

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Coram**

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

**Petition No. 129/2004**

**In the matter of**

Approval of tariff in respect of 315 MVA 400/230 KV Auto Transformer at Hyderabad and one 50 MVAR Reactor at Cuddapah under Central Transmission Project Augmentation in Southern Region for the period from 1.4.2004 to 31.3.2009.

**Petition No. 130/2004**

**And in the matter of**

Approval of tariff in respect of 400 KV Ramagundam Transmission System including ICT Khammam & Reactor at Gazuwaka under CTP Augmentation in Southern Region for the period 1.4.2004 to 31.3.2009.

**Petition No. 135/2004**

**And in the matter of**

Approval of tariff in respect of Central Transmission Project-I in Southern Region for the period 1.4.2004 to 31.3.2009.

**And in the matter of**

Power Grid Corporation of India Ltd.

**.... Petitioner**

Vs

1. Karnataka Power Transmission Corporation Ltd., Bangalore
2. Transmission Corporation of Andhra Pradesh Ltd., Hyderabad
3. Kerala State Electricity Board, Thiruvananthapuram
4. Tamil Nadu Electricity Board, Chennai
5. Electricity Department, Govt. of Pondicherry, Pondicherry **....Respondents**

**ORDER**

In these petitions, the petitioner, Power Grid Corporation of India Ltd had sought approval for 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 and 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 the transmission assets for the period 1.4.2004 to 31.3.2009 was awarded. The details of the orders, capital cost considered in the orders and final tariff awarded by the Commission are given in Annexures I to III of this order.

2. Tamil Nadu Electricity Board (TNEB) filed Appeal No. 135/2005 in the Appellate Tribunal for Electricity (the Tribunal) 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 Transmission System was followed. 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 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. The above decision was reiterated by the 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.

4. The ruling of the Tribunal, involving interpretation of the notification dated 16.12.1997 of Ministry of Power, is considered to be judgment *in rem* and thereby has universal application in all the cases of similar nature. Accordingly, it has been decided to apply the ratio of the judgment in all similar cases and re-calculate the tariff in accordance with the judgment of the Tribunal.

5. In terms of judgment dated 4.10.2006 of the 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 shall form part of loan.

6. Further through this order, we are revising the tariff in the process of implementation of the Tribunal judgment dated 16.5.2007 in Appeal No. 121 of 2005. Briefly the background of the case is as under:

- (i) The petitioner on its establishment, took-over the transmission network from the central generating companies like NTPC, NHPC, NLC and NEEPCO with effect from 1.4.1992 on book value.

- (ii) Prior to setting up of the Commission, the tariff for the various transmission systems owned by the petitioner was fixed by the Central Government in Ministry of Power, based on advice from the Central Electricity Authority.

7. For the purpose of tariff determination, Ministry of Power considered the capital cost on the following basis:

- (i) Capital cost as on 31.3.1992 was notionally divided into debt and equity in the ratio of 50:50.
- (ii) Cumulative depreciation accrued till 31.3.1992 was deducted from capital cost as at (a) above to arrive at Net Asset Value which was used for tariff purposes.
- (iii) Net asset value obtained at (ii) above, was divided notionally into debt and equity in the ratio of 50:50. In other words both debt and equity as in (i) above were reduced equally by one-half of the cumulative depreciation mentioned in (ii) above.
- (iv) This approach was continued during 1.4.1992 to 31.3.1997, with equity getting depleted further by 50% of depreciation amount charged during this period.
- (v) The approach was discontinued after 31.3.1997, and there was no further depletion of equity thereafter.

8. When the Commission determined tariff, the capital cost evolved by Ministry of Power was taken as the basis.
9. Aggrieved by the above principle followed by the Commission, the petitioner made an application, being Petition No 26/2005 urging that in respect of all its assets, the depleted equity amounting to Rs. 64600 lakh through the application of the above methodology be restored.
10. The said application was dismissed vide the Commission's order dated 11.5.2005, whereupon, the petitioner filed Appeal No. 121 of 2005 before the Tribunal.
11. The above appeal was disposed of by the Tribunal vide its judgment dated 16.5.2007 with the following directions:

**“CONCLUSION**

33. Thus, we have no hesitation in holding that the aforesaid grave error committed by the Central Government as a regulator while determining tariff for the block year 1992-1997, requires to be rectified with effect from April 1, 2004.

