.25]
76.	KAHALGOAN-II (PHASE-I) TRANSMISSION SYSTEM		10/2004 (-)	10/2007 (-) [10/2007]	1771.93 (-) [2967.85]
77.	KUNADANKULAM-APP TRANSMISSION SYSTEM		5/2005 (-)	11/2008 (-) [11/2008]	1779.29 (-) [1779.29]
78.	SIPAT-II SUPPLY TRANSMISSION SYSTEM	KV D/C 400 & 765 KV	6/2005 (-)	6/2008 (-) [6/2008]	813.67 (-) [813.67]
79.	RAPP 5 & 6 TRANSMISSION SYSTEM	KV D/C 400	6/2005 (-)	3/2008 (-) [3/2008]	499.45 (-) [509.79]
80.	EAST WEST TRANSMIISION CORRIDOR STRENGTHNING SCHEME		6/2006 (-)	6/2009 (-) [6/2009]	803.70 (-) [803.70]
81.	EAST REGION STRENGTHENING SCHEME-I		10/2006 (-)	10/2009 (-) [10/2009]	975.96 (-) [975.96]

11 DISINVESTMENT AND PRIVATIZATION

11.1 Background

The policy on 'Disinvestment' has evolved over the years. Disinvestment of Government equity in Central Public Sector Enterprises began in 1991-92. The chronology of evolution of the policy on disinvestment since 1991-92 is given in Annexure-11.1.

11.2 Public Sector Disinvestment Commission

The Ministry of Industry (Department of Public Enterprises) vide a resolution dated 23rd August, 1996, constituted a Public Sector Disinvestment Commission for a period of three years. The term of the Commission was further extended till 30th November, 1999. The Commission submitted its reports on 58 CPSEs. The Commission was reconstituted in July, 2001 for a period of two years. 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 31st October, 2004 and the Commission was wound up.

11.3 Department of Disinvestment

The Department of Disinvestment was set up vide Notification No. CD/551/99 dated 10.12.1999 as a separate Department from 6th September, 1999. It was later declared as Ministry of Disinvestment from 6th September, 2001. From 27th May, 2004 the Department of Disinvestment became one of the Departments under the Ministry of Finance. The Department has been assigned the following work :

(a) All matters relating to disinvestment of Central Government equity from Central Public Sector Undertakings.

(b) Decisions on the recommendations of the Disinvestment Commission on the modalities of disinvestment, including restructuring.

(c) Implementation on the disinvestment decisions, including appointment of advisers, pricing of shares and other terms and conditions of disinvestment.

(d) Disinvestment Commission.

(e) Central Public Sector Undertakings for purposes of disinvestment of Government equity only.

11.4 NCMP and Disinvestment

The National Common Minimum Programme (NCMP) outlines the present policy of the Government with respect to Central Public Sector Enterprises (CPSEs). The salient features of this policy are as follows:

(i) The Government is committed to a strong and effective public sector whose social objectives are met by its commercial functioning. But for this, there is need for selectivity and a strategic focus. The Government is pledged to devolve full managerial and commercial autonomy to successful, profit-making companies operating in a competitive environment.

(ii) Generally, profit-making companies will not be privatized. All privatizations will be considered on a transparent and consultative case-by-case basis. The Government will retain existing "Navratna" companies in the public sector while these companies raise resources from the capital market. All efforts will be made to modernize and restructure sick public sector companies and revive sick industry. The chronically loss-making companies will either be sold-off, or closed, after all the workers have got their legitimate dues and compensation. The Government will induct private industry to turn around companies that have potential for revival.

(iii) The Government believes that privatization should increase competition, not decrease it. It will not support the emergence of any monopoly that only restricts competition. It also believes that there must be a direct link between privatization and social needs, for example, the use of privatization revenues for designated social schemes. Public sector companies and nationalized banks will be encouraged to enter the capital market to raise resources and offer new investment avenues to retail investors.

Until 1999-2000, it was primarily the sale of minority shares of CPSEs in small lots. From 1999-2000 till 2003-04, the emphasis of disinvestment changed in favour of 'Strategic Sale'. Currently, the emphasis is on listing of currently unlisted profitable CPSEs (other than the Navratanas) each with a 'networth' in excess of Rs. 200 crore, through Initial Public Offering (IPO) either in conjunction with fresh equity issue by the CPSE concerned or independently by the Government, on a case by case basis, subject to the residual equity of the Government retaining at least 51% and the Government retaining management control of the CPSEs. It also involves sale of minority shareholding of the Government in listed, profitable CPSEs either in conjunction with a Public Issue of fresh equity by the CPSE concerned or independently by the Government, subject to the residual equity of the Government being at least 51% and the Government retaining management control of the CPSE.

11.5 Disinvestment Decisions under Review

On 6th July, 2006 the Government decided to keep all disinvestment decisions and proposals on hold, pending further review. CPSEs where disinvestment decisions will be/have been reviewed are mentioned below:

(i) *National Mineral Development Corporation Limited*

The Government had decided on 12th January, 2006 for disinvestment of 15% equity in National Mineral Development Corporation out of the Government's holding of 98.39% through the process of book building. Following the decision of 6th July, 2006 the process for implementation of the disinvestment decision has not been pursued further.

(ii) *Neyveli Lignite Corporation Limited*

The Government had decided on 22nd June, 2006 for disinvestment of 10% equity of Neyveli Lignite Corporation Ltd. out of Government's holding of 93.56% through the book building process. Following the decision of 6th July, 2006 the process for implementation of the disinvestment decision has not been pursued further.

(iii) *National Aluminium Company Limited*

The Government had decided on 22nd June, 2006 for disinvestment of 10% equity of National Aluminium Company Ltd. out of the Government's holding of 87.15% through the book building process. Following the decision of 6th July, 2006 the process for implementation of the disinvestment decision has not been pursued further.

(iv) *Power Finance Corporation Limited*

The Government had approved on 22nd December, 2005 an IPO by Power Finance Corporation Limited (PFC), consisting of fresh issue of 10 per cent of pre-issue paid-up capital of the company and 'disinvestment' through a public offer (IPO) of 5 per cent of Government's shareholding in PFC. This was reviewed consequent to the decision of 6th July, 2006. Subsequently, on 23rd November, 2006, the Government approved an IPO by PFC consisting of a fresh issue of equity only, constituting 11.385% of pre-issue capital of PFC. The IPO of PFC was completed in February, 2007.

(v) *REC, NHPC and PGCIL*

The Government had approved on 23rd November, 2006, the proposals for fresh issue of 20 per cent of the pre-issue paid-up equity capital in Rural Electrification Corporation (REC) and fresh issue not exceeding 24 per cent of the Power Grid Corporation Limited's (PGCIL) paid-up equity capital in

tranches, first tranch being limited to 10 per cent only through IPO. Subsequently, on 7th December, 2006, the Government approved the proposal of National Hydroelectric Power Corporation Limited (NHPC) for fresh issue not exceeding 24 per cent of the paid-up capital in one or more tranches. Thereafter, on 8th February 2007, the Government decided to piggy-back with an offer for sale of 10 per cent, 5 per cent and 5 per cent of the pre-issue paid-up equity of REC, PGCIL and NHPC respectively. The details of expected realization from these disinvestments are given below :

S. No.	PSE	Equity as on 31.3.06 (Rs. in crore)	GOI holding Pre-issue (%)	Book value as on 31.3.06 (Face value of Rs. 10)	Proposed fresh issue of equity by CPSE % of Equity Capital (Pre Issue)	Proposed disinvestment out of Govt.'s shareholding % of Equity Capital (Pre Issue)	Realization based on book value (Rs. in crore)		GOI holding after the IPO (%)
							CPSE	GOI	
1	REC	780.60	100	53.78	10	10	420	420	81.22
2	PGCIL	3,623.44	100	26.80	10	5	971	486	86.36
3	NHPC	10,349.00	100	14.40	10	5	1,490	745	86.36
						Total	2,881	1651	

Note: The actual realization is expected to be higher and would depend on the prevailing market conditions

(vi) *OIL, IOC, HPCL & BPCL*

On 30th August, 2007, the Government approved the proposals for fresh issue of 10% of the post-issue paid-up capital of Oil India Limited (OIL) through IPO, and also to issue additional 1% of the post issue paid-up capital to employees of OIL on reservation basis at the issue price of retail investors. Simultaneously, the Government also approved disinvestment equal to 10% of OIL's pre-issue paid-up capital in favour of IOC, HPCL and BPCL in the ratio of 2:1:1 respectively.

11.6 National Investment Fund

In pursuance of the decision dated 27th January, 2005 the Government has constituted a "National Investment Fund" (NIF) into which the proceeds from disinvestment of Government equity in CPSEs would be channelised. NIF would be maintained outside the Consolidated Fund of India and would be professionally managed by selected Public Sector Mutual Funds for providing sustainable returns without depleting the corpus. As high as 75 per cent of the annual income of NIF will be used to finance selected social sector schemes to promote education, health and employment. The residual 25 per cent of the annual income of NIF will be used to meet the capital investment requirements of profitable and revivable CPSEs.

