

**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.124/2004

In the matter of

Approval of transmission charges for Chukha 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 Chukha Transmission System (the 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 has 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. The petitioner seeks recovery of abnormal O & M expenses towards deployment of additional security forces based on

statutory auditor's certification after closing of annual accounts, by direct billing on the respondents.

2. The approval for the revised cost estimated of Rs. 139.09 crore, including IDC of Rs. 8.24 crore for the transmission system was accorded by the Central Government in Ministry of Power vide letter dated 4.9.1998. The tariff for the period up to 31.3.2001 was notified by the Central Government under its notification dated 14.5.1999 at the cost of Rs. 138.74 crore. 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. 11/2002. The scope of the work included in the transmission system and the date of commercial operation of the respective transmission assets are stated below:

S. No.	Name of the transmission line	Date of commercial operation	Line length ckt-km (For O &M)
(i)	Malda-Farakka 400 kV D/C transmission line (Charged to 400 kV on 1.5.2002)	1.10.1986 Ckt-I 220 kV 1.9.1991 Ckt-II 400 kV	80
(ii)	Malda-Dalkhola 220 kV D/C transmission line	1.12.1986	232
(iii)	Dalkhola-Purnea 220 kV D/C transmission line	1.12.1986	82
(iv)	Dalkhola-Siliguri 220 kV D/C transmission line	1.12.1986	238
(v)	Siliguri-Birpara 220 kV D/C transmission line	1.10.1986	172
(vi)	Birpara –Salakati 220 kV D/C transmission line	1.4.1987	322
(vii)	Birpara-Puntsholing 220 kV D/C transmission line	1.10.1986	72
(viii)	Birpara-Puntsholing-III 220 kV S/C transmission line	1.11.1990	38
(ix)	Salakati-BTPS 220 kV S/C transmission line	1.7.1987	3
	Total		1239

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

	(Rs. In lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09

Depreciation	279.85	279.85	279.85	279.85	279.85
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	738.08	738.08	738.08	738.08	738.08
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	93.31	97.11	101.13	105.31	109.78
O & M Expenses	1406.05	1462.40	1521.59	1581.15	1645.57
Total	2517.29	2577.45	2640.66	2704.39	2773.28

4. 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	373.60	396.01	419.77	444.96	471.66
O & M expenses	117.17	121.87	126.80	131.76	137.13
Receivables	419.55	429.57	440.11	450.73	462.21
Total	910.32	947.45	986.68	1027.45	1071.00
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	93.31	97.11	101.13	105.31	109.78

5. In the Central Government, Ministry of Power notification dated 14.5.1999, the cumulative depreciation recovered up to 31.3.1997 was deducted from gross block to arrive at net fixed asset value as on 1.4.1997. The value of net fixed asset thus arrived at was Rs.105.44 crore, which was divided into notional loan and equity on 50:50 basis. This was adopted by the Commission in its order dated 30.6.2003 in petition No. 11/2002.

6. 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

7. 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.

8. The petitioner has considered the capital expenditure of Rs.13874.00 lakh admitted by the Commission in the order dated 30.6.2003 *ibid*. The petitioner has not considered additional capitalisation on account of FERV, as there are no foreign loans. The petitioner under its affidavit dated 22.8.2005 has submitted that a 50 MVA ICT at Birpara with original capital cost of Rs. 84.57 lakh caught fire on 30.5.2001 and was decapitalised during 2001-02.

9. Accordingly, for the purpose of tariff in the present petition gross block of Rs. 13789.43 lakh as on 1.4.2004 has been considered for the purpose of tariff, after adjusting the amount decapitalised from the capital expenditure of Rs. 13874.00 lakh.

DEBT- EQUITY RATIO

10. 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.

11. The petitioner has claimed tariff based on debt-equity of 50:50 in the Net Fixed Asset as on 1.4.1997 considered by the Commission in its order dated 30.6.2003 *ibid*, in accordance with the 2004 regulations. The petitioner in the tariff computations did not account for decapitalisation of Rs. 84.57 lakh. Therefore, 50% of the decapitalized amount of Rs. 84.57 lakh has been adjusted against equity . Based on this, Rs.

5229.72 lakh as on 1.4.2004 has been considered as the equity for the purpose of determination of tariff in the present petition.

