

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 89/2009

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

Date of Hearing: 15.9.2011

Date of Order: 14 .11.2011

In the matter of:

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2009 for determination of transmission tariff for 220 kV D/C Anta Transmission System in Northern Region for tariff block 2009-14 period.

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 Vitran Nigam Limited, Jaipur
3. Jaipur Vidyut Vitran Nigam Limited, Jaipur
4. Jodhpur Vidyut Vitran Nigam Limited, Jaipur
5. Himachal Pradesh State Electricity Board, Shimla
6. Punjab State Electricity Board, Patiala
7. Haryana Power Purchase Centre, Panchkula
8. Power Development Department, 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

...**Respondent**



15. Uttarakhand Power Corporation Ltd., Dehradun
16. North Central Railway, Allahabad

The following were present:

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

ORDER

This petition has been filed seeking approval of transmission tariff for 220 kV D/C Anta Transmission System in Northern Region (hereinafter referred to as “the transmission asset”) for the period 2009-14, 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 other reliefs:-

- (a) Reimbursement of expenditure by the beneficiaries towards petition filing fees, licence fees, and publication expenditures and other expenditure (if any) in relation to the filing of the petition; and
- (b) Approve the inclusion of service tax as one of the components to be covered in transmission charges.

2. The various elements of the transmission system were put under commercial operation progressively from 1989 to 1991. The Commission vide order dated 15.12.2005 and its amendment vide its order dated 29.2.2008 approved the final transmission tariff based on admitted capital cost of ₹ 6696.69 lakh for the period 2004-09 up to 31.3.2009. The instant petition has been filed for approval of transmission tariff for the period 2009-14.



3. The details of the elements for which transmission charges have been claimed in this petitioner are as under:-

Transmission Lines:

- (a) Anta- Bhilwara 220 kV D/C transmission line ckt-I -186.67 km
- (b) Anta- Bhilwara 220 kV D/C transmission line ckt-II -186.67 km
- (c) Anta- Dausa 220 kV D/C transmission line ckt-I -215.70 km
- (d) Anta- Dausa 220 kV D/C transmission line ckt-II -215.70 km
- (e) Dausa- Bassi-Heerapura 220 kV D/C transmission line ckt-I -76.86 km
- (f) Dausa- Bassi-Heerapura 220 kV D/C transmission line ckt-II -76.86 km

4. The details of the transmission charges claimed by the petitioner are given below:-

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	127.18	127.18	127.18	127.18	127.18
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on equity	503.39	503.39	503.39	503.39	503.39
Interest on Working Capital	26.93	27.71	28.56	29.44	30.37
O & M Expenses	275.63	291.22	308.25	325.75	344.30
Total	933.13	949.50	967.38	985.76	1005.24

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	41.34	43.68	46.24	48.86	51.64
O & M expenses	22.97	24.27	25.69	27.15	28.69
Receivables	155.52	158.25	161.23	164.29	167.54
Total	219.83	226.20	233.16	240.30	247.87
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	26.93	27.71	28.56	29.44	30.37

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. Reply to the petition has been filed by Uttar Pradesh Power Corporation Ltd. (UPPCL), Respondent No.9.

7. UPPCL vide its affidavit dated 25.6.2009 has raised objections regarding depreciation and reimbursement of expenses on account of wage revision which have been dealt with in relevant part of the order.

8. Having heard the representatives of the petitioner and perused the material on records, we proceed to dispose of the petition. While doing so, we address the concerns expressed by the respondent in its reply.

CAPITAL COST

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

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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 capital cost admitted by the Commission as on 1.4.2009 was ₹ 6696.69 lakh, and the same has been considered for determination of tariff for 2009-14 period in the instant petition.

ADDITIONAL CAPITAL EXPENDITURE

11. The petitioner has not claimed any additional capital expenditure for 2009-14 period.

DEBT-EQUITY RATIO

12. Regulation 12 of the 2009 regulations provides as under:-

(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.

