

**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. 26/2009

In the matter of

Determination of revised transmission tariff due to approval of RCE and additional capitalization incurred in 2006-07 and 2007-08 for 400 kV D/C Kanpur-Auraiya transmission line along with bays at Auraiya under Northern Region System Strengthening Scheme-I in Northern Region for tariff block 2004-09.

And in the matter of

Power Grid Corporation of India Limited, Gurgaon **..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 Power Generation Corporation 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., New 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 **.... Respondents**

The following were present:

1. Shri U.K.Tyagi, PGCIL
2. Shri V.V.Sharma, PGCIL
3. Shri A.K.Nagpal, PGCIL
4. Shri B.C.Pant, PGCIL
5. Shri M.M.Mondal, PGCIL
6. Shri Mohd. Mohsin, PGCIL
7. Shri V.K.Gupta, JVVNL
8. Shri S.N.Singh, UPPCL
9. Shri Atul Pasrija, HPPC

ORDER
(DATE OF HEARING: 21.4.2009)

This petition has been filed for revision of transmission tariff for additional capital expenditure incurred during 2006-07 and 2007-08 in respect of 400 kV D/C Kanpur-Auraiya transmission line (the transmission line) along with bays at Auraiya under Northern Region System Strengthening Scheme-I (the transmission scheme) from 1.10.2006 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 and other expenditure .in connection with the filing of the petition.

2. The investment approval for the transmission scheme was accorded by Board of Directors of the petitioner company vide Memorandum dated 25.2.2004 at an estimated cost of Rs. 27180 lakh, which included IDC of Rs. 1421 lakh. The apportioned approved cost of the transmission line which was declared under commercial operation on 1.10.2006 was stated to be Rs. 6065.51 lakh. Meanwhile, the Board of Directors of the petitioner company approved the revised cost estimate vide letter dated 21.10.2008 at Rs. 35084 lakh, against which the apportioned cost of the transmission line is Rs. 8592.02 lakh.

3. The transmission charges for the transmission line were approved by the Commission in its order dated 30.4.2008 in Petition No. 134/2007 for the period 1.10.2006 to 31.3.2009 based on the apportioned approved capital cost of Rs. 6065.51 lakh against the actual expenditure of Rs. 7068.46 lakh. The summary of the transmission charges approved by the said order dated 30.4.2008 is extracted hereunder:

(Rs. in lakh)

	2006-07(Pro rata)	2007-08	2008-09
Depreciation	82.88	165.76	165.76
Interest on Loan	184.88	358.86	344.33
Return on Equity	126.53	253.06	253.06
Advance against Depreciation	0.00	0.00	0.00
Interest on Working Capital	11.28	22.65	22.90
O & M Expenses	48.36	100.45	104.60
Total	453.93	900.78	890.64

4. The relevant details of the approved cost, completion cost etc. of the transmission assets claimed by the petitioner are as under:

(Rs.in lakh)

Approved cost	Capital expenditure up to 1.10.2006	Additional Capitalization during 2006-07	Capital expenditure as on 1.4.2007	Additional Capitalization during 2007-08	Capital expenditure as on 1.4.2008	Balance estimated expenditure	Estimated completion cost
8592.02	7068.46	595.63	7664.09	461.71	8125.80	466.46	8592.25

5. Based on the above additional capital expenditure, the petitioner has claimed the revised transmission charges for the period 2006-07 to 2008-09 as under:

(Rs.in lakh)

	2006-07	2007-08	2008-09
Depreciation	101.35	219.79	227.25
.Interest on Loan	224.98	469.34	463.88
Return on Equity	153.71	329.62	339.31
Advance against Depreciation	0.00	0.00	0.00
Interest on Working Capital	13.29	27.92	28.68
O & M Expenses	48.36	100.45	104.60
Total	541.69	1147.12	1163.72

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

(Rs. in lakh)

	2006-07	2007-08	2008-09
Maintenance Spares	70.68	72.81	77.17
O & M expenses	8.06	8.37	8.72
Receivables	180.56	191.19	193.95
Total	259.30	272.37	279.84
Rate of Interest	10.25%	10.25%	10.25%
Interest	13.29	27.92	28.68

7. No reply has been filed by the respondents.

CAPITAL COST

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

Sl. No.	Year	Amount (Rs. in lakh)	Nature and details of expenditure
1.	2006-07	595.63	Transmission line and sub-station
2.	2007-08	461.71	Transmission line, sub-station and PLCC

TOTAL CAPITAL COST

9. The Commission by its order dated 30.4.2008 had restricted the then apportioned approved capital cost to Rs. 6065.51 lakh for the purpose of tariff without considering the additional capital expenditure of Rs.595.63 lakh from the date of commercial operation to 31.3.2007 (2006-07) on the ground that the total cost exceeded the apportioned approved cost though the expenditure was found to be in order. The petitioner was granted the liberty to approach the Commission for revision of tariff after the revised cost estimate was approved.

