

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram:

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

Petition No. 123/2007

In the matter of

Final transmission tariff for 2nd 315 MVA auto transformer at Narendra sub-station associated with Kaiga-Narendra transmission system in Southern Region for the period from 1.9.2006 to 31.3.2009 and transmission tariff for additional capital expenditure incurred during 2006-07 (2nd additional capitalization) for 400 kV D/C Kaiga-Narendra transmission line and 400/220 kV sub-station at Narendra in Southern region for the period from 1.4.2006 to 31.3.2009.

And in the matter of

Power Grid Corporation of India Limited, Gurgaon
Vs

..Petitioner

1. Karnataka Power Transmission Corporation Ltd., Bangalore
2. Transmission Corporation of Andhra Pradesh, Hyderabad
3. Kerala State Electricity Board, Thiruvananthapuram
4. Tamil Nadu Electricity Board, Chennai
5. Electricity Department, Government of Pondicherry, Pondicherry **Respondents**

The following were present:

1. Shri U.K.Tyagi, PGCIL
2. Shri C.Kannan, PGCIL
3. Shri Rakesh Prasad, PGCIL
4. Shri Harmeet Singh, PGCIL

**ORDER
(DATE OF HEARING: 27.11.2007)**

This petition has been filed for revision of transmission tariff for additional capital expenditure incurred during 2006-07 (2nd additional capitalization) for 400 kV D/C Kaiga-Narendra transmission line (Asset-I) and 400/220 kV sub-station at Narendra with 1x315 MVA transformer (Asset-II) for the period from 1.4.2006 to 31.3.2009, based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004 (hereinafter referred to as "the 2004 regulations"). The petitioner has also sought approval for transmission charges for

2nd 315 MVA Auto Transformer at Narendra sub-station associated with Kaiga-Narendra transmission system (Asset-III) (part of Asset-II) for the period from 1.9.2006 to 31.3.2009, after accounting for additional capitalization of Rs. 35.10 lakh during 2006-07, also based on the 2004 regulations. The petitioner has also prayed for reimbursement of expenditure from the beneficiaries incurred towards publishing of notices in newspapers and the petition filing fee.

2. The details of transmission assets and their dates of commercial operation as indicated by the petitioner are as under:

S. No.	Name of the assets	Date of commercial operation
1.	Asset-I	1.11.2005
2.	Asset-II	1.11.2005
3.	Asset-III	1.9.2006

3. The transmission charges for Asset-I and Asset-II were approved by the Commission in its order dated 15.3.2007 in Petition No. 128/2006 after accounting for additional capitalization for the period up to 31.3.2006. The provisional transmission charges for Asset-III were approved vide order dated 29.1.2007 in Petition No. 149/2007.

4. The administrative approval and expenditure sanction for Kaiga-Narendra Transmission System, which primarily relates to Asset-I was accorded by the Board of Directors of the petitioner company vide Memorandum dated 27.4.2000 at an estimated cost of Rs 7599 lakh (2nd quarter, 1999 price level), which included IDC of Rs. 912 lakh. Subsequently, revised cost estimate for Asset-I was approved by Board of Directors of the petitioner company vide Memorandum dated 30.8.2005 at an estimated cost of Rs 18161 lakh (1st quarter, 2005 price level), including IDC of Rs. 3131 lakh. The administrative approval and expenditure sanction for Asset-II, which also covered Asset-III was accorded by the Board of Directors of the petitioner

company vide Memorandum dated 27.2.2003 at an estimated cost of Rs 6051 lakh, which includes IDC of Rs. 487 lakh. Subsequently, revised cost estimate for Asset-II and Asset-III was approved by Board of Directors of the petitioner company vide Memorandum dated 26.2.2008 at an estimated cost of Rs 6231 lakh, including IDC of Rs. 223 lakh.

5. All the three assets form part of Kaiga-Narendra Transmission System, though investment approvals for Asset-I and Asset-II & Asset-III (combined) was accorded separately. During the hearing, the issue of separate approvals was raised. The representative of the petitioner explained that the decision to construct Asset-II and Asset-III was taken at a later stage in view of Ministry of Power letter dated 16.12.2002, and accordingly the approval was accorded separately. We find that though the approvals are different, the assets are the components of same transmission system. For the purpose of tariff, we have considered them together. The relevant details of the approved cost and completion cost of the assets noted at para 2 above are as under:

(Rs. in lakh)

Name of the assets	Approved cost	Capital expenditure as on the date of commercial operation	Capital Expenditure from the date of commercial operation to 31.3.2006	Capital expenditure up to 31.3.2007	Capital cost on 31.3.2007	Balance Expenditure	Estimated completion cost
Asset- I	18161.00	14602.02	39.52	397.61	15039.15	6.40	15046
Asset-II	6231.00	4347.57	644.85	436.76	5429.18	58.32	5488
Asset-III		623.59	-	35.10	658.69	84.77	743

6. The petitioner has claimed the transmission charges as under:

(Rs.in lakh)

