

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram:

1. **Shri Bhanu Bhushan, Member**
2. **Shri A. H. Jung, Member**

Petition No.107/2004

In the matter of

Approval of transmission charges for additional converter transformer (spare) for Rihand-Dadri Bi-pole in Northern Region for the period from 1.4.2004 to 31.3.2009

And in the matter of

Power Grid Corporation of India Limited

...**Petitioner**

Vs

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited, Jaipur
2. Ajmer Vidyut Vitran Nigam Ltd., Ajmer
3. Jaipur Vidyut Vitran Nigam Ltd., Jaipur
4. Jodhpur Vidyut Vitran Nigam Ltd., Jodhpur
5. Himachal Pradesh State Electricity Board, Shimla
6. Punjab State Electricity Board, Patiala
7. Haryana Vidyut Prasaran Nigam Ltd., Panchkula
8. Power Development Deptt., Govt. of Jammu & Kashmir, Jammu
9. Uttar Pradesh Power Corporation Limited, Lucknow
10. Delhi Transco Limited, New Delhi
11. Chandigarh Administration, Chandigarh
12. Uttaranchal Power Corporation Limited, Dehradun
13. Chief Electrical Distribution Engineer, Northern Railway, New Delhi..**Respondents**

The following were present:

1. Shri U.K. Tyagi, PGCIL
2. Shri C. Kannan, PGCIL
3. Shri M.M. Mondal, CM (Fin), PGCIL
4. Shri K.K. Mittal, Addl. SE (ISP), RRVPN
5. Shri A.K. Tandon, EE, UPPCL
6. Shri V.K. Malhotra, DTL

**ORDER
(DATE OF HEARING: 24.8.2005)**

The petition has been filed for approval for transmission charges for additional converter transformer (spare) for Rihand-Dadri Bi-pole in Northern Region for the period from 1.4.2004 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 had also prayed that it be permitted to continue the billing of transmission charges on the same basis as charged on 31.3.2004, pending determination of tariff in the present petition. No other specific relief is prayed for.

2. The petitioner has claimed the transmission charges as under:

(Rs. In lakh)					
	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	66.27	66.27	66.27	66.27	66.27
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	257.73	257.73	257.73	257.73	257.73
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	7.99	8.13	8.28	8.44	8.61
O & M Expenses	0.00	0.00	0.00	0.00	0.00
Total	332.00	332.14	332.29	332.45	332.62

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

(Rs. in lakh)					
	2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	22.62	23.98	25.42	26.95	28.56
O & M expenses	0.00	0.00	0.00	0.00	0.00
Receivables	55.33	55.36	55.38	55.41	55.44
Total	77.95	79.34	80.80	82.35	84.00
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	7.99	8.13	8.28	8.44	8.61

4. The additional converter transformer was declared under commercial operation on 1.10.2000. The annual transmission charges for the period from 1.4.2001 to 31.3.2004 were decided by the Commission in its order dated 23.1.2003 in petition No 70/2002, and for the period from 1.10.2000 to 31.3.2001 by order dated 31.5.2002 in petition No 19/2001.

5. The replies to the petition have been filed by Punjab State Electricity Board, Jaipur Vidyut Vitran Nigam Ltd, Jodhpur Vidyut Vitran Nigam Ltd and Ajmer Vidyut Vitran Nigam Ltd. No objections have been received in response to the notices published by the petitioner in the newspapers.

CAPITAL COST

6. As per clause (2) of Regulation 52 of the 2004 regulations in case of the projects existing up to 31.3.2004, the project cost admitted by the Commission for determination of tariff prior to 1.4.2004 shall form the basis for determination of tariff.

7. The petitioner has considered the capital expenditure of Rs.1840.94 lakh as admitted by the Commission in its order dated 23.1.2003 *ibid*. The petitioner has not claimed additional capitalisation on works. The petitioner has also not considered additional capitalisation on account of FERV as there are no foreign loans. Accordingly, gross block of Rs. 1840.94 lakh as claimed has been considered for the purpose of tariff.

DEBT- EQUITY RATIO

8. Regulation 54 of the 2004 regulations *inter alia* provides that in case of the existing project, debt–equity ratio considered by the Commission for fixation of tariff for the period ending 31.3.2004 shall be considered for determination of tariff. It further provides that the debt and equity amount arrived at in the above manner shall be used for calculation of interest on loan, return on equity, advance against depreciation and foreign exchange rate variation.

9. The entire cost of additional converter transformer (spare) for Rihand-Dadri Bi-pole has been met through the internal resources of the petitioner. The petitioner has claimed tariff based on equity of Rs. 1840.94 lakh, which was considered by the Commission in its order dated 23.1.2003 *ibid*, and is in accordance with the 2004 regulations. Accordingly, the entire capital cost has been considered as the equity for the purpose of determination of tariff in the present petition.