13. Details of debt-equity in respect of the transmission asset as on the date of commercial operation are given as under:-

Capital Cost admitted as on 31.3.2009		
Particulars	Amount (₹ in lakh)	%
Debt	3817.03	57.00
Equity	2879.66	43.00
Total	6696.69	100.00

In view of this, debt-equity ratio 57.00: 43.00 has been considered for tariff calculations.

RETURN ON EQUITY

14. Regulation 15 of the 2009 regulations provides as under:-

"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 Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as per the Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be.

(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.

(5) The generating company or the transmission licensee, as the case may be, shall recover the shortfall or refund the excess Annual Fixed Charge on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission:

Provided further that Annual Fixed Charge with respect to the 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 in accordance with regulation 6 of these regulations.

15. In this order, Return on Equity has been calculated as per Regulation 15 of the 2009 regulations with pre-tax ROE of 17.481%.

16. Petitioner's prayer to allow grossing up the base rate of ROE based on the tax rates viz., MAT, surcharge, any other cess, charges, levies etc., as per the relevant Finance Act, shall be settled in accordance with the provisions of Regulation 15 of 2009 regulations as amended by Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (Second Amendment) Regulations, 2011.

17. Details on return on equity calculated are as under:-

	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity	2879.66	2879.66	2879.66	2879.66	2879.66
Addition due to additional capital expenditure	0.00	0.00	0.00	0.00	0.00
Closing Equity	2879.66	2879.66	2879.66	2879.66	2879.66
Average Equity	2879.66	2879.66	2879.66	2879.66	2879.66
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)	503.39	503.39	503.39	503.39	503.39

INTEREST ON LOAN

18. The petitioner has not claimed any interest on loan as the entire actual and notional loan was taken to be repaid prior to 1.4.2004. As such there is no interest on loan.

DEPRECIATION

19. 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.

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(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.”

20. The gross depreciable value of the asset, as per (2) above, is 0.9 x ₹ 6696.69 lakh = ₹ 6027.02 lakh. Cumulative depreciation and advance against depreciation recovered in tariff up to 31.3.2009 is ₹ 3992.10 lakh. Remaining depreciable value as on 1.4.2009 is thus ₹ 2034.92 lakh.

21. UPPCL has submitted that the date of commercial operation of the transmission asset was 1.4.1992. The useful life of the transmission line is 35 years as per the 2009 regulations and that 17 years have lapsed and the balance useful life left is 18 years. The petitioner has spread the remaining depreciable value of ₹ 2034.93 lakh over 16 years whereas it should have been spread over 18 years. Thus, the amount of depreciation works out to ₹ 113.05 lakh instead of ₹ 127.8 lakh and it need to be revised and consequently the interest of working capital will also undergo change.

22. The Commission in its order dated 15.12.2005 in Petition No. 98/2004 pertaining to the tariff for the period 2004-09 had decided the remaining useful life of the transmission lines as on 1.4.2004 as under:-

"As the entire loan for the transmission assets covered in the present petition has already been repaid, the depreciation has been worked out by spreading the balance depreciable value over the remaining useful life of the asset (21 years) as on 1.4.2004 and it comes to Rs. 128.65 lakh per year".

Accordingly, the remaining depreciable value as on 31.3.2009 has been spread over the balance useful life of 16 years. Details of depreciation worked out are given as under:-

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Gross Block	6696.69	6696.69	6696.69	6696.69	6696.69
Addition during 2009-14	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	6696.69	6696.69	6696.69	6696.69	6696.69
Average Gross Block	6696.69	6696.69	6696.69	6696.69	6696.69
Rate of Depreciation	5.28%	5.28%	5.28%	5.28%	5.28%
Depreciable Value	6027.02	6027.02	6027.02	6027.02	6027.02
Remaining Depreciable Value	2034.92	1907.74	1780.56	1653.37	1526.19
Depreciation	127.18	127.18	127.18	127.18	127.18

OPERATION & MAINTENANCE EXPENSES

23. Clause (g) of Regulation 19 of the 2009 regulations prescribes the norms for operation and maintenance expenses based on the type of sub-station and line. Norms prescribed in respect of the elements covered in the instant petition are given as under:-