	Asset- I (Additional)			Asset-II (Additional)			Asset-III		
	2006-07 (Pro rata)	2007-08	2008-09	2006-07 (Pro rata)	2007-08	2008-09	2006-07 (Pro rata)	2007-08	2008-09
Depreciation	5.11	10.22	10.22	4.60	9.21	9.21	13.46	23.71	23.71
Interest on Loan	11.11	21.40	19.71	11.13	22.14	21.48	21.10	35.74	33.80
Return on Equity	8.35	16.70	16.70	9.17	18.34	18.34	15.66	27.58	27.58
Advance against Depreciation	0.00	7.18	11.80	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.63	1.39	1.47	0.66	1.33	1.35	2.19	3.87	3.95
O & M Expenses	0.00	0.00	0.00	0.00	0.00	0.00	35.49	63.26	65.80
Total	25.21	56.89	59.90	25.57	51.02	50.38	87.90	154.16	154.84

7. The details submitted by the petitioner in support of its claim for interest on working capital are given hereunder:

(Rs.in lakh)

	Asset- I (Additional)			Asset-II (Additional)			Asset-III		
	2006-07 (Pro rata)	2007-08	2008-09	2006-07 (Pro rata)	2007-08	2008-09	2006-07 (Pro rata)	2007-08	2008-09
Maintenance Spares	1.99	4.10	4.34	2.18	4.50	4.77	6.41	6.82	7.22
O & M expenses	0.00	0.00	0.00	0.00	0.00	0.00	5.07	5.27	5.48
Receivables	4.20	9.48	9.98	4.26	8.50	8.40	25.11	25.69	25.81
Total	6.19	13.58	14.32	6.45	13.00	13.17	36.59	37.78	38.51
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	0.63	1.39	1.47	3.88	4.74	4.84	2.19	3.87	3.95

8. The reply to the petition has been filed by Tamil Nadu Electricity Board. In response to the public notices published by the petitioner in accordance with the procedure specified by the Commission, no comments have been received from the general public.

CAPITAL COST

9. As per clause (1) of Regulation 52 of the 2004 regulations, subject to prudence check, 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 transmission system and shall include capitalised initial spares subject to a ceiling norm as 1.5% of original project cost. The regulation is applicable in case of the transmission system declared under commercial operation on or after 1.4.2004.

10. The petitioner has claimed additional capitalization of Rs. 397.61 lakh and Rs. 436.76 lakh on the works for the period from 1.4.2006 to 31.3.2007 over the capital expenditure of Rs. 15039.15 lakh and Rs. 5429.18 lakh for Asset-I and Asset-II, respectively up to 31.3.2006 earlier considered. For Asset-III, the petitioner has claimed tariff after accounting for additional capitalization of Rs. 35.10 lakh over the capital cost of Rs. 623.59 lakh up to 31.3.2007.

ADDITIONAL CAPITALIZATION 2006-07

11. Clause (1) of Regulation 53 of the 2004 regulations provides-

“(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 works subject to the ceiling norm specified in regulation 52;
- (iv) Liabilities to meet award of arbitration or 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 transmission system.”

12. The details submitted by the petitioner in support of its claim for additional capital expenditure for the transmission assets are given hereunder:

Asset-I	Asset-II	Asset-III
Nature of expenditure	Nature of expenditure	Nature of expenditure
Transmission line = Rs. 397.61 lakh	Land = Rs. 153.61 lakh Buildings = Rs. 54.72 lakh Sub-station = Rs. 228.43 lakh	Sub-station = Rs. 35.10 lakh
Total = Rs. 397.61 lakh	Total = Rs. 436.76 lakh	Total = Rs. 35.10 lakh

13. The additional capital expenditure claimed is within the original scope of work and is found to be in order as it was against the committed liability. Accordingly,

capitalization of the additional expenditure claimed by the petitioner has been allowed for the transmission assets.

Time Over-run

14. This is being discussed in the context of Asst-III whose tariff is being determined for the first time. As per the original approval, Asset-III was scheduled to be commissioned by August 2005, but has been declared under commercial operation on 1.9.2006, that is, with a delay of about 12 months. The petitioner has explained that because of failure of transformer at Baripadha sub-station, there was system constraint in Eastern Region and it was found necessary to put a new transformer in place of the failed transformer on urgent basis. Therefore, in the broader interest of the system, the available transformer on Narendra sub-station which was likely to be commissioned as per the approved schedule was diverted to Baripadha sub-station. This caused delay of about 12 months. It is further explained that because of absence of Asset-III, there was no constraint in feeding the power supply to KPTCL. There was no loss to Southern Region beneficiaries as no power supply constraint was experienced and no additional cost has been incurred on account of delayed commissioning. In view of this, it has been submitted that delay in completion of Asset-III has had no adverse implication.

15. The respondents have not raised any objection to the explanation given by the petitioner for the time over-run.

16. We have considered the matter. There is satisfactory explanation from the petitioner for the entire delay in completion of the transmission line. Therefore, the delay in commissioning of line is condoned.

TOTAL CAPITAL COST

17. Based on the above, capital cost for the purpose of tariff for each of the transmission assets, works out as under:

(Rs. in lakh)

Transmission assets	Capital cost on the date of commercial operation	Capital expenditure from the date of commercial operation to 31.3.2006	Capital cost on 1.4.2006	Capital expenditure up to 31.3.2007	Capital cost as on 1.4.2007
Asset-I (Additional)	14602.02	39.52	14641.54	397.61	15039.15
Asset-II (Additional)	4347.57	644.85	4992.42	436.76	5429.18
Asset-III	623.59	-	623.59	35.10	658.69

DEBT- EQUITY RATIO

18. Clause (1) of Regulation 54 of the 2004 regulations *inter alia* provides that,-

“(1) In case of the existing projects, debt–equity ratio Considered by the Commission for fixation of tariff for the period ending 31.3.2004 shall be considered for determination of tariff with effect from 01.04.2004:

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 projects where additional capitalisation has been completed on or after 1.4.2004 and admitted by the Commission under Regulation 53, equity in the additional capitalisation 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 capitalisation, or
- (c) actual equity employed,

whichever is the least:

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

19. The Note 1 below Regulations 53 lays down that any expenditure on account of committed liabilities with the original scope of work is to be serviced in the normative debt-equity ratio specified in Regulation 54.

