

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Coram:**

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

**Petition No. 142/2007**

**In the matter of**

Determination of final transmission tariff up to DOCO and additional capitalisation from DOCO to 31.3.2007 for (i) TCSC and 2 nos of 400 kV bays at Gorakhpur sub-station associated with 400 kV Muzaffarpur-Gorakhpur line of Powerlinks (ii) 2 nos of 400 kV bays at Muzaffarpur with line reactor associated with 400 kV Muzaffarpur-Gorkhpur line of Powerlinks, under transmission system associated with Tala HEP, East-North Inter-connector and Northern Region Transmission system, an inter-regional asset between Northern Region and Eastern Region from 1.9.2006 to 31.3.2009.

**And in the matter of**

Power Grid Corporation of India Limited

**....Petitioner**

Vs

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited, Jaipur
2. Ajmer Vidyut Vitaran Nigam Ltd., Ajmer
3. Jaipur Vidyut Vitaran Nigam Ltd, Jaipur
4. Jodhpur Vidyut Vitaran Nigam Ltd, Jodhpur
5. Himachal Pradesh State Electricity Board, Shimla
6. Punjab State Electricity Board, Patiala
7. Haryana Vidyut Prasaran Nigam Ltd, Panchkula
8. Power Development Department, Govt. of J&K, Jammu
9. Uttar Pradesh Power Corporation Ltd, Lucknow
10. Delhi Transco Ltd, New Delhi
11. BSES Yamuna Power Ltd., Delhi
12. BSES Rajdhani Power Ltd., New Delhi
13. North Delhi Power Ltd., New Delhi
14. Chief Engineer, Chandigarh Administration, Chandigarh
15. Uttaranchal Power Corporation Ltd, Dehradun
16. North Central Railway, Allahabad
17. Bihar State Electricity Board, Patna
18. West Bengal State Electricity Board, Kolkata
19. Grid Corporation of Orissa Ltd., Bhubaneshwar
20. Damodar Valley Corporation, Calcutta
21. Power Department, Govt. of Sikkim, Gangtok
22. Jharkhand State Electricity Board, Ranchi

**..Respondents**

**The following were present:**

1. Shri V.V.Sharma, PGCIL
2. Shri U.K. Tyagi, PGCIL
3. Shri C. Kannan, PGCIL
4. Shri Prashant Sharma, PGCIL
5. Ms. Sangeeta Edwards, PGCIL
6. Shri B.C.Pant, PGCIL

7. Shri. A.K. Nagpal, PGCIL
8. Shri Kashish Bhambhani, PGCIL
9. Shri A.V.S. Ramesh, PGCIL
10. Shri S.N. Singh, UPPCL
11. Shri R.B.Sharma, Advocate, BSEB
12. Shri Bharat Sharma, NDPL
13. Shri R.K.Arora, HPGL

**ORDER**  
**(DATE OF HEARING: 10.1.2008)**

This petition has been filed for approval of tariff for (i) Thyristor Controlled Series Compensation (TCSC) and 2 nos of 400 kV bays at Gorakhpur sub-station associated with 400 kV Muzaffarpur-Gorakhpur line of Powerlinks (Asset-I), and (ii) 2 nos of 400 kV bays at Muzaffarpur with line reactor associated with 400 kV Muzaffarpur-Gorkhpur line of Powerlinks (Asset- II), under transmission system associated with Tala HEP, East-North Inter-connector and Northern Region Transmission System (also collectively referred to as “the transmission system”) from 1.9.2006 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”) after accounting for additional capitalization during 2006-07. 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 administrative approval and expenditure sanction for the transmission system was accorded by the Central Government in Ministry of Power vide letter dated 2.7.2003 at an estimated cost of Rs. 198070 lakh (2nd quarter, 2000 price level), which included IDC of Rs. 21792 lakh. Subsequently, revised cost estimate-I for the transmission system was approved by Ministry of Power vide its letter dated 29.9.2005 at an estimated cost of Rs. 248388 lakh which included an IDC of Rs.14744 lakh with debt-equity ratio of 70:30. The transmission system is to be implemented by the petitioner and JV Company (Powerlinks Transmission Ltd.) with following details of approved cost:

- (i) Petitioner's portion: Rs. 87210 lakh which includes IDC of Rs. 2574 lakh;
- (ii) JV portion: Rs. 161178 lakh which includes IDC of Rs. 12170 lakh.

