

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Coram**

1. **Shri Ashok Basu, Chairperson**
2. **Shri K.N.Sinha, Member**
3. **Shri Bhanu Bhushan, Member**
4. **Shri A.H. Jung, Member**

**Petition No 153/2004  
with I.A.No.55/2005**

**In the matter of**

Approval of tariff in respect of Farakka Super Thermal Power Station (1600 MW) for the period from 1.4.2004 to 31.3.2009.

**And in the matter of**

National Thermal Power Corporation Ltd.

.....**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 (J &K), Srinagar
11. Power Department (UT of Chandigarh), Chandigarh
12. Madhya Pradesh State Electricity Board, Jabalpur
13. Gujarat Electricity Board, Baroda
14. Electricity Department, Admn. Of Daman & Diu
15. Electricity Department, Admn. Of Dadra and Nagar Haveli, Silvassa
16. Delhi Transco Ltd, Delhi
17. Maharashtra State Electricity Board, Mumbai

...**Respondents**

**The following were present**

1. Shri V.B.K.Jain, NTPC
2. Shri I.J.Kapoor, NTPC
3. Shri S.D. Jha, NTPC
4. Shri Manoj Saxena, NTPC
5. Shri D.G.Salpekar, NTPC
6. Shri Guryog Singh, NTPC
7. Shri G.K. Dua, NTPC

8. Shri T.K. Srivastava, UPPCL
9. Shri P.K.Bagchi, WBSEB
10. Shri P.C. Saha, WBSEB
11. Shri R.B. Sharma, Advocate, BSEB
12. Shri Rakesh, BSEB

**ORDER**  
**(DATE OF HEARING : 16.2.2006)**

This petition has been filed by the petitioner, a generating company owned or controlled by the Central Government for approval of tariff in respect of Farakka Super Thermal Power Station (3X200+2X500 MW) (hereinafter referred to as “the generating station”) for the period from 1.4.2004 to 31.3.2009 based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004, (hereinafter referred to as “the 2004 regulations”).

2. The generating station with a total capacity of 1600 MW 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.

3. The tariff for the generating station for the period ending 31.3.2004 was approved by the Commission vide its order dated 19.7.2004 in Petition No. 36/2001 based on the capital cost of Rs. 301732 lakh. The petitioner filed the present petition on 28.10.2004. The claim for tariff was based on the capital cost of Rs. 306844 lakh which included admitted capital cost of Rs.301732 lakh as on 1.4.2001, and additional capital expenditure of Rs.5112 lakh stated to have been incurred during 2001-04. However, an IA (No.8/2005) was filed by the petitioner for amendment of the original petition, stating that in original petition FERV of Rs.3367 lakh for the period 1.4.2001 to 31.3.2004 was inadvertently left

out while arriving at capital cost as on 1.4.2004. Accordingly, capital cost as on 1.4.2004 was revised to Rs.310211 lakh which included admitted capital cost of Rs.301732 lakh as on 31.3.2001, additional capital expenditure of Rs.5112 lakh and FERV of Rs.3367 lakh for the period 1.4.2001 to 31.3.2004. Meanwhile, the Commission vide order dated 17.6.2005 in Petition No.170/2004, approved the additional capital expenditure of Rs.1825 lakh (excluding FERV) for the period 2001-04 against the petitioner's claim of Rs.5111 lakh and arrived at a capital base of Rs.303557 lakh (excluding FERV) as on 1.4.2004. The Commission further ordered that the cost of servicing of investment on the additional expenditure would be reimbursed to the petitioner during the tariff period 2004-09. The details of capital expenditure approved are given here under:

	(Rs. in lakh)
2001-02	651.70
2002-03	1332.14
2003-04	(-)158.54
<b>TOTAL</b>	<b>1825.30</b>

4. Consequent to approval of the additional capitalization by order dated 17.6.2005 the petitioner, vide IA No.55/2005 dated 4.10.2005 sought to further amend the petition and revised the claim for tariff based on a capital cost of Rs 306925 lakh which included admitted capital cost of Rs.301732 lakh as on 1.4.2001, FERV of Rs.3367 lakh and admitted additional capital expenditure of Rs.1825 lakh for the period 2001-04. This order is in the context of this revised claim subsequently made through the amended petition.

5. The details of the fixed charges claimed by the petitioner in the present petition are given hereunder:

(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	291	186	97	37	16
Interest on Working Capital	4833	4877	4925	4984	5029
Depreciation	11418	11418	11418	11418	11418
Advance against Depreciation	0	0	0	0	0
Return on Equity	21485	21485	21485	21485	21485
O & M Expenses	15600	16222	16870	17540	18252
<b>TOTAL</b>	<b>53626</b>	<b>54188</b>	<b>54794</b>	<b>55463</b>	<b>56199</b>

6. The details of working capital furnished by the petitioner and its claim for interest thereon are summarized hereunder:

(Rs. in lakh)

	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Coal Stock	13313	13313	13313	13313	13313
O & M expenses	1300	1352	1406	1462	1521
Spares	4836	5126	5434	5760	6105
Receivables	27193	27287	27388	27549	27622
Total Working Capital	47147	47582	48045	48626	49066
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
<b>Interest on Working capital</b>	<b>4833</b>	<b>4877</b>	<b>4925</b>	<b>4984</b>	<b>5029</b>

7. In addition, the petitioner has claimed energy charges. The petitioner initially claimed energy charges @ 98.47 paise/kWh. Later on, based on escalated coal price with effect from 15.6.2004 the petitioner claimed energy charges @ 106.00 paise/kWh. The energy charges claimed are subject to adjustment for fuel price.

8. The reply to the petition was filed by the West Bengal State Electricity Board, Bihar State Electricity Board, Tamil Nadu State Electricity Board, Uttar Pradesh Power Corporation Ltd., Madhya Pradesh State Electricity Board, Gujarat Urja Vikas Nigam Ltd.(formerly known as Gujarat Electricity Board), Maharashtra State Electricity Board. The other respondents have not filed their reply. The petitioner has published notices in accordance with the procedure specified by the Commission. However, no objections or suggestions have been received in response to these notices.

