

SIXTH REPORT
STANDING COMMITTEE ON ENERGY
(1994-95)

(TENTH LOK SABHA)

MINISTRY OF POWER—
DEMANDS FOR GRANTS (1994-95)

*Presented to Lok Sabha on 19th April, 1994
Laid in Rajya Sabha on 19th April, 1994*

APR 1994



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CORRIGENDA TO THE SIXTH REPORT OF
THE STANDING COMMITTEE ON ENERGY
(1994-95).

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**COMPOSITION OF THE STANDING COMMITTEE ON ENERGY
(1994-95)**

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Shri Jaswant Singh

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(iv)

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SECRETARIAT

1. Shri G. L. Batra — *Additional Secretary*
2. Shri G. R. Juneja — *Deputy Secretary*
3. Shri A. L. Martin — *Assistant Director*

INTRODUCTION

I, the Chairman of the Standing Committee on Energy (1994-95) having been authorised by the Committee to present the Report on their behalf, present this Sixth Report on the Demands for Grants (1994-95) relating to the Ministry of Power.

2. The Standing Committee on Energy (1993-94) had considered and adopted the Report at their sitting held on 31st March, 1994 and also held discussion with the officials of Ministry of Power on the same day. This Committee's term having ended on 7 April, 1994. It was reappointed on 8 April, 1994.

3. The Committee (1994-95) at their sitting held on 18th April, 1994 authorised the Chairman to finalise the reports adopted by the previous Committee and present them to Parliament.

4. The replies furnished by the Ministry of Power on the points contained in this report and also on the points raised by the Committee during their discussion with the representatives of the Ministry of Power on 31st March, 1994 have been appended to the Report. The comments received from the Ministry of Power on the extracts of observations of Comptroller & Auditor General in the audit para No. 6 of 1993 and the Opening Statement made by the Secretary (Power) before the Committee on 31st March, 1994 are also appended to the report.

5. A copy of verbatim proceedings of the discussion held by the Committee with the officials of the Ministry of Power on 31st March, 1994 is also laid in the House along with the Report.

6. The Committee wish to thank the representatives of the Ministry of Power who appeared before the Committee and placed their considered views. They also wish to thank the Ministry for furnishing the replies on the points raised by the Committee.

7. The Committee would also like to place on record their appreciation for the work done by the retiring members of the Committee of (1993-94). The Composition of the Committee (1993-94) is given in Appendix.

NEW DELHI;
April 18, 1994

Chaitra 28, 1916 (Saka)

JASWANT SINGH,
Chairman,
Standing Committee on Energy.

CHAPTER I

INTRODUCTORY

1.1. The Ministry of Power assists in evolving the general policy in the field of Energy. While the Ministry of Power and the Central Electricity Authority (CEA) are responsible for formulation of national policies for development of power and for coordination of related activities and optimum utilisation of the available resources, it is the States/Union Territories concerned that carry out the implementation of power development programmes and supply of power to the ultimate consumers. The efforts of the State Governments in this regard are supplemented by the Central Government by establishing a number of generation and transmission projects, which deal with bulk power.

1.2. The Demands for Grants of the erstwhile Ministry of Energy comprising the Department of Power, Department of Coal and Department of Non-Conventional Energy Sources were last discussed by the Lok Sabha in April 1989. In the present report, the Committee have restricted its examination to only major issues concerning the power sector in the context of plan budget and demands for Grants.

CHAPTER II

ANALYSIS OF DEMANDS FOR GRANTS AND PLAN BUDGET OF THE MINISTRY OF POWER

2.1. The Ministry of Power have presented Demands for Grants of Rs. 3650.48 crores (including Rs. 4 crores charged) for the year 1994-95 as against Rs. 2082.77 crores (actual) in 1992-93 and Rs. 2899.55 crores (R.E.) in 1993-94. The head-wise details of the demands for grants of the Ministry are shown in Appendix-I.

2.2. Sector-wise distribution of the Budgetary Support of the Ministry for 1994-95 is as follows:

(Rs. in crores)			
Sector	Non-Plan	Plan	Total
(a) Central Sector			
1. Secretariat Economic Services	3.06	—	3.06
2. C.E.A.	12.05	25.00	37.05
3. Generation			
a) Thermal	430.00	1275.84	1705.84
b) Hydro	—	909.59	909.59
4. Trans. and Distribution	—	345.00	345.00
5. Power Finance Corporation	—	175.00	175.00
6. Renovation and Modernisation of TPS (Phase-II)	—	40.00	40.00
7. System Improvement (OECF Loan)	—	50.00	50.00
8. Misc. Schemes	—	66.67	66.67
Total (a)	<u>447.58</u>	<u>2887.10</u>	<u>3334.68</u>
(b) State Sector			
Rural Electrification	—	316.00	316.00
Total (a+b)	<u>447.58</u>	<u>3203.10</u>	<u>3650.68</u>

Plan Outlay for 1994-95

2.3. The Committee observe that the figures regarding plan outlay for the Ministry of Power for the year 1994-95 indicated in the Expenditure Budget (Vol. I-P.30) of the Govt. are at variance with the figures given in the Performance Budget (P.28) of the Ministry. While the Expenditure Budget indicates an outlay of Rs. 8463.54 crores for 1994-95, according to Ministry's Performance Budget, the outlay is far less which stands at Rs. 7163.26 crores. The Committee would like the Ministry to clarify the position and indicate the exact plan outlay for the Ministry during 1994-95. However, for the purpose of analysing plan performance, the figures shown in the Performance Budget of the Ministry are being made use of.

Plan Budget

2.4. The details regarding the 8th Five Year Plan Outlay and actual utilisation/estimates of plan allocation in the first three years of the plan in respect of the Ministry of Power are given below:

	I.E.B.R.				Total IEBR	(Rs. in crores)			
	I.R.	Bonds etc.	Bor- rowing	Others		EAB	NBS	GBS	Total plan outlay
8th Plan	3110	9403	5086	380	17979	5441	2500	7941	25920
1992-93									
B.E.	—	—	—	—	3342	1425	400	1825	5167
Actual	—	—	—	—	1901	1426	276	1701	3602
1993-94									
B.E.	562	1850	1500	149	4061	1568	640	2208	6269
R.E.	556	1750	615	397	3318	1564	643	2207	5525
1994-95									
B.E.	632	2101	1093	450	4276	2247	640	2887	7163

IEBR — Internal and Extra Budgetary Resources

GBS — Gross Budgetary Support

NBS — Net Budgetary Support

EAB — External Assistance through Budget

I.R. — Internal Resources

2.5. It can be observed from the above table that the Net Budgetary Support envisaged for the Ministry as a whole for the 5 year period in the 8th plan is Rs. 2500 crores. As against this the Net Budgetary Support for the first three years of the plan has been Rs. 276 crores (actual) in 1992-93, Rs. 643 crores (R.E.) in 1993-94 and Rs. 640 crores (B.E.) in 1994-95. This would mean that only Rs. 941 crores will be available as Net Budgetary Support for the remaining 2 years of the 8th plan. The Committee would

like to know how it is proposed to raise additional resources considering the likely reduction in the NBS.

2.6. The Committee are concerned to note that the mobilisation of resources through IEBR in 1992-93 was Rs. 1901 crores which accounts for just 57% of the Budget estimate of Rs. 3342 crores. During the year 1993-94 also the budget allocation of Rs. 4061 crores under IEBR has been revised downwards to Rs. 3318 crores. The Committee wonder whether it would be really possible to mobilise as much as Rs. 4276 crores through IEBR budgetted during 1994-95.

2.7. Viewing from the above background, the Committee are disappointed to note that the Ministry has surrendered from Budgetary Support an amount of Rs. 124 crores with reference to Budget estimate of 1992-93. The Committee wish to be apprised of the reasons for non-utilisation of this amount during 1992-93.

Capacity Addition

2.8. The 8th Five Year Plan has provided for a capacity addition target of 30,538 MW with the following break-up:—

(1) Central Sector (inclusive of Nuclear Power Corporation and Neyveli Lignite Corporation)	12,858 MW
(2) State Sector (inclusive of 2810 MW in Private Sector)	17,680 MW
Total	<u>30,538 MW</u>

* 2.9. During 1992-93, the actual capacity addition against the target was as under:—

Type	Programme for 1992-93				Achievement during 1992-93			
	Central Sector	State Sector	Private Sector	Total	Central Sector	State Sector	Private Sector	Total
Hydro	540	321	18	879	115	240	18	373
Thermal	1920	1439	—	3359	2140	804	—	2944
Nuclear	220	—	—	220	220	—	—	220
Total	2680	1760	18	4458	2475	1044	18	3537

2.10. For the year 1993-94 a capacity addition target of 4439.25 MW was envisaged. The achievement during the period April-September, 1993 was 928 MW as against the programme of 1153 MW. The Central Sector has not added any hydro capacity though 295 MW capacity was expected to be installed in the Central Sector during April-September, 1993.

2.11. The Committee regret that the overall achievement in regard to capacity addition was only a little over 75% of target in 1992-93. The performance of Central Sector in the hydro capacity addition was dismal and the achievement was just around 20% i.e. 115 MW as against the target of 540 MW. During April-Sept., 1993, no hydro capacity was installed in the Central Sector though 295 MW of hydro capacity was targetted to be installed by the Centre.

2.12. The Committee would like to be informed of the reasons for this failure in achieving the capacity addition targets particularly in the hydro sector. The performance Budget of the Ministry has not disclosed the capacity addition target for the year 1994-95. The Committee would like to be informed in this regard as well.

2.13. The Committee observe in this connection that the budgetary support to National Hydro Electric Power Corporation has been reduced from Rs. 325 crores in 1993-94 to Rs. 230.25 crores in 1994-95. The Committee fail to understand the rationale of this reduction considering the fact that there is a need to increase the hydro capacity in the wake of the past record of shortfall in capacity addition.

Generation of Electricity

2.14. The actual energy generation in 1992-93 was 301066 MUs consisting of 224485 MUs thermal, 6748 MUs nuclear and 69833 MUs hydro as against the target of 302700 MUs. The Committee observe that the shortfall in generation against the target was 1634 MUs during 1992-93. The generation programme for 1993-94 has been fixed at 316700 MUs. The Committee would like to know the extent of peak shortage and energy shortage in the year 1992-93 and 1993-94 and the anticipated peak and energy shortages during 1994-95.

Energy Conservation

2.15. Energy Conservation is identified in the 8th Plan as one of the major thrust areas in the field of Energy. An Action-Plan is reportedly being formulated, as part of the National Energy Efficiency Programme, with the objective of saving 5000 MW of installed capacity by the terminal year of the plan. A provision of Rs. 8.00 crores was allocated in BE 1993-94 for Energy conservation which has been reduced to Rs. 5.50 crores in RE 1993-94 as an economy measure. A provision of Rs. 16.00 crores has been made in B.E. 1994-95.

2.16. The Committee observe that in practice energy conservation measures have not been given the importance they deserve. The most cost effective option available for bridging the gap between the demand and supply of energy in the short-term is effective energy conservation. The

Committee would like to be apprised of the progress made in formulating the action plan and the extent of saving realised in the first two years of the 8th plan considering the targetted saving of 5000 500 MW of installed capacity aimed at.

Studies and Training

2.17. The Central Electricity Authority discharges the functions relating to assessment, processing and coordination of training requirements under the various foreign aid/bilateral programmes in various disciplines in respect of CEA, State and Central Power Utilities. The target/achievement for the year 1993-94 and target for 1994-95 is given as under:—

Training in India		Training/Seminar abroad			International Seminar/workshop		
Targ. 93-94	Achievement upto Oct. 93	Tar. 94-95	Tar. 93-94	Achievement Oct. 93	Tar. 94-95	Attended upto Oct. 93	Tar. 94-95
108	38	150	20	8	20	5	15

2.18. The Performance Budget has not shown the target and achievement in 1992-93 in regard to training of personnel by CEA and has given only the half yearly achievement for 1993-94 against the whole year target. The Committee would like to point out that no meaningful conclusion can be drawn in the absence of comparable figures. The Committee hope that the Ministry will keep this point in view and incorporate the relevant information in the performance Budget in future. As regard to training of manpower, the Committee hardy need emphasise its significance.

Central Power Research Institute

2.19. The Central Power Research Institute (CPRI) was established in 1960 to serve as a National Laboratory for applied research in the field of electrical power and also to function as an independent authority for testing, evaluation and certification of electrical equipment and components. The 8th plan outlay for CPRI is Rs. 202.67 crores. The Budget provisions of CPRI during the years from 1992-93 have been as under:—

(Rs. in crores)				
1992-93		1993-94		1994-95
B.E.	Actual	B.E.	R.E.	B.E.
80.80	34.73	31	31	19.45

2.20. The Committee find that the utilisation of funds by CPRI in 1992-93 was just 40% of the budgetary provision. The Committee wish to

be informed of the reasons for steep shortfall in utilisation of funds by CPRI in 1992-93 and also whether the under utilisation had any adverse impact on its programmes and activities. The Committee also note that against the 8th Plan outlay of Rs. 203 crores the budgetary allocation in the first three years adds upto only around Rs. 85 crores. The Committee will await an explanation for the slow progress in utilising the 8th Plan outlay for CPRI.

NEW DELHI;
18 April, 1994

28 Chaitra, 1916 (Saka)

JASWANT SINGH,
Chairman,
Standing Committee on Energy.

APPENDIX I
DEMANDS FOR GRANTS FOR THE MINISTRY OF POWER

(Rs. in thousand)

Sl. Major No. Head	Actuals 1992-93		Budget Estimates 1993-94		Revised Estimates 1993-94		Budget Estimates 1994-95		Remarks
	Plan	Non-Plan	Plan	Non-Plan	Plan	Non-Plan	Plan	Non-Plan	
1 2	3	4	5	6	7	8	9	10	11

Demand No. 68

1. 3451	—	2,57,35	—	2,70,00	—	3,03,00	—	3,06,00	This head comprises of items like Salaries etc. of Sectt. Ministry of Power.
2. 2801	65,85,90	124,60,02	77,50,00	402,95,00	71,38,00	403,35,00	73,66,00	444,52,00	This head comprises of items like Small Hydro Electric potential, All India Load Survey Scheme, Badarpur, Thermal Power Stations, Rural Electrification Corporation, Transmission & Distribution CEA Salaries, OTA etc. Power System Training Institute. R & D, other expenditure like Salary, OTA, etc. Renovations & uprating of Hydel Unit; Study & Training, organisational development Co-generation Cell.

3.	3601	69,82,97	127,17,37	81,50,00	405,65,00	77,28,00	406,38,00	78,66,00	447,58,00	This head comprises of items like grants in aid to State Govts; Central Plan schemes & Incentive Payments etc.
4.	4801	1152,70,42	—	1836,04,00	—	1509,40,00	—	1542,85,00	—	This head comprises of items like Externally Aided Schemes.
5.	6801	721,97,00	—	5,69,36,00	—	899,89,00	—	1577,59,00	—	This head comprises of items like State Plan Schemes, Transmission & Distribution Schemes, Externally Aided Schemes.
6.	7601	11,09,21	—	6,60,00	—	6,60,00	—	4,00,00	—	This head comprises of exp. under the charged Head like Loans & Advances to State Govt. centrally Sponsored Plan Scheme etc.
Total		1955,5960	127,17,37	2493,50,00	405,65,00	2493,17,00	406,38,00	3203,1000	44,75,800	

APPENDIX II

OPENING STATEMENT MADE BY POWER SECRETARY DURING THE DISCUSSION HELD BY THE COMMITTEE ON 31ST MARCH, 1994

I consider it a privilege to be allowed to make a statement before this august Committee. At the very outset, I wish to submit that my Ministry and I personally have found the recently prepared report of the Sub-Committee on Energy extremely useful, pertinent and perceptive.

2. I wish to submit that we in the Ministry of Power respectfully accept these recommendations in toto. In fact, if I may submit, action had been initiated by us some time ago with respect to many of these. We have virtually eliminated giving net budgetary support for adding to generation capacity on the thermal side. Our emphasis has been on getting more out of the existing plants and a number of measures have been initiated by us in this regard. This includes, as the Hon'ble Members are perhaps aware drawing up an action plan in the last Power Ministers' Conference held in January, 1993 to improve the PLF of various Thermal Power Stations by a specific quantum in a specified time frame. I am happy to report that these actions have started yielding results and as against a PLF of 55.3% in the year 1991-92, we had a PLF of 57.1% in 1992-93 and in the current financial year which ends today we hope to have a countrywide average of 60.7%. This is against the prescribed target of 57.8%. The contribution of the Central Thermal Stations towards this objective has indeed been spectacular.

