Power

4. Power generation in 1996-97 was 394.5 billion kwh, indicating a growth of 3.8 per cent over 1995-96. The total generation of power during April-February 1997-98 was 382.8 billion kwh, higher than 358.7 billion kwh achieved during April-February 1996-97, recording a growth of 6.7 per cent. Thermal, nuclear and hydro generation grew by 6.7 per cent, 13.4 per cent and 6.2 per cent respectively (Table 9.2). The low Plant Load Factor (PLF) of thermal plants, heavy Transmission and Distribution (T&D) losses suffered by State Electricity Boards (SEBs) and other operational and technical inefficiencies led to constrained utilisation of existing capacities.

5. As on 31st March 1996, the installed captive generation capacity of 10 selected major industries in the country was 11,628.3 MW. Policies relating to captive generation have also been liberalised. A 50 per cent threshold level

has been prescribed for the industry's own consumption from the captive units and capacity in excess of this level is permitted for grid sale.

6. Thermal plants at present account for 73 per cent of the total power generation; hydroelectricity plants contribute 25 per cent and the remaining 2 per cent accrues from nuclear plants. The installed capacity of power generation as on March 31, 1997 was 85,742 MW. As against the targeted generation of 1,998 MW for April-December 1997-98, 1,636 MW has been added. The average Plant Load Factor (PLF) in the Central PSUs in 1996-97 and during April-February 1997-98 was appreciably higher than that achieved by the State Electricity Boards (SEBs). There were wide inter-state variations in the average PLF of thermal plants with the average for Eastern and North-Eastern regions continuing to be much lower than the all-India level during 1997-98 (Table 9.3).

7. The commercial losses of SEBs, which, in

TABLE 9.2 Trends in the Power Sector (utilities only)							
			April-February*		Change over previous year		
	1995-96	1996-97*	1996-97	1997-98	1996-97	1997-98@	
		(1	Billian Kwh)			(per cent)	
1 Power generation	380.1	394.5	358.7	382.8	3.8	6.7	
() Hydro-electric	72.5	68.6	63.7	67.6	-5.4	6.2	
(ii) Thermal	299.6	316.9	286.9	306.0	5.8	6.7	
(iii) Nuclear	8.0	9.0	8.1	9.2	12.5	13.4	
2 Plant load factor of thermal plants (percent) 63.0	64.4	63.8	64.4	-	-	

* Provisional. @ April-February

Note: These figures exclude captive power generation.

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	TABLE 9.3 Thermal Plant Load Factor								
							April-February*		
		1992-93	1993-94	1994-95	1995-96	1996-97*	1996-97 Actual	1997-98 Target	1997-98 Actual
I	State Electricity Boards	54.1	56.6	55.0	58.0	60.3	59.5	64.1	60.5
Ι	Central Sector	62.7	69.8	69.2	70.9	71.0	70.4	68.7	70.2
I	Private Sector	58.8	57.0	65.8	72.3	71.2	71.7	65.2	71.9
IV	Region								
	Northern	62.0	64.0	59.1	62.0	64.7	64.2	69.6	67.1
	Western	59.7	62.4	63.8	68.1	70.2	69.5	70.8	69.7
	Southern	62.6	68.3	69.1	74.7	75.8	74.8	73.8	76.6
	Eastern	39.8	44.8	43.7	42.7	42.2	41.6	46.8	41.8
	North Fastern	24.3	19.9	26.7	28.6	27.1	27.4	34.9	21.9
A11	India	57.1	61.0	60.0	63.0	64.4	63.8	65.8	64.4
	* Provisional								

absolute terms were a little over Rs 4,000 crore in 1991-92, shot up over a five year period to Rs 9,453 crore in 1996-97. The hidden subsidy for agriculture and domestic sectors has increased Rs 7,248 crore in from 1991-92 to Rs 19,862 crore in 1996-97, Rs 23,010 crore in 1997-98(RE) and is projected at Rs. 25,772 crore in 1998-99 (AP). Introduction of proposed national minimum agricultural tariff of 50 paise/kwh, even if implemented, will leave uncovered a substantial portion of the subsidy. The subsidies involved in sale of electricity by the SEBs, commercial losses involved and the revenue mobilisation are indicated in Table 9.4.