The following steps have been taken by the Department of Disinvestment to operationalize NIF:

(i) The NIF was constituted by issuance of a Government Resolution on 23rd November, 2005.

(ii) The following Public Sector Mutual Funds have been appointed as Fund Managers to manage the funds of NIF, under the 'discretionary mode' of the Portfolio Management Scheme, that is governed by SEBI guidelines:

(a) UTI Asset Management Company Limited

(b) SBI Funds Management Company (Pvt.) Limited

(c) Jeevan Bima Sahayog Asset Management Company Limited.

(iii) A part-time advisory Board comprising of three members, namely, Shri S.B. Mathur (former Chairman, LIC), Shri B.D. Narang (former CMD, Oriental Bank of Commerce) and Shri D.K. Pai Panandiker (President, RPG Foundation and Chairman, International Life Sciences Institute, India) has been constituted.

It is expected that disinvestment proceeds from PGCIL, NHPC and REC will constitute the first tranch of funds to NIF. Accordingly, a provision of Rs. 1651 crore has been made in the Budget Estimates for 2007-08.

The receipts from disinvestment during the period 1st April, 1991 to 31st March, 2007 amounted to Rs. 49,241.64 crore. Details of the annual realization and the methodologies adopted for disinvestment are given in Annexure-11.2.

Annex. 11.1

Chronology of the evolution of the policy on disinvestment since 1991-92

Date	Event
1991-1992 Interim Budget	Government announced its intention to divest upto 20% of Government equity in selected PSUs in favour of public sector institutional investors.
Statement on Industrial Policy (July, 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 be not 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 have 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, 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 non-strategic ones through gradual disinvestment of strategic sale and devising viable rehabilitation strategies for weak units."
Government of India decision dated 16.3.1999	Public Sector Undertakings (PSUs) have been classified into strategic and non-strategic areas for the purpose of disinvestment. Strategic PSUs would be those in the areas of: (a) Arms and ammunitions and the allied items of defence equipment, defence air-crafts and warships; (b) Atomic energy (except in the areas related to the generation of nuclear power and applications of radiation and radio-isotopes to agriculture medicine and non-strategic industries); (c) Railway transport. All other PSUs were to be considered as non-strategic. For the non-strategic PSUs, 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.

Government of India 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.

Government of India Decision dated 7.9.2002

Central Public Sector Undertakings (PSUs), Central Government owned Cooperative Societies (where Government's ownership is 51% or more) should not be permitted to participate in the disinvestment of other PSUs 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.

Government of India 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 along with 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 channelised. 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, 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.

Government of India 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).

Annex. 11.2

SUMMARY OF RECEIPTS FROM DISINVESTMENT : 1991-92 TO 2006-07

Year	Budgeted receipt (Rs. crore)	Receipts through sale of minority shareholding in CPSEs (Rs. crore)	Receipts through sale of majority shareholding of one CPSE to another CPSE (Rs. crore)	Receipts through Strategic sale (Rs.crore)	Receipts from other related transactions (Rs.crore)	Receipts from sale of residual shareholding in disinvested CPSEs / companies (Rs. crore)	Total receipts (Rs. crore)	Transactions
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
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.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
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; 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	-	-	-	-	-	**-**	
Total		**33,543.56**	**1,317.23**	**6,344.35**	**4,005.17**	**4,031.33**	**49,241.64**	

*Out of Rs.5371.11, Rs. 4184 crore constitute receipts from cross purchase of shares of ONGC, GAIL and IOC.

**Out of Rs.1479.27, Rs.459.27 crore constitute receipts from cross purchase of shares of ONGC, GAIL and IOC.

12 REVIVAL AND RESTRUCTURING OF SICK/LOSS MAKING CPSEs

12.1 Background

Some of the Central Public Sector Enterprises (CPSEs) have been incurring losses continuously for the last several years. The accumulated losses in most of these cases have surpassed their net worth. Out of 217 operating CPSEs as on 31.3.2007, 59 incurred a net loss of Rs. 8223 crore during 2006-07. The accumulated losses in respect of 69 CPSEs have exceeded their respective net worth; although, some of them have turned around and recorded profit during the last one or two years.

Sickness in CPSEs has been the continuing concern of the Government. The reasons for sickness 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 social consideration for protecting employment of workers in early seventies could not be modernized quickly. British India Corporation, Bird Jute & Exports and NTC belong to this group. Besides theses textile companies, there are other enterprises as well which were taken over from the private sector but could not be modernized. These include engineering and refractory enterprises such as Andrew Yule & Co, Bharat Wagons & Engineering, Biecco Lawrie, Praga Tools, Burn Standard, Braithwaith & Co., Richardsan and Crudass Ltd., drug companies like Bengal Chemicals & Pharmaceuticals Ltd., transportation/ shipping companies like Hooghly Dock & Port Engineering Ltd., Central Inland Water Transport Corpn. and consumer goods companies like Tyre Corporation of India and Hooghly Printing Co. Ltd.

The other group of sick companies (other than taken over) are greenfield companies. These became sick on account of obsolete technology, high input cost, high overhead cost and the adminstrative price mechanism. These include fertilizer companies such as Fertilizer Corporation of India, Hindustan Fertilizer Corporation, Pyrites, Phosphates and Chemicals Ltd., chemicals and drugs companies like Indian Drugs & Pharmaceuticals Ltd., Hindustan Insecticides Ltd., and Hindustan Antibiotics Ltd. etc.

Some companies have been set up for serving national objectivies like the development of backward areas. The Nagaland Pulp & Paper Company Ltd., Manipur State Drugs & Pharmaceuticals Ltd., North Eastern Regional Agricultural Marketing Corporation Limited are examples of such enterprises. These companies have been suffering from losses from inception on account of inadequte infrastruture etc.

In addition to the above reasons, some common problems faced/ being faced by sick and loss making CPSEs include adverse market/ administrative prices, stiff competition, weak marketing strategies, low capacity utilization and high interest rates.

Attempts have, therefore, been made to overcome "sickness" in these CPSEs through various policy initiatives. The Statement on Industrial Policy (1991), the different Budget Speeches over the years and other policy pronouncements by the Government have addressed this issue from time to time.

12.2 Strategies for revival/restructuring

Some of the strategies for restructuring/ revival of sick CPSEs include the following:

(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. 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 with banks/financial institutions, etc. are also taken to improve the financial strength of the company particularly in the case of sick and loss making enterprises.

(ii) **Business restructuring:** Business restructuring involves change of

management, organizational restructuring, 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. are the steps taken under the business restructuring process as per need on case to case basis.

(iii) Manpower rationalization: Salaries and wages are often a major component of cost of an enterprise. In order to shed excess manpower, CPSEs have often resorted to *Voluntary Retirement Scheme* 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* that is introduced. Retrenchment of employees is adopted only as the last resort and in exceptional circumstances.

Net loss in a company means excess of expenditure (including depreciation, interest, taxes, extra ordinary items, prior period adjustments but before providing appropriations to reserves) over operating income. If, however, the enterprise incurs 'cash loss', that is 'net loss' alongwith provision for depreciation', then it is usually considered a fit case for recommending closure.

12.3 Sick Industrial Companies (Special Provisions) Act, 1985 (SICA)

The CPSEs were brought under the purview of Sick Industrial Companies (Special Provision) Act, 1985 (SICA) which was subsequently amended in 1991 and made effective from 1992. Under the provisions of Sick Industrial Companies (Special Provisions) Act, 1985 (SICA), the industrial CPSEs whose accumulated losses are equal to or have exceeded their net worth, may be referred to the Board for Industrial and Financial Reconstruction (BIFR) which may either sanction suitable revival/rehabilitation schemes in case of enterprises which are viable or recommend winding up/closure in respect of enterprises considered unviable. During the period of the last fifteen years, that is, between 1992-93 to 2006-07, 75 CPSEs have been referred to the BIFR (Annex. 12.1). The year-wise registration of CPSEs with BIFR is given below:

Table 12.1
Registration of CPSEs with BIFR

Year	No. of of CPSE	Year	No. of CPSEs
1992	33	2000	2
1993	6	2001	2
1994	5	2002	3
1995	1	2003	2
1996	2	2004	5
1997	3	2005	2
1998	4	2006	1
1999	3	2007	1
		Total	75

Out of the 75 CPSEs registered with BIFR till 30.6.2007, 5 CPSEs namely North Eastern Regional Agricultural Marketing Corporation Limited, Scooters India Limited, Braithwaite and Company Ltd., Kolkata, Project and Development India Ltd. and Vignyan Industries Limited have been declared 'No Longer Sick' by the Board. (This does not include Indian Iron Steel Co. Limited now as it has been merged with Steel Authority of India Limited). In addition, Bharat Immunologicals and Biologicals Corporation Limited, HMT Bearings Limited, Maharashtra Elektrosmelt Limited and Bharat Pumps & Compressors Ltd. have been dropped from the list of sick industrial CPSEs by the BIFR on their net worth becoming positive. Cases of three CPSEs have been declared as 'Non-maintainable' by the Board as either the matter had become time barred for reference to the Board or the net worth was found to be positive or the CPSE was not fulfilling the conditions of being industrial company as defined under SICA or on some other grounds. Moreover, one of these three companies namely Manipur State Drugs and Pharmaceuticals Limited has been closed. The status of the 75 sick industrial CPSEs registered with BIFR as on 30.6.2007 is given at table 12.2 .