IMPACT OF DECAPITALISATION DURING 2001-2004

12. In the petitions filed by NTPC for approval of revised fixed charges for additional capitalization for the period 1.4.2001 to 31.3.2004, the Commission has decided that additional capital expenditure be added to the gross block as on 1.4.2001 to arrive at gross block as on 1.4.2004 for the purpose of fixation of tariff for the period 2004-05 to 2008-09. The Commission has further ordered that NTPC would be entitled to earn return on equity @ 16% on equity portion of additional capitalization approved and interest on loan at the rate as applicable during 2001-02 to 2003-04. The return on equity and interest on loan are payable on additional capitalization from 1st April of the financial year following the financial year to which additional capital expenditure relates.

13. The cases of decapitalisation are to be dealt with on the analogy of decision for additional capitalization approved by the Commission and referred to above. Accordingly, in the present case, an amount of Rs.84.57 lakh decapitalised during 2001-02 has been notionally divided into debt and equity in the ratio of 1:1, Rs.42.28 lakh having been treated as notional equity and the remaining amount of Rs.42.28 lakh as notional loan. The petitioner shall be liable to refund an amount of Rs.6.77 lakh each year during 2002-03 and 2003-04 recovered as return on equity on the notionally decapitalised equity amount of Rs.42.28 lakh. As the entire loan had already been repaid during 2001-02, the petitioner does not have the liability to refund interest on loan during 2002-03 and 2003-04. Thus, a total amount of Rs.13.53 lakh (for the years 2002-03 and 2003-04) shall be adjusted by the petitioner on account of excess of return on equity for the years 2002-03 and 2003-04. The decapitalised amount of Rs. 84.57 lakh shall also have its impact on depreciation recoverable.

RETURN ON EQUITY

14. 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.

15. The petitioner has claimed return on equity of Rs. 5272.00 lakh. However, after adjustment of amount of decapitalisation, the equity of Rs. 5229.72 lakh has been considered. Accordingly, the petitioner shall be entitled to return on equity @ Rs. 732.16 lakh each year during the tariff period.

INTEREST ON LOAN

16. 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.

17. 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

18. 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.

19. Land cost included in the capital cost of the asset is Rs.450.00 lakh. The gross block value of the assets decapitalized during this period is Rs. 84.57 lakh. Thus, the gross depreciable value of the asset, as per (ii) above, is $0.9 \times (\text{Rs.}13789.43 \text{ lakh} - \text{Rs.} 450.00 \text{ lakh}) = \text{Rs.} 12005.49 \text{ lakh}$. Cumulative depreciation and AAD recovered in tariff up to 31.3.2004 is Rs. 7540.87 lakh after adjusting corresponding cumulative depreciation of Rs. 63.11 lakh pertaining to the assets decapitalized. Remaining depreciable value as on 1.4.2004 is thus Rs.4464.62 lakh.

20. As the entire loan for the transmission system 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), as on 1.4.2004 and it comes to Rs.279.04 lakh per year.

ADVANCE AGAINST DEPRECIATION

21. 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

22. 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.

23. 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

24. 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

25. The petitioner has claimed O & M expenses for 1239 ckt kms of line length and 40 bays (8 each at Malda and Siliguri sub-stations, 4 at Purnea sub-station, 6 at

Dalkola sub-station, 9 at Birpara sub-station, 2 at Farakka (NTPC) sub-station and 3 at Salakati sub-station), 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 1239 ckt km line length	281.25	292.40	304.79	315.95	329.57
O&M expenses for 40 bays	1124.80	1170.00	1216.80	1265.20	1316.00
Total	1406.05	1462.40	1521.59	1581.15	1645.57

26. The petitioner has submitted that the wage revision of its employees is due with effect from 1.1.2007. Therefore, O & M expenses should be subject to revision on account of revision of employee cost from that date. In the alternative, it has been prayed that the increase in employee cost due to wage revision be allowed as per actuals for extra cost to be incurred consequent to wage revision. We are not expressing any view, as this issue does not arise for consideration at this stage. The petitioner may approach for a relief in this regard at an appropriate stage in accordance with law.

27. The petitioner's prayer for recovery of abnormal O & M expenses directly has not been accepted as it would be void of transparency. The petitioner is at liberty to file a suitable petitions in accordance with law to claim abnormal expenses, if any.

