

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 129/2009 with I.A. 39/2009**

**Coram**

- 1. Shri R.Krishnamoorthy, Member**
- 2. Shri S. Jayaraman, Member**
- 3. Shri V.S.Verma, Member**

**DATE OF HEARING: 10.11.2009**

**DATE OF ORDER: 11.1.2010**

**In the matter of**

Determination of impact of additional capital expenditure incurred during 2008-09 on fixed charges in respect of Feroze Gandhi Unchahar TPS, Stage-I (420 MW).

**And in the matter of**

NTPC Ltd, New Delhi  
Vs

.....Petitioner

- (1) Uttar Pradesh Power Corp. Ltd, Lucknow
- (2) Jaipur Vidyut Vitran Nigam Ltd, Jaipur
- (3) Ajmer Vidyut Vitran Nigam Ltd, Ajmer
- (4) Jodhpur Vidyut Vitran Nigam Ltd, Jodhpur
- (5) North Delhi Power Ltd, Delhi
- (6) BSES Rajdhani Power Ltd, New Delhi
- (7) BSES Yamuna Power Ltd, Delhi
- (8) Haryana Power Purchase Centre, Panchkula
- (9) Punjab State Electricity Board, Patiala
- (10) Himachal Pradesh State Electricity Board, Shimla
- (11) Power Development Department, J & K, Jammu
- (12) Power Department, UT of Chandigarh, Chandigarh
- (13) Uttarakhand Power Corporation Ltd, Dehradun

..... Respondents

**The following were present:**

1. Shri V.K.Padha, NTPC
2. Shri D.G.Salpekar, NTPC
3. Shri S.Saran, NTPC
4. Shri Manoj Saxena, NTPC
5. Shri A.S.Pandey, NTPC
6. Shri Manish Garg, UPPCL

## ORDER

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 incurred during the years 2008-09 for Feroze Gandhi Unchahar TPS, 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"). The petitioner has made the following specific prayers:

- (a) Approve the revised fixed charges of this station after considering the impact of ACE as per details given in annexure-I, of the petition, for the period 01.04.2004 to 31.03.2009.*
- (b) Approve recovery of filing fee of this Petition from Respondent.*
- (c) Allow recovery of Income Tax from Beneficiaries as per CERC Regulations for the period 2004-09.*
- (d) Pass any other order in this regard as the Hon'ble Commission may find appropriate in the circumstances pleaded above.*

2. The generating station with a capacity of 420 MW comprises of 2 units of 210 MW each. The generating station was taken over by the petitioner from the erstwhile Uttar Pradesh State Electricity Board on 13.2.1992.

3. The tariff of the generating station for the period 1.4.2004 to 31.3.2009 was determined by the Commission by its order dated 9.5.2006 in Petition No.142/2004, based on the capital cost of Rs. 94543.51 lakh as on 1.4.2004. Subsequently, by order dated 27.10.2009 in Petition No. 30/2009, the Commission revised annual fixed charges after accounting for the additional capital expenditure for the period 2004-08, based

on the capital cost Rs. 95538.17 lakh as on 31.3.2008. The capital cost approved by the Commission is as under:

(Rs. in lakh)

Particulars	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
<b>Closing Capital Cost</b>	<b>94504.95</b>	<b>94516.31</b>	<b>94458.75</b>	<b>95538.17</b>

4. The annual fixed charges as approved by the Commission by order dated 27.10.2009 is as under:

(Rs in lakh)

Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
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
<b>Total</b>	<b>15777.65</b>	<b>13627.63</b>	<b>13823.71</b>	<b>14096.92</b>	<b>14393.81</b>

#### **INTERLOCUTORY APPLICATION**

5. The petitioner has filed interlocutory application (I.A No.39/2009) for amendment of Annexure-I to the petition taking into account the revised calculations for fixed charges based on the principles laid down in the tariff orders of the Commission in respect of the generating station, the judgment dated 13.6.2007 in Appeal Nos.139 to142 etc of 2006 and the judgment dated 16.3.2009 in Appeal Nos. 133,135 etc of 2008 of the Appellate Tribunal passed against the various tariff orders of the Commission for the period 2004-09 in respect of the generating stations of the petitioner.

