

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Coram:**

- 1. Shri Ashok Basu, Chairman**
- 2. Shri D.P. Sinha, Member**
- 3. Shri G.S. Rajamani, Member**
- 4. Shri K.N. Sinha, Member**

**Petition No. 2/2001**

**In the matter of**

Transmission Tariff for 1 x 63 MVA Reactor on 400 kV Kolaghat-Rengali line at Rengali End in Eastern Region.

**And in the matter of**

Power Grid Corporation of India Ltd. .... Petitioner

Vs

1. Bihar State Electricity Board
2. West Bengal State Electricity Board
3. Grid Corporation of Orissa Ltd.
4. Damodar Valley Corporation
5. Power Dept., Govt. of Sikkim,
6. Jharkhand State Electricity Board ..... Respondents

The following were present:

1. Shri R.K. Vohra, PGCIL
2. Shri S.S. Sharma, Addl. Genl. Manager, PGCIL
3. Shri Pranjapa, BSEB

**ORDER**  
**(DATE OF HEARING 22.5.2002)**

This petition has been filed by the petitioner Power Grid Corporation of India Ltd praying for approval of transmission tariff for 1 x 63 MVA Reactor at Rengali end of Kolaghat-Rengali line in Eastern Region. Originally, the petition was filed based on capital cost of Rs.181.05 lakhs. Subsequently, the petitioner filed an amended petition praying for approval of tariff based on completion cost of Rs.191.81 lakhs.

2. In a meeting held on 17.12.99, at the Eastern Regional Electricity Board, it was decided that the defective reactor at Rengali end at Kolaghat-Rengali line in Eastern Region be replaced by 1x63 MVA Reactor by the petitioner on urgent basis. It was also decided that the expenditure incurred on this account would be borne by the beneficiary constituents of Eastern Region in equal proportion, based on actuals. The petitioner undertook the work against the above background. The defective reactor was replaced and put under operation on 1.6.2000. In the amended petition, the petitioner seeks approval for transmission tariff of Rs.41.38 lakhs for the period from 1.6.2000 to 31.3.2001 based on capital cost of Rs.191.81 lakhs in accordance with norms and factors for determination of tariff notified by the Central Government on 16.12.1997. The petition for the period from 1.4.2001 to 31.3.2004 has been filed separately.

3. The replies to the original petition were filed by Damodar Valley Corporation (Respondent No.4) and Grid Corporation of Orissa Ltd. (Respondent No.3). Respondent No.4 in its reply has pointed out that the entire cost had been met out of equity, though debt and equity should be on normative basis in the ratio of 80:20. It was further stated that the return on equity (ROE) should be at 12% of the notional equity, O&M should be escalated @ 6% per annum and rate of depreciation should be between 3-4% in accordance with the Commission's Order dated 21.12.2000. Respondent No.3, in addition to the points raised by Respondent No.4 has stated that normative availability for the purpose of incentive should be 98% against 95% claimed by the petitioner.

4. We have given our thoughtful consideration to the issues raised in the petition. The Commission has already decided that for the period prior to 1.4.2001, the norms notified by the Central Government on 16.12.1997, would apply for computing the transmission charges. The petitioner in the present petition has sought approval for tariff up to 31.3.2001, based on the norms notified by the Central Government on 16.12.1997 as amended. In accordance with these tariff norms in force prior to 1.4.2001, the transmission utilities are entitled to ROE @ 16%. Similarly, the norms prescribed by the Central Government provided that O&M charges would be escalated @ 10% per annum. For the purpose of incentive, the Central Government had prescribed the normative availability level of 95%. Therefore, we do not find any merit in the contention raised on behalf of

the respondents 3 & 4 on these counts and we over-rule these objections taken on their behalf.

5. We have also duly considered the question relating to the means of financing the project. It has been explained by the petitioner that due to super cyclone in Orissa in 1999, the transmission system belonging to Respondent No.3 had been badly affected. At Rengali end of 400 kV Kolaghat-Rengali line, two line reactors of 50 MVAR capacity each were damaged, as result of which the line was out of service w.e.f. 18.10.1999. This affected the security of the Eastern Regional Grid. Therefore, according to the petitioner installation of 1x63 MVAR line Reactors was to be undertaken on urgent basis. As the work was to be undertaken on urgent basis from the point of view of security of the grid, the entire capital for the project was financed through its internal resources.

6. In accordance with norms and factors for determination of tariff notified by the Central Government on 16.12.1997, the capital expenditure of the transmission system shall be financed as per the approved financial package set out in the techno-economic clearance of CEA. In the present case, the techno-economic clearance had not been obtained from CEA as the cost involved was less than that prescribed in the notification issued by the Central Government under Section 29 of the Electricity (Supply) Act, 1948. Therefore, we allow the entire capital employed by the petitioner to be considered as equity for the purpose of computation of transmission charges.

