

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Coram**

- 1. Shri Bhanu Bhushan, Member**
- 2. Shri R.Krishnamoorthy, Member**

**Petition No. 32/2007**

**In the matter of**

Approval of revised fixed charges for the period 2004-09, after considering the impact of additional capital expenditure incurred during 2004-05 and 2005-06 for Farakka Super Thermal Power Station (1600 MW).

**And in the matter of**

NTPC Limited, New Delhi

.....**Petitioner**

Vs

1. West Bengal State Electricity Board, Kolkata
2. Bihar State Electricity Board, Patna
3. Jharkhand State Electricity Board, Ranchi
4. Grid Corporation of Orissa Ltd., Bhubaneswar
5. Damodar Valley Corporation, Kolkata
6. Power Department, Govt. of Sikkim, Gangtok
7. Tamil Nadu Electricity Board, Chennai
8. Union Territory of Pondicherry, Pondicherry
9. Uttar Pradesh Power Corporation Ltd., Lucknow
10. Power Development Department, Govt of J & K, Srinagar
11. Power Department, UT of Chandigarh, Chandigarh
12. Madhya Pradesh Power Trading Co.Ltd, Jabalpur
13. Gujarat Urja Vikas Nigam Ltd, Baroda
14. Electricity Department, Admn. Of Daman & Diu, Daman
15. Electricity Department, Admn. Of Dadra and Nagar Haveli, Silvassa
16. Delhi Transco Ltd, New Delhi
17. Maharashtra State Electricity Distribution Co. Ltd, Mumbai .....**Respondents**

**The following were present:**

1. Shri S.N.Goel, NTPC
2. Shri Vivake Kumar, NTPC
3. Shri D.G.Salpekar, NTPC
4. Shri D.Kar, NTPC
5. Shri R.Krishnaswami, TNEB
6. Shri A.K.Garg, MPPTCL
7. Shri Deepak Srivastava, MPPTCL
8. Shri Mithun Balaji, BSES Rajdhani
9. Shri Vineet Jaswal, BSES Rajdhani

**ORDER**

**(DATE OF HEARING: 23.10.2007)**

The petitioner has made this application for approval of revised fixed charges in respect of Farakka Super Thermal Power Station (1600 MW) (hereinafter referred to as “the generating station”) for the period 2004-09, after accounting for the impact of additional capital expenditure incurred during 2004-05 and 2005-06, based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004 (hereinafter referred to as “the 2004 regulations”). The petitioner has made the following specific prayers:

- “(i) Approve the revised fixed charges of this station after considering the impact of additional capital expenditure as per details given in annexure-I.*
- (ii) allow the servicing of expenditure from the year the same is incurred.*
- (iii) allow the petitioner to approach the Hon’ble Commission for another revision of fixed charges before 31.3.2009 and one revision after the tariff period i.e 31.3.2009*
- (iv) allow the recovery of filing fees from the beneficiary respondents.*
- (v) pass any other orders in this regard as the Hon’ble Commission may find appropriate in the circumstances pleaded above”.*

2. The generating station comprises of 2 units of 500 MW each and 3 units of 200 MW each. The date of commercial operation of the generating station is 1.7.1996. The Commission by its order dated 9.5.2006 in Petition No.153/2004 awarded tariff for the generating station for the period 1.4.2004 to 31.3.2009, based on the capital cost of Rs.305438 lakh (inclusive of FERV of Rs.1881 lakh). The Commission by order dated 27.10.2006 in Review Petition No. 59/2006 revised the annual fixed charges in modification of the order dated 9.5.2006. The annual fixed charges approved by the Commission are as under:

(Rs in lakh)

<b>Particulars</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Interest on Loan	165	0	0	0	0
Interest on Working Capital	4541	4514	4559	4615	4656
Depreciation	11385	7563	7563	7563	7563
Advance against Depreciation	0	0	0	0	0
Return on Equity	21381	21381	21381	21381	21381
O & M Expenses	15600	16222	16870	17540	18252
<b>TOTAL</b>	<b>53071</b>	<b>49680</b>	<b>50373</b>	<b>51305</b>	<b>52058</b>

3. The petitioner has claimed the additional fixed charges as under:

(Rs. in lakh)

<b>Particulars</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Interest on Loan	13	51	78	94	150
Interest on Working Capital	1	5	8	8	0
Depreciation	23	91	136	136	136
Return on Equity	43	171	256	256	256
<b>TOTAL</b>	<b>80</b>	<b>318</b>	<b>478</b>	<b>494</b>	<b>551</b>

4. Reply to the petition has been filed by UPPCL, TNEB, MPPTCL, WSEDCL, BSES Rajdhani Power Ltd and BSES Yamuna Power Ltd.