6. Though the interlocutory application was taken on record, the Commission observed that tariff would be determined in accordance with law. We now proceed to discuss as to whether the prayer of the petitioner for determination of tariff based on the revised calculations on the principles laid down in the judgments of the Appellate Tribunal dated 13.6.2007 in Appeal Nos. 139 to 142 etc of 2006, and judgment dated 16.3.2009 in Appeal Nos. 133, 135 etc of 2008 can be considered.

7. The petitioner filed Appeal Nos. 139 to 142 etc of 2006 before the Appellate Tribunal challenging the various orders of the Commission determining tariff for its generating stations during the period 2004-09. The Appellate Tribunal by its judgment dated 13.6.2007 allowed the said appeals and remanded the matters for re-determination by the Commission. Against the said judgment the Commission has filed 20 appeals before the Hon'ble Supreme Court (in C.A. Nos. 5434/2007 to 5452/2007 and 5622/2007) on issues such as:

- (a) Consequences of refinancing of loan;*
- (b) Treating of depreciation as deemed repayment of loan;*
- (c) Cost of maintenance spares related to additional capitalization;*
- (d) Depreciation availability up to 90% in the event of disincentive; and*
- (e) Impact of de-capitalization of assets on cumulative repayment of loan*

8. The Hon'ble Supreme Court on 26.11.2007 granted interim order of stay of the operation of the order dated 13.6.2007 of the Appellate Tribunal. However, on 10.12.2007, the Hon'ble Supreme Court modified the interim order as under:

*"Learned Solicitor General appearing on behalf of the National Thermal Power Corporation stated that pursuant to the remand order, following five issues shall not be pressed for fresh determination:*

- (a) Consequences of refinancing of loan;*
- (b) Treating of depreciation as deemed repayment of loan;*

- (c) Cost of maintenance spares related to additional capitalization;
- (d) Depreciation availability up to 90% in the event of disincentive; and
- (e) Impact of de-capitalization of assets on cumulative repayment of loan

*The Commission may, however, proceed to determine other issues.*

*It is clarified that this order shall apply to other cases also.*

*In view of this, the interim order passed by the Court on 26th November, 2007, is vacated.*

*The interlocutory applications are, accordingly, disposed of."*

9. The petitioner in its application has submitted that it has been advised that the statement of the Solicitor General of India (SGI) before the Hon'ble Supreme Court resulting in the interim order dated 10.12.2007 does not restrict it from claiming additional capitalization based on the principles laid down by the Appellate Tribunal in its judgment dated 13.6.2007 and that the effect of the statement of SGI was that it would not seek fresh determination pursuant to the remand order. The petitioner has also submitted that the Hon'ble Supreme Court has not stayed further proceedings before the Commission for determination of additional capitalization and even if it was construed as stay, the decision of the court (Appellate Tribunal) does not become *non est*.

10. The Hon'ble Supreme Court in its interim order dated 26.11.2007 had granted stay on the operation of the judgment dated 13.6.2007 of the Appellate Tribunal. In view of the undertaking given by the Solicitor General of India on behalf of the petitioner that "the five issues shall not be pressed for fresh determination", the Hon'ble Supreme Court vacated the interim order dated 26.11.2007 and directed that "the Commission may proceed to determine the other issues". It was clarified that "this order shall apply to other cases also". It is the contention of the petitioner that the undertaking before the Hon'ble Supreme Court does not restrict it from claiming additional capitalization based on the principle laid down by the Appellate Tribunal. In

our view, the undertaking given by the petitioner before the Hon'ble Supreme Court that "the five issues shall not be pressed for fresh determination" is binding on the petitioner and the petitioner is estopped from seeking fresh determination of these issues. Moreover, the petitioner seems to create a distinction between the main tariff petition and the petition for additional capitalization by stating that while the undertaking is confined to the remand order pertaining to the main petition, the additional capitalization can be considered as per the principles laid down by the Appellate Tribunal. Such an approach will lead to dichotomous situations wherein tariff for the main petition and petition for additional capitalization are determined on the basis of the different principles. The tariff for the period 2004-09 is a complete package which needs to be determined on the same principle. From the point of view of regulatory uniformity and continuity and also in line with the spirit of the interim order of the Hon'ble Supreme Court, we are of the view that the implementation of the judgment of the Appellate Tribunal on the five issues should be deferred till the final disposal of the Civil Appeals by the Hon'ble Supreme Court. Accordingly, tariff for additional capitalization is determined on the basis of the existing principles, subject to the final outcome of the Civil Appeals pending before the Supreme Court.