10. It is found that the additional capital expenditure claimed for the year 2007-08 is in respect of retention/ final payments. These are part of the deferred liabilities relating to works/services which have materialised, and are within the original scope of work. Therefore, the additional expenditure sought to be capitalised is allowed under clauses (1) and (2) of Regulation 53 of the 2004 regulations. The actual capital expenditure of the transmission line up to 31.3.2008 taking into account of additional capital expenditure from the date of commercial operation to 31.3.2008, is Rs. 8125.79 lakh and is well within the revised apportioned approved cost of Rs. 8592.02 lakh. Based on the above, capital cost for the purpose of tariff of the transmission line works out as under:

(Rs.in lakh)				
Admitted capital cost as on 1.10.2006	Additional Capitalization during 2006-07	Capital expenditure as on 1.4.2007	Additional Capitalization during 2007-08	Capital expenditure as on 1.4.2008
7068.46	595.63	7664.09	461.71	8125.80

DEBT- EQUITY RATIO

11. The petitioner has considered the amount of additional capitalization in the debt-equity ratio of 70:30. This has been found to be in order. Accordingly, for the purpose of tariff, equity considered for the transmission assets is as under:

(Rs. in lakh)

Equity as on 1.10.2006 (As per order dated 30.4.2008)	Notional additional equity during 2006-07	Average equity during 2006-07	Equity as on 1.4.2007	Notional additional equity during 2007-08	Average equity for 2007-08	Equity as on 1.4.2008
2106.46	178.69	2195.80	2285.15	138.51	2354.41	2423.66

RETURN ON EQUITY

12. 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.

13. For the reasons already recorded, equity as given the table under para 11 above has been considered. However, tariff for the years 2006-07 and 2007-08 has been allowed pro rata on average equity. Accordingly, revised return on equity allowed each year is given as under:

(Rs. in lakh)

Return on equity		
2006-07	2007-08	2008-09
153.71	329.62	339.31

INTEREST ON LOAN

14. Clause (1) 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.”

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

(a) Gross loan opening is from the year 2006-07.

(b) 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.

(c) Bond XXIII has been utilised w.e.f. 9.2.2007, that is, after date of commercial operation for the purpose of additional capital expenditure.

(d) Gross loan at (i) above have been considered along with the loan utilised after DOCO 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 and Advance Against Depreciation as repayment.

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

(a) Gross amount of loan and repayment of instalments have been taken as per the petition and matched with the petitioner's loan statement .

(b) Tariff has been worked out considering normative loan and normative repayments. Normative repayments are worked out by the following formula:

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

(c) Moratorium in repayment of loan is 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.

(d) Weighted average rate of interest on actual loan worked out as per (i) above is applied on the notional average loan during the year to arrive at the interest on loan.

(e) In case 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 has deemed as normative repayment of loan during the year

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

(Rs. in lakh)			
Details	2006-07	2007-08	2008-09
Gross Normative Loan	4962.00	5378.94	5702.14
Cumulative Repayment up to Previous Year/date of commercial operation	0.00	101.35	321.14
Net Loan-Opening	4962.00	5277.59	5381.00
Addition due to Additional Capitalisation	416.94	323.20	-
Repayment during the year	101.35	219.79	227.25
Net Loan-Closing	5277.59	5381.00	5153.75
Average Loan	5119.80	5329.30	5267.38
Weighted Average Rate of Interest on Loan	8.79%	8.81%	8.81%
Interest	224.98	469.33	463.88

18. The detailed calculations in support of the weighted revised average rate of interest 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:

(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.

