

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 34/2010

Coram:

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

DATE OF HEARING: 29.4.2010

DATE OF ORDER 18.6.2010

In the matter of

Revision of transmission tariff due to additional capital expenditure incurred during 2006-07, 2007-08 and 2008-09 for 132 kV S/C NER augmentation transmission system in North Eastern Region.

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**

The following were present:

1. Shri U.K.Tyagi, PGCIL
2. Shri Rakesh Prasad, PGCIL
3. Shri M.M.Mondal, PGCIL

ORDER

This petition has been filed for revision of transmission tariff due to additional capital expenditure incurred in respect of 132 kV S/C NER augmentation transmission system (the transmission system) in North Eastern Region during 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 prayed for reimbursement of the petition filing fee, licence fee and other expenditure in connection with the filing of the petition

2. The investment approval for Revised Cost Estimate-II for the transmission system was accorded by the Board of Directors of the petitioner company under its letter dated 24.4.2006 at an estimated cost of Rs. 13391 lakh, which included IDC of Rs.1208 lakh. The transmission asset was declared under commercial operation on 1.2.2000.

3. The transmission charges for the asset was approved vide order dated 21.8.2009 in Petition No. 88/2006. The summary of the revised transmission charges approved by the said order dated 21.8.2009 is extracted hereunder:

(Rs. In lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	370.12	374.14	376.84	376.84	376.84
Interest on Loan	669.34	634.17	588.39	530.60	472.29
Return on Equity	322.83	333.25	339.04	339.04	339.04
Advance against Depreciation	0.00	19.47	308.56	364.71	369.19
Interest on Working Capital	55.99	57.58	63.67	65.42	66.38
O & M Expenses	616.36	641.07	666.98	693.13	721.33
Total	2034.63	2059.67	2343.49	2369.73	2345.06

4. The relevant details of the capital expenditure of the transmission assets claimed by the petitioner are as under:

(Rs. in lakh)

Capital cost as on 1.4.2006 admitted vide order dated 21.8.2009	Additional Capital Expenditure during 2006-07	Capital cost as on 1.4.2007	Additional Capital Expenditure during 2007-08	Capital cost as on 1.4.2008	Additional Capital Expenditure during 2008-09	Capital cost as on 1.4.2009
13192.21	39.17	13231.38	1.70	13233.08	8.61	13241.69

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

(Rs. in lakh)

Transmission Tariff	2006-07	2007-08	2008-09
Depreciation	377.20	377.57	377.67
Interest on Loan	589.44	532.62	474.36
Return on Equity	339.87	340.73	340.94
Advance against Depreciation	308.20	366.73	371.26
Interest on Working Capital	63.70	65.53	66.50
O & M Expenses	666.98	693.13	721.33
Total	2345.39	2376.31	2352.06

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

(Rs. in lakh)

Working Capital	2006-07	2007-08	2008-09
Maintenance Spares	175.00	185.51	196.64
O & M expenses	55.58	57.76	60.11
Receivables	390.90	396.05	392.01
Total	621.48	639.32	648.76
Rate of Interest	10.25%	10.25%	10.25%
Interest	63.70	65.53	66.50

7. No reply has been filed by the respondents.

CAPITAL COST

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

(Rs. in lakh)

Year	Amount (Rs. in lakh)	Nature and details of expenditure
2006-07	Free hold land = Rs. -0.49 lakh Building = Rs. 38.89 lakh Transmission line=Rs. 0.49 lakh Sub-station = Rs. 0.28 lakh Total = Rs. 39.17 lakh	Balance and retention payments
2007-08	Building = Rs. 1.70 lakh	Balance and retention payments
2008-09	Building = Rs. 8.61 lakh	Balance and retention payments

10. The petitioner has submitted audited capital cost up to 31.3.2009 duly certified by Chartered Accountant. The additional capital expenditure claimed is within the original scope of work and on account of retention/balance payments. The additional expenditure sought to be capitalised is allowed under Regulation 53 of the 2004 regulations.

TOTAL CAPITAL COST

11. Based on the above, capital cost for the purpose of tariff in respect of the transmission assets as on 31.3.2009 works out as under:

Capital cost as on 1.4.2006	Additional Capital Expenditure during 2006-07	Capital cost as on 1.4.2007	Additional Capital Expenditure during 2007-08	Capital cost as on 1.4.2008	Additional Capital Expenditure during 2008-09	Capital cost as on 1.4.2009
13192.21	39.17	13231.38	1.70	13233.08	8.61	13241.69

DEBT- EQUITY RATIO

12. The petitioner has considered the amount of additional capital expenditure in the debt-equity ratio of 70:30, 70:30 and 70.03:29.97 for the years 2006-07, 2007-08 and 2008-09, respectively. The additional capital expenditure has been restricted 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)									
Equity as on 1.4.2006	Equity addition due to additional capital expenditure during 2006-07	Average equity 2006-07	Equity as on 1.4.2007	Equity addition due to additional capital expenditure during 2007-08	Average equity for 2007-08	Equity as on 1.4.2008	Equity addition due to additional capital expenditure during 2008-09	Total equity considered as on 31.3.2009	Average equity for 2008-09
2421.75	11.75	2433.50	2433.50	0.51	2434.01	2434.01	2.58	2436.59	2436.59

RETURN ON EQUITY

13. 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.