11. One more prayer of the petitioner in the application is for revision of capital cost of the generating station considering the undischarged liabilities, in terms of the judgment of the Appellate Tribunal dated 16.3.2009 in Appeal Nos. 133,135 etc of 2008.

12. The Commission in some of the petitions filed by the petitioner (Rihand and Ramagundam generating stations) revised the tariff for the period 2004-09 based on additional capital expenditure incurred, after deducting undischarged liabilities, on the

ground that " *the expenditure for the liability incurred for which payment was not made would not come under the category 'actual expenditure incurred'* ". Against the orders, appeals were filed by the petitioner before the Appellate Tribunal (Appeal No 151&152/2007) and the Appellate Tribunal by its judgment dated 10.12.2008 held as under:

*"25. Accordingly, we allow both the appeals in part. We direct that the appellant be allowed to recover capital cost incurred including the portion of such cost which has been retained or has not yet been paid for. We also direct that in case the Commission attributes any loan taken at the corporate level to a particular project under construction and considers any repayment out of it before the date of commercial operation the sum deployed for such repayment would earn interest as pass through in tariff.*

*26. The Commission is directed to give effect to the directions given herein in the truing up exercise and consequent subsequent tariff orders."*

13. Similar appeals (Appeal Nos.133, 135,136 and 148/2008) were filed by the petitioner before the Appellate Tribunal against the orders of the Commission in respect of other generating stations by the petitioner on the question of deduction of undischarged liabilities, IDC etc. The Appellate Tribunal, following its judgment dated 10.12.2008 *ibid*, allowed the claim of the petitioner and directed the Commission to give effect to the directions contained in the said judgments.

14. Against the judgments of the Appellate Tribunal dated 10.12.2008 and 16.3.2009 above, the Commission has filed Civil Appeal Nos. 4112-4113/2009 and Civil Appeal Nos. 6286 to 6289/2009 before the Hon'ble Supreme Court. These Civil Appeals are pending and there is no stay of the operation of the judgments of the Appellate Tribunal. Accordingly, it has been decided to revise the tariff of the generating station in

terms of the directions contained in the judgment *ibid* subject to the final outcome of the appeals before the Supreme Court.

15. The Appellate Tribunal in its judgment dated 10.12.2008 had directed that the capital cost incurred in respect of the generating station including the portion of such cost which has been retained or has not been paid for shall be recovered in tariff. In other words, un-discharged liability in respect of works which have been executed but payments deferred for future date has to be capitalized. As regards IDC, if the loan amount has been repaid out of the internal resources before the date of commercial operation, such repayments would earn interest. The Commission has been directed by the Appellate Tribunal to give effect to the directions contained in the judgment in the truing up exercise and subsequent tariff orders.

16. The directions of the Appellate Tribunal pertain to additional capitalization for the tariff period 2004-09 which has come to an end on 31.3.2009 and the exercise for implementation of the directions have been undertaken after the expiry of the said tariff period. Accordingly, tariff of the generating station is revised after considering the additional capital expenditure, capitalization of undischarged liabilities and IDC after truing up of the expenditure as on 31.3.2009. While truing up, the liabilities discharged, liabilities reversed on account of de-capitalization of assets during the tariff period have been accounted for.

17. The interlocutory application No. 39/2009 is disposed of as above. We proceed to consider the petition on merits.

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

(Rs in lakh)	
Particulars	<b>2008-09</b>
Additional capital expenditure	2205.61

### **Additional Capitalization**

19. 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 cutoff 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 cutoff 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 cutoff 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 cutoff date.

*Note 1*

Any expenditure admitted on account of committed liabilities within the original scope of work and the expenditure deferred on techno-economic grounds but falling within the original scope of work shall be serviced in the normative debt-equity ratio specified in regulation 20.

*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.

*Note 3*

Any expenditure admitted by the Commission for determination of tariff on account of new works not in the original scope of work shall be serviced in the normative debt-equity ratio specified in regulation 20.

*Note 4*

Any expenditure admitted by the Commission for determination of tariff on renovation and modernization and life extension shall be serviced on normative debt-equity ratio specified in regulation 20 after writing off the original amount of the replaced assets from the original project cost.

