

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram

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

In the matter of

Petition No. 74/2004

Approval of tariff in respect of Kayamkulam transmission system in Southern Region 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
Kerala State Electricity Board, Thiruvananthapuram **Respondent**

And in the matter of

Petition No.133/2004

Approval of tariff in respect of 315 MVA ICT -III along with associated bays equipments at Nagarjunasagar sub-station in Southern Region for the period from 1.4.2004 to 31.3.2009.

And in the matter of

Petition No. 136/2004

Approval of tariff in respect of 400 kV D/C Kaiga-Sirsi transmission line along with associated bays in Southern Region 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. Karnataka Power Transmission Corporation Ltd, Bangalore
2. Transmission Corporation of Andhra Pradesh, Hyderabad
3. Kerala State Electricity Board, Thiruvananthapuram
4. Tamil Nadu Electricity Board, Chennai
5. Electricity Department, Govt. of Pondicherry, Pondicherry
6. Electricity Department, Govt. of Goa, Panaji **Respondents**

ORDER

In these petitions, the petitioner, Power Grid Corporation of India Limited, had sought approval of tariff in respect of its various transmission assets in Southern Region for the period from 1.4.2004 to 31.3.2009, based on the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations 2004 (hereinafter referred to as “the 2004 regulations”). On completion of pleadings and after hearing the parties, final tariff in respect of these assets was awarded by different orders. The details of capital cost, equity considered at the time of award of tariff and the summary of the tariff awarded in each case are given in the annexures I to III attached. While awarding tariff, the Commission adopted capital cost, loan, equity, etc considered for determination of tariff for the period 1.4.2001 to 31.3.2004. Also, 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.

2. 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.”

3. 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.

4. 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.

5. Further, North Eastern Electric Power Corporation Ltd. (NEEPCO) filed Appeal No. 159 of 2005 before the Appellate Tribunal for Electricity which was disposed of vide judgment dated 31.10.2007. The Appellate Tribunal vide the above judgment held, *inter alia*, that interest on loan capital should be determined based on normative debt repayment formula. A similar methodology has been decided by the Appellate Tribunal in some of the appeals filed by NTPC Ltd.

6. 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.

7. Accordingly, the transmission charges for the period 1.4.2001 to 31.3.2004 for the transmission assets covered in the present order have been revised by order dated 8.2.2008 in Petition No. 7/2002 and others. The revised transmission charges allowed for the said period are also incorporated in the Annexures I to III attached, separately for each asset.

8. In the light of the forgoing discussion, the transmission charges for the transmission assets forming subject-matter of the present order for the period 2004-2009 are also being revised, and the revised transmission charges are summarized in the Annexures. It is to be noted that there is no change in O & M component 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, wherever applicable, already allowed have been recalculated.

9. The petitioner shall adjust the balance amount recoverable/refundable, as the case may be, against the future bills within six months, from the date 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, and computation of interest on loan in accordance with the methodology decided by the Appellate Tribunal in the order dated 31.10.2007 *ibid.* 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)
MEMBRER
New Delhi dated 16th April 2008

sd/-
(BHANU BHUSHAN)
MEMBRER

Annexure-I

1. Petition No. 74/2004
2. Subject: Approval of tariff in respect of Kayamkulam transmission system in Southern Region for the period from 1.4.2004 to 31.3.2009.
3. Date of order of approval of tariff: 9.5.2006
4. **Original order**

(a) Computation of capital cost

(Rs. in lakh)

	220 kV D/C Kayamkulam-Pallom transmission line along with associated bays	220 kV D/C Kayamkulam-Edmon transmission line along with associated bays
Capital expenditure up to 31.3.2001	7848.04	12655.12
Additional capital expenditure during 2001-04	259.61	0.00
FERV during 2001-04	261.05	585.82
Capital expenditure as on 31.3.2004	8368.71	13240.94

(b) Computation of equity

(Rs. in lakh)

	220 kV D/C Kayamkulam-Pallom transmission line along with associated bays	220 kV D/C Kayamkulam-Edmon transmission line along with associated bays
Equity up to 31.3.2001	1203.49	1611.36
Notional equity arising out of additional capitalization during 2001-04	166.04	0.00
Notional equity arising out of FERV during 2001-04	166.96	585.82
Total equity	1536.49	2197.18

(c) Computation of interest on loan

(Rs. in lakh)