INTEREST ON WORKING CAPITAL

28. 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, element-wise capital expenditure on

the date of commercial operation has not been made available by the petitioner. The earliest available capital cost of Rs. 13874.00 lakh as on 1.4.1997 has been considered as the historical cost for the purpose of the present petition and maintenance spares haven worked out accordingly by escalating 1% of the historical cost @ 6% per annum. In this manner, the value of maintenance spares works out to Rs. 261.94 lakh as on 1.4.2004.

(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.

29. 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	208.61	221.13	234.40	248.46	263.37
O & M expenses	117.17	121.87	126.80	131.76	137.13
Receivables	415.54	425.39	435.75	446.18	457.45
Total	471.32	768.39	796.94	826.40	857.95
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	75.99	78.76	81.69	84.71	87.94

TRANSMISSION CHARGES

30. The capital cost and other relevant details are contained in the summary sheet attached. The transmission charges being allowed for transmission system are summarised below:

(Rs.in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	279.04	279.04	279.04	279.04	279.04
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	732.16	732.16	732.16	732.16	732.16
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	75.99	78.76	81.69	84.71	87.94
O & M Expenses	1406.05	1462.40	1521.59	1581.15	1645.57
Total	2493.23	2552.36	2614.48	2677.06	2744.71

31. 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.

32. 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, including the revised return on equity for the years 2002-03 and 2003-04.

33. This order disposes of Petition No.124/2004.

Sd-/
(A.H. JUNG)
MEMBER

sd-/
(BHANU BHUSHAN)
MEMBER

sd-/
(K.N. SINHA)
MEMBER

sd-/
(ASHOK BASU)
CHAIRPERSON

New Delhi dated the 21st December 2005

Summary Sheet

Name of the Company		PGCIL							
Name of the Scheme		Chukha Transmission System in Eastern Region							
Date of Commercial Operation		Sept'86 to Oct'90 *							
Tariff setting Period		2004-09							
Petition No.		124/2004							
									Rs.in lakh
1	Capital Cost of the Project								13874.00
2	Admitted Capital Cost as on 1.4.2004 for Calculation of Debt and Equity								10544.00
3	Additional Capitalisation (works)								(84.57)
		For the year 2001-02					(84.57)		
		For the year 2002-03					0.00		

		For the year 2003-04				0.00			
		Total				(84.57)			
4	Additional Capitalisation (FERV)								0.00
		For the year 2001-02				0.00			
		For the year 2002-03				0.00	Not applicable		
		For the year 2003-04				0.00			
		Total				0.00			
5	Total Capital Cost as on 01.04.2004(2+3+4)								10459.43
6	Means of Finance¹ :								
		Debt		50.00%		5229.72			
		Equity		50.00%		5229.72			
		Total				10459.43			
7	Debt details-Entire notional debt stands paid as on 1.4.2004								-
8	Weighted Av. Rate of interest-Not applicable								
9	Depreciation recovered up to 31.3.2009:								8936.06
					Dep	AAD	Total		
		Recovered up to 31.03.2001			6554.32	0.00	6554.32		
		From 01.04.01 to 31.04.2004			996.71	52.95	1049.66		
		Cumulative depreciation due to additional capitalisation/decapitalisation			-63.11	0.00	-63.11		
		From 01.04.2004 to 31.03.2009			1395.19	0.00	1395.19		
		Total					8936.06		
10	Balance Depreciation to be recovered beyond 31.3.2009:								3069.43
		Capital cost for the purpose of Depreciation²					13789.43		
		Land Cost					450.00		
		Capital cost excluding land cost					13339.43		
		90% of Capital Cost as above					12005.49		
		Cum. Depreciation to be recovered up to 31.03.09					8936.06		
		Balance					3069.43		
1	Debt and Equity are notional and not actual as per division of debt & equity taken by GOI as 50:50 and the same has been accepted by the Commission. As per the decision of the Commission is meeting dated 11.11.2005, the decapitalisation (considering it as negative additional capital expenditure) during 2001-02 has been considered in the same debt-equity ratio of 50:50 as considered by GOI.								
2	Previous tariff was set by the Commission for the period from 01.04.2001 to 31.03.2004. The Gross Block as on 01.04.2001 as per Commission's order in petition 11/2002 was Rs. 13874.00 lakh. After considering the decapitalisation amounting Rs.84.57 lakh during 2001-02, the same works out to Rs.13789.43 lakh.								