

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 194/2009

Coram

- 1. Shri S.Jayaraman, Member**
- 2. Shri M.Deena Dayalan, Member**

DATE OF HEARING: 6.5.2010

DATE OF ORDER: 28.9.2010

In the matter of

Revision of fixed charges for the period 2006-09 due to additional capital expenditure incurred during the years 2006-07 (1.6.2006 to 31.3.2007), 2007-08 and 2008-09 at Badarpur Thermal Power Station (705 MW).

And in the matter of

NTPC Ltd, New Delhi

.....**Petitioner**

Vs

1. Delhi Transco Ltd, New Delhi
2. North Delhi Power Ltd, New Delhi
3. BSES Rajdhani Power Limited, New Delhi
4. BSES Yamuna Power Limited, Delhi.

..**Respondents**

The following were present

1. Shri V.K.Padha, NTPC
2. Shri R.Srinivasan, NTPC
3. Shri R.A.Goyal, NTPC
4. Shri D.G.Salpekar, NTPC
5. Shri V.Ramesh, NTPC
6. Shri G.K.Dua, NTPC
7. Shri Ajay Dua, NTPC
8. Shri D.Nandi, NTPC
9. Shri H.S.Bawa, NTPC
10. Shri S.K.Singh, NTPC

ORDER

The petitioner has made this application for revision of fixed charges, after considering the impact of additional capital expenditure incurred during the years 2006-07 (1.6.2006 to 31.3.2007), 2007-08 and

2008-09 at Badarpur Thermal Power Station (705 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:

- (i) Approve additional capital expenditure incurred during 2006-09;*
- (ii) Annual Lease Rent payable on land;*
- (iii) Approve recovery of filing fee of this Petition from Respondent;*
- (iv) Allow recovery of Income Tax from the beneficiaries as per the CERC Tariff Regulations, 2004 for the period 2004-09;*
- (v) Pass any other order as it may deem fit it in the circumstances mentioned above;*

2. The generating station with a capacity of 705 MW comprises of three units of 95 MW each and two units of 210 MW each. The ownership of the generating station was transferred to the petitioner vide Govt. of India, Ministry of Power, Notification dated 31.5.2006. The date of commercial operation of the generating station is 1.4.1982.

3. The tariff of the generating station for the period 1.4.2004 to 31.3.2009 was approved by the Commission vide its order dated 9.5.2006 in Petition No. 40/2004 based on the capital cost of ₹46807 lakh, as per details given as under:

(₹ in lakh)	
Particulars	Amount
Admitted Capital cost as on 1.4.2004	46807
Less : Accumulated Depreciation upto 31.3.2004	20098
Net Capital Cost	26709
Equity	23403
Debt	3306

4. The annual fixed charges allowed by the Commission by order dated 9.5.2006 is as under:

(₹ in lakh)					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Interest on Loan	265	101	10	0	0
Interest on Working Capital	2879	2879	2879	2885	2878
Depreciation	1559	1559	1559	1559	1559
Advance Against Depreciation	0	0	0	0	0
Return on Equity	3276	3276	3180	2975	2757
O & M Expenses	14275	14275	14275	14275	14275
TOTAL	22255	22091	21903	21694	21469

5. The petitioner, in this petition has calculated the revised annual fixed charges after considering the exclusion of land from the capital cost and inclusion of additional capitalization incurred during the period 2006-09, in respect of the generating station.

6. The ownership of BTPS (except land which has been transferred on lease basis for an initial period of 50 years) has been transferred to NTPC with effect from 1.6.2006. On account of transfer of ownership, without land, the capital cost of the generating station amounting to ₹46807 lakh has been reduced to ₹41613 lakh, after reduction of the book value of land of ₹5194 lakh included in the approved capital cost. The petitioner has considered the capital cost of ₹41613 lakh for the purpose of tariff and the same has been considered by the Commission for revision of annual fixed charges of the generating station for the period from 1.6.2006 to 31.3.2009.

NET FIXED ASSET METHOD

7. The petitioner has claimed revision of tariff for the period from 1.6.2006 to 31.3.2009 on Gross Fixed Asset (GFA) method in place of the Net Fixed Asset method (NFA).