## **Additional Capitalization**

5. Regulation 18 of the 2004 regulations provides for considering the additional capital expenditure for tariff after the cut-off date as under:

*(2) Subject to the provisions of clause (3) of this regulation, the capital expenditure of the following nature actually incurred after cut off date may be admitted by the commission, subject to prudence check:*

*(i) Deferred liabilities relating to works/services within the original scope of work;*

*(ii) Liabilities to meet award of arbitration or for compliance of the order or decree of a court;*

*(iii) On account of change in law;*

*(iv) Any additional works/services which have become necessary for efficient and successful operation of the generating station, but not included in the original project cost; and*

*(v) Deferred works relating to ash pond or ash handling system in the original scope of work.*

*(3) Any expenditure on minor items/assets like normal tools and tackles, personal computers, furniture, air-conditioners, voltage stabilizers, refrigerators, fans, coolers, TV, washing machine, heat-convector, carpets, mattresses etc. brought after the cut off date shall not be considered for additional capitalization for determination of tariff with effect from 1.4.2004.*

*(4) Impact of additional capitalization in tariff revision may be considered by the Commission twice in a tariff period, including revision of tariff after the cut off date.*

### **Note 2**

*Any expenditure on replacement of old assets shall be considered after writing off the gross value of the original assets from the original project cost, except such items as are listed in clause (3) of this regulation.*

6. The additional capital expenditure claimed as per books of accounts is as under:

(Rs.in lakh)

S.No	Items	2004-05	2005-06	Total
1.	Total additional expenditure on the station as per books of accounts including FERV (A)	604.68	3312.08	3916.76
2.	Exclusions of capitalization from books of accounts (B)			
	(i) FERV capitalised	(-) 519.99	1055.12	535.13
	(ii) Inter-Unit transfers (Exclusions)	(-) 25.97	(-) 101.80	(-) 127.77
	Sub-total exclusions (i) +(ii)	(-) 545.95	953.32	407.37
3.	Additional capital expenditure claimed (A –B)	1150.63	2358.76	3509.39
4.	Expenditure under CEA approved R&M schemes-charged to revenue in Books of Accounts	75.78	68.70	144.48
5.	Total additional capitalization (3-4)	<b>1226.41</b>	<b>2427.46</b>	<b>3653.87</b>

7. The additional capitalisation as per books of accounts is Rs.3916.76 lakh including FERV of Rs.535.13 lakh. However, as the impact of FERV is being claimed separately from the respondent beneficiaries, the total claim after excluding FERV should be Rs.3381.63 lakh. The petitioner has claimed additional capitalisation of Rs.3509.39 lakh. The difference is mainly on account of re-inclusion (negative entries in exclusions) of certain assets in capital base as discussed in succeeding paragraphs.

### **Exclusions**

8. In the first instance, we consider the exclusions under different heads in the claim.

**(a) FERV:** The claim for exclusion of an amount of Rs.535.13 lakh for the year 2004-06 (-) Rs.519.99 lakh in 2004-05 and Rs.1055.12 lakh in 2005-06) on account of impact of FERV is allowed, as the petitioner has billed the said amount directly to the beneficiaries in accordance with the 2004 regulations.

**(b) Inter-unit transfers:** An amount of (-) Rs.127.77 lakh for the year 2004-06 has been excluded under this head on account of transfer of certain assets like rotor blade, H.P. rotor, LP rotor moving blade (1R,2R,1L,2L), angle valves and spherical roller thrust bearing to other generating stations of the petitioner. The petitioner has submitted that the Commission in the past had permitted exclusion of such temporary transfers for the tariff purpose and allowed them to be retained in the capital base of the originating station. Accordingly, the petitioner has excluded the amounts as per the entries in the books of account for its claim for additional capitalization. The Commission while dealing with additional capitalization petitions in respect of other generating stations of the petitioner has decided that both positive and negative entries arising out of inter-unit transfers of temporary nature shall be ignored for the purposes of tariff. In consideration of the said decision, the exclusion of the amount of (-) Rs.127.77 lakh on account of inter-unit transfer of equipment is allowed.

