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**PLANNING COMMISSION**  
(Power and Energy Division)


FINANCIAL PERFORMANCE  
OF  
STATE ELECTRICITY BOARDS  
IN THE  
SEVENTH PLAN PERIOD

AUGUST, 1985

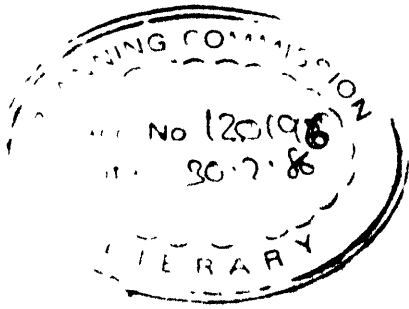
## FOREWORD

*A Review of performance of the State Electricity Boards (SEBs) in the Sixth Five Year Plan period was recently prepared and circulated by the Planning Commission. As a complement to the Review, this detailed Paper has been prepared which gives a forecast of the financial performance of the SEBs in the Seventh Plan period. This is based on the discussions with the senior representatives of the State Governments and SEBs. We would be grateful for comments.*

6.8.1985  
New Delhi

  
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# S U M M A R Y



**Financial Performance of State Electricity Boards  
in the Seventh Plan Period**

**SUMMARY**

A review undertaken in the Planning Commission on the performance of the Boards in the Sixth Plan period reveals that, on an overall basis the Boards were expected to incur commercial losses of Rs.4472 crores in the Plan period. Though the Sixth Plan had originally estimated that these losses would come down from Rs.4400 crores to less than Rs.1000 crores, this anticipated improvement had not materialised due to shortfall in generation and increase in operational expenditure. In the Seventh Plan period, the commercial losses are estimated to increase to Rs.11757 crores at 1984-85 rates. They are based upon certain proposed levels of capacity utilisation and generation and certain improved performance standards. Compared to 1984-85, in 1989-90 the All Boards position is that PLF is expected to show improvement from 42% to 50%, auxiliary consumption to be reduced from 10.8 to 10.5% and T & D losses from 19 to 17.7%. Coal consumption is expected to show improvement from 0.76 kg. to 0.74 kg. per kwh and oil consumption from 22.5 to 17.4 ml per kwh. Higher generation and sales are expected to reduce the unit cost of other expenses like O&M and Establishment. Notwithstanding these improvements, the overall unit cost shows increase from 61.5 p/kwh in 1984-85 to 69.2 p/kwh in 1989-90 mainly because of the incidence of the higher cost of purchase of power from outside, and interest. In terms of the latest amendment to the Electricity (Supply) Act, 1948, the Boards are expected to earn at least 3% surplus on the net fixed assets in use after meeting depreciation and interest and it is expected that the Boards would aim to achieve this return in the Seventh Plan period. On the basis of an approximate estimate for 1984-85, it is found that the extent of increase required in the average rates for sale of energy of different Boards to enable them to achieve the return would vary from 3 to 179%. While no increase might be required for Kerala, the increase required for Andhra Pradesh, Gujarat, Karnataka and Orissa would be within 10%, that for Madhya Pradesh, Maharashtra, Meghalaya, Tamil Nadu and

**-: 2 :-**

**West Bengal would be between 11 to 40%; and for Haryana, Uttar Pradesh, Bihar, Himachal Pradesh, Punjab and Rajasthan, the increase required would be within 41 to 100%. More than 100% increase in average rate would be required for Assam and Jammu & Kashmir. The increase required would be less if the Boards have other sources of income like subsidies or if they improve their efficiency and reduce their costs of operation.**

FINANCIAL PERFORMANCE  
OF  
STATE ELECTRICITY BOARDS  
IN THE  
SEVENTH PLAN PERIOD

1.0 **Introduction**

On the basis of discussions held in the Planning Commission from October, 1984 to January, 1985 with the senior representatives of the State Electricity Boards (SEBs), the financial working of the Boards has been reviewed for the Sixth Plan period and certain forecasts of internal resources and commercial performance were made for the Seventh Plan period. The Sixth Plan review has been circulated separately. The main aspects of performance of the Boards in the Seventh Plan period which have formed the basis of assessment of their internal resources and financial performance are discussed below.

2. **Internal Resources**

The table below shows the internal resources of the SEBs for 1984-85 (RE) and for the Seventh Plan period.

(Rs. Crores)

| <u>Year</u>    |                | <u>Internal Resources of<br/>the Boards*</u><br>(At 1984-85 rates) |
|----------------|----------------|--|
| 1984-85        | (RE)           | . 92.50  |
| 1985-86        | (AP)           | (-) 53.73  |
| 1986-87        | (Est.)         | (-) 124.24   |
| 1987-88        | (Est.)         | (-) 255.52   |
| 1988-89        | (Est.)         | (-) 383.75   |
| 1989-90        | (Est.)         | (-) 652.24   |
| <b>1985-90</b> | <b>(Total)</b> | <b>(-)1469.48@</b>   |

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@ An estimate of (-) Rs.1569 crores has been adopted for the Draft Seventh Plan.

*Annexure-1* gives Board-wise/year-wise details. The total internal resources of all the Board are expected to be (-)Rs.1470 crores at 1984-85 rates in the Seventh Plan period. They consist of retained revenue surplus or deficit, depreciation and miscellaneous capital receipt as shown in *Annexure-2*. They also include subsidies to the Boards wherever the State Governments have agreed to provide the same. This amount of subsidy is estimated at Rs.837 crores as per *Annexure-3*. Seven Boards namely Andhra Pradesh, Gujarat, Haryana, Kerala, Madhya Pradesh, Orissa and West Bengal show positive contribution of internal resources, the contribution of rest of the Boards being negative.

3. The estimates of internal resources indicated above take into account the full interest liability as well as repayment of loans to institutions like LIC, REC, IDBI/NABARD etc. So far as interest due to the State Government is concerned, the amount that can actually be paid will depend upon the surplus available after meeting the liabilities on account of higher priority items like depreciation and interest liability to institutions. In the discussions held with the Boards in the Planning Commission referred to earlier, the Boards had indicated a certain amount of payment of interest to their State Governments in working out their internal resources. Such payments amounted to Rs.2833 crores as indicated col. 4 of *Annexure-4*. This amount has been accordingly provided for in the estimated internal resources vide *Annexure-2*. If, however, the full amount of interest due to the State Governments i.e. Rs.8653 crores had been provided, the internal resources of the Boards would have deteriorated further to (-)Rs.7289 crores. According to the Electricity (Supply) Act, 1948, as amended from time to time, the Boards can carry over the interest due to the State Government in the event of their inability to meet the obligation in a particular year which could be met from surpluses in future years. Many of

-: 5 :-

the Boards have, however, accumulated such outstandings in the past. The estimated interest to State Govts. outstanding at the end of 1983-84 is Rs.1271 crores on the basis of information available in the Planning Commission. To the extent, the interest obligations are not met fully in the period subsequent to 1983-84 and upto the end of Seventh Plan, the outstandings would increase.

4. **Commercial Profits/Losses of SEBs**

The table below indicates the summary position for 1984-85(RE) and for the Seventh Plan period.

(Rs. Crores)

|                |                | <u>Commercial Profit (+)</u><br><u>Losses(-) of SEBs</u><br>(At 1984-85 rates) |
|----------------|----------------|--|
| 1984-85        | (RE)           | (-) 1122.82  |
| 1985-86        | (AP)           | (-) 1368.31  |
| 1986-87        | (Est.)         | (-) 1840.91  |
| 1987-88        | (Est.)         | (-) 2314.74  |
| 1988-89        | (Est.)         | (-) 2822.84  |
| 1989-90        | (Est.)         | (-) 3410.69  |
| <b>1985-90</b> | <b>(Total)</b> | <b>(-)11757.49</b>   |

**Annexure-5** gives Boardwise/yearwise details. The corresponding losses in the Sixth Plan period were Rs.4472 crores at current rates. The commercial profits/losses of the Boards represent gross revenue receipts less operational expenditure, depreciation and interest due to institutions and to the State Governments in the year concerned. They do not take into account the subsidy to be received from the State Governments. Taking the five year period (1985-90) together, it may be seen that only 2 Boards i.e. Andhra Pradesh and Orissa show profit. The rest of the Boards show losses.

5. The above financial estimates have been worked out on the basis of certain assumptions regarding additions to installed capacity and levels of generation, auxiliary consumption and transmission and distribution losses, fuel consumption, etc. These physical parameters represent some improvement over the anticipated levels in 1984-85. A brief treatment of the different parameters governing the estimates for 1989-90 as compared with those anticipated for 1984-85 is given below.

(i) **Installed Capacity**

*Annexure-6* indicates the position regarding installed capacity of the Boards as anticipated at the end of 1984-85 (RE) and projected for 1989-90 (Est.). The position regarding capacity shown in *Annexure-6* was based on the results of discussions on the SEBs' internal resources for the Seventh Plan period. The installed capacity has undergone some changes following the discussions on the Annual Plan 1985-86 and the Seventh Plan which were held subsequent to the discussions on SEBs internal resources. The latest estimate of additions to installed capacity of the Boards in the Seventh Plan period is 12755 MW as compared to 15975 MW assumed for the exercise on internal resources.

(ii) **Generation**

Total generation of the SEBs indicated at 117.5 Bkwh in 1984-85, was projected to increase to 194.9 Bkwh in 1989-90, giving an annual growth rate of 10.6% corresponding to an annual growth rate of 8.7% in the Sixth Plan period. Boardwise estimates are shown in *Annexure-7*.

(iii) **Other Parameters**

The projected performance in 1989-90 compared with

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1984-85 (RE) in terms of Plant Load Factor (Thermal), Auxiliary Consumption, T & D losses, sales, fuel consumption rates, fuel costs and other operating costs are shown in Annexure-8 to 16.

6. It is seen that the SEBs are planning to perform slightly better in the Seventh Plan as compared to the anticipated levels in 1984-85. The targetted improvement in physical performance also contributes to reduction in some relevant components of the costs of operation as may be seen in Annexure-14. The all-Board position is shown below :

| <u>Cost Component</u>          | <u>(Paise/kwh)</u>     |                          |  |
|--------------------------------|------------------------|--------------------------|--|
|                                | <u>1984-85</u><br>(RE) | <u>1989-90</u><br>(Est.) | <u>Increase(+)</u><br>or<br><u>Decrease(-)</u> |
| Fuel                           | 17.7                   | 17.5                     | (-) 0.2  |
| Purchase of Power              | 9.2                    | 13.1                     | (+) 3.9  |
| Operation & Maintenance        | 4.7                    | 4.7                      | -  |
| Establishment                  | 10.2                   | 9.2                      | (-) 1.0  |
| Miscellaneous                  | 1.5                    | 0.9                      | (-) 0.6  |
| Depreciation                   | 5.0                    | 6.6                      | (+) 1.6  |
| Interest to - Instt. Creditors | 5.4                    | 5.5                      | (+) 0.1  |
| - State Govts.                 | 7.8                    | 11.7                     | (+) 3.9  |
| <b>Total</b>                   | <b>61.5</b>            | <b>69.2</b>              | <b>(+) 7.7</b>                                 |

While the operating cost components like fuel, establishment show reduction in 1989-90 compared to 1984-85, other items like purchase of power, depreciation and interest show increase compared to 1984-85 (RE) level. This is evident from Annexures 13, 14 & 15.

