

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Coram**

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

**Petition No. 86/2006**

**In the matter of**

Determination of transmission tariff for associated transmission system of Agartala GBPP in North Eastern Region for the period from 1.4.2004 to 1.3.2009.

**And in the matter of**

Power Grid Corporation of India Ltd.,Gurgaon .... **Petitioner**  
Vs

1. Assam State Electricity Board, Guwahati
2. Meghalaya State Electricity Board, Shillong
3. Government of Arunachal Pradesh, Itanagar
4. Power and Electricity Department, Govt. of Mizoram, Aizawl
5. Electricity Department, Govt. of Manipur, Imphal
6. Department of Power, Govt. of Nagaland, Kohima
7. Tripura State Electricity Corporation Limited, Agartala .....**Respondents**

**Following were present:**

1. Shri M.G.Ramachandran, Advocate, PGCIL
2. Shri U.K.Tyagi, PGCIL
3. Shri M.M.Mondal, PGCIL
4. Shri R.Prasad, PGCIL
5. Ms. Sangeeta Edwards, PGCIL
6. Shri Sanjay Sen, Advocate, ASEB
7. Shri H.M.Sharma,ASEB
8. Shri R.K.Kapoor, ASEB
9. Ms. Mallika Sharma Bezbaruah, Consumer,
10. Shri A.K. Datta, representative of Ms. Mallika Sharma Bezbaruah

**ORDER  
(DATE OF HEARING: 28.5.2009)**

The petitioner, Power Grid Corporation of India Limited, had filed this petition for the transmission system associated with Agartala GBPP (the transmission system) in North Eastern Region for the period from 1.4.2004 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”). On completion of pleadings and after hearing the parties, final tariff in respect of the transmission system was awarded vide order dated 25.3.2008 for the period 1.4.2007 to 31.3.2009.

2. The original investment approval for the transmission system was accorded by the Board of Directors of the petitioner company vide its letter dated 15.12.1993 at an estimated cost of Rs.1932 lakh which includes IDC of Rs. 58 lakh. Subsequently, the revised cost estimate-I for the transmission system was approved by Ministry of Power vide its letter dated 23.11.2000 at an estimated cost of Rs. 2217 lakh which included an IDC of Rs. 210 lakh. Thereafter, the revised cost estimate-II for the transmission system was approved by Board of Directors of the petitioner company under its letter dated 31.8.2007 at an estimated cost of Rs. 2643 lakh which included IDC of Rs. 222 lakh. The transmission lines included in the transmission system and the date of commercial operation thereof are as stated below:

S. No.	Name of the transmission line	Date of commercial operation
(i)	132 kV D/C Agartala-Agartala transmission line <b>(Asset-I)</b>	1.4.1998
(ii)	132 kV S/C Agartala-Kumarghat transmission line <b>(Asset-II)</b>	1.1.2001
	Total	

3. The summary of tariff awarded vide said order dated 25.3.2008 is given as under:

(Rs.in lakh)

	Asset-I		Asset-II	
	2007-08	2008-09	2007-08	2008-09
Depreciation	12.60	12.60	58.33	58.33
Interest on Loan	9.76	8.84	98.77	94.54
Return on Equity	28.28	28.28	50.32	50.32
Advance against Depreciation	0.00	0.00	0.00	0.00
Interest on Working Capital	3.31	3.41	8.59	8.78
O & M Expenses	67.54	70.26	58.16	60.57
<b>Total</b>	<b>121.49</b>	<b>123.39</b>	<b>274.18</b>	<b>272.55</b>

4. The petitioner filed Appeal No. 78/2008 before the Appellate Tribunal for Electricity against order dated 25.3.2008. The Appellate Tribunal vide its judgment dated 4.11.2008 set aside the said order dated 25.3.2008 and directed to re-determine the transmission tariff for the period from 1.4.2004 in accordance with the 2004 regulations.

5. In view of the decision of the Appellate Tribunal, the petition was re-heard.

6. Learned counsel for the ASEB submitted that the petition had not been filed as per the 2004 regulations. It was pointed out that the Commission vide its order dated 2.1.2007 had directed the petitioner to submit the Forms 5B, 5C and 5D, duly completed in all respects. He further submitted that information had not been furnished.