Element	2009-10	2010-11	2011-12	2012-13	2013-14
220 kv D/C Transmission line (single conductor) (₹ lakh/ km)	0.269	0.284	0.301	0.318	0.336
220 kv, bay (₹ lakh/bay)	36.68	38.78	41.00	43.34	45.82

24. Based on the above norms, the petitioner has calculated the following operation and maintenance expenses which are allowed as given as under:-

Element	2009-10	2010-11	(₹ in lakh)		
			2011-12 (pro-rata for 9 months)	2012-13	2013-14
479.23 Km (186.67+215.7+76.86) 220 kV, single conductor transmission line	128.91	136.10	144.25	152.40	161.02
4 Nos. 220 kV bays	146.72	155.12	164.00	173.36	183.28
Total	275.63	291.22	308.25	325.76	344.30

25. The petitioner has submitted that O&M expenditure for the year 2009-14 had been arrived at on the basis of normalized actual O&M expenses during the period 2003-04 to 2007-08. The wage hike of 50% on account of pay revision of the

employees of public sector undertaking has also been considered while calculating the O&M charges for the tariff period 2009-14. The petitioner has further submitted that it would approach the Commission for suitable revision in the norms for O&M expenditure in case the impact of wage hike with effect from 1.1.2007 is more than 50%. UPPCL has submitted that since the normative O&M parameters have been defined, the question of considering actuals does not arise. Once the 2009 regulations have been framed after detailed consultations, discussion and public hearing, the sanctity of the same should be maintained.

26. We have considered the submissions of the petitioner and UPPCL with regard to reimbursement of additional expenditure on account of wage revision. It is clarified that if any such application is made, the same 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 of fixed cost. 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% 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

In these calculations, SBI PLR as on 1.4.2009 (i.e. 12.25%) has been considered in accordance with the 2009 regulations as amended vide the second amendment regulations notified in June 2011 has been considered for calculating interest on working capital.

28. Necessary computations in support of interest on working capital are given as under:-

	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance spares	41.34	43.68	46.24	48.86	51.65
O & M expenses	22.97	24.27	25.69	27.15	28.69
Receivables	155.52	158.25	161.23	164.30	167.54
Total	219.84	226.20	233.16	240.31	247.88
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
Interest	26.93	27.71	28.56	29.44	30.36

TRANSMISSION CHARGES

29. The transmission charges being allowed for the transmission asset are summarized hereunder:-

(₹ in lakh)

	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	127.18	127.18	127.18	127.18	127.18
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on equity	503.39	503.39	503.39	503.39	503.39
Interest on Working Capital	26.93	27.71	28.56	29.44	30.36
O & M Expenses	275.63	291.22	308.25	325.76	344.30
Total	933.14	949.51	967.39	985.77	1005.24

OTHER ISSUES

30. The petitioner has sought approval for the reimbursement of fee paid by it for filing the petition and expenses incurred towards publication of notices. In accordance with the Commission's 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.

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

32. The petitioner has made a specific prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents if the exemption granted to it is withdrawn and transmission of power is made a taxable service. We consider the prayer pre-mature. The petitioner is at liberty to approach the Commission for any relief at the appropriate time as per law.

33. As regards the prayer for reimbursement of licence fee, it is clarified that the same shall be dealt with in accordance with our order dated 25.10.2011 in Petition No.21/2011 and 22/2011.

34. As regards the sharing of the transmission charges, we direct that prior to 1.7.2011, the transmission charges shall be shared by the respondent in accordance with Regulation 33 of the 2009 regulations. From 1.7.2011 onwards, the charges shall be shared in accordance with Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses, Regulations, 2010) and the Removal of Difficulties orders issued thereunder.

35. This order disposes of Petition No. 89/2009.

(M.DEENA DAYALAN)
MEMBER

(V.S.VERMA)
MEMBER

(S. JAYARAMAN)
MEMBER

(DR. PRAMOD DEO)
CHAIRPERSON

