

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No.148/2009**

**Coram: Dr. Pramod Deo, Chairperson  
Shri S.Jayaraman, Member  
Shri V.S.Verma, Member  
Shri M.Deena Dayalan, Member**

**Date of Hearing: 11.11.2010**

**Date of Order: 11.1.2011**

**In the matter of:**

Approval under Regulation 86 of Central Electrical Regulatory Commission (Conduct of Business) Regulations, 1999 for determination of Transmission Tariff for 220 kV Jalandhar-Hamirpur D/C transmission line along with associated bays in Northern Region 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. Rajasthan Rajya Vidyut Prasaran Nigam Limited, Jaipur
2. Ajmer Vidyut Vitaran Nigam Ltd., Jaipur
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 Ltd., New Delhi
12. BSES Rajdhani Power Ltd., New Delhi
13. North Delhi Power Ltd., New Delhi
14. Chandigarh Administration, Chandigarh
15. Uttarakhand Power Corporation Ltd., Dehradun
16. North Central Railway, Allahabad
17. New Delhi Municipal Council, New Delhi

**Respondents**

**The following was present:**

1. Shri.M M Mondal, PGCIL
2. Shri Rakesh Prasad, PGCIL
3. Shri. Rajeev Gupta, PGCIL



## ORDER

This petition has been filed seeking approval of transmission tariff in respect of 220 kV Jalandhar-Hamirpur D/C transmission line along with associated bays in Northern Region (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) Approve the reimbursement, by the beneficiaries, of expenditure towards petition filing fee, licensee fee 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.
- (b) Allow the petitioner to bill and recover Service Tax on Transmission charges separately from the respondents, if petitioner is subjected to such service tax.
- (c) Pass such other relief as Hon'ble Commission deems fit and appropriate under the circumstances of the case and in the interest of justice.

2. Besides, the petitioner has also reserved the right to approach the Commission as and when the MAT rate undergoes change as per the Finance Act of the respective year. The petitioner has also reserved the right to approach the Commission for suitable revision of O&M charges in case the impact of wage hike is more than 50%..

3. Transmission charges for the transmission line for the period upto 1.4.2004 to 31.3.2009 was approved by the Commission vide order dated 23.1.2006 in Petition No: 35/2005. Subsequently, the charges were amended vide order dated 30.04.2008 by way of implementation of the judgement dated 4.10.2006 of the Hon'ble Appellate Tribunal for Electricity in Appeal No. 135 of 2005 and dated 22.12.2006 in appeal No. 161 of 2006.

4. The petitioner has claimed the following transmission charges:

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	235.53	235.53	235.53	235.53	235.53
Interest on Loan	94.39	77.76	61.48	45.71	33.26
Return on equity	74.82	74.82	74.82	74.82	74.82
Interest on Working Capital	17.44	17.61	17.82	18.07	18.41
O & M Expenses	180.08	190.34	201.32	212.79	224.94
<b>Total</b>	<b>602.26</b>	<b>596.06</b>	<b>590.97</b>	<b>586.92</b>	<b>586.96</b>

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	27.01	28.55	30.20	31.92	33.74
O & M expenses	15.01	15.86	16.78	17.73	18.75
Receivables	100.38	99.34	98.50	97.82	97.83
<b>Total</b>	<b>142.40</b>	<b>143.75</b>	<b>145.48</b>	<b>147.47</b>	<b>150.32</b>
Interest	17.44	17.61	17.82	18.07	18.41
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%

6. Reply to the petition has been filed by respondents No 2, 3, 4 and 9 viz. Ajmer Vidyut Vitaran Nigam Ltd., Jaipur Vidyut Vitaran Nigam Ltd, Jodhpur Vidyut Vitaran Nigam Ltd, and Uttar Pradesh Power Corporation Ltd. respectively. Respondents No 2,3 and 4 have questioned the correctness of the calculations of depreciation and amount of cumulative depreciation up to 2013-14. Besides, they have also objected to the revision of O&M charges based on wage revision. Respondent No 9 has objected to the grossing up of the base of rate of return on equity, refund of income tax, filing fee, license fee and service tax, revision of O&M charges based on wage hike and revision of Interest on Loan based on floating rate of interest.