7. In the Seventh Plan period, a larger volume of purchase of power by the different Boards is expected particularly in view of the coming on stream of several Central generating projects. Annexures 17, 18 & 19 indicate the details of power purchase by SEBs, its cost, share of Central Stations, etc. The summary position for all Boards is given below :

| <u>Source</u>       | <u>Unit</u> | <u>Purchase of Power (MKWH)</u> |                               |
|---------------------|-------------|---------------------------------|-------------------------------|
|                     |             | <u>1984-85</u><br>(RE)          | <u>1989-90</u><br>(Est.)      |
| Central Stations    | (Mkwh)      | 15639<br>(14.2)                 | 39748<br>(21.9)               |
| Inter-State Sources | (Mkwh)      | 6509<br>(5.9)                   | 10179<br>(5.6)                |
| <b>Total</b>        |             | <b>22148</b><br><b>(20.1)</b>   | <b>49927</b><br><b>(27.5)</b> |

(Figures in brackets are percentage of purchase of power to the net generation of the Boards)

Boardwise details of the above table are given in Annexure-17. The proportion of the Boards' purchase of power from outside in relation to their local (net) generation is shown in Annexure-18. The share of power purchase in the Seventh Plan period shows an increase by about 7% mainly due to increase in the purchase of power from Central Sector Stations. The proportions of power purchase from outside sources assumed for the Seventh Plan period are quite substantial in the case of the following Boards and show increase over the levels in 1984-85 (RE) for most of them.

| <u>Board</u>      | <u>Proportion of Purchase of Power from outside to net Generation (%)</u> |                |
|-------------------|---|----------------|
|                   | <u>1984-85</u>  | <u>1989-90</u> |
| Bihar             | 88.2  | 83.3           |
| Haryana           | 7.0   | 27.1           |
| Himachal pradesh  | 77.0  | 79.5           |
| Jammu & Kashmir   | 55.0  | 67.8           |
| Madhya Pradesh    | 15.6  | 24.1           |
| Maharashtra       | 17.9  | 26.6           |
| Punjab            | 7.2   | 20.5           |
| Rajasthan         | 52.1  | 50.0           |
| Tamil Nadu        | 50.8  | 52.0           |
| Uttar Pradesh     | 22.1  | 33.3           |
| West Bengal       | 25.9  | 42.1           |
| <b>All Boards</b> | <b>20.1</b>   | <b>27.5</b>    |

Not only the proportion of outside purchase is higher, the average rate for purchase of power also shows increase from 39.41 paise per unit of power purchased in 1984-85 to 44.41 paise in 1989-90 as shown in Annexure-19.

8. The specific average rates assumed for purchase of power from the new Super Thermal Power Stations in the Seventh Plan period are indicated below :

| <u>S.T.P.S.</u> | <u>(Paise/kwh)</u> |                |
|-----------------|--------------------|----------------|
|                 | <u>1984-85</u>     | <u>1989-90</u> |
| Singrauli       | 38.0               | 42.0           |
| Ramagundam      | 50.0               | 54.0           |
| Korba           | 40.0               | 40.8           |
| Farakka         | -                  | 59.9           |
| Vindhyachal     | -                  | 58.1           |
| Rihand          | -                  | 75.7           |

Some of the Boards had mentioned that purchase of power at the above high rates from the STPSs might not be feasible since their own rates for sale of energy were lower. It was decided that the Boards could assume purchase of power at the above rates on the premise they would be able to draw and sell it to parties willing to take it at rates which would not involve any loss or benefit to the Board concerned. The shares of different State Boards from the various STPSs and the rates for purchase were based on information furnished by the NTPC. The rates were tentative and without prejudice to whatever rates might be eventually agreed upon between NTPC and the Boards.

9. In addition to the power purchase, the other main item of increase is interest due to State Govts. This is dependent on the loan component of financing of the capital outlay of the Boards received from the State Government. To the extent the Boards raise additional resources in the Seventh Plan period, the loan component from the State Govt. can be expected to be reduced and accordingly the incidence of interest on this amount can also be expected to come down. Interest due to the State Govts. constitutes about 17% of the estimated average cost of operation in 1989-90 (all Boards). The proportions differ from Board to Board but they are high in certain Boards like Assam, Himachal Pradesh, Jammu & Kashmir, Kerala, Punjab, Rajasthan and Uttar Pradesh. Boardwise position for 1984-85 (RE) and 1989-90 (Est.) is given in Annexure-20.
10. The financial estimates for the Seventh Five Year Plan for different Boards are thus drawn on the basis of certain improvements in the physical performance of the Boards over the 1984-85 level and assuming revenues at 1984-85 rates. To the extent the Boards receive subsidy from the State Govts. it should help to bring down the commercial losses. However, no firm

estimate of subsidy in the Seventh Plan period is available. Only a partial estimate is available for some Boards as shown in Annexure-3. This amounts to Rs.837 crores. It may, however, be mentioned that the Boards are expected to aim at gradual reduction and elimination of RE subsidy in the Seventh Plan period. In the circumstances, the emphasis should be more on improvement in efficiency of operations and evolving a reasonable rate structure to enable building of retained surpluses for investment. In this connection, it may be mentioned that the Electricity (Supply) Act, 1948 has been recently amended in terms of which the Boards are expected to realise a minimum net surplus of 3% on the net fixed assets in use after providing fully for depreciation and interest due. This is a statutory requirement. Achievement of this stipulated target should help to bring about better financial performance of the Boards and also in enabling them to provide higher volume of internal resources for financing their development programmes than hitherto.

11. To earn the rate of return mentioned above, it is found on the basis of a rough estimate for 1984-85 (RE) that the average sale rates of all the Boards (except Kerala) would need to be increased as indicated below :

| S.No. | Range of increase    | No.of Boards | Name of Boards   |
|-------|----------------------|--------------|--|
| 1     | 2                    | 3            | 4  |
| 1.    | Upto & including 10% | 4            | Andhra Pradesh, Gujarat, Karnataka & Orissa                        |
| 2.    | 11 to 40%            | 5            | Madhya Pradesh, Maharashtra, Meghalaya, Tamil Nadu and West Bengal |
| 3.    | 41 to 70%            | 2            | Haryana & Uttar Pradesh  |
| 4.    | 71 to 100%           | 4            | Bihar, Himachal Pradesh Punjab & Rajasthan                         |
| 5.    | Beyond 100%          | 2            | Assam and Jammu & Kashmir  |
|       | <b>Total</b>         | <b>17</b>    |  |

12. The increase required ranges from 2.8% in the case of Andhra Pradesh to 178.9% in the case of Jammu & Kashmir as per details in **Annexure-21**. To the extent the Boards have other sources of income like miscellaneous revenue receipts, subsidies, the extent of increase required would be less. It would be less also if the Boards improve the efficiency of their operations and bring down their costs.
13. **Additional Resources Mobilisation (ARM)**
- The estimates of internal resources and commercial profits/ losses referred to above have been adopted at 1984-85 rates. Thus they do not reflect the effect of any additional resource mobilisation that would be done in the Seventh Plan period. While the Boards are expected to do additional resource mobilisation in the Seventh Plan period, precise estimates in this regard have not so far been made. In the Sixth Plan period, it was envisaged that Boards would do such resource mobilisation in order to reduce the estimated losses by 80%. These additional resources would have to be realised mainly through operational improvements further to what have been incorporated in the above estimates and by suitable revision/rationalisation of rates.
14. The main areas on which successful financial and physical performance of SEBs depends are the following :
- i) **Implementation of Projects on Schedule;**
  - ii) **Better Capacity Utilisation;**
  - iii) **Reduction in Auxiliary Consumption and Transmission and Distribution Losses;**
  - iv) **Economy in fuel inputs like coal, oil for thermal generation;**
  - v) **Control over expenditure on O&M and staff and improvement in staff productivity;**
  - vi) **Prompt realisation of assessed revenues and prevention of accumulation of arrears in the future;**
  - vii) **Control over inventory levels; and**
  - viii) **Rationalisation and revision of rate structure particularly where they are relatively low in order to build retained surpluses for investment.**

15. *As already mentioned, the resources of Boards have been worked out assuming improvements in these various parameters. In the discussions which the Deputy Chairman and Members of the Planning Commission recently had with the State Chief Ministers on the Annual Plan 1985-86 and the Seventh Plan, the particular areas relevant to each of the Boards had also been highlighted. It is expected that the State Governments and the Board management would look into the performance of the concerned Boards and take suitable steps to enable the Boards to achieve and improve on the targets that might be agreed to in respect of contribution of internal resources and financial performance for the Seventh Plan period.*

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# ANNEXURES

**Financial Performance of State Electricity Boards**  
**In the Seventh Plan Period**

**LIST OF ANNEXURES**

| <b><u>Annexure No.</u></b> | <b><u>Subject</u></b>   |
|----------------------------|---|
| 1                          | Internal Resources in the Seventh Plan period at 1984-85 rates  |
| 2                          | Estimation of internal resources in the Seventh Plan period (1985-90)   |
| 3                          | R.E. Subsidy during the Seventh Plan period   |
| 4                          | Interest due to State Governments and interest provided by the Boards in the estimated internal resources (1985-90) |
| 5                          | Commercial profit (+)/Losses (-) in the Seventh Plan period at 1984-85 rates (excluding subsidies)                  |
| 6                          | Installed capacity mix (1984-85 and 1989-90)  |
| 7                          | Details of Generation (1984-85 and 1989-90)   |
| 8                          | Projected performance indicators in 1989-90 compared with 1984-85   |
| 9                          | Anticipated Plant Load Factor of Thermal Stations (1984-85 and 1989-90)   |
| 10                         | Auxiliary consumption (Thermal) (1984-85 and 1989-90)   |
| 11                         | Transmission and Distribution Losses (1984-85 and 1989-90)  |
| 12                         | Rate of Coal and Oil consumption and cost of fuel for Coal based Thermal Generation (1989-90)                       |
| 13                         | Comparison of total Operating Cost (1984-85 and 1989-90)  |
| 14                         | Components of Operating Cost Structure (1984-85 and 1989-90)  |
| 15                         | Details of cost components regarding depreciation and interest (1984-85 and 1989-90)                                |
| 16                         | Pattern of sales of electricity (1984-85 and 1989-90)   |

contd.

| <u>Annexure No.</u> | <u>Subject</u>  |
|---------------------|---|
| 17                  | Details of Power purchase (1984-85 and 1989-90)   |
| 18                  | Power purchase as % of net generation of the Boards (1984-85 and 1989-90)                             |
| 19                  | Cost of power purchase (1984-85 and 1989-90)  |
| 20                  | Interest due to State Governments as % of the total operating cost (1984-85 and 1989-90)              |
| 21                  | Average rate required to realise 3% net surplus after meeting depreciation and interest due (1984-85) |

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## State Electricity Boards

Internal Resources in the Seventh Plan period  
(at 1984-85 rates)