20. The additional capital expenditure as per books vis-à-vis additional capital expenditure claimed by the petitioner is as under:

(Rs in lakh)	
Particulars	2008-09
Total additional expenditure of the station as per books of accounts (A)	2357.10
Exclusions for additional capitalization vis-à-vis books of accounts (B)	151.48
Total additional capitalization (A-B)	<b>2205.61</b>

21. The summary of exclusions from the books of accounts claimed for the purpose of tariff is as under:

(Rs. in lakh)	
Capital Spares (capitalized in books)	85.86
Capital spares (de- capitalized in books)	(-) 9.16
De-capitalization of vehicles, school equipments, hospital equipments, furniture's, IT equipments in books of accounts	(-) 150.44
FERV Capitalized in books of accounts	225.22
<b>Total Exclusions</b>	<b>151.48</b>

### Exclusions

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

(a) **Capital Spares:** *The petitioner has procured spares amounting to Rs.85.86 lakh during the year 2008-09 for maintaining stock of necessary spares. Since capitalization of spares over and above initial spares procured after cut-off date are not allowed for the purpose of tariff, as they form part of O&M expenses when consumed, the petitioner has excluded the said amounts. The exclusion of the said amounts under this head is allowed.*

(b) **De-capitalization of capital spares:** *The petitioner has de-capitalized capital spares amounting to Rs.9.16 lakh in books during the year 2008-09 on their becoming unserviceable. The petitioner has submitted that the spares have been de-capitalized for accounting purposes only and are not to be de-capitalized for the purpose of tariff. The ground on which the exclusion has been sought by the petitioner is as under:*

*"The unserviceable spares have been de-capitalized for accounting purposes. However, as new purchase of capital spares is not being allowed to be capitalized for tariff purposes by the Commission (Rs.1.063 crs. in tariff period 2001-04), this de-capitalization may be excluded for tariff purposes."*

The prayer of the petitioner for exclusion of de-capitalized spares is justified if the de-capitalized MBOA are the ones which were disallowed for the purpose of tariff. However, as per affidavit dated 10.9.2009, these spares were accounted for in the capital base of the generating station for the purpose of tariff since date of take over. Hence, exclusion of negative entries on account of de-capitalization of unserviceable spares not in use is not justified and not allowed for the purpose of tariff.

**(c) De-capitalisation of vehicles, school equipment, hospital equipment, furniture, IT equipment in books:** The petitioner has de-capitalized MBOA as mentioned above in books of accounts amounting to Rs.150.44 lakh during the year 2008-09 on its becoming unserviceable. However, the petitioner has prayed that negative entries arising out of de-capitalization of MBOA are to be retained in the capital base for the purpose of tariff. The ground on which the exclusion has been sought by the petitioner is as follows-

*"Vehicles and other miscellaneous assets have been de-capitalized. Since Hon'ble Commission is not permitting capitalization of same, when they are procured, decap. may also be excluded."*

The prayer of the petitioner for exclusion of de-capitalized MBOA is justified if the de-capitalized MBOA are the ones which were disallowed for the purpose of tariff. However, considering the fact that capitalization of minor assets for the purpose of tariff was disallowed for the tariff period 2004-09, it can be concluded that these de-capitalized assets are the ones which were procured prior to 1.4.2004. The petitioner in its affidavit dated 10.9.2009 has confirmed that

these de-capitalized MBOA are in service from the date of take over of the generating station i.e 13.2.1992. As such, the exclusion of negative entries arising due to de-capitalization of unserviceable MBOA is not justified and cannot be allowed to remain in the capital base for the purpose of tariff.

(d) **FERV:** The claim for exclusion of an amount of Rs.225.22 lakh for the year 2008-09 on account of FERV is allowed, as the petitioner has billed the said amount

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

(Rs in lakh)

<b>Nature of capitalization</b>	<b>2008-09</b>
For efficient and successful operation of generating station, but not included in original project cost [18(2)(iv)]	2205.62
<b>Total</b>	<b>2205.62</b>

24. After applying prudence check on the asset-wise details and justification of additional capitalization claimed by the petitioner the admissibility of additional capitalization is discussed in the succeeding paragraphs:

**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)}**

25. The petitioner has claimed an amount of Rs.2205.62 lakh under this head on the following works/assets under CEA approved schemes:

(a) **On line flue gas analyser:** The balance payment of Rs.17.06 lakh during 2007-08 for the asset allowed in Petition No. 30/2009 is considered for the purpose of tariff.