	220 kV D/C Kayamkulam-Pallom transmission line along with associated bays						220 kV D/C Kayamkulam-Edmon transmission line along with associated bays					
Details of loan	Up to 31.3.2004	2004-05	2005-06	2006-07	2007-08	2008-09	Up to 31.3.2004	2004-05	2005-06	2006-07	2007-08	2008-09
Interest on loan												

Gross Loan as on 1.4.2001	6644.55						11043.76					
Addition due to Additional Capitalisation	93.57						0.00					
Addition due to FERV	94.09						0.00					
Gross Loan	6832.21	6832.21	6832.21	6832.21	6832.21	6832.21	11043.76	11043.76	11043.76	11043.76	11043.76	11043.76
Cumulative Repayment up to Previous Year		1152.73	1785.70	2433.54	3097.33	3778.25		2686.98	3638.70	4623.14	5642.67	6699.90
Net Loan-Opening		5679.48	5046.51	4398.67	3734.89	3053.97		8356.78	7405.06	6420.62	5401.09	4343.86
Repayment during the year		632.97	647.84	663.79	680.92	615.37		951.73	984.44	1019.53	1057.23	904.50
Net Loan-Closing		5046.51	4398.67	3734.89	3053.97	2438.59		7405.06	6420.62	5401.09	4343.86	3439.36
Average Loan		5363.00	4722.59	4066.78	3394.43	2746.28		7880.92	6912.84	5910.85	4872.48	3891.61
Weighted Average Rate of Interest on Loan		7.7558%	7.6429%	7.5010%	7.3118%	7.1384%		7.2468%	7.0672%	6.8349%	6.5131%	6.2086%
Interest		415.94	360.94	305.05	248.19	196.04		571.12	488.54	404.00	317.35	241.61

(d) Summary of the transmission charges awarded

(Rs. in lakh)

	220 kV D/C Kayamkulam-Pallom transmission line along with associated bays					220 kV D/C Kayamkulam-Edmon transmission line along with associated bays				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Interest on Loan	415.94	360.94	305.05	248.19	196.04	571.12	488.54	404.00	317.35	241.61
Interest on working capital	27.72	31.55	34.24	34.29	33.03	42.10	43.35	52.15	52.53	49.88
Depreciation	256.80	256.80	256.80	256.80	256.80	405.57	405.57	405.57	405.57	405.57
Advance Against Depreciation	0.00	237.16	406.98	424.12	358.57	0.00	90.79	613.96	651.66	498.93
Return on Equity	215.11	215.11	215.11	215.11	215.11	307.60	307.60	307.60	307.60	307.60
O & M expenses	133.82	139.18	144.80	150.49	156.60	147.89	153.82	160.06	166.30	173.10
Total	1049.39	1240.74	1362.98	1329.00	1216.16	1474.28	1489.67	1943.34	1901.01	1676.70

5. Revised tariff for the period 2001-04

(a) Date of order: 8.2.2008 in Petition No. 52/2002

(b) Equity as on 31.3.2004

(Rs. in lakh)

	220 kV D/C Kayamkulam-Pallom transmission line along with associated bays	220 kV D/C Kayamkulam-Edmon transmission line along with associated bays
Equity	1169.70	1526.62

(c) Computation of interest on loan

(Rs. in lakh)

	220 kV D/C Kayamkulam-Pallom transmission line along with associated bays			220 kV D/C Kayamkulam-Edmon transmission line along with associated bays		
Interest on Loan	2001-02	2002-03	2003-04	2001-02	2002-03	2003-04
Gross Loan –Opening	6678.34	6678.34	6678.34	11128.50	11128.50	11128.50
Cumulative Repayment up	143.00	342.66	553.18	822.01	1270.14	1744.71

to Previous Year						
Net Loan-Opening	6535.34	6335.68	6125.16	10306.49	9858.36	9383.79
Repayment during the year	199.66	210.52	581.88	448.13	474.57	957.74
Net Loan-Closing	6335.68	6125.16	5543.28	9858.36	9383.79	8426.04
Interest	592.86	567.68	532.84	803.85	745.93	665.93

6. Revised tariff computation for the period 2004-09

(a) Equity and return on equity

(Rs. in lakh)

