

CHAPTER 3

INFRASTRUCTURE

The performance of the infrastructure sectors during April-December, 1989 of the current financial year indicates a mixed situation. Electricity generation, petroleum and petroleum products showed significant improvement. Railway revenue earning traffic also indicates moderate improvement. Coal and lignite production continues to grow. But there has been some deceleration in the production of saleable steel, cement and phosphatic fertiliser.

3.2 Coal production during April-December 1989 increased by 3.6 per cent as against 6.9 per cent in the same period last year. Although total despatches of coal during the period were 3.5 per cent higher than the last year's level, the pit-head stocks of coal was higher as compared to the level a year ago.

3.3 The generation of power during April-December this year was 12.0 per cent more than the corresponding period last year. The thermal (including nuclear) sector indicates a better performance of 11.7 per cent over the previous year. Average PLF improved to 54.7 per cent as against 53.0 per cent in the last year. Hydel power generation improved significantly by 12.7 per cent.

3.4 The production of crude petroleum has shown significant improvement registering a growth of 6.9 per cent during April-December 1989 over the same period last year. Refinery crude throughput and petroleum products both registered encouraging growth rates of 8.9 per cent and 9.1 per cent respectively. The import of crude oil during the period was 8.5 per cent higher than the level in the last year. There was also 4.6 per cent increase in the import of petroleum products.

3.5 Revenue earning freight traffic on railways in the first nine months of the

current year was 2.8 per cent more than the last year but it fell short of anticipated demand mainly in the foodgrains sector. The shortfall in foodgrains was made good to some extent by better lead of cement, fertiliser and iron ore. Cargo handled at major ports marginally decreased as compared to the corresponding period of April-December last year.

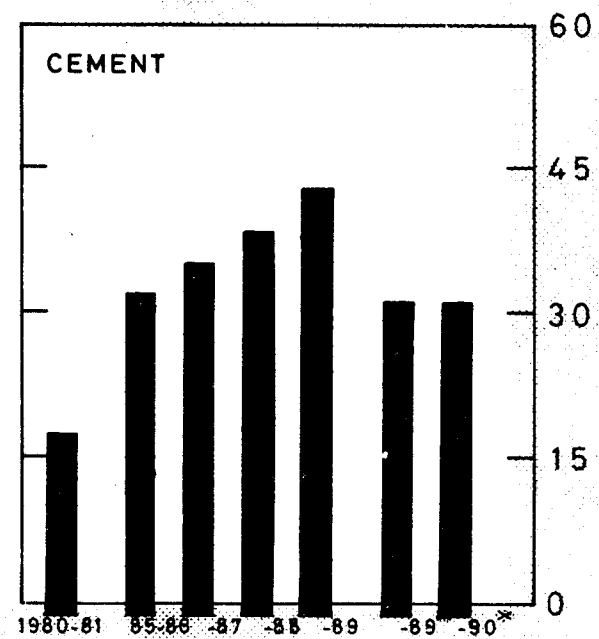
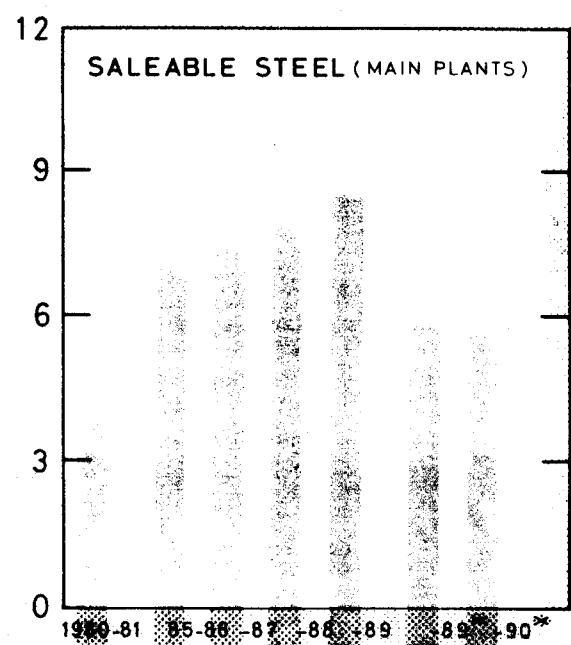
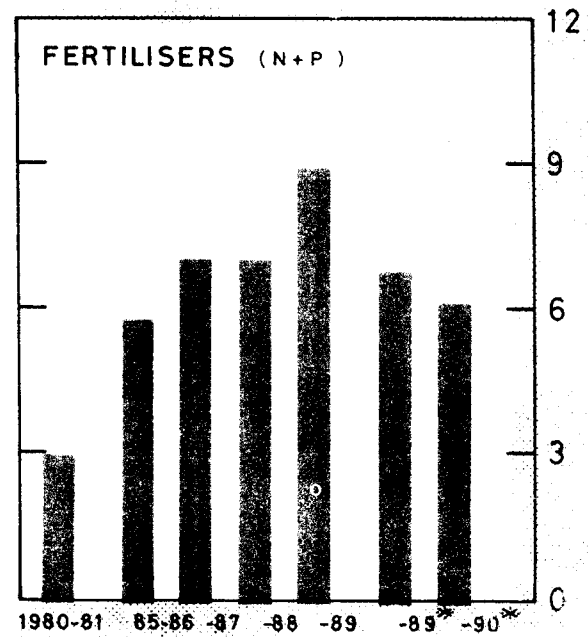
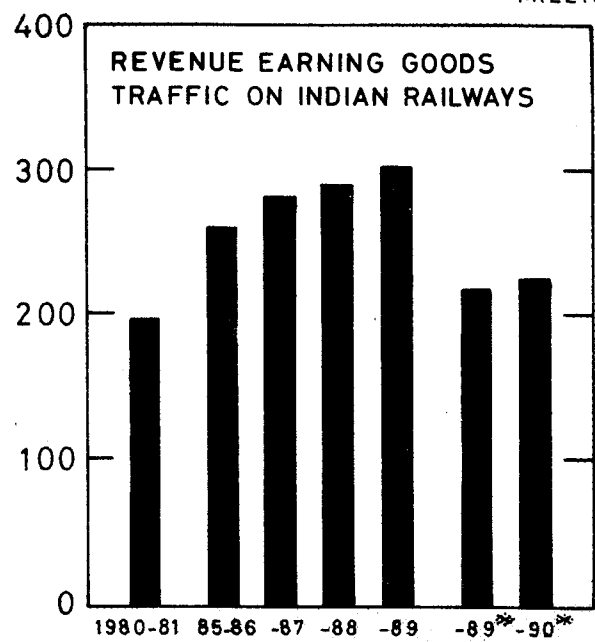
3.6 There has been a setback in the production of saleable steel by the integrated steel plants so far during the current year. Production of saleable steel during April-December 1989 was 3.2 per cent lower than the corresponding period last year mainly due to substantial shortfall of production in Durgapur and Indian Iron and Steel Company plants of SAIL. Overall capacity utilisation of SAIL plants drifted to a level of 76 per cent from 78 per cent in the same period last year. The gap in demand and supply of steel this year appears to be a matter of concern.

3.7 Cement production during April-December 1989 was nominally higher by 0.2 per cent over the corresponding period last year. Public sector enterprises in the cement sector could produce only 3.83 million tonnes of cement against the target of 4.71 million tonnes.

3.8 Production of nitrogenous fertiliser during April-December 1989 rose by only 0.4 per cent over the corresponding period of the previous year as against the achievement of 26.1 per cent in the same period of 1988-89. Phosphatic fertiliser recorded a fall of 31.7 per cent in production during April-December this year as against a growth of 64.5 per cent in the same period last year. Decline in phosphatic fertiliser's production was mainly due to shortage in imported phosphoric acid. Capacity utilisation during the period declined from 84.1 per cent to 80.8 per cent in nitrogen and from 96.1 per cent to 61.3 per cent in phosphatic fertiliser.