3. The provisional transmission charges for the two assets covered in the present petition were approved by the Commission in its order dated 16.1.2007 in Petition No.154/2006. The dates of commercial operation of the two assets are stated to be as under:

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

4. The details of the apportioned approved cost and the estimated completion cost of the transmission assets are stated to be as under:

(Rs. in lakh)

Name of the assets	Apportioned approved cost	Capital expenditure as on the date of commercial operation	Balance Expenditure	Total estimated completion cost
Asset- I	9379.00	8272.99	200.02	8636.00
Asset-II	2360.00	1637.62	437.00	2136.62

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

(Rs.in lakh)

	Asset- I			Asset-II		
	2006-07	2007-08	2008-09	2006-07	2007-08	2008-09
Depreciation	171.65	296.80	296.80	34.75	60.48	60.48
Interest on Loan	239.15	397.93	377.60	45.58	77.15	73.08
Return on Equity	204.77	354.46	354.46	40.70	71.07	71.07
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	18.56	32.29	32.68	4.97	8.76	8.93
O & M Expenses	106.47	189.78	197.40	70.98	126.52	131.60
<b>Total</b>	<b>740.60</b>	<b>1271.27</b>	<b>1258.95</b>	<b>196.97</b>	<b>343.97</b>	<b>345.15</b>

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

(Rs.in lakh)

	Asset- I			Asset-II		
	2006-07	2007-08	2008-09	2006-07	2007-08	2008-09
Maintenance Spares	83.54	87.28	92.52	16.69	17.57	18.62

O & M expenses	15.21	15.82	16.45	10.14	10.54	10.97
Receivables	211.60	211.88	209.82	56.28	57.33	57.53
Total	310.35	314.98	318.80	83.10	85.44	87.12
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	<b>18.56</b>	<b>32.29</b>	<b>32.68</b>	<b>4.97</b>	<b>8.76</b>	<b>8.93</b>

7. The reply to the petition has been filed by Bihar State Electricity Board and Uttar Pradesh Power Corporation Limited. 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.

8. BSEB and UPPCL in their replies have raised certain issues. The issues are discussed briefly as under:

9. BSEB has expressed reservation on the issue of allocation of power from Tala HEP allowed by Ministry of Power to Eastern Region constituents. It has been stated that Ministry of Power has swapped equivalent thermal capacity at Farakka and Kahalgaon STPS with the capacity at Tala HEP. This has resulted in reduced energy availability to ER constituents because Tala HEP is run of river project and maximum generation is in summer/monsoon months whereas generation from Farakka and Kehalgaon STPS is available on round-the-clock basis. It has been further stated that the swapping arrangement has considerably increased the transmission charges in ER without getting any benefit in terms of additional power. BSEB further informed that the average pooled generation cost of Farakka and Kehalgaon STPS of NTPC is Rs 1.70 (approx.) per KWh whereas the cost of Tala HEP is Rs 1.84 per KWh including 4 paise/KWh trading margin of PTC. BSEB submitted that transmission asset associated with Tala HEP from Tala to Muzzaffarpur, pooled with regional tariff of ER should be segregated from ER regional tariff and recovered from ultimate users of the said asset. BSEB has prayed the Commission to invoke provisions of clause-12- Power to remove difficulties and clause-13- Power to relax of the 2004 regulations. During the hearing, it was clarified that works related to allocation of

power from Central sector generating stations is in the domain of MoP and BSEB should take up this issue with MoP. Regarding segregation of transmission charges, the petitioner has informed that prior to construction of assets BPTA on 9.1.2003 was signed with ER respondents including BSEB for Tala transmission system in ER. For ER-NR interconnection, joint BPTA with NR respondents was signed.

10. The petitioner has submitted that Ministry of Power vide its letter dated 7.7.2006 has issued allocation of power from Tala HEP. Based on the above allocation of Tala power and /or allocation of the displaced thermal power of the Eastern Region, the total shared allocation to Eastern Region beneficiaries from Central Generating Stations would be determined. The transmission charges of the assets covered in the present petition would be added to ERTS and shall be shared in proportion of the MW share allocation of each beneficiaries from the total Central sector power in the Eastern Region.

11. UPPCL has submitted that the petitioner has not furnished the details of apportioned approved cost of all the assets. UPPCL`s contention is not borne out from records. The details of apportioned approved cost of all the assets have been furnished in Form 5D along with petition.

### **CAPITAL COST**

12. 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.

