

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No.262/2010

**Coram: Shri S.Jayaraman, Member
Shri V.S.Verma, Member
Shri M. Deena Dayalan, Member**

Date of Hearing: 24.2.2010

Date of Order: 25.4.2011

In the matter of:

Determination of transmission tariff for 400 kV D/C Raipur-Rourkela transmission line along with Rourkela extension under Eastern-Western inter-regional link for the period from 1.4.2009 to 31.3.2014.

And

In the matter of

Power Grid Corporation of India Ltd., Gurgaon**Petitioner**

Vs

1. Madhya Pradesh Power Trading company Ltd., Jabalpur
2. Maharashtra State Electricity Distribution Company Ltd., Mumbai
3. Gujarat Urja Vikas Nigam Ltd. Vadodara
4. Electricity Department. Government of Goa, Panaji
5. Electricity Deptt. Administration of Daman and Diu, Daman
6. Electricity Deptt., Govt. of UT of Dadra and Nagar Haveli, Silvassa
7. Chattisgarh State Power Distribution Co. Ltd. Raipur.
8. Madhya Pradesh Audyogik Kendra Vikas Nigam Ltd., Indore**Respondents**

The following were present:

1. Shri.S. S. Raju, PGCIL
2. Shri Rajeev Gupta, PGCIL

ORDER

This petition has been filed for approval of transmission tariff in respect of 400 kV D/C Raipur-Rourkela transmission line along with Rourkela extension under Eastern-Western inter-regional link (hereinafter referred to as "the transmission line") for the period from 1.4.2009 to 31.3.2014, based on the Central Electricity Regulatory Commission (Terms



and Conditions of Tariff) Regulations, 2009, (hereinafter referred to as “the 2009 regulations”). The petitioner has also sought the following reliefs:

(a) Allow the grossing up of the base rate of return with the applicable tax rate as per the relevant Finance Acts and direct settlement of tax liability between the generating company/ transmission licensee and the beneficiaries/long term customers on year to year basis;

(b) Approve the reimbursement, of expenditure, by the beneficiaries towards petition filing fee, and publishing of notices in newspapers in terms of Regulation 42 of the 2009 regulations, and other expenditure (if any) in relation to the filing of petition;

(c) Allow the petitioner to bill and adjust impact on Interest on Loan due to change in interest rate on account of floating rate of interest applicable during 2009-14 period, if any, from the respondents; and

(d) Allow the petitioner to bill and recover licence fee separately from the respondents.

2. The investment approval for the transmission line was accorded by Government of India vide its letter dated 1.1.2001 at an estimated cost of ₹ 23738 lakh which included IDC of ₹ 1525 lakh, based on 1st quarter 2000

price level. Date of commercial operation of the transmission line is 1.4.2003.

3. Transmission charges for the transmission line for the period up to 31.3.2009 were determined by the Commission vide order dated 9.5.2006 in Petition No. 63/2005.

4. The petitioner has claimed the following transmission charges:

(₹ in lakh)					
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	1046.50	1046.50	1046.50	1046.50	1046.50
Interest on Loan	665.97	614.28	562.61	510.98	459.37
Return on equity	538.04	538.04	538.04	538.04	538.04
Interest on Working Capital	70.32	70.59	70.93	71.35	71.85
O & M Expenses	468.13	494.97	523.32	553.21	584.69
Total	2788.96	2764.38	2741.40	2720.08	2700.45

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

(₹ in lakh)					
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	70.22	74.25	78.50	82.98	87.70
O & M expenses	39.01	41.25	43.61	46.10	48.72
Receivables	464.83	460.73	456.90	453.35	450.08
Total	574.06	576.23	579.01	582.43	586.50
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest on Working Capital	70.32	70.59	70.93	71.35	71.85

6. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under section 64 of the Electricity Act, 2003.

7. None of the respondents has filed reply to the petition.

8. Having heard the representatives of the petitioner and examined the material on record, we proceed to dispose of the petition.