7. We find that the petitioner has claimed interest on working capital @ 12%. However, we are of the opinion that interest on working capital should be calculated based on Prime Lending Rates of State Bank of India during 2000-01 when 1 x 63 MVA Reactor was to put in operation. Therefore, we allow the interest @ 11.5% on working capital applicable at the relevant time. The depreciation rate is allowed on the basis of weighted average on actual capital expenditure of the various assets as per the auditors' certificate dated 27.9.2000, annexed to the amended petition.

8. In the above background, the petitioner shall be entitled to transmission charges of Rs.41.33 lakhs for the period 1.6.2000 to 31.3.2001 as per the details given in the Table below :-

**Transmission Charges**

(Rs. In Lakhs)	
Interest on Loan	0.00
Depreciation	12.48
Operation & Maintenance Expenses	2.38
Return on Equity	25.47
Interest on Working Capital	1.00
<b>Total</b>	<b>41.33</b>

9. In addition to the transmission charges, the petitioner shall be entitled to other charges like foreign exchange rate variation, income tax, incentive, surcharge and other cess and taxes in accordance with the notifications by Ministry of Power from time to time and in force up to 31.3.2001.

10. The transmission charges approved by us shall be included in the regional transmission tariff of Eastern Region and shall be shared by the regional beneficiaries in accordance with para 7 of the Notification dated 16.12.1997.

11. We find that the auditors' certificate furnished along with the petition certifies the transmission tariff calculations but does not disclose whether the capital expenditure, equity, loan, rate of interest, repayment schedule, O&M charges, etc. are as per the audited accounts of the petitioner company. The petitioner is directed to file an affidavit within four weeks of the date of this order that all the tariff calculations and auditors' certificates are based on audited accounts of the petitioner company or in the alternative, the petitioner may file a revised auditors' certificate, in the format given below, failing which the transmission tariff approved by us shall not take effect and this order will automatically lapse without any further reference to the Commission.

#### **A U D I T O R ' S   C E R T I F I C A T E**

We have verified the books of accounts, records and other documents of Power Grid Corporation of India Ltd and certify that the data used for transmission tariff calculations for \_\_\_\_\_ [name of the transmission system/line (s)] are in accordance with the audited books of accounts of the company and audited up to \_\_\_\_\_. We have obtained all information and explanations which to the best of our knowledge and belief were necessary for the purpose of our examination and necessary approvals of the competent authority in respect of capital cost, foreign exchange, time and cost over-run, etc. as prescribed under law, have been obtained.

Signature of auditor with seal and date

12. In this context, we wish to place on record our disappointment on the manner in which documents have been filed by the petitioner, on affidavit. In the original petition, the petitioner filed the auditor's certificate dated 31.7.2000 which indicated that the capital expenditure up to the date of commercial operation was Rs.181.05 lakhs. Subsequently, the petitioner filed the amended petition and annexed therewith another certificate dated 27.9.2001 showing the expenditure up to the D.O.C.O. as Rs.190.27 lakhs. On a query, it has now been clarified that the certificate dated 31.7.2000 was based on audited accounts up to 31.3.2000 and unaudited accounts for the period from 1.4.2000 to 1.6.2000, the date of commercial operation. The certificate dated 27.9.2001 is said to be based on audited accounts up to 31.3.2001. We have accepted the explanation furnished on behalf of the petitioner. Nevertheless, we would advise the petitioner to exercise proper diligence and care in future, while filing affidavits/documents before the Commission.

13. This order disposes of petition No.2/2001.

<b>Sd/-</b>	<b>Sd/-</b>	<b>Sd/-</b>	<b>Sd/-</b>
<b>(K.N. SINHA)</b> <b>MEMBER</b>	<b>(G.S. RAJAMANI)</b> <b>MEMBER</b>	<b>(D.P. SINHA)</b> <b>MEMBER</b>	<b>(ASHOK BASU)</b> <b>CHAIRMAN</b>