13. The petitioner has claimed additional capitalization of Rs. 162.99 lakh and Rs. 62.00 lakh on the works for the period from 1.9.2006 to 31.3.2007 over the capital expenditure of Rs.. 8272.99 lakh and Rs. 1637.62 lakh for Asset-I and Asset-II, respectively as on the date of commercial operation of the respective asset. The petitioner has furnished further the following details of the capital expenditure:

(Rs. in lakh)		
	Asset-I	Asset-II
Expenditure up to date of commercial operation	8272.99	1637.62
Expenditure from date of commercial operation to 31.3.2007	162.99	62
Gross Block on 1.4.2007 (Based on audited accounts)	8435.98	1699.62
Balance estimated expenditure	200.02	437.00
Estimated completion cost	8636.00	2136.62

#### **ADDITIONAL CAPITALIZATION 2006-07**

14. 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.”

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

Asset-I	Asset-II
Nature of expenditure	Nature of expenditure

Sub-station = Rs. 120.18 lakh	Sub-station = Rs. 39.00 lakh
Building = Rs. 42.81 lakh	Building = Rs. 23.00 lakh
Total = Rs. 162.99 lakh	Total = Rs. 62.00 lakh

16. 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, the additional capital expenditure of Rs.162.99 lakh and Rs. 62.00 lakh has been allowed for both the transmission system.

### **Time Over-run**

17. As per the original approval, the transmission assets were scheduled to be commissioned by June 2006. The lines were declared under commercial operation on 1.9.2006. Therefore, there was a time delay of three months in the commissioning of the transmission lines. The petitioner has explained following reasons for delay:

(i) Two general assembly elections in Bihar during February 2005 and November 2005. Panchayat elections were also scheduled in April and May 2006. These elections adversely affected the progress of site works and mobilization of men, material as well as T & P for around one month on each of the occasion;

(ii) There had been firing incident at site on 29.4.2006 after clash between armed home guards and local labour leading to one fatal injury. Besides, this, there have been massive fire incidents by violent mob and various materials, T and P, etc. were damaged. All the working groups got demobilized for restoration of normalcy. Remobilisation of manpower and arrangement of damaged materials took considerable time. Copies of newspaper cuttings reporting violence has been attached with the application;

(iii) Though the progress of work was affected due to above mentioned reasons for about three and half months but it caused a cumulative overall

delay of two months only in completion of the project. Copies of the correspondence in this regard has been attached with the application.

18. In view of above, it has been submitted that delay in completion of the project was beyond the control of the petitioner.

19. We have considered the matter in right earnest. There is satisfactory explanation from the petitioner for the entire delay in completion of the transmission line. It needs to be pointed out that the petitioner does not gain anything by delaying the commissioning of its transmission assets. Therefore, the delay in commissioning of line is considered to be beyond the control of the petitioner.

### **TOTAL CAPITAL COST**

20. Based on the above, gross block as given below has been considered for the purpose of tariff for both the transmission assets, after allowing additional capitalization on works as claimed by the petitioner:

(Rs. in lakh)

	Expenditure up on date of commercial operation	Additional capital expenditure up to 31.3.2007	Total capital expenditure
Asset- I	8272.99	162.99	8435.98
Asset-II	1637.62	62.00	1699.62
<b>Total</b>	<b>9910.61</b>	<b>224.99</b>	<b>10135.60</b>

### **DEBT- EQUITY RATIO**

21. 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 considered 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.”

22. 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.

23. In the present case, investment approval for the transmission system was accorded by the Ministry of Power vide its letter dated 29.9.2005 with debt-equity ratio 70:30. The petitioner has considered debt-equity ratio of 69.99:30.01 and 70.14:29.86 for the transmission assets, 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. We have considered the debt-equity ratio on the date of commercial operation and for the additional capitalisation on works of Rs. 162.99 lakh and Rs. 62.00 lakh for both the assets as considered by the petitioner. Accordingly, for the purpose of tariff, debt-equity considered for two assets as under:

	Capital cost as on date of commercial operation	Equity on the date of commercial operation	Additional capital expenditure during 2006-07	Capital cost as on 1.4.2007	Equity considered as on 1.4.2007
Asset- I	8272.99	2482.99	162.99	8435.98	2531.89
Asset-II	1637.62	489.02	62.00	1699.62	507.62
<b>Total</b>	<b>9910.61</b>	<b>2972.01</b>	<b>224.99</b>	<b>10135.6</b>	<b>3039.51</b>

## **RETURN ON EQUITY**

24. 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.

