

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Coram**

1. Dr. Pramod Deo, Chairperson
2. Shri S.Jayaraman, Member
3. Shri V.S.Verma, Member

**Petition No. 30/2009**

**In the matter of**

Determination of impact of additional capital expenditure incurred during the years 2004-05, 2005-06, 2006-07 and 2007-08 on fixed charges in respect of Feroze Gandhi Unchahar Thermal Power Station, Stage-I (420 MW) for the period from 1.4.2004 to 31.3.2009.

**And in the matter of**

NTPC Ltd, New Delhi

----- Petitioner

Vs

1. Uttar Pradesh Power Corporation Limited, Lucknow
2. Jaipur Vidyut Vitran Nigam Ltd, Jaipur
3. Ajmer Vidyut Vitran Nigam Ltd, Ajmer
4. Jodhpur Vidyut Vitran Nigam Ltd, Jodhpur
5. Delhi Transco Ltd., New Delhi
6. North Delhi Power Ltd, Delhi
7. BSES-Rajdhani Power Ltd, New Delhi
8. BSES-Yamuna Power Ltd, Delhi
9. Haryana Power Generation Corporation Ltd., Panchkula
10. Punjab State Electricity Board, Patiala
11. Himachal Pradesh State Electricity Board, Shimla
12. Power Development Department, Govt. of J&K, Srinagar
13. Power Department, Union Territory of Chandigarh
14. Uttaranchal Power Corporation Ltd., Dehradun

----- Respondents

**The following were present**

1. Shri V.K.Padha, NTPC
2. Shri Sankar Saran, NTPC
3. Shri D.G.Salpekar, NTPC
4. Shri T.K.Srivastava, UPPCL
5. Shri Manish Garg, UPPCL

**ORDER**  
**(DATE OF HEARING: 16.7.2009)**

The petitioner has made this application for approval of the revised fixed charges for the period 2004-09, after considering the impact of additional capital expenditure during the years 2004-05, 2005-06, 2006-07 and 2007-08 in respect of Feroze Gandhi Unchahar Thermal Power Station, Stage-I (420 MW), (hereinafter referred to as “the generating station”) 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 420 MW was taken over by the petitioner from the Uttar Pradesh State Electricity Board on 13.2.1992. The tariff for the generating station for the period 2004-09 was approved by the Commission vide its order dated 9.5.2006 in Petition No 142/2004, based on the capital cost of Rs. 94543.51 lakh (inclusive of FERV ) as on 31.3.2004. 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>
Depreciation	3322	1031	1031	1031	1031
Interest on Loan	12	0	0	0	0
Return on Equity	6618	6618	6618	6618	6618
AAD	0	0	0	0	0
IWC	1460	1435	1451	1470	1485
O & M Expenses	4368	4544	4725	4914	5111
<b>Total</b>	<b>15780</b>	<b>13629</b>	<b>13825</b>	<b>14033</b>	<b>14246</b>

3. The petitioner has claimed the revised fixed charges based on additional expenditure as under:

(Rs. in lakh)				
Particulars	2004-05	2005-06	2006-07	2007-08
Additional capital expenditure	(-) 18.89	45.84	(-) 15.04	1194.36

4. Reply to the petition has been filed by the respondents UPPCL and NDPL.

### **Additional Capitalization**

5. Regulation 18 of the 2004 regulations provides for considering the additional capital expenditure for tariff as under:

*"18. (1) The following capital expenditure within the original scope of work actually incurred after the date of commercial operation and up to the cut off date may be admitted by the Commission, subject to prudence check:*

- (i) Deferred liabilities;*
- (ii) Works deferred for execution;*
- (iii) Procurement of initial capital spares in the original scope of work, subject to ceiling specified in regulation 17;*
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and*
- (v) On account of change in law.*

*Provided that original scope of work along with estimates of expenditure shall be submitted along with the application for provisional tariff.*

*Provided further that a list of the deferred liabilities and works deferred for execution shall be submitted along with the application for final tariff after the date of commercial operation of the generating station.*

*(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-convectors, 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)				
Items	2004-05	2005-06	2006-07	2007-08
Additional expenditure as per books of accounts (A)	(-) 35.21	(-) 10.10	(-) 60.50	1044.75
Exclusions of additional capitalization vis-à-vis books of accounts (B)	(-) 16.32	(-) 55.94	(-) 45.46	(-) 149.60
<b>Total additional capitalization (A-B)</b>	(-) 18.89	45.84	(-) 15.04	1194.36