### **De-capitalization of Assets**

9. The petitioner has de-capitalized certain assets during the period 2001-04. These de-capitalised assets were removed from the gross block to arrive at admissible additional capitalization for the purpose of capital cost by order dated 17.6.2005 in Petition No.170/2004 for additional capitalization. The petitioner is maintaining accounts on accrual basis. This resulted in inflated capital base in earlier tariff period due to capitalization of liability provision. The expenditure for which provision was made did not materialise and an amount of Rs.2229 lakh was de-capitalised subsequently by order dated 17.6.2005 *ibid*. But the petitioner has been allowed tariff on the inflated capital base till 31.3.2004. However, past period calculations towards impact on tariff have not been opened. The same may be mutually settled between the petitioner and the beneficiaries.

### **CAPITAL COST**

10. As per the second proviso to Regulation 17 of the 2004 regulations in case of the existing generating stations, the capital cost admitted by the Commission for determination of tariff prior to 1.4.2004 shall form the basis for determination of tariff.

11. The petitioner has claimed capital expenditure of Rs.306925 lakh after accounting for additional capitalization of 1825.30 lakh approved in Petition No.170/2004 vide order dated 17.6.2005 over the already approved capital expenditure of Rs.301732 lakh as on 1.4.2001 vide order dated 19.7.2004 and FERV of Rs. 3367 lakh, as per the following details:

<b>Particulars</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04</b>	<b>Total</b>
<b>ACE (RS. in lakh)</b>	<b>(-)279</b>	<b>2467</b>	<b>1179</b>	<b>3367</b>

12. The petitioner, vide affidavit filed on 25.4.2006 has confirmed that all the assets included in the balance sheet for the year 2003-04 of the generating station were in use as on 1.4.2004. The petitioner has further submitted that the assets that will be out of use in the tariff period 2004-09 will be de-capitalised and the details of such assets not in use/amounts de-capitalized shall be furnished to the Commission along with the claims of capitalisation to be filed separately.

13. The Commission vide its order dated 17.6.2005 in Petition No. 170/2004 has decided that the opening capital cost for the purpose of tariff for the period 2004-09 as on 1.4.2004 shall be Rs. 303557 lakh (excluding impact of FERV). This has been adopted for the purpose of petition in the present petition. Next we consider the additional capitalisation on account of FERV.

**FERV/Extra Rupee Liability during the years 2001-04**

14. Regulation 1.13 (a) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2001 provided as under:

(a) Extra rupee liability towards interest payment and loan repayment actually incurred, in the relevant year shall be admissible; provided it directly arises out of foreign exchange rate variation and is not attributable to Utility or its suppliers or contractors. Every utility shall follow the method as per the Accounting Standard-11 (Eleven) as issued by the Institute of Chartered Accountants of India to calculate the impact of exchange rate variation on loan repayment

(b) Any foreign exchange rate variation to the extent of the dividend paid out on the permissible equity contributed in foreign currency, subject to the ceiling of permissible return shall be admissible. This as and when paid, may be spread over the twelve-month period in arrears.

15. Regulation 1.7 of the 2001 regulations further provided that recovery of foreign exchange rate variation would be done directly by the utilities from the beneficiaries without filing a petition before the Commission. In case of any objections by the beneficiaries to the amounts claimed on these counts, they may file an appropriate petition before the Commission.

16. The petitioner has claimed FERV based on liability actually incurred. The petitioner's claim for capitalization of FERV, is to be restricted to normative loan for the reasons separately recorded in the order in Petition No.160/2004 pertaining to approval of tariff for Anta GPS. Accordingly amount worked out for FERV is Rs.1881 lakh.

17. Based on the above, after adjustment of FERV of Rs 1881 lakh, the gross block as on 1.4.2004 comes to Rs.305438 lakh as per details given hereunder:

(Rs. in lakh)

Capital cost admitted as on 31.3.2001.	301732
Additional Capitalisation as approved during 2001-04	1825
FERV admitted for the tariff period 2001-2004	1881
Opening Capital cost as on 1.4.2004 for the tariff period 2004-2009	305438

### **DEBT-EQUITY RATIO**

18. Clause (1) of Regulation 20 of the 2004 regulations *inter alia* provides that in case of the existing generating stations, debt–equity ratio considered by the Commission for fixation of tariff for the period ending 31.3.2004 shall be considered for determination of tariff.

19. The Commission, while approving tariff vide its order dated 19.7.2004 in Petition No 36/2001 for the period from 1.4.2001 to 31.3.2004 had considered the normative debt-equity ratio of 50:50. Therefore, for the purpose of present petition, debt-equity ratio of 50:50 has been adopted in the working. Accordingly, an amount of Rs. 152719 lakh has been considered as equity as on 1.4.2004.

### **TARGET AVAILABILITY**

20. The petitioner has considered target availability of 80%, based on the provisions of the 2004 regulations. Accordingly, target availability of 80 % has been considered for recovery of full fixed charges and computation of fuel element in the working capital for the period from 1.4.2004 to 31.3.2009.



## **RETURN ON EQUITY**

21. As per clause (iii) of regulation 21 of the 2004 Regulations, return on equity shall be computed on the equity base determined in accordance with regulation 20 @ 14% per annum. Equity invested in foreign currency is to be allowed a return in the same currency and the payment on this account is made in Indian Rupees based on the exchange rate prevailing on the due date of billing.

22. The petitioner has claimed return on equity of Rs.153462 lakh after accounting for equity of Rs.1683.50 lakh on account of FERV and equity of Rs.913 lakh on account of additional capitalization for the period 1.4.2001 to 31.3.2004. This claim has not been accepted since we have approved FERV of Rs.1881 lakh against the claim of Rs.3367 lakh. The return on equity has been worked out on the normative equity. The petitioner is entitled to return on equity of Rs.21381 lakh each year during the tariff period on equity of Rs.152719 lakh

## **INTEREST ON LOAN**

23. Clause (i) of regulation 21 of the 2004 regulations *inter alia* provides that,-

(a) Interest on loan capital shall be computed loan-wise on the loans arrived at in the manner indicated in regulation 20.

(b) The loan outstanding as on 1.4.2004 shall be worked out as the gross loan as per regulation 20 minus cumulative repayment as admitted by the Commission for the period up to 31.3.2004. The repayment for the period 2004-09 shall be worked out accordingly on normative basis.

(c) The generating company shall make every effort to swap the loan as long as it results in net benefit to the long-term transmission customers. The costs associated with such swapping shall be borne by the long-term transmission customers.