Table 12.2
Status of CPSEs registered with BIFR

Sl. No.	Particulars	Number
(1)	Revival scheme sanctioned	19
(2)	Draft Scheme circulated	2
(3)	Declared no longer sick	5
(4)	Dropped on net worth becoming positive	4
(5)	Dismissed as non-maintainable	3
(6)	Winding up recommended	26
(7)	Failed and reopened	1
(8)	To be allocated	12
(9)	Remanded by Court/AAIFR	1
(10)	Deregistered with BIFR	1
(11)	Change in Management	1
	Total	75

Out of the 75 CPSEs registered with BIFR, 47 enterprises were in operation during 2006-07, and establishments of 28 were closed or merged with other CPSEs. Out of these 47 CPSEs, the BIFR has already disposed of 34 cases of CPSEs either through sanctioning revival schemes (11 cases), or recommending winding up (11 cases) or declaring 'no longer sick' (5 cases) or dropping due to net worth becoming positive (4 cases) or dismissing the cases as non-maintainable (2 cases) and change of management (1 case) (Annex-12.1). The BIFR is yet to take any view on the remaining 15 cases of CPSEs. Out of these 15 cases of CPSEs, 3 were registered in 1992, one each in 1994, 1998, 2002, 2003, 2006 and 2007, two in 2001 and four in 2004.

The process of revival/rehabilitation through the BIFR has, however, been very slow. The process of appointment of Official Liquidator (OL) for winding up of CPSEs is also slow. The slow process of sanctioning of revival schemes has been on account of involvement of multiple agencies, delay in finalisation of revival schemes, lack of funds, lack of adequate powers with BIFR, lack of proper monitoring of sanctioned revival schemes, delay in winding up of sick companies, etc.

A persual of table 12.3 below shows that the number of loss making CPSEs has been continuously declining over the years. In comparison to 97 loss making CPSEs in March, 2003, there were 59 (CPSEs) in March, 2007. The number of employees in these enterprises has also been showing a big decline, which came down from 631040 employees as on 31.3.2003 to 103599 emplyees as on 31.3.2007.

In terms of accummulated losses, however, the aggregate losses have been increasing and declining. Year-wise losses in these enterprises have been subject to significant fluctuation, which can be explained in terms of steep rise in input prices that could not be recovered through increase in output prices and 'financial restructuring' in other years that helped the CPSEs.

Table 12.3
Highlights of Loss Making CPSEs

Years	CPSEs (no.)	Accumulated Net Losses (Rs. in crore) As on 31st March	During the year	Employees (no.)
2002-03	97	68048	-	631040
2003-04	83	64806	(-)3242	375587
2004-05	81	77826	13020	341053
2005-06	63	61550	(-)16276	108931
2006-07	59	70796	9246	103599

12.4 Board for Reconstruction of Public Sector Enterprises (BRPSE)

The Government set up a Board for Reconstruction of Public Sector Enterprises (BRPSE) in December, 2004 to advise the Government inter alia on the measures to be taken to restructure/revive, both industrial and non-industrial CPSEs. The Board comprises a part-time Chairman, three part-time Non-Official Members and three part-time Official Members including Secretary, Department of Expenditure, Secretary, Department of Disinvestment and Secretary, Department of Public Enterprises(DPE). There is a full-time Secretary for BRPSE in the level/rank of Secretary / Additional Secretary to the Government of India. 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 the BRPSE. The Board is serviced by the DPE.

For the purpose of making 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 a company which is a sick 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 the BRPSE. The Board is expected to make its recommendations within 2 months of the date of making reference to it.

As per the definition of sick CPSEs given above and the performance evaluation of CPSEs for 2005-06 and previous years, 75 CPSEs were referable to BRPSE. Up to 30.09.2007, cases of 57 sick CPSEs have been referred to the BRPSE; out of which the Board has made recommendations in respect of 46 cases. In addition, the Board has also recommended to the Government to accord "in principle" approval for rescinding of its earlier decision to close the units of Fertilizers Corporation of India (FCIL) and Hindustan Fertilizers Corporation Ltd. (HFCL) and to explore various options for their revival. Out of these 46 cases, the Government has approved revival proposals in respect of 26 cases of CPSEs and winding up of two enterprises namely Bharat Opthalmic Glass Limited and Bharat Yantra Nigam Ltd. as on 31.10.2007. Out of the 26 cases of revival approved by the Government till 31.10.2007, 15 were approved during 2005-06, 10 cases were approved during 2006-07 and one case has been approved during 2007-08 (upto 31.10.2007). The restructuring/revival proposals approved by the Government involved a total expenditure of Rs. 8264 crore including Rs. 1941 crore as cash assistance and Rs. 6323 crore as non-cash assistance. The enterprise-wise details of cash and non-cash assistance in respect of revival proposals are given in Annex-12.2

Annex. 12.1

STATUS OF CPSEs REGISTERED WITH BIFR AS ON 30.6.2007

S. No.	Case No. and year of reference	CPSE	Date of order
(1)	(2)	(3)	(4)
A.	**Revival Scheme sanctioned**		
1.	518/1992	The British India Corpn. Ltd., Kanpur, (Uttar Pradesh)[@]	17.12.2002
2.	533/1992	Bengal Chemicals & Pharmaceuticals Ltd., Kolkata (West Bengal)[@]	31.03.1995
3.	534/1992	NTC (APKK& Mahe) Ltd., Bangalore (Karnataka)[@]**	07.02.2002
4.	535/1992	NTC (Gujarat) Ltd., Ahmedabad (Gujarat)[@]**	10.02.2002
5.	536/1992	NTC (Maharashtra North) Ltd., Mumbai (Maharashtra)[@]**	01.10.2002
6.	501/1993	NTC (MP) Ltd., Indore (Madhya Prades)[@]**	12.02.2002
7.	503/1993	NTC (WB A B & O) Ltd., Kolkata (West Bengal)[@]**	15.02.2002
8.	504/1993	NTC (UP) Ltd., Kanpur, (Uttar Pradesh)[@]**	05.02.2002
9.	505/1993	NTC (South Maharashtra) Ltd., Mumbai (Maharashtra)[@]**	01.10.2002
10.	509/1993	Instrumentation Ltd., Kota (Rajasthan)	23.12.1998
11.	501/1994	NTC (DPR) Ltd., New Delhi (Delhi)[@]**	22.02.2002
12.	501/1996	Cement Corporation of India Ltd., New Delhi (Delhi)	21.03.2006*
13.	507/1994	Hindustan Fluorocarbons Ltd., Hyderabad (Andhra Pradesh)@	24.07.2003
14.	501/1998/ 501/2000	Eastern Coalfields Limited, Burdwan (West Bengal)@	02.11.2004*
15.	502/2000	Hindustan Salts Limited, Jaipur (Rajasthan)	22.8.2005
16.	501/2004	Hindustan Insecticides Ltd., New Delhi (Delhi)	16.05.2006*
17.	504/1998	Praga Tools Ltd., Secundrabad (Andhra Pradesh)[@]	29.03.2007*
18.	502/1992/ 601/1998	Nagaland Pulp & Paper Co. Ltd., Mokokchung, (Nagaland)	25.05.2007
19.	501/1997	Hindustan Antibiotics Limited, Pune (Maharashtra)	05.06.2007*
B.	**Winding up Recommended**		
20.	531/1992	National Instruments Ltd., Kolkata (West Bengal)	01.10.2002
21.	511/1992	Heavy Engineering Corpn. Ltd., Ranchi (Jharkhand)	06.07.2004*
22.	506/1993	National Jute Manufactures Corporation Ltd. Kolkata (West Bengal)	08.07.2004
23.	503/1995	Hindustan Photofilms Mfg. Co. Ltd.,	30.01.2003