20. The petitioner has considered debt-equity ratio 70:10:29:90 for Asset-III, as actually deployed on the date of commercial operation. The petitioner has further considered the amount of additional capitalization in the debt-equity ratio of 70:30. In our computation, debt-equity ratio for Asset-I, and Asset-II, as on 1.4.2006 as arrived at in the order dated 15.3.2007 in Petition No. 128/2006 has been considered. For Asset-III, actual debt-equity ratio as on the date of commercial operation has been considered. Additional capital expenditure approved has been apportioned between debt and equity in the ratio of 70:30 in accordance with the 2004 regulations. Accordingly, for the purpose of tariff, equity considered for the transmission assets is as under:

(Rs. in lakh)			
	Notional equity up to 31.3.2007	Average equity for 2006-07	Equity as on 31.3.2007
Asset- I	119.28	59.64	119.28
Asset-II	131.03	65.51	131.03
Asset-III	10.53	191.71	196.97

RETURN ON EQUITY

21. As per clause (iii) of Regulation 56 of the 2004 regulations, return on equity shall be computed on the equity base determined in accordance with regulation 54 @ 14% per annum. Equity invested in foreign currency is to be allowed a return in the same currency and the payment on this account is made in Indian Rupees based on the exchange rate prevailing on the due date of billing.

22. For the reasons already recorded, equity as given in the table under para 20 has been considered. However tariff for the years 2005-06 has been allowed pro rata

on average equity. Accordingly, return on equity allowed each year during the tariff period is given hereunder

(Rs. in lakh)

Transmission assets	Return on equity		
	2006-07	2007-08	2008-09
Asset- I (Additional)	8.35	16.70	16.70
Asset- II (Additional)	9.17	18.34	18.34
Asset-III	15.66 (Pro rata)	27.58	27.58

INTEREST ON LOAN

23. Clause (i) of regulation 56 of the 2004 regulations *inter alia* provides that,-

“(a) Interest on loan capital shall be computed loan wise on the loans arrived at in the manner indicated in regulation 54.

(b) The loan outstanding as on 1.4.2004 shall be worked out as the gross loan in accordance with Regulation 54 minus cumulative repayment as admitted by the Commission or any other authority having power to do so, up to 31.3.2004. The repayment for the period 2004-09 shall be worked out on a normative basis.

(c) The transmission licensee shall make every effort to re-finance the loan as long as it results in net benefit to the beneficiaries. The costs associated with such re-financing shall be borne by the beneficiaries.

(d) The changes to the loan terms and conditions shall be reflected from the date of such re-financing and benefit passed on to the beneficiaries.

(e) In case of dispute, any of the parties may approach the Commission with proper application. However, the beneficiaries shall not withhold any payment ordered by the Commission to the transmission licensee during pendency of any dispute relating to re-financing of loan;

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

(g) The transmission licensee shall not make any profit on account of re-financing of loan and interest on loan;

(h) The transmission licensee may, at its discretion, swap loans having floating rate of interest with loans having fixed rate of interest, or vice versa, at its own cost and gains or losses as a result of such swapping shall accrue to the transmission licensee:

Provided that the beneficiaries shall be liable to pay interest for the loans initially contracted, whether on floating or fixed rate of interest.”

24. The petitioner has claimed interest on loan in the following manner:

Asset-I and Asset-II (Additional)

- (i) Gross loans opening has been considered from 2006-07.;
- (ii) On the basis of actual rate of interest on actual average loan, the weighted average rate of interest on loan is worked out for various years;
- (iii) Bonds XIX (24.7.2006) and Bond XXII (7.12.2006) have been considered for additional capitalisation purpose during 2006-07;
- (iv) National loan amounting to Rs. 278.33 lakh and Rs. 305.73 lakh, respectively corresponding to additional capital expenditure for the year 2006-07 has been considered and the weighted average rate of interest on loan for respective years as per above has been multiplied to arrive at interest on loan, considering (depreciation + AAD) as repayment.

Asset-III

- (i) On the basis of actual rate of interest on actual average loan, the weighted average rate of interest on loan is worked out for various years;
- (ii) Notional loan corresponding to additional capital expenditure for the year 2006-07 has been added to the gross loan on the date of commercial operation and the weighted average rate of interest on loan for respective years has been multiplied to arrive at interest on loan. Deprecation + Advance Against Deprecation has been considered as repayment.