9. The Commission vide its order dated 27.8.2007 directed the petitioner to furnish the detailed categorization and consolidation for each asset under

different clauses of Regulation 18 of the 2004 regulations for which capitalization has been claimed, with proper justification. The petitioner by its affidavit dated 22.10.2007 has submitted details of capitalization of items under different clauses of Regulation 18 of the 2004 regulations. The year-wise and category-wise break-up of the additional expenditure claimed by petitioner is as under:

(Rs. in lakh)

<b>Particulars</b>	<b>Category Code</b>	<b>2004-05</b>	<b>2005-06</b>	<b>TOTAL</b>
Deferred liabilities relating to works /services within the original scope of work admitted by the Commission	18(2) (i)	51.88	(-) 18.37	33.51
Liabilities to meet award of Arbitration or for compliance of order or decree of court	18(2) (ii)	0	0	0
On account of change in law	18(2) (iii)	21.16	16.99	38.15
Additional works /services necessary for efficient and successful operation of the generating station, but not included in the original project cost	18(2) (iv)	342.64	2165.40	2508.05
Deferred works relating to ash pond or ash handling system in the original scope of work.	18(2) (v)	1003.08	271.66	1274.74
Expenditure on minor items/assets	18(3)	23.74	9.25	32.99
Replacements		(-) 3.18	(-) 17.48	(-) 20.66
Inter-unit transfer (Permanent nature)		(-) 212.92	0	(-) 212.92
<b>Additional capitalisation claimed</b>		<b>1226.41</b>	<b>2427.46</b>	<b>3653.87</b>

10. On prudence check of the additional expenditure incurred for the years 2004-05 and 2005-06, it is observed that the petitioner has claimed the expenditure on ABT meters, Liquid Waste Treatment Plant, Sludge Pump for LWTP, Laptop-GM, Digital Camera, LWTP system Stage I & II, raising of Nishinda ash dyke Lasgoon -II etc. in categories other than which it correctly

falls. Accordingly, the additional capital expenditure for the years 2004-05 and 2005-06 has been segregated under the following heads:

(Rs. in lakh)

<b>Particulars</b>	<b>Category Code</b>	<b>2004-05</b>	<b>2005-06</b>	<b>TOTAL</b>
Deferred liabilities relating to works /services within the original scope of work admitted by the Commission	18(2) (i)	51.46	(-) 19.03	<b>32.43</b>
Liabilities to meet award of Arbitration or for compliance of order or decree of court	18(2) (ii)	17.13	0	<b>17.13</b>
On account of change in law	18(2) (iii)	5.55	15.45	<b>21.00</b>
Additional works /services necessary for efficient and successful operation of the generating station, but not included in the original project cost	18(2) (iv)	334.81	2103.05	<b>2437.86</b>
Deferred works relating to ash pond or ash handling system in the original scope of work.	18(2) (v)	1003.08	273.86	<b>1276.94</b>
Expenditure on minor items/assets	18(3)	30.47	71.60	<b>102.07</b>
Replacements		(-) 3.18	(-) 17.48	<b>(-) 20.66</b>
Inter-unit transfer (Permanent nature)		(-) 212.92	0	<b>(-) 2129.21</b>
Additional capitalisation claimed		<b>1226.41</b>	<b>2427.46</b>	<b>3653.87</b>

11. After examining the asset-wise details and justification for additional capitalisation/ decapitalisation claimed by the petitioner, under various categories and by applying prudence check, the admissibility of additional capitalisation is discussed in the subsequent paragraphs.



**Expenditure on balance payment against works admitted by the Commission {Regulation 18(2)(i)}**

12. The petitioner has claimed capital expenditure of Rs.51.46 lakh for the year 2004-05 and decapitalisation of Rs.19.03 lakh for the year 2005-06 on account of the balance payments against the works admitted by the Commission as under:

(Rs in lakh)

Nature of work	2004-05	2005-06
Supply of 3 nos vertical pumps with drive	2.47	-
Steam generator and ESP Stage- 2	79.70	(-) 19.31
Unit and station transformer package	-0.06	0.21
CPU package	-31.61	-
Erection of 5 <sup>th</sup> ash slurry piping	1.38	0.20
Liquid waste treatment plant Stage- I & II	-0.42	1.54
Raising of Nishindra ash dyke, Lagoon-II 1st raising	-	(-) 2.20
Erection of 2 no air blowers, erection and airline and ammonia line	-	0.53
Total	<b>51.46</b>	<b>(-) 19.03</b>

13. The expenditure incurred is of the nature of deferred liabilities, on account of balance payments against works/services within the original scope of work already admitted. As such, capitalisation of an amount of Rs.51.46 lakh for the year 2004-05 and decapitalisation of Rs.19.03 lakh for 2005-06 on account of balance payments is allowed in terms of sub-clause (i) of clause (2) of Regulation 18 of the 2004 regulations.

**Liabilities to meet award of arbitration or for compliance of the order or decree of a court {Regulation 18 (2)(ii)}**

14. The petitioner has claimed an amount of Rs. 17.13 lakh for the year 2004-05, under this head for installation of ABT meters subsequent to the implementation of ABT in Eastern region. The expenditure of Rs.17.13 lakh incurred in the year 2004-05 on this account is allowed to be capitalised.