7. The summary of exclusions from the books of accounts claimed is as under:

(Rs. in lakh)				
Particulars	2004-05	2005-06	2006-07	2007-08
Balance payments against assets not allowed to be capitalized in the previous tariff period	(-) 0.74	(-) 0.053	(-) 2.99	0
De-capitalisation of capital spares	(-) 17.54	(-) 28.99 @	0	0
De-capitalisation of Minor assets	(-) 0.92	(-) 4.45	(-) 42.05	(-) 0.67
De-capitalisation of vehicles	0	(-) 1.05	(-) 0.47	(-) 20.69
Inter-unit transfer	0	0	0	(-) 128.24
FERV	2.89	(-) 21.41	0.045	0
<b>Total</b>	<b>(-)16.32</b>	<b>(-) 55.94</b>	<b>(-) 45.46</b>	<b>(-) 149.60</b>

@ Revised to Rs 8.40 lakh vide affidavit dated 10.6.2009 and the balance amount of Rs.20.59 lakh has been adjusted towards de-capitalisation against capitalization of flame scanner.

## **Exclusions**

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

(a) **Balance payments:** The petitioner had excluded an amount of (-) Rs.3.78 lakh for the period 2004-08 {(-) Rs.0.74 lakh in 2004-05, (-) Rs.0.053 lakh in 2005-06 and (-) Rs 2.99 lakh in 2006-07} in the books of accounts towards balance payments in respect of assets which were not allowed to be capitalized by the Commission during the previous tariff period. Hence, exclusion under this head is allowed.

(b) **FERV:** The claim for exclusion of an amount of (-) Rs.18.48 lakh for the years 2004-08 {Rs.2.89 lakh in 2004-05, (-) Rs.21.41 lakh in 2005-06 and Rs 0.045 lakh in 2006-07} 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.

(c) **Inter-unit transfer:** An amount of (-) Rs.128.24 lakh for the year 2007-08 has been excluded under this head on account of transfer certain assets like capacitor voltage transmitter, belt conveyor with feeder bin, FSB making machine, pallet trucks, pan mixture, wheel barrows, communication equipment, furniture etc., 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 it 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 accounts 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.128.24 lakh on account of inter-unit transfer of equipment is allowed.

**(d) De-capitalization of capital spares:**

(i) The petitioner has excluded amounts of (-) Rs.17.54 lakh and (-) Rs. 28.99 lakh during the years 2004-05 and 2005-06 respectively, on account of de-capitalization of capital spares. The petitioner has submitted that that the spares have been de-capitalized for accounting purposes only and are not to be de-capitalized for the purpose of tariff, until replaced.

(ii) The Commission while dealing with the additional capitalization of the generating stations of the petitioner during the tariff periods 1999-01 and 2001-04, did not allow the book entries corresponding to capitalization of spares, procured over and above the initial spares, for the purpose of tariff observing that the cost of the spares should be booked to O&M expenses as and when they are consumed.

(iii) In order to consider the prayer of the petitioner on this count, the Commission during the hearing held on 12.5.2009 directed the petitioner to furnish the information as under:

*“Certificate to the effect that the de-capitalised spares for which exclusion of negative entries has been sought, were not allowed by the Commission to be capitalized during previous tariff period and that the spares disallowed had not been booked to revenue (O&M) on consumption or was not claimed as capital assets, under replacement” .*

(iv) In response, the petitioner vide affidavit dated 10.6.2009, has clarified as under-

*That during 2001-04, it had claimed spares of Rs.1.063 Crs. as spares not in the approved cost. While deciding the petition, the Commission had not allowed the capitalization of these spares. The reasons as mentioned by the Commission in its order are reproduced below-*

*An expenditure of Rs. 1.063 Crore claimed for capitalization relates to capitalization of spares during 2001-04..... . The Commission while dealing with the additional capitalization petitions of the generating stations belonging to the petitioner, for the period prior to 1.4.2001, did not allow capitalization of such spares. Accordingly, capitalization of spares not with in the approved cost should not be permitted.*