PERFORMANCE OF INFRASTRUCTURE SECTORS

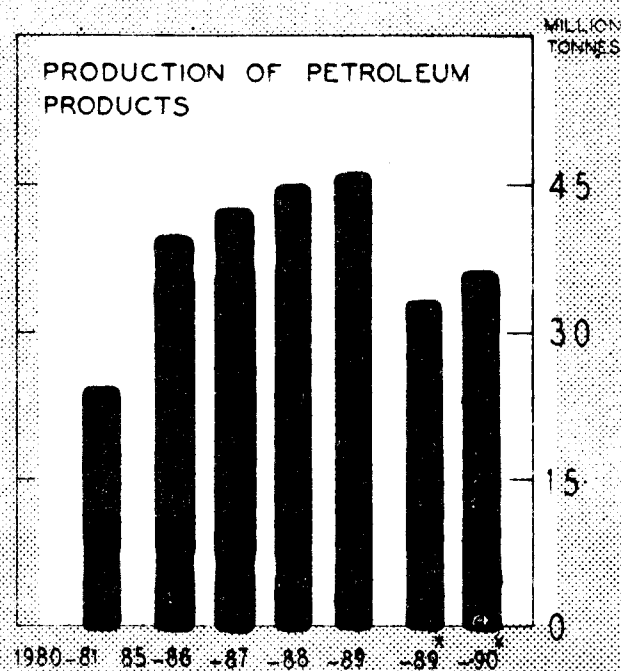
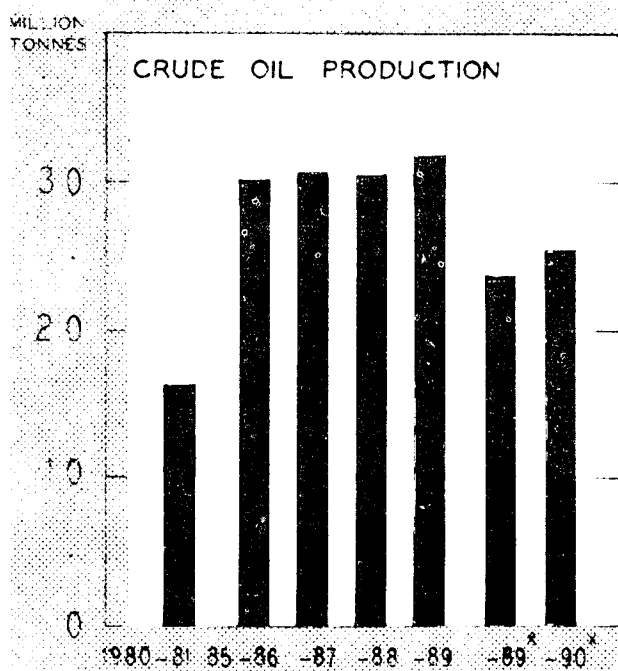
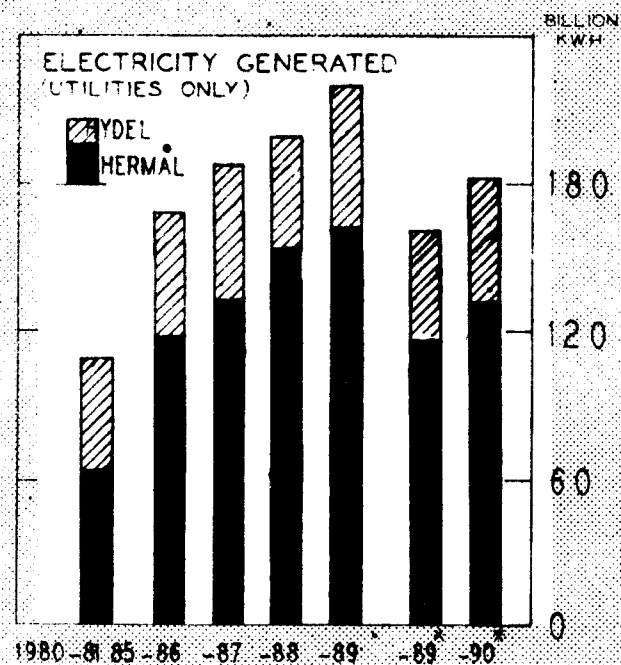
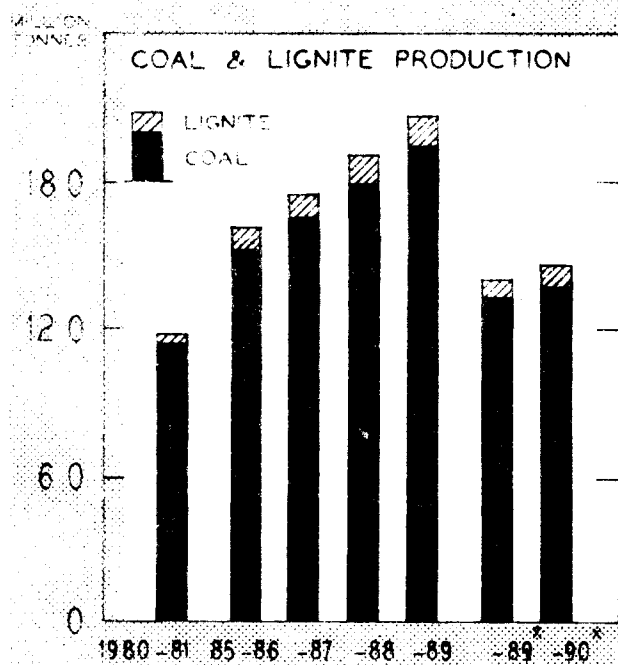
MILLION TONNES



MINISTRY OF FINANCE, ECONOMIC DIVISION.

* APRIL - DECEMBER

PERFORMANCE OF INFRASTRUCTURE SECTORS



* APRIL - DECEMBER
• INCLUDING NUCLEAR

TABLE 3.1
Trends in the Performance of the Infrastructure Sectors

Sl. Item No.	Unit		1986-87	1987-88	1988-89£	April-December£		Percentage change		
						1988-89	1989-90	1987-88	1988-89	1989-90*
								1986-87	1987-88	1988-89*
1	2	3	4	5	6	7	8	9	10	11
Energy										
1. Coal										
(a) Production	Mn. tonnes		165.8	179.7	194.6	133.0	137.7	8.4	8.3	3.6
(b) Pit-head stocks (year-end)	"		28.8	32.5	37.3	28.5	28.9	12.8	14.9	1.4
(c) Despatches	"		158.7	170.8	183.4	133.7	138.4	7.6	7.4	3.5
2. Electricity Generated (utilities only)										
	Bn. Kwh.		187.8	201.9	221.1	161.9	181.3	7.5	9.5	12.0
(a) Hydel	"		53.9	47.4	57.8	43.8	49.4	-12.1	21.9	12.7
(b) Thermal (incl. nuclear)	"		133.9	154.5	163.3	118.1	131.9	15.4	5.7	11.7
3. Petroleum										
(a) Crude oil production	Mn. Tonnes		30.48	30.36	32.04	23.84	25.49	-0.4	5.5	6.9
(b) Refinery throughput	"		45.70	47.75	48.80	35.46	38.62	4.5	2.2	8.9
Transport and Communications										
1. Revenue earning goods traffic on Railways										
	"		277.75	290.21	302.05	218.07	224.19	4.5	4.1	2.8
2. Cargo handled at major ports										
	"		124.37	133.69	146.38	107.09	105.88	7.5	9.5	-1.1
3. Telecommunications—New Telephone connections provided (DELs) '000Nos.										
	"		324.15	313.08	374.94	152.00	173.00	3.4	19.7	13.8
Basic Industries (Production)										
1 Saleable steel (M/Plants)										
	Mn. Tonnes		8.22	8.59	9.21	6.64	6.43	4.5	7.2	-3.2
2 Cement										
	"		36.59	39.57	44.27	32.43	32.48	8.0	11.9	0.2
3 Fertilisers										
(i) Nitrogenous	'000 Tonnes		5410.0	5466.0	6712.4	4913.5	4934.9	1.0	22.8	0.4
(ii) Phosphatic	"		1660.0	1665.0	2251.6	1851.9	1265.2	0.3	35.2	-31.7

*April-December

£Provisional.