**On account of change in law {Regulation 18 (2)(iii)}**

15. Expenditure for amount of Rs. 5.55 lakh in the year 2004-05 and Rs.15.45 lakh in the year 2005-06 has been incurred by the petitioner under this head for procurement of portable digital energy meters and sludge pump for liquid waste treatment plant, and construction of ash brick manufacturing plant. This expenditure was incurred to meet the requirements under the provisions of the Energy Conservation Act, 2001, the Environmental Action Plan and also the obligations under the Ministry of Environment and Forests notification dated 14.9.1999 for 100% ash utilization of thermal power station. Accordingly, the claim for Rs.21.00 lakh for the period 2004-06 under this head is allowed to be capitalized.

**Additional works/services necessary for efficient and successful operation of the generating station, but not included in the original project cost {Regulation 18 (2)(iv)}**

16. The petitioner has claimed capital expenditure of Rs.334.81 lakh for the year 2004-05 and Rs.2103.05 lakh in 2005-06 on new works under this head.

The expenditure is mainly on account of:

- (i) CEA approved R&M schemes within the approved cost;
- (ii) Expenditure relating to Residual Life Assessment (RLA) study of boiler and auxiliaries, turbine and auxiliaries, generator and generator transformers for Units –1, 2 and 3;
- (iii) Expenditure on other assets viz. provision of additional hume pipes with lock gate, reversal of slope of existing road, augmentation of communication network, current transformers, HVW spray system, hospital equipment, pitless electronic in-motion weigh bridge, LCD projector etc.; and
- (iv) Capitalisation of spares.

17. The petitioner has submitted that R&M scheme is approved based on the number of operating hours and norms laid down for the purpose. It is noticed that most of R&M schemes approved by CEA have been capitalized along with corresponding de-capitalization of old assets. Some of the approved schemes are new and no corresponding decapitalization has been made. As such, the total expenditure of Rs.1158.13 lakh for the period 2004-06 (Rs.108.22 lakh for 2004-05 and Rs.1049.91 lakh for 2005-06) claimed on account of CEA approved R&M schemes is allowed to be capitalized.

18. The petitioner has claimed an expenditure of Rs.129.44 lakh for the period 2004-06 (Rs.75.78 lakh for 2004-05 and Rs.53.66 lakh for 2005-06) on new works under CEA approved R&M schemes within approved cost and has charged it to revenue in the Books of Accounts. It is observed that CEA in its letters dated.19.7.2002 and 9.9.2002 had cleared 8 proposals for R&M and the remaining 42 proposals were cleared vide letter dated 24.3.2003. It is also

noticed from the letter of CEA dated 9.9.2002 that the proposals that needed urgent attention were cleared by letter dated 19.7.2002 as capital addition and the petitioner was advised to formulate a comprehensive R&M scheme on the basis of RLA studies of boiler and auxiliaries, turbine and auxiliaries, generator and generator transformers for Units –1, 2 and 3 along with the other proposals already under submission in order that the techno-economic viability of the comprehensive R&M scheme could be established in terms of improved generation, PLF/ availability, efficiency. In our view, capitalization of expenditure on RLA studies may be considered only after R&M work for boiler and auxiliaries, turbine and auxiliaries generator and generator transformers for Units –1, 2 and 3 are undertaken and completed on the basis of RLA. In view of this, the claim for an amount of Rs. 129.44 lakh is not admitted.

19. The claim for capitalization of expenditure of Rs.935.67 lakh for the period 2004-06 (Rs.171.12 lakh for 2004-05 and Rs.764.55 lakh for 2005-06) relate to capitalization of spares. The consumption of spares forms part of O&M and as such the expenditure of Rs.935.67 lakh is not allowed to be capitalized. The balance expenditure on other assets to the tune of Rs.214.62 lakh for the period 2004-06 (-) Rs.20.31 lakh in 2004-05 and Rs.234.93 lakh in 2005-06) has been examined on merit and only an amount of Rs.183.29 lakh (-) Rs.20.31 lakh in 2004-05 and Rs.1284.85 lakh in 2005-06 is allowed.

20. Based on the above, the total amount of Rs. 1341.44 lakh (Rs.56.59 lakh for 2004-05 and Rs.1284.85 lakh for 2005-06) is allowed to be capitalised under this head.