3. Improved PLF and higher machine availability of hydro power stations is reflecting itself in higher generation. Last year, we had a generation of about 301 billion units of electricity and this year by 31st March, we hope to have a generation of 323 billion units *i.e.* an increase of more than 7.2% over the previous year. This generation exceeds the target by 2.2%. To sustain such increases in future, however, we would have to undertake a massive programme of renovation and modernisation of power plants both thermal and hydel, particularly in the State sector. Towards this end, we have proposed that a Centrally-supported renovation and modernisation programme be taken up on the lines of a scheme which was in operation during the VII Plan though the programme now envisaged would be on a much larger scale and would also involve PFC which has access to institutional funds, both domestic and foreign.

4. Our capacity addition programme did lag behind in the first year of the Eighth Plan when we could add only 3537 MW of installed capacity as against the target of 4458 MW. This was primarily because of inadequate investments in the previous years, particularly in 1989-90 to 1991-92. With concerted efforts and constant monitoring this year, however, we hope to be successful in achieving in full the target of adding 4439 MW of new capacity.

5. For ensuring that in future we continue to have substantial capacity addition, we have expedited sanctioning of new schemes. During the current year alone, CEA cleared 17 schemes totalling 6847 MW of which 11 are in the State Sector and 6 are likely to be implemented by private entrepreneurs. For power industry in the country to improve significantly concerted action is required not only by the Central Government but also by the States particularly as Central generating and implementing agencies have to depend on the SEBs for distribution of their electricity. In this context, I am glad that State Governments are now coming forward with proposals to have a close look at their power industry and have shown willingness to undertake major restructuring if it becomes necessary. Also 12 States have signed the OFAPs (Operational and Financial Action Plan) required by PFC for obtaining institutional loans from it and have given commitments to effect improvements in their physical and financial performance in a specified time period.

6. Availability of resources has been a constraint in developing the power sector particularly, so in the first year of the Plan *i.e.* 1992-93 when the power sector was required to raise large amounts from the open market. For funding the total Plan outlay of Rs. 5167 crores, the Central PSUs were expected to raise Rs. 1647 crores through bonds but they could raise only a meagre Rs. 89 crores and also as against the prescribed target of obtaining Rs. 1300 crores of direct foreign assistance, they could raise only Rs. 509 crores. During the current year, CPSUs were given a target of raising Rs. 1850 crores through bonds and Rs. 1500 crores through direct foreign assistance. I am happy to inform this august Committee that after considerable amount of uncertainty particularly during the first 6 months of the current year, our CPSUs have been able to raise almost the entire target of bonds given to them though the amounts raised earlier in the year were at rates of interest considerably higher than those prevailing now.

7. While we are striving to find ways and means to overcome the problems in the short run, we can ill afford to ignore the imperatives of the medium term and which warrant capacity additions of high magnitude. While India is richly endowed with primary, commercial energy resources their conversion into actual capacities depends on the financial factor. It is against this background that the supplemental role of private sector acquires significance. The response to the policy has been encouraging. Out of many expressions of interest, 16 proposals have been considered by the FIPB and 7 have received clearance. It is recognised that these efforts would bear fruits only over a period of time and we would consciously strive to harmonise a variety of objectives to ensure additionality of resources in a manner which subserves our best long term interest. While public sector would continue to dominate this field for years to come, private resources will be harnessed simultaneously to meet the national challenge.

8. The various initiatives on the supply side are sought to be backed by efficient management of demand side options. Demand side management and energy conservation are two aspects to which we hope to be able to devote greater attention in future.

9. I would not take more time at this stage. The Ministry is grateful for the support and the encouragement of this august Committee in our earnest endeavours towards what has been truly described as the empowerment of the economy.

APPENDIX III

REPLIES TO THE POINTS CONTAINED IN THE COMMITTEE'S REPORT FURNISHED BY THE MINISTRY OF POWER

Analysis of Demands for Grants and Plan Budget of the Ministry of Power

Para 2.1 & 2.2 No Comments as factual position has been given.

2.3 The Committee observe that the figures regarding plan outlay for the Ministry of Power for the year 1994-95 indicated in the Expenditure Budget (Vol. I- p.30) of the Govt. are at variance with the figures given in the Performance Budget (p. 28) of the Ministry. While the Expenditure Budget indicates an outlay of Rs. 8463.54 crores for 1994-95 according to the Ministry's Performance Budget, the outlay far less which stands at Rs. 7163.26 crores. The Committee would like the Ministry to clarify the position and indicate the exact plan outlay for the Ministry during 1994-95. However, for the purpose of analysis plan performance, the figures shown in the Performance Budget of the Ministry are being made use of.

Comments of Ministry of Power

1. It is true that the Expenditure Budget indicates a total outlay of Rs. 8463.54 crores for Power in 1994-95. This, however, has 3 components, namely, allocation to the Ministry of Power, Ministry of Atomic Energy and Ministry of Coal for the power components. The details are indicated below:

Ministry of Power	Rs. 7163.26 crores (Pg. 155 of Expenditure Budget - Vol. II)
Nuclear Power	Rs. 1183.00 crores (Pg. 31 of Expenditure Budget - Vol. I)
Neyveli Lignite Corpn. (Min. of Coal)	Rs. 117.28 crores (Pg. 32 of Expenditure Budget - Vol. I)
Total	Rs. 8463.54 crores

It may, thus, be seen that there is no variation between the figures furnished in the Performance Budget of the Ministry of Power (Page 28) and the figures given in the Expenditure Budget (Vol. I) Grant No. 68.

2. It is to be mentioned that Vol. I of Expenditure budget gives both sectoral allocation as well as allocation to each Ministry/Department as per Demands for Grants. Since certain common activities are carried out by Units under different Ministries (in this case power generation from different sources), it is

essential to provide sectoral allocation separately and this does not lead to over-lapping.

3. Similarly, funds provided under a common programme to different ministries/units have to be clubbed together and exhibited under the nodal Ministry. It is for this reason that the amount provided to Rural Electrification Corporation under Minimum Needs Programme is included in the Demand of the Ministry of Finance, who are responsible for giving assistance to States under the programme. Such exhibition of expenditure does not amount to over-lapping since full details are given in Expenditure Budget Vol. II, as also in the respective Detailed Demands of Grants of each Ministry/Department.

2.4 No comments as the factual position has been given.

2.5 It can be observed from the above table (given in 2.4) that the Net Budgetary Support envisaged for Ministry as a whole for the 5 year period in the 8th plan is Rs. 2500 crores. As against this Net Budgetary Support for the first three years of the plan has been Rs. 276 crores (actual) in 1992-93, Rs. 643 crores (R.E.) in 1993-94 and Rs. 640 crores (B.E.) in 1994-95. This would mean that only Rs. 941 crores will be available as Net Budgetary Support for the remaining 2 years of the 8th plan. The Committee would like to know how it is proposed to raise additional resources considering the likely reduction in the NBS.

Comments of Ministry of Power

It is true that the net Budgetary Support included in the 8th Five Year Plan outlay for the Ministry of Power is only Rs. 2500 crores. The Working Group of the Planning Commission, set up to recommend the provisions for the Power Sector, had, however, envisaged an allocation of Rs. 6879.56 crores as Net Budgetary Support during the 8th Plan. The actual allocation, however, was restricted Rs. 2500 crores, as mentioned above.

It is also true that after providing for the actual expenditure of Rs. 276 crores in 1992-93 and Rs. 643 crores in BE 1993-94 and the provision of Rs. 640 crores in BE 1994-95, the balance available against the allocation of Rs. 2500 as Net Budgetary Support in the 8th Plan would be only Rs. 941 crores. Ministry of Power had, however, taken up with the Planning Commission the need for enhancement of the Net Budgetary Support, as a part of the exercise conducted for prioritising of the projects in the 8th Plan and Planning Commission has accordingly agreed in Oct. 1993 to provide an additional amount of Rs. 817 crores during 8th Plan as Net Budgetary Support. Of this, an amount of Rs. 195 crores was to be provided in RE 1993-94 which however, could not be made available by the Ministry of Finance due to overall shortage of funds.

The break up of the amount agreed to by the Planning Commission is as given below:—

(Rs. in crores)

	8th Plan allocation	1993-94 revised
1. NTPC	(+) 120	—
2. NHPC	(-) 315	—
3. DVC	(+) 120	(+) 80
4. THDC	(+) 383	(+) 50
5. NJPC	(+) 509	(+) 40
6. PFC	(-) 120	—
7. NEEPCO	(+) 120	(+) 25
Total	(+) 817	(+) 195

Due to resource constraints, the Planning Commission could provide only Rs. 640 crores in BE 1994-95. The Planning Commission has been supporting the need to give additional Net Budgetary Support to the hydel power projects of the Ministry of Power and it is expected that the Net Budgetary Support during the last 2 years of the Five Year Plan would be increased correspondingly.

The Ministry of Power proposes to take up the need for additional Net Budgetary Support, during the mid-term review of the 8th Five Year Plan, especially considering that the original allocation by Planning Commission was at the 1992-93 base-level and would need updating. The Ministry of Power is grateful to the Committee for the concern expressed in this behalf and would keenly look forward to its recommendation. The other options available to the Ministry are:—

- (i) Raise maximum possible amount from IEBR sources.
- (ii) Encourage private investment in the power sector which will reduce the gap in demand and supply of electricity.

The Joint Sector Corporation executing hydel projects such as NJPC, THDC etc. are not in a position to raise internal resources or extra budgetary sources. They have essentially to depend on Gross Budgetary Support. These projects have long gestation period and raising bonds even by NHPC is causing a problem of heavy repayment. The Ministry, therefore, is of the view that PSUs in the infrastructural sector especially Power should continue to be funded by Net Budgetary Support. Thus, there is a case for increasing the NBS to the Ministry of Power.

2.6 Mobilisation of Resources through IEBR

The Committee are concerned to note that the mobilisation of resources through IEBR in 1992-93 was Rs. 1901 crores which accounts for just 57% of the Budget estimate of Rs. 3342 crores. During the 1993-94 also the budget allocation of Rs. 4061 crores under IEBR has been revised downwards to Rs. 3318 crores. The Committee wonder whether it would be really possible to mobilise as much as Rs. 4276 crores through IEBR budgetted during 1994-95.

Comments of Ministry of Power

The Internal and extra budgetary resources comprise of the following elements:—

- (i) Internal Resources generated by PSU's.
- (ii) Resources raised by way of PSU bonds.
- (iii) Direct Foreign Assistance.
- (iv) Other loans and Commercial Borrowings.

An analysis of each of the above components given below would indicate that the Ministry of Power has made its assessment on a realistic basis and if the present trend of the market continues, it would be possible to raise the IEBR requirement of Rs. 4276.16 crores in 1994-95.

(i) *Internal Resources generated by PSUs*

Out of Rs. 4276.16 crores which is the total IEBR figure for Ministry of Power in 1994-95, Rs. 632.50 crores has been targeted for being met out of internal resources generated by profit making PSUs. These targets are assessed quite realistically in consultation with the Ministry of Finance and after taking into account the trend of receivable by PSUs from SEBs, the repayment obligations to meet debt servicing etc. The provisional figures for the financial year 1993-94 would indicate that the provision of Rs. 562 crores will be met fully. Thus, even in 1994-95 we should not have any problem in meeting our targets.

(ii) *Resources raised by way of PSUs Bonds*

Rs. 2101 crores is expected to be raised by way of Bonds for the year 1994-95. As pointed out by the Committee in its draft report, it is true that mobilisation through IEBR for 1992-93 was only Rs. 1901 crores, representing about 57% of the budget estimates of Rs. 3342 crores. The year 92-93 was, however, especially bad for resource mobilisation from internal capital market, in view of the various developments and strains which prevailed at that time. Moreover, the interest rates being quoted by Financial Institutions, Commercial Banks etc. were excessively high, and it was not possible for the PSUs to raise money at reasonable cost. As a matter of fact, even at the high rates of interest,

the Commercial Banks etc. were not willing to subscribe to the PSU Bonds and the matter was also brought to the notice of the Planning Commission. There was also hardly any prospect of raising money by public issues. As a result, the PSUs under the Ministry of Power could, in all, raise only Rs. 89 crores during 1992-93 as against Rs. 1647 crores allocated by the Ministry of Finance/Planning Commission.

The Capital Market started responding towards the last quarter of 1993-94 especially after the lowering of the RBI rate and as a sequel to Commercial Banks being permitted to purchase PSU Bonds for upto 5 per cent of their incremental deposit mobilisation. Most of the PSUs have been able to raise a major part of the allocated amounts of Bonds in 1993-94 at a rate of 14-15% P.A. and the total amounts raised under Bonds so far in 1993-94 comes to Rs. 1303.50 crores. If the trend continues, the Ministry of Power expects that it would be possible to raise Rs. 2101 crores through Bonds in 1994-95.

(iii) *Direct Foreign Assistance*

Rs. 1093.10 crores is expected to be raised through suppliers credits and other foreign commercial borrowings. Since this also includes direct loans to be received from World Bank, it is expected that the utilisation for 1994-95 under this head will be quite comfortable. Moreover, in view of the overall recession in the World-Market, equipment suppliers have been forthcoming to arrange buyers credit upto 80 per cent of the values.

(iv) *Other sources*

Rs. 449.56 crores is expected to be raised through loans and other commercial borrowings such as loans from UTI and other Financial Institutions. Keeping in view the fact that for the year 1993-94 we have been able to raise about Rs. 557 crores under this head, the Ministry is confident of meeting the target.

The IEBR figures for the year 1992-93, 1993-94 and 1994-95 compare as under:—

		(Rs. in crores)	
	B.E.	Actual	% of Actual to B.E.
1992-93	3342.00	1900.56	56.86%
1993-94	4061.00	2925.67 (Provisional)	72.04%
1994-95	4276.16	—	—

The above table would clearly indicate the improved position of IEBR in the year 1993-94 over 1992-93. Keeping this trend in mind the Ministry is hopeful of being able to raise resources allocated to it under IEBR for 1994-95.

2.7 Viewing from the above background, the Committee are disappointed to note that the Ministry has surrendered from Budgetary Support an amount of Rs. 124 crores with reference to Budget estimate of 1992-93. The Committee wish to be apprised of the reasons for non-utilisation of this amount during 1992-93.

Comments of Ministry of Power

DETAILS OF SURRENDER OF FUNDS DURING 1992-93

	(Rs. in crores)	
	Savings (-)	Excess (+)
1. Central Electricity Authority	2.64	—
2. Central Power Research Institute	—	7.20
3. Power Engineers Training Society	5.32	—
4. Energy Conservation Scheme	3.76	—
5. Kutir Jyoti	—	5.00
6. Badar Thermal Power Project	—	1.64
7. Nathpa Jhakri Power Corp.	70.00	—
8. Power Finance Corp.	115.00	—
9. North East Electric Power Corp.	—	58.00
10. Power Grid Corp.	—	4.00
11. Inter-State Transmission Lines	1.40	—
12. Miscellaneous items	2.70	1.55
	(- 200.82	(+) 77.39

Net Savings — Rs. 123.43 crores

From the above, it would be seen that the main reason for savings was the surrender of Rs. 115 crores provided for PFC.

During pre-budget discussion, the Ministry of Finance was of the view that PFC not be given any budgetary support in that year, in view of their liquidity position. It was also tentatively agreed that NHPC will be given an additional Rs. 50 crores out of the above, which however, was not agreed to in the final statement of Budget Estimates. Hence, against the allocation of Rs. 125 crores provided as Net Budgetary Support towards investment in PFC an amount of Rs. 115 crores had to be surrendered. The other items surrendered included

Rs. 70 crores provided as World Bank assistance to NJPC, which was due to delayed award of civil contracts. Wherever possible, additional amounts were given to organisation like CPRI, NEEPCO and Power Grid, which had off-set the savings. Thus, every care is being taken to utilise maximum possible amounts.

It may, thus, be seen that the surrender of Rs. 115 crores was on account of the decision of the Finance Ministry.