Energy**Coal**

3.9 Coal production continues to grow steadily during Seventh Five Year Plan. The demand for coal in 1988-89 was assessed at 202 million tonnes. Taking into account the possible drawal from pit-head stocks and the need to import superior grade coking coal to meet the steel plants requirements, the target for coal production was fixed at 196.3 million tonnes. Against this the

actual production was 194.6 million tonnes, registering a growth rate of 8.3 per cent over the previous year's level of 179.7 million tonnes. The actual production fell short of the target only by 0.9 per cent. Coal India Limited (CIL) produced 171.5 million tonnes, about 1 per cent more than the target and achieved a growth of 7.9 per cent over the previous year. Coal India Ltd. produced about 88 per cent of the total production of coal in the country. The Singareni Collieries Company

TABLE 3.2
Trends in Coal Sector

Sl. No.	Item	(Million Tonnes)							
		1986-87	1987-88	1988-89£	April-December£		Percentage change		
					1988-89	1989-90	1987-88	1988-89	1989-90*
1	2	3	4	5	6	7	8	9	10
1.	Production								
	(i) CIL	144.74	159.02	171.50	116.31	121.78	9.9	7.9	4.7
	(ii) SCCL	16.58	16.40	18.61	13.23	12.60	1.1	13.5	-4.8
	(iii) Others	4.45	4.30	4.49	3.42	3.32	-3.4	4.4	-2.9
	TOTAL	165.77	179.72	194.60	132.96	137.70	8.4	8.3	3.6
2.	Pit-head stocks (year-end)	28.78	32.45	37.30	28.52	28.92	12.8	14.9	1.4
3.	Despatches	158.66	170.75	183.41	133.70	138.43	7.6	7.4	3.5
4.	Lignite (production)	9.43	11.16	12.40	8.34@	8.06@	18.3	11.1	-3.4
*April-December		£Provisional		@Production of Neyveli Lignite Corporation only.					

Ltd. (SCCL) achieved only 18.6 million tonnes which fell short of target by 9 per cent due to labour problems, strikes and absenteeism. The captive mines of Tata Iron and Steel Company (TISCO), Indian Iron and Steel Company (IISCO) and Damodar Valley Corporation (DVC) produced 4.49 million tonnes achieving 78.8 per cent of the target which remained more or less stable since 1985-86.

3.10 Total despatches of coal during the year 1988-89 at 183.41 million tonnes were 7.4 per cent more than the previous year's despatches of 170.75 million tonnes. CIL alone despatched 161.53 million tonnes of coal in the year as against 150.52 million tonnes in 1987-88. Despite this increase in coal despatches, the pit-head stocks of coal at the close of the year touched a record level of 37.30 million tonnes which was 14.9 per cent higher than the year-end stocks of 32.45 million tonnes in 1987-88. The higher built-up of pit-head stocks was attributed to mismatches between production and transportation, especially in coal-fields which do not have adequate rail movement facilities and gaps in demand projected and realised by various user sectors.

3.11 CIL improved its productivity measured in terms of output of raw coal per manshift (OMS) in 1988-89. It achieved an overall OMS of 1.17 tonnes against 1.08 tonnes in 1987-88. In the case of Singareni Collieries Company Ltd., OMS

increased marginally from 0.95 tonnes in 1987-88 to 0.97 tonnes in 1988-89. Troubled industrial relations in the company continued to be a cause of concern. Mandays lost due to labour unrest in CIL in 1988-89 was 7.6 lakhs as against 21.5 lakhs in 1987-88. In SCCL also there was a decline in the mandays lost between 1987-88 and 1988-89 from 9.5 lakhs to 1.2 lakhs. The industry could have performed better had it not suffered from several constraints like power shortage, absenteeism, break-down of machinery and occasional flooding. Trend in the first nine months of the current year, however, indicates satisfactory labour relations in CIL but no improvement in SCCL.

3.12 The target set for production of coal during the current year is 209.5 million tonnes. The gap between demand and indigenous production is likely to be 12.5 million tonnes. An import of 4.5 million tonnes of coking coal has been targeted. The gap of 8 million tonnes is to be met from large pit-head stocks of 37.3 million tonnes as on 1-4-1989. Actual production in the first nine months of the year 1989-90 was 137.70 million tonnes which was 3.6 per cent higher than the production during the corresponding period last year. While CIL, the major producer of coal, continued to perform well and produced 121.78 million tonnes, production from SCCL decreased by 4.8 percent mainly because of labour unrest. Total despatches of coal during the

period April-December 1989 at 138.43 million tonnes was 3.5 per cent higher than the total despatches of 133.70 million tonnes during the corresponding period last year. Despite the increase in despatches, pit-head stocks of coal as on 31st December, 1989 was slightly higher at 28.92 million tonnes as compared to 28.52 million tonnes a year ago.

3.13 CIL's production of metallurgical grade coking coal in 1988-89 at 21.10 million tonnes was 4.4 per cent lower than the previous year's production of 22.08 million tonnes. Washed coal production by CIL washeries during the year is estimated at 8.74 million tonnes, 4.5 per cent higher than the previous year's production of 8.36 million tonnes but short of the target by 5.1 per cent. During the first nine months of current year, there was a decline in the production of metallurgical grade coal by CIL. At 13.90 million tonnes, production was 2.9 per cent less than the actual production of 14.31 million tonnes in the corresponding period last year. Production of washed coal in CIL washeries at 5.87 million tonnes during April-December, 1989 was 9.8 per cent less as compared to the production of 6.45 million tonnes in the same period last year.

3.14 Short supply of prime coking coal required by steel plants has been a persisting problem to the coal sector due to delinking of several mines which were not matching quality specifications. Import of superior quality coking coal for the use of steel plants was 4.20 million tonnes in 1988-89 as against 3.47 million tonnes in 1987-88. Import of coking coal in the current year is likely to be around 4.5 million tonnes because of the increased demand from Visakhapatnam Steel Plant and shortfall in domestic production.

TABLE 3.3
Estimated Demand/Supply of Coking Coal for the Steel Industry
(Million tonnes)

Particulars	1986-87	1987-88	1988-89
1. Total requirement	17.62	17.57	17.15
2. Actual Supplies (domestic)	12.27	12.11	11.76
3. Imported Coal received	2.56	3.49	4.20

S/35 Fin/90—6.

3.15 As on 31-10-1989, there were 24 projects costing over Rs. 100 crores, 20 in the coal sector and 4 in the lignite sector under implementation. In regard to 8 of these projects there had been delay due to various reasons, such as problems relating to acquisition of land and rehabilitation of land oustees, delay in supply of equipment by indigenous manufacturers, delay in acquisition of forest land, etc.

Lignite

3.16 Production of lignite in 1988-89 at 12.4 million tonnes was 11.1 per cent higher than the previous year's production of 11.2 million tonnes. Production by Neyveli Lignite Corporation (NLC) at 11.4 million tonnes was 9 per cent above the target of 10.5 million tonnes and 12 per cent more than the production of 10.2 million tonnes in 1987-88. Production from the mines of Gujarat Mineral Development Corporation (GMDC) was about 1.0 million tonnes.

3.17 Trend in the production of lignite continues to be firm during the current year also. Production from NLC during April-December 1989 was 8.06 million tonnes. GMDC is also expected to augment its production after mechanisation. NLC has recorded significant achievements in the fields of power generation, fertiliser production and also in the production of coke.

Electricity

3.18 Electricity generation (utilities) in 1988-89 at 221.1 billion KWH recorded a growth of 9.5 per cent over previous year although it fell short of target by 2.4 per cent. During 1988-89, the capacity addition was 4885 MW. The total installed capacity in the country at the end of March 1989 was 59040.38 MW comprising of 39677.33 MW thermal, 17798.05 MW hydel and 1565 MW nuclear.

