

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 273/2009

Coram:

- 1. Dr. Pramod Deo, Chairperson**
- 2. Shri S.Jayaraman, Member**
- 3. Shri V.S.Verma, Member**

DATE OF HEARING: 22.12.2009

DATE OF ORDER 12.1.2010

In the matter of

Revision of transmission tariff due to additional capital expenditure incurred during 2008-09 for 400 kV S/C Vindhyachal-Kanpur line at Singrauli along with bays at Singrauli end (Realignment of Vindhyachal-Kanpur S/C line at Singrauli and Singraluli-Vindhyahal 2nd 400 kV Ckt) and Bus coupler bay at Vindhyachal HVDC under System Strengthening Scheme in Singrauli-Vindhyachal corridor in Northern.

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 Purchase Centre, 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 Limited, 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 M.M.Mondal, PGCIL

3. Shri S.K.Niranjan, PGCIL

ORDER

This petition has been filed for revision of transmission tariff on account of additional capital expenditure incurred during 2008-09 in respect of 400 kV S/C Vindhyachal-Kanpur transmission line at Singrauli along with bays at Singrauli end (Realignment of Vindhyachal-Kanpur S/C transmission line at Singrauli and Singraluli-Vindhyahal 2nd 400 kV Ckt) and Bus coupler bay at Vindhyachal HVDC (collectively referred to as "the transmission assets") under the scheme for System Strengthening in Singrauli-Vindhyachal corridor in Northern Region for the period from 1.4.2008 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 assets was accorded by Board of Directors of the petitioner company vide Memorandum dated 25.2.2004 at an estimated cost of Rs.1726 lakh, which included IDC of Rs. 106 lakh. As per this approval, the transmission assets were to be completed by August 2006. Subsequently, approval for the revised cost estimate was accorded by Board of Directors of the petitioner company vide letter dated 26.2.2008 for an estimated cost of Rs. 2179 lakh, which

included IDC of Rs. 66 lakh. The transmission assets were declared under commercial operation on 1.5.2007.

3. The transmission charges for the transmission assets were approved by the Commission in its order dated 29.4.2009 in Petition No. 124/2008 for the period from 1.9.2006 to 31.3.2009 based on capital cost of Rs. 1584.27 lakh as on the date of commercial operation and Rs. 1774.53 lakh as on 31.3.2008, after considering additional capital expenditure of Rs. 190.26 lakh for the period 1.9.2007 to 31.3.2008. The summary of the transmission charges approved by the said order dated 29.4.2009 is extracted hereunder:

(Rs. in lakh)

	2007-08 (Pro rata)	2008-09
Depreciation	54.11	62.43
Interest on Loan	86.49	97.77
Return on Equity	64.66	74.53
Advance against Depreciation	0.00	0.00
Interest on Working Capital	8.85	10.11
O & M Expenses	88.11	99.98
Total	302.21	344.82

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

(Rs. in lakh)

Capital Expenditure as on 1.4.2008	Additional Capital Expenditure during 2008-09	Capital expenditure as on 1.4.2009
1774.53 (As per order dated 29.4.2008)	115.32	1889.85

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

(Rs. in lakh)

	2008-09
Depreciation	64.41
Interest on Loan	101.52
Return on Equity	76.95
Advance against Depreciation	0.00
Interest on Working Capital	10.28
O & M Expenses	99.98
Total	353.14

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

(Rs. in lakh)

	2008-09
Maintenance Spares	16.71
O & M expenses	8.33
Receivables	58.86
Total	83.90
Rate of Interest	10.25%
Interest	10.28

7. The reply to the petition has been filed by Uttar Pradesh Power Corporation Ltd.

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
2008-09	Transmission line = Rs. 18.22 lakh	Balance and retention payment
	Sub-station = Rs 97.10 lakh	
	Total = Rs. 115.32 lakh	

9. It is found that the additional capital expenditure claimed is in respect of committed liabilities. 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 line as on 31.3.2009 works out as under:

(Rs. in lakh)			
Capital expenditure as on 1.4.2008	Additional expenditure 2008-09	capital during	Capital expenditure as on 1.4.2009
1774.53		115.32	1889.85

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 1.4.2008	Notional additional equity during 2008-09	Total equity considered as on 31.3.2009	Average equity for 2008-09
532.35	34.60	566.94	549.65

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. Equity as given the table under para 11 above has been considered. The tariff for the year 2008-09 has been allowed on average equity. Accordingly, revised return on equity of Rs. 76.95 lakh has been allowed for the year 2008-09.

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. 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 have been considered as per the order dated 29.4.2009 in Petition No. 124/2008. There is addition of actual loan during 2008-09 by way of Bond XXIX and Bond XXVIII, which has been considered.

(b) Notional loan arising out of additional capitalization for the year 2008-09 has been added in loan amount as on date of commercial operation to arrive at total notional loan. This adjusted gross loan has been considered as normative loan for tariff calculations.

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

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

Opening balance of actual loan during the year 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 during the year, it has been considered as moratorium and depreciation during the year has been deemed as normative repayment of loan during the year.

(e) 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.

(f) Short term bridge loan from Bank of Baroda has been replaced by Bond XXVIII and weighted average rate of interest, based on number of days has been calculated. Details of Bank of Baroda have been taken as per the petition.