14. Equity as given in the table under para 12 above has been considered. However, tariff for 2006-07 to 2008-09 has been allowed on average equity. Accordingly, return on equity allowed for the period 2006-07 to 2008-09 is given as under:

(Rs. in lakh)		
2006-07	2007-08	2008-09
339.87	340.73	340.94

INTEREST ON LOAN

15. 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."

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

(a) Gross amount of loan, repayment of instalments and rate of interest and weighted average rate of interest on actual loan have been considered as per order dated 20.8.2009 in Petition No. 88/2006. There is no addition of actual loans.

(b) Notional loan arising out of additional capital expenditure for the years 2006-07, 2007-08 and 2008-09 has been added to the loan amount as on 31.3.2006 to arrive at total notional loans. This adjusted

gross loan has been considered as normative loans for tariff calculations.

(c) Tariff has been worked out considering normative loan and normative repayments. Once the normative loan has been arrived at, it is considered for all purposes in the tariff. Normative repayment has been worked out by the following formula:

$$\frac{\text{Actual repayment of actual loan during the year}}{\text{Opening balance of actual loan during the year}} \times \text{Opening balance of normative loan during the year}$$

(d) 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 including Advance Against Depreciation during the year, then depreciation including Advance Against Depreciation during the year is deemed as normative repayment of loan during the year.

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

17. Based on the above, the details of interest worked out are given hereunder:

	(Rs. in lakh)		
	2006-07	2007-08	2008-09
Gross Normative Loan	10770.46	10797.88	10799.07
Cumulative Repayment up to Previous Year/date of commercial operation	2718.10	3403.50	4147.80
Net Loan-Opening	8052.36	7394.38	6651.27
Addition due to Additional Capitalisation	27.42	1.19	6.03
Repayment during the year	685.40	744.30	748.93
Net Loan-Closing	7394.38	6651.27	5908.36
Average Loan	7723.37	7022.83	6279.82
Weighted Average Rate of Interest on Loan	7.63%	7.58%	7.55%
Interest	589.44	532.62	474.36

18. The detailed calculations in support of the weighted average rate of interest for the transmission system are contained in Annexure attached.

DEPRECIATION

19. 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."

20. Depreciation allowed has been worked out as below:

	(Rs. in lakh)		
	2006-07	2007-08	2008-09
Gross block as on the date of commercial operation	13192.21	13231.38	13233.08
Additional Capitalisation during 2008-09	39.17	1.70	8.61
Gross Block at the end of the year	13231.38	13233.08	13241.69
Rate of Depreciation	2.85%	2.85%	2.85%
Depreciable Value	11827.37	11845.98	11850.62
Balance Useful life of the asset	-	-	-
Remaining Depreciable Value	9109.27	8442.48	7702.82
Depreciation	377.20	377.57	377.67

ADVANCE AGAINST DEPRECIATION

21. 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

22. 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.

23. Accordingly, in our calculation the Advance Against Depreciation has been worked as detailed below:

(a) 1/10th of gross loan is worked out from the Gross Notional Loan as per para 17 above.

(b) Repayment of notional loan during the year is considered as per para 17 above.

(c) Depreciation is worked out as per para 20 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 for working out the Advance Against Depreciation

24. The Advance Against Depreciation has been worked as under:

(Rs. in lakh)

Advance against Depreciation	2006-07	2007-08	2008-09
1/10th of Gross Loan(s)	1077.05	1079.79	1079.91
Repayment of the Loan	685.40	744.30	748.93
Minimum of the above	685.40	744.30	748.93
Depreciation during the year	377.20	377.57	377.67
(A) Difference	308.20	366.73	371.27
Cumulative Repayment of the Loan	3403.50	4147.80	4896.73
Cumulative Depreciation/ Advance against Depreciation	3095.29	3781.07	4525.47
(B) Difference	308.20	366.73	371.27
Advance against Depreciation Minimum of (A) and (B)	308.20	366.73	371.27

OPERATION & MAINTENANCE EXPENSES

25. 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

26. O&M expenses as taken for the tariff calculations in the order dated 21.8.2009 in Petition No. 88/2006 has been considered, since line length and number of bays remain unchanged.

INTEREST ON WORKING CAPITAL

27. 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, maintenance spares have been worked out on the historical cost and by providing escalation from the date of commercial operation.

(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. O&M expenses as considered in the orders dated 21.8.2009 in Petition No. 88/2006 have been considered.

(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. Accordingly, in the tariff being allowed, receivables have been worked out on the basis of 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 whether or not the transmission licensee has 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.