3.19 Thermal generation of 157.5 billion KWH in 1988-89 was 5.4 per cent more than the previous year, being 96.6 per cent of the target. The shortfall of 3.4 per cent in thermal power generation was mainly on account of reduction of load demand particularly in agriculture because of favourable monsoon conditions. Hydel generation at 57.8 billion KWH in 1988-89 registered a significant improvement of 21.9 per

TABLE 3.4
Trends in the Power Sector (Utilities only)

Sl. No.	Item	Percentage change							
		1986-87	1987-88	1988-89£	April-December£		1987-88	1988-89	1989-90*
					1988-89	1989-90	1986-87	1987-88	1988-89*
1	2	3	4	5	6	7	8	9	10
1.	Additional capacity commissioned/rolled (M.W.)	2488	4981	4885	1432	2495	100.2	-1.9	74.2
2.	Power Generation (Billion KWH)	187.8	201.9	221.1	161.9	181.3	7.5	9.5	12.0
	(i) Hydel	53.9	47.4	57.8	43.8	49.4	-12.1	21.9	12.7
	(ii) Thermal (incl. nuclear)	133.9	154.5	163.3	118.1	131.9	15.4	5.7	11.7
3.	Plant Load Factor of Thermal Plants (per cent)	53.2	56.5	55.0	53.0	54.7
4.	Estimated deficit in power availability (per cent)	9.4	10.9	7.7	7.8	7.6

*April-December

£Provisional.

cent and was almost equal to the target level. In the year 1987-88, shortfall of hydel power generation on account of monsoon failure was more than compensated by thermal sector. The nuclear power generation in 1988-89 at 5.8 billion KWH was 15.7 per cent more than the previous year.

3.20 Total generation of power in April-December this year was 181.3 billion KWH as compared to 161.9 billion KWH during the same period last year and achieved a growth of 12.0 per cent. Hydel power generation at 49.35 billion KWH improved significantly by 12.7 per cent exceeding the target by 2.2 per cent. The thermal (including nuclear) sector indicates a better performance of 11.7 per cent during April-December this year as against the corresponding period of 1988-89. The power generation scenario during the year comes to be promising as both thermal (including nuclear) and hydel sectors are performing well. The shortage in availability of power during 1988-89 was 7.7 per cent as against 10.9 per cent in previous year. During the period April-December this year the estimated shortage was 7.6 per cent as against 7.8 per cent during the corresponding period of 1988-89.

3.21 The Plant Load Factor (PLF) of the thermal plants in 1988-89 was 55.0 per cent as against the target of 54.8 per cent. In the year 1987-88 it was 56.5 per cent. The central sector PLF in 1988-89 was 62.6 per cent as against

62.3 per cent in 1987-88. The figures for the state and private sectors were 51.6 per cent and 63.2 per cent respectively. The corresponding PLF for the year 1987-88 was 53.5 per cent and 67.6 per cent respectively.

3.22 Average PLF of the thermal plants in April-December this year had improved to 54.7 per cent as against 53.0 per cent in the corresponding period last year. The PLF of the central sector units was 61.2 per cent as against the target of 57.7 per cent, showing an improvement in performance. The figure of the central sector for April-December last year was 60.6 per cent. The PLF of NTPC improved to 66.3 per cent from the level of 64.5 per cent attained in the same period last year. Average PLF of the state sector plants at 50.9 per cent improved over the last year's level of 49.3 per cent. The States viz. Andhra Pradesh, Karnataka, Tamil Nadu, Punjab, Gujarat, Maharashtra, Rajasthan, West Bengal Power Development Corporation and D.E.S.U. continued to maintain PLF at more than 50 per cent during April-December in the current year. Private utilities could maintain the PLF at 68.7 per cent as against 66.1 per cent during the same period last year.

3.23 In the structure of power generation of hydel-thermal mix in the country, the share of thermal is steadily increasing. The thermal capacity at present constitutes over 67 per cent of the total installed capacity and contributes about

TABLE 3.5

Organisation-wise PLF : Targets and Actual Achievements during the Year 1988-89 & April-December, 1989

Sl. No.	Board/Undertaking/ Sector	P.L.F. (Percentage)		
		1988-89 Actual	Target	April-December, 1989 Actual
1	2	3	4	5
PLF above 50%				
1.	Karnataka Power Corporation	66.2	62.8	70.8
2.	Tamil Nadu State Electricity Board	66.7	58.8	63.2
3.	Andhra Pradesh State Electricity Board	69.4	70.2	60.8
4.	Rajasthan State Electricity Board	52.8	46.6	60.5
5.	Punjab State Electricity Board	56.1	63.1	60.1
6.	Gujarat State Electricity Board	56.1	52.0	57.6
7.	Delhi Electricity Supply Undertaking	44.7	56.5	57.7
8.	Maharashtra State Electricity Board	53.5	51.5	56.3
9.	West Bengal Power Development Corporation	49.4	56.5	55.4
PLF 40% to 50%				
1.	Madhya Pradesh State Electricity Board	50.1	48.5	48.8
2.	Uttar Pradesh Electricity Board	54.1	51.3	46.3
3.	Haryana State Electricity Board	41.2	47.8	42.9
PLF below 40%				
1.	West Bengal State Electricity Board	35.7	38.3	37.8
2.	Bihar State Electricity Board	37.1	38.1	31.8
3.	Orissa State Electricity Board	31.0	35.3	31.0
4.	Assam State Electricity Board	27.9	33.1	27.2
5.	Durgapur Project Ltd. (DPL)	21.5	29.9	14.6
PLF : Central Sector (TOTAL)		62.6	57.7	61.2
1.	Neyveli Lignite Corporation	70.3	65.8	66.1
2.	National Thermal Power Corporation	66.9	56.4	66.3
3.	Damodar-Valley Corporation	41.9	43.9	35.7
PLF : Private Utilities (TOTAL)		63.2	61.8	68.7

70 per cent of the total power generation. There has been successive improvement in the performance of the thermal power stations in recent years. The PLF of the thermal plants at the beginning of the Sixth Plan was only 44.3 per cent, it improved to 50.1 per cent in 1984-85. It further rose to 53.2 per cent and 56.5 per cent in 1986-87 and 1987-88 respectively. However, during 1988-89 it slid back to 55.0 per cent due to reduction in the demand because of the good monsoon, particularly in agriculture sector.

3.24 The target for additional power generation capacity in the current year is 4892.4 MW. This includes a capacity of 484.75 MW which has spilled over from 1988-89. Capacity scheduled for commissioning during April-December in the current year was 2868.5 MW out of which 2253.5 MW was for thermal and 615.0 MW for hydel. Actual capacity rolled/commissioned was 2494.6 MW—2273.5 MW for thermal and 221.1 MW for hydel. A review of the Seventh Plan programme taking into account the performance during the current year indicates that the plan target fixed at 22245 MW is likely to be achieved.

TABLE 3.6

Power Generation Capacity : Targets/Achievements

Sector	Commissioned/ Rolled 1988-89 Actual		April-December, 1989			
	No.	Capacity (MW)	Scheduled		Commissioned/ Rolled	
			No.	Capacity (MW)	No.	Capacity (MW)
Thermal	23	4117.3	18	2253.5	13	2273.5
Hydel	19	532.7	17	615.0	8	221.1
Nuclear	1	235.0				
TOTAL	43	4885.0	35	2868.5	21	2494.6

Petroleum

3.25 Production of crude oil at 32.04 million tonnes during 1988-89 was 5.5 per cent higher than the previous year's production but fell slightly short of the target set at 32.18 million tonnes. Oil & Natural Gas Commission (ONGC) performed well by producing 29.61 million tonnes of crude oil—21.11 million tonnes in off-shore production (exceeding the target of 20.68

million tonnes) and 8.50 million tonnes in on-shore production. However, on-shore production by Oil India Limited (OIL) at 2.43 million tonnes fell short of the target of 2.90 million tonnes.