7. The representative of ASEB, Shri Sharma submitted that 33 kV distribution feeders were additionally included by the petitioner to claim tariff, though as per the Grid Code specified by the Commission, such distribution feeders were not to be included for the purpose of the transmission tariff. He further submitted that certain costs capitalized, had not been actually incurred. He requested the Commission to look into the cost escalation aspects as well.

8. Contradicting the petitioner's submission that it had not actually recovered cumulative depreciation considered in the earlier order, the representative of Tripura stated that the petitioner had recovered the entire depreciation. According to him, UCPTT, which was in vogue up to 31.3.2004, resulted in increase in energy transmitted and consequently in increase in revenue, this also led to recovery of entire depreciation. He also raised the issue of inclusion of 33 kV bays for tariff computation and further

submitted that the petitioner should furnish the information in Forms 5B, 5C and 5D before the process of tariff determination was undertaken by the Commission.

9. The representative of the consumer, Ms. Mallika Sharma Bezbaruah submitted that she was not made a party before the Appellate Tribunal by the petitioner. He requested to direct the petitioner to submit the information in Forms 5B, 5C and 5D.

10. In response to the respondents' submissions, the representative of the petitioner submitted that none of them had challenged the Commission's order dated 31.12.2007 on above grounds. Aggrieved with the Commission's orders, the petitioner had filed the appeal before the Appellate Tribunal. There was, therefore, no ground for raising these issues at this stage, he argued. The representative of the petitioner propounded that the petitioner had filed the tariff petitions as per the 2004 regulations and the information as per Forms 5B, 5C and 5D, introduced in the regulations was to be furnished for the projects commissioned on or after 1.4.2004. Therefore, these Forms were not furnished with the petitions, he explained. These Forms had been furnished for the assets declared under commercial operation on or after 1.4.2004, he informed. The representative of the petitioner further submitted that there were a number of assets on which expenditure was incurred after the date of the commercial operation and for such assets the petitioner had submitted the auditor's certificates. It was stated that NERPC had agreed to capitalization of certain expenditure. He further submitted that the petitioner took over the transmission network from NTPC, NHPC, NLC and NEEPCO w.e.f 1.1.1992 which included 33 kV transmission lines in NER. In NER, the transmission lines were of 132 kV level and outgoing feeders were of 33 kV level with 132/33 kV ICTs. These transmission lines were being used for evacuation of Central Sector power. Thus, 33 kV transmission lines were also included for O&M purpose.

11. The representative of the petitioner further stated that the Commission had approved tariff from 1.4.2007 based on certain capital cost. At this stage, there could be

no question of going back on capital cost and that what was true for 1.4.2007, is also true for 1.4.2004.

12. The tariff for the transmission system for the period from 1.4.2004 to 31.3.2009 has been recalculated as discussed in the succeeding paras, after taking into account the submission made by the parties at the hearing. We have generally accepted the submissions made by the petitioner.

### **CAPITAL COST**

13. 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.

14. The capital expenditure including de-capitalization considered by the petitioner for tariff purpose is given here under:

(Rs. in lakh)					
	Expenditure up to date of commercial operation	Expenditure from date of commercial operation to 31.3.2004	Expenditure up to 31.3.2004	FERV from the date of commercial operation to 31.3.2004	Capital cost as on 1.4.2004
Asset-I	380.47	0.00	380.47	0.00	380.47
Asset-II	2307.54	(-)45.90	2261.64	(-)95.46	2166.18
	<b>2688.01</b>	<b>(-)45.90</b>	<b>2642.11</b>	<b>(-)95.46</b>	<b>2546.65</b>

### **Additional capitalization/De-capitalization**

15. In the present case, the petitioner has claimed net de-capitalization of Rs. 43.33 lakh for the period up to 31.3.2004 in respect of Asset-II. The details

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

Year	Amount (Rs. in lakh)	Head of expenditure
2001-04	43.33	Balance compensation and final payments

16. As per the auditor's certificate, de-capitalization of expenditure from the date of commercial to 31.3.2004 is Rs. 43.33 lakh. The petitioner in its affidavit dated 12.3.2007 has stated that difference of Rs. 2.57 lakh is on account of de-capitalization on minor items/assets which has not been considered in its books.

17. The de-capitalization of Rs. 45.90 lakh is found to be in order against the gross block of Rs. 2307.54 lakh as on the date of commercial operation i.e. 1.11.2001 and accordingly has been allowed to be capitalized.