(d) The changes to the loan terms and conditions shall be reflected from the date of such swapping and benefits passed on to the beneficiaries.

(e) In case any moratorium period is availed of by the transmission licensee, depreciation provided for in the tariff during the years of moratorium shall be treated as repayment during those years and interest on loan capital shall be calculated accordingly.

(f) In case any moratorium period is availed of by the Generating Company, depreciation provided for in the tariff during the years of moratorium shall be treated as repayment during those years and interest on loan capital shall be calculated accordingly.

(g) The generating company shall not make any profit on account of swapping of loan and interest on loan.

24. The fixed charges for the period prior to 1.4.2004 were allowed by the Commission on normative loan. Therefore, the interest on loan has been worked out as under:

(a) Normative loan of Rs.5887 lakh outstanding on 31.3.2004 as per the order dated 19.7.2004 has been considered.

(b) Notional loan of Rs.1853 lakh arising out of additional capitalization on works and FERV for the period 2001-04 has been considered. Thus, total outstanding notional loan as on 1.4.2004 is Rs.7740 lakh.

- (c) Net normative loan opening, cumulative repayment of loan of all earlier period loans continuing in this tariff period have been taken from the order dated 19.7.2004. Foreign loans have been considered duly taking into consideration effect of FERV. In case of IBRD Main, FERV is calculated on current cost basis and in others it is on temporal/historical cost basis.
- (d) The calculations of interest on loan have been made taking refinanced loan i.e. Bond Series XIII B, though the petitioner has submitted calculation of interest on loan considering 15% GOI loan since the former is found to be beneficial to the respondents in the long run, based on Net Present Value analysis carried out.
- (e) Some of the loans have moratorium period viz. Bond XIII B (upto 2007-08), SBI-I (upto 2004-05), UCO Bank (upto 2006-07) and this has been taken into account for computation of interest on loan.
- (f) The petitioner has considered FIFO method of repayment in case of following loans viz. SBI-I, UCO Bank, United Bank of India. Since application of FIFO method may result into higher AAD in case of the existing power stations and higher IDC in case of ongoing projects, all calculations of actual repayment have been made on average basis, taking into consideration terms and conditions of the loan drawal as per Form-8 as furnished by the petitioner.
- (g) The petitioner has considered rate of interest on quarterly rest in case of ICICI Bank loan and on monthly rest in case of loan from SBI-I, UCO Bank and United Bank of India. The rate of interest considered in calculation in case of all loans is on annual rest basis.

(h) Actual repayment of actual loan based on above corrections is used to calculate normative repayment of loan. Normative repayment is worked out as per formula given below:

Normative Repayment= Actual Repayment x Normative Loan

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Actual Loan

- (i) As per the decision at para 29 below normative repayment of loan or depreciation whichever is higher has been treated as repayment during the year. In this manner, entire notional loan gets repaid during 2004-05.
- (j) The weighted average rate of interest calculated on actual loan and actual repayment has been applied on normative loan for interest on loan.
- (k) Financial charges incurred by the petitioner towards loan/s have been allowed and taken into consideration for calculation for interest on loan. These charges are 0.03% Surveillance Fee for Bond Series XIII B, 1% Govt. Guarantee Fee for IBRD Main, IBRD-A and IBRD-B.
- (l) Some of the loans carry floating rate of interest viz. IBRD Main (4.85%), SBI-I (9.6%). Interest rate prevailing on 1.4.2004 has been considered for interest computation for the period 1.4.2004 onwards. However interest on loan would be subject to adjustment on the basis of actual rate of interest applicable for the period.
- (m) Loan draws upto 31.3.2004 have been considered.
- (n) Repayment in case of foreign loans is calculated as per schedule furnished by the petitioner and rate of exchange as on 31.3.2004.

25. The necessary calculations in support of weighted average rate of interest are appended below:

**CALCULATIONS OF WEIGHTED AVERAGE RATE OF INTEREST**

(Rs. in lakh)

<b>Refinancing of GOI 15% Loan with Bond XIII B Series</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04</b>
Opening Balance	265	265	265
Addition/Drawl	0	0	0
Repayment thro'GOI	0	0	0
Closing Balance	265	265	265
Average Loan	265	265	265
Rate of Interest	15.00%	10.03%	9.58%
Interest	40	27	25
<b>OTHER GOI LOANS(I TO VI)</b>			
Opening Balance	5881	4726	3570.596907
Addition/Drawl	0	0	0
Repayment thro'GOI	1155	1155	1155
Closing Balance	4726	3571	2415
Average Loan	5304	4148	2993
Rate of Interest	10.75%	10.75%	10.75%
Interest	570	446	322
<b>United Bank</b>			
Opening Balance	120	120	120
Addition/Drawl	0	0	0
Repayment	0	0	0
Closing Balance	120	120	120
Average Loan	120	120	120
Rate of Interest	12.55%	12.55%	12.55%
Interest	15	15	15
<b>ICICI-I</b>			
Opening Balance	1100	1100	990
Addition/Drawl	0	0	0
Repayment	0	110	220
Closing Balance	1100	990	770
Average Loan	1100	1045	880
Rate of Interest	13.06%	13.06%	13.06%
Interest	144	137	115
<b>Bond 8 th Issue</b>			
Opening Balance	4666	0	0
Addition/Drawl	0	0	0
Repayment	4666	0	0
Closing Balance	0	0	0
Average Loan	2333	0	0
Rate of Interest	9.00%	9.00%	9.00%
Interest	210	0	0
<b>Bond 11 th Issue( Series III)</b>			
Opening Balance	4224	4224	4224
Addition/Drawl	0	0	0