3.26 Total refinery crude throughput during 1988-89 at 48.80 million tonnes was higher than the previous year's achievement of 47.75 million tonnes. Average capacity utilisation of refineries measured in terms of actual crude throughput as the percentage of installed capacity was 100.2 per cent as against 98.0 per cent in 1987-88. Production of petroleum products (POL) in 1988-89 at 45.70 million tonnes increased only by 2.2 per cent as compared to 4.6 per cent in 1987-88. Production of natural gas in 1988-89 at 13.22 billion cubic metres recorded a growth of 15.3 per cent over the previous year.

3.27 The current year's trend in the production of crude oil so far has been encouraging. Production during April-December, 1989 at 25.49 million tonnes was 6.9 per cent more than the level achieved in the corresponding period last year. The major contribution towards this increase was from ONGC which recorded a growth of 15.3 per cent in on-shore production. OIL also recorded a growth of 10.4 per cent in on-shore production of crude oil. However, off-shore production of ONGC rose by only

3.3 per cent. Production target of crude oil for 1989-90 is 34.31 million tonnes. During the first nine months of the current year, 74.3 per cent of the target has been achieved.

3.28 The trend in production of refineries throughput and petroleum products during the current year is good. The refinery crude throughput during April-December 1989 at 38.62 million tonnes is 8.9 per cent higher than that for the corresponding period last year. The capacity utilisation of the refineries during this period was 98.9 per cent which was higher than the last year's level of 96.7 per cent. Production of petroleum products (POL) during April-December this year at 36.10 million tonnes is 9.1 per cent higher than the production during the same period last year. The target for the production of POL for the current year is 50.81 million tonnes and the achievement in the first nine months works out to 71.0 per cent. The import of POL products during April-December this year at 4.74 million tonnes was 4.6 per cent higher than the import of such products during the corresponding period of the previous year. The import of crude oil during the same period at 14.23 million tonnes was 8.5 per cent higher than the previous year's import of 13.12 million tonnes for the same period.

TABLE 3.7
Trends in Petroleum Sector

Sl. No.	Item	(Million Tonnes)							
		1986-87	1987-88	1988-89	April-December		Percentage change		
					1988-89	1989-90	1987-88	1988-89	1989-90*
							1986-87	1987-88	1988-89*
1	2	3	4	5	6	7	8	9	10
1.	Crude Oil production	30.48	30.36	32.04	23.84	25.49	-0.4	5.5	6.9
	(i) On-shore	9.86	10.19	10.93	8.04	9.17	3.3	7.3	14.1
	(a) ONGC	7.24	7.74	8.50	6.21	7.16	6.9	9.8	15.3
	(b) OIL	2.62	2.45	2.43	1.82	2.01	-6.5	-0.8	10.4
	(ii) Off-shore (ONGC)	20.62	20.17	21.11	15.80	16.32	-2.2	4.7	3.3
2.	Refinery Throughput	45.70	47.75	48.80	35.46	38.62	4.5	2.2	8.9
3.	Production of Petroleum products	42.76	44.73	45.70	32.08	36.10	4.6	2.2	9.1
4.	Natural Gas (Billion Cubic Metres)	9.85	11.47	13.22	9.64	11.90	16.4	15.3	23.4

*April-December

£Provisional.

3.29 The natural gas sector in recent years has emerged as an important energy source on account of its growing use for both energy and non-energy purposes. During the current year, the production of natural gas upto the end of December is 11.90 billion cubic metres, which is 23.4 per cent higher than the production of 9.64 billion cubic metres during the corresponding period last year. The achievement till the end of December this year is 79.8 per cent of the production target of natural gas for the current year at 14.91 billion cubic metres. Utilisation of gas in 1988-89 was 9.2 billion cubic metres as against 8.0 billion cubic metres in 1987-88. On the basis of the trend in utilisation of natural gas during the first nine months of the current year, it is estimated that about 10.6 billion cubic metres of gas will be utilised during the current year. The increase in the production capacity of nitrogenous fertiliser in recent years has been entirely based on natural gas. Natural gas is also being used for creation of additional power generation capacity in the areas where gas is available. Natural gas is also playing an important role in the production of LPG, ethane, propane and production of sponge iron.

3.30 The Seventh Five Year Plan has envisaged annual growth rate of 6.3 per cent to 6.5 per cent in production and 6 per cent to 7 per cent in consumption of POL. The average annual growth rate in the first four years of the Plan, (i.e., 1985-86 to 1988-89) was

8.9 per cent in production and 6.5 per cent in consumption. In 1988-89, the production of POL increased by 2.2 per cent over the previous year and the consumption increased by 7.2 per cent. During April-December this year, both the production and consumption of POL products increased by 9.1 per cent and 7.8 per cent respectively over the corresponding period last year.

Conservation of Energy

3.31 In respect of petroleum products over 30 per cent of our requirement is being met by imports, which causes a severe strain on balance of payments position. Moreover, oil reserves in the country are limited. It is, therefore, imperative that conservation of petroleum products is maximised by making all out efforts. Some measures have been taken to effect economy in use of petroleum products. Despite these measures share of oil and gas in commercial energy consumption has been steadily growing. For curbing growth in consumption of petroleum products, efficient use of the existing oil and gas reserves, conservation of these reserves and promotion of alternative fuels are needed.

3.32 The measures were taken to conserve petroleum products covering transport, industry, agriculture and the domestic sectors. These include adoption of measures and practices

TABLE 3.8
Consumption of Petroleum Products@

Sl. No.	Item	1986-87	1987-88	1988-89£	April-December£		(Million Tonnes) Percentage change		
							1987-88	1988-89	1989-90*
							1986-87	1987-88	1988-89*
1	2	3	4	5	6	7	8	9	10
1.	Light distillates : of which	7.41	7.55	8.58	6.20	6.76	1.9	13.6	9.0
	(a) Naphtha	3.25	2.85	3.33	2.39	2.45	-12.3	16.8	2.5
	(b) L.P.G.	1.50	1.69	1.96	1.42	1.62	12.7	16.0	14.1
	(c) Mogas	2.51	2.81	3.05	2.25	2.59	12.0	3.5	15.1
2.	Middle Distillates: of which :	25.66	28.01	29.74	21.93	23.79	9.2	6.2	8.5
	(a) Kerosene	6.65	7.23	7.71	5.71	6.05	8.7	6.6	6.0
	(b) High Speed Diesel Oil	16.01	17.66	18.70	13.77	15.26	10.3	5.9	10.8
3.	Heavy Ends : of which :	10.59	10.86	11.44	8.21	8.64	2.5	5.3	5.2
	Fuel Oil	8.05	8.14	8.38	6.11	6.35	1.1	2.9	3.9
	TOTAL	43.66	46.42	49.76	36.34	39.19	6.3	7.2	7.8

@Excluding RBF.

*April-December

£Provisional.

conducive to increased fuel efficiency and training programme in the transport sector, replacement of old and inefficient boilers and promotion of fuel efficient measures and equipment in the industrial sector, standardisation of fuel-efficient irrigation pump sets in agricultural sector, and development as well as promotion of use of fuel-efficient equipment and devices like kerosene and LPG stoves in the domestic sector and promotion of alternative fuels, etc. These activities are being promoted and coordinated by the Petroleum Conservation Research Association (PCRA). PCRA has been able to achieve annual savings worth Rs. 150 crores during the Sixth Plan period and it expects to achieve savings of Rs. 495 crores in the Seventh Plan. Other area of conservation is the oil refineries which also consume fuel in their operations. The schemes being implemented are revamping, replacement of low efficiency furnaces and boilers, installation of heat exchangers and economisers and cogeneration, etc. Refineries have been able to achieve savings in fuel and loss in consumption to the extent of Rs. 30 crores in 1988-89 alone. In order to ensure effective pursuit of Government's policy for maximising conservation of petroleum products, a Conservation Cell has started functioning recently. Activities of PCRA, and of the Centre for High Technology in respect of refineries are being intensified in identified areas and initiatives are being taken in several new areas.