25. In our calculation, the interest on loan has been worked out as detailed below:
- (i) Gross amount of loan, repayment of instalments and rate of interest submitted by the petitioner have been used to work out weighted average rate of interest on actual loan.
 - (ii) Notional loan arising out of additional capitalization has been added in loan amount as on date of commercial operation to arrive at total notional loan. The adjusted gross loan has been considered as normative loan for tariff calculations.
 - (iii) For the Asset-I and Asset-II, as the tariff is being worked out on additional capital expenditure only, therefore, the opening gross loan has been assumed nil and the notional loan corresponding to additional capital expenditure for 2006-07 only has been taken into account. As the net loan opening for these assets is nil during 2006-07, the repayment for that period is also nil.
 - (iv) Tariff has been worked out considering normative loan and normative repayments. Once the normative loan has been arrived at, it has been considered for all purposes in the tariff. Normative repayment has been worked out by the following formula :

$$\frac{\text{Actual repayment of actual loan during the year}}{\text{Opening balance of actual loan during the year}} \times \text{Opening balance of normative loan during the year}$$
 - (v) Moratorium in repayment of loan has been considered with reference to normative loan and if the normative repayment of loan during the year is less than the depreciation during the year, it has been considered as

moratorium and depreciation during the year has been deemed as normative repayment of loan during the year.

- (vi) Weighted average rate of interest on actual loan worked out as per (i) above has been applied on the average loan during the year to arrive at the interest on loan.

26. Based on the above, the year-wise details of interest worked out are given hereunder:

(Rs. in lakh)

Details of loan	Asset-I (Additional)			Asset-II (Additional)			Asset-III		
	2006-07 (Pro rata)	2007-08	2008-09	2006-07 (Pro rata)	2007-08	2008-09	2006-07 (Pro rata)	2007-08	2008-09
Opening Gross Loan	0.00	278.33	278.33	0.00	305.73	305.73	437.15	461.72	461.72
Cumulative Repayment	0.00	0.00	17.73	0.00	0.00	9.21	0.00	13.46	37.18
Net Loan-Opening	0.00	278.33	260.60	0.00	305.73	296.52	437.15	448.26	424.54
Additions due to Additional Capitalisation	278.33			305.73			24.57	0.00	
Repayment during the year	0.00	17.73	22.43	0.00	9.21	9.21	13.46	23.71	23.71
Net Loan-Closing	278.33	260.60	238.16	305.73	296.52	287.32	448.26	424.54	400.83
Average Loan	139.16	269.46	249.38	152.87	301.13	291.92	442.70	436.40	412.69
Weighted Average Rate of Interest on Loan	8.13%	8.09%	8.05%	7.39%	7.47%	7.48%	8.17%	8.19%	8.19%
Interest	11.32	21.80	20.08	11.30	22.48	21.83	21.10	35.74	33.80

27. The detailed calculations in support of the weighted average rate of interest are contained in Annexure-I, Annexure-II and Annexure-III attached.

DEPRECIATION

28. Sub-clause (a) of clause (ii) of Regulation 56 of the 2004 regulations provides for computation of depreciation in the following manner, namely:

- (i) The value base for the purpose of depreciation shall be the historical cost of the asset.
- (ii) Depreciation shall be calculated annually based on straight line method over the useful life of the asset and at the rates prescribed in Appendix II to these regulations. The residual value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the

historical capital cost of the asset. Land is not a depreciable asset and its cost shall be excluded from the capital cost while computing 90% of the historical cost of the asset. The historical capital cost of the asset shall include additional capitalisation 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.

29. Depreciation allowed has been worked out as below:

(Rs.in lakh)

Details of Depreciation	Asset-I (Additional)			Asset-II (Additional)			Asset-III		
	2006-07	2007-08	2008-09	2006-07	2007-08	2008-09	2006-07 (Pro rata)	2007-08	2008-09
Gross block as on the date of commercial operation	0.00	397.61	397.61	0.00	436.76	436.76	623.59	658.69	658.69
Additional Capitalisation during 2006-07	397.61			436.76			35.10	0.00	
Gross Block at the end of the year	397.61	397.61	397.61	436.76	436.76	436.76	658.69	658.69	658.69
Rate of Depreciation	2.5700%	2.5700%	2.5700%	2.1084%	2.1084%	2.1084%	3.6000%	3.6000%	3.6000%
Depreciable Value (90%)	357.85	357.85	357.85	254.84	254.84	254.84	577.03	592.82	592.82
Remaining Depreciable Value	357.85	352.74	340.12	254.84	250.23	241.02	577.03	579.36	555.64
Depreciation	5.11	10.22	10.22	4.60	9.21	9.21	13.46	23.71	23.71

ADVANCE AGAINST DEPRECIATION

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

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

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

32. The petitioner has claimed Advance Against Depreciation for Asset-I in the following manner:

- (i) 1/10th of gross loan is worked out from the gross notional loan.
- (ii) Cumulative loan as well as repayment of notional loan during the year have been considered.
- (iii) Depreciation as claimed in the petition.

33. The petitioner has not claimed Advance Against Depreciation for other two assets.

34. In our calculation, the Advance Against Depreciation has been worked out as under:

- (i) 1/10th of gross loan is worked out from the gross notional loan as per para 26 above.
- (ii) Repayment of cumulative loan as well as repayment of notional loan during the year have been considered as per para 26 above.
- (iii) Depreciation worked out in para 29 above has been considered.