8. This issue was considered by the Commission in Petition No. 40/2004, while determining the tariff of the generating station for the period 2004-09. In the said petition, the Commission vide its order dated 9.5.2006 rejected the prayer of the petitioner and directed it to continue with NFA method for the reasons stated therein. The relevant portion of the said order is extracted as under:

“15. The generating station was set up and has been owned by the Government of India. (NTPC has been managing it since 1.4.1978, under an agreement with the Government of India dated 12.4.1978). The tariff was determined and notified by Government of India, the owner, on 17.3.1987, on NFA basis. There is no reason for changing at this stage the tariff to GFA basis, which is comparatively disadvantageous for the respondent, the sole beneficiary in this case.

16. The arguments of the petitioner are not convincing. The generating station is in operation for about 33 years and tariff is being charged on NFA concepts since its commissioning. Therefore, it cannot be held that there was no agreement between the parties. Further, it could not be held that NFA approach is against the commercial principles. Accordingly, we have accepted the recommendation of the one- Member Bench to adopt NFA concept for tariff determination.”

9. In terms of the above decision, the submission of the petitioner is rejected and the revision of tariff for the period from 1.6.2006 to 31.3.2009 has been determined on the basis of NFA method.

CAPITAL COST

10. Regulation 17 of the 2004 regulations provides as under:

“17. Capital Cost: *Subject to prudence check by the Commission, the actual expenditure incurred on completion of the project shall form the basis for determination of final tariff. The final tariff shall be determined*

based on the admitted capital expenditure actually incurred up to the date of commercial operation of the generating station and shall include capitalized initial spares subject to following ceiling norms as a percentage of the original project cost as on the cut - off date:-

(i) Coal-based/lignite-fired generating stations - 2.5%

(ii) Gas Turbine/Combined Cycle generating stations - 4.0%

Provided that where the power purchase agreement entered into between the generating company and the beneficiaries provides a ceiling of actual expenditure, the capital expenditure shall not exceed such ceiling for determination of tariff;

Provided further that any person intending to establish, operate and maintain a generating station may make an application before the Commission for 'in principle' acceptance of the project capital cost and financing plan before taking up a project through a petition in accordance with the procedure specified in the Central Electricity Regulatory Commission (Procedure for making application for determination of tariff, publication of the application and other related matters) Regulations, 2004, as applicable from time to time. The petition shall contain information regarding salient features of the project including capacity, location, site specific features, fuel, beneficiaries, break up of capital cost estimates, financial package, schedule of commissioning, reference price level, estimated completion cost including foreign exchange component, if any, consent of beneficiary licensees to whom the electricity is proposed to be sold etc.

Provided further that where the Commission has given 'in principle' acceptance to the estimates of project capital cost and financing plan, the same shall be the guiding factor for applying prudence check on the actual capital expenditure:]

Provided further that in case of the existing generating stations, the capital cost admitted by the Commission prior to 1.4.2004 shall form the basis for determination of tariff.”

CAPITAL COST AS ON 31.5.2006

11. As stated at para 6 above, the petitioner has considered the capital expenditure of ₹41613 lakh as on 31.5.2006, after reduction of the book value of the land amounting to ₹5194 lakh from the capital cost of ₹ 48607 lakh admitted by the Commission as per order dated 9.5.2006 in Petition No. 40/2004. The details of the computation of capital cost as on 31.5.2006 are as under:

(₹ in lakh)

Particulars	Amount	
Admitted Capital cost as on 1.4.2004		46807
Less : Accumulated depreciation upto 31.3.2004		20098
Net Capital Cost		26709
Equity	23403	
Debt	3306	
Depreciation recovered upto 31.5.2006		
2004-05	1559	
2005-06	1559	
Upto 31.5.2006	260	3378*
Net Capital Cost as on 31.5.2006		23331

* Rs.3306 considered for repayment of loan and Rs.72 for repayment of equity

CAPITAL COST AS ON 1.6.2006

12. The details of the computation of capital cost as on 1.6.2006 are as under:

(₹ in lakh)

Particulars	Amount
Admitted Capital cost as on 1.4.2004 (vide order dated 9.5.2006 in Petition No.40/2004)	46807
Less : Value of land included	5194
Capital Cost as on 1.6.2006	41613
Less : Depreciation recovered upto 31.5.2006	23477
Net Capital cost as on 1.6.2006	18136

ADDITIONAL CAPITAL EXPENDITURE

13. 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 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-convector, carpets, mattresses etc. brought after the cut-off date shall not be considered for additional capitalization for determination of tariff with effect from 1.4.2004.

