

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram

1. **Shri Bhanu Bhushan, Member**
2. **Shri R. Krishnamoorthy, Member**

Petition No. 51/2005

In the matter of

Approval of transmission charges in respect of 400 kV D/C Biharsharif-Sasaram-Sarnath transmission lines with associated bays under Eastern-Northern inter-regional HVDC transmission system for the period from 1.4.2004 to 31.3.2009

And in the matter of

Power Grid Corporation of India Ltd., Gurgaon

.... Petitioner

Vs

1. Bihar State Electricity Board, Patna
2. West Bengal State Electricity Board, Calcutta
3. Grid Corporation of Orissa Ltd., Bhubaneswar
4. Damodar Valley Corporation, Calcutta
5. Power Deptt., Govt. of Sikkim, Gangtok
6. Jharkhand State Electricity Board, Ranchi
7. Rajasthan Rajya Vidyut Prasaran Nigam Limited, Jaipur
8. Ajmer Vidyut Vitran Nigam Ltd., Ajmer
9. Jaipur Vidyut Vitran Nigam Ltd., Jaipur
10. Jodhpur Vidyut Vitran Nigam Ltd., Jodhpur
11. Himachal Pradesh State Electricity Board, Shimla
12. Punjab State Electricity Board, Patiala
13. Haryana Vidyut Prasaran Nigam Ltd., Panchkula
14. Power Development Deptt., Govt. of Jammu & Kashmir, Jammu
15. Uttar Pradesh Power Corporation Limited, Lucknow
16. Delhi Transco Limited, New Delhi
17. Chandigarh Administration, Chandigarh
18. Uttaranchal Power Corporation Limited, Dehradun
19. Chief Electrical Distribution Engineer, Northern Railway, New Delhi

.. Respondents

ORDER

In this petition, the petitioner, Power Grid Corporation of India Limited, had sought approval of tariff in respect of 400 kV D/C Biharsharif-Sasaram-Sarnath transmission lines with associated bays under Eastern-Northern inter-regional

HVDC transmission system (the transmission line) for the period from 1.4.2004 to 31.3.2009, based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulation, 2004 (hereinafter referred to as “the 2004 regulations”).

2. In this case, the transmission line was declared under commercial operation after 1.4.2001. While awarding tariff for the period 2004-09, the Commission adopted capital cost, loan, equity, etc considered for determination of tariff for the period ending 31.3.2004 and FERV for the period up to 31.3.2004 was capitalized and apportioned between debt and equity in the same ratio as considered for the period 1.4.2001 to 31.3.2004.

3. On completion of pleadings and after hearing the parties, final tariff in respect of the transmission line was awarded vide the Commission’s order dated 25.1.2006. While awarding tariff, the Commission adopted capital cost, loan, equity etc. considered for determination of tariff for the period ending 31.3.2004. The details of capital cost, equity considered at the time of award of tariff and the summary of the tariff awarded are given hereunder.

(a) Computation of capital cost

(Rs. in lakh)

Capital expenditure on the date of commercial operation	17950.00
Additional capital expenditure up to 31.3.2004	(-)568.95
FERV during up to 31.3.2004	(-)862.51
Capital expenditure as on 31.3.2004	16518.54

(b) Computation of equity

(Rs. in lakh)

Equity as on the date of commercial operation	3318.88
Equity arising out of additional capitalization up to 31.3.2004	(-)6.03

Equity arising out of FERV up to 31.3.2004	(-)9.14
Total equity	3303.71

(c) Computation of interest on loan

(Rs. in lakh)

Details of loan	Up to 31.3.2004	2004-05	2005-06	2006-07	2007-08	2008-09
Gross loan as per last order	14631.12					
Addition due to additional capitalization	(-) 562.92					
Addition due to FERV	(-) 853.37					
Gross Normative Loan	13214.83	13214.83	13214.83	13214.83	13214.83	13214.83
Cumulative Repayment up to Previous Year		226.58	748.36	1270.13	2050.48	3114.16
Net Loan-Opening		12988.25	12466.47	11944.70	11164.35	10100.67
Repayment during the year		521.77	521.77	780.35	1063.68	1071.02
Net Loan-Closing		12466.47	11944.70	11164.35	10100.67	9029.65
Average Loan		12727.36	12205.59	11554.52	10632.51	9565.16
Weighted Average Rate of Interest on Loan		5.1814%	4.5949%	4.3351%	4.2281%	4.1401%
Interest		659.46	560.83	500.90	449.56	396.01