Repayment	0	0	4224
Closing Balance	4224	4224	0
Average Loan	4224	4224	2112
Rate of Interest	10.50%	10.50%	10.50%
Interest	444	444	222
<b>IBRD-O(USD-EQ)-INR</b>			
Opening Balance	212	200	187
Addition/Drawl	0	0	0
Repayment	12	13	14
Closing Balance	200	187	173
Average Loan	206	194	180
Rate of Interest	6.11%	6.11%	6.11%
Interest	13	12	11
<b>IBRD-A(USD)-INR</b>			
Opening Balance	182	182	152
Addition/Drawl	0	0	0
Repayment	0	30	30
Closing Balance	182	152	122
Average Loan	182	167	137
Rate of Interest	6.64%	6.64%	6.64%
Interest	12	11	9
<b>IBRD-B(Tr.A)(EURO)-INR</b>			
Opening Balance	33	33	27
Addition/Drawl	0	0	0
Repayment	0	6	6
Closing Balance	33	27	22
Average Loan	33	30	25
Rate of Interest	5.18%	5.18%	5.18%
Interest	2	2	1
<b>IBRD-B(Tr.B)(EURO)-INR</b>			
Opening Balance	2	2	2
Addition/Drawl	0	0	0
Repayment	0	0	0
Closing Balance	2	2	2
Average Loan	2	2	2
Rate of Interest	5.59%	5.59%	5.59%
Interest	0.11	0.11	0.09
<b>BTCO/Bank of America</b>			
Opening Balance	4273	1424	0
Addition/Drawl	0	0	0
Repayment	2849	1424	0
Closing Balance	1424	0	0
Average Loan	2849	712	0
Rate of Interest	5.31%	5.31%	5.31%
Interest	151	38	0
<b>EXIM/Sumitomo-II</b>			
Opening Balance	10652	5312	0
Addition/Drawl	0	0	0
Repayment	5340	5312	0

Closing Balance	5312	0	0
Average Loan	7982	2656	0
Rate of Interest	6.50%	6.50%	6.50%
Interest	519	173	0
<b>EXIM/SG Asia</b>			
Opening Balance	23998	23998	23969
Addition/Drawl	0	0	0
Repayment	0	29	5340
Closing Balance	23998	23969	18629
Average Loan	23998	23984	21299
Rate of Interest	4.06%	4.06%	4.06%
Interest	974	974	865
<b>Total Loan</b>			
Opening Balance	55609	41586	33507
Addition/Drawl	0	0	0
Repayment	14023	8079	10990
Closing Balance	41586	33507	22517
Average Loan	48597	37546	28012
Rate of Interest	6.36%	6.06%	5.66%
Interest	3093	2276	1585

26. The computations of interest on loan by applying weighted average interest rate are appended herein below:

#### COMPUTATION OF INTEREST ON LOAN

(Rs. in lakh)

<b>Loan</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Gross loan-Opening	150866	150866	150866	150866	150866
Cumulative repayments of Loans upto previous year	144979				
Net loan-Opening	7740	0	0	0	0
Increase/ Decrease due to FERV	940	940	940	940	940
Increase/ Decrease due to Additional Capitalization	913	913	913	913	913
Total	152719	152719	152719	152719	152719
Repayments of Loans during the year	7740	0	0	0	0
Net loan-Closing	0	0	0	0	0
Average Net Loan	3870	0	0	0	0
Rate of Interest on Loan	4.26%	4.17%	4.25%	5.14%	8.21%
<b>Interest on loan</b>	<b>165</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

#### DEPRECIATION

27. Sub-clause (a) of clause (ii) of Regulation 21 of the 2004 regulations provides for computation of depreciation in the following manner, namely:

- (i) The value base for the purpose of depreciation shall be the historical cost of the asset
- (ii) Depreciation shall be calculated annually based on straight line method over the useful life of the asset and at the rates prescribed in Appendix II to these regulations. The residual value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the historical capital cost of the asset. Land is not a depreciable asset and its cost shall be excluded from the capital cost while computing 90% of the historical cost of the asset. The historical capital cost of the asset shall include additional capitalization on account of Foreign Exchange Rate Variation up to 31.3.2004 already allowed by the Central Government/Commission
- (iii) On repayment of entire loan, the remaining depreciable value shall be spread over the balance useful life of the asset
- (iv) Depreciation shall be chargeable from the first year of operation. In case of operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

28. In the present petition the petitioner has de-capitalised assets worth Rs. 799 lakh for the period up to 31.3.2004 and has claimed depreciation after accounting for depreciation of Rs. 395.14 lakh recovered against the assets de-capitalised.

29. A question regarding treatment of depreciation when it exceeds repayment of loan in a year has been raised by the beneficiaries. In order dated 5.5.2006 in Petition No.



162/2004 (NTPC Vs UPPCL and another), the Commission has held that when depreciation recovered in a year is more than the amount of repayment during that year, the entire amount of depreciation is to be considered as repayment of loan for tariff computation. Similar approach has been adopted by the Commission, while approving tariff in respect of the transmission assets of PGCIL, and in the interest of consistency and continuity of approach same methodology needs to be followed in case of the petitioner also. Accordingly, in the present case also, where the depreciation recovered in a year exceeds the amount of repayment during that year, the entire amount of depreciation has been considered as repayment of loan for computation of tariff as per the above decision.

30. The cost of land in the present case is Rs.1514 lakh. The gross depreciable value of the asset, excluding land cost, is  $0.9 \times (\text{Rs.}305438 \text{ lakh} - \text{Rs.}1514 \text{ lakh}) = \text{Rs.} 273531$  lakh. The depreciable value after adding amortisation of leased land over 25 years works out to Rs.274125 lakh. Cumulative depreciation and AAD recovered in tariff up to 31.3.2004 is Rs.161166 lakh. Remaining depreciable value as on 1.4.2004 is thus Rs.112959 lakh.

31. Since the normative loan is outstanding during 2004-05 depreciation has been calculated as per weighted average rate of depreciation. Weighted average rate of depreciation calculated based on gross value of asset is 3.73% against the petitioner's claim of 3.72%. The petitioner had considered depreciation rate of 25% for assets not owned by it amounting to Rs. 99.84 lakh. However, rate of depreciation of these assets, as per details furnished by the petitioner, was worked out as per rates applicable to individual assets included in Appendix-II to the 2004 regulations. For assets not listed specifically in

Appendix-II, the rates considered are as applicable to similar assets included in Appendix-II.

32. In case of de-capitalization of physical assets, depreciation recovered up to the date of de-capitalization has been reduced from cumulative depreciation recovered till 31.3.2004. The petitioner has considered de-capitalisation of assets to the tune of Rs.799 Lakh and calculated depreciation charged on the assets till de-capitalisation, amounting to Rs. 395.14 lakh. However, de-capitalization of assets amounting to Rs. 798.12 lakh was considered while finalising additional capitalization. Claim of the petitioner on admitted value as provided is Rs. 394.35 lakh. As per procedure adopted in other cases, claim made by the petitioner towards the amount of cumulative depreciation, have been considered. Reduction in cumulative depreciation thus is Rs.395.14 lakh. De-capitalization of assets under the head "Replacement" could not be considered as details regarding date of capitalization and de-capitalization were not available, and claim towards the same has not been asked by the petitioner.