New Delhi dated the 31<sup>st</sup> May, 2002

**Annexure "A" to Order dated 31<sup>st</sup> May 2002**  
**In Petition No.2/2001**

**1x63 MVAR line reactor on 400kV Kolaghat-Rengali line at Rengali end in ER**

**Calculation of Transmission Tariff upto the year 2000-01**

			(Rs. in Lacs)
			<b>2000-01</b>
Actual DOCO	1.6.2000		
Period from DOCO (Year)			0.83
Annual Average SBI PLR			11.50%
<b>Gross Block</b>			
Opening Balance (at DOCO)			190.27
Addition			1.54
Cumulative Gross Block			191.81
Average Gross Block			191.04
Weighted Average Rate of Depreciation			7.84%
Depreciation			12.48
Cumulative Depreciation			12.48
<b>Equity</b>			
Opening Balance (at DOCO)			190.27
Addition during the year			1.54
Closing Balance			191.81
Average Equity			191.04
<b>Transmission Charges</b>			
Interest on Loan			0.00
Depreciation			12.48
Operation & Maintenance Expenses	1.50%	of capital expenditure	2.38
Return on Equity	16%		25.47
Interest on Working Capital			1.00
<b>Total</b>			<b>41.33</b>
<b>Calculation of Working Capital</b>			
Operation & Maintenance Expenses	1	months of O&M expenses	0.24
Maintenance Spares	1%	of capital cost	1.91
Receivables	2	months' average billing	8.27
<b>Total</b>			<b>10.42</b>

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**Annexure "A" (Contd) to Order dated 31<sup>st</sup> May 2002  
In Petition No.2/2001**

**1x63 MVAR line reactor on 400kV Kolaghat-Rengali line at Rengali end in ER**

**Capital Expenditures, Gross Block, Depreciation, Debt & Equity**

		(Rs. in Lacs)			
Capital Expenditures		Upto DOCO			Depreciation
		01.06.2000	2000-01	Total	
Land	0%	0.00	0.00	0.00	0.00
Building & Other Civil Works	3.02%	0.00	0.00	0.00	0.00
Sub-Station Equipments	7.84%	190.27	1.54	191.81	15.04
Transmission Line	5.27%	0	0.00	0.00	0.00
PLCC	12.77%	0	0.00	0.00	0.00
<b>Total</b>		190.27	1.54	191.81	15.04
<b>Weighted Average Rate of Depreciation</b>					7.84%
<b>Debt-Equity Ratio</b>					
Debt				0.00%	
Equity				100.00%	
Loan		0.00	0.00	0.00	
Equity		190.27	1.54	191.81	
<b>Total</b>		190.27	1.54	191.81	

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**1x63 MVAR line reactor on 400kV Kolaghat-Rengali line at Rengali end in ER**

**Calculation of O & M Expenses and Maintenance Spares for Working Capital**

		(Rs. In Lacs)
		<del>2000-01</del>
Wholesale Price Index for April of this Year (W1)		151.7
Wholesale Price Index for April of last Year (W0)		142.7
All India Consumer Price Index for Industrial Workers for April of this Year (C1)		438
All India Consumer Price Index for Industrial Workers for April of last Year (C0)		415
Weighted average Growth Rate of Index = ((60%*W1/W0)+(40%*C1/C0))-1		6.00%
Actual DOCO		1.6.2000
Period from DOCO (Year)		0.83
<b>Gross Block</b>		(Rs. in Lacs)
Opening Balance (at DOCO)		190.27
Addition		1.54
Cumulative Gross Block		191.81
Average Gross Block		191.04
<b>O &amp; M Expenses</b>	1.50%	
On Assets at DOCO		2.85
On Assets added during Year1	2000-01	0.01
O & M Expenses for the Full year		2.86
Proportionate O & M Expenses for the Year		2.38
<b>Maintenance Spares</b>	1%	
On Assets at DOCO		1.90
On Assets added during Year1	2000-01	0.01
<b>Total</b>		1.91

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**Lending Rates- SBI Advance Rate**

Year	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02#
Minimum	16.50%	16.50%	19.00%	19.00%	15.00%	16.50%	14.50%	14.00%	12.00%	12.00%	11.50%	11.50%
Maximum	16.50%	16.50%	19.00%	19.00%	15.00%	16.50%	14.50%	14.00%	14.00%	12.00%	11.50%	11.50%
Average	16.50%	16.50%	19.00%	19.00%	15.00%	16.50%	14.50%	14.00%	13.00%	12.00%	11.50%	11.50%
Source: Handbook of Statistics on Indian Economy,2001												

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**Calculation of Weighted average growth rate of WPI & CPI**

	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01
Wholesale Price Index for April of this Year (W1)					340.5	354.8	151.7
Wholesale Price Index for April of last Year (W0)		0	0	0	322.3	340.5	142.7
All India Consumer Price Index for Industrial Workers for April of this Year (C1)					383	415	438
All India Consumer Price Index for Industrial Workers for April of last Year (C0)		0	0	0	354	383	415
Weighted average Growth Rate of Index = ((60%*W1/W0)+(40%*C1/C0))-1					6.66%	5.86%	6.00%
(based on 60% weightage of WPI & 40% weightage of CPI)							

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