16. Based on above, revised interest on loan for the year 2008-09 has been worked out as under:

	(Rs. in lakh)
Details	2008-09
Gross Normative Loan-Opening	1242.18
Cumulative Repayment up to Previous Year/date of commercial operation	54.11
Net Loan-Opening	1188.07
Addition due to Additional Capitalisation	80.72
Repayment during the year	64.41
Net Loan-Closing	1204.38
Average Loan	1196.23
Weighted Average Rate of Interest on Loan	8.4869%
Interest	101.52

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

DEPRECIATION

18. 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.

19. Depreciation allowed has been worked out as below:

(Rs. in lakh)	
	2008-09
Gross block as on 1 st April of the year	1774.53
Addition due to Additional Capitalisation	115.32
Gross Block	1889.85
Rate of Depreciation	3.5156%
Depreciable Value	1648.97
Balance Useful life of the asset	-
Remaining Depreciable Value	1594.86
Depreciation	64.41

ADVANCE AGAINST DEPRECIATION

20. 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

21. 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.

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

OPERATION & MAINTENANCE EXPENSES

23. 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

24. O&M expenses as taken for the tariff calculations as per order dated 29.4.2009 in Petition No. 124/2008 have been considered, since line length and number of bays remain unchanged.

INTEREST ON WORKING CAPITAL

25. 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 29.4.2009 in Petition No. 124/2008 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 1.4.2007, which is in accordance with the 2004 regulations and has been allowed.

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

(Rs. in lakh)

	2008-09
Maintenance Spares	16.71
O & M expenses	8.33
Receivables	58.86
Total	83.90
Rate of Interest	12.25%
Interest	10.28

TRANSMISSION CHARGES

27. The revised transmission charges being allowed for the transmission assets for the year 2008-09 are summarised below:

(Rs. in lakh)

	2008-09
Depreciation	64.41
Interest on Loan	101.52
Return on Equity	76.95
Advance against Depreciation	0.00
Interest on Working Capital	10.28
O & M Expenses	99.98
Total	353.14

28. The petitioner shall recover from the respondent the additional transmission charges in one monthly instalment and these charges shall be

shared in accordance with the 2004 regulations. The petitioner has also sought reimbursement of filing fee paid.

29. 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.

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.

31. This order disposes of Petition No. 273/2009.

Sd/-
(V.S.VERMA)
MEMBER

sd/-
(S.JAYARAMAN)
MEMBER

sd/-
(DR.PRAMOD DEO)
CHAIRPERSON

Annexure

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN			
			(Rs. in lakh)
	Details of Loan	2007-08	2008-09
1	Bond-XVII		
	Gross Loan opening	591.00	591.00
	Cumulative Repayment up to the date of commercial operation/previous year	0.00	0.00
	Net Loan-Opening	591.00	591.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	591.00	591.00
	Average Loan	591.00	591.00
	Rate of Interest	7.39%	7.39%
	Interest	43.67	43.67
	Repayment Schedule	10 equal Annual instalments from 22.9.2009	
2	Bond-XIX		
	Gross Loan opening	175.00	175.00
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00
	Net Loan-Opening	175.00	175.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	175.00	175.00
	Average Loan	175.00	175.00
	Rate of Interest	9.25%	9.25%
	Interest	16.19	16.19
	Repayment Schedule	12 equal Annual instalments from 24.7.2010	
3	Bond-XXII		
	Gross Loan opening	40.00	40.00
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00
	Net Loan-Opening	40.00	40.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	40.00	40.00
	Average Loan	40.00	40.00
	Rate of Interest	8.68%	8.68%
	Interest	3.47	3.47
	Repayment Schedule	12 equal Annual instalments from 7.12.2010	
4	Bond-XXIII		
	Gross Loan opening	25.00	25.00
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00
	Net Loan-Opening	25.00	25.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	25.00	25.00
	Average Loan	25.00	25.00
	Rate of Interest	9.25%	9.25%

	Interest	2.31	2.31
	Repayment Schedule	12 Annual instalments from 26.3.2011	
5	Bond-XXV (Drawal 12.06.2007)		
	Gross Loan opening	0.00	278.00
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00
	Net Loan-Opening	0.00	278.00
	Additions during the year	278.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	278.00	278.00
	Average Loan	139.00	278.00
	Rate of Interest	10.10%	10.10%
	Interest	14.04	28.08
	Repayment Schedule	12 equal Annual instalments from 12 6.2011	
6	BONDS XXIX (ADDCAP FOR 2008-2009 DRAWL ON 12-MAR-2009)		
	Gross Loan opening	0.00	0.00
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00
	Net Loan-Opening	0.00	0.00
	Additions during the year	0.00	65.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	0.00	65.00
	Average Loan	0.00	32.50
	Rate of Interest	0.00%	9.20%
	Interest	0.00	2.99
	Repayment Schedule	12 half yearly instalments from 12.3.2013	
7	STBL FROM BOB @ 12.5% W.E.F. 29.9.2008 TO 14.12.2008 replaced by BOND XXVIII @9.33% (ADDCAP AFOR 2008-09) DRAWL ON 15-12-2008		
	Gross Loan opening	0.00	0.00
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00
	Net Loan-Opening	0.00	0.00
	Additions during the year	0.00	15.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	0.00	15.00
	Average Loan	0.00	7.50
	Rate of Interest	0.00%	10.66%
	Interest	0.00	0.80
	Repayment Schedule	12 Annual instalments from 15.12.2012	
	Total Loan		
	Gross Loan opening	831.00	1109.00
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	0.00
	Net Loan-Opening	831.00	1109.00
	Additions during the year	278.00	80.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	1109.00	1189.00
	Average Loan	970.00	1149.00
	Rate of Interest	8.2150%	8.4869%
	Interest	79.69	97.51