33. The petitioner has stated that the generating station could not achieve the target availability norm of 80% during the year 2002-03 and 2003-04 due to non-availability of fuel. Actual availability achieved by the generating station during these years was 75.03% and 70.12% respectively. This resulted in pro rata reduction in annual fixed charges, which included depreciation during the years 2002-03 and 2003-04. The petitioner has submitted that depreciation to the tune of Rs.2057 lakh could not be recovered during these years. The petitioner has pleaded that the same should be reduced from the cumulative depreciation otherwise the generating station would not be able to recover its capital cost.

The issue of relaxed availability for the generating station due to non-availability of coal was raised by the Petitioner in a separate petition. The Commission had held that fuel risk had to be borne by the petitioner. The non-recovery of full fixed charges due to not achieving the target availability is in the nature of penalty/disincentive and, therefore, adjustment of cumulative depreciation on this account cannot be allowed. A similar view has been taken in Petition No.147/2004 (Tariff for Kayamkulam CCPP) filed by the petitioner and for the reasons recorded in the order in that petition, we do not find merit in the petitioner's contention.

34. Accordingly, for the period 1.4.2004 to 31.3.2005 the depreciation works out to 11385 lakh by applying rate of depreciation of 3.73%. The entire normative loan is repaid in 2004-05. Therefore, from 2005-06 and onwards remaining depreciation recoverable has been spread over to the balance useful life of the generating station. As such, for the period 1.4.2005 to 31.3.2009 the depreciation works out to Rs. 7766 lakh each year as shown below:

(Rs.in lakh)					
<b>Details of Depreciation</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Rate of Depreciation	3.73%				
Depreciable Value	274125	274125	274125	274125	274125
Remaining Depreciable Value	112959	101574	93808	86043	78277
<b>Depreciation</b>	<b>11385</b>	<b>7766</b>	<b>7766</b>	<b>7766</b>	<b>7766</b>

### **ADVANCE AGAINST DEPRECIATION**

35. As per sub-clause (b) of clause (ii) of Regulation 56 of the 2004 regulations, in addition to allowable depreciation, the transmission licensee is entitled to Advance Against Depreciation, computed in the manner given hereunder:

AAD = Loan repayment amount as per regulation 56 (i) subject to a ceiling of 1/10th of loan amount as per regulation 54 minus depreciation as per schedule

36. It is provided that Advance Against Depreciation shall be permitted only if the cumulative repayment up to a particular year exceeds the cumulative depreciation up to that year. It is further provided that Advance Against Depreciation in a year shall be restricted to the extent of difference between cumulative repayment and cumulative depreciation up to that year.

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

### **O&M EXPENSES**

38. The 2004 regulations have prescribed the following O&M expense norms for 200 MW and 500 MW units-

(Rs. lakh /MW)					
Year	2004-05	2005-06	2006-07	2007-08	2008-09
O&M expenses for 220/210 MW units	10.46	10.82	11.25	11.70	12.17
O&M expenses for 500 MW and above units	9.36	9.73	10.12	10.52	10.95

39. The petitioner has claimed O&M expenses as detailed below:

(Rs. in lakh)					
Years	2004-05	2005-06	2006-07	2007-08	2008-09
O&M Expenses	15600	16222	16870	17540	18252

40. The petitioner has prayed for a specific deviation pertaining to water charges in O&M. The petitioner has submitted that in the past years, the State Governments have

been resorting to manifold increase in the rates of water charges / royalty payable, which is not normally based on common commercial principles. Therefore, this increase cannot be covered under the normal O&M expenses allowed in the tariff. The petitioner has, therefore, submitted that any increase in the rates of water charges / royalty etc. by more than 4% per annum over the rates prevailing on 31.3.2004 should be additionally payable by the respondent beneficiaries.

41. The normative O&M expenses were finalized by the Commission after going through the transparent process of hearing and consulting all concerned and were based on the data furnished by the concerned utilities for different components of O&M, including water charges. Further, an escalation of 4% per year is inbuilt in the normative O&M expenses specified by the Commission. There may be other heads in O&M expenses where actual expenses may be less than the normative expenses specified by the Commission. Therefore, we do not consider it to be justified to allow increase under one head, that is, water charges in isolation. As such, recovery of additional O&M expenses on account of any increase in the rates of water charges / royalty etc. during tariff period cannot be allowed. However, the petitioner is at liberty to approach the Commission in accordance with law for recovery of additional water charges with proper justification and details of actual expenses recovered under other heads, if State Governments resort to abnormal increase in the rates of water charges / royalty during the tariff period.

42. Based on above discussion, the year-wise O&M expenses for the generating station as per the 2004 regulations work out as follows and have been allowed:

(Rs. in lakh)					
Year	2004-05	2005-06	2006-07	2007-08	2008-09
<b>O&amp;M Expenses</b>	<b>15600</b>	<b>16222</b>	<b>16870</b>	<b>17540</b>	<b>18252</b>

43. The petitioner has submitted that the wage revision of its employees is due with effect from 1.1.2007. Therefore, O &M expenses should be subject to revision on account of revision of employee cost from that date. In the alternative, it has been prayed that the increase in employee cost due to wage revision be allowed as per actuals for extra cost to be incurred consequent to wage revision. We are not expressing any view, as this issue does not arise for consideration at this stage. The petitioner may approach for a relief in this regard at an appropriate stage in accordance with law.

#### **INTEREST ON WORKING CAPITAL**

44. In accordance with clause (v) of Regulation 21 of the 2004 regulations, working capital in case of Coal based/Lignite-fired generating stations shall cover:

- (i) Cost of coal or lignite for 1½ months for pit-head generating stations and two months for non-pit-head generating stations, corresponding to the target availability;
- (ii) Cost of secondary fuel oil for two months corresponding to the target availability;
- (iii) Operation and Maintenance expenses for one month;
- (iv) Maintenance spares @ 1% of the historical cost escalated @ 6% per annum from the date of commercial operation; and
- (v) Receivables equivalent to two months of fixed and variable charges for sale of electricity calculated on the target availability.

