

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 313/2009

Coram:

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

DATE OF HEARING: 23.2.2010

DATE OF ORDER: 8.4.2010

In the matter of

Revision of transmission tariff due to additional capital expenditure incurred during 2008-09 for Agra-Gwalior 765 kV S/C transmission line along with 400 kV Agra (PGCIL) switching station extension and 400/220 kV Gwalior (PGCIL) sub-station extension under Kahalgaon Stage-II Phase-I transmission system in Western Region and Northern Region.

And in the matter of

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

1. Madhya Pradesh Power Transmission Company Ltd
2. Maharashtra State Electricity Distribution Company Ltd.,
Mumbai
3. Gujarat Urja Vikas Nigam Ltd., Baroda
4. Electricity Deptt., Government of Goa, Panaji
5. Electricity Deptt., Administration of Daman & Diu, Daman
6. Electricity Deptt., Administration of Dadra Nagar Haveli, Silvassa
7. Chhattisgarh State Electricity Board, Raipur
8. Madhya Pradesh Audyogik Kandra Vikas Nigam (Indore) Ltd,
Indore
9. Rajasthan Rajya Vidyut Prasaran Nigam Limited, Jaipur
10. Ajmer Vidyut Vitaran Nigam Ltd., Ajmer
11. Jaipur Vidyut Vitaran Nigam Ltd, Jaipur
12. Jodhpur Vidyut Vitaran Nigam Ltd, Jodhpur
13. Himachal Pradesh State Electricity Board, Shimla
14. Punjab State Electricity Board, Patiala
15. Haryana Power Purchase Centre, Panchkula
16. Power Development Department, Govt. of J&K, Jammu
17. Uttar Pradesh Power Corporation Ltd, Lucknow
18. Delhi Transco Ltd, New Delhi
19. BSES Yamuna Power Limited, New Delhi
20. BSES Rajdhani Power Ltd., New Delhi

21. North Delhi Power Ltd., New Delhi
22. Chief Engineer, Chandigarh Administration, Chandigarh
23. Uttaranchal Power Corporation Ltd, Dehradun
24. North Central Railway, Allahabad
25. New Delhi Municipal Council, New Delhi

.....Respondents

The following were present:

1. Shri U.K.Tyagi, PGCIL
2. Shri M.M.Mondal, PGCIL
3. Shri Mohd. Mohsin, PGCIL
4. Shri R.Prasad, PGCIL

ORDER

This petition has been filed for revision of transmission tariff on account of additional capital expenditure in respect of Agra-Gwalior 765 kV S/C transmission line along with 400 kV Agra (PGCIL) switching station extension and 400/220 kV Gwalior (PGCIL) sub-station extension (the transmission assets) under Kahalgaon Stage-II Phase-I transmission system (the transmission system) in Western Region and Northern Region during 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, licence fee and other expenditure in connection with the filing of the petition.

2. The investment approval for the transmission system was accorded by Ministry of Power vide its letter dated 12.10.2004 at an estimated cost of Rs. 177193 lakh, which includes IDC of Rs. 8618 lakh. Subsequently, approval for the revised cost estimate was accorded by Board of Directors of the petitioner company vide letter dated 26.12.2008 for an

estimated cost of Rs. 275223 lakh, which included IDC of Rs. 10947 lakh. The transmission assets were declared under commercial operation on 1.4.2007.

3. The transmission charges for the transmission assets were approved by the Commission vide its order dated 29.4.2009 in Petition No. 167/2008 for the period 1.4.2007 to 31.3.2009 after accounting for additional capital expenditure incurred up to 31.3.2007. The summary of the transmission charges approved by the said order dated 29.4.2009 is extracted hereunder:

(Rs. in lakh)

	2007-08	2008-09
Depreciation	475.99	488.63
Interest on Loan	1137.48	1125.54
Return on Equity	763.59	782.66
Advance against Depreciation	0.00	0.00
Interest on Working Capital	74.73	76.59
O & M Expenses	96.27	100.23
Total	2548.06	2573.66

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
18640.06 (As per order dated 29.4.2009)	480.12	19120.18

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	494.83
Interest on Loan	1141.36
Return on Equity	792.74
Advance against Depreciation	0.00
Interest on Working Capital	77.26
O & M Expenses	100.23
Total	2606.42

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	187.96
O & M expenses	8.35
Receivables	434.41
Total	630.72
Rate of Interest	12.25%
Interest	77.26

7. The reply to the petition has been filed by Madhya Pradesh Power Trading Co. Ltd. (MPPTCL) submitted that as per Form 6 at page 35 of the petition, seeking of additional capital expenditure of Rs. 480.12 lakh has been fully done in the form of debt and no equity is employed. However, the petitioner has apportioned the expenditure between debt and equity and claimed Rs. 144.04 lakh as equity and Rs. 336.08 lakh as normative loan in violation of Regulations 53 and 54 of 2004 regulation which provides that if the actual equity deployed is less than 30% , actual debt and equity shall be considered for determination of tariff.