CAPITAL COST

9. Proviso to clause (2) of Regulation 7 of the 2009 regulations provides as under:

“Provided also that in case of the existing projects, the capital cost admitted by the Commission prior to 1.4.2009 and the additional capital expenditure projected to be incurred for the respective year of the tariff period 2009-14, as may be admitted by the Commission, shall form the basis for determination of tariff.”

10. The Commission vide order dated 9.5.2006 in Petition No. 63/2005 had allowed capital cost of ₹ 19847.56 lakh as on 1.4.2009 for the purpose of tariff calculation. There are differences in the individual elements of the capital cost as admitted in previous order dated 9.5.2006 and those claimed by the petitioner in present petition due to treatment of FERV during the previous order as FERV was apportioned by the petitioner after inclusion of additional capital expenditure for the tariff period 2004-09 whereas in our calculations FERV was apportioned before considering additional capital expenditure.

11. Treatment of FERV and additional capital expenditure in Petition No. 63/2005 is as under:

(₹ in lakh)

Assets	As per order dated 4.4.2005 in Petition No. 121/2002	Additional capital expenditure during 2004-09 Tariff period	Total	Apportionment of FERV	Capital Cost as on 31.3.2009
	(a)	(b)	(c) = (a)+(b)	(d)	(e)=(c)+(d)
Freehold land	0.00	0.000	0.000	0.000	0.00
Leasehold land	0.00	0.000	0.000	0.000	0.00
Building and other civil Works	48.72	(-)3.06	45.66	68.90	114.56
Transmission line	18994.03	(-)1192.50	17801.53	0.00	17801.53
Sub-Station equipments	1946.68	(-)122.22	1824.46	41.35	1865.81
PLCC	70.06	(-)4.40	65.66	0.00	65.66
TOTAL	21059.49	(-)1322.18	19737.31	110.25	19847.56
FERV for tariff period 2001-04	1322.18				

12. Accordingly, gross block of ₹19847.56 lakh as on 31.3.2009 has been considered as the capital cost for the purpose of tariff.

ADDITIONAL CAPITAL EXPENDITURE

13. The petitioner has not projected any additional capital expenditure for the period 2009-14.

DEBT- EQUITY RATIO

14. Clause (2) of Regulation 12 of the 2009 regulations *inter alia* provides that,-

“(2) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2009 shall be considered.”

15. The petitioner has claimed tariff based on debt-equity ratio of 84.49:15.51 as considered by the Commission in its order dated 9.5.2006 *ibid*. The same debt-equity ratio has been considered for the purpose of tariff.

RETURN ON EQUITY

16. Regulation 15 of the 2009 regulations provides that,-

“15. (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 12.

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% to be grossed up as per clause (3) of this regulation:

*Provided that in case of projects commissioned on or after 1st April, 2009, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in **Appendix-II**:*

Provided further that the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever.

(3) The rate of return on equity shall be computed by grossing up the base rate with the normal tax rate for the year 2008-09 applicable to the concerned generating company or the transmission licensee, as the case may be:

Provided that return on equity with respect to the actual tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective year during the tariff period shall be trued up separately for each year of the tariff period along with the tariff petition filed for the next tariff period.”

17. The petitioner has computed ROE on pre- tax basis on 11.33% MAT in accordance with the tax rate applicable for 2008-09 and has claimed return on equity @ 17.481%.

18. Petitioner's prayer to allow grossing up of the base rate of ROE as per the relevant Finance Acts, has already been taken cognizance of in the Commission's order dated 3.8.2010 in Petition No. 17/2010 wherein a decision has been taken to address the issue raised by the petitioner by issuing amendment to the 2009 regulations. In this regard, it is clarified that the Commission vide its order dated 3.8.2010 in Petition No. 17/2010 has already taken a decision to amend the 2009 regulations for allowing grossing up of the base rate of return with the applicable tax rate as per the Finance Act for the relevant year and for direct settlement of tax holidays between the generating company/transmission licensee and the beneficiaries/long-term transmission customers on year to year basis. The process of amendment to the 2009 regulations is under way and will address the grievance of the petitioner with regard to the MAT rate. Accordingly, the return on equity has been computed as per the existing provision of Regulation 15 (3) of 2009 regulations as under:

(₹ in lakh)

		2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity	3077.84	3077.84	3077.84	3077.84	3077.84	3077.84
Addition due to Additional Capitalization		0.00	0.00	0.00	0.00	0.00
Closing Equity		3077.84	3077.84	3077.84	3077.84	3077.84
Average Equity		3077.84	3077.84	3077.84	3077.84	3077.84
Return on Equity (Base Rate)		15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09		11.33%	11.33%	11.33%	11.33%	11.33%
Rate of Return on Equity (Pre Tax)		17.481%	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)		538.04	538.04	538.04	538.04	538.04

INTEREST ON LOAN

19. Regulation 16 of the 2009 regulations provides as under:-

"16. (1) The loans arrived at in the manner indicated in regulation 12 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2009 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2009 from the gross normative loan.

(3) The repayment for the year of the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that year:

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed,.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project:

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:

Provided that the beneficiary or the transmission customers shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan."

20. In these calculations, 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 average loan have been considered as per the petition;

(b) The repayment for the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that period;

(c) In respect of the moratorium period availed by the transmission licensee, the repayment of the loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed;

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

21. Detailed calculations in support of the weighted average rate of interest for the transmission line are contained in **Annexure** attached to this order. Based on the above, the year-wise details of interest worked out are given hereunder:

(₹ in lakh)

		2009-10	2010-11	2011-12	2012-13	2013-14
Gross Notional Loan	16769.72					
Addition due to Additional capital expenditure	0.00					
Gross Normative Loan	16769.72	16769.72	16769.72	16769.72	16769.72	16769.72
Cumulative Repayment upto Previous Year		2690.14	3736.56	4782.98	5829.39	6875.81
Net Loan-Opening		14079.58	13033.16	11986.74	10940.33	9893.91
Addition due to Additional capital expenditure		0.00	0.00	0.00	0.00	0.00
Repayment during the year		1046.42	1046.42	1046.42	1046.42	1046.42
Net Loan-Closing		13033.16	11986.74	10940.33	9893.91	8847.49
Average Loan		13556.37	12509.95	11463.54	10417.12	9370.70
Weighted Average Rate of Interest on Loan		4.9126%	4.9104%	4.9079%	4.9053%	4.9024%
Interest		665.98	614.28	562.62	510.99	459.39

DEPRECIATION

22. Regulation 17 of the 2009 regulations provides for computation of depreciation in the following manner, namely:

“17. (1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.

(2) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.

XXXX
XXXX

(3) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-III to these regulations for the assets of the generating station and transmission system:

Provided that, the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the assets.

(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2009 from the gross depreciable value of the assets.

(6) Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis."

23. The transmission line was declared under commercial operation on 1.4.2003. Accordingly, it will complete 12 years beyond the current tariff block 2009-14. Thus, depreciation has been calculated annually based on Straight Line Method and at rates specified in **Appendix-III** of the 2009 regulations. Accordingly, for the period 1.4.2009 to 31.3.2014 the depreciation worked out are as under:

(₹ in lakh)						
	Up to 31.3.200 9	2009-10	2010-11	2011-12	2012-13	2013-14
Gross block as per order dated 9.5.2006	19847.56	19847.56	19847.56	19847.56	19847.56	19847.56
Addition during 2009-14 due to projected Additional capital expenditure		0.00	0.00	0.00	0.00	0.00
Gross block as on 31.3.2009		19847.56	19847.56	19847.56	19847.56	19847.56
Average gross block		19847.56	19847.56	19847.56	19847.56	19847.56
Rate of Depreciation		5.2723%	5.2723%	5.2723%	5.2723%	5.2723%
Depreciable Value	90%	17862.80	17862.80	17862.80	17862.80	17862.80
Remaining Depreciable Value		14663.82	13617.40	12570.98	11524.57	10478.15
Depreciation		1046.42	1046.42	1046.42	1046.42	1046.42

OPERATION & MAINTENANCE EXPENSES

24. Clause (g) of Regulation 19 the 2009 regulations prescribes the following norms for calculation of operation and maintenance expenses based on the type of sub-station and line:

Element	2009-10	2010-11	2011-12	2012-13	2013-14
400 kV D/C, twin conductor, transmission line (₹ lakh per km)	0.627	0.663	0.701	0.741	0.783
400 kV, bays (₹ lakh per Bay)	52.40	55.40	58.57	61.92	65.46

25. The petitioner has calculated the following operation and maintenance expenses in accordance with the above norms and the same are allowed as such.