(1)	(2)	(3)	(4)
		Ootacamund (Tamilnadu)	
24.	502/1999	Hindustan Vegetable Oils Corpn. Ltd., New Delhi (Delhi)[@]	07.12.2001
25.	507/1992	Triveni Structurals Ltd. , Allahabad (Uttar Pradesh)	05.06.2003
26.	514/1992	Orissa Drugs & Chemicals Ltd., Bhubaneswar (Orissa)	08.04.2003
27.	532/1992	Bharat Ophthalmic Glass Ltd., Durgapur (West Bengal)[$$]	19.06.2003
28.	509/1992	Richardson & Crudass (1972) Ltd., Mumbai (Maharashtra)[@]	25.07.2003
29.	501/1999	Birds Jute and Exports Ltd., Kolkata (West Bengal)[)@]	24.06.2004
30.	503/1999	Pyrites, Phosphates & Chemicals Ltd., Rohtash (Bihar)	20.11.2002
31.	515/1992	Fertilizers Corpn. of India Ltd., New Delhi (Delhi)	02.04.2004
CPSEs recommended for winding up and have been 'closed'			
32.	526/1992	Bharat Brakes & Valves Ltd., Kolkata (West Bengal)[@]	27.09.2002
33.	520/1992	Bharat Process and Mechanical Engineers Ltd., Kolkata (West Bengal)[@]	22.07.1996
34.	508/1992	Cycle Corporation of India Limited, Kolkata (West Bengal)[@]	10.07.2000
35.	510/1992	Mining and Allied Machinery Corporation Ltd., Durgapur (West Bengal)	29.06.2001
36.	513/1992	National Bicycle Corporation of India Ltd., Mumbai (Maharashtra)[@]	20.12.1993
37.	506/1994	Rayrolle Burn Ltd., Kolkata (West Bengal)[@]	13.07.2001
38.	506/1992	Tannery and Footwear Corporation of India Ltd., Kanpur (Uttar Pradesh)	14.02.1995
39.	524/1992	Weighbird India Limited, Kolkata (West Bengal)[@]	17.02.1997
40.	504/1994	Southern Pesticides Corporation Limited, Hyderabad (Andhra Pradesh)	01.11.2001
41.	505/1992	Bharat Gold Mines Ltd., Kolar Gold Fields (Karnataka)	12.06.2000
42.	527/1992	Cawnpore Textiles Ltd., Kanpur (Uttar Pradesh)[@]	19.01.1995
43.	538/1992	Bengal Immunity Limited, Kolkata (West Bengal)[@]	25.02.2003
44.	502/1996	Maharashtra Antibiotics & Pharma. Ltd., Nagpur (Maharashtra)	04.07.2000
45.	529/1992	Smith Stanistreet & Pharmaceuticals Ltd., Kolkata (West Bengal)[@]	03.12.2001

(1)	(2)	(3)	(4)
C Dismissed as 'Non-maintainable'			
46.	504/1997	Manipur State Drugs & Pharmaceuticals Ltd., Imphal (Manipur) [$$]	17.11.1997
47.	502/2002	Central Coalfields Ltd., Ranchi (Jharkhand)	29.11.2002*
48.	517/1992/ 504/2002	Biecco Lawrie Limited, Kolkata (West Bengal) [@]	27.03.2003*
D. Draft Scheme Circulated			
49.	523/1992	Tyre Corporation of India Ltd., Kolkata (West Bengal) [@]	20.02.1997
50.	502/1998	NEPA Ltd., Nepanagar (Madhya Pradesh)	29.05.2007
E. Under Examination /Process			
51.	501/2003	Andrew Yule and Company Ltd., Kolkata (West Bengal) [@]	20.09.2004
52.	501/2001	Bharat Wagon & Engg. Co. Limited , Patna (Bihar) [@]	11.02.2004
53.	504/1995/ 502/2001	Bharat Coking Coal Ltd., Dhanbad (Jharkhand)	11.02.2004*
54.	503/505/ 2002	Hindustan Cables Ltd., Kolkata (West Bengal)	21.03.2003
55.	502/2004	NTC(TN & Pond.) Ltd., Coimbatore (Tamilnadu) [@]**	05.12.2005
56.	503/2004	Bharat Heavy Plates and Vessels Limited, Visakhapatnam (Andhra Pradesh)	06.10.2005
57.	504/2004	ITI Limited, Bangalore (Karnataka)	03.10.2005
58.	505/2004	Tungabhadra Steel Products Limited, Tungabhadra Dam (Karnataka)	04.08.2005
59.	501/2005	Hindustan Organic Chemicals Limited, Rasayani, Raigad (Maharashtra)	21.11.2005*
60.	501/2006	HMT Machine Tools Limited, Bangalore (Karnataka)	02.11.2006
61.	503/1992	Indian Drugs and Pharmaceuticals Limited, Gurgaon (Haryana)	28.03.2006
62.	501/2007	Madras Fertilizers Limited	-
F. Declared no longer Sick			
63.	504/1992	Scooters India Ltd., Lucknow(Uttar Pradesh)	01.07.2000
64.	503/1997	North Eastern Regional Agri. Marktg. Corpn., Guwahati (Assam)	20.08.2001
65.	512/1992	Vignyan Industries Ltd., Tarkere (Karnataka)	27.05.2003*
66.	528/1992	Braithwaite & Co. Ltd., Kolkata (West Bengal) [@]	29.06.2006*
67.	521/1992	Projects and Development India Ltd., Dhanbad (Jharkhand)	19.04.2006*

(1)	(2)	(3)	(4)
G. Dropped (Positive Networth)			
68.	502/1997/ 503/1998	Bharat Immunologicals & Biologicals Corporation Limited, Buland Sahar (Uttar Pradesh)	01.08.2002
69.	501/2002/ 502/2003	Maharashtra Elektrosmelt Ltd., Mumbai (Maharashtra)	27.06.2005*
70.	502/2005	HMT Bearings Limited, Hyderabad (Andhra Pradesh)	13.02.2006
71.	501/1992	Bharat Pumps & Compressors Ltd., Allahabad (Uttar Pradesh)	6.02.2007*
H. Failed & Reopened			
72.	588/1994	Burn Standard Co. Ltd., Kolkata (West Bengal)[@]	14.09.2001
I. Remanded by Court			
73.	525/1992	Bharat Refractories Ltd., Bokaro Steel City (Jharkhand)[@]	13.01.2004
J. Change of Management			
74.	516/1992	Hindustan Fertilizer Corpn. Ltd., New Delhi (Delhi)	01.02.2007
K. Deregistered from BIFR			
75.	519/1992	The Elgin Mills Co. Ltd., Kanpur (Uttar Pradesh)[@]	13.03.2007

[@] Taken over PSEs (34) * Profit making during 2006-07 (15) ** Merged with NTC Holding Co. [$$] Since closed

Note : Since Mandya National Paper Mills Limited has been wound up, Jessop & Co. Ltd. has been privatized(also discharged from BIFR vide order dated 28.4.2006), U.P. Drugs and Pharmaceuticals Limited has been transferred to the U.P. Government(also discharged by the BIFR vide order dated 1.2.2007) and Indian Iron and Steel Co. Limited has been merged with SAIL, these have not been included in this list.

Annex.12.2

Cash and Non-cash Assistance approved in respect of Revival Proposals recommended by the BRPSE as on 31.10.2007

SL No.	CPSE	Assistance (Rs. in crores)		
		Cash #	Non-Cash@	Total
1.	Hindustan Salts Ltd.	4.28	73.30	77.58
2.	NTC including its subsidiaries	39.23	-	39.23
3.	Bridge & Roof Co. (India) Ltd.	60.00	42.92	102.92
4.	BBJ Construction Co. Ltd.	-	54.61	54.61
5.	HMT Bearings Ltd.	7.40	43.97	51.37
6.	Praga Tools Ltd.	5.00	209.71	214.71
7.	Braithwaite & Company Ltd.	4.00	280.21	284.21
8.	British India Corporation Ltd.	47.35	-	47.35
9.	Central Inland Water Transport Corporation Ltd.	73.60	280.00	353.60
10.	Heavy Engineering Corporation Ltd.	102.00	1116.30	1218.30
11.	Cement Corporation of India Ltd.	184.29	1267.95	1452.24
12.	Richardson & Cruddas Ltd.	-	-	-
13.	Hindustan Antibiotics Ltd.	137.59	267.57	405.16
14.	Hindustan Organic Chemicals Ltd.	250.00	NA	250.00
15.	Fertilizers & Chemicals (Travancore) Ltd.	-	670.37	670.37
16.	Tungabhadra Steel Products Ltd.	-	-	-
17.	Hindustan Insecticides Ltd.	-	267.29	267.29
18.	Mineral Exploration Corporation Ltd.	-	104.64	104.64
19.	Central Electronics Ltd.	-	6.02	6.02
20.	Eastern Coal Fields Ltd.	-*	-*	-*
21.	Bharat Pumps and Compressors Ltd.	3.37$	153.15	156.52$
22.	Bengal Chemicals & Pharmaceuticals Ltd.	207.19	233.41	440.60
23.	HMT Machine Tools Ltd.	723.00	157.80	880.80
24.	MECON Ltd.	93.00**	23.08	116.08
25.	Andrew Yule & Co. Ltd.	-	457.14	457.14
26.	Bharat Ophthalmic Glass Ltd.£	9.80	-	9.80
27.	Hindustan Copper Ltd.	-	612.94	612.94
28.	Bharat Yantra Nigam Ltd.£	3.82	7.55	11.37
	Total	1954.92*	6329.93*	8284.85*

\# 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.