18. Based on the above, gross block as given below has been arrived at for the transmission lines, after allowing additional capitalization/ de- capitalization on woks as claimed by the petitioner:

(Rs. in lakh)			
	Expenditure as on the date of commercial operation	Additional expenditure up to 31.3.2004	Total capital expenditure as on 1.4.2004
Asset-I	380.47	0.00	380.47
Asset-II	2307.54	(-)45.90	2261.64

**Extra Rupee Liability during the years 2001-04:**

19. Regulation 1.13 (a) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2001 provided as under:

- (a) Extra rupee liability towards interest payment and loan repayment actually incurred, in the relevant year shall be admissible; provided it directly arises out of foreign exchange rate variation and is not attributable to Utility or its suppliers or contractors. Every utility shall

follow the method as per the Accounting Standard-11 (Eleven) as issued by the Institute of Chartered Accountants of India to calculate the impact of exchange rate variation on loan repayment

- (b) Any foreign exchange rate variation to the extent of the dividend paid out on the permissible equity contributed in foreign currency, subject to the ceiling of permissible return shall be admissible. This as and when paid, may be spread over the twelve-month period in arrears

20. Regulation 1.7 of the 2001 further provided that recovery of foreign exchange rate variation would be done directly by the utilities from the beneficiaries without filing a petition before the Commission. In case of any objections by the beneficiaries to the amounts claimed on these counts, they may file an appropriate petition before the Commission.

21. FERV worked out by the petitioner is matching with calculations submitted, and is in accordance with provisions of AS-11, applicable for the period up to 31.3.2004. The petitioner's claim for de-capitalization of Rs.95.46 lakh on account of FERV in respect of Asset-II has accordingly been considered for tariff calculations.

### **TOTAL CAPITAL COST**

22. Based on the above discussion, capital cost considered for the purpose of tariff is as under:

	Expenditure up to date of commercial operation	Expenditure from the date of commercial operation to 31.3.2004	Expenditure up to 31.3.2004	FERV from the date of commercial operation to 31.3.2004	Capital cost as on 1.4.2004
Asset-I	380.47	0.00	380.47	0.00	380.47
Asset-II	2307.54	(-)45.90	2261.64	(-)95.46	2166.18

### **DEBT- EQUITY RATIO**

23. 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.”

24 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.



25. The petitioner has claimed debt-equity ratio of 100:00 and 84.42:15.58 for Asset-I and Asset-II respectively.

26. The petitioner has stated in the petition that the approved debt-equity ratio is 78.75:21.25. The petitioner has further claimed tariff after accounting for the de-capitalization expenditure of Rs. 45.90 lakh on works for the period up to 31.3.2004 towards equity in respect of Asset-II. As actual equity deployment of both the assets taken together exceeds the equity as per approved debt-equity ratio, we have limited the total equity for both the assets taken together to 21.25% of the capital cost excluding FERV which worked out to Rs. 561.45 lakh. Therefore, notional equity for Asset-I has been adjusted by restricting it to 53.09% of the assets cost. FERV has been adjusted against loan in respect of Asst-II. Accordingly, equity considered for the purpose of tariff is as under:

(Rs. in lakh)

Name of the assets	Capital cost as on date of commercial operation	Actual equity as on date of commercial operation	Additional capital expenditure	FERV	Capital cost excluding FERV	Notional equity
Asset-I	380.47	380.47	0.00	0.00	380.47	202.00
Asset-II	2307.54	359.45	(-) 45.90	(-) 95.46	2261.64	359.45
Total	2688.01	739.92	(-) 45.90	(-) 95.46	2642.11	561.45

### **RETURN ON EQUITY**

27. 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.

28. For the reasons recorded in para 26 above the petitioner shall be entitled to return on equity during the tariff period as under.

(Rs. in lakh)

	Return on equity				
	2004-05	2005-06	2006-07	2007-08	2008-09
Asset-I	28.28	28.28	28.28	28.28	28.28
Asset-II	50.32	50.32	50.32	50.32	50.32

### **INTEREST ON LOAN**

29. 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.”

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

- (i) In case of Asset-I, the actual financial package has 100% equity.
- (ii) In case of Asset-II, the petitioner has claimed interest on loan 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.