3.33 Energy Management Cell in the Department of Power acts as a focal point to coordinate the activities of energy conservation. The Cell promotes energy conservation through fixation of specific energy consumption targets mainly in regard to energy intensive industries, energy audits, preparation of action plans, monitoring, demonstration projects, training, standardisation of electrical equipment and appliances commonly used in the domestic and commercial sectors, efficient lighting systems and awareness campaigns on the need and scope of electricity conservation. As a result of periodic reviews, there has been improvement in energy efficiency in the energy intensive industrial sub-sectors like aluminium, fertilisers, textiles, coal, cement, paper, refineries, etc. and also in other sectors like railways, surface transport, agriculture, commercial and household sectors. An Energy Management Centre has been set up in April, 1989 as an autonomous

organisation in collaboration with the Commission for European Community to promote research, training and dissemination of relevant information. Bureau of Industrial Costs and Prices (BICP) is also conducting in-depth studies on energy audit for selected energy-intensive industries like aluminium, fertilisers, cement, paper, etc.

3.34. Despite these measures undertaken by various industries, the use of energy per unit of output continues to be high, judged by international standards. There is still considerable scope for achieving better efficiency in use of energy by different sectors. The growth in the demand for energy needs to be contained specially in the context of rise in prices.

Renewable Sources of Energy

3.35 Consistent efforts have been made in the country for the development of new and renewable sources of energy. Major thrusts are on programmes relating to biogas, solar energy, wind power and biomass. Over 12.22 lakh biogas plants have already been set up in the country so far under the National Project for Biogas Development. Annual generation of biogas from these plants is estimated to be equivalent to about 43.20 lakh tonnes of fuel wood valued at Rs. 172.83 crores. Benefits for the environment and women's welfare are additional. In 1988-89, 1.67 lakh plants were set up as against a target of 1.50 lakh plants. The target for 1989-90 is fixed at 1.60 lakh plants. The number of working plants was about 85 per cent. Under the programme for introducing fuel efficient and smokeless chulhas, against a target of 15 lakhs, 18.33 lakh chulhas were set up in 1988-89 bringing the total number installed to 67 lakhs approximately. These are estimated to save 46.9 lakh tonnes of wood valued at Rs. 187.60 crores apart from other environmental and health benefits. During 1989-90, 18 lakh chulhas are targeted to be installed.

3.36. Some progress has been achieved during 1988-89 in the solar thermal extension programme. Physical achievements under this programme include distribution of 6390 solar water heaters, 7554 solar stills, about 1,35,000 solar cookers, etc. Further, about 6000 village hamlets have been provided with solar photovoltaic lighting systems and about 30 experimental solar power plants have been set up. The programme

of development of amorphous silicon solar cell technology has been taken up as one of the technology missions and a pilot plant is under construction. Under the wind energy development and demonstration programme, 2461 wind pumps have been installed and wind farm projects of aggregate capacity of over 10 MW have been set up in 6 States so far. 411 biomass gasifier systems which each can achieve a diesel replacement of over 65—70 per cent have been installed under a demonstration programme. Efforts are being made to tap potential resources for harnessing energy from micro hydel systems, ocean and urban and agricultural wastes.

Transport and Communications

Railways

3.37. For the fourth year in succession, there was increase in the freight traffic carried by the railways. The total freight traffic carried in 1988-89 was 329.49 million tonnes (including 27.44 million tonnes of non-revenue traffic), as against 318.5 million tonnes (including 28.3 million tonnes of non-revenue traffic) in 1987-88. Thus, freight traffic in 1988-89 was 11 million tonnes (or 3.5 per cent) more than in 1987-88. Overall transport output in 1988-89 was 230.1 billion tonne-kilometres as against 231.2 billion tonne-kilometres in 1987-88. The marginal shortfall in tonne-kilometres in 1988-89 compared to 1987-88 was on account of a decline in the lead of almost all the bulk commodities and a drop in the foodgrains traffic, a comparatively long lead traffic. The demand for rail transport in respect of freight traffic, in the current year has been estimated at 344 million tonnes and 252 billion tonne-kilometres in terms of tonne-kilometres. In the first nine months of the current year viz. April to December, 1989, the railways lifted 224.19 million tonnes of revenue traffic as against 218.07 million tonnes in the same period last year, i.e., 6.12 million tonnes or 2.8 per cent more. In terms of tonne-kms, the traffic carried was 166.86 billion tonne-kms as against 161.98 billion tonne-kms last year, i.e., 4.88 billion tonne kilometres or about 3 per cent more. However, freight traffic in the first nine months in the current year fell short of anticipated demand in the case of foodgrains, coal and steel sectors. The shortfall was made good to some extent by increased loading of iron ore, cement and fertilisers.

3.38 There was a drop in passenger traffic in 1988-89 compared to 1987-88, both in terms of passengers carried and passenger kms. The number of passengers carried in 1988-89 was 3500 million, as against 3792 million in 1987-88. The volume of passenger traffic in terms of passenger kilometres in 1988-89 was 263.7 billion, as against 269.4 billion in 1987-88. The trend this year viz 1989-90 shows that the volume of passenger traffic would be more than the last year. During April—December, 1989 the volume of passenger traffic increased over the corresponding period of 1988-89 both in terms of passengers and passenger kilometres. The number of passengers increased by 2.7 per cent and passenger kms increased by 5.5 per cent.

3.39 At the beginning of the Seventh Plan the size of the railway network was 61,850 route kms. During the first four years of the Seventh Plan, 637 kms of new lines were added and doubling was completed on 728 kms. In the current year, 330 kms of new lines are expected to be completed and 350 kms are expected to be doubled. Only 6,325 route kms. were electrified at the beginning of the Seventh Plan. The Seventh Plan envisaged electrification of 3,400 rkms. In the first four years of the Seventh Plan, 2,358 rkms were electrified and it is proposed to complete electrification of 750 rkms during the current year. With this another trunk route viz. Delhi to Madras would be completely electrified in addition to two routes viz. Delhi to Howrah and Delhi to Bombay via Western Railway, which already have electric traction.

3.40 Technology in key areas viz. track, rolling stock, locomotives, signalling and communications is being continuously updated, with a view to improve operational performance, service levels and bring down operational costs. As part of this technology upgradation programme, high power electric locomotives have been introduced and a new type of wagon for transport of coal to power houses has been designed and introduced, passenger reservation systems have been computerised in four metropolitan and five other major cities and this facility is being extended. Solid state interlocking has been introduced in the area of signalling, and optic fibre in telecommunications. As a prime

TABLE 3.9
Performance of Railway Sector

Sl. No.	Item	1986-87	1987-88	1988-89	April-December		Percentage change		
					1983-89	1989-90	1987-88	1988-89	1989-90*
							1986-87	1987-88	1988-89*
1	2	3	4	5	6	7	8	9	10
1.	Total revenue earning freight traffic (million tonnes)	277.75	290.21	302.05	218.07	224.19	4.5	4.1	2.8
	(i) Coal	109.45	119.84	128.01	93.60	95.19	9.5	6.8	1.7
	(ii) Raw materials for steel plants (excl. coal)	24.05	24.86	26.97	18.81	19.92	3.4	8.5	5.9
	(iii) Pig iron & finished steel from steel plants	9.48	9.87	10.18	7.38	7.18	4.1	3.1	-2.7
	(iv) Iron ore for exports	14.17	13.04	13.64	9.66	10.62	-8.0	4.6	9.9
	(v) Cement	19.79	22.32	25.91	18.45	19.89	12.8	16.1	7.8
	(vi) Foodgrains	29.00	30.13	24.88	18.39	16.92	3.9	-17.3	-8.0
	(vii) Fertilisers	14.53	13.18	16.10	11.83	13.02	-9.3	22.1	10.1
	(viii) POL	19.85	21.69	22.69	16.44	17.80	9.3	4.2	8.3
	(ix) Balance "Other goods"	37.43	35.28	33.76	23.51	23.65	-5.7	-4.3	0.6
2.	Net tonne-kilometres (billion)	214.10	222.53	222.37	161.98	166.86	3.9	-0.1	3.0
3.	Net tonne-kilometres per wagon per day (BG)	1420	1449	1453	1395	1424	2.0	0.3	2.1
4.	Passenger traffic originating (million)	3594	3792	3500	2628	2699	5.5	-7.7	2.7
5.	Passenger kilometres (billion)	256.5	269.4	263.7	195.5	206.3	5.0	-2.1	5.5
*Provisional		*April-December							

indicator of utilisation of assets on the Railways viz. net tonne-kms per wagon per day, the Seventh Plan envisaged a target of 1350 ntkms per wagon per day on broad gauge and 650 ntkms per wagon per day on metre gauge for the terminal year of the Plan. The target had been surpassed on broad gauge in the second year with an achievement of 1462 ntkms per wagon per day and on metre gauge in the first year of the Seventh Plan with an achievement of 677 ntkms per wagon per day. This has further gone up in 1988-89 to 1453 ntkms per wagon per day on broad gauge and 763 ntkms per wagon per day on metre gauge. The target for the current year on broad gauge is 1475 ntkms per wagon per day.

