

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 329/2009

Coram:

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

DATE OF HEARING: 16.2.2010

DATE OF ORDER: 8.4.2010

In the matter of

Revision of transmission tariff due to additional capital expenditure incurred during 2008-09 for LLO of both circuits of 400 kV D/C Guzuwaka-Vijaywada transmission line at Vemagiri and extension of 400/220 kV Sub-station at Vijayawada under "system strengthening-VI" in Southern Region.

And in the matter of

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

1. Karnataka Power Transmission Corporation Limited, Bangalore
2. Transmission Corporation of Andhra Pradesh Ltd., Hyderabad
3. Kerala State Electricity Board, Thiruvananthapuram
4. Tamil Nadu Electricity Board, Chennai
5. Electricity Department, Govt. of Pondicherry, Pondicherry
6. Eastern Power Distribution Company of Andhra Pradesh Limited, Vishakhapatnam
7. Southern Power Distribution Company of Andhra Pradesh Limited, Tirupati
8. Central Power Distribution Company of Andhra Pradesh Limited, Hyderabad
9. Northern Power Distribution Company of Andhra Pradesh Limited, Warangal
10. Bangalore Electricity Supply Company Ltd., Bangalore
11. Gulbarga Electricity Supply Company Ltd. Gulbarga
12. Hubli Electricity Supply Company Ltd., Hubli
13. MESCOM Corporate office, Mangalore
14. Chamundeswari Electricity Supply Corporation Ltd., Mysore.

.Respondents

The following were present:

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

The following were present:

5. Shri U.K.Tyagi, PGCIL
6. Shri M.M.Mondal, PGCIL
7. Shri Mohd. Mohsin, PGCIL
8. Shri R.Prasad, PGCIL
9. Shri R. Krishnaswami, TNEB

ORDER

This petition has been filed for revision of transmission tariff on account of additional capital expenditure in respect LLO of both circuits of 400 kV D/C Guzuwaka-Vijaywada transmission line at Vemagiri and extension of 400/220 kV Sub-station at Vijayawada under "system strengthening-VI" (the transmission scheme) in Southern 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 administrative approval and expenditure sanction for the scheme was accorded by Board of Directors of the petitioner company vide Memorandum dated 30.3.2005, read with corrigendum dated 21.4.2005 at an estimated cost of Rs. 11373 lakh, which included IDC of Rs. 520 lakh. Subsequently, the Board of Directors accorded approval for revised cost estimate of Rs. 12684 lakh, including IDC of Rs. 713 lakh vide Memorandum dated 20.10.2008. The scheme has been declared under commercial operation w.e.f.1.4.2008.

3. The transmission charges for the transmission assets were approved by the Commission vide its order dated 22.1.2009 in Petition No. 94/2008 for the period 1.4.2008 to 31.3.2009. The summary of the revised transmission charges approve by the said order dated 22.1.2009 is extracted hereunder:

(Rs. in lakh)

	2008-09
Depreciation	319.08
Interest on Loan	774.44
Return on Equity	494.73
Advance against Depreciation	0.00
Interest on Working Capital	51.18
O & M Expenses	107.21
Total	1746.64

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
11779.23	601.43	12380.66

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	328.17
Interest on Loan	795.25
Return on Equity	507.36
Advance against Depreciation	0.00
Interest on Working Capital	52.07
O & M Expenses	107.21
Total	1790.06

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	117.79
O & M expenses	8.93
Receivables	298.34
Total	425.06
Rate of Interest	12.25%
Interest	52.07

7. Tamil Nadu Electricity Board (TNEB) in its reply has objected to considering wage revision under O & M expenses, reimbursement of the petition filing fee etc. These have been considered in the relevant paras in the order.

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 and Sub-station = Rs. 601.43 lakh	Balance and retention payments
	Total = = Rs. 601.43 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 the 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
11779.23		601.43	12380.66

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 31.3.2009	Average equity for 2008-09
3533.77	180.43	3714.20	3623.98

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 in 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. 507.36 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 loan have been considered as per order dated 22.1.2009 in Petition No. 94/2008. Bonds XXVIII and XXIX has been utilised for additional capital expenditure during 2008-09.

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

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

(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 Bridge loan from Bank of Baroda was replaced by Bond XXVIII w.e.f. 15.12.2008. Therefore, 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.

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	8245.46
Cumulative Repayment up to Previous Year	0.00
Net Loan-Opening	8245.46
Addition due to Additional Capitalisation	421.00
Repayment during the year	328.17
Net Loan-Closing	8338.29
Average Loan	8291.87
Weighted Average Rate of Interest on Loan	9.59%
Interest	795.25

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	11779.23
Addition due to Additional Capitalisation	601.43
Gross Block	12380.66
Rate of Depreciation	2.7167%
Depreciable Value	10871.95
Balance Useful life of the asset	-
Remaining Depreciable Value	10871.95
Depreciation	328.17

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 22.1.2009 in Petition No. 94/2008 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. 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 22.1.2009 in Petition No. 94/2008 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 1.4.2008, 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	117.79
O & M expenses	8.93
Receivables	298.34
Total	425.07
Rate of Interest	12.25%
Interest	52.07

TRANSMISSION CHARGES

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

(Rs. in lakh)

	2008-09
Depreciation	328.17
Interest on Loan	795.25
Return on Equity	507.36
Advance against Depreciation	0.00
Interest on Working Capital	52.07
O & M Expenses	107.21
Total	1790.06

28. 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.