(b) **Wide range coal burner:** The balance payment of Rs.59.06 lakh for the asset allowed during 2007-08 in Petition No. 30/2009 is considered for the purpose of tariff.

(c) **Metallic expansion joint:** The balance payment of Rs.2.96 lakh for the asset disallowed during 2007-08 in Petition No. 30/2009 is not considered for the purpose of tariff.

(d) **Delta-PI transmitter:** The balance payment of Rs.24.40 lakh for the asset allowed during 2007-08 in Petition No. 30/2009, is considered for the purpose of tariff.

(e) The petitioner's claim of Rs. 4.77 lakh for "**Room for flue gas analyzer**" is allowed in view of the fact that the asset "flue gas analyzer" has been allowed during the year 2007-08.

(f) **Augmentation of railway siding and Marsh. Yard:** The justification as provided by the petitioner for incurring the expenditure of Rs. 72.95 lakh along with de-capitalization amounting Rs. 9.68 lakh, is as under:

*"Scheme no. R-20: This is for augmentation of railway siding to withstand higher axle capacity"*

In consideration of the above justification submitted by the petitioner, the expenditure on replacement/augmentation of assets under CEA approved capital addition scheme is allowed under this head and in terms of Note-2 under Regulation 18 along with corresponding de-capitalization.

(g) **Installation of guillotine gates** - The justification submitted by the petitioner for the expenditure of Rs. 61.12 lakh along with de- capitalization amounting Rs.44.20 lakh, is as under:

*“Scheme no. R-2: The existing plate type hot air gates provided to mill inlet were unable to isolate the mills resulting in continuous passing of hot air to mills. This might cause the coal inside the stand by mills to catch fire. Further the condition inside mill might prove to be hazardous for the maintenance personnel on account of continuous hot air gate passing. So, the work essential on account of safety angle.”*

In consideration of the above justification, the expenditure on replacement/augmentation of asset under CEA approved capital addition scheme is allowed under regulation 18(2)(iv) and note-2 to regulation 18 along with corresponding de-capitalization.

**(h) Expenditure on HP heaters tube replacement, condensor tubes and HPT/IPT fasteners:** The petitioner has claimed amounts of Rs.238.66 lakh, Rs.699.04 lakh and Rs.122.99 lakh respectively on the replacement of the said assets. The petitioner has de-capitalized an amount of Rs.123.06 lakh in respect of these assets. CEA has approved the replacement of HP heater tubes and condenser tubes as ‘capital addition schemes’. However, it is observed from the approval letter of CEA that replacement of HPT/IPT fasteners (scheme no. R-8) is of O&M nature and has not been recommended for implementation under R&M. In view of the above the expenditure of Rs.238.66 lakh and Rs.699.04 lakh is allowed for the purpose of tariff and expenditure of Rs.122.99 lakh in respect of HTP/IPT fasteners has not been allowed for the purpose of tariff. Further, in the absence of the detailed breakup of the de-capitalization amount of Rs.123.06 lakh, pro-rata de-capitalization amounting to Rs.108.80 lakh has been adjusted in respect of the assets allowed for the purpose of tariff.

(i) **Ash handling system (Bottom ash hopper gates):** The justification submitted by the petitioner for the expenditure of Rs.37.52 lakh along with de- capitalization amounting Rs.5.03 lakh, is as under:

*"Scheme no. R-4: The Bottom Ash Hopper Isolation Gates have become technologically obsolete and are manually operated through hand wheel and screwed spindle. This was posing a hazard for the safety of the operating personnel due to splashing of hot water and leakage of ash fumes. Further, the sealing of the existing gates was very poor and the manual operations required more down time for maintenance activity. In view of the above, these gates were replace with hydraulic operated gates."*

In consideration of the above justification, the expenditure on replacement/augmentation of asset under CEA approved capital addition scheme is allowed under regulation 18(2)(iv) and note-2 to regulation 18 along with corresponding de-capitalization.