31. In our calculation, the interest on loan has been worked out as detailed below:

- (i) In case of Asset-II, the petitioner have utilised only ADB –I loan. Gross loan amount and repayment of instalments as per the Form 13 along with the supporting documents has been used to work out weighted average rate of interest on actual loan. As ADB-I loan has floating rate of interest, the rate of interest (7.51%) as on 1.4.2004 has been considered. The Notional loan amount has been arrived at by working out the notional equity as indicated above and than deducting it from the admitted capital cost as on 1.4.2004;
- (ii) In case of Asset-I, the notional loan has been arrived at by deducting the notional equity from the admitted cost as on 1.4.2004. Further, as there are no actual loan, therefore, for calculations purpose, rate of interest of 7.51% as in the case of Asset-II, has been considered ;
- (iii) Notional loan corresponding to additional capitalisation from date of commercial operation to 31.3.2004 has been added to the loan amount as on the date of commercial operation to arrive at total notional loan.

This adjusted gross loan has been considered as normative loan for tariff calculation.

- (iii) Tariff has been worked out considering normative loan and normative repayments. Normative repayments are 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) 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.

32. Based on above, revised year-wise interest on loan has been worked out as under:

Details of loan	Asset-I					Asset-II					
	2004-05	2005-06	2006-07	2007-08	2008-09	Up to 31.3.2004	2004-05	2005-06	2006-07	2007-08	2008-09
Notional Gross Loan as on date of the commercial operation						1948.09					
Addition due to Additional Capitalisation						-45.90					
Addition due to FERV						-95.46					
Gross Normative Loan as on 1.4.2004						1806.73					
Opening Gross Loan	178.47	178.47	178.47	178.47	178.47	1806.73	1806.73	1806.73	1806.73	1806.73	1806.73
Cumulative Repayment up to DOCO/Previous Year	0.00	12.60	25.20	37.80	50.40		224.49	308.73	401.61	504.00	616.88
Net Loan-Opening	178.47	165.87	153.27	140.67	128.07		1582.24	1498.00	1405.12	1302.73	1189.85
Repayment during the year	12.60	12.60	12.60	12.60	12.60		84.24	92.87	102.39	112.89	124.47
Net Loan-Closing	165.87	153.27	140.67	128.07	115.47		1498.00	1405.12	1302.73	1189.85	1065.38
Average Loan	172.17	159.57	146.97	134.37	121.77		1540.12	1451.56	1353.93	1246.29	1127.61
Weighted Average Rate of Interest on Loan	7.51%	7.51%	7.51%	7.51%	7.51%		7.51%	7.51%	7.51%	7.51%	7.51%
<b>Interest</b>	12.93	11.98	11.04	10.09	9.14		115.66	109.01	101.68	93.60	84.68

33. In respect of Asset-II, the detailed calculations in support of the weighted average rate of interest are contained in annexure attached.

## **DEPRECIATION**

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

(a) The value base for the purpose of depreciation shall be the historical cost of the asset.

(b) 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.

(c) On repayment of entire loan, the remaining depreciable value shall be spread over the balance useful life of the asset.

(d) 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.

35. In respect of Asset-I, the petitioner has claimed depreciation on the capital cost on as date of commercial operation. As there is no actual loan, the remaining depreciable value has been spread over the balance useful life of the asset (balance life of the asset as on 1.4.2004 is 23 years) .i.e. Rs. 342.42 lakh /23 = Rs. 14.89 lakh. For the purpose of tariff, the capital cost has been segregated into notional debt and equity as per reasons recorded in paras 24

and 29 (ii) above and therefore, depreciation has been charged in the usual manner. As there is net notional loan opening during the year 2004-05, the gross block for 2004-05 has been multiplied by the rate of depreciation.

36. In our calculations, the depreciation has been considered as under:

- (a) For the Asset-I, cumulative depreciation (which is the depreciation due as per the petition) for the period from the date of commercial operation to 31.3.2004 has been considered as per the petition;
- (b) For the Asset-II, depreciation for the period from the date of commercial operation to 31.3.2004 has been worked out by considering the applicable depreciation rates;
- (c) Depreciation for 2004-05 onwards has been considered on the capital expenditure as per para 1 above;
- (d) For the asset Asset-I, the capital cost has been segregated in to notional debt and equity and depreciation has been charged in the usual manner. As there is net loan opening during the year 2004-05, the gross block for the period 2004-05 has been multiplied by the rate of depreciation i.e. 3.312%.