34. In the light of the aforesaid discussion, the issues raised in Para 19 are determined and answered as follows:

**ISSUE No.1:** The regulator committed grave error in fixing equity while determining tariff for the block year 1992-1997 and 1997-2002.

**ISSUE No.2:** The appellant is entitled to the restoration of equity of Rs.664 Crore, with effect from April 1, 1992, for the purposes of accounting.

**ISSUE No.3:** Consequent to restoration of equity, tariff needs to be determined for the period commencing from April 1, 2004.

**ISSUE No.4:** The Order of the CERC is liable to be set aside.

**ISSUE No.5:** The CERC shall re-determine the transmission tariff for the period commencing from April 1, 2004.

35. In view of the aforesaid determination, the appeal is allowed. The order of the CERC is set aside and the matter is remitted to it (CERC) for re-determination of the tariff for the period commencing from April 1, 2004 in accordance with law and having regard to the observations made by us.

We make it clear that the appellant shall not be entitled to claim tariff difference from the period anterior to 01.04.2004. “

12. In pursuance of the above judgment of the Tribunal, the petitioner filed region-wise applications for revision of tariff for the period 2004-09 after restoration of equity. The project-wise details for revision of equity in respect of the transmission assets in the Southern Region were filed in Petition No 39/2007.

13. Based on the above two judgments of the Tribunal, the transmission charges for the assets forming subject matter of the present order have been recalculated. The details of revised calculation of annual transmission tariff and annual transmission tariff in respect of transmission are also incorporated in the annexure I to III of this order.

14. Revision of the capital cost on the above basis has resulted in the revision of notional equity and loan as on 1.4.2004. This has consequently led to the revision of all the elements of the transmission charges, except O&M expenses, which are allowed on normative basis in terms of the line length and number of bays, and therefore, remain unchanged. While re-calculating the transmission charges, the methodology considered is the same as considered while originally fixing these charges for the period 2004-09 except in case of interest on loan. While re-calculating interest on loan, outstanding loan as on 1.4.2004 has been

re-worked out based on the judgment of the Appellate Tribunal for Electricity, in cases involving National Thermal Power Corporation, wherein the Appellate Tribunal decided to compute interest on loan based on normative repayment. Further, where loan has been fully re-paid, depreciation recoverable has been spread over the balance useful life of the transmission asset.

15. The petitioner shall recover the additional amount in the six equal monthly installments.

Sd/-

**(R KRISHNAMOORTHY)**  
**MEMBER**  
New Delhi, dated 17<sup>th</sup> March 2008

sd/-

**(BHANU BHUSHAN)**  
**MEMBER**

## Annexure - I

1. Petition No. 129/2004
2. Subject: Approval of tariff in respect of 315 MVA 400/230 KV Auto Transformer at Hyderabad and one 50 MVAR Reactor at Cuddapah under Central Transmission Project Augmentation in Southern Region for the period from 1.4.2004 to 31.3.2009.
3. Date of order of approval of tariff: 3.5.2006
4. **Original tariff**

(a) Summary of the tariff awarded

(Rs.in lakh)

	315 MVA 400/230 kV Auto Transformer along with associated equipments at Hyderabad sub-station					50 MVAR Reactor along with associated equipments at Cuddapah sub-station				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	31.25	31.25	31.25	31.25	31.25	25.79	25.79	25.79	25.79	25.79
Interest on Loan	6.78	4.97	3.16	1.34	0.22	14.86	13.36	11.87	10.37	8.87
Return on Equity	56.73	56.73	56.73	56.73	56.73	53.29	53.29	53.29	53.29	53.29
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	3.41	3.47	3.53	3.60	3.69	3.33	3.39	3.45	3.52	3.60
O & M Expenses	28.12	29.25	30.42	31.63	32.90	28.12	29.25	30.42	31.63	32.90
<b>Total</b>	<b>126.28</b>	<b>125.66</b>	<b>125.08</b>	<b>124.55</b>	<b>124.78</b>	<b>125.39</b>	<b>125.09</b>	<b>124.82</b>	<b>124.61</b>	<b>124.46</b>

(b) Computation of capital cost

(Rs. in lakh)

	315 MVA 400/230 kV Auto Transformer along with associated equipments at Hyderabad sub-station	50 MVAR Reactor along with associated equipments at Cuddapah sub-station
Gross block as on 31.3.2001	834.38	713.20
Admitted capital cost as on 1.4.2001 for calculation of Debt and Equity	779.50	713.20
Additional capitalization due to works from 1.4.2001 to 31.3.2004	0.00	0.00
Additional capitalization due to FERV from 1.4.2001 to 31.3.2004	30.86	27.47
Total capital cost as on 1.4.2004 considered for tariff calculation	810.36	740.67
Equity as on 1.4.2004	405.18	380.60



## 5. Revised tariff claimed by the petitioner

In case of 315 MVA 400/230 kV Auto Transformer along with associated equipments at Hyderabad sub-station, the petitioner has claimed tariff after restitution of equity.