	220 kV D/C Kayamkulam- Pallom transmission line along with associated bays	220 kV D/C Kayamkulam- Edmon transmission line along with associated bays
Equity up to 31.3.2004 as per order dated 8.2.2008	1169.70	1526.62
Notional equity arising out of additional capitalization during 2001-04 (not considered in the order dated 8.2.2008)	259.61	0.00
Notional equity arising out of FERV during 2001-04	0.00	0.00
Total equity	1429.31	1526.62
Return on equity @ 14% for the period 2004-09	200.10	213.73

(b) Interest on loan

(i) Computation of outstanding loan

(Rs. in lakh)

		220 kV D/C Kayamkulam-Pallom transmission line along with associated bays				220 kV D/C Kayamkulam-Edmon transmission line along with associated bays			
		As per order dated 30.6.2003 in petition 52/2002 for tariff period 2001-04	As per order dated 9.5.2006 in petition 74/2004 for tariff period 2004-09	As per order dated 8.2.2008 in petition 52/2002 for tariff period 2001-04	Revised tariff for the period 2004-09	As per order dated 30.6.2003 in petition 52/2002 for tariff period 2001-04	As per order dated 9.5.2006 in petition 74/2004 for tariff period 2004-09	As per order dated 8.2.2008 in petition 52/2002 for tariff period 2001-04	Revised calculation for the period 2004-09
(i)	Gross loan as on DOCO	6458.00	-	6458.00	-	10463.00	-	10463.00	-
(ii)	Loan against FERV capitalised	186.55	-	220.34	-	580.76	-	665.50	-

	upto 31.3.2001								
(iii)	Gross Loan considered for Tariff period 2001-04	6644.55	6644.55	6678.34	6678.34	11043.76	11043.76	11128.50	11128.50
(iv)	Loan against FERV capitalised during 2001-04	-	94.09	-	261.05	-	0.00	-	585.82
(v)	Loan against ACE capitalised during 2001-04	-	93.57	-	0.00	--	0.00	-	0.00
(vi)	Gross Loan considered for Tariff period 2004-09	-	6832.21	-	6939.39	-	11043.76	-	11714.32
	Repayment								
(vii)	Upto 31.3.2001	143.00	-	143.00	-	822.01	-	822.01	-
(viii)	During 2001-04	985.91	-	992.06	-	1864.97	-	1880.44	-
(ix)	Repayment considered for tariff period 2001-04	1128.91	1128.91	1135.06	1135.06	2686.98	2686.98	2702.45	2702.45
(x)	Repayment against FERV capitalised during 2001-04	-	11.55	-	32.04	-	0.00	-	83.11
(xi)	Repayment against ACE capitalised during 2001-04	-	12.27	-	0.00	-	0.00	-	0.00
(xii)	Total repayment considered for tariff period 2004-09	-	1152.73	-	1167.10	-	2686.98	-	2785.56
(xiii)	Outstanding as on 1 st April of the year	5515.64	5679.48	5543.28	5772.29	8356.78	8356.78	8426.04	8928.75

(ii) Computation of interest on loan

(Rs. in lakh)

Details of loan	220 kV D/C Kayamkulam-Pallom transmission line along with associated bays					220 kV D/C Kayamkulam-Edmon transmission line along with associated bays						
		2004-05	2005-06	2006-07	2007-08	2008-09		2004-05	2005-06	2006-07	2007-08	2008-09
Gross loan as per order dated 8.2.2008	6678.34						11128.50					
Addition due to Additional Capitalisation for the period 2001-04	0.00						0.00					
Addition due to FERV for the period 2001-04	261.05						585.82					
Gross Normative Loan	6939.40	6939.40	6939.40	6939.40	6939.40	6939.40	11714.32	11714.32	11714.32	11714.32	11714.32	11714.32

Cumulative repayment up to previous year		1167.10	1810.42	2468.85	3143.48	3835.53		2785.56	3802.43	4854.25	5943.56	7073.14
Net Loan-Opening		5772.29	5128.98	4470.55	3795.92	3103.87		8928.75	7911.88	6860.07	5770.76	4641.17
Repayment during the year		643.32	658.42	674.63	692.05	625.38		1016.87	1051.81	1089.31	1129.59	966.41
Net Loan-Closing		5128.98	4470.55	3795.92	3103.87	2478.49		7911.88	6860.07	5770.76	4641.17	3674.76
Average Loan		5450.63	4799.76	4133.23	3449.89	2791.18		8420.32	7385.98	6315.41	5205.97	4157.97
Rate of Interest		7.7558%	7.6429%	7.5010%	7.3118%	7.1384%		7.2468%	7.0672%	6.8349%	6.5131%	6.2086%
Interest		422.74	366.84	310.03	252.25	199.25		610.20	521.98	431.65	339.07	258.15