8. We have considered the submission made by the MPPTCL. Note 3 of the Regulations 53 provides that any expenditure admitted by the Commission for determination of tariff on account of new works shall be serviced in the normative debt-equity ratio specified in Regulation 54. As per Regulation 54, in case of all projects, debt-equity ratio as on the date of commercial operation shall be 70:30 for determination of tariff. Therefore, the additional capital expenditure shall also be serviced in the ratio of 70:30. Accordingly, servicing of the additional capital expenditure in the debt equity ratio of 70:30 by the petitioner in the present petition is in conformity with the provisions of Note 3 under Regulation 53 read with Regulation 54 of the 2004 regulations.

CAPITAL COST

9. 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 and Sub-station = Rs. 480.12 lakh	Final and retention payments.
	Total = Rs. 480.12 lakh	

10. 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 Regulation 53 of the 2004 regulations.

Initial spares

11. Clause (1) of the Regulation 52 of the 2004 regulations *inter alia* provides that,-

“(1) Subject to prudence check by the Commission, 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 capitalized initial spares subject to a ceiling norm as 1.5% of original project cost”.

12. The details of actual expenditure incurred and spares included therein by the petitioner as per original scope of project up to 31.3.2009 are as under:-

Capital Expenditures (Rs in lakh)					Remarks
Up to the date of commercial operation	From the date of commercial operation to 31.3.2008	From 1.4.2008 to 31.3.2009	Total	Initial Spares included therein	
17732.02	908.04	480.12	19120.18	108.93	Claimed in this petition

13. Total actual expenditure incurred by the petitioner up to 31.3.2009 is Rs. 19120.18 lakh and cost of spares included therein is Rs. 108.93 lakh. The total cost without initial spares is Rs. 19011.25 lakh and cost of spares included therein is Rs. 108.93 lakh which is found within the ceiling of 1.5% up to the cut off date as per the 2004 regulations.

TOTAL CAPITAL COST

14. Based on the above, capital cost for the purpose of tariff for the transmission line as on 31.3.2009 works out as under:

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

18640.06	480.12	19120.18
----------	--------	----------

DEBT- EQUITY RATIO

15. 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
5590.43	144.04	5734.47	5662.45

RETURN ON EQUITY

16. 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.

17. Equity as given in the table under para 15 above has been considered. The tariff for the year 2008-09 has been allowed on average equity. Accordingly, revised return on equity of Rs. 792.74 lakh has been allowed for the year 2008-09.

INTEREST ON LOAN

18. 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."

19. 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 the petition.

(b) Notional loan arising out of additional capitalization for the year 2008-09 has been added in loan amount as on 31.3.2008 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:

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

(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 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 (a) above has been applied on the average loan during the year to arrive at the interest on loan.

(f) Short term loan from SBI was replaced by Bond XXVI w.e.f. 24.8.2007. Therefore, for the year 2007-08, weighted average rate of

interest based on number of days for these loans has been considered while working out the weighted average rate of interest on actual loans.

20. 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	13049.63
Cumulative Repayment up to Previous Year	475.99
Net Loan-Opening	12573.64
Addition due to Additional Capitalisation	336.08
Repayment during the year	494.84
Net Loan-Closing	12414.88
Average Loan	12494.26
Weighted Average Rate of Interest on Loan	9.14%
Interest	1141.36

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

DEPRECIATION

22. 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.

23. Depreciation allowed has been worked out as below:

	(Rs. in lakh)
	2008-09
Gross block as on 1 st April of the year	18640.06
Addition due to Additional Capitalisation	480.12
Gross Block	19120.18
Rate of Depreciation	2.6210%
Depreciable Value	16992.11
Balance Useful life of the asset	-
Remaining Depreciable Value	16516.12
Depreciation	494.84

ADVANCE AGAINST DEPRECIATION

24. 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

25. 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.

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

OPERATION & MAINTENANCE EXPENSES

27. 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

28. O&M expenses as taken for the tariff calculations as per order dated 29.4.2009 in Petition No. 167/2008 have been considered, since line length and number of bays remain unchanged.