**Deferred works relating to ash pond or ash handling system in the original scope of work {Regulation18 (2)(v)}**

21. The petitioner has claimed a capital expenditure of Rs.1276.94 lakh during the period 2004-06 (Rs.1003.08 lakh in 2004-05 and Rs.273.86 lakh in 2005-06) under this head on new works within the approved cost. It is observed that the expenditure incurred is towards procurement of land for ash dyke, civil works relating to raising of ash dyke, construction of WBM road and associated pipeline works. The expenditure is found to be justified and the claim for capitalisation of Rs.1276.94 lakh is allowed.

**Expenditure on Minor assets {Regulation18 (3)}**

22. The petitioner has claimed capitalization of an expenditure totalling Rs.102.07 lakh on minor assets (Rs.30.47 lakh for 2004-05 and Rs.71.60 lakh for 2005-06) which includes furniture, PCs, Laptops, TVs, fans, desert coolers, mobile handsets, phone-sets, fridge, vacuum cleaners, CD/DVD writers, inkjet printers, almirah, digital copier Machine, digital camera, T.T. Board, binocular, electric punch/binding Machine, and lamination machine etc. As per Regulation 18(3) minor assets brought after the cut off date are not to be considered for

capitalization for the purpose of tariff. Hence, the expenditure of Rs.102.07 lakh is not allowed for capitalization.

#### **Expenditure on replacement of assets**

23. An amount of (-) Rs.20.66 lakhs {( -) Rs.3.18 lakh for 2004-05 and (-) Rs.17.48 lakh for 2005-06)} has been claimed under this head. The petitioner has de-capitalised assets worth Rs.20.66 lakh as they have become obsolete. The petitioner has submitted that the replacements shall be capitalized after their procurement and proposal for capitalization of the same will be submitted to the Commission. As such, the decapitalization of Rs.20.66 lakh is allowed.

#### **Expenditure on inter-unit transfer**

24. An amount of Rs.212.92 lakh has been decapitalised by the petitioner under this head on account of permanent inter-unit transfer of water tankers and F-08 LoCo to its other generating stations. The petitioner has submitted that these assets would be capitalised at the respective generating stations. Hence, de-capitalisation of Rs.212.92 lakh is allowed.

#### **Undischarged liability**

25. The Commission vide order dated 27.8.2007 had directed the petitioner to furnish the undischarged liability included in the additional capital expenditure as on 1.4.2004, 1.4.2005, 1.4.2006. The petitioner vide affidavit dated 22.10.2007

has submitted that undischarged liability amounting to Rs.114.18 lakh as on 1.4.2005 and Rs.202.19 lakh as on 1.4.2006 is included in the claim for additional capitalization. The petitioner has not submitted the necessary details as on 1.4.2004. It was argued that in view of the second proviso to Regulation 17 of the 2004 regulations, the capital cost already considered while determining tariff for period ending 31.3.2004 cannot be revised by knocking out the undischarged liabilities. We have considered the submission and find merit in it. Therefore, we have not insisted on submission of information.

26. It is observed that undischarged liabilities of Rs.1.92 lakh in the year 2004-05 in respect of assets of digital copier machine and capital spares, and Rs.7.33 lakh in the year 2005-06 in respect of assets for augmentation of IT net work, colour camera and capital spares have been included in the claim of the petitioner. As we have not allowed the expenditure on these assets for capitalization, the above amounts are deducted from the undischarged liability as on 1.4.2005 and 1.4.2006 and accordingly, the undischarged liabilities included in the claim for additional capitalization as on 1.4.2005 and 1.4.2006 are Rs.112.26 lakh and Rs.194.86 respectively are disallowed.

## **IDC**

27. The petitioner has submitted that the IDC included in the additional capital expenditure is "Nil" for the year 2004-05 and Rs. 23.09 lakh for the year 2005-06. Since there exists no provision for capitalization of IDC on year-to-year basis, the

claim is not justified. In view of this, IDC amounting to Rs.23.09 lakh has been taken out from the additional capital expenditure for the year 2005-06.

**Assets not in use as on 1.4.2005 and 1.4.2006**

28. The Commission vide order dated 27.8.2007 directed the petitioner to furnish the details of assets which were not in use or were unserviceable. The petitioner vide affidavit dated 22.10.2007 has submitted that all assets as per gross block provided in the balance sheet, including the assets for which additional capitalization has been claimed were in use as on 1.4.2005 and 1.4.2006. The petitioner has, however, stated that identified unserviceable assets have been taken out of service and in cases of assets like motor cycles, in-motion weigh bridge, atomic absorp spectophoto, trailor and tripper, where their disposal is pending, value of such assets have been retained in the gross block at lower of their net book value/net realizable value. As unserviceable assets taken out cannot be allowed to remain in the capital base for the purposes of tariff, the values of such assets of Rs.1.85 lakh for the year 2004-05 and Rs.0.66 lakh for the year 2005-06 have been taken out from the gross block as on 1.4.2005 and 1.4.2006 respectively.