(Rs. in lakh)

	315 MVA 400/230 kV Auto Transformer along with associated equipments at Hyderabad sub-station				
	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	31.25	31.25	31.25	31.25	23.63
Interest on Loan	5.22	3.40	1.59	0.34	0.00
Return on Equity	60.51	60.51	60.51	60.51	60.51
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	3.45	3.51	3.57	3.65	3.62
O & M Expenses	28.12	29.25	30.42	31.63	32.90
<b>Total</b>	<b>128.53</b>	<b>127.91</b>	<b>127.33</b>	<b>127.37</b>	<b>120.65</b>

Since 50 MVAR Reactor, etc. was declared under commercial operation on 1.4.1997 (after 31.3.1997), it does not involve restitution of equity and therefore, the petitioner has not claimed the revised transmission charges for the asset.

## 6. Revised tariff computations

### (a) Capital cost

(Rs. in lakh)

	315 MVA 400/230 kV Auto Transformer along with associated equipments at Hyderabad sub-station	50 MVAR Reactor along with associated equipments at Cuddapah sub-station
Gross Block as on 31.3.2001	834.38	713.20
Additional capitalization due to works from 1.4.2001 to 31.3.2004	0.00	0.00
Additional capitalization due to FERV from 1.4.2001 to 31.3.2004	30.86	27.47
<b>Total capital cost as on 1.4.2004</b>	<b>865.24</b>	<b>740.67</b>

## (b) Equity and return on equity:

(Rs. in lakh)

	315 MVA 400/230 kV Auto Transformer along with associated equipments at Hyderabad sub-station	50 MVAR Reactor along with associated equipments at Cuddapah sub-station
Equity as per order dated 3.5.2006	405.18	380.66
Addition on account of restitution of equity	27.44	0.00
Deletion on account of FERV	77.55	41.63
Net equity	355.07	339.03
Return on equity per annum	49.71	47.46

## (c) Interest on loan

(Rs. in lakh)

Details of loan	315 MVA 400/230 kV Auto Transformer along with associated equipments at Hyderabad sub-station						50 MVAR Reactor along with associated equipments at Cuddapah sub-station					
	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	479.31						374.17					
Addition due to Additional Capitalization	0.00						0.00					
Additions due to FERV	30.86						27.47					
Gross Loan	510.17	510.17	510.17	510.17	510.17	510.17	401.64	401.64	401.64	401.64	401.64	401.64
Cumulative Repayment up to Previous Year		318.74	349.99	381.24	412.48	443.73		98.56	124.36	150.15	175.94	203.39
Net Loan-Opening		191.43	160.18	128.93	97.68	66.44		303.07	277.28	251.49	225.69	198.24
Repayment during the year		31.25	31.25	31.25	31.25	31.25		25.79	25.79	25.79	27.45	29.53
Net Loan-Closing		160.18	128.93	97.68	66.44	35.19		277.28	251.49	225.69	198.24	168.71
Average Loan		175.80	144.56	113.31	82.06	50.81		290.18	264.38	238.59	211.97	183.48
Weighted Average Rate of Interest on Loan		5.8000%	5.8000%	5.8000%	5.8000%	5.8000%		5.8000%	5.8000%	5.8000%	5.8000%	5.8000%
Interest		10.20	8.38	6.57	4.76	2.95		16.83	15.33	13.84	12.29	10.64

## (d) Depreciation

(Rs.in lakh)

Details of Depreciation	315 MVA 400/230 kV Auto Transformer along with associated equipments at Hyderabad sub-station						50 MVAR Reactor along with associated equipments at Cuddapah sub-station					
		2004-05	2005-06	2006-07	2007-08	2008-09		2004-05	2005-06	2006-07	2007-08	2008-09
Rate of Depreciation	3.6115%						3.4825%					
Depreciable Value	90%	778.71	778.71	778.71	778.71	778.71	90%	666.60	666.60	666.60	666.60	666.60
Balance Useful life of the asset		-	-	-	-	-		-	-	-	-	-
Remaining Depreciable Value		408.58	377.33	346.08	314.83	283.58		374.71	348.92	323.12	297.33	400.50
Depreciation		31.25	31.25	31.25	31.25	31.25		25.79	25.79	25.79	25.79	25.79