25. Equity has been considered as on the date of commercial operation and as on 1.4.2007 and 1.4.2007 onwards as given in the table below para 23 above. However, tariff for the period 1.9.2006 to 31.3.2007 has been allowed on average equity. Accordingly, the petitioner shall be entitled to return on equity as under:

(Rs. in lakh)

Name of the assets	Equity as on the date of commercial operation	Addition due to additional capitalization	Average equity	Return on equity		
				2006-07 (Pro rata)	2007-08	2008-09
Asset- I	2482.99	48.90	2507.44	204.77	354.46	354.46
Asset- II	489.02	18.60	498.32	40.70	71.07	71.07

## **INTEREST ON LOAN**

26. 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.”

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

(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) Gross loans at (i) above 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.

28. 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 have been used to work out weighted average rate of interest on actual loan.

- (ii) Notional loan arising out of additional capitalization capitalization from date of commercial operation to 31.3.2007 has been added in loan amount as on date of commercial operation to arrive at total notional loan. This adjusted gross loan has been considered as normative loan for tariff calculations
- (iii) 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 :
- $$\frac{\text{Actual repayment of actual loan during the year}}{\text{Opening balance of actual loan during the year}} \times \text{Opening balance of normative loan during the year}$$
- (iv) 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.
- (v) 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.

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

(Rs. in lakh)

Details of loan	Asset-I			Asset-II		
	2006-07	2007-08	2008-09	2006-07	2007-08	2008-09

	(Pro -rata)			(Pro -rata)		
Interest on loan						
Opening Gross Loan	5790.00	5904.09	5904.09	1148.60	1192.00	1192.00
Cumulative Repayment	0.00	171.65	468.45	0.00	34.75	95.22
Net Loan-Opening	5790.00	5732.44	5435.64	1148.60	1157.25	1096.78
Additions due to Additional Capitalisation	114.09			43.40		
Repayment during the year	171.65	296.80	296.80	34.75	60.48	60.48
Net Loan-Closing	5732.44	5435.64	5138.83	1157.25	1096.78	1036.30
Average Loan	5761.22	5584.04	5287.24	1152.93	1127.01	1066.54
Weighted Average Rate of Interest on Loan	7.12%	7.13%	7.14%	6.78%	6.85%	6.85%
<b>Interest</b>	<b>239.16</b>	<b>397.94</b>	<b>377.60</b>	<b>45.58</b>	<b>77.15</b>	<b>73.08</b>

30. The detailed calculations in support of the weighted average rate of interest are contained in Annexure attached.

### **DEPRECIATION**

31. 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.

32. The petitioner has claimed the depreciation on the average gross block of Rs. 8354.49 lakh and 1668.62 lakh for the year 2006-07 and Rs. 8435.98 lakh and Rs. 1699.62 lakh w.e.f. 1.4.2007 , respectively. This has been found to be in order.

33. Depreciation allowed has been worked out as calculated below:

(Rs.in lakh)

Details of Depreciation	Asset-I			Asset-II		
	2006-07 (Pro -rata)	2007-08	2008-09	2006-07 (Pro -rata)	2007-08	2008-09
Gross block as on the date of commercial operation	8272.99	8435.98	8435.98	1637.62	1699.62	1699.62
Additional Capitalisation during the period	162.99			62.00		
Gross Block at the end of the period	8435.98	8435.98	8435.98	1699.62	1699.62	1699.62
Rate of Depreciation	3.5221%	3.5183%	3.5183%	3.5699%	3.5583%	3.5583%
Depreciable Value (90%)	7407.06	7480.40	7480.40	1456.76	1484.66	1484.66
Balance Useful life of the asset	-	-	-	-	-	-
Remaining Depreciable Value	7407.06	7308.75	7011.95	1456.76	1449.91	1389.43
<b>Depreciation</b>	<b>171.65</b>	<b>296.80</b>	<b>296.80</b>	<b>34.75</b>	<b>60.48</b>	<b>60.48</b>

### **ADVANCE AGAINST DEPRECIATION**

34. 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

35. 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.

