

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Coram:**

1. **Shri Ashok Basu, Chairman**
2. **Shri K.N. Sinha, Member**
3. **Shri Bhanu Bhushan, Member**
4. **Shri A.H. Jung, Member**

**Petition No.122/2004**

**In the matter of**

Approval of transmission charges for Jeypore –Talcher Transmission system in Eastern 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. Bihar State Electricity Board, Patna
2. West Bengal State Electricity Board, Kolkata,
3. Grid Corporation of Orissa Ltd., Bhubaneshwar
4. Damodar Valley Corporation, Kolkata
5. Power Department, Govt of Sikkim, Gangtok
6. Jharkhand State Electricity Board, Ranchi

..**Respondents**

**The following were present:**

1. Shri U.K. Tyagi, PGCIL
2. Shri C. Kannan, PGCIL
3. Shri P.C. Pankaj, PGCIL
4. Shri M.M. Mondal, CM (Fin), PGCIL
5. Shri V.K. Singh, BSEB
6. Shri S.R. Sarangi, GRIDCO

**ORDER  
(DATE OF HEARING: 28.7.2005)**

The petition has been filed for approval for transmission charges for Jeypore – Talcher Transmission system in Eastern 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)

	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Depreciation	251.95	251.95	251.95	251.95	251.95
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	746.20	746.20	746.20	746.20	746.20
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	52.52	54.46	56.52	58.68	60.98
O & M Expenses	321.89	334.77	348.40	361.93	376.78
<b>Total</b>	<b>1372.56</b>	<b>1387.38</b>	<b>1403.07</b>	<b>1418.76</b>	<b>1435.91</b>

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

(Rs. in lakh)

	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Maintenance Spares	256.80	272.21	288.55	305.86	324.21
O & M expenses	26.82	27.90	29.03	30.16	31.40
Receivables	228.76	231.23	233.85	236.46	239.32
Total	512.38	531.34	551.43	572.48	594.93
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	52.52	54.46	56.52	58.68	60.98

4. The date of commercial operation of the above transmission asset is 1.12.1990. The annual transmission charges for the period from 1.4.2001 to 31.3.2004 were decided by the Commission in its order dated 22.10.2003 in petition No 23/2002,

and for the period upto 31.3.2001 by Government of India in notifications dated 14.6.1996 and 4.12.1998. The asset comprises of (i) 400 kV S/C Jeypore-Indravati line; (ii) 400 kV S/C Indravati-Rengali line; (iii) ICT-1 at Jeypore; (iv) two ICTs and one Bus reactor at Rengali; and (v) eight 400 kV bays at Jeypore/Indravati/Rengali.

5. The respondents have not filed any reply to the petition. Neither has any objection been received in response to the public notices published by the petitioner.

### **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.12040.00 lakh admitted by the Commission in the order dated 22.10.2003 *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. 12040 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 petitioner has claimed tariff based on debt-equity of 50:50 in the Net Fixed Asset as on 1.4.1997, which was considered by the Commission in its order dated 22.10.2003 *ibid*, and is in accordance with the 2004 regulations. Accordingly, the Net Fixed Asset of Rs.10660.00 lakh as on 1.4.1997 (after adjusting Cumulative Depreciation of Rs.1380 lakh up to 31.3.1997 from the Gross Block of Rs.12040 lakh) has been divided into debt and equity. Based on this, Rs. 5330 lakh 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. 5330.00 lakh, which has been found to be admissible. Accordingly, the petitioner shall be entitled to return on equity @ Rs. 746.20 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 entire loan was repaid during 2001-02. 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. Land cost included in the historical cost of the asset is Rs.91.76 lakh. Thus, the gross depreciable value of the asset, as per (ii) above, is  $0.9 \times (12040.00 - 91.76) = \text{Rs.}10753.42$  lakh. Cumulative depreciation and AAD recovered in tariff upto 31.3.2004 is Rs.6218.23 lakh. Remaining depreciable value as on 1.4.2004 is thus Rs.4535.19 lakh.

16. As the entire loan for the transmission lines 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 (18 years), and it comes to Rs.251.95 lakh per year.

#### **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 (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

21. The petitioner has claimed O & M expenses for 427 kms of line length and 8 bays, which has been allowed. Accordingly, the petitioner's entitlement to O & M expenses has been worked out as given hereunder.

	Year				
	2004-05	2005-06	2006-07	2007-08	2008-09
O&M expenses for line length	96.93	100.77	105.04	108.89	113.58
O&M expenses for bays	224.96	234.00	243.36	253.04	263.20
Total	321.89	334.77	348.40	361.93	376.78

**INTEREST ON WORKING CAPITAL**

22. 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 22.10.2003 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.

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

(Rs. in lakh)

	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Maintenance Spares	261.94	277.66	294.32	311.98	330.69
O & M expenses	26.82	27.90	29.03	30.16	31.40
Receivables	228.85	231.33	233.95	236.57	239.43
Total	517.61	536.88	557.30	578.70	601.52
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
<b>Interest</b>	<b>53.06</b>	<b>55.03</b>	<b>57.12</b>	<b>59.32</b>	<b>61.66</b>

### **TRANSMISSION CHARGES**

24. The transmission charges being allowed for Jyepore-Talcher transmission system are summarised below.

(Rs. In lakh)

	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Depreciation	251.95	251.95	251.95	251.95	251.95
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	746.20	746.20	746.20	746.20	746.20
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	53.06	55.03	57.12	59.32	61.66
O & M Expenses	321.89	334.77	348.40	361.93	376.78
<b>Total</b>	<b>1373.10</b>	<b>1387.96</b>	<b>1403.68</b>	<b>1419.40</b>	<b>1436.59</b>

25. 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 Eastern Region and shall be shared by the regional beneficiaries in accordance with the 2004 regulations.

26. 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.

27. This order disposes of Petition No.122/2004.

Sd/-  
**(A.H. JUNG)**  
**MEMBER**

Sd/-  
**(BHANU BHUSHAN)**  
**MEMBER**

Sd/-  
**(K.N. SINHA)**  
**MEMBER**

Sd/-  
**(ASHOK BASU)**  
**CHAIRMAN**

**New Delhi dated 14<sup>th</sup> September, 2005**