37. Depreciation has been worked out as under:

(Rs. in lakh)

Details of loan	Asset-I					Up to 31.3.2004	Asset-II				
	2004-05	2005-06	2006-07	2007-08	2008-09		2004-05	2005-06	2006-07	2007-08	2008-09
Gross block as on the date of commercial operation	380.47	380.47	380.47	380.47	380.47	2307.54					
Addition during the date of commercial operation to 2003-04 due to ACE	-	-	-	-	-	-45.90					
Addition during the date of commercial operation to 2003-04 due to FERV	-	-	-	-	-	-95.46					
Gross block as 1.4.2004	380.47	380.47	380.47	380.47	380.47	2166.18	2166.18	2166.18	2166.18	2166.18	2166.18
Rate of Depreciation	3.312%	3.312%	3.312%	3.312%	3.312%		2.6929%	2.6929%	2.6929%	2.6929%	2.6929%
Depreciable Value	342.42	342.42	342.42	342.42	342.42		1949.56	1949.56	1949.56	1949.56	1949.56
Balance Useful life of the asset						-	-	-	-	-	-
Remaining Depreciable Value	239.68	227.08	214.48	201.88	189.28		1729.55	1645.31	1552.43	1450.04	1337.16
Depreciation	12.60	12.60	12.60	12.60	12.60		58.33	58.33	58.33	58.33	58.33

## **ADVANCE AGAINST DEPRECIATION**

38. 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

39. 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.

40. Accordingly, in our calculation the Advance Against Depreciation in respect of Asset-II has been worked as detailed below:

(a) 1/10th of gross loan is worked out from the Gross Notional Loan as per para 32 above.

(b) Repayment of notional loan during the year is considered as per para 32 above.

(c) Depreciation is worked out as per para 37 above.

(d) In the calculation of Advance Against Depreciation, cumulative depreciation/Advance Against Depreciation up to the preceding year along with the depreciation of the current year have been considered.

41. Details of Advance Against Depreciation allowed for Asset-II are given hereunder:

(Rs. in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
1/10th of Gross Loan(s)	180.67	180.67	180.67	180.67	180.67
Repayment of the Loan	84.24	92.87	102.39	112.89	124.47
Minimum of the above	84.24	92.87	102.39	112.89	124.47
Depreciation during the year	58.33	58.33	58.33	58.33	58.33
(A) Difference	25.90	34.54	44.06	54.55	66.13
Cumulative Repayment of the Loan	308.73	401.61	504.00	616.88	741.35
Cumulative Depreciation/ Advance against Depreciation	278.35	362.59	455.46	557.85	670.74
(B) Difference	30.38	39.02	48.54	59.03	70.61
Advance against Depreciation Minimum of (A) and (B)	<b>25.90</b>	<b>34.54</b>	<b>44.06</b>	<b>54.55</b>	<b>66.13</b>

### **OPERATION & MAINTENANCE EXPENSES**

42. 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

43. The petitioner's entitlement to O & M expenses for ckt km and bays has been worked out as given hereunder:

(Rs. in lakh)

	Asset-I					Asset-II				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
O&M expenses for 16.788. ckt km line length	3.81	3.96	4.12	4.28	4.46	23.61	24.55	25.59	26.53	27.67
O&M expenses for 2 bays	56.24	58.50	60.84	63.26	65.80	28.12	29.25	30.42	31.63	32.90
<b>Total</b>	<b>60.05</b>	<b>62.46</b>	<b>64.96</b>	<b>67.54</b>	<b>70.26</b>	<b>51.73</b>	<b>53.80</b>	<b>56.01</b>	<b>58.16</b>	<b>60.57</b>

### **INTEREST ON WORKING CAPITAL**

44. 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. Accordingly, the capital expenditure on the date of commercial operation is Rs. 380.47 lakh and Rs. 2307.54 lakh, respectively, 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 as on 1.4.2004 are given hereunder:

(Rs. in lakh)

Name of the assets	Date of commercial operation	Value of maintenance spares as on 1.4.2004
Asset-I	1.1.2001	5.40
Asset-II	1.4.1998	27.90

**(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 the respective year 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 of 2 months' transmission charges. 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.