(d) Summary of the transmission charges awarded

(Rs.in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	435.79	435.79	435.79	435.79	435.79
Interest on Loan	659.46	560.83	500.90	449.56	396.01
Return on Equity	462.52	462.52	462.52	462.52	462.52
Advance against Depreciation	0.00	0.00	0.00	94.74	635.22
Interest on Working Capital	55.10	54.95	55.56	58.05	68.36
O & M Expenses	235.51	244.91	255.01	264.73	275.77
Total	1848.39	1759.00	1709.78	1765.38	2273.68

4. Tamil Nadu Electricity Board (TNEB) filed Appeal No. 135/2005 in the Appellate Tribunal for Electricity against order dated 30.6.2006 of the Commission in Petition No 40/2002, vide which while fixing transmission tariff in respect of 400 kV D/C Kaiga-Sirsi transmission line along with associated bays for the period 1.4.2001 to 31.3.2004, the methodology similar to that adopted in respect of the various transmission assets was followed as regards

apportionment of FERV into debt and equity. TNEB had, *inter alia*, questioned the methodology of bifurcation of FERV into debt and equity for the purpose of tariff determination. This appeal, as also some other linked appeals were disposed of by the Appellate Tribunal through a common judgment dated 4.10.2006. The Tribunal vide its judgment dated 4.10.2006 held as under:

“16. According to Explanation 1 to clause 4.4 (c), the premium raised by the Transmission Utility while issuing share capital and investment of internal resources created out of free reserve of the existing utility, if any, for the funding of the project, shall also be reckoned as paid up capital for the purpose of computing the return on equity subject to fulfillment of certain conditions. Explanation also makes no provision for increasing the equity beyond 50% of the book value of the transmission system. Once the fixed cost has been agreed to be financed in a certain ratio of debt and equity, the equity can be affected by FERV only if the equity is in foreign exchange. The provision of FERV as a pass through has been kept to ensure that any liability or gain, if any, arising on account of any variation in foreign exchange rates (whether debt or equity) is passed on to the beneficiary. In case there is no FERV liability or gain, as the case may be, there will not be any FERV adjustment. In the instant case the additional liability arising on account of FERV shall have an impact only on the debt liability and not equity capital. In this view of the matter, we hold that FERV adjustment is to be made in respect of debt liability and not in respect of the equity. Accordingly, we hold that the CERC is only to make adjustment in respect of debt liability and not in respect of the equity.

17. In view of the aforesaid discussion, the appeal is partly allowed to the extent indicated above. The Central Electricity Regulatory Commission shall re-calculate the effect of FERV on the debt liability.”

5. In terms of judgment dated 4.10.2006 of the Appellate Tribunal in Appeal No 135 of 2005 and other related appeals, addition of notional equity on account of FERV is not to be considered for computation of return on equity. As a consequence, the entire amount of FERV forms part of loan.

6. The above decision was reiterated by the Appellate Tribunal in its judgment dated 22.12.2006 in Appeal No 161 Of 2006 (M.P. State Electricity Board Vs. Power grid Corporation of India and Others) which related to

transmission tariff for Vindhyachal Stage - I Additional Transmission System in Western Region for the period 1.4.2001 to 31.3.2004.

7. The above rulings of the Appellate Tribunal on the question of apportionment of FERV and computation of interest on loan have been considered to be judgments in *rem* and thereby have been applied in all cases of similar nature to re-calculate the transmission charges.

8. In the light of the foregoing discussion, the transmission charges for the transmission system forming subject-matter of the present order for the period 2004-09 are also being revised, and the revised transmission charges are summarized herein below. It is to be noted that there is no change in O & M components of the tariff because this was allowed on normative basis for per km line length and per bay. O & M charges already approved, therefore, hold good. Other components of tariff (except depreciation) including Advance Against Depreciation already allowed have been recalculated.