45. Under the 2004 regulations, the rate of interest on working capital shall be on a normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on 1.4.2004 or on 1<sup>st</sup> April of the year in which the generating station or a unit thereof is declared under commercial operation, whichever is later. Interest on working capital shall be payable on normative basis notwithstanding that the generating company has not taken working capital loan from any outside agency.

46. Working capital has been calculated considering the following elements:

(a) **Coal stock:** The petitioner in the amended petition has revised its claim for interest on working capital from July, 2004 onwards urging that the price of coal has increased w.e.f 15.6.2004. As per provisions of the 2004 regulations, interest on working capital has to be frozen as normative number at the beginning of the tariff setting based on the price and GCV of the fuel during preceding three months prevailing applicable rate of interest and is not to be revised based on subsequent revision of the price of fuel or applicable rate of interest. As such, the prayer of the petitioner to allow interest on working capital based on escalated fuel price w.e.f 15.6.2004 cannot be accepted. The coal stock has been worked out for 1.5 months on the basis of operational parameters given in the 2004 regulations and weighted average price and GCV of coal as per **para 54 below**. The fuel cost allowed in working capital is given hereunder:

<b>Coal Stock</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Weighted Avg. GCV of Coal (kCal/kg)	2701.67	2701.67	2701.67	2701.67	2701.67
Heat Contribution by Coal (kCal/kwh)	2449.55	2449.55	2449.55	2449.55	2449.55
Specific Coal Consumption (kg/kwh)	0.91	0.91	0.91	0.91	0.91
Annual Requirement of Coal (MT)	10166420.9	10166421	10166421	10194274	10166421
Coal Stock (1.5 months (MT)	1270802.61	1270803	1270803	1274284	1270803
Weighted Avg. Price of Coal (Rs./MT)	975.17	975.17	975.17	975.17	975.17
<b>Coal Stock-1.5 months (Rs.in Lakhs)</b>	<b>12392</b>	<b>12392</b>	<b>12392</b>	<b>12392</b>	<b>12392</b>

**Oil Stock:** The oil stock for 2 months as per the operational parameters and weighted average price of oil as given in para 54 below has been considered, the details of which are extracted below:

<b>Oil Stock</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Weighted Avg. GCV of Oil (kCal/Lit.)	9600	9600	9600	9600	9600
Heat Contribution by Oil (kCal/kwh)	19.2	19.2	19.2	19.2	19.2
Annual Requirement of Oil (ltrs)	22425600	22425600	22425600	22487040	22425600
Oil Stock for 2 months (KL)	3738	3738	3738	3748	3748
Weighted Avg. Price of Oil (Rs./KL)	13490.35	13490.35	13490.35	13490.35	13490.35
<b>Oil Stock- 2 months (Rs. in Lakhs)</b>	<b>504</b>	<b>504</b>	<b>504</b>	<b>506</b>	<b>504</b>

(c) **O&M Expenses:** O&M expenses for working capital have been worked out for 1 month of O&M expenses approved above are considered in tariff of the respective year.

(d) **Spares:** The petitioner has calculated the value of maintenance spares for the purpose of working capital considering additional capital expenditure in respective year after the date of commercial operation. Starting with 1% of historical cost as on the date of commercial operation, the cost of maintenance spares for a particular year has been calculated by the petitioner, by escalating the previous year's cost by 6% plus 1% of the additional capital expenditure for that particular year. The amounts claimed by the Petitioner for maintenance spares for IWC calculation are as given below :

(Rs.in lakh)

<b>Year</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
<b>Amount claimed for maintenance spares</b>	48.36	51.26	54.34	57.60	61.05



However, the 2004 regulations do not provide for taking into account additional capital expenditure for working out the cost of maintenance spares for the working capital. The cost of maintenance spares for the working capital has, therefore, been computed based on historical cost of Rs. 283531 lakh as on 31.3.1997 (closing date of financial year in which the date of commercial operation occurred) as per Gol tariff Notification dated 7.5.1999.

(e) **Receivables:** The receivables have been worked out on the basis of two months of fixed and variable charges. The supporting calculations in respect of receivables are tabulated hereunder:

**Computation of receivables component of Working Capital**

<b>Variable Charges</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Coal (Rs/kwh)	0.9565	0.9565	0.9565	0.9565	0.9565
Oil (Rs/kwh)	0.0292	0.0292	0.0292	0.0292	0.0292
Rs./kwh	0.9857	0.9857	0.9857	0.9857	0.9857
Variable Charges per year	102165	102165	102165	102165	102165
Receivables					
Variable Charges -2 months	17028	17028	17028	17074	17028
Fixed Charges - 2 months	8845	8314	8430	8551	8676
<b>Receivables (Rs in lakh)</b>	<b>25873</b>	<b>25342</b>	<b>25457</b>	<b>25625</b>	<b>25704</b>

47. The average SBI PLR of 10.25% as on 1.4.2004 has been considered as the rate of interest on working capital during the tariff period 2004-05 to 2008-09.

48. The necessary details in support of calculation of interest on working capital are appended below:

### Calculation of Interest on Working Capital

(Rs. in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Fuel Cost	0	0	0	0	0
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
Spares	4230	4484	4753	5038	5340
Receivables	25873	25342	25457	25625	25704
<b>Total Working Capital</b>	44299	44074	44512	45056	45462
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
Total Interest on Working capital	4541	4518	4563	4618	4660

### **ANNUAL FIXED CHARGES**

49. A statement showing summary of the capital cost and other related matters is annexed to this order. The annual fixed charges for the period 1.4.2004 to 31.3.2009 allowed in this order are summed up as below:

(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>
1	Interest on Loan	165	0	0	0	0
2	Interest on Working Capital	4541	4518	4563	4618	4660
3	Depreciation	11385	7766	7766	7766	7766
4	Advance against Depreciation	0	0	0	0	0
5	Return on Equity	21381	21381	21381	21381	21381
6	O & M Expenses	15600	16222	16870	17540	18252
	<b>TOTAL</b>	<b>53071</b>	<b>49886</b>	<b>50579</b>	<b>51305</b>	<b>52058</b>

### **ENERGY/VARIABLE CHARGES**

50. Originally the petitioner had claimed energy charge of 98.47 paise/kWh. in the main petition. The petitioner has subsequently claimed the rate of energy charge at 106.00 paise/kWh on the ground that the coal price has increased with effect from 15.6.2004. The Fuel Price Adjustment clause provided in the 2004 regulations takes care of revision of

energy charges on subsequent revision of coal price on month to month basis and base rate of energy charge need not be re-worked on the basis of increased coal prices w.e.f 15.6.2004.