(₹ in lakh)

Element	2009-10	2010-11	2011-12	2012-13	2013-14
O & M expenses for 400 kV D/C, twin conductor, transmission line (412.35 k.m)	258.53	273.37	289.04	305.53	322.85
O & M expenses for 400 kV/bays (4 bays)	209.60	221.60	234.28	247.68	261.84
Total	468.13	494.97	523.32	553.21	584.69

26. The petitioner has submitted that total impact wage hike would be more as compared to the compensation provided in the O & M norms in the 2009 regulations and the petitioner intends to approach the Commission for revision of norms if the actual employee cost works out to more than 50%. In this regard, it is clarified that any request made by the petitioner for revision of O & M norms on account of wage hike will be dealt with in accordance with law.

INTEREST ON WORKING CAPITAL

27. As per the 2009 regulations the components of the working capital and the interest thereon are discussed hereunder:

(i) Receivables: As per Regulation 18(1)(c)(i) of the 2009 regulations, receivables will be equivalent to two months' average billing calculated on target availability level. The petitioner has claimed the receivables on the basis of 2 months' transmission charges claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis of 2 months' transmission charges.

(ii) Maintenance spares: Regulation 18(1)(c)(ii) of the 2009 regulations provides for maintenance spares @ 15% per annum of the O & M expenses from 1.4.2009. The value of maintenance spares has accordingly been worked out.

(iii) O & M expenses: Regulation 18(1) (c) (iii) of the 2009 regulations provides for operation and maintenance expenses for one month as a component of working capital. The petitioner has claimed O&M expenses for 1 month of the respective year as claimed in the petition. This has been considered in the working capital.

(iv) Rate of interest on working capital: As per Regulation 18(3) of the 2009 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 1.4.2009 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 petitioner has claimed interest on working capital @ 12.25% based on SBI PLR as on 1.4.2009, which is in accordance with the 2009 regulations and has been allowed.

28. Necessary computations in support of interest on working capital are appended hereinbelow:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	70.22	74.25	78.50	82.98	87.70
O & M expenses	39.01	41.25	43.61	46.10	48.72
Receivables	464.81	460.72	456.89	453.33	450.06
Total	574.04	576.21	578.99	582.42	586.49
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	70.32	70.59	70.93	71.35	71.85

TRANSMISSION CHARGES

29. The transmission charges being allowed for the transmission lines are summarized below:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	1046.42	1046.42	1046.42	1046.42	1046.42
Interest on Loan	665.98	614.28	562.62	510.99	459.39
Return on equity	538.04	538.04	538.04	538.04	538.04
Interest on Working Capital	70.32	70.59	70.93	71.35	71.85
O & M Expenses	468.13	494.97	523.32	553.21	584.69
Total	2788.88	2764.30	2741.32	2720.00	2700.38

Application fee and the publication expenses

30. The petitioner has sought approval for the reimbursement of fee paid by it for filing the petition for determination of transmission tariff.

Regulation 42 of the 209 regulations provides as under:

"The application filing fee and the expenses incurred on publication of notices in the application for approval of tariff, may in the discretion of the Commission, be allowed to be recovered by the generating company or the transmission licensee, as the case may be, directly from the beneficiaries or the transmission customers, as the case may be."

31. In accordance with our decision in order dated 11.1.2010 in Petition No. 109/2009, the petitioner shall be entitled to recover the filing fee from the beneficiaries on pro rata basis. The petitioner shall also be entitled for reimbursement of publication expenses from the beneficiaries on pro rata basis.