* The revival plan approved by the Government inter alia envisaged non-cash assistance of Rs.2470.77 crores and waiver of service charges of Rs.14 crores per annum from 2004-05 from Coal India Ltd.

$ In addition ONGC and BHEL would extend cash support to the extent of Rs.150 crores and Rs.20 crores respectively.

** Excludes continuation of 50% interest subsidy not exceeding Rs.6.50 crores per annum on VRS loans

£ Decided for closure

13 INTERNATIONAL OPERATIONS OF CPSEs

International operations of CPSEs may be examined with reference to trade, finance and investment. International trade in goods and services has a direct bearing on 'earnings' and 'out go' of foreign exchange. Finance mainly relates to external commercial borrowings and raising of resources through the equity market abroad. Investment, inturn comprises off-shore investment by CPSEs by way of joint venture, merger and acquisition as well as operation of Indian subsidiaries abroad.

Indian companies, both public and private (Corporate) sectors, are increasingly focusing on niche areas to avail newer opportunities and to enhance their strengths through cross border mergers and acquisitions. There is a growing realization among Indian companies that mere organic growth is not enough to propel the company towards growth, in view of the liberalization of the Indian economy and globalization. The Navratna CPSEs have been delegated wide powers for entering into joint ventures and for establishing subsidiaries abroad. CPSEs like ONGC, IOC, GAIL, BHEL, NTPC, RITES, MECON and WAPCOS etc. are already in the race of forming joint ventures or have set up subsidiaries abroad for a broad-base business activity.

13.1 Foreign Exchange Earnings

Foreign exchange earnings of the CPSEs during 2006-07 and 2005-06, on account of export of goods and services, may be seen in Table 13.1 below.

Table 13.1
Foreign Exchange Earnings
(Rs. in crore)

Sr. No.	Items	2006-07	2005-06
(1)	(2)	(3)	(4)
(i)	Export of Goods on FOB basis	54489.66 (85.41%)	41884.04 (91.14%)
(ii)	Royalty, Know-how, Professional and Consultancy fee	1080.25 (1.69%)	1093.57 (2.38%)
(iii)	Interest and Dividend	70.84 (0.11%)	880.16 (1.92%)
(iv)	Other Income	8157.43 (12.39%)	2096.21 (1.92%)
Grand Total		63798.18 (100%)	45953.98 (100%)

Note: Figure in brakets are as percentage of otal

Export of merchandise was the major source of foreign exchange earnings in both the years of 2005-06 and 2006-07. The share of 'other income' during 2006-07 significantly increased. Its share went up from 5% in 2005-06 to 13% in 2006-07.

The enterprises where foreign exchange earnings (increase/decrease) was more than Rs. 50 crore during 2006-07 over 2005-06 are shown at Annexure 13.1. Accordingly, while ONGC, Indian Oil Corporation, Shipping Corporation of India were the top three CPSEs that saw big increase, CPSEs such as Kudremukh Iron Ore Co. Ltd., Mangalore Refinery and Air India Charters Ltd. were big losers.

13.2 Foreign Exchange Utilization

Table 13.2 below shows the utilization (expenditure) of foreign exchange under different heads of raw materials, import of capital goods, consultancy fee/payment of royalty and interest payment etc. Import of 'raw materals' and 'capital goods' were the major items of foreign exchange utilisation.

Table 13.2
Foreign Exchange Utilisation
(Rs. in crore)

Particulars	2006-07	2005-06
(1)	(2)	(3)
(a)Imports (CIF Basis)		
Raw materials	235124.10 (74.91%)	184028.60 (81.37%)
Stores, Spares & Components	7589.72 (2.42%)	7419.58 (3.28%
Capital Goods	7767.82 (12.47%)	5619.17 (2.49%)
Sub Total (a)	250481.64 (79.79%)	197067.35 (87.14%)

(1)	(2)	(3)
(b)Expenditure on account of :		
Royalty and Consultancy fee	6026.81 (1.92%)	5712.43 (2.53%)
Interest payment	1915.07 (0.61%)	1686.20 (0.74%)
Others	55513.62 (17.68)	21690.26 (9.59%)
Sub Total (b)	63455.50 (20.21%)	29088.89 (12.86%)
Grand Total (a + b)	313937.14 (100%)	226156.24 (100%)

The CPSEs where the increase and decrease in foreign exchange utilization (expenditure) was more than Rs. 50 crore in 2006-07as compared to 2005-06 are shown at annexure 13.2. Accourdintly whereas expenditure in foreign exchange increased significantly in the case of CPSEs, such as, HPCL, Indian Oil, MMTC and ONGC, it came down in the case of MSTC, Handicraft & Handloom Exports Corpn. BSNL and Bharat Coking Coal Ltd. The respective changes in regard to foreign exchange earning and expenditure of CPSEs are either on account of changes in prices of commodity being imported and exported by CPSEs or due to mobilization of financila resourses from aborad. Annexure 13.3 shows mobilisation of funds by CPSEs cognate group-wise in the form of secured and unsecured loans.

13.3 International Operations of select CPSEs:-

The paragraphs below discuss briefly the international operations of CPSEs:

13.3.1 Bharat Heavy Electricals Ltd. (BHEL)

BHEL expanded its international operation through entering new markets and building up on existing ones. During the year 2006-07, the exports by BHEL went up to Rs. 1071 crore. The company, moreover, booked export orders worth Rs. 1903 crore in comparison to an average yearly order book of Rs. 1275 crore during the last five years. Export orders received during the year include countries like France, Sweden, Bangladesh, Jordan, Oman, Tajikistan, Egypt, Afghanistan, Ethiopia, Sudan and Nepal. The continued focus on After-Sales Services led to several orders for spares and services from Oman, Indonesia, Kazakhstan, Germany, Libya, Philippines, Surinam, Malaysia, and Sri Lanka. The Company received orders during the year for power equipments for over 900 MW of power plants and for 5600 MVA of transformer capacity from over ten countries.

In the area of overseas project execution, a significant landmark was achieved with the commissioning of the remaining two gas turbine generating units at the 600 MW Western Mountain Project in Libya. The company also successfully supplied and commissioned 1x25 MVA & 1 x15 MVA transformer for NVEBS Surinam. The largest single phase transformer bank of 405 MVA capacity with 3 x 135 MVA single phase transformers in Zambia was also commissioned during the year.

Over the next five year period, BHEL aims to increase exports by six times from the current levels. Investments abroad through Merger & Acquisition (M&A) route will also be explored for growth opportunities in order to enlarge its operations both in India and abroad.

13.3.2 Engineers India Ltd. (EIL)

EIL provides various services in India and abroad mainly in the field of engineering which inter-alia include petroleum refineries, pipeline, oil & gas processing, petrochemicals, offshore structures & platforms, power, fertilizers and metallurgy. The company renders complete range of services needed for conceptualisation, designing, engineering and constructing of projects. EIL has served in the past, various customers in Algeria, Abu Dhabi, Australia, Papua New Guinea, Bahrain, Ghana, Iran, Kuwait, Qatar and Saudi Arabia. During the year 2006-07, engineering consultancy services was provided to Shuaiba Petrochemicals Complex, Kuwait and product storage tanks at Buipe and Bolgatanga for BOST, Ghana were completed. Other assignments are going on satisfactorily in Algeria, Kuwait and Iran. A significant new assignment secured during 2006-07 related to engineering consultancy services for an Ammonia-Urea

Fertilizer Complex in Papua New Guinea. Other assignments received, during the year, are Abadan refinery in Iran and Consultancy Services in Abu Dhabi, Iran, Qatar and Kuwait.

The revenue generation from overseas business accounted for about 26% of the total revenue from consultancy services of EIL for the year 2006-07. EIL Asia Pacific Sdn. Bhd. Is a wholly owned foreign subsidiary of EIL in Malaysia.

13.3.3 GAIL (India) Ltd. (GAIL)

GAIL has been going for strategic alliance with international players for technological collaboration to gain entry in international market. It entered into a MOU with Arrow Energy of Australia and Energy Infrastructure Group of Sweden for exploring Coal Based Methane opportunities in India, Australia and other countries. During the year, all the four companies in which Gail has made investments, namely, Fayum Gas Authority, Shell CNG Egypt, National Gas Company in Egypt and China Gas Holding Ltd. performed well. GAIL also plans to form a joint venture company with China Gas, for pursuing CNG, City Gas, CBM and other related gas opportunities in China. A joint venture agreement to this effect has been signed with China Gas. Further, discussions are on with Iran and Pakistan Governments and significant progress has already been made for bringing gas from Iran to India through pipeline under a trilateral framework. GAIL is also pursuing other business opportunities in the gas sector in Australia, Algeria, Libya, Egypt, Saudi Arabia, China, Singapore and Oman. GAIL Global (Singapore) Pte. Ltd. is a wholly owned subsidiary of GAIL.