35. The details of Advance Against Depreciation allowed for Asset-I are given hereunder:

Advance against Depreciation	(Rs. in lakh)		
	Asset-I (Additional)		
	2006-07	2007-08	2008-09
1/10th of Gross Loan(s)	0.00	27.83	27.83
Repayment of the Loan	0.00	17.73	22.43
Minimum of the above	0.00	17.73	22.43
Depreciation during the year	5.11	10.22	10.22
(A) Difference	-5.11	7.51	12.22
Cumulative Repayment of the Loan	0.00	17.73	40.16
Cumulative Depreciation/ Advance against Depreciation	5.11	15.33	27.95
(B) Difference	-5.11	2.40	12.22
Advance against Depreciation Minimum of (A) and (B)	0.00	2.40	12.22

OPERATION & MAINTENANCE EXPENSES

36. In accordance with clause (iv) of Regulation 56 the 2004 regulations, the following norms are prescribed for O & M expenses

	Year				
	2004-05	2005-06	2006-07	2007-08	2008-09
O&M expenses (Rs in lakh per ckt-km)	0.227	0.236	0.246	0.255	0.266
O&M expenses (Rs in lakh per bay)	28.12	29.25	30.42	31.63	32.90

37. The petitioner has claimed O & M expenses for 2 bays for Asset-III, which has been allowed. Accordingly, the petitioner's entitlement to O & M expenses has been worked out as given hereunder:

	(Rs. in lakh)		
	2006-07 (Pro rata)	2007-08	2008-09
O&M expenses for 2 bays	35.49	63.26	65.80
Total	35.49	63.26	65.80

38. No additional O & M expenses are admissible in case of Asset-I and Asset-II.

39. The petitioner has submitted that the wage revision of its employees is due with effect from 1.1.2007. Therefore, according to the petitioner, O & M expenses should be subject to revision on account of revision of employee cost from that date. In the

alternative, it has been prayed that the increase in employee cost due to wage revision be allowed as per actuals for extra cost to be incurred consequent to wage revision. We are not expressing any view, as this issue does not arise for consideration at this stage. The petitioner may approach for a relief in this regard at an appropriate stage in accordance with law.

INTEREST ON WORKING CAPITAL

40. The components of the working capital and the interest thereon are discussed hereunder:

(i) Maintenance spares

Regulation 56(v) (1) (b) of the 2004 regulations provides for maintenance spares @ 1% of the historical cost escalated @ 6% per annum from the date of commercial operation. Relying upon the Appellate Tribunal's judgment dated 13.6.2007 in certain appeals filed by NTPC Ltd., the petitioner has urged that the additional capital expenditure incurred up to the cut off date be considered for computation of maintenance spares. In this context it is noted that the Commission has filed appeals before the Hon`ble Supreme Court against the Appellate Tribunal's said judgment dated 13.6.2007. In these appeals, before the Hon`ble Supreme Court, NTPC has undertaken not to press for the relief granted by the Appellate Tribunal. Therefore, for the present methodology decided by the Appellate Tribunal for computation of maintenance spares is being held in abeyance. In the present case, the capital expenditure of the Asset-III on the date of commercial operation which has been considered as the historical cost for the purpose of the present petition and maintenance spares have been worked out accordingly by escalating 1% of the historical cost @ 6% per annum. . The necessary details in respect of Asset-III are given hereunder:

Transmission assets	Date of	Capital Expenditure	Spares cost
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	Commercial Operation	(Rs. in lakh) on the date of commercial operation	(Rs in lakh)
Asset-III	1.9.2006	623.59	6.24

(ii) O & M expenses

Regulation 56(v)(1)(a) of the 2004 regulations provides for operation and maintenance expenses for one month as a component of working capital. The petitioner has claimed O&M expenses for 1 month of O&M expenses of the respective year as claimed in the petition. This has been considered in the working capital.

(iii) Receivables

As per Regulation 56(v)(1)(c) of the 2004 regulations, receivables will be equivalent to two months average billing calculated on target availability level. The petitioner has claimed the receivables on the basis 2 months' transmission charges claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis 2 months' transmission charges.

(iv) Rate of interest on working capital

As per Regulation 56(v) (2) of the 2004 regulations, rate of interest on working capital shall be on normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on 1.4.2004 or on 1st April of the year in which the project or part thereof (as the case may be) is declared under commercial operation, whichever is later. The interest on working capital is payable on normative basis notwithstanding that the transmission licensee has not taken working capital loan from any outside agency. The petitioner has claimed interest on working capital @ 10.25% based on SBI PLR as on 1.4.2004, which is in accordance with the 2004 regulations and has been allowed.

41. The necessary computations in support of interest on working capital are appended herein below:

(Rs. in lakh)

	Asset-I (Additional)			Asset-II (Additional)			Asset-III		
	2006-07 (Pro rata)	2007-08	2008-09	2006-07 (Pro rata)	2007-08	2008-09	2006-07 (Pro rata)	2007-08	2008-09
Maintenance Spares	0.00	0.00	0.00	0.00	0.00	0.00	6.24	6.45	6.84
O & M expenses	0.00	0.00	0.00	0.00	0.00	0.00	5.07	5.27	5.48
Receivables	4.20	8.67	10.04	4.25	8.48	8.37	25.11	25.69	25.80
Total	4.20	8.67	10.04	4.25	8.48	8.37	36.42	37.41	38.12
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	0.43	0.89	1.03	0.44	0.87	0.86	2.18	3.83	3.91

TRANSMISSION CHARGES

42. The transmission charges being allowed for the two transmission assets are summarised below:

(Rs. in lakh)