*It may be seen from above that the total spares amounting to Rs. 1.063 Crs. were not allowed by the Commission for capitalization. Decapitalisation of spares claimed under exclusion by NTPC is well with in the limit of capital spares not allowed by the Commission in the previous tariff period. In general, CERC has not been allowing any capitalization of spares. If decapitalisation is considered, it will amount to reduction in capital cost on account of spares without permitting the capitalisation of the same amount. Therefore, exclusion as claimed by NTPC is justified and may be permitted.*

*Further, as these spares were capitalized, the same were not booked to revenue (O&M) in the books on consumption. Further, NTPC submits that these spares are not claimed as capital assets under replacement.*

(v) It is observed from the above that the petitioner has not been able to categorically establish that the de-capitalized spares, for which exclusion has been sought, are the ones which were not allowed for capitalization during previous tariff periods. Accordingly, we conclude that the prayer of the petitioner for exclusion of the total amount of (-) Rs.46.53 lakh during the period 2004-06, is not justified as unserviceable spares which are not in use have to be taken out from capital base for the purpose of tariff.

**(e) De-capitalisation of minor assets:**

(i) The petitioner has excluded amounts of (-) Rs.0.92 lakh, (-) Rs 4.45 lakh, (-) Rs 42.05 lakh and (-) Rs 0.67 lakh during the years 2004-05, 2005-06, 2006-07 and 2007-08 respectively, on account of de-capitalisation of minor assets like office furniture, IT equipment etc, and has submitted as under:

*“The unusable furniture/ office equipments has been decapitalised for accounting purposes. However as purchase of new furniture/ office equipments is not being allowed to be capitalized for tariff purposes, this decapitalisation may be excluded for tariff purpose”*

(ii) The petitioner’s expenditure towards acquiring IT and office equipment was allowed for the purpose of tariff for the period 2001-04 for providing up to-date

working environment. The capitalization was allowed without insisting on the de-capitalization of old assets in lieu of new assets acquired. As such, some of the minor assets which had been allowed for purposes of tariff during the earlier tariff period would have been de-capitalized in books of accounts during the period 2004-09. Since reconciliation among the old and new assets could not be established, it cannot be concluded that the petitioner was not allowed capitalization of minor assets in lieu of de-capitalized assets for which exclusion has been made for the purposes of tariff. As these assets are no longer in use, the exclusion for the purpose of tariff is not allowed.

**(f) De-capitalization of vehicles**

As regards exclusion of de-capitalized vehicles, the petitioner has submitted that two nos. of vehicles have been de-capitalized for accounts purposes and their value be retained in gross block for the purpose of tariff till their replacement is purchased and capitalized. Since the vehicles are not in use, the exclusions on account of de-capitalization are allowed. However, the petitioner is at liberty to approach the Commission for capitalization of new vehicles as and when the same is acquired.

9. The year-wise and category-wise break-up of the additional expenditure claimed by petitioner is as under:



(Rs in lakh)

Nature of capitalization	Category	2004-05	2005-06	2006-07	2007-08
Deferred liabilities relating to works/services within original scope of work	18 (2) (i)	(-) 31.88	1.84	(-) 44.42	0.68
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	18 (2) (iv) R&M	0.00	44.00	29.37	1132.90
	18(2)(iv) : Spares	0.00	0.00	0.00	60.78
	18(2)(iv) : Other assets	1.21	0.00	0.00	0.00
Deferred works relating to ash pond or ash handling system in the original scope of work	18 (2) (v)	11.78	0.00	0.00	0.00
<b>Total</b>		<b>(-) 18.89</b>	<b>45.84</b>	<b>(-) 15.04</b>	<b>1194.36</b>

**Deferred liabilities relating to works/services within original scope of work- (Regulation 18(2)(i))**

10. The petitioner has claimed amounts of (-) Rs.31.88 lakh, Rs.1.84 lakh, (-) Rs 44.42 lakh and Rs 0.68 lakh, for the years 2004-05, 2005-06, 2006-07 and 2007-08 respectively, on account of de-capitalization of hydrogen plant building and balance payments against civil works within original scope of work. The de-capitalisation of Rs 31.88 lakh for the year 2004-05 relates to the hydrogen plant building which has been dismantled from its location in order to create area for the construction of Stage-III of the generating station. The expenditure for the years 2005-06 and 2006-07 pertains to balance payments towards works like construction of room and administration building, concrete CW system, raising boundary wall and railway siding. The expenditure for the year 2007-08 relates to balance payments to the contractor for supply of water to the generating station and payment of compensation to PAPs against withdrawal of court case. In view of the justification provided by the petitioner, the total amount of (-) Rs 73.78 lakh for the period 2004-08, is allowed under this head.