2.8. No comments

2.9 The 8th Five Year Plan has provided for a capacity addition targets of 30,538 MW with the following breakup:

(1) Central Sector (inclusive of Nuclear Power Corporation and Neyveli Lignite Corporation)		12,858 MW
(2) State-Sector (inclusive of 210 MW in Private Sector)	:	17,680 MW
Total	:	30,538 MW

During 1992-93, the actual capacity addition against the target was an under:

(in Mega Watts)

Type	Programme for 1992-93				Achievement during 1992-93			
	Central Sector	State Sector	Private Sector	Total	Central Sector	State Sector	Private Sector	Total
Hydro	540	321	18	879	115	240	18	373
Thermal	1920	1439	—	3359	2140	804	—	2944
Nuclear	220	—	—	220	220	—	—	220
Total	2680	1760	18	4458	2475	1044	18	3537

Comments of Ministry of Power

The total capacity programme for the year 1992-93 was 4458 MW. In the Central Sector, as against a programme of 2680 MW, the achievement was 2475 MW i.e. 92.3% of the target. As noted by the Committee the achievement during 1992-93 was however lower than the programmed capacity addition for the entire power sector. In the case of Hydro Projects, the capacity addition of 373 MW was achieved as against the target of 879 MW. The main reason for the gap was on account of slippage of Chamara Hydro Electric Project which was envisaged to add 540 MW during 1992-93. This was largely on account of geological surprises and erosion in the diversion Canal. In case of Thermal projects, the slippage was on account of inadequate funds for Tanda Unit-IV and Tenughat etc.

2.10 For the year 1993-94 a capacity addition target of 4439.25 MW was envisaged. The achievement during the period April-September, 1993 was 928 MW as against the programme of 1153 MW. The central sector has not added any Hydro capacity though 295 MW capacity was expected to be installed in the central sector during April-Sept., 93.

Comments of the Ministry of Power

The slippage in achievement during the period April-Sept. 1993 was entirely on account of slippage in commissioning of one unit of Chamera-I of 180 MW and one unit of Salal Stage II of 150 MW. However, the Committee may like to note that during the end of the year 1993-94 the capacity addition is 4538.75 MW against the targeted capacity addition of 4439.25 MW.

Details of achievement in respect of capacity addition during 1993-94 with particular reference to last quarter:

CAPACITY ADDITION DURING 1993-94 (MW)

	Apr.-Dec. 1993	Jan.-Mar. 1993	Apr. 93 to Mar. 94
Hydro	13.65	783.50	797.15
Thermal	1170.28	2571.32	3741.60
Total	1183.93	3354.82	4538.75

(Details are Annex. I)

2.11 The Committee regret that the overall achievement in regard to capacity addition was only a little over 75% of target in 1992-93. The performance of Central Sector in hydro capacity addition was dismal and the achievement was just around 10% i.e. 115 MW as against the target of 540 MW. During April-Sept., 1993, no hydro-capacity was installed in the Central Sector though 95 MW of hydro capacity was targeted to be installed by the Centre.

2.12 The Committee would like to be informed of the reasons for this failure in achieving the capacity addition targets particularly in the hydro sector. The performance Budget of the Ministry has not disclosed the capacity addition target for the year 1994-95. The Committee would like to be informed in the regard as well.

Comments of Ministry of Power

2.11 & 2.12 As observed by the Committee, the overall achievement in regard to capacity addition in 1992-93 was only around 79% of the target. While Thermal Generation could achieve 88% of the programmed capacity addition, the Hydel Sector performance was only to the tune of 42% of the target.

The reasons for this shortfall in the hydro sector have already been summarised above in Para 2.10. The target of 540 MW set for the Central Sector in 1992-93 was fixed with the expectation that Chamera-I (3 x 180 MW) in Himachal Pradesh would be commissioned. However, to partially compensate for this slippage of Chamera-I, one unit of 115 MW of the Salal Stage-II was commissioned ahead of schedule.

While the target of the first half of 1993-94 was not achieved; in the full year of 1993-94 total Hydel capacity of 797.15 MW has been added. In the Central Sector capacity of 655 MW has been added against the target of 770 MW. Only one unit of Salal Stage-II (115 MW) has not been added in 1993-94 because of delay in civil works and due to siltation problems in Salal river. This third unit of Salal Stage-II will be commissioned in 1994-95.

The capacity addition programme for 1994-95 has been tentatively fixed as 4159.95 MW. This programme is being firmed up after the details of the full capacity addition for the year 1993-94 is known.

2.13 Budgetary Support for Hydro Projects

The Committee observe in this connection that the budgetary support to National Hydro Electric Power Corporation has been reduced from Rs. 325 crores in 1993-94 to Rs. 230.25 crores in 1994-95. The Committee fail to understand the rationale of this reduction considering the need to increase the hydro capacity in the wake of the past record of capacity addition.

Comments of the Ministry

Although budgetary support to NHPC has been reduced from Rs. 325 crores in 1993-94 to Rs. 230.25 crores in 1994-95, the budgetary support in the central sector for increasing the hydel capacity has in fact been increased from Rs. 686.89 crores in 1993-94 to Rs. 909.59 crores in 1994-95 which amounts to about 33% increase. The increase has been provided largely to the Nathpa Jhakri Power Corporation due to the fact that award of all major civil works has been completed, pre-construction activities are in full swing and the civil works have gathered momentum. The outlay of Tehri Hydro Development Corporation has also been increased besides increase in the outlays of Kopili Extension Project and Sardar Sarovar Project. This is due to the fact that these projects are ongoing and adequate budgetary support would enable deriving early benefits from them. The intention is to ensure that all ongoing projects are speeded up rather than taking up new projects and spreading the resources thinly.

2. NHPC is at present implementing Salal HE Project whose 1st Unit has already been commissioned, Uri & Dulhasti HE Projects with external assistance in J&K and Rangit Project in Sikkim. The allocation of funds have been

made to these projects keeping in view the overall availability of funds, *inter-se* priority and requirement of funds for these projects. Koel Karo and Dhauligan-ga HE Projects have not made a start due to inadequacy of funds. The State Govt. of Bihar has been requested to explore the possibility of private sector implementation of Koel Karo Project since the current resource position does not enable start of work immediately on this large project. Another main reason for low allocation of budgetary support to NHPC is the fact that NHPC as compared to the other project implementing agencies is in a position to generate internal resources from commissioned projects like Baira Siul, Loktak, Salal and Chamera HE Projects and also raise market borrowings.

During 1993-94, the provision for the net budgetary support for the hydel projects in the Central Sector was Rs. 375 cr. and Rs. 375 crores was actually released. In addition, another Rs. 30 crores was provided to Sardar Sarovar, making a total of Rs. 405 crores. The external assistance through budget for the central hydel corporations was 281.89 crores, which has been fully utilised. Thus the total budgetary support to hydel corporations released during 1993-94 is Rs. 687 crores. As against this, the gross budgetary support to hydel corporations during 1994-95 is Rs. 909.59 crores. In the case of net budgetary support the increase in allocation for hydel projects is from Rs. 405 crores to Rs. 430 crores.

2.14 Generation of Electricity

The actual energy generation in 1992-93 was 301066 MUs consisting of 224485 MUs thermal, 6748 MUs nuclear and 69833 MUs as against the target of 302700 MUs. The Committee observe that the shortfall in generation against the target was 1634 MUs during 1992-93. The generation programme for 1993-94 has been fixed at 316700 MUs. The Committee would like to know the extent of peak shortage and energy shortage in the year 1992-93 and 1993-94 and the anticipated peak and energy shortage during 1994-95.

Comments of Ministry of Power

Information in regard to peak and energy shortages, is as follows:

	1992-93	
	Peak Power (MW)	Energy (MU)
Requirement	52805	385266
Availability	41984	279824
Shortage	10821	25442
(Percentage)	(20.5)	(8.3)

	1993-94 (Tentative) Peak Power (MW)	Energy (MU)
Requirement	54132	322776
Availability	44641	299000
Shortage	9491	23776
(Percentage)	(17.5)	(7.4)

	1994-95 (anticipated) Peak Power (MW)	Energy (MU)
Requirement	58000	345640
Availability	48177	316526
Shortage	9823	29114
(Percentage)	(16.9)	(8.4)

2. In order to mitigate the affect of shortages, integrated operation of the contiguous states in each of the five regions is being promoted to derive the benefit of peak diversities, seasonal surpluses, etc. and inter-regional exchanges are being maximised to the extent practically feasible within the existing constituents.

2.15 Energy Conservation

Energy Conservation is identified in the 8th Plan as one of the major thrust arear in the field of Energy. An Action-Plan is reportedly being formulated, as part of the National Energy Efficiency Programme, with the objective of saving 5000 MW of installed capacity by the terminal year of the plan. A provision of Rs. 8.00 crores was allocated in BE 93-94 for Energy conservation which has been reduced to Rs. 5.50 crores in RE 93-94 as an economy measure. A provision of Rs. 16.00 crores has been made in BE 1994-95.

2.16 The Committee observe that in practice energy conservation measures have not been given the importance it deserves. The most cost effective option available for bridging the gap between the demand and supply of energy in the short term is effective energy conservation. The Committee would like to be apprised of the progress made in formulating the action plan and the extent of saving realised in the first two years of the 8th plan considering the targeted saving of 5000 MW of installed capacity aimed at.

Comments of Ministry of Power

2.15 & 2.16

1. Ministry of Power has already drawn up the Action Plan for implementation of National Energy Efficiency Programme (NEEP) and forwarded it to all concerned. The programme envisages saving of 2250 MW through better supply side management and 2750 MW through Demand Side Management. The components on the demand side are as follows:-

Industry	1300 MW
Lighting	450 MW
Domestic	200 MW
Commercial	150 MW
Agriculture	350 MW
Better Grid Management	300 MW

On the supply side, in the thermal power stations, through improving capacity utilisation, improving head rate and reducing auxiliary power consumption, 1350 MW saving is anticipated and through reduction in T&D losses 900 MW are proposed to be saved.

2. Action to implement various schemes has to be taken by a very large number of organisations and not by the Ministry of Power alone. For instance, on the supply side the action is required to be taken by all the power stations, all utilities responsible for distribution—be these in the public sector or the private sector. Certain action is beyond the power units since improving capacity utilisation is also dependent upon timely supply and quality of fuel. Similarly on the demand side, action has to be taken not only by the utilities but more so by the consumers—be these in the industry, commerce or domestic sector. In agriculture sector, action is not only required to be taken by the farmer but also by the utilities and financial institutions financing the purchase of pumpsets and by institutions like Bureau of Industrial Standard (BIS) which set standards etc. Energy Conservation thus becomes the responsibility of all other Ministries of Government of India—be these ministries of Agriculture, Industry, Steel, Surface Transport, Railway, Civil Aviation, Petroleum & Natural Gas etc. and the job of the Ministry of Power is to coordinate action leaving it to each Ministry to devise suitable ways and means.

3. It would thus be seen that action for Energy Conservation is required to be taken by a very large number of players. Ministry of Power has to mainly play the role of a Coordinator for which a policy frame work has been set by the Ministry of encourage the energy conservation. This *inter-alia* includes

requesting State Governments to rationalise their power tariff, undertaking programmes of Renovation & Modernisations, reduction in T&D losses etc. Towards this end, the Ministry also closely associates itself with the working of Bureau of Industrial Standard (BIS) on whose Governing Council the Ministry is represented. The Ministry of Power is also represented on the Governing Council of National Productivity Council whose overall job to ensure higher productivity or lower costs per unit of output. More specifically, to fill up the gap where other Ministries are not taking action, Ministry of Power initiate action through the Energy Management Centre which is directly under its control.

4. The Ministry of Power has also allocated large amounts to funds to Renovation and Modernisation for which a scheme costing Rs. 1848 crores has been prepared for Eighth Plan, with Power Finance Corporation partly funding it. Considerable action is being taken to improve capacity utilisation through PLF which has already started showing results and this year the PLF is the highest ever—60.7% as against 57.1% in the previous year.

5. Ministry is of also fully involved in reduction of T&D losses. An Action Plan for reduction of T&D losses by 1% per year, among other things, has been adopted in the last Power Minister's Conference, which is being monitored. PFC and REC are assigning high priority for funding System Improvement Schemes, including capacitor installation programme etc.

6. A number of States have set up Energy Development Agencies which are being supported by us directly as well as through EMC for which they are acting as lead agencies. It is not only EDAs but also a number of other agencies like CII, local productivity council, local research institution etc., which are also acting as lead agencies for EMC under its various programmes. Ministry is encouraging use of such non-official bodies so that they can act as extended arms of the Government and also bring about greater cooperation of consumers plus build up awareness for energy conservation.

7. A large number of training programmes, workshops, seminars are encouraged/participated by the Ministry of Power/EMC on energy conservation at various levels and many of these are also being financially supported. Energy Conservation Day is also celebrated on the 14th December every year, as part of the "Awareness Campaign" on energy conservation.

8. It would be seen from what has been enumerated above that large scale efforts and funds go into the totality of what constitutes energy conservation. The amounts available to Ministry of Power are essentially for demonstration and pilot projects in various sectors. Utilisation of funds depends on the ongoing schemes and status of fresh proposals received in the current year. After assessing the proposals received from the various organisations and approved project, the budget provision was revised to Rs. 5.5 crores. However, during

the current year projects worth Rs. 15.00 crores have been/are being sanctioned. Part of the amounts will be earmarked to form a Corpus Fund of EMC to make the Centre fully autonomous, as per the recommendation of high level committee.

2.17 Studies and Training

The Central Electricity Authority discharges the functions relating to assessment, processing and coordination of training requirements under the various foreign aid/bilateral programmes in various disciplines in respect of CEA, state and Central Power Utilities. The target/achievement for the year 1993-94 and target for 1994-95 is given as under:

Training in India			Training/Seminar abroad			International Seminar/Workshop	
Targ. 93-94	Achievement upto Oct. 93	Tar. 94-95	Tar. 93-94	Achievement Oct. 93	Tar. 94-95	Attended upto Oct. 93	Tar. 94-95
108	38	150	20	8	20	5	15

2.18 The Performance Budget has not shown the target and achievement in 1992-93 in regard to training of personnel by CEA and has given only the half yearly achievement for 93-94 against the whole year target. The Committee would like to point out that no meaningful conclusion can be drawn in the absence of comparable figures. The Committee hope that the Ministry will keep this point in view and incorporate the relevant information in the Performance Budget in future. As regard to training of manpower, the Committee hardly need emphasis its significance.

Comments of Ministry of Power

It is true that the Performance Budget for 1994-95 has not shown the targets and achievements of 1992-93 in regard to training of personnel by CEA. This target was however given in the Performance Budget of the previous year i.e. 1993-94. The Committee's observations regarding incorporation of the targets of the previous year too in the Performance Budget is noted for future.