3.41. The Railways have on 1st March, 1990 released a "Status Paper on Indian Railways" which looks at the various issues faced by the Railways and analyses some of the policy options available. The need for technology upgradation and increase in line capacity to meet future traffic projections are highlighted in the Status Paper. The need for subsidising passenger movement and the movement of essential commodities to reduce the burden on the socially disadvantaged segments of society is also recognised. Decisions on these issues however, have implications for the finances and profitability of the Railways and need to be viewed with great care, particularly

in the context of the growing reliance on commercial market borrowings.

Ports

3.42 The Jawahar Lal Nehru Port at Nhava Sheva became the eleventh major port of the country, when it came into operation in May 1989. With its commissioning and augmentation of capacities at other ports, the total cargo handling capacity at the major ports will increase to 149.08 million tonnes by the end of March, 1990 from a level of 141.93 million tonnes in March, 1989.

3.43 Cargo handled at the 10 major ports of the country during 1988-89 at 146.4 million tonnes was 9.5 per cent higher than 133.7 million tonnes handled in 1987-88 and 14.2 per cent above the target of 128.15 million tonnes. Major increases were recorded in the traffic of iron ore, coal, foodgrains and fertilisers. The traffic in vegetable oils, however, declined as compared to 1987-88. Growth in cargo handling achieved during the year at 9.5 per cent was higher than the growth of 7.5 per cent achieved in 1987-88. Cargo handled at almost all the major ports increased in 1988-89 over the previous year. Only in the case of Calcutta and Kandla there was a marginal fall of about 1 per cent at each port. Maximum growth in traffic was recorded by Visakhapatnam port. Visakhapatnam and Madras ports performed very well by exceeding

the target by 34.9 per cent and 38.0 per cent respectively, followed by Paradip by 20.6 per cent. All other ports also achieved their targets. The container traffic tonnage at 5.5 million tonnes in 1988-89 recorded an increase of 9 per cent as compared to the previous year's level of about 5.0 million tonnes. More than 50 per cent of the container traffic continued to be handled at the port of Bombay. The total cargo handling capacity at major ports in 1988-89 remained at 141.93 million tonnes. Capacity utilisation during the year was 103.1 per cent as compared to 94.2 per cent in 1987-88.

3.44 During the period April—December this year, cargo handled at the major ports at 105.88 million tonnes showed a marginal decrease of 1.1 per cent as compared to the corresponding period of 1988-89. The ports of Visakhapatnam, Tuticorin and New Mangalore have exceeded their targets as well as the traffic handled in the corresponding period last year. Bombay port though having achieved the target, handled a cargo traffic which is lower as compared to the corresponding period last year, partly due to some diversion of traffic to J.L. Nehru port. The target fixed for cargo handling at major ports for the current year is 146.00 million tonnes and about 72.5 per cent of the target has been achieved in the first nine months.

Shipping

3.45 Acquisition of Indian shipping tonnage showed signs of improvement. The fleet strength by March, 1989 was 389 vessels of 5.70 million Gross Registered Tonnage (GRT) as compared to 366 vessels with 5.54 million GRT in March, 1988. By January, 1990 the total GRT has risen further to 5.92 million GRT. Coastal shipment of coal to the South via Haldia, Paradip and Visakhapatnam, improved by 14.4 per cent from 4.80 million tonnes in 1987-88 to 5.49 million tonnes in 1988-89. During April—December, 1989 coastal shipment of coal at 4.63 million tonnes was 21.8 per cent higher than 3.80 million tonnes shipped during the corresponding period of 1988.

Telecommunications

3.46 Telecommunications sector performed well in 1988-89 in creating additional switching capacity, providing new telephone connections and in the production of switching equipment. Additional switching capacity commissioned during the year was 4.68 lakh lines being 37.6 per cent higher than the 3.40 lakh lines commissioned during 1987-88. About 25.4 per cent of this capacity expansion was in the four metro districts of Delhi, Bombay, Calcutta and Madras, where it was higher by 17.4 per cent over the previous year.

TABLE 3.10
Trends in Port Traffic (Major Ports)

		(Million Tonnes)							
							Percentage change		
Sl. No.	Commodity	1986-87	1987-88	1988-89£	April-December£		1987-88	1988-89	1989-90*
					1988-89	1989-90	1986-87	1987-88	1988-89*
1	2	3	4	5	6	7	8	9	10
1.	POL	56.11	63.50	64.36	48.47	45.24	13.2	1.4	—6.7
2.	Iron Ore	30.58	28.75	32.73	22.44	22.58	—6.0	13.8	0.6
3.	Fertiliser & Raw Materials	5.33	4.52	5.12	3.73	5.39	—15.2	13.3	44.5
4.	Foodgrains	0.68	1.13	2.35	1.96	0.96	66.2	108.0	—51.0
5.	Coal	9.62	12.79	15.60	10.99	12.76	33.0	22.0	16.1
6.	Vegetable Oil	1.66	2.15	1.44	1.21	0.34	29.5	—33.0	—71.9
7.	Other Liquids	2.30	2.03	2.68	2.41	1.80	—11.7	32.0	—25.0
8.	Containerised Cargo	4.46	5.01	5.46	3.97	4.88	12.3	9.0	22.9
9.	Others	13.63	13.81	16.64	11.91	11.93	1.3	20.5	0.2
	Total	124.37	133.69	146.38	107.09	105.88	7.5	9.5	—1.1

£Provisional *April—December
S/35 Fin/90—7.

3.47 The number of new telephone connections provided during 1988-89 was 3.75 lakh Direct Exchange Lines (DELs) which was 19.7 per cent higher than the previous year's level of 3.13 lakh DELs. The four metro districts accounted for around 27.4 per cent of the total new telephone connections provided during the year. While there was a decrease of over 38 per cent as new telex capacity of 2063 lines was added during the year, the number of new telex connections provided at 3900 was about 13.4

per cent higher than the previous year's achievement. Laying of telephone cables during 1988-89 at 59.27 lakh Conductor kms (Ckms) was 13.7 per cent higher than the achievement of 52.11 lakh Ckms during 1987-88. Total production of switching equipment (strowger, crossbar and electronic) by the Indian Telephone Industries (ITI) was production value equivalent to 7.25 lakh lines which was 41.6 per cent higher than the figure for 1987-88.

