

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram:

- 1. Shri R.Krishnamoorthy, Member**
- 2. Shri S.Jayaraman, Member**
- 3. Shri V.S.Verma, Member**

Petition No. 31/2009

In the matter of

Determination of revised transmission tariff considering additional capitalization incurred during 2007-08 for 220 kV S/C Meerut-Shatabdinagar transmission line under System improvement Scheme in Uttar Pradesh in Northern Region for the tariff block 2004-09 period.

And in the matter of

Power Grid Corporation of India Limited, Gurgaon	..Petitioner
Vs	
Uttar Pradesh Power Corporation Limited, LucknowRespondent

The following were present:

1. Shri U.K.Tyagi, PGCIL
2. Shri V.V.Sharma, PGCIL
3. Shri R.Prasad, PGCIL
4. Shri M.M.Mondal, PGCIL
5. Shri B.C.Pant, PGCIL
6. Shri S.N.Raju, PGCIL
7. Shri S.N. Singh, PGCIL

**ORDER
(DATE OF HEARING: 12.5.2009)**

This petition has been filed for revision of transmission tariff on account of additional capital expenditure incurred during 2007-08 in respect of the petitioner's portion of 220 kV S/C Meerut-Shatabdinagar transmission line (the transmission line) under system improvement scheme in Uttar Pradesh (hereinafter referred to as "the transmission scheme") for the period from 1.4.2007 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 the Board of Directors of the petitioner company as per Memorandum dated 14.1.2002 at an estimated cost of Rs.2257 lakh, including IDC of Rs.107 lakh, based on 3rd quarter 2001 price level. Subsequently, because of change in the scope of work, the Board of Directors of the petitioner company approved the revised cost estimate of Rs. 2604 lakh, including IDC of Rs. 197 lakh based on 4th quarter 2004 price level, as per Memorandum dated 17.10.2005. The transmission line was declared under commercial operation on 1.1.2006.

3. The transmission charges for the transmission line were approved by the Commission in its order dated 17.7.2007 in Petition No. 10/2007 for the period 1.1.2006 to 31.3.2009 based on capital cost of Rs. 327.25 lakh as on the date of commercial operation and Rs. 339.05 lakh as on 31.3.2007, after considering additional capital expenditure of Rs. 9.17 lakh for the period 1.1.2006 to 31.3.2006 and Rs. 2.63 lakh for the period 1.4.2006 to 31.3.2007. The summary of the transmission charges approved by the said order dated 17.7.2007 is extracted hereunder:

(Rs.in lakh)

	2005-06 (Pro rata)	2006-07	2007-08	2008-09
Depreciation	2.97	12.14	12.19	12.19
Interest on Loan	4.87	18.64	17.01	15.29
Return on Equity	3.94	16.02	16.08	16.08
Advance against Depreciation	4.92	6.42	6.55	6.55
Interest on Working Capital	0.39	1.32	1.32	1.32
O & M Expenses	0.49	2.03	2.10	2.19
Total	17.59	56.57	55.24	53.61

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

Approved apporportioned cost	Capital expenditure up to 1.1.2006	Additional Capitalization during 2005-06	Capital expenditure as on 1.4.2006	Additional Capitalization during 2006-07	Capital expenditure as on 1.4.2007	Additional Capitalization during 2007-08	Capital expenditure as on 1.4.2008
306.49	327.25	9.17	336.42	2.63	339.05	5.81	344.86

5. Based on the above additional capital expenditure, the petitioner has claimed the revised transmission charges for the years 2007-08 to 2008-09 as under:

(Rs.in lakh)

	2007-08	2008-09
Depreciation	12.26	12.34
.Interest on Loan	17.19	15.64
Return on Equity	16.20	16.32
Advance against Depreciation	6.48	6.83
Interest on Working Capital	1.33	1.33
O & M Expenses	2.10	2.19
Total	55.56	54.65

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

(Rs. in lakh)

	2007-08	2008-09
Maintenance Spares	3.52	3.73
O & M expenses	0.18	0.18
Receivables	9.26	9.11
Total	12.96	13.02
Rate of Interest	10.25%	10.25%
Interest	1.33	1.33

7. The reply to the petition has been filed by the respondent, Uttar Pradesh Power Corporation Ltd. (UPPCL).

CAPITAL COST

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

Year	Amount (Rs. in lakh)	Nature and details of expenditure
2007-08	5.81	Retention and balance payments

9. It is found that the additional capital expenditure claimed is in respect of retention and balance payments. These are part of the deferred liabilities relating to works/services which have since 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.

