

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram:

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

Petition No.100/2004

In the matter of

Approval of transmission charges for Transmission System associated with Uri Hydroelectric Project (4x120 MW) 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 P.C.Pankaj, PGCIL
2. Shri U.K. Tyagi, PGCIL
3. Shri C. Kannan, PGCIL
4. Shri B. P. Kundu, PGCIL
5. Shri M.M. Mondal, CM (Fin), PGCIL
6. Shri K.K. Mittal, Addl. SE (ISP), RRVPN
7. Shri S.R.G.Sabal, AVVNL, JPR
8. Shri Yeshpal Singh, Jd JPR
9. Shri A.K. Tandon, EE, UPPCL
10. Shri Jayant Verma, UPPCL
11. Shri T.P.S.Bawa, PSEB
12. Shri V.K. Malhotra, DTL
13. Shri R.K.Arora, HPGCL

ORDER
(DATE OF HEARING: 17.8.2005)

The petition has been filed for approval for transmission charges for transmission system associated with Uri Hydroelectric Project (the transmission system) 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, and for recovery of abnormal O &M expenses for deployment of additional security forces at Wagoora sub-station based on statutory auditors certification after closing of annual accounts by way of direct billing on the respondents. 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	513.33	513.33	513.33	513.33	513.33
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	1297.24	1297.24	1297.24	1297.24	1297.24
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	74.64	77.09	79.68	82.42	85.32
O & M Expenses	272.76	283.69	295.16	306.73	319.21
Total	2157.97	2171.35	2185.41	2199.72	2215.10

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	345.82	366.59	388.58	411.89	436.61
O & M expenses	22.73	23.64	24.60	25.56	26.60
Receivables	359.66	361.89	364.24	366.62	369.18
Total	728.21	752.12	777.42	804.07	832.39
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	74.64	77.09	79.69	82.42	85.32

4. Approval of the Central Government for setting up the transmission system was accorded vide Ministry of Power, letter dated 30.6.1989, for a total capital investment of Rs. 8610.00 lakh including an IDC of RS. 915.00 lakh. Subsequently, Ministry of Power vide letter dated 4.9.1998 approved Revised Cost Estimate (RCE) of the transmission system for an amount of Rs. 25017.00 lakh, including IDC of Rs. 2220.00 lakh. The approved scope of work covered under the transmission system included 400 kV D/C Uri-Wagoora transmission line (189.98 ckt-km), 220 kV D/C Wagoora-Pampore transmission line (20.58 ckt-km), and 400/220 kV sub-station at Wagoora which have been completed and put in commercial operation between 1.4.1997 to 1.2.1998, matching with completion of generating station. The annual transmission charges for the period from 1.4.2001 to 31.3.2004 were decided by the Commission in its order dated 5.8.2003 in petition No 18/2002, and for the period up to 31.3.2001 by the Central Government under its notification dated 16.11.1998 which was revised by notification dated 7.5.1999.

5. The replies to the petition have been filed by 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.23000.00 lakh as admitted by the Commission in its order dated 5.8.2003 *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.23000.00 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 59.71:40.29, considered by the Commission in its order dated 5.8.2003 *ibid*, and is in accordance with the 2004 regulations. Accordingly, the capital cost of Rs. 23000.00 lakh as on 1.2.1998 has been divided into debt and equity. Based on this, Rs. 13734.00 lakh has been considered as the debt and Rs. 9266.00 lakh as the equity as on 1.2.1998 for the purpose of determination of tariff.

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. 9266.00 lakh, which has been found to be admissible. Accordingly, the petitioner shall be entitled to return on equity @ Rs. 1297.24 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 prior to 1.4.2004. 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 $0.9 \times (\text{Rs. } 23000.00 \text{ lakh} - \text{Rs. } 254.00 \text{ lakh}) = \text{Rs. } 20471.40 \text{ lakh}$. Cumulative depreciation and AAD recovered in tariff up to 31.3.2004 is Rs. 7638.12 lakh. Remaining depreciable value as on 1.4.2004 is thus Rs. 12833.28 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 (25 years) as on 1.4.2004, and it comes to Rs.513.33 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 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 claimed O & M expenses for 210.56 ckt. kms and 8 bays at Wagoora sub-station (deemed to include two additional bays for 220 kV Zaincot line), which have been allowed. Accordingly, the petitioner's entitlement to O & M expenses has been worked out as given hereunder:

(Rs. in lakh)

	Year				
	2004-05	2005-06	2006-07	2007-08	2008-09
O&M expenses for transmission lines	47.80	49.69	51.80	53.69	56.01
O&M expenses for 8 bays	224.96	234	243.36	253.04	263.2
Total	272.76	283.69	295.16	306.73	319.21

22. 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.