51. The weighted average price and GCV of coal procured and burnt for preceding three months i.e. January 2004 to March 2004 and secondary fuel oils procured and burnt for the month of March 04 considered by the petitioner are as under:

GCV of Oil (as fired basis)	kCal/l	<b>9600</b>
GCV of Coal (as fired basis)	kCal/Kg	<b>2701.67</b>
Weighted Average Price of Oil (as procured basis)	Rs./KL	<b>13489.14</b>
Price of Coal (as procured basis)	Rs./MT	<b>974.12</b>

52. The petitioner vide affidavit dated 7.3.2006 has furnished revised details for the prices of coal and secondary fuel oil for the above noted three months, supported by the auditors certificate submitting that there was some error in the earlier figures.

### **TRANSIT LOSSES**

53. It was noted from the details of coal prices furnished in the main petition that the petitioner was getting coal from the linked mines as well as from the non-linked mines and that transit & handling losses were considered at 0.3% for the coal supplies from linked mines and for the non-linked mines at 0.8% to arrive at the landed cost of coal. The generating station is a pit-head station and qualifies for handling losses of 0.3% as per the 2004 regulations. The petitioner has submitted that the supply of coal through linked mines is not adequate to meet the availability norms and as such the petitioner has arranged coal from non-linked mines. The respondents during the hearing held on 6.10.05

objected to the adoption of handling losses of 0.8% for the pit-head stations arguing that they were already paying tariff on the expenditure made by the petitioner on MGR and other coal handling equipment required for pit head stations and allowing extra handling losses would increase the coal prices, which would have bearing on tariff. Whereas it may be appreciated that the petitioner is arranging coal from non-linked mines and trying its best to utilize the capacity of the generating station, but it is also a fact that the beneficiaries are bearing the cost of MGR without corresponding benefit. Hence, it does not appear to be fair to allow transit and handling losses at 0.8% for the coal procured through non-linked mines. This calls for adjustment in MGR cost which may not be practicable. In view of this, it would be more appropriate and fair to allow transit and handling losses for the coal supplies from non-linked mines also at 0.3% as applicable to pit-head stations, instead of 0.8%.

54. Accordingly, the weighted average price & GCV for the coal procured & burnt during preceding three months (January-March, 2004) and the weighted average price & GCV for secondary fuel oil (HFO) procured during March, 2004 works out as follows after making adjustment for transit & handling losses for the coal supplies from the non-linked mines at 0.3%:

GCV of Oil (as fired basis)	kCal/l	<b>9600</b>
GCV of Coal (as fired basis)	kCal/Kg	<b>2701.67</b>
Weighted Average Price of Oil (as procured basis)	Rs./KL	<b>13490.35</b>
Price of Coal (as procured basis)	Rs./MT	<b>975.17</b>

55. Accordingly, the Base Energy Charges (BEC) computed based on the data furnished by the petitioner are summarized below:

### Computation of Energy Charges

Description	Unit	As considered
Capacity	MW	1600.00
Gross Station Heat Rate	kCal/kWh	2468.75
Specific Fuel Oil Consumption	MI/kWh	2.00
Aux. Energy Consumption	%	7.56
Weighted Average GCV of HFO	kCal/l	9600
Weighted Average GCV of Coal	kCal/Kg	2701.67
Weighted Average Price of Oil	Rs./KL	13490.35
Weighted Average Price of Coal	Rs./MT	975.17
Rate of Energy Charge ex-bus per kWh Sent	Paise/kWh	98.567

56. The Base Energy Charges have been calculated on base value of GCV, base price of fuel and normative operating parameters as indicated in the above table and are subject to fuel price adjustment. The notification dated 26.3.2004 provides for fuel price adjustment for variation in fuel price and GCV of fuels. Accordingly, the base energy charges approved shall be subject to adjustment. The formula applicable for fuel price adjustment shall be as given below: -

$$\mathbf{FPA = A + B}$$

**Where,**

**FPA** – Fuel price Adjustment for a month in Paise/kWh Sent out

**A** – Fuel price adjustment for Secondary Fuel oil in Paise/kWh sent out

**B** – Fuel price adjustment for Coal in Paise/kWh sent out

**And,**

$$\mathbf{A = \frac{10 \times (SFC_n)}{(100 - AC_n)} \left\{ (P_{om}) - (P_{os}) \right\}}$$

$$B = \frac{10}{(100 - AC_n)} \left\{ \left\{ (SHR_n) (P_{cm}/K_{cm}) - (P_{cs}/K_{cs}) \right\} - (SFC_n) \left\{ (k_{om} \times P_{cm}/K_{cm}) - (k_{os} \times P_{cs}/K_{cs}) \right\} \right\}$$

**Where,**

- SFC<sub>n</sub> – Normative Specific Fuel Oil consumption in l/kWh
- SHR<sub>n</sub> – Normative Gross Station Heat Rate in kCal/kWh
- AC<sub>n</sub> – Normative Auxiliary Consumption in percentage
- P<sub>om</sub> – Weighted Average price of fuel oil on as consumed basis during the month in Rs./KL.
- K<sub>om</sub> – Weighted average GCV of fuel oils fired at boiler front for the month in Kcal/Litre
- P<sub>os</sub> – Base value of price of fuel oils as taken for determination of base energy charge in tariff order in Rs. / KL.
- K<sub>os</sub> – Base value of gross calorific value of fuel oils as taken for determination of base energy charge in tariff order in Kcal/Litre
- P<sub>cm</sub> – Weighted average price of coal procured and burnt during the month at the power station in Rs. / MT.
- K<sub>cm</sub> – Weighted average gross calorific value of coal fired at boiler front for the month in Kcal/Kg
- P<sub>cs</sub> – Base value of price of coal as taken for determination of base energy charge in tariff order in Rs. /MT
- K<sub>cs</sub> – Base value of gross calorific value of coal as taken for determination of base energy charge in tariff order in kCal/Kg

**Impact of additional Capitalisation**

57. The claim made by the petitioner is for Rs.389 lakh. The claim made by the petitioner is by considering effective capitalization (50% of additional capitalization) in the year it incurred. The rate of interest applied is as per tariff order in petition No. 36/2001.