(j) **Modernization of DAS, SER, ACS (DDCMIS PKG.), hydrogen purity measurement System, renovation of turbovisory instrument for ST, SWAS panel & sample conditioning compt, boiler tube leakage detection system, renovation of ID/FD/PA Blade IGV Actuators (control system):** The petitioner has claimed expenditure of Rs.720.35 lakh, Rs.4.96 lakh, 59.84 lakh, Rs.23.69 lakh, Rs.24.72 lakh and 20.60 lakh respectively on replacement of the above said assets. The petitioner has de-capitalized an amount of Rs.113.65 lakh in respect of the above said assets. CEA had approved replacement/renovation of the above assets as "capital addition schemes". In consideration of the justification submitted by the petitioner and the fact that these assets are CEA approved capital addition schemes, capitalization of the expenditure is allowed for the purpose of tariff under this head and in terms of Note-2 under Regulation 18 along with corresponding de-capitalization.

(k) **Renovation of 6.6 KV circuit breaker:** The justification submitted by the petitioner for the expenditure of Rs.331.56 lakh along with de-capitalization amounting Rs.48.92 lakh, is as under:

“Scheme no. R224: The system has become obsolete and no supplier support was available. It was augmented with a new system.”

In consideration of the above justification, the expenditure on replacement/augmentation of asset under CEA approved capital addition scheme is allowed under this head and in terms of Note-2 under Regulation 18 along with corresponding de-capitalization.

(l) **Upgradation-220 KV line protection:** The justification as provided by the petitioner for incurring the expenditure of Rs.27.57 lakh along with de-capitalization amounting Rs.3.67 lakh, is as follows-

“Scheme no. R-25: The relay used for protection system has become obsolete and spares are not available. Numerical relay based feeder / distance protection schemes with twin channel protection system is provided.”

In consideration of the above justification, the expenditure on replacement of the asset under CEA approved capital addition scheme is allowed under this head and in terms of Note-2 under Regulation 18 along with corresponding de-capitalization.

26. Based on the above discussions, the additional capital expenditure allowed for the purpose of tariff for the year 2008-09 is as under:

(Rs in lakh)

<b>Nature of capitalization</b>	<b>2008-09</b>
Works/services which have become necessary for efficient and successful operation of the generating station, but not included in the original project cost- <b>18(2) (iv)</b>	2093.94
<b>Total before adjustments of exclusions(A)</b>	<b>2093.94</b>
<b>Exclusions not allowed (B)</b>	(-)159.60
<b>Additional capital expenditure allowed(C=A+B)</b>	<b>1934.34</b>
Less: Un-discharged liabilities included above	13.61
<b>Net additional capital expenditure allowed for the purpose of tariff</b>	<b>1920.73</b>

### Capital cost

27. As stated above, the Commission had admitted the capital cost of Rs.95538.17 lakh as on 1.4.2008, for determining tariff for the period 2004-09.

28. Taking into account the capital cost of the generating station as on 1.4.2008 and the additional capital expenditure approved for the year 2008-09 as per para 16 above, the capital cost for the period 2008-09 is worked out as under:

(Rs. in lakh)

<b>Year</b>	<b>2008-09</b>
Opening Capital cost	95538.17
Additional capital expenditure allowed	1920.73
<b>Closing Capital cost</b>	<b>97458.90</b>
<b>Average Capital cost</b>	<b>96498.53</b>

### Debt-Equity ratio

29. Para- 20 of the 2004 regulations provides that:

*“(1) In case of the existing project, 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 31.03.2004 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 capitalization 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.*

30. The petitioner has stated that additional capital expenditure claimed has been financed through loan of Rs.1983.31lakh drawn out of KFW loan during 2008-09 and the balance from its internal accruals/resources. Considering the details of the capital work in progress furnished by the petitioner and the amount of de-capitalized assets, the equity component of additional capitalization is more than 30%. Hence, the debt-equity ratio of 70:30 has been considered for the additional capital expenditure approved 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>2008-09</b>
Additional Notional Equity	576.22

### **Return on Equity**

31. Return on equity is allowed @ 14% on the average normative equity, as under:

(Rs. in lakh)

	<b>2008-09</b>
<b>Equity-Opening</b>	47570.16
Addition of Equity due to additional capital expenditure	576.22
<b>Equity-Closing</b>	<b>48146.38</b>
Average equity	47858.27
<b>Return on Equity</b>	<b>6700.16</b>