(a) Equity and return on equity

(Rs. in lakh)

Equity as on the date of commercial operation	3318.88
Equity arising out of additional capitalization up to 31.3.2004	(-)6.03
Equity arising out of FERV up to 31.3.2004	0.00
Total equity	3312.85
Return on equity @ 14% for the period 2004-09	463.80

(b) Interest on loan

(Rs. in lakh)

Interest on Loan	Up to 31.3.2004	2004-05	2005-06	2006-07	2007-08	2008-09
Gross Loan as per last Order	14631.12					
Addition due to Additional Capitalisation up to	(-)562.92					

31.3.2004						
Addition due to FERV up to 31.3.2004	(-)862.51					
Gross Normative Loan	13205.69	13205.69	13205.69	13205.69	13205.69	13205.69
Cumulative Repayment upto Previous Year		226.43	747.84	1269.25	2049.06	3112.00
Net Loan-Opening		12979.26	12457.85	11936.44	11156.62	10093.68
Repayment during the year		521.41	521.41	779.81	1062.94	1070.28
Net Loan-Closing		12457.85	11936.44	11156.62	10093.68	9023.41
Average Loan		12718.56	12197.14	11546.53	10625.15	9558.54
Weighted Average Rate of Interest on Loan		5.1814%	4.5949%	4.3351%	4.2281%	4.1401%
Interest		659.00	560.44	500.55	449.24	395.74

(c) Advance Against Depreciation

(Rs. in lakh)

Advance against Depreciation	2004-05	2005-06	2006-07	2007-08	2008-09
1/10th of Gross Loan(s)	1320.57	1320.57	1320.57	1320.57	1320.57
Repayment of the Loan	521.41	521.41	779.81	1062.94	1070.28
Minimum of the above	521.41	521.41	779.81	1062.94	1070.28
Depreciation during the year	435.79	435.79	435.79	435.79	435.79
(A) Difference	85.62	85.62	344.02	627.15	634.48
Cumulative Repayment of the Loan	747.84	1269.25	2049.06	3112.00	4182.28
Cumulative Depreciation/ Advance against Depreciation	1712.04	2147.83	2583.63	3019.42	3547.80
(B) Difference	(-)964.20	(-)878.58	(-)534.57	92.58	634.48
Advance against Depreciation Minimum of (A) and (B)	0.00	0.00	0.00	92.58	634.48

(d) Interest on Working Capital

(Rs. in lakh)

Interest on working capital	2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	209.91	222.50	235.85	250.00	265.00
O & M expenses	19.63	20.41	21.25	22.06	22.98
Receivables	308.20	293.32	285.12	294.03	378.99
Total	537.74	536.23	542.23	566.09	666.98
Rate of interest	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	55.12	54.96	55.58	58.02	68.37

(e) Annual Transmission charges

(Rs. in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	435.79	435.79	435.79	435.79	435.79
Interest on Loan	659.00	560.44	500.55	449.24	395.74
Return on Equity	463.80	463.80	463.80	463.80	463.80
Advance against Depreciation	0.00	0.00	0.00	92.58	634.48
Interest on Working Capital	55.12	54.96	55.58	58.02	68.37
O & M Expenses	235.51	244.91	255.01	264.73	275.77

Total	1849.23	1759.91	1710.73	1764.17	2273.95
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9. The petitioner shall adjust the balance recoverable/refundable amount against the future bills within one month, after issue of this order.

10. It is brought out that but for revision of debt and equity in line with the Appellate Tribunal's judgments dated 4.10.2006 and 31.10.2007, generally the methodology considered for re-computation of the transmission charges is the same as originally considered.

11. The revision of tariff allowed is subject to decision of the Hon`ble Supreme Court in the appeals filed by the petitioner against the Appellate Tribunal's judgment dated 4.10.2006.

Sd/-
(R KRISHNAMOORTHY)
MEMBER
New Delhi dated 28th 2008

sd/-
(BHANU BHUSHAN)
MEMBER