**Additional capital expenditure relating to new works under CEA approved R&M scheme –Regulation 18(2)(iv)**

11. The petitioner has claimed expenditure of Rs.1206.27 lakh for the period 2005-08 (Rs.44 lakh for 2005-06, Rs 29.37 lakh for 2006-07 and Rs.1132.90 lakh for 2007-08) under this head towards CEA approved R&M schemes. In terms of Note 2 under Regulation 18 of the 2004 regulations, the expenditure involving replacement of old assets could be considered, provided the gross value of the replaced assets been deducted for the purpose of tariff. The assets/works claimed under this head are as under:

- (a) Upgradation of flame scanner
- (b) Sodium analyser online micro processor & calibration kit
- (c) Silica analyzer C&I package and opacity meter analyzer
- (d) Wide range coal burner
- (e) Replacement of re-heater coil assembly
- (f) Fabric expansion joints
- (g) Replacement of condenser tubes
- (h) Elevator in primary coal crusher house
- (i) Delta PI transmitter and chart less recorders
- (j) Portable flue gas analyser
- (k) Disturbance recorder
- (l) Upgradation of 220 kV PLCC System

12. It has been observed that the expenditure of Rs.37.91 lakh incurred for replacement of fabric expansion joints (sl. No. (f) above) is in the nature of O&M and hence not allowed to be capitalized for the purpose of tariff. The petitioner vide affidavit dated 10.6.2009 has submitted that an amount of Rs 16.78 lakh for the year 2005-06 has been incurred towards supply of material for up-gradation of flame scanners which had become obsolete. The expenditure incurred on all the assets shown above, except fabric expansion joints, are allowed to be capitalized in terms of Note-2 under Regulation 18 of the 2004 regulations, since the gross value of the replaced assets

have been reduced from the claim for additional capitalization. After reduction of the gross value of replaced assets, a total amount of Rs. 1152.90 lakh for the period 2005-08, is allowed to be capitalized under approved R&M scheme.

### **Spares**

13. The petitioner has sought capitalization of 'spares' amounting to Rs.60.78 lakh for the year 2007-08 on the ground that the critical spares are essentially required for the efficient operation of the generating station. It has been the conscious decision of the Commission not to allow the capitalization of spares over and above initial spares, as the spares could be booked to O&M expenses as and when consumed. As such, the expenditure of Rs 60.78 lakh on spares is not allowed to be capitalized for the purpose of tariff.

### **Others assets**

14. The petitioner has procured assets like IT software and hardware etc amounting to Rs.1.21 lakh for the year 2004-05 and has prayed for capitalization on the ground that the same was required for efficient operation of the generating station. These assets are in the nature of minor assets and in terms of clause (3) of Regulation 18 of the 2004 regulations, are not admissible for capitalization. Hence the claim for capitalization of expenditure on this count is not allowed.

### **Deferred works relating to ash pond or ash handling system in the original scope of work- Regulation 18 (2) (v)**

15. The petitioner has claimed an amount of Rs.11.78 lakh for the year 2004-05, on new works within the approved cost, under this head. It is observed that the expenditure incurred is towards construction and development works of dry ash collection system,

strengthening of discharge channel for ash dyke, civil works relating to raising of ash dyke, construction and laying of ash slurry pipeline work etc., The expenditure is found to be justified based on environmental considerations and the capitalisation of Rs. 11.78 lakh, is allowed.