(e) Interest on working capital

(Rs. in lakh)

	315 MVA 400/230 kV Auto Transformer along with associated equipments at Hyderabad sub-station					50 MVAR Reactor along with associated equipments at Cuddapah sub-station				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	9.85	10.44	11.07	11.73	12.44	9.21	9.76	10.35	10.97	11.63
O & M expenses	2.34	2.44	2.54	2.64	2.74	2.34	2.44	2.54	2.64	2.74
Receivables	20.44	20.33	20.24	20.15	20.07	20.24	20.19	20.15	20.11	20.05
Total	32.63	33.21	33.84	34.52	35.25	31.80	32.40	33.04	33.71	34.43
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	<b>3.34</b>	<b>3.40</b>	<b>3.47</b>	<b>3.54</b>	<b>3.61</b>	<b>3.26</b>	<b>3.32</b>	<b>3.39</b>	<b>3.46</b>	<b>3.53</b>

(f) Revised annual transmission charges

(Rs.in lakh)

	315 MVA 400/230 kV Auto Transformer along with associated equipments at Hyderabad sub-station					50 MVAR Reactor along with associated equipments at Cuddapah sub-station				
	2004-05	2005-06	2006-07	2007-08	2008-09	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	31.25	31.25	31.25	31.25	31.25	25.79	25.79	25.79	25.79	25.79
Interest on Loan	10.20	8.38	6.57	4.76	2.95	16.83	15.33	13.84	12.29	10.64
Return on Equity	49.71	49.71	49.71	49.71	49.71	47.46	47.46	47.46	47.46	47.46
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	3.34	3.40	3.47	3.54	3.61	3.26	3.32	3.39	3.46	3.53
O & M Expenses	28.12	29.25	30.42	31.63	32.90	28.12	29.25	30.42	31.63	32.90
Total	<b>122.62</b>	<b>122.00</b>	<b>121.42</b>	<b>120.89</b>	<b>120.42</b>	<b>121.47</b>	<b>121.16</b>	<b>120.90</b>	<b>120.64</b>	<b>120.33</b>

## Annexure II

1. Petition No.130/2004
2. Approval of tariff in respect of 400 KV Ramagundam Transmission System including ICT Khammam & Reactor at Gazuwaka under CTP Augmentation in Southern Region for the period 1.4.2004 to 31.3.2009.
3. Date of order of approval of tariff: 2.5.2006.
4. **Original tariff**

(a) Summary of the tariff awarded

(Rs. in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	1048.35	1048.35	1048.35	566.00	566.00
Interest on Loan	63.84	28.17	4.97	0.00	0.00
Return on Equity	1831.62	1831.62	1831.62	1831.62	1831.62
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	155.89	160.89	166.45	164.18	170.84
O & M Expenses	1277.03	1328.04	1382.58	1435.59	1495.16
<b>Total</b>	<b>4376.74</b>	<b>4397.07</b>	<b>4433.98</b>	<b>3997.40</b>	<b>4063.62</b>

(b) Computation of capital cost

(Rs. in lakh)

Cost approved in the order dated 2.5.2006, as 1.4.2001	37593.69
Admitted capital cost as on 1.4.2004 for calculation of Debt and Equity	25951.15
Additional capitalization due to works from 1.4.2001 to 31.3.2004	(-)361.60
Additional capitalization due to FERV 1.4.2001 to 31.3.2004	576.51
Total capital cost as on 1.4.2004 considered for calculation of return on equity	26166.06

(c) Computation of equity: Rs.13083.03 lakh in the debt – equity ratio of 50:50

5. **Revised tariff claimed by the petitioner**

(Rs. in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	651.12	651.12	651.12	651.12	651.12
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	2671.90	2671.90	2671.90	2671.90	2671.90
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	162.48	168.10	174.06	180.26	186.92
O & M Expenses	1277.03	1328.04	1382.58	1435.59	1495.16
<b>Total</b>	<b>4762.54</b>	<b>4819.18</b>	<b>4879.67</b>	<b>4938.88</b>	<b>5005.10</b>