8. The SEBs continue to suffer from high T&D losses. T&D losses have marginally declined to 21.1 per cent in 1994-95 from 21.8 per cent in 1992-93. The losses are extremely high in comparison to the international average of less than 10 per cent for the advanced countries. T&D losses are occurring due to sparsely distributed loads over large rural areas, substantial energy sold at low voltage levels, inadequate investment in distribution systems, improper billing and high pilferage.

9. Restoration of the financial health of SEBs and improvement in their operational performance continue to remain a critical issue in the power sector. In terms of Section 59 of the Electricity

(Supply) Act, 1948, SEBs are required to earn a minimum rate of return (ROR) of 3 per cent on their net fixed assets in service, after providing for depreciation and interest charges. This provision was to become operative from the accounting year 1985. However SEBs are yet to comply with this statutory stipulation. While in 1993-94, 13 SEBs had a positive ROR, in 1995-96 it increased to 14. Similarly as against 4 SEBs with a negative ROR in 1993-94, there were 3 in 1995-96. Only 5 SEBs had ROR of more than 3 per cent in 1995-96. Managerial and financial inefficiencies in state sector utilities have adversely affected capacity addition and system improvement. While the SEBs do not have enough resources to finance future programmes, they are also unable to raise investible funds from alternate sources due to their poor financial and commercial performance.

10. Orissa was the first state to introduce major reforms in power sector through enactment of Orissa Reforms Act, 1995, which came into effect from 1st April 1996. The Haryana State Restructuring Bill, 1997 has been adopted by the State Assembly and has received Presidential assent. Rajasthan, Andhra Pradesh and Gujarat are also following a similar course. Assam, Karnataka, Bihar, Madhya Pradesh, Maharashtra, Punjab, Tamil Nadu, Kerala and J&K have also

TABLE 9.4							
Financial Performance of the State Power Sector							
	(Rs. Crore)						
	1996-97	1997-98 (RE)	1998-99 (AP)				
A. Gross Subsidy involved							
(i) On account of sale of Electricity to:							
(a) Agriculture	15,628	18,296	20.432				
(b) Domestic	4,234	4,714	5,340				
(c) Inter-State Sales	285	235	331				
Total	20,147	23,245	26,103				
(ii) Subventions Received from State Govts.	6,284	3,807	3,860				
(iii) Net Subsidy	13,863	19,438	22,243				
(iv) Surplus Generated by sale to other sectors	7,849	11,136	12,633				
(v) Uncovered Subsidy	6,014	8,302	9,610				
B. Commercial Losses @	9,453	10,345	11,378				
C. Revenue Mobilisation							
(i) Rate of Return (ROR) #	-17.2	-17.6	-17.8				
(ii) Additional Revenue Mobilisation from achieving							
(a) 3 per cent ROR	11,106	12,106	13,298				
(b) From introducing 50 paise/unit from Agriculture/Irrigation	2,417	2,622	2,547				
RE: Revised Estimates. AP: Annual Plan Projections. # In per cent.							

@ Commercial losses are different from uncovered subsidy because they include financial results of other activities undertaken by the SEBs.

Note: The above information excludes J&K for Annual Plan 1998-99. The earlier figures for 1996-97(RE) and 1997-98(AP) in respect of J&K have been taken as 1996-97 (Actual) and 1997-98 (RE).

initiated action for undertaking reforms and restructuring of the power sector. In order to break the impasse with regard to making power sector commercially viable, a major policy initiative has been taken where the Government of India has issued the Electricity Regulatory Commissions Ordinance, 1998 on April 25, 1998 for setting up of Central Electricity Regulatory Commission (CERC) at the Centre and State Electricity Regulatory Commissions (SERCs) in the States for rationalisation of tariff and other allied matters.

11. The net budgetary support to Central sector undertakings under the Ministry of Power as a proportion of the approved plan outlay has been declining over the years. It was Rs 719.5 crore in

1996-97 which amounted to only 10.6 per cent of the total plan outlay. Owing to the decline in budgetary support, the central PSUs have to mobilise resources through Internal and Extra-Budgetary Resources (IEBR). During 1996-97, PSUs were able to mobilise resources amounting to Rs 3,145 crore under IEBR. The actual utilisation of Plan allocation was of the order of Rs 5,277 crore against the approved outlay of Rs 6,790.3 crore. During 1997-98, the Planning Commission approved an outlay of Rs 6,742.4 crore, which includes Rs 1,020 crore as net budgetary support. To enable timely completion of hydro projects this was further increased to Rs 1,917.5 crore by Ministry of Finance through supplementary grants.