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

### **CAPITAL COST**

8. As per clause (2) of Regulation 7 of the 2009 regulations, the project cost admitted by the Commission for determination of tariff prior to 1.4.2009 shall form the basis for determination of tariff.

9. The Commission, vide its order dated 23.1.2006 in Petition No: 35/2005 and the amendment dated 30.4.2008, has approved the final Transmission Tariff based on admitted capital cost of ₹ 4452.18 lakh. The same has been considered in this order, for the purpose of calculation of tariff for the period 2009-14.

### **ADDITIONAL CAPITAL EXPENDITURE**

10. The petitioner has not projected any additional capital expenditure during the period 2009-14.

### **DEBT- EQUITY RATIO**

11. 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.”*

12. The petitioner has submitted the following debt-equity details:-

Admitted as on 31.3.2009		
	Amount (₹ in lakh)	percentage
Debt	4024.17	90.39%
Equity	428.01	9.61%
Total	4452.18	100.00%

13. The above ratio has been adopted for the calculation of tariff in this order.

### **RETURN ON EQUITY**

14. 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 tried up separately for each year of the tariff period along with the tariff petition filed for the next tariff period.*

*(4) Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below:*

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

*Where t is the applicable tax rate in accordance with clause (3) of this regulation.*

**Illustration.-**

*(i) In case of the generating company or the transmission licensee paying Minimum Alternate Tax (MAT) @ 11.33% including surcharge and cess:*

$$\text{Rate of return on equity} = 15.50 / (1-0.1133) = 17.481\%$$

*(ii) In case of generating company or the transmission licensee paying normal corporate tax @ 33.99% including surcharge and cess:*

$$\text{Rate of return on equity} = 15.50 / (1-0.3399) = 23.481\%."$$

15. 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%.

16. Petitioner has stated that it reserves the “right to approach the Commission if and when the applicable MAT rate undergoes changed/revised as per the Finance Act of the respective year as provided under Regulation 15(3) of the said Regulations.” Such a petition as and when filed will be examined in accordance with the provisions of law.

17. Detailed calculation of the ROE in respect the transmission assets is as under:

		(₹ in lakh)				
		2009-10	2010-11	2011-12	2012-13	2013-14
Gross Notional Equity	428.01					
Addition due to Additional Capitalisation	0.00					
Opening Equity	428.01	428.01	428.01	428.01	428.01	428.01
Addition due to Additional Capitalisation		0.00	0.00	0.00	0.00	0.00
Closing Equity		428.01	428.01	428.01	428.01	428.01
Average Equity		428.01	428.01	428.01	428.01	428.01
Return on Equity (Base Rate )		15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09		11.330%	11.330%	11.330%	11.330%	11.330%
Rate of Return on Equity (Pre Tax )		17.481%	17.481%	17.481%	17.481%	17.481%
Return on Equity (Pre Tax)		<b>74.82</b>	<b>74.82</b>	<b>74.82</b>	<b>74.82</b>	<b>74.82</b>

### **INTEREST ON LOAN**

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

*“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.”*

19. In these calculations, interest on loan has been worked out as detailed below:

(a) Details of net outstanding loan as on 31.3.2009, cumulative repayment up to 31.3.2009, repayment schedule for the loans, rate of

interest etc. have been taken from the amendment order dated 30.4.2008 in Petition No: 35/2005 for working out weighted average rate of interest.

(b) For loans with floating interest rates, rates of interest as on 1.4.2009 have been considered.

(c) Tariff is worked out considering normative loan and normative repayments. Depreciation allowed has been taken as normative repayment for the tariff period 2009-14.

(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.