## 6. Revised tariff computations

### (a) Capital cost

Cost approved in the order dated 2.5.2006, as on 1.4.2001	37955.29
Additional capitalization due to works from 1.4.2001 to 31.3.2004	(-)-361.60
Additional capitalization due to FERV from 1.4.2001 to 31.3.2004	576.51
Total capital cost as on 1.4.2004	38170.20

### (b) Equity and return on equity:

Equity as per order dated 2.5.2006	Rs. 13083.03 lakh
Addition on account of restitution of equity	Rs. 6002.07 lakh
Deletion on account of FERV	Rs. 1543.90 lakh
Net equity	Rs. 17541.21 lakh
Return on equity	Rs.2455.77 lakh per annum

### (c) Interest on loan

Details of loan	(Rs. in lakh)					
	Up to 31.3.2004	2004-05	2005-06	2006-07	2007-08	2008-09
Gross Notional loan	20233.28					
Addition due to additional capitalization	(180.80)					
Addition due to FERV	576.51					
Gross Normative Loan	20628.99	20628.99	20628.99	20628.99	20628.99	20628.99
Cumulative Repayment up to Previous Year		20307.20	20628.99	20628.99	20628.99	20628.99
Net Loan-Opening		321.78	0.00	0.00	0.00	0.00
Repayment during the year		321.78	0.00	0.00	0.00	0.00
Net Loan-Closing		0.00	0.00	0.00	0.00	0.00
Average Loan		160.89	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan		3.4966%	3.6229%	3.9283%	4.7643%	5.8000%
<b>Interest</b>		<b>5.63</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

(d) Depreciation

(Rs. in lakh)

Details of Depreciation		2004-05	2005-06	2006-07	2007-08	2008-09
Rate of Depreciation	2.7465%					
Depreciable Value	90%	34087.05	34087.05	34087.05	34087.05	34087.05
Balance Useful life of the asset		17	16	15	14	13
Remaining Depreciable Value		10655.99	9607.65	9007.17	8406.69	7806.21
<b>Depreciation</b>		<b>1048.35</b>	<b>600.48</b>	<b>600.48</b>	<b>600.48</b>	<b>600.48</b>

(e) Interest on working capital

(Rs. in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	685.03	726.13	769.70	815.88	864.84
O & M expenses	106.42	110.67	115.22	119.63	124.60
Receivables	825.42	757.96	768.04	777.91	788.95
Total	1,616.87	1,594.76	1,652.96	1,713.43	1,778.38
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
<b>Interest</b>	<b>165.73</b>	<b>163.46</b>	<b>169.43</b>	<b>175.63</b>	<b>182.28</b>

(f) Revised annual transmission charges

(Rs.in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	1048.35	600.48	600.48	600.48	600.48
Interest on Loan	5.63	0.00	0.00	0.00	0.00
Return on Equity	2455.77	2455.77	2455.77	2455.77	2455.77
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	165.73	163.46	169.43	175.63	182.28
O & M Expenses	1277.03	1328.04	1382.58	1435.59	1495.16
Total	<b>4952.50</b>	<b>4547.75</b>	<b>4608.26</b>	<b>4667.46</b>	<b>4733.69</b>

### Annexure III

1. Petition No. 135/2004
2. Approval of tariff in respect of Central Transmission Project-I in Southern Region for the period 1.4.2004 to 31.3.2009.
3. Date of order of approval of tariff: 14.12.2005
4. **Original tariff**

- (a) Summary of the tariff awarded

(Rs. in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	454.25	454.25	454.25	454.25	454.25
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	1480.78	1480.78	1480.78	1480.78	1480.78
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	109.36	113.48	117.84	122.41	127.28
O & M Expenses	813.56	846.10	880.63	914.70	952.36
<b>Total</b>	<b>2857.95</b>	<b>2894.61</b>	<b>2933.50</b>	<b>2972.14</b>	<b>3014.67</b>

- (b) Computation of capital cost

(Rs. in lakh)

Cost approved in the order dated 14.12.2005, as on 1.4.2001	28065.86
Admitted capital cost as on 1.4.2004 for calculation of Debt and Equity	20936.86
Additional capitalization due to works from 1.4.2001 to 31.3.2004	00.00
Additional capitalization due to FERV from 1.4.2001 to 31.3.2004	217.08
Total capital cost as on 1.4.2004 considered for calculation of return on equity	21153.94

- (c) Computation of equity: Rs. 10576.97 lakh in the debt – equity ratio of 50:50