16. Based on the discussion in the preceding paragraphs, the additional capital expenditure for the years 2004-05, 2005-06, 2006-07 and 2007-08, is allowed as under:-

(Rs in lakh)					
Nature of capitalization	Category	2004-05	2005-06	2006-07	2007-08
Deferred liabilities relating to works/services within original scope of work	18 (2) (i)	(-) 31.88	1.84	(-) 44.42	0.68
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	18 (2) (iv) R&M	0.00	23.42	29.37	1100.11
	18(2)(iv) : Spares	0.00	0.00	0.00	0.00
	18(2)(iv) : Other assets	0.00	0.00	0.00	0.00
Deferred works relating to ash pond or ash handling system in the original scope of work	18 (2) (v)	11.78	0.00	0.00	0.00
<b>Total (a)</b>		<b>(-) 20.10</b>	<b>25.26</b>	<b>(-)15.04</b>	<b>1100.78</b>
Exclusions not allowed (b)		(-) 18.46	(-)13.89 *	(-) 42.52	(-) 21.36
<b>Additional Capitalization allowed for the purpose of tariff (a+b)</b>		<b>(-) 38.56</b>	<b>11.36</b>	<b>(-) 57.56</b>	<b>1079.42</b>

\* after adjusting (-) Rs.20.59 lakh towards de-capitalization against capitalization of flame scanner during 2005-06.

## Capital Cost

17. As already noted, the Commission had admitted the capital cost of Rs. 94543.51 lakh (inclusive of FERV) as on 31.3.2004 for determining tariff for the period 2004-09.

18. 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, 2005-06, 2006-07

and 2007-08 as per para 16 above, the capital cost for the period 2004-09 is worked out as under:

Particulars	(Rs in lakh)			
	2004-05	2005-06	2006-07	2007-08
Opening Capital Cost	94543.51	94504.95	94516.31	94458.75
Additional capital expenditure	(-) 38.56	11.36	(-) 57.56	1079.42
Closing Capital Cost	<b>94504.95</b>	<b>94516.31</b>	<b>94458.75</b>	<b>95538.17</b>
Average Capital Cost	<b>94524.23</b>	<b>94510.63</b>	<b>94487.53</b>	<b>94998.46</b>

## Debt-Equity ratio

19. 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”.*

20. The petitioner in its affidavit dated 10.6.2009 has stated that the additional capital expenditure has been financed through loan amounting to Rs.1113.00 lakh from KFW and LIC-III and the balance through internal accruals/own funds. The petitioner has also submitted that out of the said loan an amount of Rs.25.00 lakh had been repaid on 31.12.2007. Taking into consideration the CWIP and the amount of the assets de-capitalized, the equity component of additional capitalization is more than 30%. 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>	<b>2006-07</b>	<b>2007-08</b>
Additional Notional Equity	(-) 11.57	3.41	(-)17.27	323.83

### Return on Equity

21. 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	47271.76	47260.19	47263.60	47246.33	47570.16
Equity due to Additional capitalization	(-) 11.57	3.41	(-) 17.27	323.83	-
Equity closing	47,260.19	47263.60	47246.33	47570.16	47570.16
Average equity	47,265.98	47261.90	47254.97	47408.25	47570.16
Return on equity	<b>6617.24</b>	<b>6616.67</b>	<b>6615.70</b>	<b>6637.15</b>	<b>6659.82</b>

### Interest on loan

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

(i) The normative loan outstanding as on 1.4.2004 as per order dated 9.5.2006 was Rs.402.45 lakh corresponding to gross loan of Rs 47271.76 lakh. There is reduction in the notional loan amounting to Rs.26.99 lakh and Rs.40.29 lakh during the years 2004-05 and 2006-07, respectively and addition of notional loan amounting to Rs.7.95 lakh during the year 2005-06 and Rs.755.59 lakh during the year 2007-08.

(ii) The amount de-capitalised in a year has been segregated into negative loan and equity and where ever the sum total of net positive opening balance of loan (gross loan *minus* cumulative repayment of loan) and negative loan due to de-capitalization has resulted in negative balance, and the negative loan due to de-capitalisation has been restricted to the net positive opening balance of loan.

(iii) Normative repayment of loan considered is equal to the admissible depreciation for the year and restricted to maximum of notional loan amount, 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. The normative loan arising out of additional capital expenditure gets repaid in the respective year and as such there is no interest on normative loan.

(iv) Interest rate as considered in order dated 9.5.2006 has been considered along with the addition of loan of for calculations of weighted average interest rate after accounting for Interest capitalized during 2007-08.

(v) Weighted average rate of interest on loan has been worked out after accounting for interest capitalized on loans as admitted in order dated 9.5.2006 along with the addition of Rs.1113 lakh drawn from KFW and LIC-III.