20. Details of the calculation of Interest on Loan are as under:

(₹ in lakh)

		2009-10	2010-11	2011-12	2012-13	2013-14
Gross Notional Loan	4024.17					
Addition due to Additional Capitalisation	0.00					
Gross Normative Loan	4024.17	4024.17	4024.17	4024.17	4024.17	4024.17
Cumulative Repayment upto Previous Year		2075.70	2311.23	2546.76	2782.29	3017.82
Net Loan-Opening		1948.47	1712.94	1477.41	1241.88	1006.35
Addition due to Additional Capitalisation		0.00	0.00	0.00	0.00	0.00
Repayment during the year		235.53	235.53	235.53	235.53	235.53
Net Loan-Closing		1712.94	1477.41	1241.88	1006.35	770.82
Average Loan		1830.70	1595.17	1359.64	1124.11	888.58
Weighted Average Rate of Interest on Loan		5.1558%	4.8746%	4.5219%	4.0667%	3.7426%
Interest		<b>94.39</b>	<b>77.76</b>	<b>61.48</b>	<b>45.71</b>	<b>33.26</b>

## **DEPRECIATION**

21. 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.”

22. Depreciation has been worked out on the admitted capital expenditure as on 1.4.2009 and projected additional capitalization thereafter.

23. For the period 1.4.2009 to 31.3.2014 the depreciation worked out are as under:

(₹ in lakh)

		2009-10	2010-11	2011-12	2012-13	2013-14
Rate of Depreciation		5.2902%	5.2902%	5.2902%	5.2902%	5.2902%
Depreciable Value	90%	4006.96	4006.96	4006.96	4006.96	4006.96
Elapsed Life (Beginning of the year)		7	8	9	10	11
Weighted Balance Useful life (life of asset)	33	26	25	24	23	22
Remaining Depreciable Value		2323.10	2087.57	1852.04	1616.51	1380.98
Depreciation		235.53	235.53	235.53	235.53	235.53

## **OPERATION & MAINTENANCE EXPENSES**

24. Clause (g) of Regulation 19 the 2009 regulations prescribes the norms for operation and maintenance expenses based on the type of sub-station and line. The petitioner has calculated the operation and maintenance expenses in accordance with the above norms and the same are allowed as such.

## **INTEREST ON WORKING CAPITAL**

25. 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 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 1.4.2009, which is in accordance with the 2009 regulations and has been allowed.

26. 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	27.01	28.55	30.20	31.92	33.74
O & M expenses	15.01	15.86	16.78	17.73	18.75
Receivables	100.38	99.34	98.50	97.82	97.83
<b>Total</b>	<b>142.40</b>	<b>143.76</b>	<b>145.47</b>	<b>147.47</b>	<b>150.31</b>
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	<b>17.44</b>	<b>17.61</b>	<b>17.82</b>	<b>18.07</b>	<b>18.41</b>

#### TRANSMISSION CHARGES

27. 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	235.53	235.53	235.53	235.53	235.53
Interest on Loan	94.39	77.76	61.48	45.71	33.26
Return on equity	74.82	74.82	74.82	74.82	74.82
Interest on Working Capital	17.44	17.61	17.82	18.07	18.41
O & M Expenses	180.08	190.34	201.32	212.79	224.94
<b>Total</b>	<b>602.26</b>	<b>596.06</b>	<b>590.97</b>	<b>586.92</b>	<b>586.96</b>

#### Application fee and the publication expenses

28. The petitioner has sought approval for the reimbursement of fee paid by it for filing the petition. 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.

29. Accordingly, expenses incurred by the petitioner on application filing fees and publication of notices in connection with the present petition shall be directly recovered from the beneficiaries on pro rata basis.

### **Service Tax**

30. The petitioner has made a specific prayer to be allowed to bill and recover the Service tax on Transmission charges separately from the respondents.

31. Presently, service tax on transmission service has been exempted by Government of India vide its notification No. 20/2010 dated 27.2.2010 read with notification No. 45/2010 dated 20.7.2010. Therefore, the prayer made by the petitioner in this regard has become infructuous .

32. 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.

33. This order disposes of Petition No. 148/2010.

Sd/-

**(M.Deena Dayalan)**  
Member

Sd/-

**(V.S.Verma)**  
Member

Sd/-

**(S.Jayaraman)**  
Member

Sd/-

**(Dr. Pramod Deo)**  
Chairperson