13.3.4 Indian Oil Corporation Ltd. (IOC)

Indian Oil is actively pursuing upstream integration through exploration & production activities both within and outside India. During the year, IOC along with its consortium partners participated in the exploration block in Gabon, acquired participating interest in a block in Nigeria and other two blocks in Yemen. With this IOC has now seven oil & gas blocks overseas. The corporation also executed an MOU with Sinopec, the leading petroleum and chemicals company of China for jointly pursuing opportunities in international trade, exploration & production, refinery & petrochemicals, engineering & technical services.

Indian Oil (Mauritius) Ltd. (IOML) and Lanka IOC Ltd. ((LIOC) are subsidiaries of IOC. The main activities of these companies relate to imports, sale and distribution of petroleum products in Mauritius and Sri Lanka. IOC Middle East FZE is also a wholly owned subsidiary of IOC operating in Dubai, and is engaged in marketing of lubricants and other petroleum products in the Middle East, Africa and CIS regions.

13.3.5 MECON Ltd. (MECON)

MECON is engaged in providing design and technical consultancy services in the field of steel production. During the year 2006-07, the company received various foreign assignments, which inter-alia include countries like The Netherlands, Thailand, Japan, Dubai, UAE and Nigeria. Various overseas assignments taken up for execution during the year related to detailed engineering and consultancy services to M/s Star Steel International, U.A.E. for their 3,60,000 Re-bar Mill in Dubai, basic engineering services for integrated steel plant of M/s Essar Construction Limited in Iran, vetting of Bankable Feasibility Report on development of iron ore mine in Central Kazakhstan assigned by M/s Oilex N. Kazakhstan and preparation of a technical proposal for development of iron ore deposit and processing of iron ore concentrate at Bolivia assigned by M/s. Jindal Steel & Power Ltd.

13.3.6 National Thermal Power Corporation Ltd. (NTPC)

The consultancy wing of NTPC, with an ISO 9001:2000 accreditation, undertakes a broad range of services, namely, consultancy services in engineering, project management, contract & procurement, construction, operation & maintenance of power plants, renovation & modernization, energy audit etc. to domestic and international clients. The company is registered as a consultant with several leading international development and financial institutions such as the World Bank, the Asian Development Bank, the African

Development Bank and UNDP. NTPC also launched a separate *International Cell* to meet the varied need of Independent Power Producers (IPP) and other international clients who are looking for world class services in the power sector. The company has executed/ implemented a number of power related projects abroad. Some of the countries where NTPC has executed projects inter-alia include countries such as Dubai, Nepal, Tanzania, Sri Lanka, Bahrain, Oman, Nigeria, Kenya, Saudi Arabia, Egypt etc.

During the year 2006-07, the company signed a MOU with the Government of Sri Lanka and the Ceylon Electricity Board for development of a 2 x 250 MW coal based power plant at Trincomalee in Sri Lanka. A MOU was also signed with the Ministry of Energy, Federal Government of Nigeria (FGN) for energy cooperation. Under the MOU, FGN shall provide a minimum of 3 Million Tonnes per annum of LNG to NTPC on long term basis and permit NTPC to participate in bidding for gas blocks. NTPC shall also set-up and operate a 500MW coal based power plant and a 700 MW gas based power plant in Nigeria.

NTPC has also signed a MOU with Kyushi Electric Power Company Inc., Japan establishing an alliance under which expertise and information in different areas will be exchanged. The company is also doing the work of energy audit for power plants in Saudi Arabia and has set up an office in Dubai to explore business opportunities in the Middle-East.

13.3.7 Oil and Natural Gas Corporation Ltd. (ONGC)

ONGC Videsh Ltd. (OVL) is a wholly owned subsidiary of ONGC. It is engaged in overseas Exploration and Production(E&P). Since April, 2006 OVL has acquired stakes in 9 projects in 6 countries, out of which 6 projects were acquired through participation in 'competitive bidding' and 3 projects directly from the existing concession holders. Out of the acquired projects, Manasarovar Energy Project in Colmbia acquired in partnership with Sinopec, (China) is under production, Block BC-10 in Brazil is under development and other blocks in Vietnam, Cuba and Nigeria are under exploration.

Sakhalin-1 project in Russia commenced export of crude oil from September, 2006. The peak production of over 2,50,000 BOPD was achieved in March, 2007 by the consortium, with OVL's share being equal to 50,000 BOPD. Crude oil production from Block 5A in Sudan commenced in May, 2006. The consortium of Blocks A-1 and A-3 in Myanmaar in which (OVL) holds 20% share, made also gas discoveries. The consortium of North Ramadan Block in Egypt, in which OVL holds 70% also made oil discoveries. The company also completed drilling of four wells including a high pressure complex gas well in Farsi offshore Block in Iran. This success has won OVL recognition as a credible global operator. OVL currently participates in 26 E&P projects in 15 countries. The company has three subsidiaries, namely, ONGC Nile Ganga B.V., ONGC Narmada Ltd., ONGC Amazon Alaknanda Ltd. and one joint venture ONGC Mittal Energy Limited.

13.3.8 RITES Ltd. (RITES)

RITES Ltd. is a multi-disciplinary consultancy organization in the fields of transport, infrastructure and related technologies in India and abroad. It provides an array of services under a single roof and believes in transfer of technology to client organizations. In regard to overseas projects, RITES actively develops cooperative link with local consultants/firms for maximum utilization of local resources. The company is internationally recognized as a leading consultant in rail transport with operational experience of 62 countries in Africa, Middle East and Latin America. Most of RITES foreign assignments are for National Governments and other apex organizations. The company is currently implementing projects in various countries such as Sudan, Senegal, Angola, Tanzania, Mozambique, Mali, and Bangladesh. It has established two wholly owned foreign subsidiaries, namely, RITES (Afrika) Pty. Ltd. Botswana and RITES Colombia LTDA., Colombia and one foreign joint venture, namely, Companhia Das Caminhos De Ferro De Beira, SARL (CCFB), Mozambique for strengthening its overseas operations. Tanzania Railway Concession project

was awarded to the company. RITES & Government of Tanzania have signed the shareholders agreement and the concession company in the name of Tanzania Railway Limited has been incorporated on 25th May, 2007 to take over the project. During the year 2006-07, the company posted an export of Rs. 252.79 crore compared to Rs. 96.09 crore as exports in the previous year.

13.3.9 Water & Power Consultancy Services (India) Ltd. (WAPCOS)

WAPCOS is one of the pioneering enterprises providing consultancy services in the field water resources, power and infrastructure projects etc. It covers all aspects relating to water resources development from conceptualizing a project to its commissioning and successful operation. The company has successfully completed/on-going consultancy assignments abroad in 40 countries and is registered with various international funding agencies for participating in the funded projects. WAPCOS is currently engaged in providing consultancy services in Afghanistan, Bhutan, Cambodia, Ethiopia, Eritrea, Laos, Lesotho, Rwanda, Sudan, Swaziland, Uganda, Zambia and Zimbabwe.

13.3.10 Shipping Corporation of India (SCI)

SCI is one of the pioneering enterprises providing diversify services almost in all areas of ship transportation management in India and abroad including Liner Passenger Services, Bulk Career and Tanker Services, Technical and Off-Shore Services etc. SCI has a JV company in Iran (Irano-Hind Shipping Co.) which continued to perform well during the Iranian year 1385 (from 21.03.2006 to 20.3.2007) and earned a net profit after tax of Iranian Rials 33.336 Billion (US$ 3.683 million). The aggregate provisional net profit after tax of the JV company and its subsidiaries for the Iranian year 1385 stood at Iranian Rials 163.828 billion (US$ 18.102 million) The fleet owned by the said JV company together with it subsidiaries as at 20.03.2007 stood at 7 ships with an aggregate of 0.335 million DWT. During the year 1385 the JV Company took delivery of one Supramax Bulk Career of 52466 DWT and contracted a newbuilding Suezmax tanker of 158500 DWT with delivery slated for November, 2009. Foreign Exchange earned and saved by SCI including deemed earning and savings amounted to Rs. 3993.56 crores during the year 2006-07.

13.3.11 Minerals & Metal Trading Corporation Ltd (MMTC)

MMTC is engaged to provide services in the field of international trading of minerals and metals, coals, fertilizers, Diamonds, gems, Jewellery and other products. It has one wholly owned subsidiary namely MTPL Transitional Pte. Ltd. (MTPL) registered in Singapore. During the year 2006-07, MTPL achieved its highest ever business turnover of US$ 545 million registering a growth of 53% over the corresponding performance of last fiscal. MTPL posted a profit before tax of US$1.64 million and profit after tax of US$ 1.53 million during 2006-07. MTPL continues to enjoy prestigious 'Global Trader' status awarded to it by IE Singapore since the financial 2000. The foreign exchange earning of MMTC Ltd. amounted to Rs. 34369 million during the year 2006-07.