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

(Rs. in lakh)

Working Capital	2006-07	2007-08	2008-09
Maintenance Spares	175.00	185.51	196.64
O & M expenses	55.58	57.76	60.11
Receivables	390.90	396.05	392.01
Total	621.48	639.32	648.76
Rate of Interest	10.25%	10.25%	10.25%
Interest	63.70	65.53	66.50

TRANSMISSION CHARGES

29. The transmission charges being allowed for the three transmission assets are summarised below:

(Rs. in lakh)

Transmission Tariff	2006-07	2007-08	2008-09
Depreciation	377.20	377.57	377.67
Interest on Loan	589.44	532.62	474.36
Return on Equity	339.87	340.73	340.94
Advance against Depreciation	308.20	366.73	371.27
Interest on Working Capital	63.70	65.53	66.50
O & M Expenses	666.98	693.13	721.33
Total	2345.39	2376.31	2352.06

30. The petitioner shall recover from the beneficiaries the additional transmission charges in one instalment and these charges shall be shared in accordance with the 2004 regulations.

31. 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 (suo-motu) has decided that the petitioner shall not be allowed reimbursement of the petition filing fee. The decision on reimbursement of the licence fee shall be communicated separately.

32. 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.

33. This order disposes of Petition No. 34/2010.

Sd/-
(M.DEENA DAYALAN)
MEMBER

sd/-
(S.JAYARAMAN)
MEMBER

Annexure-I

	Details of Loan	2006-07	2007-08	2008-09
1	Bond-VII			
	Gross Loan- Opening	275.00	275.00	275.00
	Cum Repayment up to the date of commercial operation/Previous year	165.00	220.00	275.00
	Net Loan-Opening	110.00	55.00	0.00
	Repayment during the year	55.00	55.00	0.00
	Net Loan-Closing	55.00	0.00	0.00
	Average Loan	82.50	27.50	0.00
	Rate of Interest	13.64%	13.64%	13.64%
	Interest	11.25	3.75	0.00
	Rep Schedule	Annual instalments from 4.8.2003		
2	PNB-I			
	Gross Loan- Opening	275.00	275.00	275.00
	Cum Repayment up to the date of commercial operation /Previous year	82.50	110.00	137.50
	Net Loan-Opening	192.50	165.00	137.50
	Repayment during the year	27.50	27.50	27.50
	Net Loan-Closing	165.00	137.50	110.00
	Average Loan	178.75	151.25	123.75
	Rate of Interest	8.66%	8.66%	8.66%
	Interest	15.48	13.10	10.72
	Rep Schedule	Annual instalments from 30.3.2004		
3	Bond- XIII- II			
	Gross Loan- Opening	213.00	213.00	213.00
	Cum Repayment up to the date of commercial operation /Previous year	106.50	142.00	177.50
	Net Loan-Opening	106.50	71.00	35.50
	Repayment during the year	35.50	35.50	35.50
	Net Loan-Closing	71.00	35.50	0.00
	Average Loan	88.75	53.25	17.75
	Rate of Interest	7.85%	7.85%	7.85%
	Interest	6.97	4.18	1.39
	Rep Schedule	Annual instalments from 31.7.2003		
4	Corporation Bank			
	Gross Loan- Opening	138.00	138.00	138.00
	Cum Repayment up to the date of commercial operation /Previous year	34.50	48.30	62.10
	Net Loan-Opening	103.50	89.70	75.90
	Repayment during the year	13.80	13.80	13.80
	Net Loan-Closing	89.70	75.90	62.10
	Average Loan	96.60	82.80	69.00
	Rate of Interest	9.15%	9.15%	9.15%
	Interest	8.84	7.58	6.31
	Rep Schedule	Annual instalments from 10.3.2004		

5	ADB-I			
	Gross Loan- Opening	9434.85	9434.85	9434.85
	Cum Repayment up to the date of commercial operation /Previous year	2304.85	2829.48	3407.88
	Net Loan-Opening	7199.52	6674.89	6096.49
	Repayment during the year	524.63	578.40	637.69
	Net Loan-Closing	6674.89	6096.49	5458.80
	Average Loan	6937.21	6385.69	5777.65
	Rate of Interest	7.51%	7.51%	7.51%
	Interest	520.98	479.57	433.90
	Rep Schedule	Half yearly instalments from 1.6.2000		
	Total Loan			
	Gross Loan- Opening	10335.85	10335.85	10335.85
	Cum Repayment up to DOCO/Previous year	2693.35	3349.78	4059.98
	Net Loan-Opening	7712.02	7055.59	6345.39
	Repayment during the year	656.43	710.20	714.49
	Net Loan-Closing	7055.59	6345.39	5630.90
	Average Loan	7383.81	6700.49	5988.15
	Rate of Interest	7.63%	7.58%	7.55%
	Interest	563.52	508.17	452.32