(c) Advance Against Depreciation

(Rs. in lakh)

	220 kV D/C Kayamkulam-Pallom transmission line along with associated bays					220 kV D/C Kayamkulam-Edmon transmission line along with associated bays				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
1/10th of Gross loan(s)	693.94	693.94	693.94	693.94	693.94	1171.43	1171.43	1171.43	1171.43	1171.43
Repayment of loan during the year	643.32	658.42	674.63	692.05	625.38	1016.87	1051.81	1089.31	1129.59	966.41
Minimum of the above	643.32	658.42	674.63	692.05	625.38	1016.87	1051.81	1089.31	1129.59	966.41
Depreciation during the year	256.80	256.80	256.80	256.80	256.80	405.57	405.57	405.57	405.57	405.57
(A) Difference	386.51	401.62	417.83	435.24	368.58	611.30	646.24	683.74	724.02	560.84
Cumulative repayment of the loan	1810.42	2468.85	3143.48	3835.53	4460.91	3802.43	4854.25	5943.56	7073.14	8039.56
Cumulative Depreciation/ Advance against Depreciation	1942.40	2199.20	2725.65	3400.28	4092.33	4144.04	4549.61	5259.82	6349.13	7478.71
(B) Difference	-131.97	269.65	417.83	435.24	368.58	-341.61	304.63	683.74	724.02	560.84
Advance against Depreciation Minimum of (A) and (B)	0.00	269.65	417.83	435.24	368.58	0.00	304.63	683.74	724.02	560.84

(d) Interest on Working Capital

(Rs. in lakh)

	220 kV D/C Kayamkulam-Pallom transmission line along with associated bays					220 kV D/C Kayamkulam-Edmon transmission line along with associated bays				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	84.39	89.46	94.83	100.51	106.55	152.66	161.82	171.53	181.82	192.73
O & M expenses	11.15	11.60	12.07	12.54	13.05	12.32	12.82	13.34	13.86	14.43
Receivables	173.51	210.76	227.30	221.53	202.39	236.42	274.29	324.49	316.87	276.83
Total	269.05	311.81	334.20	334.59	321.98	401.40	448.93	509.36	512.55	483.98

Rate of interest	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	27.58	31.96	34.26	34.30	33.00	41.14	46.01	52.21	52.54	49.61

(e) Revised Annual Transmission charges

(Rs. in lakh)

	220 kV D/C Kayamkulam-Pallom transmission line along with associated bays					220 kV D/C Kayamkulam-Edmon transmission line along with associated bays				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	256.80	256.80	256.80	256.80	256.80	405.57	405.57	405.57	405.57	405.57
Interest on Loan	422.74	366.84	310.03	252.25	199.25	610.20	521.98	431.65	339.07	258.15
Return on Equity	200.10	200.10	200.10	200.10	200.10	213.73	213.73	213.73	213.73	213.73
Advance against Depreciation	0.00	269.65	417.83	435.24	368.58	0.00	304.63	683.74	724.02	560.84
Interest on Working Capital	27.58	31.96	34.26	34.30	33.00	41.14	46.01	52.21	52.54	49.61
O & M Expenses	133.82	139.18	144.80	150.49	156.60	147.89	153.82	160.06	166.30	173.10
Total	1041.04	1264.53	1363.83	1329.18	1214.33	1418.54	1645.74	1946.96	1901.22	1661.00

Annexure-II

- Petition No.133/2004
- Subject: Approval of tariff in respect of 315 MVA ICT-III along with associated bays equipments at Nagarjunasagar sub-station in Southern Region for the period from 1.4.2004 to 31.3.2009.
- Date of order of approval of tariff: 4.1.2006
- Original order**

(a) Computation of capital cost

(Rs. in lakh)

Capital expenditure up to 31.3.2001	767.24
Additional capitalization during 2001-04	0.00
FERV during 2001-04	(-)22.72
Capital expenditure considered for determination of tariff for the period 2004-09	744.52

(b) Computation of equity

(Rs. in lakh)