13.3.12 Bharat Petroleum Corporation Ltd. (BPCL)

Bharat PetroResources Ltd. (BPRL) a wholly owned subsidiary of BPCL was incorporated to implement BPCL's plans in the exploration and production sector. BPRL has joined a consortium of Oilex (Operator), Videocon Industries Ltd. (VIL) and Gujarat State Petroleum Corporation Ltd. (GSPCL) to participate in the joint petroleum development area between East Timor and Australia, through a formation of a Special Purpose Vehicle which was incorporated on 28th October, 2006 as Bharat PetroResources JPDA Ltd.(BPR-JPDA LTD). During the year 2006-07, BPCL earned Rs. 55851.32 million in foreign exchange as against Rs. 42866.71 million in the previous year.

13.4 Listing of Securities of CPSEs abroad :

Shares of MTNL (ADR) are listed on the New York Stock Exchange and GAIL and SAIL (GDR) are listed on the London Stock Exchange.

Annex. 13.1

Foreign Exchange Earnings by CPSEs

(Rs. in crore)

Sr. No.	CPSEs	2006-07	2005-06	Change over the previous year
(1)	(2)	(3)	(4)	(5)
I. Increase (more than Rs. 50 crore)				
1.	ONGC Videsh Ltd.	9232.83	2037.08	7195.75
2.	Indian Oil Corporation Ltd.	9126.23	5617.56	3508.67
3.	Shipping Corporation Of India Ltd.	3993.55	1032.91	2960.64
4.	Hindustan Petroleum Corpn. Ltd.	5198.84	3271.39	1927.45
5.	State Trading Corpn. Of India Ltd.	2702.12	929.65	1772.47
6.	Bharat Petroleum Corpn. Ltd.	5585.13	4286.67	1298.46
7.	M M T C Ltd.	3436.93	2899.3	537.63
8.	Bharat Heavy Electricals Ltd.	1095.91	709.63	386.28
9.	Oil & Natural Gas Corporation Ltd.	2990.66	2609.38	381.28
10.	Cochin Shipyard Ltd.	506.33	187.51	318.82
11.	National Aluminium Company Ltd.	2576.2	2318.2	258
12.	Rites Ltd.	274.17	136.5	137.67
13.	Indian Airlines Ltd.	1821.63	1691.08	130.55
14.	Stcl Ltd.	590.02	470.78	119.24
15.	Hindustan Aeronautics Ltd.	270.51	188.02	82.49
16.	Steel Authority Of India Ltd.	1169.55	1091.64	77.91
17.	Antrix Corporation Ltd.	100.77	25.74	75.03
18.	Beml Ltd.	106.56	44.61	61.95
II. Decrease (more than Rs. 50 crore)				
1.	Dredging Corpn.of India Ltd.	7.27	61.89	54.62
2.	Bharat Sanchar Nigam Ltd.	35.47	103.01	67.54
3.	Airports Authority Of India Ltd.	829.89	903.36	73.47
4.	P E C Ltd.	138.85	279.17	140.32
5.	Air India Charters Ltd.	0	242.93	242.93
6.	Mangalore Refinery & Petrochemicals Ltd.	11615.27	11917.19	301.92
7.	Kudremukh Iron Ore Co.ltd	49.99	942.65	892.66

Annex. 13.2

Foreign Exchange Utilisation by CPSEs

(Rs. in crore)

Sr. No.	CPSEs	2006-07	2005-06	Increase
I. Increase (more than Rs. 50 crore)				
1.	Hindustan Petroleum Corporation Ltd.	55408.11	20235.17	35172.94
2.	Indian Oil Corporation Ltd.	99373.2	79014.21	20358.99
3.	M M T C Ltd.	18444.58	11676.04	6768.54
4.	ONGC Videsh Ltd.	9560.52	3404.83	6155.69
5.	Bharat Petroleum Corporation Ltd.	29321.92	23737.94	5583.98
6.	State Trading Corpn. of India Ltd.	7821.01	4114.77	3706.24
7.	Mangalore Refinary & Petrochemicals Ltd.	18629.87	16495.25	2134.62
8.	Hindustan Aeronautics Ltd.	6859.51	4910.9	1948.61
9.	Security Printing & Minting Corporation India Ltd.	1801.86	0	1801.86
10.	Shipping Corporation of India Ltd.	2874.62	1152.25	1722.37
11.	Chennai Petroleum Corporation Ltd.	17606.42	16175.9	1430.52
12.	Oil & Natural Gas Corporation Ltd.	9176.33	7861.43	1314.9
13.	Indian Airlines Ltd.	2563.63	1373.82	1189.81
14.	Steel Authority Of India Ltd.	7379.2	6226.96	1152.24
15.	Bharat Electronics Ltd.	1494.26	947.58	546.68
16.	Mazagon Dock Ltd.	1744.86	1224.28	520.58
17.	STCL Ltd.	659.85	261.32	398.53
18.	Rashtriya Ispat Nigam Ltd.	2129.64	1795.89	333.75
19.	Rashtriya Chemicals And Fertilizers Ltd.	632.98	339.84	293.14
20.	Power Grid Corporation of India Ltd	665.91	403.84	262.07
21.	Neyveli Lignite Corpn. Ltd.	376.8	189	187.8
22.	Bongaigaon Refinery & Petrochemicals Ltd.	1279.88	1094.58	185.3
23.	National Aluminium Company Ltd.	336.13	170.38	165.75
24.	Bharat Heavy Electricals Ltd.	2603.84	2443.09	160.75
25.	Garden Reach Shipbuilders & Engineers Ltd.	232.9	126.74	106.16
26.	Nuclear Power Corpn. of India Ltd.	1372.35	1284.49	87.86
27.	Northern Coalfields Ltd.	207.03	127.43	79.6
28.	BEML Ltd.	808.47	733.52	74.95
29.	Hindustan Shipyard Ltd.	139.86	83.86	56
30.	Ircon International Ltd.	108.6	54.36	54.24
31.	Narmada Hydroelectric Development Corporation Ltd.	197.7	145.37	52.33
32.	Cochin Shipyard Ltd.	420.53	369.98	50.55

II. Decrease (more than Rs. 50 crore)

1	Telecommunications Consultants (India) Ltd.	130.35	183.56	53.21
2	Madras Fertilizers Ltd.	104.88	175.82	70.94
3	Mumbai Railway Vikas Corporation Ltd.	14.27	91.03	76.76
4	National Hydroelectric Power Corporation Limited	362.05	447.17	85.12
5	Goa Shipyard Ltd.	49.93	136.22	86.29
6	Kudremukh Iron Ore Co.ltd	50.15	140.08	89.93
7	Engineers India Ltd.	84.3	184.5	100.2
8	Bharat Dynamics Ltd.	86.87	237.65	150.78
9	Bharat Coking Coal Ltd.	3.42	239.08	235.66
10	Bharat Sanchar Nigam Ltd.	565.84	1067.57	501.73
11	Handicrafts & Handloom Exports Corp. of India Ltd.	28.18	996.06	967.88
12	M S T C Ltd.	2657.49	4274.4	1616.91

Annex. 13.3

Mobilization of Funds from Abroad

(Rs. in crore)

Sr. No.	Coagnate Groups	2006-07		2005-06	
		Secured Loan	Unsecured Loan	Secured Loan	Unsecured Loan
I. Agriculture					
1	Agro Based Industries	0.00	0.00	0.00	0.00
	Sub Total	0.00	0.00	0.00	0.00
II. Mining					
2	Coal & Lignite	0.00	3526.27	0.00	3090.91
3	Crude Oil	0.00	49.37	0.00	66.54
4	Other Minerals & Metals	0.00	0.00	0.00	0.00
	Sub Total	0.00	3575.64	0.00	3157.45
III. Manufacturing					
5	Steel	0.00	535.65	0.00	607.81
6	Petroleum (Refinery & Marketing)	267.79	8873.47	424.43	5851.21
7	Fertilizers	0.00	0.00	0.00	0.00
8	Chemicals & Pharmaceuticals	0.00	0.00	0.00	0.00
9	Heavy Engineering	0.10	0.00	0.10	0.00
10	Medium & Light Engineering	0.00	0.00	0.00	1.38
11	Transportation Equipment	0.00	25.72	0.00	26.49
12	Consumer Goods	2093.59	0.00	0.00	0.00
13	Textiles	0.00	0.00	0.00	0.00
	Sub Total	2361.48	9434.84	424.53	6486.89
IV. Electricity					
14	Generation	1003.33	9961.22	1183.03	6959.36
15	Transmission	2655.64	3093.87	2359.04	2869.57
	Sub Total	3658.97	13055.09	3542.07	9828.93
V. Services					
16	Trading & Marketing	0.00	0.00	0.00	0.00
17	Transport Services	1926.76	269.79	873.74	128.04
18	Contract & Construction Services	0.00	0.00	0.00	81.66
19	Industrial Deveplopment & Tech. Consultancy Services	0.00	60.92	0.00	58.56
20	Tourist Services	0.00	0.00	0.00	0.00
21	Financial Services	195.89	8012.51	214.42	5082.84
22	Telecommunication Services	0.00	0.00	0.00	0.00
	Sub Total	2122.65	8343.22	1088.16	5351.10
VI. Under Construction					
23	Enterprises Under Construction	0.00	0.00	0.00	0.00
	Sub Total	0.00	0.00	0.00	0.00
	Total	8143.10	34408.79	5054.76	24824.37

14 PERFORMANCE OF PUBLIC SECTOR INSURANCE COMPANIES

There is greater competition in the insurance sector after it was opened to the private sector, including international joint ventures (with the ceiling on foreign equity holding of 26%). As many as seven insurance companies (Life and non-Life insurance) were functioning as CPSEs as on 31.3.2007. As a group they offered a variety of insurance policies ranging from life insurance to crop insurance. The paragraphs below provide an operational view of each of these CPSEs.