TOTAL CAPITAL COST

10. Based on the above, capital cost for the purpose of tariff for transmission asset, works out as under:

(Rs.in lakh)						
Admitted capital cost as on 1.1.2006	Additional Capitalization during 2005-06	Capital expenditure as on 1.4.2006	Additional Capitalization during 2006-07	Capital expenditure as on 1.4.2007	Additional Capitalization during 2007-08	Capital expenditure as on 1.4.2008
327.25	9.17	336.42	2.63	339.05	5.81	344.86

11. Although the capital cost of the transmission line as considered for the purpose of tariff exceed its apportioned cost, the estimated completion cost of Rs. 2383.60 lakh (for the transmission scheme as a whole) is less than its approved cost of Rs. 2604.41 lakh.

DEBT- EQUITY RATIO

12. 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 1.1.2006 (As per order dated 17.7.2007)	Notional additional equity up to 31.3.2006 (As per order dated 17.7.2007)	Average equity considered during 2005-06	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
111.30	2.75	112.67	0.79	114.44	114.84	1.74	115.71	116.58

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. For the reasons already recorded, equity as given the table under para 12 above has been considered. The tariff for the years 2007-08 has been allowed on average equity. Accordingly, revised return on equity allowed each year is given as under:

(Rs. in lakh)

Return on equity	
2007-08	2008-09
16.20	16.32

INTEREST ON LOAN

15. 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.”

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

(a) Gross amount of loan, repayment of instalments as per the loan allocation statement has been prepared on the basis of loan allocation details submitted by the petitioner and rate of interest as given in the petition.

(b) On the basis of actual rate of interest on actual average loan, the weighted average rate of interest on loan has been worked out for various years.

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

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

(d) 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 is 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	2007-08	2008-09
Gross Normative Loan-Opening	224.21	228.28
Cumulative Repayment up to Previous Year/date of commercial operation	28.98	47.71
Net Loan-Opening	195.23	180.57
Addition due to Additional Capitalisation	4.07	-
Repayment during the year	18.73	19.16
Net Loan-Closing	180.57	161.41
Average Loan	187.90	170.99
Weighted Average Rate of Interest on Loan	9.15%	9.15%
Interest	17.19	15.64

18. The detailed calculations in support of the weighted 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)

	2007-08	2008-09
Rate of Depreciation	3.5855 %	3.5769%
Depreciable Value	307.76	310.37
Balance Useful life of the asset	-	-
Remaining Depreciable Value	281.31	265.20
Depreciation	12.26	12.34

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. Details of the Advance Against Depreciation being allowed are given hereunder:

(Rs. in lakh)

	2007-08	2008-09
1/10th of Gross Loan(s)	22.42	22.83
Repayment of the Loan	18.73	19.16
Minimum of the above	18.73	19.16
Depreciation during the year	12.26	12.34
(A) Difference	6.47	6.82
Cumulative Repayment of the Loan	47.71	66.87
Cumulative Depreciation/ Advance against Depreciation	38.71	57.51
(B) Difference	9.01	9.36
Advance against Depreciation Minimum of (A) and (B)	6.47	6.82

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 as per order dated 17.7.2007 in Petition No. 10/2007 have 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. 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 17.7.2007 in Petition No. 10/2007 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 1.4.2005, which is in accordance with the 2004 regulations and has been allowed.

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

(Rs. in lakh)

	2007-08	2008-09
Maintenance Spares	3.52	3.73
O & M expenses	0.18	0.18
Receivables	9.26	9.11
Total	12.95	13.02
Rate of interest	10.25%	10.25%
Interest	1.33	1.33

TRANSMISSION CHARGES

29. The revised transmission charges being allowed for the transmission line for the years 2007-08 and 2008-09 are summarised below:

(Rs. in lakh)

	2007-08	2008-09
Depreciation	12.26	12.34
Interest on Loan	17.19	15.64
Return on Equity	16.20	16.32
Advance against Depreciation	6.47	6.82
Interest on Working Capital	1.33	1.33
O & M Expenses	2.10	2.19
Total	55.55	54.65

30. The petitioner shall recover from the respondent 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.

31. 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.

