

**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.103/2004

In the matter of

Approval of transmission charges for Salal Stage II Transmission System 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 Ltd, Jaipur
2. Ajmer Vidyut Vitaran Nigam Ltd., Ajmer
3. Jaipur Vidyut Vitaran Nigam Ltd, Jaipur
4. Jodhpur Vidyut Vitaran 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 Department, Govt. of J&K, Srinagar
9. Uttar Pradesh Power Corporation Ltd., Lucknow
10. Delhi Transmission Corporation Ltd, New Delhi
11. Chief Engineer, Chandigarh Administration, Chandigarh
12. Uttranchal Power Corporation Ltd, Dehradun
13. Northern Railway, New Delhi

.....Respondents

The following were present:

1. Shri U.K. Tyagi, PGCIL
2. Shri C. Kannan, PGCIL
3. Shri P.C. Pankaj, PGCIL
4. Shri V.K. Malhotra, DTL
5. Shri A.K. Tandon, EE, UPPCL
6. Shri Jayant Verma, EE, UPPCL

**ORDER
(DATE OF HEARING: 18.8.2005)**

The petition has been filed for approval for transmission charges for Salal Stage II 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. No other specific relief is prayed for.

2. The Salal Stage-II Transmission System comprises the following transmission lines, with date of commercial operation indicated against each:

			<u>ckt-km</u>
(a)	220 KV D/C Salal-II – Kishenpur	1.8.1996	117.40
(b)	220 KV D/C Kishenpur – Sarna	1.1.1995	207.28
(c)	220 KV S/C Salal-II – Jammu	1.1.1995	62.42
(d)	Second circuit of 220 KV D/C Sarna – Dasuya	1.5.1994	53.07
			<u>440.17</u>

The transmission system also includes nine (9) 220 kV sub-station bays: four at Kishenpur (PGCIL), three at Sarna (PSEB), and one each at Jammu (PDD, J&K) and Dasuya (PSEB), for the above lines.

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

	(Rs. In lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	196.35	196.35	196.35	196.35	196.35
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	638.45	638.45	638.45	638.45	638.45
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	41.59	43.03	44.56	46.15	47.85
O & M Expenses	353.00	367.13	382.06	396.91	413.19
Total	1229.39	1244.96	1261.42	1277.86	1295.84

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	171.44	181.73	192.63	204.19	216.44
O & M expenses	29.42	30.59	31.84	33.08	34.43
Receivables	204.90	207.50	210.24	212.98	215.97
Total	405.76	419.82	434.71	450.25	466.84
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	41.59	43.03	44.56	46.15	47.85

5. The annual transmission charges for the period from 1.4.2001 to 31.3.2004 were decided by the Commission in its order dated 31.7.2003 in petition No 21/2002, and for the period up to 31.3.2001 by the Central Government, Ministry of Power in respect of 220 KV S/C Salal-II – Jammu transmission line and 220 KV D/C Sarna – Dasuya transmission line by notification dated 16.11.1998 and for other assets by the Commission in its order dated 9.6.2002 in petition No 66/2000..

6. The replies to the petition have been filed by Punjab State Electricity Board, Jaipur Vidyut Vitran Nigam Ltd, Jodhpur Vidyut Vitran Nigam Ltd and Ajmer Vidyut Vitran Nigam Ltd.

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.10147.77 lakh admitted by the Commission in the order dated 31.7.2003 *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. 10147.77 lakh as claimed has been considered for the purpose of tariff.

DEBT- EQUITY RATIO

9. 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.

10. 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 31.7.2003 *ibid*, and is in accordance with the 2004 regulations. Accordingly, the Net Fixed Asset of Rs. 9120.77 lakh as on 1.4.1997 has been divided into debt and equity. Based on this, Rs. 4560.39 lakh has been considered as the equity for the purpose of determination of tariff in the present petition.

RETURN ON EQUITY

11. 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.

12. The petitioner has claimed return on equity of Rs. 4560.39 lakh, which has been found to be admissible. Accordingly, the petitioner shall be entitled to return on equity @ Rs. 638.45 lakh each year during the tariff period.

INTEREST ON LOAN

13. 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.

14. 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

15. 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.

16. The gross depreciable value of the asset, as per (ii) above, is $0.9 \times (10147.77 - 123.40) = \text{Rs.}9021.93$ lakh. Cumulative depreciation and AAD recovered in tariff up to 31.3.2004 is Rs.4113.07 lakh. Remaining depreciable value as on 1.4.2004 is thus Rs.4908.86 lakh.

17. 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 transmission system (25 years as on 1.4.2004), and it comes to Rs.196.35 lakh per year.

ADVANCE AGAINST DEPRECIATION

18. 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

19. 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.

20. 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

21. 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

22. The petitioner has claimed O & M expenses for 440.17 kms of line length and 9 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	99.92	103.88	108.28	112.24	117.09
O&M expenses for bays	253.08	263.25	273.78	284.67	296.10
Total	353.00	367.13	382.06	396.91	413.19

23. The petitioner has submitted that the wage revision of its employees is due with effect from 1.1.2007. Therefore, according to the petitioner, 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.

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. 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 31.7.2003 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.

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	171.82	182.13	193.06	204.64	216.92
O & M expenses	29.42	30.59	31.84	33.08	34.43
Receivables	204.91	207.50	210.25	212.99	215.98
Total	406.15	420.23	435.14	450.71	467.34
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	41.63	43.07	44.60	46.20	47.90

TRANSMISSION CHARGES

26. The transmission charges being allowed for Salal II Transmission System are summarised below.

(Rs. In lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	196.35	196.35	196.35	196.35	196.35
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	638.45	638.45	638.45	638.45	638.45
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	41.63	43.07	44.60	46.20	47.90
O & M Expenses	353.00	367.13	382.06	396.91	413.19
Total	1229.44	1245.01	1261.47	1277.92	1295.90

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.103/2004.

Sd/-
(A.H. JUNG)
MEMBER

Sd/-
(BHANU BHUSHAN)
MEMBER

Sd/-
(K.N. SINHA)
MEMBER

Sd/-
(ASHOK BASU)
CHAIRMAN

New Delhi dated 9th September, 2005