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

Note 1

Any expenditure admitted on account of committed liabilities within 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 capital cost.”

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

Particulars	(₹ in lakh)		
	2006-07	2007-08	2008-09
Total additional expenditure of the generating station as per books of accounts (A)	1717.19	1723.14	3380.61
Exclusions for additional capitalization vis-à-vis books of accounts (B)	(-) 641.56	(-) 702.68	(-) 766.20
Total additional capitalization (A-B)	1075.64	1020.47	2614.40

15. The summary of exclusions from the books of accounts claimed by the petitioner is as under:

Particulars	(₹ in lakh)		
	2006-07	2007-08	2008-09
Capital spares (Capitalized)	590.48	637.48	582.03
MBOA (Capitalized)	51.07	65.20	184.17
Total	641.56	702.68	766.20

Exclusions

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

(a) **Capitalization of capital spares:** The petitioner has incurred expenditure of ₹590.48 lakh, ₹637.48 lakh and ₹582.03 lakh during the years 2006-07, 2007-08 and 2008-09 respectively. 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) **MBOA:** The petitioner has sought exclusion of ₹51.07 lakh, ₹65.20 lakh and ₹184.17 lakh during the years 2006-07, 2007-08 and 2008-09 respectively. The justification submitted by the petitioner is as under:

“As the purchase of new furniture is generally not been allowed to be capitalized by Hon’ble commission for tariff purposes, therefore capitalization as well as de-capitalization of such items is kept under exclusion.”

Clause 3 of Regulation 18 of the 2004 regulations provides as under:

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

Note

The list of items is illustrative and not exhaustive.”

As the above provision does not allow capitalization of minor assets after cut-off date, the claim of the petitioner is justified and the said amounts are allowed to be excluded.

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

(₹ in lakh)			
Nature of capitalization	2006-07	2007-08	2008-09
On account of change in law- Regulation 18 (2) (iii)	24.61	0	0
Additional works/services which have become necessary for efficient and successful operation of the	486.50	1015.77	1355.75

generating station, but not included in the original project cost- Regulation 18 (2) (iv)			
Deferred works relating to ash pond or ash handling system in the original scope of work- Regulation 18(2)(v)	564.54	4.70	1258.65
Total	1075.64	1020.47	2614.40

18. After applying prudence check on the asset-wise details and justification of additional capitalization claimed by the petitioner under various categories for the years 2006-09, the admissibility of additional capitalization is discussed in the succeeding paragraphs:

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

19. The petitioner has claimed an amount of ₹24.61 lakh under this head, for the year 2006-07, on the following works/assets:

(a) **Supply of Opacity meter:** The justification provided by the petitioner for the expenditure of ₹11.30 lakh incurred is as follows-

“To improve environmental monitoring and fulfill the DPCC guidelines, opacity meters were installed at the chimney.”

As the expenditure incurred is on account of the implementation of statutory guidelines, the justification submitted is in order and the expenditure has been allowed to be capitalized.

(b) **Ash brick machine and installation:** The petitioner’s has claimed an amount of ₹.13.30 lakh under this head, towards expenditure incurred for the purchase of Ash brick making machine and installation for utilization of ash for manufacturing of Ash bricks. The expenditure is in order and is allowed under this head.

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)}.

20. The petitioner has claimed a total expenditure of ₹2858.02 lakh (₹486.50 lakh, ₹1015.77 lakh and ₹1355.75 lakh for the years 2006-07, 2007-08 and 2008-09 respectively) under this head. The admissibility of the claims for the respective years is examined as under:

2006-07

21. The expenditure of ₹486.50 lakh claimed by the petitioner is in respect of replacement of boiler tubes (economizer), 'motor winding conversion', L&T make switch fuse units, installation of fire alarm system, emulsifier system for 25MVA station transformer, supply of network items for expansion/up-gradation of LAN, lease line modems, drag chain system, pull-chord system, station switch boards 6.6 kV, lifting of underground HP, LP and fire pipelines, bull dozer, dual channel portable vibration data collector cum analyzer cum balancer, civil work for weighbridge platform in cement/steel yard reference standard energy meter for calibration of energy meters, dew point meter, construction of sheds, dozer transmission system-control valve, construction of boundary wall on the land not owned by petitioner, LAN server, laptops, projectors, fax machine etc, hospital equipments etc.