Information relating to 92-93 is as under:

	Training in India	Training Abroad	International Seminar/Workshop
Target	105	35	12
Actual	119	34	12

The training in the relevant fields for all the Engineers of CEA at induction level as well as in-service/refresher courses is organised by availing training opportunities available with the established Institutes like National Power Training Institute, Power System Training Institute etc. in the country. CEA Engineers are also deputed to participate in various national workshops/seminars in fields related to Power Sector. CEA makes full use of the slots allotted for the training programmes sponsored by department of Personnel and Training. These programmes are mainly related to energy, environment, projects appraisal, financial management, computer etc. To upgrade the managerial skill/administrative skill and decision making of middle level/senior level, CEA Officers are deputed for training in the specialise organisations like Management Development Institute (MDI), Indian Institute of Public Administration (IIPA), Administrative College of India (ASCI) etc. To upgrade the knowledge in the area of computer technology the officers are sent for training in CMC, NIC etc.

iii) CEA Engineers are also deputed to Power System Training Institute and Hotline Training Centre at Bangalore which impart training in the field of power system planning, operation, protection, load despatch, hotline maintenance technique etc. These Institutes are directly under the control of CEA.

iv) Apart from in country training, CEA Engineers are also deputed abroad for their upgradation of knowledge and skills etc. against the slots made available from doner countries under fully aided/semi-aided programmes like Colombo Plan, US-Aid, UNDP, SIDA, JICA etc. Specialised training programmes abroad mainly relate to O & M, design of Thermal and Hydro stations, system improvement, reduction in T & D losses, management of power station etc. Officers are also deputed under transfer of technology programme for specific projects. Generally the middle level officers upto 45 years of age are deputed as for the guidelines laid down by Ministry of Finance (DEA) and doner countries.

v) Apart from the above, officers are also deputed for attending international conferences/symposia/finalisation of contracts/factory acceptance tests etc.

vi) A scheme of Technology Transfer and Training Project for CEA/CWC/GSI Officers with World Bank Assistance of US\$ 5 million has also been sanctioned in October, 1993. The scheme provides for technology transfer and training programmes. The scheme envisages to further upgrade the technical know-how of hydro power engineers by (i) establishing overall training strategy evolved by the development of detailed training programme, (ii) equipping CEA/CWC with upto date design manuals and skills, preparation of DPR and designs of manuals and skills, preparation of DPR and designs of Hydro Electric projects and with specialised office equipment, computer facilities and software in order to improve working systems.

vii) The target/achievement for the year 1993-94 and target for the year 1994-95 pertaining to studies and training, CEA is furnished as under:

Training in India			Training/Seminar abroad			International Seminar/ Workshop		
Targ. 93-94	Actual 93-94	Tar. 94-95	Tar. 93-94	Actual 93-94	Tar. 94-95	Targ. 93-94	Actual 93-94	Tar. 94-95
108	130	150	20	15	20	9	7	15

2.19. Central Power Research Institute

The Central Power Research Institute (CPRI) was establishment in 1960 to serve as a National Laboratory for applied research in the field of electrical power and also to function as an independent authority for testing, evaluation and certification of electrical equipment and components. The 8th plan outlay for CPRI is Rs. 202.67 crores. The Budget provision of CPRI during the years from 1992-93 have been as under:

(Rs. in crores)

1992-93		1993-94		1994-95
B.E.	Actual	B.E.	Actual	B.E.
89.00	4.73	31	31	19.45

2.20. The Committee find that the utilisation of funds by CPRI in 1992-93 was just of the budgetary provision. The Committee wish to be informed of the reasons for steep shortfall in utilisation of funds by CPRI in 1992-93 and also whether the under utilisation had any adverse impact on its programmes and activities. The Committee also note that against the 8th plan outlay of Rs. 203 crores the budgetary allocation in the first three years adds upto only around Rs. 85 crores. The Committee will await an explanation for the slow progress in utilising the 8th plan outlay for CPRI.

Comments of Ministry of Power

2.19 & 2.20. It may be seen from the printed book of "Demands for Grants for the Ministry of Power 1993-94 (Page-13)" that B.E. 1992-93 of CPRI was Rs. 30.80 crores (and not Rs. 80.80 crores). This was increased to Rs. 38.00 crores at the R.E. stage to accommodate the equipment from Ms/ CEGLEC, France for the High Power Laboratory at Bangalore. The amount of Rs. 38 crores was entirely used by CPRI in 1992-93.

The 8th Plan outlay of Rs. 203 crores for CPRI has been reduced to Rs. 176.17 crores consequent to prioritisation of CPRI's projects. This has been

necessitated due to the fact that the External Assistance Component may not materialise to the level of the 8th Plan allocation.

After taking into account the expenditure and budgetary provisions in the first 3 years of the plan, which comes to around Rs. 88 crores, CPRI will be required to utilise around Rs. 88 crores in the final 2 years of the 8th Plan, CPRI has already planned the schemes that it will be taking up for these years. The details are as under:-

(Rs. in Crores)			
Item	1995-96	1996-97	Total
1. Buyers Credit for HPL (High Power Laboratory)	1.66	1.68	3.34
2. 2nd Short-circuit Generator	32.88	—	32.88
3. R & D Schemes	0.76	0.76	1.52
4. New Projects	43.88	9.31	53.19
			90.93

As regards the New Projects, there are 5 new schemes relating to Augmentation and Modernisation of existing laboratories for a total of Rs. 60 crores and are under consideration of the Ministry.

UNITS COMMISSIONED DURING 1993-94

Sl. No.	Name of the Project/Unit	State/ Organisation	Capacity (MW)	Actual Commissioning Date
1	2	3	4	5
Central sector				
<i>Hydro</i>				
1.	Salal-5	J & K/NHPC	115	26.3.94
2.	Chamera-1	HP/NHPC	180	31.3.94 (R)
3.	Chamera-2	HP/NHPC	180	30.3.94 (R)
4.	Chamera-3	HP/NHPC	180	28.3.94 (R)
	Total (4 units)		<u>655</u>	
<i>Thermal</i>				
1.	Dadri ST-1	UP/NTPC	146.5	26.2.94
2.	Dadri ST-2	UP/NTPC	146.5	27.3.94
3.	Neyveli-7	TN/NLC	210	19.6.93
4.	Kahalgaon	Bihar/NTPC	210	17.3.94
5.	Farakka-5	WB/NTPC	500	16.2.94
6.	NCTPP-4	UP/NTPC	210*	24.3.94
7.	Gandhar GT-1	Guj/NTPC	131*	17.3.94
8.	Gandhar GT-2	Guj/NTPC	131*	31.3.94
	Total (8 units)		<u>1685</u>	
State Sector				
<i>Hydro</i>				
1.	Peena Ahobilam-1	AP	10	10.1.94
2.	Peena Ahobilam-2	AP	10	23.1.94
3.	Upper Sileru-3	AP	60	31.3.94 (R)
4.	Mallapur-1	Karnataka	4.5	19.11.93
5.	Mallapur-2	Karnataka	4.5	31.3.94 (R)
6.	Kallada-2	Kerala	7.5	29.11.93
7.	Sone Western Canal-3	Bihar	1.65	28.8.93

1	2	3	4	5
8.	Upper Rongnichu-3	Sikkim	2	2.2.94 (R)
9.	Upper Rongnichu-4	Sikkim	2	25.3.94 (R)
10.	Hasdeo Bango-1	MP	40*	21.3.94
	Total (10 units)		<u>142.15</u>	
<i>Thermal</i>				
1.	Pampore GT-1	J & K	25	7.1.94
2.	Pampore GT-2	J & K	25	6.2.94
3.	Anpara 'B'-4	U.P.	500	19.7.93
4.	Utran ST-1	Guj.	45	17.7.93
5.	Birsinghpur-2	MP	210	27.3.94
6.	Uran WH-1	Maharashtra	120	16.3.94
7.	Trombay GT-1	Mah/Pvt.	120	29.7.93
8.	Royalaseema-1	AP	210	31.3.94 (R)
9.	Yelahanka DG-1	Karnataka	21.32	31.1.94
10.	Yelahanka DG-2	Karnataka	21.32	26.11.93
11.	Yelahanka DG-3	Karnataka	21.32	19.10.93
12.	Yelahanka DG-4	Karnataka	21.32	27.7.93
13.	Yelahanka DG-5	Karnataka	21.32	14.5.93
14.	Kolaghat-4	W.B.	210	29.12.93
15.	Lakwa GT-5	Assam	20	3.01.94
16.	Lakwa GT-6	Assam	20	31.3.94 (R)
17.	Kota-5	Rajasthan	210*	26.3.94
18.	Pampore GT-3	J & K	25*	29.3.94 (R)
19.	Vijayawada-5	AP	210*	31.3.94
	Total (19 units)		<u>2056.6</u>	
	Total (All India)		<u>4538.75</u>	

(R) Rolled

* Preponed

APPENDIX IV

REPLIES TO THE POINTS RAISED BY THE COMMITTEE DURING THE DISCUSSION HELD WITH THE REPRESENTATIVES OF MINISTRY OF POWER ON 31.3.94.

ITEM NO. 1

NOTE ON THE RENOVATION & MODERNISATION (R & M) PROJECTS OF STATE ELECTRICITY BOARDS AND THE ROLE OF THE MINISTRY OF POWER IN ENCOURAGING SEBs TO TAKE UP R & M PROJECTS

Phase-I expenditure incurred and outcome.

Phase-II proposals and expenditure projected with particular reference to Bihar and other States where PLF is very low.

R & M Phase-I

The Phase-I of the programme had envisaged R&M of 34 power stations covering 164 old thermal units involving a total capacity of 13.586 MW. The total investment for this renovation programme was estimated at Rs. 1223 crores out of which an amount of Rs. 451 crores was financed as Central Loan Assistance and Rs. 772 crores from the State Plan/own resources. The programme envisaged an additional generation of 7000 MU per annum (7% increase in PLF) from the renovated units, which is equivalent to an addition of 1400 MW of new capacity. The overall coordination and monitoring of Phase-I R&M programme was carried out by CEA as per the statutory provision of the Electricity (Supply) Act, 1948. Out of the 34 power stations covered under the Phase-I of the programme, 90% R&M activities have been completed in 28 power stations. In 7 of these power stations the actual benefit well exceeded the target and in another 7 stations, the generation performance has improved significantly. Consequently, against the target of additional generation of 7000 MU/year additional generation from these 14 Schemes were as under:-

1988-89	11000 MU
1989-90	10800 MU
1990-91	10700 MU
1991-92	9500 MU
1992-93	10462 MU

In respect of the remaining 14 power stations (in which the requisite 90% R&M activities have been completed only recently), the performance was below expectation due to a number of factors, *inter-alia*, non-availability of inputs like coal, oil, etc. backing down the units due to low system demand, non-availability of funds for operating the units, shut down of units for carrying out life extension and unduly long duration of planned maintenance.

R & M Phase-II

In view of the usefulness of Phase-I of the R&M Programme, a fresh programme covering 46 old thermal power stations involving 209 generating units with a total capacity of 20,871 MW has been taken up for implementation during the Eighth Five Year Plan as Phase-II programme. This programme was expected to yield an additional generation of 8750 MU per annum which is equivalent to about 1,770 MW of new capacity addition. This programme was anticipated to extend the life of 24 units in a thermal power stations covering a capacity of 1403 MW by 15-20 year. The scheme was also envisaged to bring an improvement in environmental performance of 46 units having a total capacity of 9,238 MW. The total cost of the scheme under Phase-II is estimated at Rs. 1848 crores at current price. The Phase-II of the R&M programme was proposed to be funded totally out of the State Plan as no central loan assistance was envisaged. Power Finance Corporation, which had been entrusted with the responsibility of disbursement and management of central loan assistance w.e.f. 1.4.1988, was authorised by the Government to fund 70% of the total cost of the scheme by providing loans, subject to the conditions of eligibility of the loan being satisfied. PFC has been given a loan by the World Bank of \$265 million (Rs. 800 crores) to improve the efficiency of SEBs and the Phase-II outlay envisages a contribution of Rs. 242 crores by PFC towards this activity.

Since a number of SEBs are not eligible for PFC loans on account of their poor financial performance, the scheme has not covered all the identified power stations. In fact, in many SEBs, due to precarious financial position the normal maintenance activities are also not being carried out and even the performance of some of the stations covered under the PFC loan assistance has deteriorated due to non-availability of PFC loan assistance. As a result, the average PFL of the stations covered under Phase-II reduced to 49.9% in 1992-93 as against the average PLF of 51.5% obtaining at the time when the Phase-II proposals were framed. The total expenditure upto January 1994, was a meagre sum of Rs. 235.49 crores (12.7% of the total cost). It has also been assessed that the R&M Phase-II programme is likely to extend beyond the scheduled target of 1995-96 and it would take another 3-4 years for completion. It has also been assessed that if immediate financial assistance is not made available to these power stations, their PLF is likely to decline further and there may be serious damages/accidents to the plant and threat to the personnel working there.

Recent steps taken by Ministry of Power including those to encourage SEB's

Many of the SEBs are not eligible for PFC funding because of its bad financial performance. Therefore, realising that this is keeping out those very States where R&M is extremely essential because of their low PLF, (e.g., Bihar), the Government is now considering a proposal to separate those States which fall under eligibility criteria of PFC from those States falling under 'non-eligibility criteria'.

The Central Electricity Authority has, therefore, worked out a new scheme which would also cover those States which are not eligible for PFC funding. This new scheme is envisaged to be implemented through the Central Electricity Authority. The total year-wise fund requirement both for thermal & hydel schemes would be as under:-

YEAR WISE FUND REQUIREMENT FOR R&M SCHEMES

(Rs. in crores)			
Year	Thermal	Hydel	Total
Upto March 93	31.69	—	31.69
1993-94	55.56	12.00	67.56
1994-95	326.67	9.00	335.67
1995-96	221.69	150.00	371.69
1996-97	—	214.00	214.00
Total	635.61	385.00	1020.61

Total Central Loan Assistance Required is = 1020.61—31.69 (Expenditure already incurred) = Rs. 988.92 crores.

The Ministry of Power has, therefore, moved a proposal for the approval of the Committee of Secretaries for taking up a special R&M drive during the remaining years of the Eighth Five Year Plan and entrusting its implementation to the Central Electricity Authority. It would be entrusted with the task of approving R&M schemes, disbursing the funds assessed at Rs. 988.92 crores and monitoring the programme particularly for States for which PFC assistance is not likely to be made available. To make a beginning, Ministry of Power has made a small provision of Rs. 40 crores for R&M project (Phase-II) in its BE 1994-95. The amount will be released to SEBs as loan for R&M projects, as per the recommendation of CEA who will also monitor the progress of work.

It is hoped that, this would help in improving the plant performance in States like Bihar, where PLF is very low and also encourage the State Electricity Boards to take up R&M proposals which, at present, they are finding it difficult to, due to PFC's criteria of eligibility as also lack of availability of funds.

ITEM NO. 2**A NOTE ON THE PROJECTS INCLUDING KOEL KARO IN BIHAR AND SUPPLY OF POWER TO BIHAR FROM D.V.C. ALSO, PROPOSALS TO MEET SHORTAGE OF POWER IN DEFICIENT AREAS***Comments of Minister of Power*

1. The franchise area of DVC system covers the Damodar Valley in the States of Bihar and West Bengal, in which a large number of collieries, steel plants and such core sector industries are located. DVC supplies these loads out of its own generation and entitlement from the Central Sector Power Stations in the Eastern Region viz. Farakka, Kahalgaon STP Station and Chukha HE Power Stn. At present, with the improved availability of power in DVC system, the supply of power in the areas of Bihar served by DVC is quite satisfactory.

2. Allocation by DVC of peak load for different sectors was agreed to in a meeting taken by Secretary (Coordination), on 16.12.1981 and accepted by Ministry of Power in February, 1982. How the power is to be shared amongst different sectors *i.e.* Railway traction, coal mining, steel industry and mixed and other loads, at different levels of generation, was agreed to in the meeting and the DVC follows the above allocation.

3. Power supply to Bihar and West Bengal during 1993-94 has been as follows:—

Allocation in MVA from April, 1993 to February, 1994

West Bengal	448 MVA
Bihar	1035 MVA

Actual sale of energy in MU from April '93 to Feb '94

West Bengal	372.35 MU
Bihar	1238.52 MU

Thus, it would be seen that Bihar gets the lions share of DVC power. Though Bihar has been getting the major benefits from DVC, the Bihar State Electricity Board has not been paying the DVC's dues as a result of which the outstanding dues of BSEB as on 28.2.94 is Rs. 405.32 crores.

4. Over the past one year DVC has been constantly improving its generation and trying to meet the shortage of power in the valley. In fact, generation of 627 MU in the month of February, 1994 was a record and daily energy generation attained a new high of 27.75 MU on 25.2.94.

5. The actual power supply position in the rest of Bihar during the year 1993-94 upto Feb '94 is given below:—

	1993-94 (All fig. in MU) (upto Feb'94)
Requirement	7865
Availability	5130
Deficit	2735
Percentage	(34.8)

With the above mentioned power shortage conditions prevailing in the State, the power supply to different areas within the State is within the authority of Bihar Govt./BSEB. At present, there are no statutory power cuts/restrictions imposed in the State and the power supply is being regulated depending upon the day to day availability.

6. In order to bridge the gap between the demand and availability in Bihar, besides allocation of power from Central Sector Stations in the Eastern Region, assistance has been provided from un-allocated out-put of these stations depending upon relative percentage shortages in the constituent system of Eastern Region. At present, Bihar has been allocated 45% power from un-allocated out put of Central Sector Stations in the Eastern Region. The details of entitlement and actual drawal of power from Central Sector Stations and assistance availed from neighbouring Northern and North-Eastern Region during the period April-Feb '94 are given below:—

	Entitlement	(All figures in MU) Actual Drawal
Central Sector Stations	1301.1	2433.5
Northern Region	—	171.3
North-Eastern Region	—	31.9
Total	1301.1	2636.7

Hydro Development in Bihar

The total hydro potential of Bihar has been estimated as 538 MW at 60% load factor. 99.17 MW at 60% load factor has already been exploited which constitutes 18.43% of the economical exploitable potential. Hydel Projects under construction at present would result in further addition of 230.78 MW at 60% load factor resulting in exploitation of about 61.51% of hydro potential in Bihar.