	Asset- I (Additional)			Asset-II (Additional)			Asset-III		
	2006-07 (Pro rata)	2007-08	2008-09	2006-07 (Pro rata)	2007-08	2008-09	2006-07 (Pro rata)	2007-08	2008-09
Depreciation	5.11	10.22	10.22	4.60	9.21	9.21	13.46	23.71	23.71
Interest on Loan	11.32	21.80	20.08	11.30	22.48	21.83	21.10	35.74	33.80
Return on Equity	8.35	16.70	16.70	9.17	18.34	18.34	15.66	27.58	27.58
Advance against Depreciation	0.00	2.40	12.22	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	0.43	0.89	1.03	0.44	0.87	0.86	2.18	3.83	3.91
O & M Expenses	0.00	0.00	0.00	0.00	0.00	0.00	35.49	63.26	65.80
Total	25.21	52.00	60.24	25.52	50.90	50.24	87.89	154.12	154.79

43. In addition to the transmission charges, the petitioner shall be entitled to other charges like income-tax, incentive, surcharge and other cess and taxes in accordance with the 2004 regulations. The additional amount approved in respect of Asset-I and Asset-II shall be recovered in three monthly instalments, along with regular monthly transmission charges.

44. The petitioner has sought approval for the reimbursement of expenditure of Rs.1,55,654/- incurred on publication of notices in the newspapers. The petitioner shall claim reimbursement of the said expenditure directly from the respondents in one installment in the ratio applicable for sharing of transmission charges. The petitioner

has also sought reimbursement of filing fee of Rs.5 lakh paid. A final view on reimbursement of filing fee is yet to be taken by the Commission for which views of the stakeholder have been called for. The view taken on consideration of the comments received shall apply in the present case as regards reimbursement of filing fee.

45. This order disposes of Petition No. 123/2007.

sd/-
(R.KRISHNAMOORTHY)
MEMBER
New Delhi dated the 30th May 2008

sd/-
(BHANU BHUSHAN)
MEMBER

Annexure-I

400 kV D/C Kaiga-Narendra transmission line

(Rs. in lakh)

	Details of Loan	2005-06	2006-07	2007-08	2008-09
1	Bond-IX				
	Gross Loan opening	431.00	431.00	431.00	431.00

	Cumulative Repayment upto DOCO/previous year	129.30	129.30	172.40	215.50
	Net Loan-Opening	301.70	301.70	258.60	215.50
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	43.10	43.10	43.10
	Net Loan-Closing	301.70	258.60	215.50	172.40
	Average Loan	301.70	280.15	237.05	193.95
	Rate of Interest	12.25%	12.25%	12.25%	12.25%
	Interest	36.96	34.32	29.04	23.76
	Repayment Schedule		10 Annual instalments from 22.8.2003		
2	Bond-X				
	Gross Loan opening	1254.00	1254.00	1254.00	1254.00
	Cumulative Repayment upto DOCO/previous year	209.00	209.00	313.50	418.00
	Net Loan-Opening	1045.00	1045.00	940.50	836.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	104.50	104.50	104.50
	Net Loan-Closing	1045.00	940.50	836.00	731.50
	Average Loan	1045.00	992.75	888.25	783.75
	Rate of Interest	10.90%	10.90%	10.90%	10.90%
	Interest	113.91	108.21	96.82	85.43
	Repayment Schedule		12 Annual instalments from 21.6.2004		
3	Bond-XI Option-I				
	Gross Loan opening	1012.00	1012.00	1012.00	1012.00
	Cumulative Repayment upto DOCO/previous year	0.00	84.33	168.66	252.99
	Net Loan-Opening	1012.00	927.67	843.34	759.01
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	84.33	84.33	84.33	84.33
	Net Loan-Closing	927.67	843.34	759.01	674.68
	Average Loan	969.84	885.51	801.18	716.85
	Rate of Interest	9.80%	9.80%	9.80%	9.80%
	Interest	95.04	86.78	78.52	70.25
	Repayment Schedule		12 Annual instalments from 7.12.2005		
4	Bond-XII				
	Gross Loan opening	71.00	71.00	71.00	71.00
	Cumulative Repayment upto DOCO/previous year	0.00	5.92	11.84	17.76
	Net Loan-Opening	71.00	65.08	59.16	53.24
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	5.92	5.92	5.92	5.92
	Net Loan-Closing	65.08	59.16	53.24	47.32
	Average Loan	68.04	62.12	56.20	50.28
	Rate of Interest	9.70%	9.70%	9.70%	9.70%
	Interest	6.60	6.03	5.45	4.88
	Repayment Schedule		12 Annual instalments from 28.3.2006		
5	Bond-XIII Option-I				
	Gross Loan opening	888.00	888.00	888.00	888.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	74.00	148.00
	Net Loan-Opening	888.00	888.00	814.00	740.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	74.00	74.00	74.00
	Net Loan-Closing	888.00	814.00	740.00	666.00
	Average Loan	888.00	851.00	777.00	703.00
	Rate of Interest	8.63%	8.63%	8.63%	8.63%
	Interest	76.63	73.44	67.06	60.67
	Repayment Schedule		12 Annual instalments from 31.7.2006		