Service Tax

32. The petitioner has made a specific prayer that it be allowed to bill and recover the Service tax from the respondents if at any time exemption from service tax is withdrawn and transmission of Power is notified as a taxable service. The petitioner is at liberty to approach the Commission with such a prayer if need arises. The same will be disposed off in accordance with law.

Licence fee

33. The petitioner has prayed for reimbursement of licence fee as it is an extra cost on the petitioner. In this regard, it is clarified that the issue of reimbursement of licence fee is under consideration of the Commission and any decision on the issue as and when taken will be applicable to this petition.

34. The transmission charges allowed in this order shall be recovered on monthly basis in accordance with Regulation 23 and shall be shared by the respondents in accordance with Regulation 33 of the 2009 regulations.

35. This order disposes of Petition No. 262/2010.

Sd/-

(M.Deena Dayalan)
Member

Sd/-

(V.S.Verma)
Member

Sd/-

(S.Jayaraman)
Member

ANNEXURE**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN**

(₹ in lakh)

	Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
1	BOND XII					
	Gross loan opening	126.00	126.00	126.00	126.00	126.00
	Cumulative Repayment up to DOCO/previous year	42.00	52.50	63.00	73.50	84.00
	Net Loan-Opening	84.00	73.50	63.00	52.50	42.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	10.50	10.50	10.50	10.50	10.50
	Net Loan-Closing	73.50	63.00	52.50	42.00	31.50
	Average Loan	78.75	68.25	57.75	47.25	36.75
	Rate of Interest	9.70%	9.70%	9.70%	9.70%	9.70%
	Interest	7.64	6.62	5.60	4.58	3.56
	Rep Schedule	12 Annual Instalments from 28.3.2006				
2	ADB-II uv (Exchange Rate: 44.31)					
	Gross loan opening	6585.80	6585.80	6585.80	6585.80	6585.80
	Cumulative Repayment up to DOCO/previous year	602.54	878.15	1182.03	1517.04	1886.40
	Net Loan-Opening	5983.26	5707.65	5403.77	5068.76	4699.40
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	275.61	303.88	335.01	369.36	407.23
	Net Loan-Closing	5707.65	5403.77	5068.76	4699.40	4292.17
	Average Loan	5845.45	5555.71	5236.26	4884.08	4495.79
	Rate of Interest	6.84%	6.84%	6.84%	6.84%	6.84%
	Interest	399.83	380.01	358.16	334.07	307.51
	Rep Schedule	30 Half yearly Instalments from 15.6.2006				
3	ADB-II LB (Exchange Rate : 44.31)					
	Gross loan opening	10057.93	10057.93	10057.93	10057.93	10057.93
	Cumulative Repayment up to DOCO/previous year	1029.93	1446.33	1903.97	2408.87	2966.08
	Net Loan-Opening	9027.99	8611.60	8153.96	7649.05	7091.84
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	416.40	457.64	504.91	557.21	614.54
	Net Loan-Closing	8611.60	8153.96	7649.05	7091.84	6477.30
	Average Loan	8819.80	8382.78	7901.51	7370.45	6784.57
	Rate of Interest	3.5925%	3.5925%	3.5925%	3.5925%	3.5925%
	Interest	316.85	301.15	283.86	264.78	243.74
	Rep Schedule	30 Half yearly Instalments from 15.6.2006				
	Total Loan					
	Gross loan opening	16769.72	16769.72	16769.72	16769.72	16769.72
	Cumulative Repayment up to DOCO/previous year	1674.47	2376.98	3148.99	3999.41	4936.48
	Net Loan-Opening	15095.25	14392.75	13620.73	12770.31	11833.24
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	702.51	772.02	850.42	937.07	1032.26
	Net Loan-Closing	14392.75	13620.73	12770.31	11833.24	10800.98
	Average Loan	14744.00	14006.74	13195.52	12301.78	11317.11
	Rate of Interest	4.9126%	4.9104%	4.9079%	4.9053%	4.9024%
	Interest	724.32	687.78	647.62	603.44	554.81