(Includes subsidies as shown in Annexure-3)

| S. No. | Board                       | 1984-85 | 1985-86 | 1986-87  | 1987-88  | 1988-89  | 1989-90  | 1985-90   |
|--------|-----------------------------|---------|---------|----------|----------|----------|----------|-----------|
|        |                             | RE      | A. Plan | Est.     | Est.     | Est.     | Est.     | Est.      |
| 1      | 2                           | 3       | 4       | 5        | 6        | 7        | 8        | 9         |
| 1.     | Andhra Pradesh              | 87.97   | 112.60  | 105.68   | 77.88    | 53.38    | 30.47    | 380.01    |
| 2.     | Assam                       | - 18.48 | - 28.54 | - 26.68  | - 29.80  | - 26.20  | - 26.76  | - 137.98  |
| 3.     | Bihar                       | - 69.53 | - 69.60 | - 64.97  | - 73.13  | - 82.58  | - 98.86  | - 389.14  |
| 4.     | Gujarat                     | 27.29   | 44.98   | 47.66    | 63.67    | 70.22    | 63.24    | 289.77    |
| 5.     | Haryana                     | - 14.11 | 9.08    | 10.00    | 11.00    | 12.00    | 13.00    | 55.00     |
| 6.     | Himachal Pradesh            | - 3.50  | - 10.52 | - 9.47   | 4.20     | 2.79     | - 6.54   | - 19.54   |
| 7.     | Jammu & Kashmir             | - 18.20 | - 14.04 | - 17.59  | - 19.45  | - 16.69  | - 12.16  | - 79.93   |
| 8.     | Karnataka Board             | 28.32   | - 23.10 | - 59.93  | - 88.02  | - 108.22 | - 153.43 | - 432.70  |
| 9.     | Karnataka Power Corp. (KPC) | - 44.43 | - 47.83 | - 61.70  | - 70.73  | - 77.25  | - 122.63 | - 380.14  |
| 10.    | Kerala                      | 28.83   | 33.18   | 23.76    | 12.10    | 15.70    | 11.36    | 96.10     |
| 11.    | Madhya Pradesh              | 34.48   | 69.75   | 88.59    | 97.17    | 155.72   | 256.12   | 667.35    |
| 12.    | Maharashtra                 | 90.88   | - 14.85 | 6.29     | - 73.50  | - 141.19 | - 303.16 | - 526.41  |
| 13.    | Meghalaya                   | - 0.49  | - 3.13  | - 4.40   | - 5.83   | - 7.83   | - 6.02   | - 27.21   |
| 14.    | Orissa                      | 16.41   | 24.20   | 41.82    | 46.52    | 36.98    | 23.95    | 173.47    |
| 15.    | Punjab                      | - 8.60  | - 12.53 | - 16.25  | - 27.37  | - 40.66  | - 49.23  | - 146.04  |
| 16.    | Rajasthan                   | - 22.79 | - 51.90 | - 63.78  | - 81.07  | - 95.98  | - 111.98 | - 404.71  |
| 17.    | Tamil Nadu                  | - 48.37 | - 97.19 | - 105.32 | - 91.98  | - 99.73  | - 118.96 | - 513.18  |
| 18.    | Uttar Pradesh               | 6.95    | 18.36   | - 30.48  | - 18.14  | - 46.74  | - 54.45  | - 131.45  |
| 19.    | West Bengal                 | 19.87   | 7.43    | 12.53    | 10.96    | 12.53    | 13.80    | 57.25     |
| 20.    | Total : All Boards          | 92.50   | - 53.73 | - 124.24 | - 255.52 | - 583.75 | - 652.24 | - 1469.48 |

● Includes Rs.18.91 crores of U.P.R.Vidyut Utpadan Nigam Ltd.

●● An estimate of (-) Rs.1569 crores at 84-85 rates has been adopted for the Draft Seventh Plan based on estimate of (-) Rs.249 crores for Bihar, (-) Rs.1027 crores for Karnataka including KPC and (-) Rs.552 crores for Maharashtra in place of the estimates given above for them.

## State Electricity Boards

Estimation of Internal Resources in the Seventh Plan period  
(1985-90)

(Rs. crores)

| S. No. | Board                 | (Rs. crores)      |              |                             |                          |              |                                  |                        |              |                |                                |                                |    |
|--------|-----------------------|-------------------|--------------|-----------------------------|--------------------------|--------------|----------------------------------|------------------------|--------------|----------------|--------------------------------|--------------------------------|----|
|        |                       | 1                 | 2            | 3                           | 4                        | 5            | 6                                | 7                      | 8            | 9              | 10                             | 11                             | 12 |
|        |                       | Gross surplus *** | Depreciation | Net operating surplus (3-4) | Interest to Institutions | State Govt.* | Retained surplus/deficit 5-(6+7) | Misc. Capital Receipts | Depreciation | Total (8+9+10) | Less Repayment to institutions | Net Internal Resources (11-12) |    |
| 1.     | Andhra Pradesh        | 1150.30           | 423.81       | 726.49                      | 281.27                   | 405.74       | 39.48                            | 120.00                 | 423.81       | 583.29         | 203.28                         | 380.01                         |    |
| 2.     | Assam                 | (-) 23.85         | 132.08       | (-) 155.93                  | 110.65                   | -            | (-) 266.58                       | 23.45                  | 132.08       | (-) 111.05     | 26.93                          | (-) 137.98                     |    |
| 3.     | Bihar                 | 49.41             | 264.84       | (-) 215.43                  | 432.18                   | -            | (-) 647.61                       | 116.25                 | 264.84       | (-) 266.52     | 122.62                         | (-) 389.14                     |    |
| 4.     | Gujarat               | 921.38            | 387.51       | 533.87                      | 268.64                   | 233.68       | 31.55                            | 17.68                  | 387.51       | 436.74         | 146.97                         | 289.77                         |    |
| 5.     | Haryana               | 230.21            | 155.26       | 74.95                       | 150.83                   | 34.61        | (-) 110.49                       | 55.00                  | 155.26       | 99.77          | 44.77                          | 55.00                          |    |
| 6.     | Himachal Pradesh      | 73.97             | 36.20        | 37.77                       | 72.25                    | -            | (-) 34.48                        | 7.39                   | 36.20        | 9.11           | 28.65                          | (-) 19.54                      |    |
| 7.     | Jammu & Kashmir       | (-) 9.58          | 40.72        | (-) 50.30                   | 57.65                    | -            | (-) 107.95                       | 5.10                   | 40.72        | (-) 62.13      | 17.80                          | (-) 79.93                      |    |
| 8.     | Karnataka Board       | (-) 161.55        | 117.45       | (-) 279.00                  | 112.43                   | -            | (-) 391.43                       | 84.49                  | 117.45       | (-) 189.49     | 243.21                         | (-) 432.70                     |    |
| 9.     | Karnataka Power Corp. | 562.37            | 190.97       | 371.40                      | 143.76                   | 542.34       | (-) 314.70                       | -                      | 190.97       | (-) 123.73     | 256.41                         | (-) 380.14                     |    |
| 10.    | Kerala                | 425.80            | 120.15       | 305.65                      | 132.85                   | 188.28       | (-) 15.48                        | 68.50                  | 120.15       | 173.17         | 77.07                          | 96.10                          |    |
| 11.    | Madhya Pradesh        | 1793.83           | 526.72       | 1267.11                     | 428.17                   | 670.54       | 168.40                           | 175.70                 | 526.72       | 870.82         | 203.47                         | 667.35                         |    |
| 12.    | Maharashtra           | 925.49            | 666.45       | 259.04                      | 465.63                   | 562.67       | (-) 769.26                       | (-) 34.81              | 666.45       | (-) 137.62     | 388.79                         | (-) 526.41                     |    |
| 13.    | Meghalaya             | 32.28             | 12.49        | 19.79                       | 37.94                    | -            | (-) 18.15                        | 2.83                   | 12.49        | (-) 2.83       | 24.39                          | (-) 27.22                      |    |
| 14.    | Orissa                | 485.12            | 118.44       | 366.68                      | 165.94                   | 94.67        | 106.07                           | 21.30                  | 118.44       | 245.81         | 72.34                          | 173.47                         |    |
| 15.    | Punjab                | 69.50             | 279.00       | (-) 209.50                  | 190.54                   | -            | (-) 400.04                       | 95.55                  | 279.00       | (-) 25.49      | 120.55                         | (-) 146.04                     |    |
| 16.    | Rajasthan             | (-) 2.69          | 306.23       | (-) 308.92                  | 282.76                   | -            | (-) 591.68                       | 54.87                  | 306.23       | (-) 230.58     | 174.13                         | (-) 404.71                     |    |
| 17.    | Tamil Nadu            | (-) 155.37        | 351.60       | (-) 506.97                  | 313.86                   | -            | (-) 820.83                       | 71.13                  | 351.60       | (-) 398.10     | 115.08                         | (-) 513.18                     |    |
| 18.    | Utter Pradesh         | (a) 303.35        | 722.73       | 419.38                      | 452.24                   | -            | (-) 871.62                       | 262.12                 | 722.73       | 113.23         | 263.59                         | (-) 150.36                     |    |
|        |                       | (b) 119.74        | 54.92        | 64.82                       | -                        | 100.83       | (-) 36.01                        | -                      | 54.92        | 18.91          | -                              | 18.91                          |    |
| 19.    | West Bengal           | 445.26            | 161.80       | 283.46                      | 333.55                   | -            | (-) 50.09                        | 47.00                  | 161.80       | 158.71         | 101.46                         | 57.25                          |    |
| 20.    | Total : All Boards    | 7234.97           | 5069.37      | 2165.60                     | 4433.14                  | 2833.36      | (-) 5100.90                      | 1193.55                | 5069.37      | 1162.02        | 2631.51                        | (-) 1469.49                    |    |

\* Interest to be paid as assumed for estimate of Internal Resources

\*\*\* Gross Revenue Receipts including subsidies less operating expenditure excluding Depreciation and Interest.

(a) UPSEB

(b) UPRVU Nigam Ltd.

State Electricity BoardsR.E. Subsidy during Seventh Plan period

(Rs.crores)

| S. | Board           | 1984-85<br>RE | 1985-86<br>AP | 1986-87<br>Est. | 1987-88<br>Est. | 1988-89<br>Est. | 1989-90<br>Est. | 1985-90<br>Total |
|----|-----------------|---------------|---------------|-----------------|-----------------|-----------------|-----------------|------------------|
| 1  | 2               | 3             | 4             | 5               | 6               | 7               | 8               | 9                |
| 1. | Karnataka Board | 1.00          | 1.00          | 1.00            | 1.00            | 1.00            | 1.00            | 5.00             |
| 2. | Madhya Pradesh  | 57.00         | 64.00         | 74.00           | 79.00           | 95.00           | 114.00          | 426.00           |
| 3. | Maharashtra     | 110.22        | 45.37         | 85.83           | 73.95           | 48.46           | -               | 253.61           |
| 4. | Punjab *        | 13.40         | 14.40         | 15.40           | 16.50           | 17.50           | 18.50           | 82.30            |
| 5. | Rajasthan       | 25.00         | -             | -               | -               | -               | -               | -                |
| 6. | West Bengal     | 14.00         | 14.00         | 14.00           | 14.00           | 14.00           | 14.00           | 70.00            |
| 7. | <b>Total</b>    | <b>207.62</b> | <b>138.77</b> | <b>190.23</b>   | <b>184.45</b>   | <b>175.96</b>   | <b>147.50</b>   | <b>836.91</b>    |

\* AP subsidy.