Equity up to 31.3.2001	366.98
Notional equity arising out of additional capitalization during 2001-04	0.00
Notional equity arising out of FERV during 2001-04	(-)22.72
Total equity	344.26

(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
Interest on Loan						
Gross Loan as per last Order	400.26					
Addition due to Additional Capitalisation	0.00					
Addition due to FERV	0.00					
Gross Normative Loan	400.26	400.26	400.26	400.26	400.26	400.26
Cumulative Repayment up to Previous Year		0.00	26.80	53.61	80.41	107.21
Net Loan-Opening		400.26	373.46	346.66	319.86	293.05
Repayment during the year		26.80	26.80	26.80	26.80	26.80
Net Loan-Closing		373.46	346.66	319.86	293.05	266.25
Average Loan		386.86	360.06	333.26	306.46	279.65
Weighted Average Rate of Interest on Loan		2.76%	2.76%	2.76%	2.76%	2.76%
Interest		10.68	9.94	9.20	8.46	7.72

(d) Summary of the transmission charges awarded

(Rs. in lakh)

Transmission Tariff	2004-05	2005-06	2006-07	2007-08	2008-09
Interest on Loan	10.68	9.94	9.20	8.46	7.72
Interest on Working Capital	2.61	2.65	2.69	2.73	2.78
Depreciation	26.80	26.80	26.80	26.80	26.80
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Return on Equity	48.20	48.20	48.20	48.20	48.20
O & M Expenses	28.12	29.25	30.42	31.63	32.90
Total	116.40	116.83	117.30	117.82	118.40

5. Revised tariff for the period 2001-04

(a) Date of order: 8.2.2008 in Petition No. 41/2002

(b) Equity as on 31.3.2004:

(Rs. in lakh)

	2001-02	2002-03	2003-04
Equity	352.98	352.98	352.98

(c) Computation of interest on loan:

(Rs. in lakh)

Interest on Loan	2001-02	2002-03	2003-04

Gross Loan –Opening	414.26	414.26	414.26
Cumulative Repayment up to Previous Year	0.00	0.00	0.00
Net Loan-Opening	414.26	414.26	414.26
Repayment during the year	0.00	0.00	0.00
Net Loan-Closing	414.26	414.26	414.26
Interest	26.14	26.14	26.14

6. Revised tariff computations for the period 2004-09

(a) Equity and return on equity

(Rs. in lakh)

Equity up to 31.3.2004 as per order dated 8.2.2008	352.98
Notional equity arising out of additional capitalization during 2001-04 (not considered in the order dated 8.2.2008)	0.00
Notional equity arising out of FERV during 2001-04	0.00
Total equity	352.98
Return on equity @ 14% for the period 2004-09	49.42

(b) Interest on loan:

(i) Computation of outstanding loan

(Rs. in lakh)

		As per order dated 25.5.2003 in petition 41/2002 for tariff period 2001-04	As per order dated 4.2.2006. in petition 133/2004 for tariff period 2004-09	As per order dated 8.2.2008 in petition 41/2002 for tariff period 2001-04	Revised calculation for the period 2004-09
(i)	Gross loan as on DOCO	385.00	-	385.00	-
(ii)	Loan against FERV capitalised upto 31.3.2001	15.26	-	29.26	-
(iii)	Gross Loan considered for Tariff period 2001-04	400.26	400.26	414.26	414.26
(iv)	Loan against FERV capitalised during 2001-04	-	0.00	-	-22.72
(v)	Loan against ACE capitalised during 2001-04	-	0.00	-	0.00
(vi)	Gross Loan considered for Tariff period 2004-09	-	400.26	-	391.54
	Repayment	-	-	-	-
(vii)	Upto 31.3.2001	0.00	-	0.00	-
(viii)	During 2001-04	0.00	-	0.00	-
(ix)	Repayment considered for tariff period 2001-04	0.00	0.00	0.00	0.00
(x)	Repayment against FERV capitalised during 2001-04	-	0.00	-	0.00
(xi)	Repayment against ACE capitalised during 2001-04	-	0.00	-	0.00
(xii)	Total repayment considered for tariff period 2004-09	-	0.00	-	0.00
(xiii)	Outstanding as on 1 st April of the year	400.26	400.26	414.26	391.54

(ii) Computation of interest on loan

(Rs. in lakh)