6	Bond-XV				
	Gross Loan opening	2550.00	2550.00	2550.00	2550.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	212.50
	Net Loan-Opening	2550.00	2550.00	2550.00	2337.50
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	212.50	212.50
	Net Loan-Closing	2550.00	2550.00	2337.50	2125.00
	Average Loan	2550.00	2550.00	2443.75	2231.25
	Rate of Interest	6.68%	6.68%	6.68%	6.68%
	Interest	170.34	170.34	163.24	149.05
	Repayment Schedule		12 Annual instalments from 23-2-2008		
	7	Bond-XVI			
Gross Loan opening		1619.00	1619.00	1619.00	1619.00
Cumulative Repayment upto DOCO/previous year		0.00	0.00	0.00	0.00
Net Loan-Opening		1619.00	1619.00	1619.00	1619.00
Additions during the year		0.00	0.00	0.00	0.00
Repayment during the year		0.00	0.00	0.00	161.90
Net Loan-Closing		1619.00	1619.00	1619.00	1457.10
Average Loan		1619.00	1619.00	1619.00	1538.05
Rate of Interest		7.10%	7.10%	7.10%	7.10%
Interest		114.95	114.95	114.95	109.20
Repayment Schedule			10 Annual instalments from 18-2-2009		
8		Bond- XVII			
	Gross Loan opening	1340.00	1340.00	1340.00	1340.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	1340.00	1340.00	1340.00	1340.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	1340.00	1340.00	1340.00	1340.00
	Average Loan	1340.00	1340.00	1340.00	1340.00
	Rate of Interest	7.39%	7.39%	7.39%	7.39%
	Interest	99.03	99.03	99.03	99.03
	Repayment Schedule		10 Annual Instalments from 22.9.2009		
	9	Bond- XVIII (Date of Drawal 9-3-2006)			
Gross Loan opening		0.00	100.00	100.00	100.00
Cumulative Repayment upto DOCO/previous year		0.00	0.00	0.00	0.00
Net Loan-Opening		0.00	100.00	100.00	100.00
Additions during the year		100.00	0.00	0.00	0.00
Repayment during the year		0.00	0.00	0.00	0.00
Net Loan-Closing		100.00	100.00	100.00	100.00
Average Loan		50.00	100.00	100.00	100.00
Rate of Interest		8.15%	8.15%	8.15%	8.15%
Interest		4.08	8.15	8.15	8.15
Repayment Schedule			12 annual inatalments from 9-3-2010		
10		Bond- XIX (For ACE) (Date of Drawal 24.7.2006)			
	Gross Loan opening	0.00	0.00	130.00	130.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	0.00	130.00	130.00
	Additions during the year	0.00	130.00	0.00	0.00

	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	130.00	130.00	130.00
	Average Loan	0.00	65.00	130.00	130.00
	Rate of Interest	0.00%	9.25%	9.25%	9.25%
	Interest	0.00	6.01	12.03	12.03
	Repayment Schedule		12 annual instalments from 24.7.2010		
11	Bond- XXII (For ACE) (Date of Drawal 7.12.2006)				
	Gross Loan opening	0.00	0.00	150.00	150.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	0.00	150.00	150.00
	Additions during the year	0.00	150.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	150.00	150.00	150.00
	Average Loan	0.00	75.00	150.00	150.00
	Rate of Interest	0.00%	8.68%	8.68%	8.68%
	Interest	0.00	6.51	13.02	13.02
	Repayment Schedule		12 Annual Instalments from 07.12.2010		
12	PNB-II				
	Gross Loan opening	559.00	559.00	559.00	559.00
	Cumulative Repayment upto DOCO/previous year	46.58	93.16	139.74	186.32
	Net Loan-Opening	512.42	465.84	419.26	372.68
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	46.58	46.58	46.58	46.58
	Net Loan-Closing	465.84	419.26	372.68	326.10
	Average Loan	489.13	442.55	395.97	349.39
	Rate of Interest	8.60%	8.60%	8.60%	8.60%
	Interest	42.07	38.06	34.05	30.05
	Repayment Schedule		12 Annual Instalments from 08.03.2005		
13	OBC				
	Gross Loan opening	466.00	466.00	466.00	466.00
	Cumulative Repayment upto DOCO/previous year	38.83	77.66	116.49	155.32
	Net Loan-Opening	427.17	388.34	349.51	310.68
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	38.83	38.83	38.83	38.83
	Net Loan-Closing	388.34	349.51	310.68	271.85
	Average Loan	407.76	368.93	330.10	291.27
	Rate of Interest	8.60%	8.60%	8.60%	8.60%
	Interest	35.07	31.73	28.39	25.05
	Repayment Schedule		12 Annual Instalments from 22.3.2005		
	Total Loan				
	Gross Loan opening	10190.00	10290.00	10570.00	10570.00
	Cumulative Repayment upto DOCO/previous year	423.71	599.37	996.63	1606.39
	Net Loan-Opening	9766.29	9690.63	9573.37	8963.61
	Additions during the year	100.00	280.00	0.00	0.00
	Repayment during the year	175.66	397.26	609.76	771.66
	Net Loan-Closing	9690.63	9573.37	8963.61	8191.95
	Average Loan	9728.46	9632.00	9268.49	8577.78
	Rate of Interest	8.17%	8.13%	8.09%	8.05%
	Interest	794.66	783.55	749.73	690.55

Annexure-II

400/220 kV sub-station at Narendra with 1x315 MVA transformer

(Rs. in lakh)