**State Electricity Boards**  
**Interest due to State Governments and**  
**Interest provided by the Boards in the estimates of**  
**Internal Resources**  
**(1985-90)**

| (Rs. crores) |                           |                |  |                             |
|--------------|---------------------------|----------------|--|-----------------------------|
| S. No.       | Board                     | Interest due   | Interest that has been provided by the Board | Interest not provided (3-4) |
| 1            | 2                         | 3              | 4  | 5                           |
| 1.           | Andhra Pradesh            | 405.74         | 405.74                                       | -                           |
| 2.           | Assam                     | 420.66         | -  | 420.66                      |
| 3.           | Bihar                     | 405.90         | -  | 485.90                      |
| 4.           | Gujarat                   | 273.45         | 233.68                                       | 39.77                       |
| 5.           | Haryana                   | 306.18         | 34.61  | 271.57                      |
| 6.           | Himachal Pradesh          | 127.65         | -  | 127.65                      |
| 7.           | Jammu & Kashmir           | 78.83          | -  | 78.83                       |
| 8.           | Karnataka Board           | 212.99         | -  | 212.99                      |
| 9.           | Karnataka Power Corp.     | 542.34         | 542.34                                       | -                           |
| 10.          | Kerala                    | 188.28         | 188.28                                       | -                           |
| 11.          | Madhya Pradesh            | 670.54         | 670.54                                       | -                           |
| 12.          | Maharashtra               | 562.67         | 562.67                                       | -                           |
| 13.          | Meghalaya                 | 13.21          | -  | 13.21                       |
| 14.          | Orissa                    | 94.67          | 94.67  | -                           |
| 15.          | Punjab                    | 871.90         | -  | 871.90                      |
| 16.          | Rajasthan                 | 580.88         | -  | 580.88                      |
| 17.          | Tamil Nadu                | 593.20         | -  | 593.20                      |
| 18.          | Uttar Pradesh             | (a) 1848.17    | -  | 1848.17                     |
|              |                           | (b) 100.83     | 100.83                                       | -                           |
| 19.          | West Bengal               | 354.96         | -  | 354.96                      |
| 20.          | <b>Total : All Boards</b> | <b>8653.05</b> | <b>2833.36</b>                               | <b>5819.69</b>              |

(a) U P S E B

(b) U P R V U Nigam Ltd.

**State Electricity Boards**  
**Commercial Profits (+)/Losses (-)**  
**In the Seventh Five Year Plan period**  
 (at 1984-85 rates)  
 (excluding subsidies)

| S.No. Board                    | ( Rs.crores ) |                   |                 |                 |                 |                 |                  |  |  |  |
|--------------------------------|---------------|-------------------|-----------------|-----------------|-----------------|-----------------|------------------|--|--|--|
|                                | 1984-85<br>RE | 1985-86<br>A.Plan | 1986-87<br>Est. | 1987-88<br>Est. | 1988-89<br>Est. | 1989-90<br>Est. | 1985-90<br>Total |  |  |  |
| 2                              | 3             | 4                 | 5               | 6               | 7               | 8               | 9                |  |  |  |
| 1. Andhra Pradesh              | 33.99         | 63.51             | 50.99           | 12.17           | (-) 26.45       | (-) 60.74       | 39.48            |  |  |  |
| 2. Assam                       | (-) 84.19     | (-) 94.99         | (-) 116.60      | (-) 140.16      | (-) 158.93      | (-) 176.56      | (-) 687.24       |  |  |  |
| 3. Bihar                       | (-) 121.98    | (-) 158.15        | (-) 174.55      | (-) 202.90      | (-) 237.28      | (-) 280.53      | (-)1053.51       |  |  |  |
| 4. Gujarat                     | 10.23         | 20.82             | 14.34           | 2.37            | (-) 13.89       | (-) 31.86       | (-) 8.22         |  |  |  |
| 5. Haryana                     | (-) 52.27     | (-) 45.10         | (-) 57.17       | (-) 75.95       | (-) 89.74       | (-) 114.10      | (-) 382.06       |  |  |  |
| 6. Himachal Pradesh            | (-) 17.79     | (-) 28.59         | (-) 35.62       | (-) 24.66       | (-) 30.87       | (-) 42.39       | (-) 162.13       |  |  |  |
| 7. Jammu & Kashmir             | (-) 35.10     | (-) 33.09         | (-) 37.11       | (-) 38.68       | (-) 38.41       | (-) 39.49       | (-) 186.78       |  |  |  |
| 8. Karnataka Board             | (-) 21.00     | (-) 50.08         | (-) 86.11       | (-) 119.22      | (-) 149.98      | (-) 204.03      | (-) 609.42       |  |  |  |
| 9. Karnataka Power Corporation | (-) 19.73     | (-) 45.22         | (-) 53.35       | (-) 59.23       | (-) 60.04       | (-) 96.86       | (-) 314.70       |  |  |  |
| 10. Kerala                     | 17.12         | 19.09             | 4.74            | (-) 10.11       | (-) 10.47       | (-) 18.72       | (-) 15.47        |  |  |  |
| 11. Madhya Pradesh             | (-) 65.82     | (-) 62.88         | (-) 69.59       | (-) 74.87       | (-) 54.26       | 4.00            | (-) 257.60       |  |  |  |
| 12. Maharashtra                | (-) 46.82     | (-) 84.84         | (-) 132.16      | (-) 196.04      | (-) 258.95      | (-) 350.88      | (-)1022.87       |  |  |  |
| 13. Meghalaya                  | (-) 1.78      | (-) 4.66          | (-) 5.28        | (-) 6.59        | (-) 8.47        | (-) 6.36        | (-) 31.36        |  |  |  |
| 14. Orissa                     | 6.47          | 13.54             | 30.45           | 51.53           | 21.86           | 8.69            | 106.07           |  |  |  |
| 15. Punjab                     | (-) 135.60    | (-) 163.85        | (-) 201.28      | (-) 262.29      | (-) 321.30      | (-) 405.52      | (-)1354.24       |  |  |  |
| 16. Rajasthan                  | (-) 103.39    | (-) 124.32        | (-) 173.13      | (-) 237.01      | (-) 297.53      | (-) 340.57      | (-)1172.56       |  |  |  |
| 17. Tamil Nadu                 | (-) 163.92    | (-) 206.58        | (-) 259.47      | (-) 279.97      | (-) 312.48      | (-) 355.53      | (-)1414.03       |  |  |  |
| 18. Uttar Pradesh              | (-) 257.35    | (-) 314.87        | (-) 461.96      | (-) 540.61      | (-) 664.84      | (-) 773.52      | (-)2755.80       |  |  |  |
| 19. West Bengal                | (-) 63.89     | (-) 68.05         | (-) 78.05       | (-) 92.52       | (-) 110.71      | (-) 125.72      | (-) 475.05       |  |  |  |
| 20. Total : All Boards         | (-)1122.82    | (-)1368.31        | (-)1840.91      | (-)2314.74      | (-)2822.84      | (-)3410.69      | (-)11757.49      |  |  |  |

● Includes commercial loss of Rs.36.01 crores of UP Rajya Vidyut Utpadan Nigam Ltd.

**State Electricity Boards****Installed Capacity Mix<sup>⊙</sup>**

(1984-85 &amp; 1989-90)

|        |                           | (MW)           |                |                           |                |                |                           |
|--------|---------------------------|----------------|----------------|---------------------------|----------------|----------------|---------------------------|
| S. No. | Board                     | 1984-85(RE)    |                |                           | 1989-90 (Est.) |                |                           |
|        |                           | Hydel          | Thermal        | Total <sup>⊙</sup><br>3+4 | Hydel          | Thermal        | Total <sup>⊙</sup><br>5+6 |
| 1      | 2                         | 3              | 4              | 5                         | 6              | 7              | 8                         |
| 1.     | Andhra Pradesh            | 1963.0         | 1193.0         | 3156.0                    | 2591.5         | 1613.0         | 4204.5                    |
| 2.     | Assam                     | 1.0            | 407.0          | 408.0                     | 101.0          | 574.0          | 675.0                     |
| 3.     | Bihar                     | 150.0          | 1121.0         | 1271.0                    | 150.0          | 1648.0         | 1798.0                    |
| 4.     | Gujarat                   | 300.0          | 2596.0         | 2896.0                    | 545.0          | 3696.0         | 4241.0                    |
| 5.     | Haryana                   | 818.0          | 481.4          | 1299.4                    | 884.0          | 1121.4         | 2005.4                    |
| 6.     | Himachal Pradesh          | 132.6          | -              | 132.6                     | 322.5          | -              | 322.5                     |
| 7.     | Jammu & Kashmir           | 179.3          | 29.3           | 208.6                     | 311.2          | 29.3           | 340.5                     |
| 8.     | Karnataka Board           | 220.6          | -              | 220.6                     | 220.6          | -              | 220.6                     |
| 9.     | Karnataka Power Corp.     | 1765.0         | -              | 1765.0                    | 2149.0         | 420.0          | 2569.0                    |
| 10.    | Kerala                    | 1011.5         | -              | 1011.5                    | 1612.0         | -              | 1612.0                    |
| 11.    | Madhya Pradesh            | 193.0          | 2487.5         | 2680.5                    | 1150.0         | 3327.5         | 4477.5                    |
| 12.    | Maharashtra               | 956.0          | 3550.0         | 4506.0                    | 1178.0         | 5032.0         | 6210.0                    |
| 13.    | Meghalaya                 | 126.7          | 7.0            | 133.7                     | 186.7          | 7.0            | 193.7                     |
| 14.    | Orissa                    | 664.0          | 470.0          | 1134.0                    | 1147.5         | 470.0          | 1617.5                    |
| 15.    | Punjab                    | 1588.0         | 870.6          | 2458.6                    | 1801.4         | 1290.6         | 3092.0                    |
| 16.    | Rajasthan                 | 833.6          | 383.0          | 1216.6                    | 979.1          | 768.0          | 1747.1                    |
| 17.    | Tamil Nadu                | 1369.0         | 1140.0         | 2509.0                    | 1975.0         | 2190.0         | 4165.0                    |
| 18.    | Uttar Pradesh             | 1422.4         | 2708.5         | 4130.9                    | 1998.4         | 4698.5         | 6696.9                    |
| 19.    | West Bengal               | 47.1           | 1391.3         | 1438.4                    | 99.3           | 2231.3         | 2330.6                    |
| 20.    | <b>Total : All Boards</b> | <b>13740.8</b> | <b>18835.6</b> | <b>32576.4</b>            | <b>19402.2</b> | <b>29116.6</b> | <b>48518.8</b>            |

⊙ As decided at the discussions on SEBs internal resources held in the Planning Commission

State Electricity BoardsDetails of Generation  
(1984-85 and 1989-90 ●)