29. Based on the discussions in the preceding paragraphs, the additional capital expenditure for the years 2004-06, after excluding the liabilities and the cost of unserviceable assets, is allowed as under:



( Rs.in lakh)

<b>Particulars</b>	<b>Category Code</b>	<b>2004-05</b>	<b>2005-06</b>	<b>TOTAL</b>
Deferred liabilities relating to works /services within the original scope of work admitted by the Commission	<b>18(2) (i)</b>	51.46	(-) 19.03	<b>32.43</b>
Liabilities to meet award of Arbitration or for compliance of order or decree of court	<b>18(2) (ii)</b>	17.13	0	<b>17.13</b>
On account of change in law	<b>18(2) (iii)</b>	5.55	15.45	<b>21.00</b>
Additional works /services which has become necessary for efficient and successful operation of the generating station, but not included in the original project cost	<b>18(2) (iv)</b>	56.59	1284.85	<b>1341.44</b>
Deferred works relating to ash pond or ash handling system in the original scope of work.	<b>18(2) (v)</b>	1003.08	273.86	<b>1276.94</b>
Expenditure on minor items/assets	<b>18(3)</b>	0	0	<b>0</b>
Replacements		(-) 3.18	(-) 17.48	<b>(-) 20.66</b>
Inter-unit transfer (Permanent nature)		(-) 212.92	0	<b>(-) 212.92</b>
<b>Total Additional capitalization</b>		<b>917.71</b>	<b>1537.65</b>	<b>2455.36</b>
<b>Less:</b>				
(a) IDC in additional capital expenditure		-	23.09	23.09
(b) Undischarged liability		112.26	194.86	307.12
(c) Value of unserviceable assets		1.85	(-) 0.66	1.19
<b>Additional capitalization allowed</b>		<b>803.60</b>	<b>1320.36</b>	<b>2123.96</b>

30. The petitioner vide affidavit dated.18.10.2007 has furnished detailed list of assets and their gross values which form part of the gross block as on 31.3.2004 for the purpose of tariff and has subsequently decapitalised the assets during the period 2004-06 along with the date on which these assets were put to use, date on which they were taken out of service and depreciation recovered through tariff in respect of these assets up to 31.3.2004. In the additional capital expenditure

considered above for the period 2004-06, we have allowed decapitalisation of certain assets, which were not in use. Moreover, the gross value of these assets has been taken out of admitted capital cost as a result of which the admitted capital cost of the generating station has been reduced.

### Capital Cost

31. As already noted, the Commission had admitted the capital cost of Rs.303557 lakh as on 1.4.2004, excluding FERV, for determining tariff for the period 2004-09.

32. Taking into account the capital cost of the generating station as on 1.4.2004 and the additional capital expenditure approved for the years 2004-05 and 2005-06 as per para 29 above, the capital cost for the period 2004-09 is worked out as under:

(Rs. In lakh)					
Year	2004-05	2005-06	2006-07	2007-08	2008-09
Opening capital cost	305438.14	306241.74	307562.10	307562.10	307562.10
Additional capital expenditure	803.60	1320.36	-	-	-
Closing capital cost	<b>306241.74</b>	<b>307562.10</b>	<b>307562.10</b>	<b>307562.10</b>	<b>307562.10</b>
Average capital cost	<b>305839.94</b>	<b>3069.1.92</b>	<b>307562.10</b>	<b>307562.10</b>	<b>307562.10</b>

### Debt-Equity ratio

33. Clause (1) of Regulation 20 of the 2004 regulations, as amended, provides that:

*“(1) In case of the existing generating stations, debt-equity ratio considered by the Commission for the period ending 31.3.2004 shall be considered for determination of tariff with effect from 1.4.2004:*

*Provided that in cases where the tariff for the period ending 31.3.2004 has not been determined by the Commission, debt-equity ratio shall be as may be decided by the Commission:*

*Provided further that in case of the existing generating stations where additional capitalisation has been completed on or after 1.4.2004 and admitted by the Commission under Regulation 18, equity in the additional capitalization to be considered shall be,-*

- (a) 30% of the additional capital expenditure admitted by the Commission;*
  - or*
  - (b) equity approved by the competent authority in the financial package, for additional capitalization; or*
  - (c) actual equity employed,*
- Whichever is the least:*

*Provided further that in case of additional capital expenditure admitted under the second proviso, the Commission may consider equity of more than 30% if the generating company is able to satisfy the Commission that deployment of such equity of more than 30% was in the interest of general public”.*