RETURN ON EQUITY

10. 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.

11. The petitioner has claimed return on equity of Rs. 1840.94 lakh, which has been found to be admissible. Accordingly, the petitioner shall be entitled to return on equity @ Rs. 257.73 lakh each year during the tariff period.

INTEREST ON LOAN

12. As per clause (i) of Regulation 56 of the 2004 regulations, interest on loan capital is to be computed loan wise on the loans arrived at in the manner indicated in regulation 54. Further, the loan outstanding as on 1.4.2004 is worked out as the gross loan as per regulation 54 minus cumulative repayment as admitted by the Commission up to 31.3.2004. The repayment for the period 2004-09 needs to be worked out on normative basis.

13. The petitioner has not claimed any interest on loan as the transmission asset was financed through equity. Accordingly, the petitioner is not entitled to interest on loan.

DEPRECIATION

14. Sub-clause (a) of clause (ii) of Regulation 56 of the 2004 regulations provides for computation of depreciation in the following manner, namely:

- (i) The value base for the purpose of depreciation shall be the historical cost of the asset.
- (ii) 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.
- (iii) On repayment of entire loan, the remaining depreciable value shall be spread over the balance useful life of the asset.
- (iv) 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.

15. The gross depreciable value of the asset, as per (ii) above, is $0.9 \times \text{Rs. } 1840.94$ lakh = Rs.1656.85 lakh. Cumulative depreciation and AAD recovered in tariff up to 31.3.2004 is Rs. 274.00 lakh. Remaining depreciable value as on 1.4.2004 is thus Rs. 1382.85 lakh.

16. As the transmission elements are financed entirely through equity, the spreading of the deprecation cannot be considered. Therefore, the depreciation has been worked out on the capital cost of Rs.1840.94 lakh and the rates as prescribed in the 2004 regulations. For working out cumulative depreciation the depreciation as per last tariff setting has been considered. The petitioner is entitled to claim depreciation at the rate of Rs. 66.27 lakh each year during the tariff period.

ADVANCE AGAINST DEPRECIATION

17. 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

18. 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.

19. The petitioner has not claimed Advance Against Depreciation, as there is no loan repayment. The petitioner's entitlement to Advance Against Depreciation is, therefore, zero.

OPERATION & MAINTENANCE EXPENSES

20. 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 per ckt-km (Rs in lakh)	0.227	0.236	0.246	0.255	0.266
O&M expenses per bay (Rs in lakh)	28.12	29.25	30.42	31.63	32.90

21. The petitioner has not claimed O & M expenses. Accordingly, the petitioner's entitlement to O & M expenses has not been considered.

INTEREST ON WORKING CAPITAL

23. 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 the maintenance spares on the basis of capital cost as on the date of commercial operation as per the order dated 23.1.2003 and escalating the same @ 6% per annum. This is in order and has been allowed.

(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. The

petitioner has claimed O&M expenses for 1 month of O&M expenses of the respective year as claimed in the petition. This has been considered in the working capital.

(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. The petitioner has claimed the receivables on the basis 2 months' transmission charges claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis 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 @ 10.25% based on SBI PLR as on 1.4.2004, which is in accordance with the 2004 regulations and has been allowed.

24. The necessary computations in support of interest on working capital are appended hereinbelow.

	(Rs. in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	22.69	24.05	25.49	27.02	28.64
O & M expenses	0.00	0.00	0.00	0.00	0.00
Receivables	55.33	55.36	55.38	55.41	55.44
Total	78.02	79.41	80.88	82.43	84.08
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	8.00	8.14	8.29	8.45	8.62

TRANSMISSION CHARGES

25. The transmission charges being allowed for additional converter transformer (spare) for Rihand-Dadri Bi-pole are summarised below.

(Rs. In lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	66.27	66.27	66.27	66.27	66.27
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	257.73	257.73	257.73	257.73	257.73
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	8.00	8.14	8.29	8.45	8.62
O & M Expenses	0.00	0.00	0.00	0.00	0.00
Total	332.00	332.14	332.29	332.45	332.62

26. 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. These transmission charges shall be included in the regional transmission tariff for Northern Region and shall be shared by the regional beneficiaries in accordance with the 2004 regulations.

27. The petitioner is already billing the respondents on provisional basis in accordance with the Commission's interim directions. The provisional billing of tariff shall be adjusted in the light of final tariff now approved by us.

28. This order disposes of Petition No.107/2004.

Sd/-
(A.H. JUNG)
MEMBER

Sd/-
(BHANU BHUSHAN)
MEMBER

New Delhi dated the 7th September, 2005