(Mkwh)

| S. No. | Board                    | 1984-85(RE)  |              |               | 1989-90 (Est.) |               |               |
|--------|--------------------------|--------------|--------------|---------------|----------------|---------------|---------------|
|        |                          | Hydel        | Thermal*     | Total ●       | Hydel          | Thermal*      | Total ●       |
| 1      | 2                        | 3            | 4            | 5             | 6              | 7             | 8             |
| 1.     | Andhra Pradesh           | 6818         | 5550         | 12368         | 9463           | 8570          | 18063         |
| 2.     | Assam                    | 2            | 1043         | 1045          | 308            | 1838          | 2146          |
| 3.     | Bihar                    | 247          | 2553         | 2800          | 186            | 5328          | 5514          |
| 4.     | Gujarat                  | 680          | 10424        | 11104         | 1173           | 17920         | 19093         |
| 5.     | Haryana                  | 2947         | 1550         | 4497          | 3078           | 4470          | 7548          |
| 6.     | Himachal Pradesh         | 581          | -            | 581           | 1236           | -             | 1236          |
| 7.     | Jammu & Kashmir          | 823          | 4            | 827           | 1336           | 6             | 1342          |
| 8.     | Karnataka Board          | 420          | -            | 420           | 420            | -             | 420           |
| 9.     | Karnataka Power Corp.    | 7357         | -            | 7357          | 11048          | 2451          | 13499         |
| 10.    | Kerala                   | 5305         | -            | 5305          | 6463           | -             | 6463          |
| 11.    | Madhya Pradesh           | 640          | 10200        | 10840         | 3149           | 14675         | 17824         |
| 12.    | Maharashtra              | 4641         | 15624        | 20265         | 4592           | 25375         | 29967         |
| 13.    | Meghalaya                | 377          | 2            | 379           | 481            | 2             | 483           |
| 14.    | Orissa                   | 2022         | 1570         | 3592          | 3733           | 2000          | 5733          |
| 15.    | Punjab                   | 4426         | 2365         | 6791          | 6719           | 5884          | 12603         |
| 16.    | Rajasthan                | 2451         | 1519         | 3970          | 2996           | 3624          | 6620          |
| 17.    | Tamil Nadu               | 4685         | 4802         | 9487          | 4953           | 8228          | 13181         |
| 18.    | Uttar Pradesh            | 4498         | 7288         | 11786         | 6026           | 19021         | 25047         |
| 19.    | West Bengal              | 136          | 3896         | 4032          | 336            | 7750          | 8086          |
| 20.    | <b>Total :All Boards</b> | <b>49056</b> | <b>68390</b> | <b>117446</b> | <b>67726</b>   | <b>127142</b> | <b>194868</b> |

\* Including Gas and Diesel.

● As decided at the discussions on SEBs' internal resources held in the Planning Commission.

State Electricity BoardsProjected Performance Indicators  
in 1989-90 compared with 1984-85

| S. No. | Item  | Unit   | All Boards      |                   |
|--------|---|--------|-----------------|-------------------|
|        |   |        | 1984-85<br>(RE) | 1989-90<br>(Est.) |
| 1      | 2   | 3      | 4               | 5                 |
| 1.     | Annual Plant Load Factor                                | %      | 41.7            | 49.9              |
| 2.     | Auxiliary Consumption<br>(Thermal)                      | %      | 10.8            | 10.5              |
| 3.     | Transmission & Distribution<br>Losses                   | %      | 19.0            | 17.7              |
| 4.     | <u>Rates of Fuel Consumption</u>                        |        |                 |                   |
|        | i) Coal   | g/kwh  | 0.76            | 0.74              |
|        | ii) Oil   | ML/kwh | 22.52           | 17.38             |
| 5.     | <u>Costs of Fuel per Unit<br/>of Thermal generation</u> |        | Paise/kwh       |                   |
|        | i) Coal   |        | 24.0            | 24.3              |
|        | ii) Oil   |        | 6.2             | 4.9               |
|        | iii) Total  |        | 30.2            | 29.2              |
| 6.     | <u>Operating Costs Per Unit<br/>of sale of energy</u>   |        | Paise/kwh       |                   |
|        | i) Fuel   |        | 17.7            | 17.5              |
|        | ii) O & M   |        | 4.7             | 4.7               |
|        | iii) Establishment                                      |        | 10.2            | 9.2               |
|        | iv) Miscellaneous                                       |        | 1.5             | 0.9               |
|        | v) Purchase of Power                                    |        | 9.2             | 13.1              |
|        | vi) Depreciation  |        | 5.0             | 6.6               |
|        | vii) Interest to Institutional Creditors                |        | 5.4             | 5.5               |
|        | viii) Interest to State Govts.                          |        | 7.8             | 11.7              |
|        | ix) Total   |        | 61.5            | 69.2              |
| 7.     | Sale of energy  | Mkwh   | 107008          | 190593            |

Notes: Board-wise details are given in Annexures 9 to 16.

State Electricity BoardsAnticipated Plant Load Factor of Thermal Stations  
(1984-85 and 1989-90)

| S. No. | Board                       | 1984-85(RE)             |                   |             | 1989-90(Est.)           |                   |             |
|--------|-----------------------------|-------------------------|-------------------|-------------|-------------------------|-------------------|-------------|
|        |                             | Installed Capacity (MW) | Generation (Mkwh) | P L F (%)   | Installed Capacity (MW) | Generation (Mkwh) | P L F (%)   |
| 1      | 2                           | 3                       | 4                 | 5           | 6                       | 7                 | 8           |
| 1.     | Andhra Pradesh              | 1193                    | 5550              | 53.1        | 1613                    | 8570              | 60.7        |
| 2.     | Assam                       | 377                     | 1043              | 30.8        | 574                     | 1838              | 36.6        |
| 3.     | Bihar                       | 1121                    | 2553              | 26.0        | 1648                    | 5328              | 36.9        |
| 4.     | Gujarat                     | 2596                    | 10424             | 45.8        | 3696                    | 17920             | 55.4        |
| 5.     | Haryana                     | 478                     | 1550              | 37.0        | 1121                    | 4470              | 45.5        |
| 6.     | Karnataka Power Corporation | -                       | -                 | -           | 420                     | 2451              | 66.6        |
| 7.     | Madhya Pradesh              | 2488                    | 10200             | 46.8        | 3328                    | 14675             | 50.3        |
| 8.     | Maharashtra                 | 3550                    | 15624             | 50.2        | 5032                    | 25375             | 57.6        |
| 9.     | Orissa                      | 470                     | 1570              | 38.1        | 470                     | 2000              | 48.6        |
| 10.    | Punjab                      | 860                     | 2365              | 31.4        | 1280                    | 5884              | 52.5        |
| 11.    | Rajasthan                   | 345                     | 1519              | 50.3        | 768                     | 3624              | 53.9        |
| 12.    | Tamil Nadu                  | 1140                    | 4802              | 48.1        | 2190                    | 8228              | 42.9        |
| 13.    | Uttar Pradesh               | 2709                    | 7288              | 30.7        | 4699                    | 19021             | 46.2        |
| 14.    | West Bengal                 | 1391                    | 3896              | 32.0        | 2231                    | 7750              | 39.7        |
|        |                             | <b>18728</b>            | <b>68384</b>      | <b>41.7</b> | <b>29070</b>            | <b>127134</b>     | <b>49.9</b> |

● Based on discussions on SEBs' internal resources held in the Planning Commission.

State Electricity BoardsAuxiliary Consumption (Thermal)\*  
(1984-85 and 1989-90)

( % )

| S. No. | Board                             | 1984-85<br>(RE) | 1989-90<br>(Est.) |
|--------|-----------------------------------|-----------------|-------------------|
| 1      | 2                                 | 3               | 4                 |
| 1.     | Andhra Pradesh                    | 10.7            | 10.0              |
| 2.     | Assam                             | 11.2            | 11.3              |
| 3.     | Bihar                             | 15.0            | 13.9              |
| 4.     | Gujarat                           | 10.1            | 10.1              |
| 5.     | Haryana                           | 15.0            | 11.5              |
| 6.     | Karnataka Power Corp.             | -               | 12.5              |
| 7.     | Madhya Pradesh                    | 9.7             | 9.9               |
| 8.     | Maharashtra                       | 10.0            | 10.0              |
| 9.     | Orissa                            | 10.0            | 10.0              |
| 10.    | Punjab                            | 12.6            | 11.2              |
| 11.    | Rajasthan                         | 12.8            | 13.0              |
| 12.    | Tamil Nadu                        | 10.0            | 10.0              |
| 13.    | Uttar Pradesh                     | 12.5            | 10.5              |
| 14.    | West Bengal                       | 10.5            | 9.8               |
| 15.    | <b>Total : All (above) Boards</b> | <b>10.8</b>     | <b>10.5</b>       |

\* excluding gas.

**State Electricity Boards**  
**Transmission & Distribution Losses**  
 (1984-85 & 1989-90)

( % )

| S.<br>No. | Board            | 1984-85<br>(RE) | 1989-90<br>(Est.) |
|-----------|------------------|-----------------|-------------------|
| 1         | 2                | 3               | 4                 |
| 1.        | Andhra Pradesh   | 21.20           | 20.00             |
| 2.        | Assam            | 20.00           | 19.00             |
| 3.        | Bihar            | 23.00           | 20.50             |
| 4.        | Gujarat          | 21.00           | 19.00             |
| 5.        | Haryana          | 15.12           | 15.46             |
| 6.        | Himachal Pradesh | 18.44           | 15.22             |
| 7.        | Jammu & Kashmir  | 39.00           | 26.00             |
| 8.        | Karnataka        | 22.00           | 20.00             |
| 9.        | Kerala           | 15.00           | 14.85             |
| 10.       | Madhya Pradesh   | 19.00           | 16.50             |
| 11.       | Maharashtra      | 14.80           | 14.50             |
| 12.       | Meghalaya        | 7.45            | 7.31              |
| 13.       | Orissa           | 18.00           | 17.00             |
| 14.       | Punjab           | 19.00           | 18.00             |
| 15.       | Rajasthan        | 24.00           | 22.09             |
| 16.       | Tamil Nadu       | 18.75           | 18.50             |
| 17.       | Uttar Pradesh    | 19.00           | 18.00             |
| 18.       | West Bengal      | 17.00           | 14.00             |
| 19.       | All Boards       | 19.00           | 17.70             |