INTEREST ON WORKING CAPITAL

29. 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. 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. 167/2008 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 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 that the transmission licensee has not taken working capital loan from any outside agency. The petitioner has claimed interest on working capital @ 12.25% based on SBI PLR as on 1.4.2007, which is in accordance with the 2004 regulations and has been allowed.

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

(Rs. in lakh)

	2008-09
Maintenance Spares	187.96
O & M expenses	8.35
Receivables	434.41
Total	630.72
Rate of Interest	12.25%
Interest	77.26

TRANSMISSION CHARGES

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

(Rs. in lakh)

	2008-09
Depreciation	494.84
Interest on Loan	1141.36

Return on Equity	792.74
Advance against Depreciation	0.00
Interest on Working Capital	77.26
O & M Expenses	100.23
Total	2606.44

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

33. 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 petition filing fee shall not be reimbursed during the tariff period 2004-09 as the same has been factored in the O & M norms. The decision applies in the present case also. The decision on licence fee shall be communicated separately.

34. 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.

35. This order disposes of Petition No. 313/2009.

Sd/-
(V.S.VERMA)
MEMBER

sd/-
(S.JAYARAMAN)
MEMBER

sd/-
(DR.PRAMOD DEO)
CHAIRPERSON

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

	Details of Loan	2008-09
1	Bond-XX	
	Gross Loan opening	7287.00
	Cumulative Repayment up to the date of commercial operation/previous year	0.00
	Net Loan-Opening	7287.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	7287.00
	Average Loan	7287.00
	Rate of Interest	8.93%
	Interest	650.73
	Repayment Schedule	12 equal Annual instalments from 7.9.2010
2	Bond-XXI	
	Gross Loan opening	877.00
	Cumulative Repayment up to the date of commercial operation /previous year	0.00
	Net Loan-Opening	877.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	877.00
	Average Loan	877.00
	Rate of Interest	8.73%
	Interest	76.56
	Repayment Schedule	12 equal Annual instalments from 11.10.2010
3	Bond-XXII	
	Gross Loan opening	1468.00
	Cumulative Repayment up to the date of commercial operation /previous year	0.00
	Net Loan-Opening	1468.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1468.00
	Average Loan	1468.00
	Rate of Interest	8.68%
	Interest	127.42
	Repayment Schedule	12 equal Annual instalments from 7.12.2010
4	Bond-XXIV	
	Gross Loan opening	2782.00
	Cumulative Repayment up to the date of commercial operation /previous year	0.00
	Net Loan-Opening	2782.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	2782.00
	Average Loan	2782.00
	Rate of Interest	9.95%
	Interest	276.81
	Repayment Schedule	12 Annual instalments from 26.3.2011
5	Bond-XXVI @ 9.30% w.e.f. 07.03.2008 (Replaced	

	SBI short Term Bridge Loan @ 7.95% w.e.f. 24.08.2007 to 06.03.2008 (Add- Cap for 2007-08)	
	Gross Loan opening	378.00
	Cumulative Repayment up to the date of commercial operation /previous year	0.00
	Net Loan-Opening	378.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	378.00
	Average Loan	378.00
	Rate of Interest	9.30%
	Interest	35.15
	Repayment Schedule	12 equal Annual instalments from 7.3.2012
6	Bond-XXVII (Add-Cap 2007-08)	
	Gross Loan opening	323.00
	Cumulative Repayment up to the date of commercial operation /previous year	0.00
	Net Loan-Opening	323.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	323.00
	Average Loan	323.00
	Rate of Interest	9.47%
	Interest	30.59
	Repayment Schedule	12 equal Annual instalments from 31.3.2012
7	Bond-XXVII (Add-Cap 2008-09 Drawl on 31.03.2009)	
	Gross Loan opening	0.00
	Cumulative Repayment up to the date of commercial operation /previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	480.12
	Repayment during the year	0.00
	Net Loan-Closing	480.12
	Average Loan	240.06
	Rate of Interest	9.47%
	Interest	22.73
	Repayment Schedule	12 equal Annual instalments from 31.3.2012
	Total Loan	
	Gross Loan opening	13115.00
	Cumulative Repayment up to the date of commercial operation /previous year	0.00
	Net Loan-Opening	13115.00
	Additions during the year	480.12
	Repayment during the year	0.00
	Net Loan-Closing	13595.12
	Average Loan	13355.06
	Rate of Interest	9.1351%
	Interest	1220.00