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

sd/-
(V.S.VERMA)
MEMBER

New Delhi dated the 8th June 2009

sd/-
(S.JAYARAMAN)
MEMBER

sd/-
(R.KRISHNAMOORTHY)
MEMBER

Annexure

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(Rs. in lakh)

Details of Loan	2005-06	2006-07	2007-08	2008-09
Bond X				
Gross Loan opening	4.00	4.00	4.00	4.00
Cumulative Repayment upto DOCO/previous year	0.67	0.67	1.00	1.33
Net Loan-Opening	3.33	3.33	3.00	2.67
Additions during the year	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.33	0.33	0.33
Net Loan-Closing	3.33	3.00	2.67	2.34
Average Loan	3.33	3.17	2.84	2.51
Rate of Interest	10.90%	10.90%	10.90%	10.90%
Interest	0.363	0.345	0.309	0.273
Repayment Schedule	12 Annual instalments from 21. 6.2004			
Bond XI- option-I				
Gross Loan opening	4.00	4.00	4.00	4.00
Cumulative Repayment upto DOCO/previous year	0.33	0.33	0.66	0.99
Net Loan-Opening	3.67	3.67	3.34	3.01
Additions during the year	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.33	0.33	0.33
Net Loan-Closing	3.67	3.34	3.01	2.68
Average Loan	3.67	3.51	3.18	2.85
Rate of Interest	9.80%	9.80%	9.80%	9.80%
Interest	0.360	0.343	0.311	0.279
Repayment Schedule	12 Annual instalments from 7.12.2005			
Bond XII				
Gross Loan opening	46.00	46.00	46.00	46.00
Cumulative Repayment upto DOCO/previous year	0.00	3.83	7.66	11.49
Net Loan-Opening	46.00	42.17	38.34	34.51
Additions during the year	0.00	0.00	0.00	0.00
Repayment during the year	3.83	3.83	3.83	3.83
Net Loan-Closing	42.17	38.34	34.51	30.68
Average Loan	44.09	40.26	36.43	32.60
Rate of Interest	9.70%	9.70%	9.70%	9.70%
Interest	4.28	3.90	3.53	3.16
Repayment Schedule	12 Annual instalments from 28. 3.2006			
Bond XIII-Option-I				
Gross Loan opening	56.00	56.00	56.00	56.00
Cumulative Repayment upto DOCO/previous year	0.00	0.00	4.67	9.34
Net Loan-Opening	56.00	56.00	51.33	46.66
Additions during the year	0.00	0.00	0.00	0.00
Repayment during the year	0.00	4.67	4.67	4.67
Net Loan-Closing	56.00	51.33	46.66	41.99
Average Loan	56.00	53.67	49.00	44.33
Rate of Interest	8.63%	8.63%	8.63%	8.63%
Interest	4.83	4.63	4.23	3.83
Repayment Schedule	12 Annual instalments from 31. 7.2006			
OBC LOAN				
Gross Loan opening	2.00	2.00	2.00	2.00
Cumulative Repayment upto DOCO/previous year	0.17	0.34	0.51	0.68
Net Loan-Opening	1.83	1.66	1.49	1.32
Additions during the year	0.00	0.00	0.00	0.00
Repayment during the year	0.17	0.17	0.17	0.17

Net Loan-Closing	1.66	1.49	1.32	1.15
Average Loan	1.75	1.58	1.41	1.24
Rate of Interest	8.60%	8.60%	8.60%	8.60%
Interest	0.15	0.14	0.12	0.11
Repayment Schedule	12 Annual instalments from 22. 3.2005			
PNB-II				
Gross Loan opening	2.00	2.00	2.00	2.00
Cumulative Repayment upto DOCO/previous year	0.17	0.34	0.50	0.67
Net Loan-Opening	1.83	1.66	1.50	1.33
Additions during the year	0.00	0.00	0.00	0.00
Repayment during the year	0.17	0.17	0.17	0.17
Net Loan-Closing	1.66	1.50	1.33	1.16
Average Loan	1.75	1.58	1.41	1.25
Rate of Interest	8.60%	8.60%	8.60%	8.60%
Interest	0.15	0.14	0.12	0.11
Repayment Schedule	12 Annual Installments from 8. 3.2005			
Gross Loan opening	114.00	114.00	114.00	114.00
Cumulative Repayment upto DOCO/previous year	1.34	5.51	15.00	24.50
Net Loan-Opening	112.66	108.49	99.00	89.50
Additions during the year	0.00	0.00	0.00	0.00
Repayment during the year	4.17	9.50	9.50	9.50
Net Loan-Closing	108.49	99.00	89.50	80.00
Average Loan	110.58	103.75	94.25	84.75
Rate of Interest	9.1628%	9.1530%	9.1503%	9.1470%
Interest	10.13	9.50	8.62	7.75