## State Electricity Boards

Rate of Coal and Oil Consumption/Costs of Fuel  
for Coal Based Thermal Generation  
(1989-90)

| S. No. | Board                     | Generation (MKWH) | Coal Consumption |                              | Oil Consumption |                                | Total Cost (Rs/cr.) |               |                | Fuel cost/unit/paise/kwh     |                            |                              |
|--------|---------------------------|-------------------|------------------|------------------------------|-----------------|--------------------------------|---------------------|---------------|----------------|------------------------------|----------------------------|------------------------------|
|        |                           |                   | 000 Tonnes       | kg/kwh                       | 000 KL          | ML/kwh                         | Coal                | Oil           | Total (8+9)    | Coal                         | Oil                        | Total (11+12)                |
| 1      | 2                         | 3                 | 4                | 5                            | 6               | 7                              | 8                   | 9             | 10             | 11                           | 12                         | 13                           |
| 1.     | Andhra Pradesh            | 8570              | 6313             | 0.74                         | 61.9            | 7.23                           | 180.76              | 18.26         | 199.02         | 21.1                         | 2.1                        | 23.2                         |
| 2.     | Assam *                   | 780               | 468              | 0.60                         | 46.4            | 58.97                          | 21.06               | 12.72         | 33.78          | 27.0                         | 16.3                       | 43.3                         |
| 3.     | Bihar                     | 5320              | 3712             | 0.70                         | 211.8           | 39.80                          | 88.94               | 53.95         | 142.89         | 16.5                         | 10.1                       | 26.9                         |
| 4.     | Gujarat                   | 13720             | 7899             | 0.58                         | 335.2           | 24.43                          | 373.39              | 92.43         | 465.82         | 27.2                         | 6.7                        | 33.9                         |
| 5.     | Haryana                   | 4470              | 3048             | 0.68                         | 72.8            | 16.29                          | 142.37              | 20.57         | 162.94         | 31.9                         | 4.6                        | 36.5                         |
| 6.     | Madhya Pradesh            | 14675             | 10948            | 0.77                         | 174.7           | 12.20                          | 173.33              | 48.96         | 222.29         | 11.8                         | 3.3                        | 15.1                         |
| 7.     | Maharashtra               | 21875             | 14776            | 0.68                         | 329.8           | 15.08                          | 433.40              | 92.82         | 526.22         | 19.8                         | 4.3                        | 24.1                         |
| 8.     | Orissa                    | 2000              | 1600             | 0.80                         | 4.7             | 2.36                           | 15.80               | 1.41          | 17.21          | 7.9                          | 0.7                        | 8.6                          |
| 9.     | Punjab                    | 5884              | 4675             | 0.80                         | 82.2            | 13.97                          | 198.70              | 23.10         | 221.80         | 33.8                         | 3.9                        | 37.7                         |
| 10.    | Rajasthan *               | 2806              | 2245             | 0.80                         | 56.1            | 20.00                          | 102.14              | 16.12         | 118.26         | 36.4                         | 5.7                        | 42.1                         |
| 11.    | Tamil Nadu                | 8228              | 4958             | 0.60                         | 154.1           | 18.72                          | 241.47              | 43.77         | 285.24         | 29.4                         | 5.3                        | 34.7                         |
| 12.    | Uttar Pradesh             | 19021             | 14610            | 0.77                         | 234.5           | 12.33                          | 484.54              | 69.56         | 554.10         | 25.5                         | 3.6                        | 29.1                         |
| 13.    | West Bengal               | 7500              | 3948             | 0.53                         | 89.0            | 11.87                          | 137.02              | 27.67         | 164.69         | 18.3                         | 3.7                        | 22.0                         |
| 14.    | <b>Total : All Boards</b> | <b>106621</b>     | <b>79200</b>     | <b>0.74</b><br><b>(0.76)</b> | <b>1853.2</b>   | <b>17.38</b><br><b>(22.52)</b> | <b>2592.92</b>      | <b>521.34</b> | <b>3114.26</b> | <b>24.3</b><br><b>(24.0)</b> | <b>4.9</b><br><b>(6.3)</b> | <b>29.2</b><br><b>(30.1)</b> |

Figures in brackets refer to 1984-85 (RE)

\* Bongaigaon TPS

\* KTPS I &amp; II

## State Electricity Boards

Comparison of Total Operating Cost  
(1984-85 and 1989-90)

| S. No. | Board            | 1984-85(RE) |                               |                        | 1989-90(Est.)          |        |                               | (Paise/kwh of energy sale) |                        |  |
|--------|------------------|-------------|-------------------------------|------------------------|------------------------|--------|-------------------------------|----------------------------|------------------------|--|
|        |                  | Total       | Depreciation and interest due | Cost of power purchase | Operating cost 3-(4+5) | Total  | Depreciation and interest due | Cost of power purchase     | Operating cost 7-(8+9) |  |
| 1      | 2                | 3           | 4                             | 5                      | 6                      | 7      | 8                             | 9                          | 10                     |  |
| 1.     | Andhra Pradesh   | 48.89       | 14.45                         | 2.89                   | 31.55                  | 57.12  | 19.50                         | 6.40                       | 31.42                  |  |
| 2.     | Assam            | 134.37      | 63.15                         | 13.47                  | 57.74                  | 158.82 | 101.98                        | 3.14                       | 53.70                  |  |
| 3.     | Bihar            | 109.17      | 33.54                         | 25.36                  | 50.27                  | 108.53 | 43.01                         | 25.86                      | 39.66                  |  |
| 4.     | Gujarat          | 68.01       | 12.50                         | 4.89                   | 50.61                  | 69.29  | 15.06                         | 7.72                       | 46.51                  |  |
| 5.     | Haryana          | 57.12       | 20.71                         | 2.55                   | 33.88                  | 65.63  | 21.08                         | 10.91                      | 33.64                  |  |
| 6.     | Himachal Pradesh | 62.86       | 28.36                         | 8.47                   | 26.03                  | 62.68  | 33.15                         | 11.10                      | 18.43                  |  |
| 7.     | Jammu & Kashmir  | 77.20       | 34.95                         | 22.16                  | 20.09                  | 57.83  | 27.59                         | 20.18                      | 10.06                  |  |
| 8.     | Karnataka Board  | 38.89       | 6.25                          | 18.06                  | 14.58                  | 52.18  | 11.58                         | 29.31                      | 11.29                  |  |
| 9.     | Kerala           | 31.75       | 10.92                         | 0.55                   | 20.28                  | 44.39  | 18.77                         | 7.68                       | 17.94                  |  |
| 10.    | Madhya Pradesh   | 62.66       | 23.10                         | 6.03                   | 33.53                  | 58.09  | 23.84                         | 9.58                       | 24.67                  |  |
| 11.    | Maharashtra      | 52.81       | 9.95                          | 9.30                   | 33.52                  | 62.06  | 14.39                         | 12.86                      | 34.81                  |  |
| 12.    | Meghalaya        | 47.64       | 24.61                         | -                      | 22.96                  | 58.60  | 37.29                         | -                          | 21.31                  |  |
| 13.    | Orissa           | 57.53       | 16.01                         | 3.06                   | 18.46                  | 39.67  | 17.73                         | 4.39                       | 17.55                  |  |
| 14.    | Punjab           | 63.62       | 23.76                         | 2.52                   | 35.34                  | 73.46  | 31.93                         | 9.19                       | 32.34                  |  |
| 15.    | Rajasthan        | 72.52       | 25.45                         | 16.79                  | 30.28                  | 98.53  | 44.67                         | 16.28                      | 37.58                  |  |
| 16.    | Tamil Nadu       | 64.27       | 14.15                         | 16.60                  | 33.52                  | 72.47  | 20.92                         | 16.42                      | 35.13                  |  |
| 17.    | Uttar Pradesh    | 77.77       | 29.57                         | 9.43                   | 38.77                  | 84.20  | 32.15                         | 14.82                      | 37.23                  |  |
| 18.    | West Bengal      | 80.81       | 26.34                         | 9.54                   | 44.93                  | 73.69  | 25.08                         | 15.22                      | 33.39                  |  |
| 19.    | All Boards       | 61.50       | 18.23                         | 9.15                   | 34.12                  | 69.18  | 23.80                         | 13.14                      | 32.24                  |  |

• Componentwise details in Annexure 14 and 15.

## State Electricity Boards

## Components of Operating Cost Structure

(1984-85 and 1989-90)

(with reference to cols. 6 and 10 of Annexure-13)

| S. No. | Board            | 1984-85 (R.E) |       |       |       |        |       | 1989-90 (Est) |       |       |       | Total* |
|--------|------------------|---------------|-------|-------|-------|--------|-------|---------------|-------|-------|-------|--------|
|        |                  | Fuel          | O & M | Estt. | Misc. | Total* | Fuel  | O & M         | Estt. | Misc. |       |        |
|        |                  | 3             | 4     | 5     | 6     | 7      | 8     | 9             | 10    | 11    |       |        |
| 1.     | Andhra Pradesh   | 14.75         | 4.42  | 9.39  | 2.99  | 31.55  | 13.06 | 5.10          | 9.25  | 4.01  | 31.42 |        |
| 2.     | Assam            | 20.46         | 13.85 | 21.65 | 1.78  | 57.54  | 23.54 | 10.32         | 16.91 | 2.93  | 53.70 |        |
| 3.     | Bihar            | 20.32         | 8.67  | 20.70 | 0.58  | 50.27  | 20.51 | 6.40          | 12.75 | -     | 39.66 |        |
| 4.     | Gujarat          | 36.40         | 5.12  | 8.27  | 0.82  | 50.61  | 34.10 | 5.03          | 7.38  | -     | 46.51 |        |
| 5.     | Haryana          | 15.70         | 5.21  | 12.33 | 0.64  | 33.88  | 21.56 | 4.07          | 8.01  | -     | 33.64 |        |
| 6.     | Himachal Pradesh | -             | 16.33 | 8.97  | 0.73  | 26.03  | -     | 12.05         | 6.38  | -     | 18.43 |        |
| 7.     | Jammu & Kashmir  | 0.66          | 7.29  | 9.28  | 2.86  | 20.09  | 0.39  | 4.26          | 5.42  | -     | 10.06 |        |
| 8.     | Karnataka        | -             | 2.59  | 10.80 | 1.19  | 14.58  | -     | 2.56          | 8.73  | -     | 11.29 |        |
| 9.     | Kerala           | -             | 3.74  | 10.67 | 5.87  | 20.28  | -     | 4.00          | 10.38 | 3.56  | 17.94 |        |
| 10.    | Madhya Pradesh   | 20.39         | 4.27  | 7.44  | 1.43  | 33.53  | 13.10 | 4.66          | 6.02  | 0.90  | 24.67 |        |
| 11.    | Maharashtra      | 21.24         | 3.88  | 6.88  | 1.51  | 33.52  | 20.76 | 4.20          | 8.92  | 0.94  | 34.81 |        |
| 12.    | Meghalaya        | 0.63          | 5.09  | 11.95 | 5.29  | 22.96  | 0.50  | 5.43          | 13.58 | 1.80  | 21.31 |        |
| 13.    | Orissa           | 4.20          | 3.07  | 10.23 | 0.96  | 18.46  | 3.33  | 3.46          | 10.75 | -     | 17.55 |        |
| 14.    | Punjab           | 16.80         | 4.24  | 12.95 | 1.35  | 35.34  | 18.79 | 4.31          | 8.70  | 0.54  | 32.34 |        |
| 15.    | Rajasthan        | 11.13         | 9.03  | 9.65  | 0.45  | 30.28  | 18.55 | 10.21         | 8.82  | -     | 37.58 |        |
| 16.    | Tamil Nadu       | 18.04         | 3.66  | 11.41 | 0.41  | 33.52  | 18.82 | 3.40          | 12.91 | -     | 35.13 |        |
| 17.    | Uttar Pradesh    | 21.43         | 4.50  | 11.24 | 1.60  | 38.77  | 22.02 | 4.50          | 9.50  | 1.21  | 37.23 |        |
| 18.    | West Bengal      | 24.47         | 4.92  | 14.57 | 0.97  | 44.93  | 19.29 | 4.51          | 9.54  | 0.06  | 33.39 |        |
| 19.    | All Boards       | 17.69         | 4.70  | 10.23 | 1.51  | 34.12  | 17.48 | 4.69          | 9.18  | 0.89  | 32.24 |        |

\* Excluding cost of purchase, depreciation and interest due.