34. The petitioner in its affidavit dated 18.10.2007 has stated that no loan was deployed during the year 2004-05 and loan of Rs.1300 lakh was deployed during the year 2005-06. The petitioner has considered the capital work in progress amounting to Rs.377.44 lakh during 2004-05 and Rs.801.35 lakh during 2005-06. The petitioner has submitted that the balance additional capital expenditure has been financed from its internal accruals/resources. The petitioner has applied the rate of interest admitted by the Commission in order dated 27.10.2006 in Petition No. 153/2004. As the petitioner has not submitted the basis of its claim for interest on loan arising out of additional capital expenditure, the weighted average rate of interest computed in order dated 27.10.2006 has been considered. Further, since the equity component of additional capitalization is more than 30%, the debt-equity ratio of 70:30 has been considered for additional

capitalization in terms of sub-clause (a) of clause (1) of Regulation 20 of the 2004 regulations. Accordingly, additional notional equity of the generating station on account of capitalization approved, works out as under:

(Rs. in lakh)		
	<b>2004-05</b>	<b>2005-06</b>
Notional Equity	241.08	396.11

### **Return on Equity**

35. Return on equity is allowed @ 14% on the average normative equity, as follows:

(Rs in lakh)					
	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Equity opening	152719	152960	153356	153356	153356
Equity due to Additional capitalization	241	396	0	0	0
Equity closing	152960	153356	153356	153356	153356
Average equity	152840	153158	153356	153356	153356
Return on equity @ 14%	<b>21398</b>	<b>21442</b>	<b>21470</b>	<b>21470</b>	<b>21470</b>

### **Interest on loan**

36. Interest on loan has been worked out as mentioned below:

- (a) The normative loan outstanding as on 1.4.2004 is Rs.7740.26 lakh and the notional loan arising on account of additional capital expenditure for the year 2004-05 is Rs.562.52 lakh. Hence, the total outstanding notional loan as on 1.4.2004 is Rs.8302.78 lakh.
- (b) The cumulative repayment of loan up to 31.3.2004 considered in order dated 9.5.2006 was Rs.144979 lakh, which was subsequently revised to Rs.133514 lakh by the Commission vide order dated

25.1.2008 in Petition No. 36/2001 while implementing judgment of Appellate Tribunal. This has been considered while calculating the impact of additional capital expenditure. The outstanding normative loan of Rs.19205 lakh as on 1.4.2004 as per order dated 25.1.2008 has also been considered.

- (c) Repayment of actual loan has been used to calculate the normative repayment of loan. Normative repayment has been worked out as per formula below:

$$\text{Normative repayment} = \frac{\text{Actual Repayment} \times \text{Normative Loan}}{\text{Actual Loan}}$$

Actual loan considered in the order dated 9.5.2006 and 27.10.2006 has been taken as the claim of the petitioner, though there is addition in loan on account of additional capitalization during the year 2005-06.

- (d) Where normative repayment of loan is less than the depreciation of the same year, repayment has been considered to the extent of depreciation as considered in the orders dated 9.5.2006 and 27.10.2006, subject to the final decision of the Hon'ble Supreme Court in Civil Appeal No. 5434/2007 and other related appeals preferred by the Commission.
- (e) Since depreciation has been spread over the balance useful life of the generating station from the year 2005-06 onwards and

repayment of loan on normative basis being less than the admissible depreciation of loan based on the spread over, the entire normative loan arising on account of additional capital expenditure, is deemed to be repaid in the year 2005-06, with adequate amount of depreciation available even when spread over has been considered.

37. Interest on loan has been computed as under:

(Rs in lakh)						
Details	Up to 31.3.2004	2004-05	2005-06	2006-07	2007-08	2008-09
Gross Loan Opening	152719	153282	154206	154206	154206	154206
Cumulative repayment of deemed loan upto previous year	133514	133514	144914	154206	154206	154206
Net loan opening	19204.67	19767	9291	0	0	0
Repayment of loan during the year		11400	9291	0	0	0
Net loan Closing		8367	0	0	0	0
Average Loan	9602.30	14067	4646	0	0	0
Wt. Average Rate of Interest		4.2611%	4.1745%	4.2592%	5.1411%	8.2190%
<b>Interest on Loan</b>		<b>599</b>	<b>194</b>	<b>0</b>	<b>0</b>	<b>0</b>

### Depreciation

38. The petitioner has calculated the weighted average rate of depreciation as 3.73% in terms of order dated 9.5.2006. In our order dated 27.10.2006, the remaining depreciation recoverable was spread over the balance useful life of 13.43 years of the generating station from 2005-06 onward, as entire normative loan was repaid in 2004-05. However, on account of the change in the repayment methodology in accordance with the judgment of the Appellate