	Details of Loan	2005-06	2006-07	2007-08	2008-09
1	Bond-XV				
	Gross Loan opening	450.00	450.00	450.00	450.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	37.50
	Net Loan-Opening	450.00	450.00	450.00	412.50
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	37.50	37.50
	Net Loan-Closing	450.00	450.00	412.50	375.00
	Average Loan	450.00	450.00	431.25	393.75
	Rate of Interest	6.68%	6.68%	6.68%	6.68%
	Interest	30.06	30.06	28.81	26.30
	Repayment Schedule		12 Annual instalments from 23-2-2008		
2	Bond-XVI				
	Gross Loan opening	746.00	746.00	746.00	746.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	746.00	746.00	746.00	746.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	74.60
	Net Loan-Closing	746.00	746.00	746.00	671.40
	Average Loan	746.00	746.00	746.00	708.70
	Rate of Interest	7.10%	7.10%	7.10%	7.10%
	Interest	52.97	52.97	52.97	50.32
	Repayment Schedule		10 Annual instalments from 18-2-2009		
3	Bond- XVII				
	Gross Loan opening	1850.00	1850.00	1850.00	1850.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	1850.00	1850.00	1850.00	1850.00
	Additions during the year	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	1850.00	1850.00	1850.00	1850.00
	Average Loan	1850.00	1850.00	1850.00	1850.00
	Rate of Interest	7.39%	7.39%	7.39%	7.39%
	Interest	136.72	136.72	136.72	136.72
	Repayment Schedule		10 Annual Instalments from 22.9.2009		
4	Bond- XVII (AddCap 2005-06)				
	Gross Loan opening	0.00	282.00	282.00	282.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	282.00	282.00	282.00
	Additions during the year	282.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	282.00	282.00	282.00	282.00
	Average Loan	141.00	282.00	282.00	282.00
	Rate of Interest	7.39%	7.39%	7.39%	7.39%
	Interest	10.42	20.84	20.84	20.84
	Repayment Schedule		10 Annual Instalments from 22.9.2009		
5	Bond- XVIII (AddCap 2005-06) (Date of Drawal 9-3-2006)				

	Gross Loan opening	0.00	362.85	362.85	362.85
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	362.85	362.85	362.85
	Additions during the year	362.85	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	362.85	362.85	362.85	362.85
	Average Loan	181.43	362.85	362.85	362.85
	Rate of Interest	8.15%	8.15%	8.15%	8.15%
	Interest	14.79	29.57	29.57	29.57
	Repayment Schedule		12 annual inatalments from 9-3-2010		
6	Bond- XIX (For AddCap) (Date of Drawal 24.7.2006)				
	Gross Loan opening	0.00	0.00	100.00	100.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	0.00	100.00	100.00
	Additions during the year	0.00	100.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	100.00	100.00	100.00
	Average Loan	0.00	50.00	100.00	100.00
	Rate of Interest	0.00%	9.25%	9.25%	9.25%
	Interest	0.00	4.63	9.25	9.25
	Repayment Schedule		12 annual inatalments from 24.7.2010		
7	Bond- XXII (For AddCap)(Date of Drawal 7.12.2006)				
	Gross Loan opening	0.00	0.00	284.90	284.90
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	0.00	284.90	284.90
	Additions during the year	0.00	284.90	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.00	284.90	284.90	284.90
	Average Loan	0.00	142.45	284.90	284.90
	Rate of Interest	0.00%	8.68%	8.68%	8.68%
	Interest	0.00	12.36	24.73	24.73
	Repayment Schedule		12 Annual Instalments from 7.12.2010		
	Total Loan				
	Gross Loan opening	3046.00	3690.85	4075.75	4075.75
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	37.50
	Net Loan-Opening	3046.00	3690.85	4075.75	4038.25
	Additions during the year	644.85	384.90	0.00	0.00
	Repayment during the year	0.00	0.00	37.50	112.10
	Net Loan-Closing	3690.85	4075.75	4038.25	3926.15
	Average Loan	3368.43	3883.30	4057.00	3982.20
	Rate of Interest	7.27%	7.39%	7.47%	7.48%
	Interest	244.95	287.14	302.88	297.73

2nd 315 MVA Auto Transformer at Narendra sub-station associated with Kaiga-Narendra transmission system

(Rs. in lakh)

	Details of Loan	2006-07	2007-08	2008-09
1	Bond- XVIII (Date of Drawal 9-3-2006)			
	Gross Loan opening	437.15	437.15	437.15
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	437.15	437.15	437.15
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	437.15	437.15	437.15
	Average Loan	437.15	437.15	437.15
	Rate of Interest	8.15%	8.15%	8.15%
	Interest	35.63	35.63	35.63
	Repayment Schedule	12 annual instalments from 9-3-2010		
2	Bond- XXII (For ACE) (Date of Drawal 7.12.2006)			
	Gross Loan opening	0.00	35.10	35.10
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	0.00	35.10	35.10
	Additions during the year	35.10	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	35.10	35.10	35.10
	Average Loan	17.55	35.10	35.10
	Rate of Interest	8.68%	8.68%	8.68%
	Interest	1.52	3.05	3.05
	Repayment Schedule	12 Annual Instalments from 7.12.2010		
	Total Loan			
	Gross Loan opening	437.15	472.25	472.25
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	437.15	472.25	472.25
	Additions during the year	35.10	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	472.25	472.25	472.25
	Average Loan	454.70	472.25	472.25
	Rate of Interest	8.17%	8.19%	8.19%
	Interest	37.15	38.67	38.67