State Electricity Boards

Details of cost components regarding Depreciation & Interest  
(1984-85 & 1989-90)

(with reference to col. 4 and 8 of Annexure-13)

(Paise per kwh of energy sale)

| S.No. | Board            | 1984-85 (R-E) |                   |                | 1989-90 (Est.) |                   |                | Total<br>(7+8+9) |        |
|-------|------------------|---------------|-------------------|----------------|----------------|-------------------|----------------|------------------|--------|
|       |                  | Depreciation  | Interest due to   |                | Depreciation   | Interest due      |                |                  |        |
|       |                  |               | Institu-<br>tions | State<br>Govt. |                | Institu-<br>tions | State<br>Govt. |                  |        |
| 3     | 4                | 5             | 6                 | 7              | 8              | 9                 | 10             |                  |        |
| 1.    | Andhra Pradesh   | 5.51          | 4.47              | 4.47           | 14.45          | 7.38              | 4.38           | 7.54             | 19.30  |
| 2.    | Assam            | 9.86          | 17.03             | 36.26          | 63.15          | 20.71             | 15.06          | 66.21            | 101.98 |
| 3.    | Bihar            | 6.66          | 13.62             | 13.26          | 33.54          | 9.21              | 17.27          | 16.53            | 43.01  |
| 4.    | Gujarat          | 4.50          | 4.29              | 3.71           | 12.50          | 6.59              | 3.97           | 4.50             | 15.06  |
| 5.    | Haryana          | 5.11          | 7.14              | 8.46           | 20.71          | 5.46              | 4.30           | 11.32            | 21.08  |
| 6.    | Himachal Pradesh | 3.47          | 9.72              | 15.17          | 28.36          | 5.37              | 9.88           | 17.90            | 33.15  |
| 7.    | Jammu & Kashmir  | 7.21          | 11.63             | 16.11          | 34.95          | 6.88              | 8.16           | 12.55            | 27.59  |
| 8.    | Karnataka        | 2.33          | 2.14              | 1.78           | 6.25           | 2.54              | 2.27           | 6.77             | 11.58  |
| 9.    | Kerala           | 2.92          | 4.43              | 3.57           | 10.92          | 4.99              | 4.85           | 8.93             | 18.77  |
| 10.   | Madhya Pradesh   | 6.10          | 6.41              | 10.59          | 23.10          | 8.07              | 6.19           | 9.58             | 23.84  |
| 11.   | Maharashtra      | 3.87          | 3.10              | 3.02           | 9.99           | 5.60              | 3.84           | 4.95             | 14.39  |
| 12.   | Meghalaya        | 3.99          | 15.29             | 5.40           | 24.68          | 7.30              | 22.57          | 7.42             | 37.29  |
| 13.   | Orissa           | 5.10          | 7.34              | 3.57           | 16.01          | 5.52              | 7.87           | 4.34             | 17.73  |
| 14.   | Punjab           | 5.27          | 5.71              | 14.78          | 25.76          | 6.46              | 3.63           | 21.84            | 31.93  |
| 15.   | Rajasthan        | 7.22          | 8.77              | 9.46           | 25.45          | 11.75             | 9.44           | 23.48            | 44.67  |
| 16.   | Tamil Nadu       | 4.07          | 3.75              | 6.33           | 14.15          | 5.62              | 5.23           | 10.07            | 20.92  |
| 17.   | Utter Pradesh    | 7.14          | 4.57              | 17.86          | 29.57          | 7.44              | 4.20           | 20.51            | 32.15  |
| 18.   | West Bengal      | 5.21          | 12.39             | 8.74           | 26.34          | 4.82              | 9.08           | 11.18            | 25.08  |
| 19.   | All Boards       | 5.00          | 5.43              | 7.80           | 18.23          | 6.60              | 5.50           | 11.70            | 23.80  |

**State Electricity Boards**  
**Pattern of sales of electricity**  
**(1984-85 and 1989-90)**

(Mkwh)

| S. No. | Board            | 1984-85 (RE)   |                 |                 | 1989-90(Ent.)  |                 |                 | Total  | Total |
|--------|------------------|----------------|-----------------|-----------------|----------------|-----------------|-----------------|--------|-------|
|        |                  | Domestic       |                 | Industry        | Domestic       |                 | Industry        |        |       |
|        |                  | 3              | 4               | 5               | 7              | 8               | 9               |        |       |
| 1.     | Andhra Pradesh   | 950<br>(9.8)   | 1800<br>(18.6)  | 5340<br>(55.1)  | 1933<br>(12.7) | 2800<br>(18.4)  | 9404<br>(55.1)  | 15243  |       |
| 2.     | Assam            | 112<br>(10.3)  | 22<br>(2.0)     | 397<br>(36.7)   | 185<br>(10.6)  | 37<br>(2.12)    | 656<br>(37.6)   | 1744   |       |
| 3.     | Bihar            | 192<br>(5.5)   | 629<br>(18.0)   | 2058<br>(58.8)  | 383<br>(5.5)   | 1058<br>(15.2)  | 4285<br>(61.5)  | 6967   |       |
| 4.     | Gujarat          | 756<br>(8.4)   | 1579<br>(17.5)  | 4854<br>(35.9)  | 1366<br>(8.4)  | 2849<br>(17.5)  | 8754<br>(53.8)  | 16281  |       |
| 5.     | Haryana          | 370<br>(9.6)   | 1240<br>(32.0)  | 1390<br>(35.9)  | 850<br>(8.9)   | 2380<br>(31.4)  | 3553<br>(47.0)  | 7557   |       |
| 6.     | Himachal Pradesh | 120<br>(14.4)  | 15<br>(1.8)     | 300<br>(35.9)   | 230<br>(12.2)  | 22<br>(1.2)     | 774<br>(41.3)   | 1872   |       |
| 7.     | Jammu & Kashmir  | 178<br>(23.6)  | 40<br>(5.3)     | 178<br>(23.6)   | 287<br>(17.4)  | 62<br>(3.8)     | 287<br>(17.4)   | 1649   |       |
| 8.     | Karnataka        | 457<br>(7.0)   | 607<br>(9.3)    | 3612<br>(55.2)  | 757<br>(6.2)   | 1027<br>(8.4)   | 7587<br>(62.4)  | 12167  |       |
| 9.     | Kerala           | 788<br>(17.4)  | 128<br>(2.8)    | 2739<br>(60.5)  | 1235<br>(19.7) | 166<br>(2.6)    | 4040<br>(64.4)  | 6269   |       |
| 10.    | Madhya Pradesh   | 620<br>(6.8)   | 606<br>(6.7)    | 6781<br>(74.2)  | 1247<br>(7.4)  | 1166<br>(6.9)   | 11239<br>(66.3) | 16956  |       |
| 11.    | Maharashtra      | 1249<br>(6.6)  | 3000<br>(15.9)  | 7921<br>(42.0)  | 1602<br>(5.3)  | 4579<br>(15.3)  | 13208<br>(44.1) | 29957  |       |
| 12.    | Meghalaya        | 23<br>(6.6)    | -               | 43<br>(12.4)    | 35<br>(7.9)    | -               | 73<br>(16.4)    | 464    |       |
| 13.    | Orissa           | 175<br>(5.4)   | 85<br>(2.6)     | 2567<br>(79.8)  | 282<br>(5.5)   | 160<br>(3.1)    | 4123<br>(79.7)  | 5176   |       |
| 14.    | Punjab           | 662<br>(11.7)  | 2208<br>(39.2)  | 2230<br>(39.6)  | 1390<br>(11.8) | 4610<br>(39.1)  | 4681<br>(39.7)  | 11806  |       |
| 15.    | Rajasthan        | 367<br>(8.3)   | 1301<br>(29.4)  | 2058<br>(46.5)  | 592<br>(8.2)   | 1820<br>(25.3)  | 3655<br>(50.9)  | 7186   |       |
| 16.    | Tamil Nadu       | 990<br>(9.0)   | 2900<br>(26.3)  | 5561<br>(50.5)  | 1060<br>(7.0)  | 4300<br>(28.4)  | 8056<br>(53.2)  | 15153  |       |
| 17.    | Uttar Pradesh    | 1347<br>(12.5) | 3435<br>(32.0)  | 4611<br>(43.0)  | 3158<br>(12.5) | 8052<br>(32.0)  | 10807<br>(43.0) | 25164  |       |
| 18.    | West Bengal      | 226<br>(6.0)   | 95<br>(2.5)     | 1698<br>(44.9)  | 370<br>(4.1)   | 170<br>(1.9)    | 4330<br>(48.4)  | 8942   |       |
| 19.    | All Boards       | 9582<br>(9.0)  | 19690<br>(18.4) | 54338<br>(50.6) | 16962<br>(8.9) | 39258<br>(18.5) | 98512<br>(51.7) | 198533 |       |

● Includes other categories.

**State Electricity Boards****Details of Purchase of Power**  
(1984-85 and 1989-90)

(Mkwh)

| S. No. | Board            | 1984-85(RE)             |             |       | 1989-90 (Est.)          |             |       |
|--------|------------------|-------------------------|-------------|-------|-------------------------|-------------|-------|
|        |                  | Central Sector Stations | Inter-State | Total | Central Sector Stations | Inter-State | Total |
| 1      | 2                | 3                       | 4           | 5     | 6                       | 7           | 8     |
| 1.     | Andhra Pradesh   | 570                     | -           | 570   | 1908                    | -           | 1908  |
| 2.     | Assam            | 144                     | 230         | 374   | NA                      | 144         | 144   |
| 3.     | Bihar            | 1652                    | 480         | 2132  | 3217                    | 766         | 3983  |
| 4.     | Gujarat          | 1375                    | -           | 1375  | 2820                    | -           | 2820  |
| 5.     | Haryana          | 300                     | -           | 300   | 1905                    | -           | 1905  |
| 6.     | Himachal Pradesh | 96                      | 350         | 446   | 96                      | 882         | 978   |
| 7.     | Jammu & Kashmir  | -                       | 450         | 450   | -                       | 900         | 900   |
| 8.     | Karnataka Board  | 214                     | 500         | 714   | 1307                    | 350         | 1657  |
| 9.     | Kerala           | -                       | 50          | 50    | 931                     | -           | 931   |
| 10.    | Madhya Pradesh   | 1398                    | 140         | 1538  | 3806                    | 140         | 3946  |
| 11.    | Maharashtra      | 1430                    | 1935        | 3365  | 4461                    | 2890        | 7351  |
| 12.    | Meghalaya        | -                       | -           | -     | -                       | -           | -     |
| 13.    | Orissa           | -                       | 499         | 499   | 351                     | 371         | 722   |
| 14.    | Punjab           | 380                     | 85          | 465   | 2453                    | -           | 2453  |
| 15.    | Rajasthan        | 1714                    | 251         | 1965  | 2791                    | 283         | 3074  |
| 16.    | Tamil Nadu       | 3966                    | 600         | 4566  | 6207                    | 200         | 6407  |
| 17.    | Uttar Pradesh    | 2000                    | 400         | 2400  | 5460                    | 2208        | 7668  |
| 18.    | West Bengal      | 400                     | 539         | 939   | 2035                    | 1045        | 3080  |
| 19.    | All Boards       | 15639                   | 6509        | 22148 | 39748                   | 10179       | 49927 |

State Electricity BoardsPower Purchase as % of Net Generation<sup>⊙</sup>  
of the Boards  
(1984-85 and 1989-90)