45. The necessary computations in support of interest on working capital are appended hereinbelow.

(Rs. in lakh)

	Asset-I					Asset-II				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	5.40	5.72	6.06	6.43	6.81	27.90	29.57	31.34	33.22	35.22
O & M expenses	5.00	5.21	5.41	5.63	5.86	4.31	4.48	4.67	4.85	5.05
Receivables	19.49	19.74	20.02	20.30	20.62	51.76	52.48	53.26	54.07	54.97
Total	29.89	30.67	31.50	32.36	33.28	83.97	86.53	89.27	92.14	95.23
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	3.06	3.14	3.23	3.32	3.41	8.61	8.87	9.15	9.44	9.76

### **TRANSMISSION CHARGES**

46. The transmission charges being allowed for the two transmission lines are summarised below:

(Rs in lakh)

	Asset-I					Asset-II				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	12.60	12.60	12.60	12.60	12.60	58.33	58.33	58.33	58.33	58.33
Interest on Loan	12.93	11.98	11.04	10.09	9.14	115.66	109.01	101.68	93.60	84.68
Return on Equity	28.28	28.28	28.28	28.28	28.28	50.32	50.32	50.32	50.32	50.32
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00	25.90	34.54	44.06	54.55	66.13
Interest on Working Capital	3.06	3.14	3.23	3.32	3.41	8.61	8.87	9.15	9.44	9.76
O & M Expenses	60.05	62.46	64.96	67.54	70.26	51.73	53.80	56.01	58.16	60.57
Total	116.92	118.47	120.11	121.83	123.70	310.56	314.88	319.55	324.41	329.80

47. The petitioner has been paid UCPTT for the period up to 31.3.2007 based on various order of the Commission, and thereafter the transmission charges in accordance with the order dated 25.3.2008. The petitioner shall recover from the beneficiaries the additional transmission charges in three monthly instalments. The petitioner has also

sought reimbursement of filing fee paid. The Commission by its separate general order dated 11.9.2008 in Petition No. 129/2005 has decided that the petitioner shall not be allowed reimbursement of the petition filing fee.

48. 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.

49. This order disposes of Petition No.86/2006.

<b>Sd/-</b>	<b>sd/-</b>	<b>sd/-</b>	<b>sd/-</b>
<b>(V.S.VERMA)</b>	<b>(S.JAYARAMAN)</b>	<b>(R.KRISHNAMOORTHY)</b>	<b>(DR.PRAMOD DEO)</b>
<b>MEMBER</b>	<b>MEMBER</b>	<b>MEMBER</b>	<b>CHAIRPERSON</b>

**New Delhi dated the 21st August 2009**

## Annexure

Details of calculations in support of the weighted revised average rate of interest.

### **Asset-II**

Details of Loan	2004-05	2005-06	2006-07	2007-08	2008-09
<b>ADB-I</b>					
Gross Loan- Opening	1836.21	1836.21	1836.21	1836.21	1836.21
Cum Repayment up to DOCO/Previous year	228.16	313.77	408.16	512.22	626.95
Net Loan-Opening	1608.05	1522.44	1428.05	1323.99	1209.26
Repayment during the year	85.61	94.39	104.06	114.73	126.50
Net Loan-Closing	1522.44	1428.05	1323.99	1209.26	1082.76
Average Loan	1565.24	1475.24	1376.02	1266.62	1146.01
Rate of Interest	7.51%	7.51%	7.51%	7.51%	7.51%
Interest	117.55	110.79	103.34	95.12	86.07
Rep Schedule	Half yearly instalments from 1. 6.2000				
<b>Total Loan</b>					
Gross Loan- Opening	1836.21	1836.21	1836.21	1836.21	1836.21
Cum Repayment up to DOCO/Previous year	228.16	313.77	408.16	512.22	626.95
Net Loan-Opening	1608.05	1522.44	1428.05	1323.99	1209.26
Repayment during the year	85.61	94.39	104.06	114.73	126.50
Net Loan-Closing	1522.44	1428.05	1323.99	1209.26	1082.76
Average Loan	1565.24	1475.24	1376.02	1266.62	1146.01
Rate of Interest	7.51%	7.51%	7.51%	7.51%	7.51%
<b>Interest</b>	<b>117.55</b>	<b>110.79</b>	<b>103.34</b>	<b>95.12</b>	<b>86.07</b>