20. Depreciation allowed has been worked out as below:

(Rs. in lakh)

	2006-07	2007-08	2008-09
Rate of Depreciation	2.7517%	2.7839%	2.7966%
Depreciable Value	6629.65	7105.45	7313.22
Balance Useful life of the asset	-	-	-
Remaining Depreciable Value	6629.65	7004.10	6992.08
Depreciation	101.35	219.79	227.25
Cumulative Depreciation/ Advance against Depreciation	101.35	321.14	548.38

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. The petitioner has not claimed Advance Against Depreciation and, thereafter, Advance Against Depreciation has not been considered.

OPERATION & MAINTENANCE EXPENSES

24. 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

25. O&M expenses as taken for the tariff calculations as per order dated 30.4.2008 in Petition No. 134/2007 have been considered, since line length and number of bays remain unchanged.

INTEREST ON WORKING CAPITAL

26. 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. The petitioner has claimed maintenance spares after accounting for additional capital expenditure. For the purpose of computation of maintenance spares, the historical cost is being taken as the cost on the date of commercial operation. Maintenance spares on additional capital expenditure are not being considered for the present. Therefore, the petitioner's claim in this regard is not being allowed. Accordingly, maintenance spares have been worked out on the historical cost and 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 order dated 30.4.2008 in Petition No. 134/2007 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 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 1.4.2006, which is in accordance with the 2004 regulations and has been allowed.

27. The necessary computations in support of interest revised on working capital, as revised, are appended herein below:

(Rs. in lakh)

	2006-07	2007-08	2008-09
Maintenance Spares	70.68	72.81	77.17
O & M expenses	8.06	8.37	8.72
Receivables	180.56	191.18	193.95
Total	259.31	272.36	279.84
Rate of interest	10.25%	10.25%	10.25%
Interest	13.29	27.92	28.68

TRANSMISSION CHARGES

28. The revised transmission charges being allowed for the transmission line for the period 2006-07 to 2008-09 are summarised below:

(Rs. in lakh)

	2006-07	2007-08	2008-09
Depreciation	101.35	219.79	227.25
Interest on Loan	224.98	469.33	463.88
Return on Equity	153.71	329.62	339.31
Advance against Depreciation	0.00	0.00	0.00
Interest on Working Capital	13.29	27.92	28.68
O & M Expenses	48.36	100.45	104.60
Total	541.69	1147.11	1163.72

29. 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.

30. 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. These transmission charges shall be included in the regional transmission tariff for Northern Region and shall be shared by the regional beneficiaries in accordance with the 2004 regulations.

31. This order disposes of Petition No.26/2009.

sd/- sd/- sd/- sd/-
(V.S.VERMA) (S.JAYARAMAN) (R.KRISHNAMOORTHY) (DR.PRAMOD DEO)
MEMBER MEMBER MEMBER CHAIRPERSON
New Delhi dated the 13th May 2009

Annexure

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN				
				(Rs. in Lakh)
	Details of Loan	2006-07	2007-08	2008-09
1	Bond- XVII			
	Gross Loan opening	1282.00	1282.00	1282.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	1282.00	1282.00	1282.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	1282.00	1282.00	1282.00
	Average Loan	1282.00	1282.00	1282.00
	Rate of Interest	7.39%	7.39%	7.39%
	Interest	94.74	94.74	94.74
	Repayment Schedule		10 Annual Instalments from 22.9.2009	
2	Bond- XIX			
	Gross Loan opening	3680.00	3680.00	3680.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	3680.00	3680.00	3680.00
	Additions during the year	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	3680.00	3680.00	3680.00
	Average Loan	3680.00	3680.00	3680.00
	Rate of Interest	9.25%	9.25%	9.25%
	Interest	340.40	340.40	340.40
	Repayment Schedule		12 annual instalments from 24. 7. 2010	
3	Bond- XXIII (Add Cap for 2006-07)			
	Gross Loan opening	0.00	417.00	417.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening		417.00	417.00
	Additions during the year	417.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	417.00	417.00	417.00
	Average Loan	208.50	417.00	417.00
	Rate of Interest	9.25%	9.25%	9.25%
	Interest	19.29	38.57	38.57
	Repayment Schedule		12 annual instalments from 9.2.2011	
	Total Loan			
	Gross Loan opening	4962.00	5379.00	4962.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00
	Net Loan-Opening	4962.00	5379.00	4962.00
	Additions during the year	417.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00
	Net Loan-Closing	5379.00	5379.00	5379.00
	Average Loan	5170.50	5379.00	5379.00
	Rate of Interest	8.79%	8.81%	8.81%
	Interest	454.43	473.71	473.71