Hydro Power Stations in Bihar

The following HE Stations with a total installed capacity of 156.6 MW are in operation in Bihar.

- [i] Subernrekha Power House-I [1x65 MW and Power House-II (1x65MW)]
- [ii] Kosi Hydrel Station [4x5 MW]
- [iii] Sone Western Canal [4x1.65 MW]

5. In addition to above, DVC have three following hydro projects in operation with a total installed capacity of 144 MW which serves some areas of Bihar.

- [i] Maithon [3x20 MW] — Bihar.
- [ii] Panchet Hill [1x40 MW] + [1x40 MW] Pumped Storage Project — Bihar/Bengal
- [iii] Tiliya [2x2 MW] — Bihar

Bihar also gets its share of 69 MW from Chukha Hydroelectric Project of Bhutan.

HE Stations under Construction in Bihar

The following HE Stations of Bihar Hydroelectric Power Corporation [BHPC] are under construction in Bihar:—

[i] Sone Eastern Canal [2x1.65 MW]	=	3.3 MW
[ii] Eastern Gandak Canal [3x5 MW]	=	15.0 MW
[iii] Chandil Dam [2x4 MW]	=	8.0 MW
[iv] North Koel [2x12 MW]	=	24.0 MW
Total	=	<u>50.3 MW</u>

Bihar has a share from Rangit HE Project [60 MW] and Koel Karo HE Project [710 MW] in Sikkim and Bihar States respectively and approved for execution by NHPC in Central Sector.

Koel Karo Hydroelectric Project [710 MW]

The 710 MW Koel Karo HE Project, to be located in Ranchi, Gumla and Singhbhum Districts of Bihar, envisages utilisation of the waters of the South Koel and North Karo rivers for generation of 1000 MUs of energy annually. The Project is meant to provide valuable peaking support to the Eastern Region.

2. The Project was taken over from the State Government in 1980 for execution in the Central Sector through NHPC. The environmental clearance

was received in June, 1982 and forest clearance in July, 1990. The process of acquisition of land for project suffered due to resistance from the local people who took the matter to the Supreme Court in 1984. The Supreme Court disposed off the matter in February, 1989 after a comprehensive plan for rehabilitation of the oustees families [about 7100 in number] had been submitted by the State Government.

3. The investment approval to the Project was accorded by the Government in November, 1991 at an estimated cost of Rs. 1338.91 crore for implementation by NHPC in a period of eight years. NHPC was hopeful of beginning work on the project during the 8th Plan and based on the working group discussions in the Planning Commission expected that funds to the extent of Rs. 500 crore in the form of net budgetary support from the Government would be made available to it for execution of the Koel Karo Project during the 8th Plan. However, the Government was not in a position to provide large net budgetary support to PSUs in the Power Sector and a major part of the 8th Plan allocation of Rs. 5200 crore was left to be mobilised by NHPC through market borrowings. However, the market response over the first two years of the 8th Plan was poor, NHPC had no choice but to confine its available resources to ensure timely commissioning of the ongoing Projects like Chamera St. I, Salal St. II, Dulhasti, Uri and Rangit. Work on new schemes, namely, Dhauliganga St. I in UP and Koel Karo in Bihar, could not commence immediately due to paucity of funds.

4. As the Government of Bihar had been pressing the Central Govt. to take immediate steps to implement the Project, they were advised in December, 1993 to explore the possibility of execution of the Koel Karo Project through private participation since the current resource position of NHPC just does not enable it to start work immediately on this large project. The State Govt. has, however, again insisted that the Central Govt./NHPC may implement the Project with external financing from World Bank or OECE [Japan], etc.

5. While it is uncertain whether World Bank/OECF or other external agencies would be interested in funding the Koel Karo Project, the fact is that external funds would cover only the off-shore portion of the project cost and NHPC would still require a considerable amount as counterpart funding for the project. Commencement of work on the Project in the Central Sector would, therefore, not be feasible immediately in view of the current resource position of NHPC.

ITEM NO. 3**HYDRO POWER DEVELOPMENT AND PROBLEMS OF
CLEARANCES OF HYDRO PROJECTS***Comments of Minister of Power**Hydro Potential*

As per the reassessment of hydro potential carried out by the Central Electricity Authority, economically exploitable hydro potential is 84044 MW at 60% load factor which will yield an annual energy of 442 billion units of electricity. With seasonal energy the total energy potential is assessed to be 600 billion units per year.

The hydro potential of 84044 MW would perhaps yield an installed capacity over 1,50,000 MW on the basis of probable average load factor. Hydro-electric schemes in operation account for only 14.5% and those under execution for only 7.2% of the total potential.

The installed capacity of Hydro increased in the past four decades and half by over 50 times from a paltry 1362 MW to an impressive 73200 MW (approx) upto 30.9.93 registering an annual compounded growth rate of about 9%. The country ranks 8th in the world after USA, erstwhile USSR, Spain, Germany, France, Canada and China in that order in total installed capacity.

*Efforts to Boost Hydro Development**Power Corporations*

Recognising that bulk of the hydro resources is concentrated in states not endowed with financial resources, the government created hydro power corporations in the central sector and the joint sector (central and state). The hydro corporations thus formed are as under.

Sl. No.	Name of Corporation	Sector	Year of creation
1.	National Hydro Electric Power Corporation (NHPC)	Central	1975
2.	North Eastern Electric Power Corporation (NEEPCO)	Central	1976
3.	Nathpa Jhakri Power Corporation (NJPC)	Central+ HP	1988
4.	Tehri Hydro Development Corporation (THDC)	Central+ UP	1988

These are in addition to Bhakra Beas Management Board (BBMB) and Damodar Valley Corporation (DVC) which are also under Ministry of Power.

The NHPC has five power stations, (Baira Siul (198 MW), Salal Stage I & II (575 MW), Loktak (105 MW), and Chamera (540 MW) and Tanakapur (120 MW) aggregating to 1538 MW in operation and 6 sanctioned projects (Dulhasti, Uri, Dhauliganga St. I, Koel Karo, Rangit, Salal-II), aggregating to 2035 MW under construction.

NEEPCO has completed two projects (Kopili and Khandong) with a total capacity of 150 MW and has in hand 3 sanctioned hydro projects (Ranganadi, Doyang & Kopili Extn.) with 580 MW of aggregate capacity.

NJPC has taken up the implementations of the 1500 MW Nathpa Jhakri HE Project, one of the largest in terms of physical dimensions and installed capacity.

The THDC has been entrusted with the construction of the Tehri Hydro Electric complex comprising 1000 MW Tehri Hydro Project, 1000 MW Tehri Pumped Storage Project and the 400 MW Koteshwar H.E. Project.

Private Sector in Hydro Development

To bring additionality to resources for the capacity addition in the Power Sector, Government of India has formulated a scheme to encourage greater participation by the Private entrepreneurs in India and abroad in electric Power generation, supply and distribution. These efforts would enhance the chances of private investment and create the financial, administrative and legal environment suitable for and conducive to massive investment by enterprises.

Following the liberal and attractive incentives offered by the Government, many private investors have concluded memoranda of understanding (MOU) and some of them have even submitted Project Reports (PR) for techno-economic clearance of CEA.

Problems of Clearances

Rehabilitation

Rehabilitation is becoming a major issue in the implementation of storage based hydro development and after funds constraints, it is one of the main reasons for the delay in the execution. While the project authorities have proposed liberal rehabilitation packages, the support of local leaders in accepting the package is not always forthcoming.

Land Acquisition

The problems arising in acquisition of land for project construction is causing suspension and delay in the construction activities. In the case of

Doyang Project (3x25 MW) in Nagaland the delay in land acquisition had caused a delay of atleast 2 years in commencement of construction.

Law and Order

Disturbed condition is one of the factors causing delay in project execution and even suspension of works in some of the projects. The projects affected by disturbed conditions are:—

— Dulhasti HE Project (3x130 MW)	J&K
— Upper Sindh (2x35 MW)	J&K
— Upper Sindh St.II (Extn.)(1x35)	J&K
— Uri HE Project (4x120 MW)	J&K
— Baman II HE Project (4x12. 5 MW)	West Bengal
— Doyang (3x25 MW)	Nagaland

Inter-State Disputes

A large number of hydro projects having common river systems between adjoining States are held up on account of inter-state disputes/aspects. Some of these projects have received a techno-economic clearance of CEA but the investment sanction could not be accorded due to inter-state aspects. Many projects have not been accorded CEA clearance on account of inter-state matter.

Environment and Forest Clearance Problems

The investment decision for new projects and implementation of some of the sanctioned projects are held up on account of non-availability of environment and/or forest clearances from Ministry of Environment and Forests.

Ministry of Environment and Forests is insisting on treatment of very high erodable areas of free catchment at project cost. It may be noted that degradation of catchment takes place due to various economic activities in the catchment area such as rising pressure of population, developmental activities, wood requirement of local people and timber requirement etc. Over grazing and pressure of agricultural activities also contribute significantly to the degradation of catchment area. There is no justification that cost of the treatment of entire free draining catchment be borne by the project. Only the area directly affected by project construction should be treated at project cost.

The problem is also being encountered in compensatory afforestation due to non-availability of non-forest land. Identification of non-forest land, its acquisition and preparation and implementation of afforestation plans contribute to considerable delay in obtaining forest clearance for hydro-electric projects.

ITEM NO. 4.**NOTE ON PRIVATE SECTOR PARTICIPATION IN POWER DEVELOPMENT***1. Introduction:*

Privatisation and attracting greater private investments in electricity generation and distribution are now a global phenomena. Capacity addition in electricity generation & distribution being a capital intensive industry puts a great strain on the scare capital resources available with public sector companies. China, India, Thailand, Philippines, Indonesia and Malaysia are actively soliciting proposals for development of private power in their countries.

2. Policy to Encourage Greater Private investments in Power Generation and Distribution to Tap additionality of Resources

In the context of paucity of resources with Central/State PSUs and SEBs and to bridge the gap between the rapidly growing demand for electricity and supply, a policy to encourage greater investments by private enterprises in the power sector with the objective of mobilising additional resources for capacity addition in power generation and distribution, had been formulated in 1991 and is currently under implementation. The legislation governing the electricity sector was amended in October, 1991 to provide for a more liberal financial and legal environment for private licensee (distribution) companies, than hitherto available. The policy also permits private enterprises to set up generating companies which was before the amendment of the law, a preserve of public sector companies owned by the State/Central Govts. A policy complementary to the amendment to the Act, has also brought about an administrative environment conducive to attracting private investments in electricity generation and distribution. To provide for mobilisation of resources for capacity expansion in the electricity sector, the policy permits 100% foreign owned private companies to set up power projects.

3. The details of the policy are as follows:

3.1 The following are the details of the Scheme to encourage greater private sector participation in the electricity generation, supply and distribution:

- The Indian Electricity Act, 1910 and the Electricity (Supply) Act, 1948 have been amended to bring about a new legal, administrative and financial environment for private enterprises in the Electricity Sector.
- Private Sector can set up thermal projects (coal/gas), hydel projects and wind/solar energy project of any size.
- Electricity Projects where the total outlay does not exceed Rs. 25 crores need not be submitted to the Central Electricity Authority for concurrence.

- Private sector companies can set up enterprises to operate either as licensees or as generating companies.
- All private companies entering the Electricity Sector hereafter will be allowed a debt-equity ratio upto 4:1.
- Promoter's contribution should be at least 11% of the total outlay.
- To ensure that private entrepreneurs bring in additionality of resources to the sector, not less than 60% of the total outlay for the project must come from sources other than Public Financial Institutions.
- Upto hundred per cent (100%) foreign equity participation can be permitted for projects set up by foreign private investors.
- The condition of dividend balancing by export earnings which is normally being applied to cases of foreign investment upto 51% equity will not be applicable to foreign investments in the power sector.
- The rates for depreciation in respect of assets have been liberalised.
- With the approval of the Government, import of equipment for power projects will also be permitted in cases where foreign supplier(s) or agency(ies) extend concessional credit.
- The customs duty for import of power equipment has been reduced to 20% and this rate has also been extended to machinery required for modernisation and renovation of power plants.
- A five year tax holiday has been allowed in respect of profits and gains of new industrial undertakings set up anywhere in India for either generation or generation and distribution of power. The five year tax holiday will begin from the year of generation of power.
- The excise duty on a large number of capital goods and instruments in the power sector has been reduced to a uniform lower rate of 5%.
- Upto 16% return on the foreign equity included in the tariff can be provided in the respective foreign currency.
- Fixed costs including 16% Return on Equity (ROE) can be recovered at 68.5% PLF. Attractive incentives are prescribed for performance beyond this PLF in the form of additional ROE (upto 0.7%) for each 1% rise in PLF.
- Flexibility has been allowed in including insurance charges in the project cost.
- Government of India may consider extending a counter guarantee for the payment obligations of State Electricity Boards to the private power

companies on the specific request of the concerned State Government subject to certain terms and conditions.

The specific incentives for Licensees are:

- Licences of longer duration of 30 years in the first instance and subsequent renewals of 20 years instead of 20 and 10 years respectively as it was before.
- Higher rate of return of 5% in place of the previous 2% above the RBI rate.
- Capitalisation of Interest During Construction (IDC) at actual cost (for expansion projects also) as against 1% over RBI rate as it was before.
- Special appropriations to meet debt redemption obligations.

3.3 An administrative framework for rapid clearances of Power Projects have put in place:

The Foreign Investment Promotion Board (FIPB) constituted under the Chairmanship of Principal Secretary to PM considers all cases of foreign investment into the country, including those in the Power Sector.

A High Powered Board has been constituted under the Chairmanship of Cabinet Secretary to monitor and provide for faster clearance of private sector power projects and resolve outstanding issues thereof.

An Investment Promotion Cell has been set up in the Ministry of Power to provide information and assistance to prospective entrepreneurs in the electricity sector and take timely action for time bound clearances of the proposals.

3.4 Two editions of a brochure titled "India's Electricity Sector-Widening scope for private participation" have been brought out by the Investment Promotion Cell in the Ministry of Power. The brochure gives details of the policy, the clearances required, and the tariff regulations for generating companies. The second edition is available from Investment Promotion Cell, on payment of Rs. 300/- or US\$ 15 by means of demand draft drawn in favour of Energy Management Centre, Ministry of Power, New Delhi.

4. Private Sector Participation in Power Generation and Distribution—Status:

4.1 At present 3,005 MW (around 4% of India's installed capacity) is in the Private Sector. The Government of India announced in September, 1991 the policy to encourage private enterprises participation in the electricity sector. In pursuance of the policy announcement, the legislation governing the electricity sector was amended in October 1991, and the two part tariff notification was issued on 30.3.92. There was a supplementary notification on 17.1.94 making some normative parameters still more attractive by further liberalising

depreciation rates, O&M expenses etc. The primary objective of the policy was to bring in additionality of resources, increase efficiency in operations and encourage commercial operations in this sector.

4.2 The response to GOI's policy has been encouraging, as on date, interest has been expressed in putting up 75 power projects for a total capacity of 32.662 MW involving an investment of Rs. 1,04,152 crores.

Thirty five (35) of these proposals are from foreign investors (including NRI & Joint venture proposals) for a capacity addition of 22,432 MW at an estimated cost of Rs. 73.386 crores, and 35 (Thirty five) from Indian investors for a capacity addition of 7020 MW at an estimated cost of Rs. 20,330 crores. Five projects are under bidding.

4.3 These proposals are presently at various stages of discussion. Seven of the 75 proposals have been approved by the CCFI from foreign investment angle. Three out of these seven proposals have already been cleared by CEA and Power Purchase Agreements have been signed for four projects.

5. Procedure for award of projects to Private Investors:

The States/SEB's have been following both bidding as well as MOU's based on negotiations for inviting private sector proposals.