29. 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. Accordingly, filing fee has not been allowed to be reimbursed. The decision on licence fee as and when taken shall be communicated separately.

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. 329/2009.

Sd/-
(V.S.VERMA)
MEMBER

sd/-
(S.JAYARAMAN)
MEMBER

sd/-
(DR.PRAMOD DEO)
CHAIRPERSON

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN		
(Rs. in lakh)		
Details of Loan	2008-09	
1 Bond-XX		
Gross Loan opening		700.00
Cumulative Repayment up to the date of commercial operation/previous year		0.00
Net Loan-Opening		700.00
Additions during the year		0.00
Repayment during the year		0.00
Net Loan-Closing		700.00
Average Loan		700.00
Rate of Interest		8.93%
Interest		62.51
Repayment Schedule		12 Annual instalments from 7-9-2010
2 Bond-XXI		
Gross Loan opening		636.00
Cumulative Repayment up to the date of commercial operation /previous year		0.00
Net Loan-Opening		636.00
Additions during the year		0.00
Repayment during the year		0.00
Net Loan-Closing		636.00
Average Loan		636.00
Rate of Interest		8.73%
Interest		55.52
Repayment Schedule		12 Annual instalments from 11.10.2010
3 Bond-XXII		
Gross Loan opening		661.00
Cumulative Repayment up to the date of commercial operation /previous year		0.00
Net Loan-Opening		661.00
Additions during the year		0.00
Repayment during the year		0.00
Net Loan-Closing		661.00
Average Loan		661.00
Rate of Interest		8.68%
Interest		57.37
Repayment Schedule		12 Annual instalments from 07.12.2010
4 Bond-XXIV		
Gross Loan opening		2144.00
Cumulative Repayment up to the date of commercial operation /previous year		0.00
Net Loan-Opening		2144.00
Additions during the year		0.00
Repayment during the year		0.00
Net Loan-Closing		2144.00

	Average Loan	2144.00	
	Rate of Interest	9.95%	
	Interest	213.33	
	Repayment Schedule	12 Annual instalments from 26-3-2011	
5	Bond- XXV		
	Gross Loan opening	2290.00	
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	
	Net Loan-Opening	2290.00	
	Additions during the year	0.00	
	Repayment during the year	0.00	
	Net Loan-Closing	2290.00	
	Average Loan	2290.00	
	Rate of Interest	10.10%	
	Interest	231.29	
	Repayment Schedule	12 Annual instalments from 12-6-2011	
6	Bond-XXVI		
	Gross Loan opening	1258.00	
	Cumulative Repayment upto DOCO/previous year	0.00	
	Net Loan-Opening	1258.00	
	Additions during the year	0.00	
	Repayment during the year	0.00	
	Net Loan-Closing	1258.00	
	Average Loan	1258.00	
	Rate of Interest	9.30%	
	Interest	116.99	
	Repayment Schedule	12 Annual instalments from 7.3.2012	
7	Bond-XXVII		
	Gross Loan opening	557.00	
	Cumulative Repayment up to the date of commercial operation /previous year	0.00	
	Net Loan-Opening	557.00	
	Additions during the year	0.00	
	Repayment during the year	0.00	
	Net Loan-Closing	557.00	
	Average Loan	557.00	
	Rate of Interest	9.47%	
	Interest	52.75	
	Repayment Schedule	12 Annual instalments from 31.3.2012	
8	Bond-XXIX (ADDCAP FOR 2008-09 DRAWL ON 12.03.2009)		
	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	144.00	
	Repayment during the year	0.00	
	Net Loan-Closing	144.00	

	Average Loan	72.00	
	Rate of Interest	9.20%	
	Interest	6.62	
	Repayment Schedule	12 Annual instalments from 12.3.2013	
9	BOND XXVIII (ADDCAP FOR 2008-09 DRAWL ON 29.09.2008). STBL from BoB replaced by Bond XXVIII		
	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	256.00	
	Repayment during the year	0.00	
	Net Loan-Closing	256.00	
	Average Loan	128.00	
	Rate of Interest	10.66%	
	Interest	13.64	
	Repayment Schedule	12 Annual instalments from 15.12.2012	
	Total Loan		
	Gross Loan opening	8246.00	
	Cumulative Repayment up to the date of commercial operation	0.00	
	Net Loan-Opening	8246.00	
	Additions during the year	400.00	
	Repayment during the year	0.00	
	Net Loan-Closing	8646.00	
	Average Loan	8446.00	
	Rate of Interest	9.59%	
	Interest	810.03	