

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram:

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

Petition No.120/2004

In the matter of

Approval of transmission charges for 50 MVA Auto Transformer at Malda sub-station 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 50 MVA,220/132 kV Auto Transformer-3 at Malda sub-station 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)

	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	7.40	7.40	7.40	7.40	7.40
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	18.29	18.29	18.29	18.29	18.29
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	2.40	2.49	2.58	2.68	2.78
O & M Expenses	56.24	58.50	60.84	63.26	65.80
Total	84.33	86.68	89.11	91.63	94.27

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	4.68	4.96	5.25	5.57	5.90
O & M expenses	4.69	4.88	5.07	5.27	5.48
Receivables	14.05	14.45	14.85	15.27	15.71
Total	23.42	24.29	25.17	26.11	27.09
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	2.40	2.49	2.58	2.68	2.78

4. The date of commercial operation of the above transmission asset is 1.9.1995. The annual transmission charges for the period from 1.4.2001 to 31.3.2004 were decided by the Commission in its order dated 30.6.2003 in petition No 64/2002, and

for the period from 1.9.1995 to 31.3.2001 vide order dated 31.7.2002 in petition No. 67/2000 at completion cost of Rs. 283.46 lakh.

5. The respondent BSEB has filed its reply to the petition. No objection has 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.283.46 lakh admitted by the Commission in the order dated 30.6.2003 *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. 283.46 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 of Rs. 261.24 lakh as on 1.4.1997, which was considered by the Commission in its order dated 30.6.2003 *ibid*, and is in accordance with the 2004 regulations. Accordingly, equity of Rs. 130.62 lakh as on 1.4.1997, as claimed has been considered 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. 130.62 lakh, which has been found to be admissible. Accordingly, the petitioner shall be entitled to return on equity @ Rs. 18.29 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.
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- (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 0.9×283.46 lakh = Rs.255.11 lakh. Cumulative depreciation and AAD recovered in tariff up to 31.3.2004 is Rs.136.79 lakh. Remaining depreciable value as on 1.4.2004 is thus Rs.118.32 lakh.

16. As the entire loan for the transmission asset 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 (16 years), and it comes to Rs.7.40 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 2 bays only, 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 bays	56.24	58.50	60.84	63.26	65.80
Total	56.24	58.50	60.84	63.26	65.80

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. In the present case, the capital expenditure on the date

of commercial operation is as given hereunder, which has been considered as the historical cost for the purpose of the present petition and maintenance spares have been worked out accordingly by escalating 1% of historical cost @6% per annum.

(Rs. In lakh)			
Name of element	Date of commercial operation	Capital expenditure as on 1.9.1995	Escalated cost of maintenance spares as on 1.4.2004
50 MVA 3 rd ICT at Malda sub-station	1.9.1995	283.46	4.68

(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)

	2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	4.68	4.96	5.25	5.57	5.90
O & M expenses	4.69	4.88	5.07	5.27	5.48
Receivables	14.05	14.45	14.85	15.27	15.71
Total	23.42	24.28	25.18	26.11	27.10
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	2.40	2.49	2.58	2.68	2.78

TRANSMISSION CHARGES

24. A summary sheet on computation of transmission charges is attached to this order. The transmission charges being allowed for 50 MVA Auto transformer at Malda sub-station are summarised below.

(Rs. In lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	7.40	7.40	7.40	7.40	7.40
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	18.29	18.29	18.29	18.29	18.29
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	2.40	2.49	2.58	2.68	2.78
O & M Expenses	56.24	58.50	60.84	63.26	65.80
Total	84.33	86.68	89.11	91.63	94.27

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, which has already been agreed in EREB meeting, held on 26-27.4.2002 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.120/2004.

Sd-/
(A.H. JUNG)
MEMBER

sd-/
(BHANU BHUSHAN)
MEMBER

sd-/
(K.N. SINHA)
MEMBER

sd-/
(ASHOK BASU)
CHAIRPERSON

New Delhi dated 23rd November 2005

Summary Sheet

Name of the Company				PGCIL		
Name of the Scheme				50 MVA Auto Transformer at Malda Sub-Station of Eastern region		
Date of Commercial Operation				01.09.1995		
Petition No.				120/2004		
Tariff Period				2004-09		
1	Capital Cost of the Project					283.46
2	Cumulative Depreciation up to 31.03.97					22.22
3	Net Fixed assets as 1.04.97					261.24
4	Admitted Capital Cost as on 01.04.2004 for Calculation of Debt and Equity					261.24
5	Additional Capitalisation (works)					0.00
			For the year 2001-02			0.00
			For the year 2002-03			0.00
			For the year 2003-04			0.00
			Total			0.00
6	Additional Capitalisation (FERV) as per Commission's Order dated 30.6.2004 in Petition 64/2002					0.00
	No:					
			For the year 2001-02			0.00
			For the year 2002-03			0.00
			For the year 2003-04			0.00
			Total			0.00
7	Total Capital Cost as on 01.04.2004(4+5+6)					261.24
8	Means of Finance¹ :					
		Debt	50.00%			130.62
		Equity	50.00%			130.62
		Total				261.24
9	Debt details-Entire notional debt stands paid as on 01.04.2004					-
10	Weighted Av. Rate of interest-Not applicable					
11	Depreciation recovered up to 31.03.09:					173.79
				Dep	AAD	Total
		Recovered up to 31.03.97		22.22	0.00	22.22
		From 01.04.97 to 31.04.2001		88.89	0.00	88.89
		From 01.04.01 to 31.04.2004		25.00	0.68	25.68
		From 01.04.2004 to 31.03.2009		37.00	0.00	37.00
		Total				173.79
12	Balance Depreciation to be recovered beyond 31.03.2009:					81.32
		Capital cost for the purpose of Depreciation²				283.46
		90% of Capital Cost as above				255.11
		Cum. Depreciation to be recovered up to 31.03.09				173.79
		Balance				81.32
<p>1 Debt and Equity are not actual but notional calculated in the ratio of 50:50 as considered by Government of India and the same has been accepted by the Commission.</p> <p>2 The tariff was set by GOI for the period up to 31.03.1997 on NFA basis .The Gross Block, as on 01.04.1997 was Rs. 283.46 lahs. Cumulative depreciation recovered up to 31.03.1997 amounting Rs.22.22 lahs was deducted to arrive at NFA of Rs261.24 lakh as on 31.03.1997.The same was divided into notional loan and notional equity in the ratio of 50:50 which had already been considered by the Commission while awarding the tariff for the period 2001-04 in petition 64/2002.</p>						