6. Foreign Investment Approval Procedure:

Under the liberalised policy, the Foreign Investment Promotion Board (FIPB) headed by the Principal Secretary to the Prime Minister has been set up to consider all foreign investment proposals including those in the power sector. After foreign investment proposals are processed in the FIPB, these are submitted for final approval before, (i) the Empowered Committee- in case of investment proposals upto the value of Rs. 300 crores and (ii) in cases above Rs. 300 crores, the Cabinet Committee on Foreign Investment (CCFI).

The Chairman of the Empowered Committee, which considers foreign investment proposals upto Rs. 300 crores, is the Finance Minister, the other members being:

- (i) Minister in Charge of the concerned administrative Ministry
- (ii) Chairman, FIPB
- (iii) Cabinet Secretary
- (iv) Finance Secretary

The CCFI considers foreign investment proposals where the investment for the project is above Rs. 300 crores. Members of the CCFI are:

1. Prime Minister — *Chairman*
2. Finance Minister
3. Commerce Minister
4. Minister concerned

After the Empowered Committee or the CCFI approve the proposal, approvals are issued by the Secretariat for Industrial Approval (SIA), Ministry of Industry.

7. Critical Private Sector Policy Issues:

Foreign investors while considering the incentives attractive, and the policy workable, have expressed their concern regarding a number of issues which need to be addressed to facilitate the flow of foreign investment. The major issues are GOI guarantee for the payment and performance obligations of state power utilities, foreign exchange fluctuation on the equity investment to be borne by the consumers, legally enforceable contracts providing for liquidated damages for shortfall in case of fuel supply or its transportation and streamlining of clearances. Foreign investors have also sought a number of deviations from the two part tariff notification of GOI.

These issues have been addressed. GOI's position regarding these issues is as follows:

- (i) The 16% rate of return for the portion of the foreign equity, included in the fixed cost, as an element in the final tariff, could be denominated in respective foreign currency in respect of the foreign equity only.
- (ii) Coal India and the Railways are prepared to enter into legally enforceable long term fuel supply and transportation contracts with penalty for non performance.
- (iii) The present policy permits convertibility of funds required to remit dividends and profits. The liberalised exchange rate mechanism provides the required assurance regarding availability of foreign exchange.
- (iv) The Government of India may consider extending a counter guarantee for the payment obligations of State Electricity Boards to the private power companies on the specific request of the concerned State Government on a case by case basis.
- (v) The Government of India would be willing to provide guarantees only for loans taken by the project from the multilateral agencies that

require such a guarantee under its statutes but would not provide such guarantees for External Commercial Borrowings.

8. Single Window Clearance:

For setting up a project in the Electricity Sector, several clearances (both statutory and non-statutory) are required in relation to certain major parameters, which are to be obtained from several Central/State Government Departments/organizations and specialist agencies. To facilitate expeditious clearances a single point reference facility has been established with the creation of the Investment Promotion Cell (IPC). The IPC helps the promoters in expediting the procedural clearances by taking up the issues with the concerned agencies.

ITEM NO. 5**PROJECTS UNDER CONSTRUCTION IN NORTH EASTERN HILLY AREAS POWER DEVELOPMENT PROJECTS IN THE NORTH EASTERN STATES**

31857.00 MW of hydro potential at 60% load factor has been assessed in the North Eastern Region. Out of this as on 31.1.94, 315.50 MW has been developed (1% of the assessed potential). Another 1% (309.88 MW) is presently under development from the sanctioned schemes.

Hydro schemes in operation in North Eastern Region are indicated in Annexure.

Hydro projects under construction in North Eastern Region are as under:-

Sl. No.	Name of Scheme and location	Installed Cap. (MW)	Present Status	Commissioning Schedule
CENTRAL SECTOR				
1.	Doyang (Nagaland) NEEPCO	3 x 25	Land acquired Diver- sion tunnel works in progress. TG sets ordered.	9th plan
2.	Ranganadi (Arunachal Pradesh) - NEEPCO	3 x 135	Land acquired. HRT & PH works in progress. TG set ordered.	9th plan
3.	Kopili Extn. (Assam) NEEPCO	2 x 50	Civil Works in progress TG sets ordered.	9th plan
STATE SECTOR				
4.	Nuranang (Arunachal Pradesh)	3 x 2	Civil Works in progress. TG sets ordered.	95-96
5.	Karbi Langpi (Assam)	2 x 50	All works except dam & unit erection completed, balance works to be executed in joint sector.	9th plan
6.	Dhansiri (Assam)	15 x 1.33	Power house civil works & unit erection in progress.	95-96
7.	Dalaima (Assam) (Under hill area development)	3 x 2	Scheme is about to be abandoned by state Govt. due to non-availability of funds.	--
8.	Likim-Ro (Nagaland)	3 x 8	TG sets ordered. All Civil works in progress	95-96
9.	Serlui-B (Mizoram)	2 x 4.5	Tenders for award of work on turn key basis are under finalisation.	9th plan

ANNEXURE

HYDRO SCHEMES IN OPERATION IN NORTH-EASTERN REGION

Sl. No.	Name of Schemes	Installed Capacity (MW)	Total Capacity (MW)
	NEEPCO		
1.	Khandong	2 x 25	50
2.	Kopili	2 x 50	100
	N.H.P.C.		
3.	Loktak	3 x 35	105
	Arunachal Pradesh		
4.	Tago	3 x 1.5	4.5
	Meghalaya		
5.	Kyrdemkulai	2 x 30	60
6.	Umiam St.-I	2 x 9 + 2 x 9	36
7.	Umiam St.-II	2 x 9	18
8.	Umtru	4 x 2.8	11.2
9.	Umiam Umtru St.-IV	2 x 30	60
	Tripura		
10.	Gumti	3 x 5	15
	Total		459.70

ITEM NO. 6

NOTE ON FUNDING OF THE PROGRAMME OF RURAL
ELECTRIFICATION CORPORATION

Rural Electrification programme is in the state plan sector and is formulated by the State Electricity Boards. The programme is directly financed by the State Government/SEBs and also by Rural Electrification Corporation. The funds are routed through REC to ensure that the funds are used for rural electrification programme. The funds to REC are allocated by the Planning commission on an annual basis. The funding pattern of the corporation consists of budgetary support (from the Budget of Ministry of Power). Minimum Need Programme through Ministry of Finance Market Borrowing/SLR Bonds. Internal Resources etc. During the year 1993-94 the funding pattern of REC was as under:—

		(Rs. in Crores)
PROPOSED FUNDING		ACTUAL FUNDING
286.00	BUDGETARY SUPPORT	286.00
160.00	M.M.P.	160.00
54.00	S.L.R. BONDS	26.00
100.00	MARKET BONDS & INTERNAL RESOURCES	150.00 23.00
TOTAL	600.00	645.00

In addition to this Rs. 10 crores was provided as Grant-in-aid to REC for release of single point light connections to rural poor under Kutir Jyoti Programme. The componentwise financing in 1993-94 was proposed as under:-

RE-NORMAL	RS. 143.50 CR.	561 VILLAGES	51230 PUMPSETS
MNP	RS. 160.00 CR.	2195 "	9900 "
SPA	RS. 125.00 CR.	—	170900 "
S.I.	RS. 151.50 CR.	—	—
SMALL HYDRO & RE COOP.	RS. 20.00 CR.	—	—
TOTAL	RS. 600.00 CR.	2756 VILL.	232030 PUMPSETS

For the year 1994-95 the financing pattern and programme for Rural Electrification Corporation is as under:-

S. NO.	PROGRAMME	FINANCIAL OUTLAYS (RS. IN CRORES)	PHYSICAL VILLAGES	TARGETS (NOS.) PUMPSETS
1.	RE NORMAL	193.00	704	46948
2.	M.N.P.*	160.00	2602	12321
3.	S.P.A. (REC's SHARE)**	125.00	—	152400
4.	S.I.***	145.00	—	—
5.	KUTHR JYOTI	5.00	—	—
6.	SMALL HYDRO & OTHER RURAL GENERATION PROJECTS & RE COOPERATIVES	32.00	—	—
TOTAL		660.00 +50.00	3306	211669 FOR OECF SCHEMES AS PROVIDED IN THE BUDGET OF M/o POWER

PROPOSED FUNDING	(RS. IN CRORES)	
BUDGETARY SUPPORT	316.00	
M.N.P.	160.00	
KUTIR JYOTI (GRANT)	5.00	(1)
REC'S INTERNAL RESOURCES	29.00	
SLR BONDS	26.00	(2)
MARKET BONDS	124.00	(3)
TOTAL	660.00	+50.00 (OECF)

* Minimum Needs Programme.

** Special Projects Agriculture.

*** System Improvement.

ITEM NO. 7**TIME AND COST OVER-RUN OF POWER PROJECTS AND THEIR
IMPACT ON TARIFF**

In the absence of internal resources the Boards are dependent on loans from the State Governments and other leading institutions for meeting their capital expenditure and quite often, they are required to borrow even to meet revenue expenses. The normal maintenance of existing plants also suffer, with its adverse effect on generation.

Shortage of funds lead to time over-run which in turn leads to further cost over-run. Since capital cost of power projects are heavy and the entire amounts are raised by way of loans the S.E.B's, have heavy interest burden which increases the tariff of electricity. Time over-run also results from delay in environmental clearances heavy cost of rehabilitation and resettlement delay in land acquisition etc. Hydro projects are particularly prone to delays due to long gestation period geological surprises etc. All these factors in turn contribute to higher tariff for sale of electricity.

ITEM NO. 8**ECONOMICS OF SMALL UNITS VERSUS LARGE POWER PLANTS
AND IMPACT ON SYSTEM OPERATION**

Large power plants with higher size of units provide an opportunity to exploit economics of scale. It results in higher reliability of electricity supply in large inter-connected electrical system when they are operated efficiently in an integrated manner.

Small sized units are less efficient and have higher cost of installation per unit size. Such units, however, could prove economical in the case of widely dispersed loads where reliability of supply has low cost factor. Where source of generation of power is also widely distributed small sized units may turn out to be economical.

Large size (500 MW) thermal units do not have any major impact on System Operation in our Grids today because (i) Transmission Technology is available for delivery of this power to desired load centres (ii) With the increase in installed capacity and interconnections the sudden outage of a large unit would not lead to a system collapse.

Thus large units interconnected through grids and supplying power to concentrated load centres result in economical generation and supply of electricity with reliability.

ITEM NO. 9**WORKING OF STATE ELECTRICITY BOARDS—ACTION TAKEN BY
MINISTRY OF POWER TO IMPROVE THEIR PERFORMANCE/
IMPACT OF NON-PAYMENT OF CPU'S DUES ON THE INTERNAL
RESOURCE OF NATIONAL THERMAL POWER STATION***Financial Performance of SEBs*

Section 59 of Electricity (Supply) Act, 1948 require SEBs to earn a minimum return of 3% on the net fixed assets at the beginning of the year less consumer's contribution. The annual accounts of the SEBs for the year 1992-93 reveal that out of 17 Boards, 11 Boards have achieved the above target while one more Board has achieved a surplus though it could not achieve the 3% surplus. Only 6 Boards have thus failed to achieve the statutory minimum. However, since a number of SEBs have revised their tariffs in the last one year or so, the impact of tariff revision on the profitability of the Board would be known and reflected only in the accounts for the years 1993-94 and 1994-95. The Boards who have revised their tariffs during 1992-93 to 1993-94 are:

Andhra Pradesh, Haryana, H.P., Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and Assam.

While the above position shows some redeeming features. (after taking into account BE subsidies). The actual operational surplus of State Electricity Boards are in the negative. This is because of the defective tariff structure obtaining in most of the SEBs with particular reference to agricultural and domestic sector, which are highly subsidised. In fact the gap between the average cost of generation and supply and average realisation from the agricultural sector is widening on an all India basis, as can be seen from the table below:

	(Paise/Kwh)			
	1974-75	1980-81	1984-85	1992-93
Average cost of Supply	22.52	41.90	65.07	139.02
Avg. Realization from agrl. cons.	18.00	18.84	18.64	15.40
Gap	4.52	23.06	46.63	123.62

Efforts for Improving Financial Performance of SEBs

1. Two Working Groups headed by Member (E&C) were constituted by the Govt., one by the Department of Power and another by the Planning Commis-

sion to suggest the ways and means of strengthening the financial performance of the Boards. The recommendations of the Working Group were accepted by the Govt. and the State Govts./State Electricity Boards were requested to initiate action for its implementation in the interest of improving financial performance of SEBs.

2. The important factors which adversely effect the financial performance of SEBs and identified by the Working Group are the lacunae in:-

- (1) Technical Performance
- (2) Tariffs
- (3) Capital Structure

3. The Ministry of Power has been following up the need for improvement in the working of SEBs. The issues are also discussed in the Conference of Power Ministers periodically. As a result, the last Conference held in January, 1993 has adopted an Action Plan which *inter-alia* provide for achieving higher PLF, reduction in T&D losses, recovery of outstanding, periodical revision of tariff, prompt payment of BE subsidy etc. Keeping in view the high losses suffered by SEBs on account of supply of power to the agricultural sector, State Govts. were impressed upon from time to time to fix a minimum agricultural tariff of 50 Ps./Kwh. 16 States and 2 UTs have so far agreed to carry out this. Another investment available with Ministry of Power to bring about improvement in the working of SEBs is the pressure it exercises through Power Finance Corporation, whose funding is outside the plan assistance. P.F.C. has been insisting on SEBs to sign an Operational & Financial Action Plan (OFAP) to become eligible for P.F.Cs funding OFAP provides for measures to be taken, according to a schedule, for improving the technical and commercial performance of S.E.Bs and to achieve the statutory minimum surplus. OFAP is regularly monitored by PFC.

ITEM NO. 10

IMPACT OF NON-PAYMENT OF PSU'S DUES ON THE INTERNAL RESOURCES OF NATIONAL THERMAL POWER CORPORATION

A Statement showing the outstanding dues payable to the Central Sector Power Corporations as on 28.2.1994 is enclosed at Annexure.

The non-payment of dues by the Boards has affected the Internal Resources of the CPSUs adversely and has reduced their self-financing ratio which stands in the way of getting loans from multilateral institutions. The overdues also affect the Operation and Maintenance of the existing plants and the capital expansion programmes of these undertakings.

ITEM NO. 11

**OVERHEAD EXPENDITURE OF PUBLIC SECTOR
UNDERTAKINGS—EFFORTS TO CONTROL THE SAME**

National Thermal Power Corporation Limited

Overhead costs in NTPC include salary, wages to employees, repairs & maintenance of plant & buildings and other overhead expenses like travelling, security, insurance, rent, education etc. The actuals for 1992-93 and those expected for 1993-94 are given below. The increase in the overhead cost as a percentage of sales is mainly on account of additional expenditure on repair and maintenance of plants which are ageing with the passage of time.

	(Rs. in crores)	
	Actuals 1992-93	Expected 1993-94
Sales	4441.44	5637.65
Overheads expenditure	421.59	568.05
Overhead as a percentage of sales	9.49%	10.7%

Operation & Maintenance Budget of N.T.P.C. is reviewed by the Board and norms for administrative costs have also been fixed.

Damodar Valley Corporation

General overhead charges of DVC comprise expenditure incurred by different departments at corporate level and constitutes establishment cost and general office expenses. Actual expenditure during last three years and estimated expenditure for 1993-94 alongwith turnover and percentage thereof are shown below:

	(Rs. in crores)			
	1993-94 (Estimated)	1992-93 (Actual)	1991-92 (Actual)	1990-91 (Actual)
General Overhead Charges	10.82	9.77	7.98	7.25
Turnover	855.00	660.71	586.93	526.99
Percentage	1.27	1.48	1.36	1.38

Strict measures are being taken to control such expenditure as a result of which overhead expenditure is already showing a downward trend. It may also be mentioned that these figures compare favourably with corresponding figures of other power utilities.

Similarly, the administrative expenditure of NHPC is also under strict control. The Govt. representatives on the Board of Directors of P.S.Us are briefed to ensure that economy measures are adhered to by the P.S.Us.