23. Interest on loan has been computed as under:

(Rs in lakh)						
<b>Details</b>	<b>Order dated 9.5.2006</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Gross loan opening	47271.76	47271.76	47244.77	47252.72	47252.72	48008.31
Cumulative repayment of loan upto previous year	46869.31	46869.31	47244.77	47252.72	47252.72	48008.31
Net loan opening		402.45	-	-	-	-
Addition of additional capital expenditure		(-) 26.99	7.95	-	755.59	-
Repayment of loan during the year		375.46	7.95	-	755.59	-
Net loan closing		-	-	-	-	-
Average loan		201.23	-	-	-	-
Wt. average rate of Interest		5.8521%	5.8516%	7.6809%	5.6088%	5.8033%
<b>Interest on Loan</b>		<b>11.78</b>	-	-	-	-

## Depreciation

24. The petitioner has calculated the weighted average rate of depreciation as 3.51% in terms of order dated 9.5.2006/29.6.2006 and the same has been considered for computation of tariff on account of additional capital expenditure for the years 2004-05, 2005-06, 2006-07 and 2007-08. Since the normative loan arising on account of additional capital expenditure gets repaid through depreciation by the year 2004-05 the remaining depreciation recoverable from the year 2005-06 is spread over the balance useful life in line with the order dated 9.5.2006. Adjustment of cumulative depreciation on account of de-capitalisation 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 necessary calculations are as under:



(Rs in lakh)

	<b>Order dated 9.5.2006</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Opening capital cost		94543.51	94504.95	94516.31	94458.75	95538.17
Closing capital cost		94504.95	94516.31	94458.75	95538.17	95538.17
Average capital cost		94524.23	94510.63	94487.53	94998.46	95538.17
Depreciable value @ 90%	84768.32	84750.97	84738.73	84717.94	85177.77	85663.51
Balance depreciable value	17686.32	17668.97	14372.66	13347.29	12817.05	12401.80
Balance useful life	14.93	14.93	13.93	12.93	11.93	10.93
Depreciation		<b>3321.06</b>	<b>1031.78</b>	<b>1032.27</b>	<b>1074.35</b>	<b>1134.66</b>
Cumulative Depreciation	67082.00	70366.07	71370.65	72360.72	73261.71	74396.37

### **Advance Against Depreciation**

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

### **O&M expenses**

26. O&M expenses as considered in the order dated 9.5.2006 in Petition No.142/2004 has been considered.

### **Interest on Working capital**

27. For the purpose of calculation of working capital, the operating parameters including the price of fuel components as considered in the 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)				
	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Coal Stock- 1.1/2 months	4641.12	4641.12	4641.12	4653.84	4641.12
Oil Stock- 2 months	133.54	133.54	133.54	133.90	133.54
O & M expenses	364.00	378.70	393.75	409.50	425.95
Maintenance spares	1696.78	1798.58	1906.50	2020.89	2142.14
Receivables	7404.27	7045.93	7078.61	7137.23	7173.63
Total Working Capital	14239.70	13997.87	14153.52	14355.35	14516.38
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
Interest on Working Capital	<b>1459.57</b>	<b>1434.78</b>	<b>1450.74</b>	<b>1471.42</b>	<b>1487.93</b>

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

	(Rs. in lakh)				
Particulars	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Depreciation	3321.06	1031.78	1032.27	1074.35	1134.66
Interest on Loan	11.78	0.00	0.00	0.00	0.00
Return on Equity	6617.24	6616.67	6615.70	6637.15	6659.82
Advance Against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	1459.57	1434.78	1450.74	1471.42	1487.93
O & M Expenses	4368.00	4544.40	4725.00	4914.00	5111.40
Total	<b>15777.65</b>	<b>13627.63</b>	<b>13823.71</b>	<b>14096.92</b>	<b>14393.81</b>

29. The target availability of 80% considered by the Commission in the original 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.

30. The difference between the fixed charges approved vide order dated 9.5.2006 and those approved now, shall be adjusted in three equal monthly installments.

31. In addition, the petitioner shall be entitled to claim all other charges like income – tax, in accordance with the 2004 regulations.

32. Petition No.30/2009 stands disposed of in terms of the above.

**Sd/-  
(V.S.VERMA)  
MEMBER**

**Sd/-  
(S.JAYARAMAN)  
MEMBER**

**Sd/-  
(DR.PRAMOD DEO)  
CHAIRPERSON**

New Delhi dated the 27<sup>th</sup> October, 2009