TABLE 3.11
Performance of Telecommunications Sector

Sl. No.	Group/Total	1986-87	1987-88	1988-89†	April—December‡		Percentage change		
							1987-88	1988-89	1989-90*
					1988-89	1989-90	1986-87	1987-88	1988-89*
1	2	3	4	5	6	7	8	9	10
I. Addition to Switching Capacity : (Lakh Lines)									
(1)	Metro Districts	1.00	1.44	1.19	0.36	0.30	44.0	17.4	—16.7
(2)	Others	2.24	1.96	3.49	1.18	1.11	—12.5	78.1	—5.9
	Total (All—India).	3.24	3.40	4.68	1.54	1.41	4.9	37.6	—8.4
II. Telephone Connections Provided : (DELs)(000 Nos.)									
(1)	Metro Districts	113.73	114.12	102.82	47.00	44.00	0.3	9.9	—6.4
(2)	Others	210.42	198.96	272.11	105.00	129.00	—5.4	36.8	22.9
	Total (All—India).	324.15	313.08	374.94	152.00	173.00	—3.4	19.7	13.8
III. Telex Service :									
(1)	Telex Capacity (Lines)	2450	3342	2063	1368	730	36.4	—38.3	—46.6
(2)	Telex Connections (Nos.)	4132	3438	3900	2303	2125	—16.8	13.4	—7.7
IV. Production of Switching Equipment : ('000 lines)									
(1)	Strowger	166.52	154.24	213.23	139.69	117.34	—7.4	38.2	—16.0
(2)	Crossbar	89.04	97.90	86.50	56.41	38.76	10.0	—11.6	—31.3
(3)	Electronic	175.03	259.57	425.10	166.81	340.73	48.3	63.8	104.3
	Total	430.59	511.71	724.83	362.91	496.84	18.8	41.6	36.9
V. Laying of Telephone Cables : (Lakh Conductor kilometres)									
(1)	Metro Districts	17.31	25.07	23.36	12.18	10.75	11.8	6.8	—11.7
(2)	Others	19.52	27.04	35.91	20.95	27.05	38.5	32.8	29.1
	Total (All—India)	36.83	52.11	59.27	33.13	37.80	41.5	13.7	14.1

†Provisional.

*April—December.

3.48 During April-December 1989 the number of direct exchange lines, i.e. new telephone connections, provided during the period at 1.73 lakh DELs was also more than the previous year's achievement of 1.52 lakh DELs by 13.8 per cent. Of the total connections provided, 25.4 per cent were in four metro cities. The provision of new telephone connections in other regions was also higher by 22.9 per cent than in the corresponding period of the previous year. So far 37.8 lakh Ckms of cable have been laid during the period April-December this year as against 33.13 lakh Ckms of the corresponding period of the previous year. ITI produced production value equivalent to 4.97 lakh lines of switching equipment during April-December this year which is about 36.9 per cent more than the production value equivalent to 3.63 lakh lines in the corresponding period of the previous year. The bulk of this increase was in the electronic equipment. Production of electronic switching equipment at production value equivalent to 3.41 lakh lines exceeded by 104.3 per cent the production value equivalent to 1.76 lakh lines during the corresponding period of the previous year.

Basic Industries

Steel

3.49 Production of saleable steel in 1988-89 by the six integrated steel plants at 9.21 million tonnes recorded a growth of 7.2 per cent over the previous year's production of 8.59 million tonnes, but marginally fell short of the target of 9.28 million tonnes. There was an acceleration in the growth of steel production in the year from a modest growth of 4.5 per cent

achieved in 1987-88. The five integrated steel plants of Steel Authority of India (SAIL) produced 7.26 million tonnes of saleable steel in 1988-89 achieving a growth of 8.8 per cent over the previous year's production of 6.67 million tonnes. There was a perceptible improvement in the capacity utilisation of the SAIL plants; from 77 per cent in 1987-88 to 80 per cent in 1988-89. Total production of finished steel including that of the secondary producers and mini-steel plants during the year was 11.54 million tonnes which was 5.7 per cent higher than the production at 10.92 million tonnes in 1987-88. With an import of 1.61 million tonnes to supplement the domestic production, estimated consumption of finished steel in 1988-89 was about 13.6 million tonnes.

3.50 There has been a setback in the production of saleable steel by the integrated steel plants so far during the current year. Production during April-December, 1989 at 6.43 million tonnes was 3.2 per cent lower than the production of 6.64 million tonnes in the corresponding period last year. Production by SAIL during the period declined to 5.00 million tonnes from 5.22 million tonnes in the corresponding period last year. Fall in production has been substantial in Durgapur (-18 per cent) and Indian Iron and Steel Company (-29 per cent) under SAIL. Overall capacity utilisation of SAIL plants for saleable steel drifted to 76 per cent from 78 per cent in the corresponding period last year. Production by Tata Iron and Steel Company (TISCO) at 1.43 million tonnes was almost equal to the achievement in April-December last year.

TABLE 3.12
Performance of Steel Sector

Sl. No.	Product	(Million Tonnes)							
		1986-87	1987-88	1988-89 [£]	April-December [£]		Percentage change		
					1988-89	1989-90	1987-88	1988-89	1989-90*
1	2	3	4	5	6	7	8	9	10
1.	Saleable Steel (M/Plants)	8.22	8.59	9.21	6.64	6.43	4.5	7.2	-3.2
2.	Saleable Pig Iron (SAIL)	1.26	1.20	1.01	0.77	0.96	-4.8	-15.8	24.7

*April-December

£Provisional

industry improved from 76.7 per cent in 1987-88 to 85.6 per cent during the year due to good monsoon and there was considerable reduction in stocks. Total offtake of fertilisers in 1988-89 at 11.03 million tonnes (including 1.14 of potassic fertiliser) was higher than the target of 10.20 million tonnes. At the close of the year, stocks of indigen-

ous fertilisers, in terms of nutrients, was 1.55 million tonnes of nitrogen and 0.26 million tonnes of phosphates as against 2.22 million tonnes and 0.44 million tonnes respectively at the close of the previous year. With the increase in domestic production, since 1986-87, there has been a substantial fall in the import of fertilisers, particularly nitrogenous fertiliser.

TABLE 3.14
Performance of Fertiliser Sector

Sl. No.	Sector	Percentage change							
		1986-87	1987-88	1988-89£	April—December£		1987-88	1988-89	1989-90*
					1988-89	1989-90	1986-87	1987-88	1988-89*
1	2	3	4	5	6	7	8	9	10
I. Nitrogenous		5410.0	5466.0	6712.4	4913.5	4934.9	1.0	22.8	0.4
(i) Public Sector		2514.0	2649.8	3880.9	2225.8	2066.2	5.4	16.3	-7.2
(ii) Private Sector		1778.0	1615.4	2041.7	1521.2	1622.0	-9.1	26.4	6.6
(iii) Co-operative Sector		1118.0	1200.8	1589.8	1166.5	1246.7	7.4	32.4	7.0
II. Phosphatic		1660.0	1665.0	2251.6	1851.9	1265.2	0.3	35.2	-31.7
(i) Public Sector		558.0	510.0	670.6	554.8	290.2	-8.6	31.5	-47.7
(ii) Private Sector		760.0	865.8	1284.7	1033.0	815.9	13.9	48.4	-21.0
(iii) Co-operative Sector		342.0	289.2	296.3	264.1	159.1	-15.4	2.3	-39.8
Total :		7070.0	7131.0	8964.0	6765.4	6200.1	0.9	25.7	-8.4

*April—December

£Provisional

3.55 Production of nitrogenous fertiliser during April—December, 1989 at 4.93 million tonnes was higher than the production at 4.91 million tonnes in the corresponding period last year by 0.4 per cent as against a growth of 26.1 per cent achieved in April—December last year. There was a fall in the production of phosphatic fertiliser from 1.85 million tonnes in April—December last year to 1.26 million tonnes in April—December this year, marking a decline of 31.7 per cent as against a growth of 64.5 per cent achieved in the corresponding period last year. The fall in the production of phosphatic fertiliser was mainly due to a shortage in imported phosphoric acid. Compared to last year, the capacity utilisation of the industry during April—

December 1989 declined from 84.1 per cent to 80.8 per cent in nitrogen and from 96.1 per cent to 61.3 per cent in phosphates.

3.56 Targets of production set for 1989-90 are 7.0 million tonnes of nitrogenous fertiliser and 2.4 million tonnes of phosphatic fertiliser. Upto the end of December, 1989, 70.5 per cent of the target has been achieved in nitrogen and 52.7 per cent in phosphates. Consumption of fertilisers during the current year is expected to be around 12 million tonnes (including 1.2 million tonnes of potassic fertiliser for which no indigenous capacity exists). About 78 per cent of this demand is likely to be met by domestic production.