ITEM NO. 12**THE COORDINATION BETWEEN CEA AND MINISTRY OF POWER IN IDENTIFYING THE COST OF POWER PROJECTS, CONTROL ON CAPITAL COST OF PRIVATE SECTOR PROJECTS; NEED FOR ADOPTING BIDDING ROUTE**

At present, all electricity projects where the capital cost is estimated to exceed Rs. 25 crores, irrespective of whether they are in public or in private sector, require the concurrence of Central Electricity Authority. Further, the Electricity (Supply) Act has laid down the matters to be considered by the CEA before concurring with any scheme. The CEA is required, *inter-alia*, to examine the scheme before giving its concurrence as to whether the scheme conforms to technical economic and other criteria laid down by it in accordance with the National Power Policy and such other directions in this regard as may be given by the Central Government. The project company is required to publish the estimates of capital expenditure and the salient features of the project in the Official Gazette of the State concerned and in local newspapers along with a notice that licencees and other persons interested may make representations on such schemes within a period of 2 months.

The Minister of Power and Secretary (Power) have addressed letters to Chief Ministers and Power Secretaries of State Governments with the suggestion that projects could be assigned to private sector companies through a process of competitive bidding. Further, since the bidding procedures would require some amount of preparation by the SEBs/State Govts. not only in terms of establishment of the feasibility of specific projects but also in terms of the establishment of criteria/yardstick on the basis of which the award is to be made, assistance including financial assistance was also offered by the Minister of Power/Secretary (Power) to the State Governments from PFC for introduction of the system of bidding for awarding projects to private sector companies. A seminar is to be held in the month of June, 1994 regarding offering projects through a system of bidding.

While several project proposals from private sector companies now under consideration of the State Government have come up through the bidding system, a large number of these have come from private companies on their own. State Govts. have in the interest of quick implementation of the project, found it expedient to finalise the award of projects in the light of the policy provisions as applicable.

ANNEXURE

**OUTSTANDING DUES PAYABLE TO CENTRAL SECTOR POWER
CORPORATIONS AS ON 28TH FEBRUARY, 1994**

(Rs. in crores)

Sl. No.	SEBs/State	REC 02/94	NTPC 02/94	NEEPCO 02/94	DVC 02/94	NHPC 02/94	PFC 02/94	PGC 02/94
1.	Andhra Pradesh	5.24	102.12	0.00	0.00	0.00	0.00	30.63
2.	Assam	31.54	0.00	88.96	2.07	33.04	0.00	9.74
3.	Arunachal Pradesh	0.14	0.00	1.19	0.00	1.36	0.03	0.02
4.	Bihar	128.18	394.04	0.00	405.32	11.20	0.00	21.64
5.	Gujarat	0.21	117.74	0.00	0.00	0.00	0.00	5.16
6.	Goa	0.00	1.07	0.00	0.00	0.00	0.00	0.42
7.	Haryana	0.07	372.40	0.00	0.00	94.54	0.00	28.36
8.	Himachal Pradesh	0.10	22.32	0.00	0.00	18.66	0.00	1.38
9.	Jammu & Kashmir	0.28	199.46	0.00	0.00	51.87	0.07	13.69
10.	Karnataka	0.00	50.40	0.00	0.00	0.00	0.00	17.52
11.	Kerala	3.30	33.96	0.00	0.00	0.00	2.41	5.30
12.	Madhya Pradesh	93.03	179.64	0.00	0.00	0.00	0.00	0.00
13.	Maharashtra	0.35	121.04	0.00	0.00	0.00	0.00	3.98
14.	Manipur	0.00	0.00	7.00	0.00	19.96	0.00	2.73
15.	Meghalaya	4.27	0.00	0.00	0.00	0.00	0.00	0.66
16.	Mizoram	0.06	0.00	1.42	0.00	1.82	0.01	0.22
17.	Nagaland	0.00	0.00	4.05	0.00	1.93	0.00	0.60
18.	Orissa	57.47	50.29	0.00	1.73	3.23	0.00	11.53
19.	Punjab	0.28	48.96	0.00	0.00	25.67	0.24	15.03
20.	Rajasthan	23.09	208.25	0.00	0.00	6.03	0.00	34.15
21.	Sikkim	0.15	0.67	0.00	0.00	0.00	0.00	0.26
22.	Tamil Nadu	0.49	115.18	0.00	0.00	0.00	0.00	27.51
23.	Tripura	0.00	0.00	3.85	0.00	4.07	0.00	0.96
24.	Uttar Pradesh	175.19	618.24	0.00	0.00	6.51	17.41	102.53
25.	West Bengal	62.13	62.84	0.00	102.07	8.24	1.61	5.03
26.	DESU	0.00	235.48	0.00	0.00	11.66	0.00	28.31
27.	DVC	0.00	147.78	0.00	0.00	16.27	0.00	9.49
28.	DNH	0.00	0.04	0.00	0.00	0.00	0.00	0.00
29.	UTC	0.00	1.03	0.00	0.00	0.00	0.00	0.00
30.	NEEPCO	0.00	0.00	0.00	0.00	4.35	0.00	0.00
31.	Daman & Diu	0.00	0.09	0.00	0.00	0.00	0.00	0.12
32.	Pondy.	0.00	0.00	0.00	0.00	0.00	0.00	0.75
33.	Co-operatives	5.05	0.00	0.00	0.00	0.00	0.00	0.00
34.	State Govts.	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		588.70	3083.04	106.47	511.19	320.41	21.78	377.72

Cumulative outstanding dues from SEBs to Central Power Sector Corporations
= Rs. 5009.31 crores.

APPENDIX V

EXTRACT OF OBSERVATIONS OF COMPTROLLER & AUDITOR GENERAL IN THE AUDIT PARA NO. 6 OF 1993

1. Against projects for 22245 MW capacity envisaged for commissioning during Seventh Plan, projects for 18212.28 MW capacity (82 per cent) only were commissioned.

2. Cost over run in commissioning of Power projects both in the Central and State sectors ranged between 91 and 855 per cent and time over run ranged between 2 years and 13 years.

3. Hydro-power potential has been tapped only to the extent of 14.1 per cent.

4. Delayed/non-utilisation of external assistance sanctioned for various Central/State Projects resulted in payment of *commitment charges of Rs. 152.13 crores.*

5. Plant load factor of the Central sector thermal units declined from 65 per cent in 1986-87 to 58.1 per cent in 1990-91.

6. Poor implementation of energy conservation programmes resulted in low utilization of funds during 1988-89 to 1990-91.

7. Against the original commissioning target of 5541 MW of Hydro Power Plants fixed for the Seventh Plan, commissioning was only to the extent of 3827.44 MW (69 per cent.)

APPENDIX VI

COMMENTS OF THE MINISTRY OF POWER ON THE EXTRACTS OF OBSERVATION OF COMPTROLLER & AUDITOR GENERAL IN THE AUDIT PARA NO. 6 OF 1993

4.1.2 Financial Outlays and Expenditure

Factual Statement

4.1.3 The records of the Department, CEA and the autonomous bodies under the Department's Control for the above period, were test checked in audit. The major audit observations are outlined in the succeeding paragraphs.

4.1.3 (A) Thermal

The original commissioning programme of the seventh plan in respect of thermal plants (including the gas and diesel based plants) was fixed at 15999 MW, comprising 8032 MW, 17 MW and 7950 MW in State Sector, UTs and Central Sector respectively. Against this programme, commissioning was to the extent of 17093.3 MW.

Factual Statement

4.1.3 (B) Time and Cost Overrun

Audit has observed that the scheme approved for completion during Seventh Plan period at an estimated cost of Rs. 15885.98 crores were however, completed/partially completed at a higher cost of Rs. 31040.34 crores (95 per cent higher).

Audit has also pointed out a considerable time overrun ranging between 2 and 4 years in projects in Central Sector and between 2 and 10 years in State Sector. The cost overrun in respect of these Projects ranged between 91 and 196 per cent in Central Sector and 199 and 489 per cent in State Sector. Details of few such cases as indicated in Appendix II of Report.

Action Taken Note:

Neyveli Second Mine Cut Stage-I and Neyveli Second Mine Cut Stage-II were executed by the Neyveli Lignite Corporation, a Public Sector Undertaking under the administrative control of the Ministry of Coal. In case of Bokaro 'B' Project, Damodar Valley Corporation is the Project Authority responsible for the timely execution of the project. In case of State Sector thermal projects, the State Authorities are responsible for their timely completion. However, in order to keep a watch on their implementation and to expedite their construction on schedule, these projects are regularly and continuously monitored by the Thermal Construction Monitoring (TCM) Division of the Central Electricity Authority. In order to ensure timely completion of the construction activities

of the thermal power projects, the procedure for monitoring of the thermal power projects under construction is, in brief, given below:

As soon as a project is sanctioned, the State Electricity Board is asked to submit monthly project report as per CEA format. These reports are analysed as per activity schedule prepared in CEA. For the activities slipping as per schedule of CEA the matter is taken up with the concerned authorities. The monthly status report of all sanctioned/ongoing projects is prepared in TCM Division based on progress reports received from project authorities and sent to all concerned in CEA and Ministry of Power. For the projects likely to be commissioned during next two years Joint Co-ordination Meetings (JCMs) are held twice in CEA in the month of February and August every year. These meetings are attended by projects authorities and the main equipment suppliers. During these meetings important milestones for projects are fixed. The commissioning programme for the coming year is also finalised based on the JCM held in February and also in consultation with the Ministry of Power. In addition to JCM, monthly review meetings are also held with concerned project authorities. Rigorous follow up action is taken with the suppliers/project authorities in respect of activities which are not proceeding as per schedule. Officers of TCM Division undertake site visits also sort out the problems, wherever possible and to expedite the progress of work.

The Ministry of Power is very keen that all the sanctioned projects are implemented on schedule and within cost parameters approved by the CEA. In order to achieve this goal equipments suppliers, the State Electricity Boards and Project Authorities need to work in close cooperation and coordination. The Ministry of Power continue to provide the necessary assistance to resolve and sort out the problems in their implementation, wherever required.

The CEA have informed that based on the monitoring of the construction activities of the Thermal Power Projects, the following factors mainly contribute to the slippage in the commissioning of the units:

- (a) Delay in acquisition of land.
- (b) Delay in finalisation of supply orders/award of contracts for various equipments/works by project authorities.
- (c) Delay in finalisation of design & engineering details/approval/release of drawings.
- (d) Delay in execution of civil works.
- (e) Delay in erection of plant and equipments.
- (f) Delay in supply of plant and equipments by major equipments suppliers and others.

- (g) Non-sequential supply of equipment.
- (h) Lack of quality-assurance checks during manufacture and erection, thereby entailing delay in rectification of defective components/erection work.
- (i) Paucity of Funds.
- (j) Delay due to labour unrest and industrial relations problems.
- (k) Delay due to shortage of cement & steel.
- (l) Lack of use of modern project management systems, techniques & methods and inadequate monitoring by SEBs.
- (m) Delay in recruitment, training and placement of O&M staff.

It is felt that in case of State Sector projects, the project implementation need to be monitored by the State Governments at the highest level.

Cost Over Run

The main reasons for the cost over run were:

- (i) Price escalation which in turn was due to excessive time over run.
- (ii) Increase in quantities of civil works during detailed engineering/execution of the projects.
- (iii) In certain projects, the capacities of the auxiliary systems like coal handling plant, CW system etc. were increased so as to cater to requirement of future units planned in subsequent stages.
- (iv) Certain new items were incorporated due to technological development.
- (v) In few cases, it was also found that there had been under-estimation of cost by the project authorities which was due to lack of experience/details and prevalent prices data.

4.1.3 (C) Operating Performance of Thermal Power Stations

After test check of the records the Audit has pointed out that the central sector units mentioned in the table below except Korba STPS did not achieve the normal PLF of 60 per cent even after about 4 years of their commissioning:—

Sl. No.	Name of Station	Unit No.	Capacity	Date of Commissioning	PLF %				
					85-86	86-87	87-88	88-89	89-90
1.	Farakka STPS	1	210	1.01.86	*	46.1	33.9	39.9	47.5
2.	Farakka STPS	2	210	24.12.86	-	*	49.6	21.3	58.9

Sl. No.	Name of Station	Unit Capacity No.	Date of Commissioning	PLF %				
				85-86	86-87	87-88	88-89	89-90
3.	Bokaro	5	210 24.03.86	-	*	35.2	60.0	35
4.	Korba (West) STPS	4	210 13.03.86	-	*	*	42.1	60.6

* Unit not considered for PLF calculation.

- Unit taken into consideration for PLF calculations for part of the year.

Action Taken Note:

(a) Factual Statement

(b) The All-India average Plant Load Factor of Central Sector during the past 3 years and in the current year is indicated below:—

Year	All India PLF %	Central Sector PLF %
1990-91	53.8	58.1
1991-92	55.3	64.5
1992-93	57.1	62.7
1993-94 (upto Feb. 94)	60.2	69.1

It would be seen that performance of Central Sector undertakings has been constantly above the national average and that their PLF since 1990 has shown a marked improvement.

Regarding the specific observation made by the audit about PLF of 4 thermal units, the position has also improved with the exception of Bokaro. These units have shown the following PLF during the year 1992-93.

PLANT LOAD FACTOR (%)

Sl. No.	Name of the Station	1992-93
1.	Farakka STPS Unit 1	58.9
2.	Farakka STPS Unit 2	67.8
3.	Bokaro Unit 5	19.9
4.	Korba (West) Unit 4 STPS	66.6

4.1.4 Hydro Power Potential

The Audit has pointed out that about 78.8 per cent Hydro potential still remains untapped. Even in the Central Sector there had been a declining trend in the share of Hydro Capacity addition. The decline was from 6.5 per cent in 1988-89 to 5.67 per cent in 1989-90 and further 5.5 per cent in 1990-91. This is indicative of the need to give due priority to the development of this sector.

4.1.4 (A)

Audit has observed that in the absence of closer monitoring and assistance for timely completion of the Project by the Department of Power against the fixed target of 5541 MW in the Seventh plan, only 3827.44 MW (69%) was achieved.

It is true that the capacity addition in respect of hydro units was 3827 MW the 7th Plan against a target of 5541 MW. Some of the major reasons for the slippages have been enumerated in the Report. One of the main factors responsible for slippages is the insufficient financial resources and unsatisfactory cash flow. In spite of best efforts by the project authorities as well as the State Govts., the project allocations for hydro projects were inadequate and were resource based and not need based. Even these meagre allocations did not ensure availability of funds and availability of cash to the projects at the required time. In addition to the reasons enumerated in the Report, delay in completion of hydro projects has also taken place due to the following reasons:—

- Geological surprises encountered during execution of the project particularly in executing underground works.
- Contract failures leading to court injunctions and prolonged delays in settlement.
- Unprecedented natural calamities resulting in flooding of power house tunnels and other civil works damaging of plant, civil structures loss of life etc.
- Law and order problems.

All the activities and requirements of monitoring were meticulously carried out and because of this assiduous action, accomplishment of capacity addition to about 69% was possible. Slippages were due to reasons which were beyond the capacity of the State Govt. and the monitoring efforts of CEA/MOP. However, monitoring would be further intensified with more frequent interaction with the State Govts. and frequent visits to the project sites which are at present curtailed due to meagre budget provisions.

4.1.8 Utilisation of External Assistance

4.1.8 (A)

Audit has pointed out that there was an undrawn balance amounting to Rs. 737.87 crores in respect of 13 power Projects on the terminal date (June 1991) of their disbursement.

4.1.8 (B)

It has also pointed out low disbursement during 1990-91 in respect of both multilateral and bilateral loans.