Interest on Loan		2004-05	2005-06	2006-07	2007-08	2008-09
Gross loan as per order dated 8.2.2008	414.26					
Addition due to additional capitalization for the period 2001-04	0.00					
Addition due to FERV for the period 2001-04	(-)22.72					
Gross Normative Loan	391.54	391.54	391.54	391.54	391.54	391.54
Cumulative repayment up to previous year		0.00	26.80	53.61	80.41	107.21
Net loan-Opening		391.54	364.74	337.94	311.13	284.33
Repayment during the year		26.80	26.80	26.80	26.80	26.80
Net loan-Closing		364.74	337.94	311.13	284.33	257.53
Average loan		378.14	351.34	324.53	297.73	270.93
Rate of interest		2.7600%	2.7600%	2.7600%	2.7600%	2.7600%
Interest		10.44	9.70	8.96	8.22	7.48

(c) Advance Against Depreciation
No change

(d) Interest on Working Capital

(Rs. in lakh)

Working Capital	2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	3.68	3.90	4.14	4.39	4.65
O & M expenses	2.34	2.44	2.54	2.64	2.74
Receivables	19.57	19.64	19.72	19.80	19.90
Total	25.59	25.98	26.39	26.83	27.29
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	2.62	2.66	2.70	2.75	2.80

(e) Revised Annual Transmission charges

(Rs. in lakh)

Transmission Tariff	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	26.80	26.80	26.80	26.80	26.80
Interest on Loan	10.44	9.70	8.96	8.22	7.48
Return on Equity	49.42	49.42	49.42	49.42	49.42
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	2.62	2.66	2.70	2.75	2.80
O & M Expenses	28.12	29.25	30.42	31.63	32.90
Total	117.40	117.83	118.30	118.82	119.39

Annexure-III

1. Petition No. 136/2004
2. Subject: Approval of tariff in respect of 400 kV D/C Kaiga-Sirsi transmission line along with associated bays in Southern Region for the period from 1.4.2004 to 31.3.2009.
3. Date of order of approval of tariff: 27.1.2006.

4. **Original order**

(a) Computation of capital cost

(Rs. in lakh)

Capital expenditure up to 31.3.2001	5682.84
FERV during 2001-04	(-)11.46
Additional capitalization during 2001-04	70.40
Capital expenditure considered for determination of tariff for the period 2004-09	5741.78

(b) Computation of equity

(Rs. in lakh)

Equity up to 31.3.2001	2498.90
Notional equity arising out of additional capitalization during 2001-04	0.00
Notional equity arising out of FERV during 2001-04	(-)11.46
Total equity	2487.43

(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 order dated 30.6.2003	3183.95					
Addition due to additional capitalisation	70.40					
Addition due to FERV	0.00					
Gross Normative Loan	3254.35	3254.35	3254.35	3254.35	3254.35	3254.35
Cumulative Repayment up to Previous Year		2595.76	2748.38	2901.00	3053.63	3206.25
Net Loan-Opening		658.59	505.97	353.34	200.72	48.10
Repayment during the year		152.62	152.62	152.62	152.62	48.10
Net Loan-Closing		505.97	353.34	200.72	48.10	0.00
Average Loan		582.28	429.65	277.03	124.41	24.05
Weighted Average Rate of Interest on Loan		7.8196%	7.5944%	7.2777%	6.7996%	5.9946%
Interest		45.53	32.63	20.16	8.46	1.44

(d) Summary of the transmission charges awarded

(Rs. in lakh)

Transmission Tariff	2004-05	2005-06	2006-07	2007-08	2008-09
Interest on Loan	45.53	32.63	20.16	8.46	1.44
Interest on Working Capital	17.75	18.00	18.30	18.63	19.08
Depreciation	152.62	152.62	152.62	152.62	152.62
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Return on Equity	348.24	348.24	348.24	348.24	348.24
O & M Expenses	27.77	28.87	30.09	31.19	32.54
Total	591.91	580.37	569.41	559.14	553.93

5. Revised tariff for the period 2001-04

(a) Date of order: 8.2.2008 in Petition No. 40/2002

(b) Equity as on 31.3.2004

(Rs. in lakh)

	2001-02	2002-03	2003-04
Equity	2492.66	2492.66	2492.66

(c) Computation of interest on loan

(Rs. in lakh)