14.1 Life Insurance Corporation (LIC)

The Life Insurance Corporation of India (LIC) was established in 1956 as a Statutory Corporation under the Life Insurance Act, 1956, to carry out life insurance business. The LIC has its Central Office in Mumbai and seven Zonal Offices at Mumbai, Kolkata, Delhi, Chennai, Hyderabad, Kanpur and Bhopal.

The Corporation also transacts business abroad and has branch offices in Fiji, Mauritius and United Kingdom. LIC also operates in overseas insurance market through Joint Venture companies namely Life Insurance Corporation (International) B.S.C(C), registered in Bahrain, Kenindia Assurance Company Ltd. registered in Nairobi, Life Insurance Corporation (Nepal) and life Insurance Corporation (Lanka) Ltd. registered in Colombo in partnership with M/s Bartleet Transcapital Ltd, Sri Lanka.

The life Fund of LIC as at 31.3.2007 amounts to Rs. 56080.33 crore. During 2006-07 the corporation made payments of Rs. 4443.32 crore under Death Claim cases, Rs. 32,093.90 crore under Maturity Claims and Rs. 2189.64 under Annuities. Under Varishtha Pension Bima Yojana the corporation made payments of Rs. 98.86 crore under Death Claim cases and Rs. 635.42 crore under Annuities.

Janashree Bima Yojana launched on 10th August 2000 is also administered by the LIC. The Scheme replaced the Social Security Group Insurance Scheme (SSGIS) and Rural Group Life Insurance Scheme (RGLIS). Janashree Bima Yojana provides for an insurance cover of Rs. 30,000/- on natural death. On partial permanent disability due to accident, the benefit is Rs. 37,500/-. The premium for the scheme is Rs. 200 per member. 50 per cent premium is to be borne by the member and / or Nodal Agency. As on 31st March, 2007, about 76.51 lakhs people have been covered.

Based on the figures received from LIC, the highlights of LIC performance are given below :-

(Rs. in crore)

	2006-07	2005-06
Individual Polices Sold (Nos. in crore)	3.82	3.16
Total Income	175527	132147
Total premium Income	127782	90759
Market Share in terms of number of Policy	83%	89%

14.2 General Insurance Corporation of India

The General Insurance Corporation of India (GIC) was set up as a Government company under Section 9(1) of 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 Limited, The New India Assurance Company Limited, The Oriental Insurance Company Limited and United India Insurance Company Limited.

During November, 2000, GIC was renotified as the Indian Reinsurer and its supervisory role over its subsidiaries ended. Moreover, with notification of General Insurance Business (Nationalization) Amendment Act, 2002 coming into force w.e.f 21.03.2003, GIC ceased to be a holding company of its subsidiaries and the ownership of subsidiaries vested with the Government of India. . GIC has been responding to the changes in the insurance sector by extending reinsurance support to the Indian Insurance Companies in addition to accepting the mandatory 20% reinsurance. It has also ceased to carry on direct insurance business.

14.3 Agricultural Insurance Company of India Limited (AICIL)

A new company , namely "Agricultural Insurance Company of India Limited" (AICIL)" was registered under the Companies Act, 1956 in collaboration with NABARD and the four erstwhile subsidiary companies of GIC, with a paid up share capital of Rs. 200 crores to transact crop insurance and other allied agricultural insurance business in India. The assets and liabilities of various crop cells and Central Crop Insurance Department (CCID), Delhi have been also transferred to the new company with effect from 1.4.2003.

The company enjoys the distinction of being the largest crop insurance provider in the world in terms of the number of farmers insured annually. During 2006-07, the Scheme insured around 170 lakh farmers constituting 15% of the total farm holdings in the country.

The main product i.e. "National Agricultural Insurance Scheme" (NAIS) is presently implemented in 23 States and 2 Union Territories. The total sum insured under the Scheme amounted to approximately Rs. 20200 crore, with premium income of Rs. 562.32 crore. The Company is making efforts to bring the remaining States/ UTs into the fold of NAIS. In addition to NAIS, as pursued in the previous years, this year also new tailor-made products were developed to bring more specialized farming into the insurance net.

The Company recorded operating profit of Rs. 62.32 crore during 2006-07 as against 65.68 crore during 2005-06. Gross Direct Premium this year is Rs. 564.67 crore which includes 2.35 crore from non-NAIS products.The different insurance products offered by the company are mentioned below.

Rainfall Insurance: Rainfall Insurance product, more popularly known as Varsha Bima, was developed to combat the impact of adverse rainfall incidence. The main advantage of the product is quick settlement of claims on the basis of rainfall data obtained from the designated Rain Gauge Stations.

Rabi Weather Insurance for Field Crops: The Company designed a tailor-made weather index based insurance product for Rabi season for the farmers serviced by 'e-chaupals' of ITC in the States of Madhya Pradesh, Maharashtra, Rajasthan & Uttar Pradesh. The product covered potato, wheat, barley, lentil, gram etc.

Bio-Fuel Tree/ Plant Insurance: The Company designed a named peril product to insure six different species commercially grown for bio-fuel production. The annual policy is being sold to corporates/ instituions involved in commercial production of bio-fuel.

Potato Crop Insurance: There has been a demand from potato growers for an 'individual farm' based potato insurance against natural calamities, pests and disease. Considering this, AIC has designed "Potato Crop Insurance (Input) Policy".

Weather Insurance: Wheat Crop Vigour & Temperature based insurance product piloted in a few districts of Haryana and Panjab during Rabi 2005-06 season has been modified on the basis of the review. A new trigger has also been added.

Awareness & Publicity Program

To reach out to the poorest and the remotest farmers has always been a challenge to the company. To this end, the Company has undertaken various intensive awareness and publicity activities, both direct and indirect. A number of awareness workshops were organized at the State and District levels where farmers, bank officials, district level government functionaries and others were briefed about the services on offer. A special effort was made to

give wide publicity to the newly launched schemes. Publicity has been done through various media like newspaper, radio, TV, fairs and exhibitions etc. A formal Publicity Policy of the Company was devised and adopted by the Board during 2006-07.

During the year 2007-08, the Company is focusing on developing its distribution channels through utilizing the services of NGOs, SHGs and MFIs as Micro Insurance Agents to expand the Company's operations in rural areas. A few of our Regional Offices (Ahmedabad, Chennai and Mumbai) have trained certain NGOs of repute, who in turn will conduct insurance awareness among the farmers. The bancassurance arrangements have been finalized with a couple of Banks, having rural network for marketing our Non-NAIS products. Further, attempts are being made to engage all India organizations with rural presence and certain Regional Banks as Corporate Agents.

14.4 NICL, NIACL, OICL, UICL

The non life, non- agricultural insurance companies in the public sector are National Insurance Company Ltd. (NICL), New India Assurance Company Ltd. (NIACL), Oriental Insurance Company Ltd. (OICL) and United India Insurance Company Ltd. (UICL) providing insurance coverage for variety of purposes such as car insurance , medical insurance, insurance against fire etc. The over all performance of these companies (along with GIC) during the year in terms of Gross Direct Premium Income (GDPI) and Net Incurred Claim Ratio (ICR) are given below:

Company	2006-07			2005-06		
	GDPI (Rs. in crore)	ICR (in %)	Net Profit (Rs. in Crore)	GDPI (Rs. in Crore)	ICR (in %)	Net Profit (Rs. in Crore)
GIC	7404	69	1531	4881	103	599
NICL	3827	84	418	3536	105	-115
NIACL	5937	77	1460	5676	84	716
OICL	4021	82	497	3610	83	284
UICL	3499	85	529	3155	92	425

The performance of these companes has improved significantly during the year 2006-07, as shown in the table above. The ICR ratio for all these companies has shown reducing trend in the year 2006-07, which has resulted in increase in profitability of these companies.