Action Taken Note:

1. Reasons for Slow-utilisation

i. The main reasons behind the slow utilisation of external assistance, *inter-alia*, are delayed implementation of power projects with consequent time and cost overruns, inadequate project preparation, organisational weaknesses of the implementing agencies, procurement delays, inadequate levels of budgetary support and other bottlenecks/constraints in regard to land acquisition, environmental & forest clearances, rehabilitation plans etc.

ii. Out of the above reasons inadequate provision of counterpart funds, especially in the case of State sector projects, is the main reason for the slow utilisation of the aid. Under the present procedure, the project authorities have first to incur the expenditure and then claim reimbursement from the Department of Economic Affairs. Lack of budgetary support and inability to generate sufficient internal resources owing to the poor financial health of SEBs/SGCs, project authorities are unable to fit into this procedure of expenditure first followed by reimbursement. Thus, these authorities are frequently compelled to come to DEA/aid agencies seeking release of advances. For example, APSEB for Rayalaseema TPP aided by ADB and KPCL for Raichur TPP (Karnataka) from OECF have sought advances last year. Presently, a similar request from UPSEB for implementing the Anpara-B transmission project with OECE aid is pending before DEA.

iii. Further, it is observed that even these advances. Once released through DEA, are reaching the project authorities in certain cases, as the State Governments are resorting to adjustment of SEBs dues to the State Governments on various accounts. As a result, project execution and commissioning schedule of various power projects are severely hampered. Kerala Power Project, aided by World Bank, is a case in example, where an advance amount of Rs. 12 crores released by DEA has been adjusted by G/o Kerala against dues from KEB.

iv. The inability of the SEBs to reduce their outstanding dues to Central Power Corporation in lieu of the power purchased from them to rationalise their tariff to various categories of consumers to implement a minimum levy of 50 paise per unit for supply of power to agricultural sector, to bring down the arrears of revenue realisation, to improve the functional efficiency of the power plants by raising the Plant Load Factor (PLF), to increase the efficiency of the transmission and distribution network by reducing the losses thereof etc., have led to a situation where a majority of the SEBs are unable to achieve the statutory minimum of 3 per cent rate of return on their fixed assets. This has also led to the SEBs not being able to implement the covenants signed by them with the aid agencies, primarily World Bank, leading to cancellation of loans to the Srinagar Hydro Electric Power Project in U.P. Upper Indravati HEP in Orissa and Karnataka Power Project-I & II.

II. Cancellation of World Bank's Loans

Cancellation of World Bank Loan to the above hydel projects is also due to certain other impediments like failure in getting forest clearance for land acquisition, inability to carry out the rehabilitation & resettlement plans for the project affected persons, non-availability of certain clearances etc. Details of the cancelled World Bank loans, project-wise, are given in the Annexure.

III. Steps taken by Ministry of Power

State Sector

The details of important actions being taken by the Ministry of Power in respect of speedy utilisation of external assistance are as follows:

(a) Review meetings are being taken periodically by the Secretary (Power) region-wise on each project to identify the critical areas in utilisation of aid/implementation of projects and to remove bottlenecks. Such meetings are also attended by the CEA at appropriately higher levels to sort out the problems from technical angle on priority basis.

(b) CEA has been requested to help the States in overcoming the technical difficulties including obtaining of clearances. If any, pending from the Union Government.

(c) To overcome the problem of lack of counterpart rupee funds, the State Government/executing agency concerned is being instructed to ensure that adequate budgetary sources are available and earmarked for the externally aided projects. It is proposed to approach the Planning Commission with the suggestion that while allocating outlays this aspect may also be kept in view.

(d) To overcome the funds constraints, the department has already approached the Ministry of Finance that advance drawals to the extent of 3 months requirements be allowed in externally funded projects.

(e) Since BHEL is a major supplier to the power sector, the department is in close touch with the Ministry of Industry and consultations are being held regularly at high levels. While BHEL is concerned with the future order book position, the Department of Power faces the problems of delays supplies for orders already placed leading to project slippages.

(f) To cope up with the requirements related to environment the department is strengthening the environmental awareness and assessment system and would seek the assistance of the Ministry of Environment and Forests for this purpose, if need be through micro level and regional assessment of the problems.

(g) By far, project delays are related to the various clearance and linkages required to execute the project. In order to cut down delays due to such reasons,

it is proposed that a Standing Committee on Power Projects be constituted under the chairmanship of the Secretary (Power) which can include representatives of the Departments of Environment and Forests, Industries, Water Resources (if required), Coal, Shipping and Transport, Finance, Civil Aviation, Planning Commission besides those of CEA, concerned State/PSU. This may meet at frequent intervals, at least once in each quarter to review the ongoing projects as well as to expedite clearances for future projects which are candidates for external assistance.

(h) For delays caused at the project execution stage, it is proposed to draw the project authorities attention to this aspect and suitable mechanisms are proposed to be worked out to avoid delays caused by the contractors.

(i) The Ministry of Power proposes to focus on the weaknesses of the project monitoring mechanism both at the PSU/CEA level as well as the State and Union Governments. For this purpose intensified monitoring will be initiated both at the Ministry and CEA level using the PERT/CPM network techniques being if feasible, the NICNET support system. In this connection, an online, satellite-communication based. Common Power Database (CPDB) is being complied by the NIC, which is collecting information on power projects under construction from the project sites and then being compiled at the NIC headquarters.

Central Sector

As far as the power projects in the Central Sector are concerned details of flow of external aid are as follows:—

Year	Allocation	(In Rs. crores)
		Released
1992-93	1425.00	1426.00
1993-94	1567.50	658.78*

* Released upto 13.9.93.

Though the amounts of external aid released through budget are as per allocation/outlay, there is a case for substantial increase in the allocation under this category. The present pattern of outlay for the Central Sector power projects envisages about 65 per cent to come as internal and extra budgetary resources (IEBR), while the remaining 35 per cent is expected to come from external assistance through budget plus net budgetary support (GBS). A major chunk of the IEBR portion relies upon raising monies from the market as bonds. This did not materialise during 1992-93, as can be seen from the actuals of Rs. 89 crores against a target of Rs. 1647 crores. This is mainly due to saturation of the primary as well as secondary markets. Owing to this situation, availability of counterpart rupee funds to the central sector power projects is not satisfactory

and hence, low levels of utilisation of the external aid. Thus, if the pattern of funding/outlay for the Central Sector is changed in such a way as to reduce the emphasis on IEBR and simultaneously increase reliance upon Gross Budgetary Support (GBS), then adequate funds could be made available to match the releases of external aid.

In this connection, a request has already been made before the Cabinet Committee on Infrastructure in its recent meeting held on 8.9.92, to reduce the outlay for IEBR from the existing Rs. 4061 crores to Rs. 2561 crores and increase the GBS from the existing Rs. 2207.50 crores to Rs. 3707.50 crores. The break up of the proposed increase in GBS will be Rs. 500 crores more as external assistance through budget (making it a total of Rs. 2057.50 crores) and Rs. 1000 crores more as net budgetary support making it a total of Rs. 1640 crores). This request needs to be pursued vigorously with Finance Ministry and Planning Commission before whom the matter is again going to come up for discussion.

11. DEA have recently issued a circular enabling direct flow of external aid to Central Power Corporation, with a view to cutting down procedural delays etc. presently faced by these corporations. However, direct flow of such aid to CPSU's is likely to increase their debt equity ratio (DER), if counterpart rupee funds were not to be available for speedy utilisation of aid. Also, these CPSU's may not be in a position to bear the risk on account of exchange rate fluctuations. Thus, it would be desirable to route the external aid to CPSUs through Ministry of Power. This matter has been taken up by Minister of Power with Finance Minister in a DO letter.

4.1.12 (a) Energy Conservation Programme

Audit has observed that budget allocations were made purely or tentative basis. As a result the percentage of unspent budget provision was 23.8 in 1988-89 which increased to 53 in 1989-90. Even in 1990-91 the Budget provision to the extent of 48.4 per cent remained unutilised. It was further observed by Audit that utilisation certificates amounting to Rs. 1105.40 lakhs and Rs. 71.07 lakhs were outstanding as on March 31, 1992 from REC and NPC respectively. It was also observed that the Department was asked by Cabinet Secretariat in August 1990 to review and bring up a note on utilisation of funds under the scheme of energy Conservation and Utilisation for its consideration. No action was, however, taken by the Department (May 1992) in this regard.

(B) Budget allocation were made purely on tentative basis resulting in non-utilisation of allocated funds.

(C) No control records were maintained.

(D) Details of expenditure from 85-86 to 87-88 were not available.

(E) Utilisation Certificates were not received from REC/NPC.

(F) Note required by Cabinet Sectt. on utilisation of energy conservation funds was not sent.

(G) Unutilised amount of a scheme sanctioned to REC in Oct., 1988 was not refunded.

(H) Energy audit scheme sanctioned to NPC in Oct. 1988 was not implemented properly. No evaluation done.

(I) Scheme for replacement of footvalves in agricultural pumpsets sanctioned to TEDA in March, 1990 was not implemented properly. The proper agencies were not appointed. No testing was done.

(J) Awareness Campaign Scheme sanctioned to EMC in March 1990 did not follow the Govt. guidelines.

Action Taken Note:

(A) The para mainly gives the history of the Energy Conservation Programme under the Government of India. The observations are general in nature based on various documentary/files. We have no comments to give except on the following:-

(B) Energy Conservation was an upcoming subject during these years and hence budget allocations could not have been made based on actual projects/schemes. The allocations, therefore, were bound to be on a tentative basis. The situation is different at present and allocations are now made based on ongoing schemes and new projects/schemes likely to be taken up/sanctioned.

(C) Control records are now maintained indicating the details mentioned.

(D) Details of expenditure from 85-86 to 87-88 were not available as a separate budget Head for Energy Conservation was not kept in the budget of the Ministry of Power till 88-89. Details are available from 88-89 onwards.

(E) Utilisation Certificates have since been furnished both by REC and NPC for the amount in question.

(F) The note on Utilisation of funds under various schemes of Energy Conservation from 88-89 onwards was prepared in 91-92 as desired by the Committee of Secretaries. It was, however, decided at the level of Secretary (P) that there was no necessity to send the note to the Committee of Secretaries for the time being. The direction of the Committee was with reference to the Budget for 90-91. The note has not been called for thereafter.

(G) REC has since refunded the unutilised amount.

(H) Dissemination of information is being undertaken not directly by this Ministry but through Energy Management Centre set up in 1989. Progress of

implementation of proposals contained in Energy Audit reports are monitored through follow up correspondences undertaken by this Ministry in this regard.

(I) Although TEDA did not engage an approved agency for monitoring and evaluation of the project on subsequent scrutiny, it was found that report submitted by the Madurai Kamraj University was quite satisfactory and had all the technical details required for evaluating the performance of efficient pumping systems. The areas of the sample had to be reduced by TEDA because Ministry was not inclined to spend much for monitoring work.

(J) The Department released an amount of Rs. 67 lakhs in March, 1990 to the EMC for organising Phase I of the Energy Conservation Campaign. It was actually carried out in November—December, 1990. A general direction was given in the sanction to the effect that the campaign will give more stress on Television & Radio than on printing of publicity material. However, this was not one of the basis conditions of the sanction.

APPENDIX VII

COMPOSITION OF THE STANDING COMMITTEE ON ENERGY (1993-94)

CHAIRMAN

Shri Jaswant Singh

MEMBERS

Lok Sabha

2. **Shri Bhawani Lal Verma**
3. **Shri Murli Deora**
4. **Shri Motilal Singh**
5. **Shri Khelsai Singh**
6. **Shri Khelan Ram Jangde**
7. **Shri Parasram Bhardwaj**
8. **Shri S. Thota Subha Rao**
9. **Shri Shiv Charan Mathur**
10. **Shri K.P. Reddaiah Yadav**
11. **Dr. Krupasindhu Bhoi**
12. **Shri Dalbir Singh**
13. **Shri Vilas Muttemwar**
14. **Shri P.C. Chacko**
15. **Shri Virender Singh**
16. **Shri Laxminarain Tripathi**
17. **Prof. Rita Verma**
18. **Shri Ram Tahal Choudhary**
19. **Shri Shanker Singh Vaghela**
20. **Shri Keshari Lal**
21. **Shri Rajesh Kumar**
22. **Shri Arjun Singh Yadav**
23. **Shri Ajit Singh**
24. **Shri Haradhan Roy**

25. Shri Anil Basu
26. Shri Vijay Kumar Yadav
27. Dr. Venkateswara D. Rao
28. Shri Chitta Basu
29. Shri Mohan Singh (Ferozpur)
30. Shrimati Dil Kumari Bhandari

Rajya Sabha

31. Shri Parameshwar Kumar Agrawalla
- *32. Shri Sunil Basu Ray
33. Shri M.M. Hashim
- ***34. Shri Manmohan Mathur
35. Smt. Ila Panda
36. Shri J.S. Raju
- ***37. Shri Dayanand Sahay
38. Shri Rajni Ranjan Sahu
39. Shri Viren J. Shah
40. Shri Matang Singh
- ***41. Smt. Kamla Sinha
- **42. Shri Yashwant Sinha
43. Dr. Naunihal Singh

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- * Ceased to be a Member of the Committee consequent on his retirement from Rajya Sabha on 9th July, 1993.
 - ** Ceased to be a Member of the Committee consequent on his resignation from Rajya Sabha w.e.f. 14th November, 1993.
 - *** Ceased to be Member of the Committee consequent on his retirement from Rajya Sabha on 2nd April, 1994.

APPENDIX VIII

EXTRACT OF MINUTES OF THE EIGHTH SITTING OF THE STANDING COMMITTEE ON ENERGY HELD ON 31ST MARCH, 1994

The Committee sat from 11.00 hrs. to 13.30 hrs.

PRESENT

1. Shri Jaswant Singh — *Chairman*
2. Shri Bhawani Lal Verma
3. Shri Motilal Singh
4. Shri Khelsai Singh
5. Shri Shiv Charan Mathur
6. Shri Dalbir Singh
7. Shri Virender Singh
8. Prof. Rita Verma
9. Shri Ram Tahal Choudhary
10. Shri Shanker Sinh Vaghela
11. Shri Keshari Lal
12. Shri Vijay Kumar Yadav
13. Smt. Dil Kumari Bhandari
14. Shri Parmeshwar Kumar Aggarwalla
15. Shri Manmohan Mathur
16. Smt. Ila Panda
17. Shri J.S. Raju
18. Shri Dayanand Sahay
19. Shri Rajni Ranjan Sahu
20. Shri Viren J. Shah
21. Smt. Kamla Sinha
22. Dr. Naunihal Singh

SECRETARIAT

1. Shri G.L. Batra — *Additional Secretary*
2. Shri G.R. Juneja — *Deputy Secretary*
3. Shri A.L. Martin — *Assistant Director*

** ** *

** Paras 2 and 5 of the minutes relating to general procedure and consideration of draft report relating to Ministry of Coal are not included.

3. The Committee then took up for consideration the draft report on the Demands for Grants of the Ministry of Power (1994-95). The Chairman apprised the committee of the important points contained in the draft report. On a member pointing out the observations made by the Comptroller & Auditor General regarding power projects in the audit para No. 6 of 1993, the Committee decided that the Ministry's comments on the observations of CAG may be obtained and the Ministry's replies be incorporated in the report. The Committee, thereafter, adopted the report and authorised the Chairman to finalise the same on receipt of replies from Ministry of Power and present the same to Parliament.

4. The Committee then held a detailed discussion with the representatives of the Ministry of Power on the draft report on demands for grants of the Ministry of Power. The list of representatives of the Ministry of Power who were present during discussion is given in Annexure. A copy of the verbatim proceedings of the discussion is kept on record. The officials of the Ministry withdrew from the meeting after the discussion.

** ** **

6. The Committee placed on record their appreciation of the useful work done by the two members viz. Shri Manmohan Mathur, M.P. and Shri Dayanand Sahay, M.P. who would be retiring from Rajya Sabha on 2nd April, 1994 and would consequently cease to be members of the Committee.

The Committee then adjourned.

** Paras 2 and 5 of the Minutes relating to general procedure and consideration of draft report relating to Ministry of coal are not included.

LIST OF REPRESENTATIVES OF THE MINISTRY OF POWER

Sl. No.	Name of the Officials	Designation
1.	Shri R. Vasudevan	Secretary
2.	Shri V.K. Shunglu	Special Secretary
3.	Shri R.K. Nair	Jt. Secretary (TH.)
4.	Shri A.H. Jung	Jt. Secretary (S)
5.	Shri V.K. Dewan	Jt. Secretary (AH&C)
6.	Shri Ramji	Jt. Secretary (IPC)
7.	Shri T. Sethumadhavan	Jt. Secretary & FA
8.	Shri Ajay Dua	Jt. Secretary (P&EM)
9.	Shri V.P. Gambhir	Chairman, CEA
10.	Shri M.I. Beg	Member (Planning), CEA
11.	Shri M.A. Ramanand	Member (Thermal), CEA
12.	Shri S.R. Narsimha	Member (H), CEA
13.	Shri H.C. Mital	Member (PS), CEA
14.	Shri Rajender Singh	CMD, NTPC
15.	Shri C.P. Jain	Director (Finance), NTPC
16.	Shri R.K. Narayan	CMD, Power Grid