For the reasons recorded in order dated 31.3.2005 in Petition No.139/2004 calculations have been made by considering capitalization from 1<sup>st</sup> April of the financial year following the financial year to which additional capital expenditure relates and upto 31.3.2004. Further, rate of interest applicable is worked out considering refinancing of 15% GOI loan by 9.58% Bond Series XIII B from the date of such refinancing which is 30.4.2002 in this case. Return on equity has been allowed @ 16%. The amount towards impact of additional capitalisation works out to Rs.286.73 lakh. This amount shall be recovered by the petitioner from the beneficiaries during the tariff period 2004-09. The details of calculation of interest on loan and return on equity allowed on additional capitalisation are given hereunder:

**CALCULATION OF IMPACT OF ADDITIONAL CAPITALISATION DURING THE YEAR 2001-04**

(Rs. in lakh)					
		2001-02	2002-03	2003-04	Total
<b>Additional Capitalisation</b>		<b>651.70</b>	<b>1332.14</b>	<b>(158.54)</b>	<b>1825.30</b>
<b>Financing of Additional Capitalisation</b>					
Notional Loan		325.85	666.07	(79.27)	912.65
Notional Equity		325.85	666.07	(79.27)	912.65
<b>Total</b>					
<b>Effective Additional Capitalisation</b>					
Opening Loan Balance		0.00	325.85	991.92	
Addition of Loan		325.85	666.07	(79.27)	<b>912.65</b>
Repayment of Loan		0.00	0.00	0.00	<b>0.00</b>
Closing Loan Balance		325.85	991.92	912.65	
Effective Loan			325.85	991.92	
Weighted Average Rate of Interest on Loan			6.0628%	5.6586%	
Effective Equity			325.85	991.92	
Interest on Loan			19.76	56.13	<b>75.88</b>
Return on Equity	16%		52.14	158.71	<b>210.84</b>
<b>Impact of Additional Capitalisation</b>			<b>71.89</b>	<b>214.84</b>	<b>286.73</b>

58. The petitioner has sought approval for the reimbursement of expenditure incurred on publication of notices in the newspapers. The details of the expenditure have not been submitted, the petitioner shall claim reimbursement of the said expenditure directly from the respondents in one installment in the ratio applicable for sharing of transmission

charges, subject to the petitioner filing an affidavit before the Commission. The petitioner has also sought reimbursement of filing fee of Rs.25 lakh paid. A final view on reimbursement of filing fee is yet to be taken by the Commission for which views of the stakeholder have been called for. The view taken on consideration of the comments received shall apply in the present case as regards reimbursement of filing fee.

59. In addition to the charges approved above, the petitioner is entitled to recover other charges also like incentive, claim for reimbursement of Income-tax, other taxes, cess levied by a statutory authority, and other charges in accordance with the 2004 regulations, as applicable.

60. The petitioner is already billing the respondents on provisional basis in accordance with the Commission's interim directions. The provisional billing of tariff shall be adjusted in the light of final tariff now approved by us.

61. This order disposes of Petition No.153/2004 as also IA 55/2005.

Sd/-  
**(A.H. JUNG)**  
**MEMBER**

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

Sd/-  
**(K.N. SINHA)**  
**MEMBER**

Sd/-  
**(ASHOKBASU)**  
**CHAIRPERSON**

**New Delhi dated the 9<sup>th</sup> May 2006**



## SUMMARY SHEET

<b>COMPANY</b>		NTPC Ltd.		
<b>POWER STATION</b>		FARAKKA (1600MW)		
<b>PETITION NO.</b>		153/2004		
<b>IA NO.</b>		55/2005		
<b>Tariff Setting Period</b>		2004-09		
(Rs.in lakh)				
<b>1</b>	<b>Capital Cost of the Project as on 31.3.2001</b>			<b>301732</b>
<b>2</b>	<b>Additional Capitalisation(works)</b>			<b>1825</b>
	2001-02		652	
	2002-03		1332	
	2003-04		-159	
	Total		1825	
<b>3</b>	<b>Additional Capitalisation(FERV)</b>			<b>1881</b>
	2001-02		-196	
	2002-03		1482	
	2003-04		595	
	Total		1881	
<b>4</b>	<b>Total Capital Cost as on 1.4.2004(1+2+3)</b>			<b>305438</b>
<b>5</b>	<b>Means of Finance<sup>T</sup> :</b>			
	Debt	50.00%	152719	
	Equity	50.00%	152719	
	Total	100.00%	305438	
<b>6</b>	<b>Normative Loan as on 1.4.2004</b>			<b>7740</b>
	Normative loan O/S as on 31.03.2004		5887	
	Normative loan due to ACE+FERV in 2001-2004		1853	
	Total Normative Loan as on 1.4.2004		7740	
<b>7</b>	<b>Cumulative Repayment upto 31.3.2009 :</b>			<b>152719</b>
	Repaid upto 31.03.2004		144979	
	1.4.01 to 31.3.2004 (ACE & FERV)		0	
	1.4.2004 to 31.3.2009		7740	
	Total		152719	
<b>8</b>	<b>Balance Normative Loan to be repaid beyond 31.03.2009 :</b>			<b>0</b>
<b>9</b>	<b>Depreciation recovered upto 31.03.2009 :</b>			<b>203613</b>
		<b>Dep</b>	<b>AAD</b>	<b>Total</b>
	Recovered upto 31.3.2004	159839	1648	161486
	1.4.2001 to 31.03.2004 (ACE & FERV)	74	0	74
	1.4.2004 to 31.3.2009	42447	0	42447
	Adj.of Cum.Dep.due to decapitalisation	-394	0	-394
	Total			203613
<b>10</b>	<b>Balance Depreciation to be recovered beyond 31.03.2009 :</b>			<b>70512</b>
	Capital cost for the purpose of Depreciation			301732
	ACE + FERV			3706
	Capital cost as 01.04.2004			305438
	Less: Land Cost			1514
				303924
	90% of Capital Cost as above			273531
	Amortisation of Lease land in 25 years			593
	90% dep. Value incl. lease amortisation			274125
	Cum. Depreciation to be recovered upto 31.03.2009			203613
	Balance Depreciation to be recovered beyond 31.03.2009			70512