Tribunal ibid, entire normative loan is now repaid in 2005-06. Therefore, from 2006-07 onwards, remaining depreciation recoverable has been spread over the balance useful life of 12.43 years of the generating station. Adjustment of cumulative depreciation on account of decapitalisation of assets has been considered in the calculations as carried out in the tariff orders for the period 2004-09 for other generating stations of the petitioner. The petitioner has furnished the depreciation recovered based on the books of accounts and has limited it to 90% of the total value of the assets. The weighted average rate of depreciation as applicable for the different years has been computed and the reduction in cumulative depreciation has been worked out as Rs.273.51 lakh for 2004-05 and Rs.363.09 lakh for 2005-06. The necessary calculations are as under:

		(Rs in lakh)				
	<b>Upto 31.3.2004</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Opening capital cost		305438	306242	307562	307562	307562
Closing capital cost		<b>306242</b>	<b>307562</b>	<b>307562</b>	<b>307562</b>	<b>307562</b>
Average capital cost		<b>305840</b>	<b>306902</b>	<b>307562</b>	<b>307562</b>	<b>307562</b>
Depreciable value @ 90%	274125	<b>274486</b>	<b>275442</b>	<b>276036</b>	<b>276036</b>	<b>276036</b>
Balance depreciable value	112959	113321	103150	92668	85212	77757
Balance useful life	14.43	14.43	13.43	12.43	11.43	10.43
Depreciation		<b>11400</b>	<b>11440</b>	<b>7455</b>	<b>7455</b>	<b>7455</b>

### **Advance Against Depreciation**

39. The petitioner has not claimed Advance Against Depreciation. Therefore the petitioner's entitlement to Advance Against Depreciation is "nil"

## O&M expenses

40. O&M expenses as considered in the order dated 9.5.2006 in Petition No.153/2004 have been considered.

## Interest on Working capital

41. For the purpose of calculation of working capital, the operating parameters including the price of fuel components as considered in the original order dated 9.5.2006 has been kept unaltered. The “receivables” component of the working capital has been revised for the reason of revision of return on equity, interest on loan, etc. The necessary details in support of calculation of interest on working capital are as under:

	(Rs in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Coal Stock- 1.1/2 months	12392	12392	12392	12426	12392
Oil Stock- 2 months	504	504	504	506	504
O & M expenses	1300	1352	1406	1462	1521
Maintenance spares	4230	4484	4753	5038	5340
Receivables	25952	26008	25420	25587	25666
Total Working Capital	44378	44740	44475	45019	45424
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
<b>Interest on Working Capital</b>	<b>4549</b>	<b>4586</b>	<b>4559</b>	<b>4614</b>	<b>4656</b>

42. The revised annual fixed charges for the period from 1.4.2004 to 31.3.2009 are summarized as under:



( Rs. in lakh)

<b>Particulars</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Interest on Loan	599	194	0	0	0
Interest on Working Capital	4549	4586	4559	4614	4656
Depreciation	11400	11440	7455	7455	7455
Advance Against Depreciation	0	0	0	0	0
Return on Equity	21398	21442	21470	21470	21470
O & M Expenses	15600	16222	16870	17540	18252
<b>TOTAL</b>	<b>53546</b>	<b>53884</b>	<b>50354</b>	<b>51079</b>	<b>51833</b>

43. There is a substantial increase in the amounts of interest on loan and depreciation approved in the revised tariff qua the additional amount claimed by the petitioner. This is for the reason that the revised amount has been calculated through the methodology for re-calculation of interest on loan, decided by the Appellate Tribunal and implemented by the order dated 25.1.2008 in Petition No. 36/2001, *ibid*.

44. The target availability of 80% considered by the Commission in the order dated 9.5.2006 remains unchanged. Similarly, other parameters viz., specific fuel consumption, Auxiliary Power consumption and Station Heat rate etc considered in the order dated 9.5.2006 have been retained for the purpose of calculation of the revised fixed charges.

45. The petitioner shall claim the difference from the beneficiaries in six equal monthly installments.

46. As regards the petitioner's prayer in clause (iii) of the petition as quoted in para 1 of this order, the petitioner may approach the Commission for further revision of fixed charges in accordance with clause (4) of Regulation 18 of the 2004 regulations.

47. The petitioner has also sought reimbursement of filing fee of Rs. one lakh paid. A final view on reimbursement of filing fee is yet to be taken by the Commission.

48. Petition No.32/2007 stands disposed of in terms of the above.

**Sd/-**  
**(R. KRISHNAMOORTHY)**  
**MEMBER**

**Sd/-**  
**(BHANU BHUSHAN)**  
**MEMBER**

New Delhi dated the 22<sup>nd</sup> July, 2008