22. However, the expenditure in respect of the following assets has not been allowed as these were either in the nature of O&M expenses or

expenses of a minor nature, which are not permissible in terms of Clause (3) of Regulation 18.

(a) **Expenditure of O&M nature**

Sl. No	Particulars of asset	Amount (₹in lakh)
1	Motor winding conversion for 8 nos. of station ID fans, mill fans	9.97
2	Replacement of L&T make switch fuse units	10.33 7.72
3	Construction of sheds	1.52
4	Dozer transmission system-control valve	2.28

The expenditure of ₹31.83 lakh in respect of the above assets is in the nature of O&M expenses and hence capitalization has not been allowed.

(b) **Minor items**

23. The petitioner has claimed an expenditure of ₹.22.51 lakh in respect of certain office items like personal computers, laptops, projectors, fax machine etc, which are in the nature of minor assets. The justification submitted by the petitioner for the said expenditure, is as under:

“Office equipment was procured to provide the employees the basic minimum working infrastructure in the office / plant.”

As capitalization of minor assets purchased after the cut-off date is not permissible in terms of Clause (3) of Regulation 18, the above expenditure has not been allowed.

24. In addition to the above, the petitioner has de-capitalized an amount of ₹24.47 lakh under this head, in respect of assets like replacement of boiler tubes (economizer), boiler tubes (ceiling superheat

coils, miniature oil circuit breaker (MOCB) etc, during the year 2006-07, which has been considered. The additional capitalization allowed for the year is summarized as under:

(₹in lakh)	
Nature of capitalization	2006-07
Expenditure claimed	486.50
Less: Expenditure disallowed	54.34
Total	432.16
Less : Expenditure de-capitalized	24.47
Net additional capital expenditure allowed	407.69

2007-08

25. The petitioners have claimed an amount of ₹1015.77 lakh towards expenditure incurred on 'digital control system closed loop control', design, manufacturing, supply & erection of breaker with extension panel for augmentation of L&T make switchboard, replacement of condenser tubes for 210 MW unit, weak basic Aion (WBA) & strong basic Aion (SBA) system for improving the quality of water, microprocessor based pH analyzer for water, portable dynamic three phase relay testing, ezee cut gasket cutting machine, portable electronic weighing machine, motor cycle, civil works for 3rd raising of ash dyke Ph III & IV combined at BTPS, operation table hydraulic system & instrument trolley, LAN servers etc.

26. However, the expenditure in respect of the following assets has not been allowed as these were either in the nature of O&M expenses or expenses of a minor nature, which are not permissible in terms of Clause (3) of Regulation 18.

(a) **Expenditure of O&M nature**

27. In respect of a claim for an expenditure of ₹839.66 lakh towards replacement of condenser tubes for 210 MW unit, the petitioner has submitted the following justification:

“Cooling water for BTPS is supplied from the River Yamuna. The Yamuna waters have been heavily polluted by the number of polluting industries and other sources. The biological oxygen demand is in the range of 100 PPM. Due to the high BOD water entering the condenser still has microbiological organism which causes microbiological corrosion insides of the condenser tubes. The condenser tubes have got totally corroded; thinning has taken place and has caused tube punctures leading to cooling water leakage into the steam condensate. With replacement of condensers tubes, the station has been able to maintain high generation levels”.

From the details regarding the consumption of capital spares during the year 2006-07 submitted by the petitioner vide affidavit dated 11.1.2010, it is observed that the condenser tubes amounting to ₹534.32 lakh has been consumed during the year. As O&M norms specified by the Commission for the period 2004-09, provide for expenditure on this count, the said expenditure is covered under O&M expenses, and has not been allowed.

