

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Coram**

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

**Petition No. 144/2005**

**In the matter of**

Approval of transmission charges in respect of LILO of Purnia-Dalkola 132 kV S/C line and extension at Purnia sub-station in Eastern Region for the period 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, Kolkata
3. Grid Corporation of Orissa Ltd., Bhubaneswar
4. Damodar Valley Corporation, Kolkata
5. Power Dept., Govt. of Sikkim, Gangtok
6. Jharkhand State Electricity Board, Ranchi

**.....Respondents**

**ORDER**

In this petition, the petitioner, Power Grid Corporation of India Limited, had sought approval of tariff in respect of LILO of Purnia-Dalkola 132 kV S/C line and extension at Purnia sub-station (the transmission line) 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) 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 system was awarded vide the Commission's order dated 29.6.2006. 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 as on the date of commercial operation	585.38
Additional capital expenditure up to 31.3.2004	0.00
FERV up to 31.3.2004	(-)12.54
Capital expenditure as on 31.3.2004	<b>572.84</b>

(b) Computation of equity

(Rs. in lakh)

Equity as on the date of commercial operation	115.80
Equity arising out of additional capitalization up to 31.3.2004	0.00
Equity arising out of FERV up to 31.3.2004	(-)1.23
Total equity	114.57

(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 on the date of commercial operation	469.58					
Addition due to additional capitalization	0.00					
Addition due to FERV	(-)11.31					
Gross Normative Loan	458.27	458.27	458.27	458.27	458.27	458.27
Cumulative Repayment up to Previous Year		22.89	46.07	71.63	99.80	130.87
Net Loan-Opening		435.38	412.20	386.65	358.47	327.41
Repayment during the year		23.18	25.56	28.18	31.06	34.25
Net Loan-Closing		412.20	386.65	358.47	327.41	293.16
Average Loan		423.79	399.42	372.56	342.94	310.28
Weighted Average Rate of Interest on Loan		7.51%	7.51%	7.51%	7.51%	7.51%
Interest		<b>31.83</b>	<b>30.00</b>	<b>27.98</b>	<b>25.75</b>	<b>23.30</b>

(d) Summary of the transmission charges awarded

(Rs.in lakh)

	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Depreciation	20.55	20.55	20.55	20.55	20.55
Interest on Loan	31.83	30.00	27.98	25.75	23.30
Return on Equity	16.04	16.04	16.04	16.04	16.04
Advance against Depreciation	2.63	5.01	7.63	10.52	13.70
Interest on Working Capital	4.80	4.96	5.14	5.32	5.51
O & M Expenses	112.71	117.24	121.93	126.78	131.87
<b>Total</b>	<b>188.56</b>	<b>193.80</b>	<b>199.26</b>	<b>204.95</b>	<b>210.97</b>

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	115.80
Equity arising out of additional capitalization up to 31.3.2004	0.00
Equity arising out of FERV up to 31.3.2004	0.00
Total equity	115.80
Return on equity @ 14% for the period 2004-09	16.21

(b) Interest on loan

Interest on Loan	Up to 31.3.2004	2004-05	2005-06	2006-07	2007-08	2008-09
Gross Loan as per last Order	469.58					
Addition due to Additional Capitalisation up to 31.3.2004	0.00					
Addition due to FERV up to 31.3.2004	(-)12.54					
Gross Normative Loan	457.04	457.04	457.04	457.04	457.04	457.04
Cumulative Repayment upto Previous Year		22.89	46.00	71.49	99.58	130.56
Net Loan-Opening		434.15	411.04	385.55	357.46	326.48
Repayment during the year		23.11	25.48	28.10	30.98	34.15
Net Loan-Closing		411.04	385.55	357.46	326.48	292.33
Average Loan		422.59	398.29	371.50	341.97	309.41
Weighted Average Rate of Interest on Loan		7.51%	7.51%	7.51%	7.51%	7.51%
Interest		31.74	29.91	27.90	25.68	23.24

(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)	45.70	45.70	45.70	45.70	45.70
Repayment of the Loan	23.11	25.48	28.10	30.98	34.15
Minimum of the above	23.11	25.48	28.10	30.98	34.15
Depreciation during the year	20.55	20.55	20.55	20.55	20.55
(A) Difference	2.57	4.94	7.55	10.43	13.60
Cumulative Repayment of the Loan	46.00	71.49	99.58	130.56	164.71
Cumulative Depreciation/ Advance against Depreciation	29.20	52.32	77.80	105.89	136.87
(B) Difference	16.80	19.17	21.78	24.66	27.84
Advance against Depreciation Minimum of (A) and (B)	2.57	4.94	7.55	10.43	13.60

(d) Interest on Working Capital

(Rs. in lakh)

Interest on working capital	2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	6.00	6.36	6.74	7.15	7.58
O & M expenses	9.39	9.77	10.16	10.57	10.99
Receivables	31.43	32.30	33.21	34.16	35.16
Total	46.82	48.43	50.12	51.87	53.73
Rate of interest	10.25%	10.25%	10.25%	10.25%	10.25%
<b>Interest</b>	<b>4.80</b>	<b>4.96</b>	<b>5.14</b>	<b>5.32</b>	<b>5.51</b>

(e) Annual Transmission charges

(Rs. in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	20.55	20.55	20.55	20.55	20.55
Interest on Loan	31.74	29.91	27.90	25.68	23.24
Return on Equity	16.21	16.21	16.21	16.21	16.21
Advance against Depreciation	2.57	4.94	7.55	10.43	13.60
Interest on Working Capital	4.80	4.96	5.14	5.32	5.51
O & M Expenses	112.71	117.24	121.93	126.78	131.87
<b>Total</b>	<b>188.57</b>	<b>193.81</b>	<b>199.27</b>	<b>204.97</b>	<b>210.98</b>

9. The petitioner shall adjust the balance recoverable 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 29<sup>th</sup> April 2008

**sd/-**  
**(BHANU BHUSHAN)**  
**MEMBER**