36. The petitioner has not claimed Advance Against Deprecation and accordingly Advance Against Deprecation has not been considered

**OPERATION & MAINTENANCE EXPENSES**

37. 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

38. The petitioner has claimed O & M expenses for 2 bays for the Asset-I and 4 bays of Asset - II, which has been allowed. Accordingly, the petitioner’s entitlement to O & M expenses has been worked out as given hereunder:

(Rs. in lakh)

	Asset-I			Asset-II			
	2006-07 (Pro- rata)	2007-08	2007-08	2006-07 (Pro- rata)	2007-08	2008-09	
O&M expenses for 4 bays	106.47	189.78	197.40	O&M expenses for 4 bays	70.98	126.52	131.60
<b>TOTAL</b>	106.47	189.78	197.40	<b>TOTAL</b>	70.98	126.52	131.60

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. In the present case, element wise capital expenditure 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. In this manner, the value of maintenance spares works out to Rs. 82.73 lakh and Rs. 16.38 lakh for Asset-I and Asset-II, respectively as on 1.3.2005. The necessary details are given hereunder:

Transmission assets	Date of Commercial Operation	Capital Expenditure (Rs. in lakh) on the date of commercial operation	Escalated spares Cost as on 1.4.2004 (Rs. in lakh)
Asset- I	1.9.2006	8272.99	82.73
Asset-II	1.9.2006	1637.62	16.38

#### **(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			Asset-II		
	2006-07 (Pro-rata)	2007-08	2008-09	2006-07 (Pro-rata)	2007-08	2008-09
Maintenance Spares	82.73	85.63	90.76	16.38	16.95	17.97
O & M expenses	15.21	15.82	16.45	10.14	10.54	10.97
Receivables	211.59	211.85	209.79	56.27	57.32	57.51
Total	309.53	313.29	317.01	82.79	84.81	86.45
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	<b>18.51</b>	<b>32.11</b>	<b>32.49</b>	<b>4.95</b>	<b>8.69</b>	<b>8.86</b>

**TRANSMISSION CHARGES**

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

(Rs. in lakh)

	Asset-I			Asset-II		
	2006-07 (Pro-rata)	2007-08	2008-09	2006-07 (Pro-rata)	2007-08	2008-09
Depreciation	171.65	296.80	296.80	34.75	60.48	60.48
Interest on Loan	239.16	397.94	377.60	45.58	77.15	73.08
Return on Equity	204.77	354.46	354.46	40.70	71.07	71.07
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	18.51	32.11	32.49	4.95	8.69	8.86
O & M Expenses	106.47	189.78	197.40	70.98	126.52	131.60
Total	<b>740.56</b>	<b>1271.10</b>	<b>1258.77</b>	<b>196.96</b>	<b>343.91</b>	<b>345.08</b>

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.

44. The petitioner has sought approval for the reimbursement of expenditure of Rs.4,99,263/- 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

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

46. This order disposes of Petition No.142/2007.

sd/-  
**(R.KRISHNAMOORTHY)**  
**MEMBER**  
New Delhi dated the 28<sup>th</sup> March 2008

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

**Annexure****Asset-I**

<b>CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN</b>				
(Rs. in Lacs)				
	<b>Details of Loan</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
<b>1</b>	<b>Bond-XV</b>			
	Gross Loan opening	267.00	267.00	267.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	22.25
	Net Loan-Opening	267.00	267.00	244.75
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	22.25	22.25
	Net Loan-Closing	267.00	244.75	222.50
	Average Loan	267.00	255.88	233.63
	Rate of Interest	6.68%	6.68%	6.68%
	Interest	17.84	17.09	15.61
	Repayment Schedule	12 Annual instalments from 23-02-2008		
<b>2</b>	<b>Bond- XVI</b>			
	Gross Loan opening	208.00	208.00	208.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	208.00	208.00	208.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	20.80
	Net Loan-Closing	208.00	208.00	187.20
	Average Loan	208.00	208.00	197.60
	Rate of Interest	7.10%	7.10%	7.10%
	Interest	14.77	14.77	14.03
	Repayment Schedule	10 Annual instalments from 18-02-2009		