(b) **Minor items**

28. The petitioner has purchased certain minor assets amounting to ₹ 19.00 lakh like motor generator welding set, turbidity meter, portable electronic weighing machine of 200kg capacity, portable electronic weighing machine of 200kg capacity, ezee cut gasket cutting machine, zirconia probe model- ZFG2 cell, LAN servers and Hero Honda splendor plus motor cycle. Since capitalization of minor assets purchased after the

cut-off date is not permissible in terms of clause (3) of Regulation 18, the said expenditure has not been allowed to be capitalized.

29. In addition to the above, in respect of an expenditure of ₹15.90 lakh incurred for the purchase of 'digital control system closed loop control', the petitioner has not submitted any justification for the same. However, considering the nature of the asset, which falls under the category of 'minor asset', capitalization of the same has not been allowed.

30. Further, the petitioner has de-capitalized an amount of ₹0.56 lakh under this head, in respect of 66 kV 3 phase kV Bus duct outside turbine hall etc, for the year 2007-08, which has been considered. The additional capitalization allowed for the year is summarized as under:

(₹in lakh)	
Nature of capitalization	2007-08
Expenditure claimed	1015.77
Less: Expenditure disallowed	874.57
Total	141.20
Less : Expenditure de-capitalized	0.56
Net Additional capital expenditure allowed	140.64

2008-09

31. The petitioner has claimed an expenditure of ₹1355.75 lakh towards the refurbishment of 125 MVA transformer of GT-1, replacement of 166 MVA generator transformer, 36 channel programmable recorder, renovation of quarter for ET hostel, ERP implementation, modification of coal mill, online infrared absorption based CO analyser, micro-processor based on-line boiler flue gas oxygen analyser, hydraulic comparator, ambient air quality monitoring system, replacement of finned economizer,

J bends tubes of boiler, split spurwheel assembly, replacement of battery bank, construction of cabin for CISF at ash dyke, raising of ash dyke etc.

32. However, the expenditure in respect of the following assets has not been allowed as these were either in the nature of O&M expenses or expenses of a minor nature, which are not permissible in terms of Clause (3) of Regulation 18.

(a) **Expenditure of O&M nature**

Sl. No	Particulars of assets	Amount (₹.in lakh)
1	Renovation of 'A' type quarter for ET hostel	41.06
2	Replacement of finned economiser J bends tubes of Boiler	29.51
3	Split spurwheel assembly used in wagon tripller	26.55
4	High discharge performance type battery bank	57.90

The above expenditure amounting to ₹155.02 lakh is in the nature of O&M expenses and hence not allowed to be capitalized for the year 2008-09, under this head.

33. In addition to the above, the petitioner has de-capitalized an amount of ₹79.00 lakh under this head, in respect of assets like old generator transformer, 12 channel paperless recorder etc, for the year 2008-09, which has been considered. The additional capitalization allowed for the year is summarized as under:

(₹ in lakh)	
Nature of capitalization	2008-09
Expenditure claimed	1355.75
Less: Expenditure disallowed	155.02
Total	1200.73
Less : Expenditure de-capitalized	79.00
Net Additional capital expenditure allowed	1121.73

34. The petitioner in its claim for expenditure on replacement of old assets, has de-capitalized an amount estimated at 10% of the value of the new assets which had been put to use, instead of de-capitalization of the original gross value of the original assets in terms of Note 2 and 4 of Regulation 18. The petitioner has submitted that from the date of commercial operation of the generating station, the capital cost per MW of the generating station had escalated at least 10 times and hence, de-capitalization of an estimated amount of 10% of the value of the new assets which had been put to use, has been considered. However, the de-capitalized amount has not been reduced from the additional capital expenditure claimed by the petitioner, on the ground that the amount of de-capitalization claimed would be adjusted in the books of accounts subsequently.

35. During the hearing, the petitioner was directed to submit the gross value of the old generator transformers replaced from Units II and III of the generating station against which the amount de-capitalized was not furnished. In its submission dated 14.6.2010, the petitioner has submitted that the estimated de-capitalized value could be considered as 5.42% of the replacement cost. However, in its petition, the petitioner has adopted the methodology of de-capitalization of an amount estimated at 10% of the value of the new asset.