23. The petitioner's prayer for recovery of abnormal O & M expenses has not been considered for the present. The petitioner is granted liberty to file a fresh petition in accordance with law to claim additional expenses, if any, for the extra security deployed at Wagoora sub-station.

INTEREST ON WORKING CAPITAL

24. 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 is not available. The total capital expenditure on the scheme on the date of commercial operation of the last element commissioned shall be considered as the historical cost for the purpose of the present petition and maintenance spares have been worked out accordingly by escalating 1% of the historical cost @ 6% per annum. The historical cost of Rs.

23000.00 lakh as on 1.2.1998 has been considered for computation of maintenance spares.

(Rs. In lakh)

Name of elements	Capital expenditure on date of commercial operation	Date of commercial operation	Escalated cost as on 1.4.2004
400 kV D/C line from Uri-Wagoora	23000.00	Ckt-I: 1.4.1997 Ckt-II: 1.4.1997	329.52
220 kV D/C line from Wagoora-Pampore line		Ckt-I: 1.4.1997 Ckt-II: 1.4.1997	
400/220 kV sub-station at Wagoora (8 bays) and Zaincot bays (2 bays)		1.4.1997 to 1.2.1998	
Total			329.52

(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.

25. 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	329.52	349.29	370.25	392.47	416.01
O & M expenses	22.73	23.64	24.60	25.56	26.60
Receivables	359.38	361.59	363.92	366.28	368.83
Total	711.63	734.53	758.76	784.31	811.44
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	72.94	75.29	77.77	80.39	83.17

TRANSMISSION CHARGES

26. A summary sheet on computation of transmission charges is attached to this order. 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	513.33	513.33	513.33	513.33	513.33
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	1297.24	1297.24	1297.24	1297.24	1297.24
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	72.94	75.29	77.77	80.39	83.17
O & M Expenses	272.76	283.69	295.16	306.73	319.21
Total	2156.27	2169.55	2183.50	2197.70	2212.95

27. 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.

28. 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.

29. This order disposes of Petition No.100/2004.

sd/
(A.H. JUNG)
MEMBER

sd/-
(BHANU BHUSHAN)
MEMBER

sd/-
(K.N.SINHA)
MEMBER

sd/-
(ASHOK BASU)
CHAIRPERSON

New Delhi dated the 23rd November 2005

Summary Sheet

Name of the Company		PGCIL	
Name of the Scheme		Uri HEP Transmission System	
Date of Commercial Operation		Between 01.04.1997 to 01.02.1998	
Tariff setting Period		2004-09	
Petition No.		100/2004	Rs.in lakh
1	Capital Cost of the Project		23000
2	Admitted Capital Cost as on 01.04.2004 for Calculation of Debt and Equity		23000
3	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	
4	Additional Capitalisation (FERV) as per Commission's Order dated 5.8.2003 in Petition No.118/2002		0.00
	For the year 2001-02	0.00	Not applicable
	For the year 2002-03	0.00	
	For the year 2003-04	0.00	
	Total	0.00	
5	Total Capital Cost as on 01.04.2004(2+3+4)		23000.00
6	Means of Finance 1 :		
	Debt	59.71%	13734.00
	Equity	40.29%	9266.00
	Total		23000.00
7	Debt details-Entire notional debt stands paid as on 01.04.2004		-
8	Weighted Av. Rate of interest-Not applicable		
9	Depreciation recovered up to 31.03.09:		10204.78
		Dep	AAD
	Recovered up to 31.03.2001	5448.67	0.00
	From 01.04.01 to 31.04.2004	1699.86	489.60
	From 01.04.2004 to 31.03.2009	2566.65	0.00
	Total		10204.78
10	Balance Depreciation to be recovered beyond 31.03.2009:		10266.62
	Capital cost for the purpose of Depreciation ²		23000.00
	Land Cost		254.00
	Capital cost excluding land cost		22746.00
	90% of Capital Cost as above		20471.40
	Cum. Depreciation to be recovered up to 31.03.09		10204.78
	Balance		10266.62
1	Debt and Equity are at actual in the ratio of 59.71:40.29 as considered by the Commission in the previous tariff setting.		
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 dated 05.08.2003 in petition 18/2002 was Rs. 23000.00 lakh.		