<b>3</b>	<b>Bond- XVII</b>			
	Gross Loan opening	482.00	482.00	482.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	482.00	482.00	482.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	482.00	482.00	482.00
	Average Loan	482.00	482.00	482.00
	Rate of Interest	7.39%	7.39%	7.39%
	Interest	35.62	35.62	35.62
	Repayment Schedule	10 Annual Instalments from 22.09.2009		
<b>4</b>	<b>Bond- XVIII</b>			
	Gross Loan opening	163.00	163.00	163.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	163.00	163.00	163.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	163.00	163.00	163.00
	Average Loan	163.00	163.00	163.00
	Rate of Interest	8.15%	8.15%	8.15%
	Interest	13.28	13.28	13.28
	Repayment Schedule	12 annual instalments from 09.03.2010		
<b>5</b>	<b>Bond- XIX</b>			
	Gross Loan opening	669.00	669.00	669.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	669.00	669.00	669.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	669.00	669.00	669.00
	Average Loan	669.00	669.00	669.00
	Rate of Interest	9.25%	9.25%	9.25%
	Interest	61.88	61.88	61.88
	Repayment Schedule	12 Annual Instalments from 24.07.2010		
<b>6</b>	<b>IBRD- II</b>			
	Gross Loan opening	4000.57	4000.57	4000.57
	Cumulative Repayment upto DOCO/previous year	0.00	83.48	254.67
	Net Loan-Opening	4000.57	3917.09	3745.90
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	83.48	171.19	181.97
	Net Loan-Closing	3917.09	3745.90	3563.93
	Average Loan	3958.83	3831.50	3654.92
	Rate of Interest	6.71%	6.71%	6.71%
	Interest	265.64	257.09	245.24
	Repayment Schedule	Half yearly Instalments from 15.12.2006		
	<b>Total Loan</b>			
	Gross Loan opening	5789.57	5789.57	5789.57
	Cumulative Repayment upto DOCO/previous year	0.00	83.48	276.92
	Net Loan-Opening	5789.57	5706.09	5512.65
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	83.48	193.44	225.02
	Net Loan-Closing	5706.09	5512.65	5287.63
	Average Loan	5747.83	5609.37	5400.14
	Rate of Interest	7.12%	7.13%	7.14%

Interest	409.03	399.74	385.67
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## Asset-II

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN				
(Rs. in Lakh)				
	Details of Loan	2006-07	2007-08	2008-09
<b>1</b>	<b>Bond-XV</b>			
	Gross Loan opening	21.00	21.00	21.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	1.75
	Net Loan-Opening	21.00	21.00	19.25
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	1.75	1.75
	Net Loan-Closing	21.00	19.25	17.50
	Average Loan	21.00	20.13	18.38
	Rate of Interest	6.68%	6.68%	6.68%
	Interest	1.40	1.34	1.23
	Repayment Schedule	12 Annual instalments from 23-02-2008		
<b>2</b>	<b>Bond- XVI</b>			
	Gross Loan opening	2.00	2.00	2.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	2.00	2.00	2.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.20
	Net Loan-Closing	2.00	2.00	1.80
	Average Loan	2.00	2.00	1.90
	Rate of Interest	7.10%	7.10%	7.10%
	Interest	0.14	0.14	0.13
	Repayment Schedule	10 Annual instalments from 18-02-2009		

<b>3</b>	<b>Bond- XIX (for add cap)</b>			
	Gross Loan opening	0.00	0.00	0.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	0.00	62.00	62.00
	Additions during the year	62.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	62.00	62.00	62.00
	Average Loan	31.00	62.00	62.00
	Rate of Interest	9.25%	9.25%	9.25%
	Interest	2.87	5.74	5.74
	Repayment Schedule	12 Annual Instalments from 24.7.2010		
<b>4</b>	<b>IBRD- II</b>			
	Gross Loan opening	1125.60	1125.60	1125.60
	Cumulative Repayment upto DOCO/previous year	0.00	23.45	71.76
	Net Loan-Opening	1125.60	1102.15	1053.84
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	23.45	48.31	51.59
	Net Loan-Closing	1102.15	1053.84	1002.25
	Average Loan	1113.88	1078.00	1028.05
	Rate of Interest	6.71%	6.71%	6.71%
	Interest	74.74	72.33	68.98
	Repayment Schedule	Half yearly Instalments from 15.12.2006		
	<b>Total Loan</b>			
	Gross Loan opening	1148.60	1148.60	1148.60
	Cumulative Repayment upto DOCO/previous year	0.00	23.45	73.51
	Net Loan-Opening	1148.60	1187.15	1137.09
	Additions during the year	62.00	0.00	0.00
	Repayment during the year	23.45	50.06	53.54
	Net Loan-Closing	1187.15	1137.09	1083.55
	Average Loan	1167.88	1162.12	1110.32
	Rate of Interest	6.78%	6.85%	6.85%
	<b>Interest</b>	79.15	79.55	76.08