36. Unit-I of the generating station was declared under commercial operation on 1.11.1973 and Unit-V on 1.4.1982. As the generating station is more than 25 years old, the methodology of de-capitalization of an amount estimated at 10% of the value of the new assets, adopted by the petitioner is accepted, in relaxation of the provisions of Note 2 and 4 of Regulation 18 of the 2004 regulations.

Deferred works relating to ash pond or ash handling system in original scope of work. {Regulation 18(2) (v)}

37. The petitioner has claimed a total expenditure of ₹1827.88 lakh (₹564.53 lakh, ₹4.70 lakh and ₹1258.65 lakh for the years 2006-07, 2007-08 and 2008-09 respectively) under this head, towards the raising of ash dyke and erection of boundary wall to prevent trespassing. The claim is in order and the amount has been allowed to be capitalized.

38. Based on the above discussions, the additional capital expenditure allowed for the period 2006-09, for the purpose of tariff is as under:

(₹ in lakh)				
Nature of capitalization	2006-07	2007-08	2008-09	Total
On Account of change in law [Regulation 18 (2)(iii)]	24.61	0.00	0.00	24.61
Additional works/services which have become necessary for efficient and successful operation of the generating station, but not included in the original project cost- [Regulation 18(2)(iv)]	407.69	140.64	1121.73	1670.06
Deferred works relating to ash pond or ash handling system in the original project cost- [Regulation 18(2)(v)]	564.53	4.70	1258.65	1827.88
Additional capital expenditure allowed	996.83	145.34	2380.38	3522.55
Less: Un-discharged liabilities included in the above	51.59	5.00	1.91	58.50

Add : Liabilities discharged during the years	0.00	40.86	10.35	51.21
Net additional capital expenditure allowed	945.24	181.20	2388.82	3515.26

Debt- Equity ratio

39. Regulation 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.

(2) In case of the generating stations for which investment approval was accorded prior to 1.4.2004 and which are likely to be declared under commercial operation during the period 1.4.2004 to 31.3.2009, debt and equity in the ratio of 70:30 shall be considered:

Provided that where equity actually employed to finance the project is less than 30%, the actual debt and equity shall be considered for determination of tariff:

Provided further that the Commission may in appropriate cases consider equity higher than 30% for determination of tariff, where the generating company is able to establish to the satisfaction of the Commission that deployment of equity higher than 30% was in the interest of general public.

(3) In case of the generating stations for which investment approval is accorded on or after 1.4.2004, debt and equity in the ratio of 70:30 shall be considered for determination of tariff:

7 Substituted vide Regulation 3 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (First Amendment) Regulations, 2006 published in the Gazette of India (Extraordinary) Part III,

Provided that where equity actually employed is more than 30%, equity in excess of 30% shall be treated as notional loan:

Provided further that where deployment of equity is less than 30%, the actual debt and equity shall be considered for determination of tariff.

(4) The debt and equity amount arrived at in accordance with above clause (1), (2) or (3), as the case may be, shall be used for calculation of interest on loan, return on equity, advance against depreciation and foreign exchange rate variation.]”

40. The Commission vide its order dated 9.5.2006 in Petition No. 40/2004 had considered the debt-equity ratio of 50:50 for the capital cost of the generating station as on 31.3.2004. The petitioner has submitted that the additional capital expenditure incurred after 31.5.2006 has been financed through internal resources. Hence, in terms of sub-clause (a) of clause (1) of Regulation 20 of the 2004 regulations, the debt-equity ratio of 70:30 has been considered for the additional capital expenditure for the period 1.6.2006 to 31.3.2009. Accordingly, the additional notional equity, on account of additional capitalization, works out as under:

Particulars	₹ in lakh)		
	2006-07	2007-08	2008-09
Additional notional equity	284	54	717

Return on Equity

41. As per NFA methodology, return would be provided on constant equity component till the loans are fully paid. Once the loans are fully repaid, the amount of depreciation recovered would be considered/

adjusted towards notional reduction in equity. In other words, the return on equity has been calculated on reducing equity base, once the loan is fully repaid notionally. The details of equity and loan as on 1.6.2006 are as under:

Particulars	(₹ in lakh)	
	Normative Loan	Normative Equity
Balance as on 1.4.2006 (as per order dated 9.5.2006)	187	23403
Repayment/depreciation recovered during 1.4.2006 to 31.5.2006 i.e.Rs. 260 lakh	187	73
Balance as on 31.5.2006	0	23330

42. The depreciation recovered during the period from 1.4.2006 to 31.5.2006 amounting to ₹260 lakh has been adjusted towards repayment of the balance normative loan of ₹187 lakh and normative equity by ₹73 lakh. Since normative loan has been fully repaid by 31.5.2006, the reduction in the capital cost at the time of transfer of ownership (due to exclusion of land as stated above) has resulted in decrease in equity, by ₹5194 lakh as on 1.6.2006.