Interest on Loan	2001-02	2002-03	2003-04
Gross Loan –Opening	3190.18	3190.18	3190.18
Cumulative Repayment up to Previous Year	1200.00	2499.00	2515.10
Net Loan-Opening	1990.18	691.18	675.08
Repayment during the year	1299.00	16.10	69.60
Net Loan-Closing	691.18	675.08	605.48
Interest	196.93	63.20	59.04

7. Revised tariff computations for the period 2004-09

(a) Equity and return on equity

(Rs. in lakh)

Equity up to 31.3.2004 as per order dated 8.2.2008	2492.66
Notional equity arising out of additional capitalization during 2001-04 (not considered in the order dated 8.2.2008)	0.00
Notional equity arising out of FERV during 2001-04	0.00
Total equity	2492.66
Return on equity @ 14% for the period 2004-09	348.97

(b) Interest on loan:

(i) Computation of outstanding loan

(Rs. in lakh)

		As per the order dated 30.6.2003 in petition 40/2002 for tariff period 2001-04	As per the order dated 27.1.2006 in petition 136/2004 for tariff period 2004-09	As per the order dated 8.2.2008 in petition 40/2002 for tariff period 2001-04	Revised calculation for the period 2004-09
(i)	Gross loan as on DOCO	3176.00	-	3176.00	-
(ii)	Loan against FERV capitalised upto 31.3.2001	7.95	-	14.18	-
(iii)	Gross Loan considered for Tariff period 2001-04	3183.95	3183.95	3190.18	3190.18
(iv)	Loan against FERV capitalised	-	0.00	-	-11.46

	during 2001-04				
(v)	Loan against ACE capitalised during 2001-04	-	70.40	-	70.40
(vi)	Gross Loan considered for Tariff period 2004-09	-	3254.35	-	3249.12
	Repayment				
(vii)	Upto 31.3.2001	1200.00	-	1200.00	-
(viii)	During 2001-04	1384.70	-	1384.70	-
(ix)	Repayment considered for tariff period 2001-04	2584.70	2584.70	2584.70	2584.70
(x)	Repayment against FERV capitalised during 2001-04	-	0.00	-	4.21
(xi)	Repayment against ACE capitalised during 2001-04	-	11.06	-	10.98
(xii)	Total repayment considered for tariff period 2004-09	-	2595.76	-	2599.89
(xiii)	Outstanding as on 1 st April of the year	599.25	658.59	605.48	649.23

(ii) Computation of interest on loan

(Rs. in lakh)

Interest on loan		2004-05	2005-06	2006-07	2007-08	2008-09
Gross loan as per order dated 8.2.2008	3190.18					
Addition due to additional capitalization for the period 2001-04	70.40					
Addition due to FERV for the period 2001-04	(-)11.46					
Gross Normative Loan	3249.12	3249.12	3249.12	3249.12	3249.12	3249.12
Cumulative repayment up to previous year		2599.89	2752.51	2905.14	3057.76	3210.38
Net Loan-Opening		649.23	496.61	343.98	191.36	38.74
Repayment during the year		152.62	152.62	152.62	152.62	38.74
Net Loan-Closing		496.61	343.98	191.36	38.74	0.00
Average Loan		572.92	420.30	267.67	115.05	19.37
Rate of interest		7.8196%	7.5944%	7.2777%	6.7996%	5.9946%
Interest		44.80	31.92	19.48	7.82	1.16

(c) Advance Against Depreciation

No change

(d) Interest on Working Capital

(Rs. in lakh)

Working Capital	2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	72.19	76.52	81.11	85.98	91.14
O & M expenses	2.31	2.41	2.51	2.60	2.71
Receivables	98.65	96.73	94.91	93.21	92.40
Total	173.16	175.66	178.53	181.79	186.25
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	17.75	18.01	18.30	18.63	19.09

(e) Revised Annual Transmission charges

(Rs. in lakh)

Transmission Tariff	2004-05	2005-06	2006-07	2007-08	2008-09
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Depreciation	152.62	152.62	152.62	152.62	152.62
Interest on Loan	44.80	31.92	19.48	7.82	1.16
Return on Equity	348.97	348.97	348.97	348.97	348.97
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	17.75	18.01	18.30	18.63	19.09
O & M Expenses	27.77	28.87	30.09	31.19	32.54
Total	591.91	580.39	569.47	559.24	554.39