( Mkw h )

| S. No. | Board                     | 1984-85 (R.E.) |                   |               | 1989-90 (Est.) |                   |               |
|--------|---------------------------|----------------|-------------------|---------------|----------------|-------------------|---------------|
|        |                           | Net Generation | Purchase of power | %<br>(4 of 3) | Net Generation | Purchase of power | %<br>(7 of 6) |
| 1      | 2                         | 3              | 4                 | 5             | 6              | 7                 | 8             |
| 1.     | Andhra Pradesh            | 11738          | 570               | 4.9           | 17158          | 1908              | 11.1          |
| 2.     | Assam                     | 980            | 374               | 38.2          | 2009           | 144               | 7.2           |
| 3.     | Bihar                     | 2416           | 2132              | 88.2          | 4780           | 3983              | 83.3          |
| 4.     | Gujarat                   | 10050          | 1375              | 13.7          | 17279          | 2820              | 16.3          |
| 5.     | Haryana                   | 4264           | 300               | 7.0           | 7034           | 1905              | 27.1          |
| 6.     | Himachal Pradesh          | 579            | 446               | 77.0          | 1230           | 978               | 79.5          |
| 7.     | Jammu & Kashmir           | 818            | 450               | 55.0          | 1328           | 900               | 67.8          |
| 8.     | Karnataka*                | 7678           | 714               | 9.3           | 13552          | 1657              | 12.2          |
| 9.     | Kerala                    | 5275           | 50                | 0.9           | 6431           | 931               | 14.5          |
| 10.    | Madhya Pradesh            | 9849           | 1538              | 15.6          | 16361          | 3946              | 24.1          |
| 11.    | Maharashtra               | 18790          | 3365              | 17.9          | 27686          | 7351              | 26.6          |
| 12.    | Meghalaya                 | 376            | -                 | -             | 479            | -                 | -             |
| 13.    | Orissa                    | 3425           | 499               | 14.6          | 5514           | 722               | 13.1          |
| 14.    | Punjab                    | 6492           | 465               | 7.2           | 11944          | 2453              | 20.5          |
| 15.    | Rajasthan                 | 3775           | 1965              | 52.1          | 6149           | 3074              | 50.0          |
| 16.    | Tamil Nadu                | 8984           | 4566              | 50.8          | 12333          | 6407              | 52.0          |
| 17.    | Uttar Pradesh             | 10853          | 2400              | 22.1          | 23020          | 7668              | 33.3          |
| 18.    | West Bengal               | 3620           | 939               | 25.9          | 7317           | 3080              | 42.1          |
| 19.    | <b>Total : All Boards</b> | <b>109962</b>  | <b>22148</b>      | <b>20.1</b>   | <b>181604</b>  | <b>49927</b>      | <b>27.5</b>   |

\* Including Generation from Karnataka Power Corporation.

⊙ Gross Generation less auxiliary consumption.

**State Electricity Boards**

**Cost of Power Purchase**

(1984-85 and 1989-90)

| S. No. | Board                     | 1984-85(RE)             |                  |                             | 1989-90(Est.)           |                  |                             |
|--------|---------------------------|-------------------------|------------------|-----------------------------|-------------------------|------------------|-----------------------------|
|        |                           | Energy Purchased (Mkwh) | Cost Rs.- crores | Paise/kwh (4 <sup>3</sup> ) | Energy Purchased (Mkwh) | Cost Rs.- crores | Paise/kwh (7 <sup>6</sup> ) |
| 1      | 2                         | 3                       | 4                | 5                           | 6                       | 7                | 8                           |
| 1.     | Andhra Pradesh            | 570                     | 28.00            | 49.12                       | 1908                    | 97.61            | 51.15                       |
| 2.     | Assam                     | 374                     | 14.59            | 39.01                       | 144                     | 5.47             | 37.99                       |
| 3.     | Bihar                     | 2132                    | 88.80            | 41.65                       | 3983                    | 180.18           | 45.24                       |
| 4.     | Gujarat                   | 1375                    | 44.15            | 32.11                       | 2820                    | 125.66           | 44.56                       |
| 5.     | Haryana                   | 300                     | 9.79             | 32.63                       | 1905                    | 82.47            | 43.29                       |
| 6.     | Himachal Pradesh          | 446                     | 7.08             | 15.87                       | 978                     | 20.78            | 21.25                       |
| 7.     | Jammu & Kashmir           | 450                     | 16.70            | 37.11                       | 900                     | 33.28            | 36.98                       |
| 8.     | Karnataka                 | 714                     | 11.99            | 16.79                       | 1657                    | 69.71            | 42.07                       |
| 9.     | Kerala                    | 50                      | 2.50             | 50.00                       | 931                     | 48.14            | 51.71                       |
| 10.    | Madhya Pradesh            | 1538                    | 55.51            | 36.09                       | 3946                    | 162.47           | 41.17                       |
| 11.    | Maharashtra               | 3365                    | 175.46           | 52.14                       | 7351                    | 385.25           | 52.41                       |
| 12.    | Meghalaya                 | -                       | -                | -                           | -                       | -                | -                           |
| 13.    | Orissa                    | 499                     | 9.86             | 19.76                       | 722                     | 22.72            | 31.47                       |
| 14.    | Punjab                    | 465                     | 14.20            | 30.54                       | 2453                    | 108.50           | 44.23                       |
| 15.    | Rajasthan                 | 1965                    | 74.27            | 37.80                       | 3074                    | 116.98           | 38.06                       |
| 16.    | Tamil Nadu                | 4566                    | 182.73           | 40.02                       | 6407                    | 248.79           | 38.86                       |
| 17.    | Uttar Pradesh             | 2400                    | 101.21           | 41.7                        | 7668                    | 372.99           | 48.64                       |
| 18.    | West Bengal               | 939                     | 36.11            | 38.46                       | 3080                    | 136.10           | 45.19                       |
| 19.    | <b>Total : All Boards</b> | <b>22148</b>            | <b>872.95</b>    | <b>39.41</b>                | <b>49927</b>            | <b>2217.10</b>   | <b>44.41</b>                |

**State Electricity Boards**

**Interest due to State Government  
as % of total operating cost  
(1984-85 and 1989-90)**

**( Paise/kwh of  
sale of energy)**

| S.<br>No.  | Board             | 1984-85 (RE)               |                               |               | 1989-90 (Est.)             |                               |               |
|------------|-------------------|----------------------------|-------------------------------|---------------|----------------------------|-------------------------------|---------------|
|            |                   | Total<br>operating<br>cost | Interest<br>to State<br>Govt. | %<br>(4 of 3) | Total<br>operating<br>cost | Interest<br>to State<br>Govt. | %<br>(7 of 6) |
| 1          |                   | 3                          | 4                             | 5             | 6                          | 7                             | 8             |
| 1.         | Andhra pradesh    | 48.89                      | 4.47                          | 9.1           | 57.12                      | 7.54                          | 13.2          |
| 2.         | Assam             | 134.37                     | 36.26                         | 27.0          | 158.82                     | 66.21                         | 41.7          |
| 3.         | Bihar             | 109.17                     | 13.26                         | 12.2          | 108.53                     | 16.53                         | 15.2          |
| 4.         | Gujarat           | 68.01                      | 3.71                          | 5.5           | 69.29                      | 4.50                          | 6.5           |
| 5.         | Haryana           | 57.12                      | 8.46                          | 14.8          | 65.63                      | 11.32                         | 17.3          |
| 6.         | Himachal Pradesh  | 62.86                      | 15.17                         | 24.1          | 62.68                      | 17.90                         | 28.6          |
| 7.         | Jammu & Kashmir   | 77.20                      | 16.11                         | 20.9          | 57.83                      | 12.55                         | 21.7          |
| 8.         | Karnataka Board   | 38.89                      | 1.78                          | 4.6           | <b>52.18</b>               | 6.77                          | 13.0          |
| 9.         | Kerala            | 31.75                      | 3.57                          | 11.2          | 44.39                      | 8.93                          | 20.1          |
| 10.        | Madhya Pradesh    | 62.66                      | 10.59                         | 16.9          | 58.09                      | 9.58                          | 16.5          |
| 11.        | Maharashtra       | 52.81                      | 3.02                          | 5.7           | 62.06                      | 4.95                          | 8.0           |
| 12.        | Meghalaya         | 47.64                      | 5.40                          | 11.3          | 58.60                      | 7.42                          | 12.7          |
| 13.        | Orissa            | 37.53                      | 3.57                          | <b>9.5</b>    | 39.67                      | 4.34                          | 10.9          |
| 14.        | Punjab            | 63.62                      | 14.78                         | 23.2          | 73.46                      | 21.84                         | 29.7          |
| 15.        | Rajasthan         | 72.52                      | 9.46                          | 13.0          | 98.53                      | 23.48                         | 23.8          |
| 16.        | Tamil Nadu        | 64.27                      | 6.33                          | 9.8           | 72.47                      | 10.07                         | 13.9          |
| 17.        | Uttar Pradesh     | 77.77                      | 17.86                         | 23.0          | 84.20                      | 20.51                         | 24.4          |
| 18.        | West Bengal       | 80.81                      | 8.74                          | 10.8          | 73.69                      | 11.18                         | 15.2          |
| <b>19.</b> | <b>All Boards</b> | <b>61.50</b>               | <b>7.80</b>                   | <b>12.7</b>   | <b>69.18</b>               | <b>11.70</b>                  | <b>16.9</b>   |

**State Electricity Boards**  
**Average Rate required to realise 3% Net Surplus**  
**after meeting depreciation and interest due**  
**(1984-85)**

| S. No. | Board            | Average rate (1984-85) |             | % increase<br>4 over 3 |
|--------|------------------|------------------------|-------------|------------------------|
|        |                  | As existing            | As required |                        |
| 1      | 2                | 3                      | 4           | 5                      |
| 1.     | Andhra Pradesh   | 50.7                   | 52.1        | 2.8                    |
| 2.     | Assam            | 54.8                   | 141.7       | 158.6                  |
| 3.     | Bihar            | 65.6                   | 114.6       | 74.7                   |
| 4.     | Gujarat          | 67.9                   | 71.1        | 4.7                    |
| 5.     | Haryana          | 40.3                   | 61.9        | 53.6                   |
| 6.     | Himachal Pradesh | 37.8                   | 65.4        | 73.0                   |
| 7.     | Jammu & Kashmir  | 30.3                   | 84.5        | 178.9                  |
| 8.     | Karnataka Board  | 37.0                   | 40.7        | 10.0                   |
| 9.     | Kerala           | 35.3                   | 34.7        | -                      |
| 10.    | Madhya Pradesh   | 52.4                   | 67.3        | 28.4                   |
| 11.    | Maharashtra      | 49.1                   | 55.8        | 13.7                   |
| 12.    | Meghalaya        | 42.1                   | 52.6        | 24.9                   |
| 13.    | Orissa           | 38.9                   | 41.4        | 6.4                    |
| 14.    | Punjab           | 35.3                   | 70.0        | 98.3                   |
| 15.    | Rajasthan        | 46.0                   | 78.4        | 70.4                   |
| 16.    | Tamil Nadu       | 48.0                   | 66.7        | 39.0                   |
| 17.    | Uttar Pradesh    | 52.3                   | 83.3        | 59.3                   |
| 18.    | West Bengal      | 62.7                   | 84.2        | 34.3                   |
| 19.    | All Boards       | 49.4                   | 65.3        | 32.2                   |