43. In view of above, the opening balance of equity as on 1.6.2006 has been worked out as ₹18136 lakh. Return on equity has been computed as under:

Particulars	(₹ in lakh)		
	2006-07 (1.6.2006 to 31.3.2007)	2007-08	2008-09
Equity-Opening	18136	17790	16374
Addition of equity due to additional capital expenditure	284	54	716
Repayment of equity (i.e Depreciation after adjusting the	(-) 630	(-) 1471	-

<i>accumulated depreciation of de-capitalized assets and payments towards repayment of loan)</i>			
Equity-Closing	17790	16374	17090
Average equity	17963	17082	16732
Return on Equity @14%	2095*	2391	2342
Return on Equity (annualised)	2515	2391	2342

**for the period from 1.6.2006 to 31.3.2007*

Interest on loan

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

- (a) Gross opening loan on normative basis as on 1.4.2004 as considered in order dated 9.5.2009 in Petition No. 40/2004 was ₹23403 lakh corresponding to the capital cost of ₹46806 lakh.
- (b) The cumulative repayment of loan upto 31.3.2004 was ₹20098 lakh.
- (c) As the balance amount of loan was paid during the period 1.4.2004 to 31.5.2006, the net opening loan as on 31.5.2006 is 'nil'.
- (d) On account of additional capitalization during the period 1.6.2006 to 31.3.2009, an amount of ₹662 lakh, ₹127 lakh and ₹1672 lakh has been apportioned to the normative loan during the years 2006-07, 2007-08 and 2008-09 respectively.
- (e) The repayment for the period 2006-09 has been worked out on normative basis i.e. depreciation amount after adjusting the accumulated depreciation of de-capitalized assets has been considered as repayment till the entire loan is repaid.
- (f) The rate of interest for the period 2004-09 on outstanding notional loan is considered as 10.5% in line with the Commission's order dated 9.5.2006 in Petition No. 40/2004.

45. Interest on loan has been computed as under:

Particulars	(₹in lakh)		
	2006-07 (1.6.2006 to 31.3.2007)	2007-08	2008-09
Gross Opening loan	20806	21468	21595
Cumulative repayment of loan upto previous year	20806	21468	21595
Net loan Opening	-	-	-
Addition of loan due to additional capital expenditure	662	127	1672
Repayment of loan during the year (i.e. <i>Depreciation after adjusting the accumulated depreciation of de-capitalized asset</i>)	(-) 662	(-) 127	(-) 1575
Net loan closing	-	-	97
Average loan	-	-	48
Weighted average rate of interest on loan	-	-	10.5%
Interest on Loan	-	-	5

Depreciation

46. Sub-clause (a) of clause (ii) of Regulation 38 of the 2004 regulations provides that depreciation shall be computed 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 life 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.”

47. The petitioner has claimed depreciation on the capital expenditure in terms of the provisions of the above regulation.

48. Depreciation has been worked out as under:

- (a) The Commission vide its order dated 9.5.2006 in Petition No. 40/2004 approved the capital cost of ₹46807 lakh. As per Govt. of India notification dated 4.10.2006, the capital cost (excluding the land value of ₹5194 lakh) as on 31.5.2006, works out to ₹41613 lakh.
- (b) As the capital cost has been reduced to ₹41613 lakh, the weighted average rate of depreciation has been re-calculated as per methodology adopted in order dated 9.5.2006 in Petition No. 40/2004, which works out to 3.7473%, against the petitioner’s claim for 3.75%.