### Interest on loan

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

- (a) Gross opening loan on normative basis on 1.4.2008 as considered in order dated 27.10.2009 in Petition No. 30/2009 was Rs.48008.31 lakh corresponding to Capital cost of Rs.95538.17 lakh.
- (b) Cumulative repayment of loan on 1.4.2008 as considered in the said order dated 27.10.2009 was Rs.48008.31 lakh.
- (c) Net opening loan on normative basis on on 1.4.2008 as considered in the said order dated 27.10.2009 was 'nil'.
- (d) There is addition of notional loan to the tune of Rs.1344.51 lakh on account of additional capital expenditure incurred during the year 2008-09.
- (e) Weighted average rate of interest on loan has been worked out after accounting for the rate of interest considered in order dated 27.10.2009 along with addition of loan of 1983.31 lakh drawn out of KFW loan during the year 2008-09, and interest capitalized during the year 2008-09.
- (f) Normative repayment of the normative loan has been calculated based on following formula:

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

(g) Normative repayment of loan considered is equal to the admissible depreciation for the year or normative repayment whichever is higher, as considered in the determination of the tariff for other generating stations of the petitioner for the period 2004-09. This is however subject to the final decision of the Hon'ble Supreme Court in Civil Appeal No. 5434/2007 and other related appeals).

33. Interest on loan has been computed as under:

(Rs. in lakh)	
	<b>2008-09</b>
<b>Gross Opening Loan</b>	48008.31
Cumulative Repayment of loan upto previous year	48008.31
Net Loan Opening	0.00
Addition of loan due to additional capital expenditure	1344.51
Repayment of loan during the year	1213.74
<b>Net Loan Closing</b>	<b>130.78</b>
Average Loan	65.39
<b>Weighted Average Rate of Interest on Loan</b>	2.4888%
<b>Interest on Loan</b>	<b>1.63</b>

### Depreciation

34. In the order dated 27.10.2009, the balance depreciation recoverable was spread over the balance useful life of the generating station from 2005-06 onwards, as the entire normative loan was repaid in 2004-05. This has been considered for revision of tariff on account of additional capital expenditure during 2008-09.

35. The admitted amount of additional capital expenditure has been considered after disallowing exclusion of de-capitalization of certain unserviceable assets and

allowing de-capitalization of certain assets. Adjustment of cumulative depreciation on account of de-capitalization 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>2008-09</b>
Opening capital cost	95538.17
Closing capital cost	97458.90
Average capital cost	96498.53
Depreciable value @ 90%	86527.84
Balance depreciable value	13266.13
Balance useful life	10.93
<b>Depreciation</b>	<b>1213.74</b>

### **Advance Against Depreciation**

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

### **O&M expenses**

37. The O&M Expenses as considered in order dated 27.10.2009 has been considered for revision of tariff.

### **Interest on Working capital**

38. For the purpose of calculation of working capital the operating parameters including the price of fuel components as considered in the order dated 27.10.2009 have been kept unchanged. The "receivables" component of the working capital has been revised due to 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>Particulars</b>	<b>2008-09</b>
Coal Stock- 1.1/2 months	4641.12
Oil stock -2 months	133.54
O & M expenses	425.95
Spares	2142.14

Receivables	7194.15
Total Working Capital	14536.90
Rate of Interest	10.2500%
<b>Total Interest on Working capital</b>	<b>1490.03</b>

39. The target availability of 80% considered by the Commission in the order dated 27.10.2009 remains unchanged. Similarly other parameters viz. specific fuel consumption Auxiliary Power consumption and Station Heat rate etc considered in the order dated 27.10.2009 have been retained for the purpose of calculation of the revised fixed charges.

40. The revised annual fixed charges for the period from 1.4.2008 to 31.3.2009 are summarized as under:

(Rs. in lakh)	
<b>Particulars</b>	<b>2008-09</b>
Interest on loan	1.63
Interest on Working Capital	1490.03
Depreciation	1213.74
Advance Against Depreciation	0.00
Return on Equity	6700.16
O & M Expenses	5111.40
<b>Total</b>	<b>14516.96</b>

41. The petitioner shall claim the difference in respect of the tariff determined by order dated 27.10.2009 and the tariff determined by this order from the beneficiaries in three equal monthly installments.

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

43. The petitioner's claim for reimbursement of filing fees is not allowed in terms of

the Commission's general order dated 11.9.2008 in Petition No. 129/2005.

44. Petition No.129/2009 stands disposed of in terms of the above.

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

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

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