49. The necessary calculation for depreciation is as under:

Particulars	(₹ in lakh)		
	2006-07 (1.6.2006 to 31.3.2007)	2007-08	2008-09
Gross Block-opening	41613	42558	42739
Additions	945	181	2389
Gross Block- closing	42558	42739	45128
Average Gross Block	42086	42649	43934
Rate of Depreciation	3.7473%	3.7473%	3.7473%
90% Depreciable Value	37877	38384	39540
Depreciation	1314*	1598	1646
Depreciation (annualized)	1577	1598	1646

* for the period from 1.6.2006 to 31.3.2007

Advance against Depreciation

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

Operation & Maintenance Expenses

51. The Commission vide its order dated 9.5.2006 in Petition No. 40/2004 had admitted an amount of ₹14275 lakh per year as O&M expenses for the generating station. This has been considered.

52. In addition to the above, the petitioner has claimed 'Annual lease rent' amounting to ₹537 lakh, ₹584 lakh and ₹601 lakh during the years 2006-07, 2007-08 and 2008-09 respectively.

53. Govt. of India, vide its notification dated 31.5.2006 decided to recover the "annual lease rent" @ 10% of the book value of leasehold land which amounts to ₹5194 lakh, as on the said date. Further, the Ministry of Power, Govt. of India vide letter no. 2/16/2004-BTPS dated 18.12.2006, had further increased the book value of the land by an amount of ₹4,00,37,000/- on account of payment made to slum & Jhuggie Jhopri, MCD, towards provisional relocation charges for removal of Jhuggie clusters from the land of the generating station and directed the petitioner to revise the lease rent in accordance with the revised land value.

54. In view of the above, the petitioner has incurred an additional amount of ₹4.27 crore during the period 2006-09 on account of the enhanced amount paid on behalf of the Govt. of India and has claimed lease rent on the said enhanced amount.

55. During the hearing, the petitioner was directed to submit additional details regarding the enhancement of the annual lease rents and the actual amount incurred towards the lease rent for the years 2006-07, 2007-08 and 2008-09 alongwith the documentary evidence for the same. The petitioner by affidavit dated 16.6.2010 has submitted the said details.

56. On scrutiny of the details and the documents submitted by the petitioner, it is observed that an amount of ₹447 lakh (annualized at ₹537 lakh), ₹584 lakh and ₹601 lakh has been incurred by the petitioner during the years 2006-07, 2007-08 and 2008-09 respectively, as lease rental charges. The claim of the petitioner is in order and hence allowed.

57. Based on the above discussions, the O&M expenses for the period from 1.6.2006 to 31.3.2009 is computed as under:

Particulars	(₹ in lakh)		
	2006-07 (1.6.2006 to 31.3.2007)	2007-08	2008-09
O&M expenses allowed as per order dated 9.5.2006	14275*	14275	14275
Annual lease rent incurred	537*	584	601
Total O&M expenses	14812	14859	14876

**figures on annualized basis*

Interest on working capital

58. 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 have been kept unchanged. 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:

(₹ in lakh)			
Particulars	2006-07	2007-08	2008-09
Coal Stock- 2 months	10993	11023	10993
Oil stock -2 months	363	364	363
O & M expenses	1234	1238	1240
Maintenance Spares	535	567	601
Receivables	14987	15010	14982
Total Working Capital	28112	28203	28179
Rate of Interest	10.25%	10.25%	10.25%
Total Interest on Working capital	2881	2891	2888

59. The annual fixed charges of the generating station for the period 2006-09 is summarized as under:

(₹ in lakh)			
Annual Fixed Charges	2006-07	2007-08	2008-09
Depreciation	1577	1598	1646
Interest on Loan	-	-	5
Return on Equity	2515	2391	2342
Advance against Depreciation	-	-	-
Interest on Working Capital	2881	2891	2888
O & M Expenses (including annual lease rental for land)	14812	14859	14876
Total	21785	21739	21759

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

61. The difference in respect of the tariff determined by order dated 9.5.2006 and the tariff determined by this order, shall be recovered from the beneficiaries in three equal monthly installments.

62. 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.

63. 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, wherein it was concluded by the Commission that the application filing fees was part of the allowable O&M expenses.

64. Petition No.194/2009 stands disposed of in terms of the above.

Sd/-
(M.DEENA DAYALAN)
MEMBER

Sd/-
(S.JAYARAMAN)
MEMBER