5. **Revised tariff claimed by the petitioner**

(Rs. in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	454.25	454.25	454.25	454.25	454.25
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	1979.88	1979.88	1979.88	1979.88	1979.88
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	118.03	122.15	126.52	131.08	135.96
O & M Expenses	813.56	846.10	880.64	914.70	952.36
<b>Total</b>	<b>3365.72</b>	<b>3402.38</b>	<b>3441.28</b>	<b>3479.90</b>	<b>3522.45</b>

## 6. Revised tariff computations

### (a) Capital cost

Cost approved in the order dated 14.12.2005, as on 1.4.2001	28065.86
Additional capitalization due to works from 1.4.2001 to 31.3.2004	00.00
Additional capitalization due to FERV from 1.4.2001 to 31.3.2004	217.08
Total capital cost as on 1.4.2004	28282.93

### (b) Equity and return on equity

Equity as per order dated 14.12.2005	Rs. 10576.97 lakh.
Addition on account of restitution of equity	Rs. 3564.50 lakh
Deletion on account of FERV	Rs. 923.97 lakh
Net equity	Rs. 13217.50 lakh
Return on equity	Rs.1850.45 lakh per annum

### (c) Interest on loan

Details of loan	(Rs. in lakh)					
	Up to 31.3.2004	2004-05	2005-06	2006-07	2007-08	2008-09
Gross Notional loan	14848.36					
Addition due to additional capitalization	0.00					
Addition due to FERV	217.08					
Gross Normative Loan	15065.43	15065.43	15065.43	15065.43	15065.43	15065.43
Cumulative Repayment up to Previous Year		15065.43	15065.43	15065.43	15065.43	15065.43
Net Loan-Opening		0.00	0.00	0.00	0.00	0.00
Repayment during the year		0.00	0.00	0.00	0.00	0.00
Net Loan-Closing		0.00	0.00	0.00	0.00	0.00
Average Loan		0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan		0.0000%	0.0000%	0.0000%	0.0000%	0.0000%
<b>Interest</b>		0.00	0.00	0.00	0.00	0.00



(c) Depreciation

(i) Cumulative depreciation considered upto 31.3.2004 in the order dated 14.12.2005 in Petition No. 135/2004 is Rs. 15493.66 lakh consisting of cumulative depreciation up to 31.3.2004 as Rs. 15482.78 lakh and addition to due to FERV during 2001-04 as Rs. 10.88 lakh.

(ii) Cumulative depreciation considered up to 31.3.2004 has been revised due to allocation of FERV up to 31.3.2001 to loan only during tariff period 2001-04 vide order dated 8.2.2008 in petition No. 7/2002 which is worked out as under:

Cumulative depreciation up to 31.3.1997	Rs. 7129.00 lakh
Depreciation during 1997-2001	Rs. 6143.49 lakh
Depreciation/AAD during 2001-04	Rs. 2340.01 lakh
	Rs. 15612.50 lakh
Addition due to FERV during 2001-04	Rs. 10.88 lakh
Total	Rs. 15623.38 lakh

Deprecation work out as under:

(Rs. in lakh)

Details of Depreciation		2004-05	2005-06	2006-07	2007-08	2008-09
Rate of Depreciation	2.7856%					
Depreciable Value	90%	25032.88	25032.88	25032.88	25032.88	25032.88
Balance Useful life of the asset		21	20	19	18	17
Remaining Depreciable Value		9409.50	8961.43	8513.36	8065.29	7617.21
<b>Depreciation</b>		<b>448.07</b>	<b>448.07</b>	<b>448.07</b>	<b>448.07</b>	<b>448.07</b>

(e) Interest on working capital

(Rs. in lakh)

	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Maintenance Spares	522.77	554.13	587.38	622.63	659.98
O & M expenses	67.80	70.51	73.39	76.23	79.36
Receivables	537.96	544.07	550.55	556.99	564.08
<b>Total</b>	<b>1,128.52</b>	<b>1,168.71</b>	<b>1,211.32</b>	<b>1,255.84</b>	<b>1,303.43</b>
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
<b>Interest</b>	<b>115.67</b>	<b>119.79</b>	<b>124.16</b>	<b>128.72</b>	<b>133.60</b>

(f) Revised annual transmission charges

(Rs.in lakh)

	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Depreciation	448.07	448.07	448.07	448.07	448.07
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	1850.45	1850.45	1850.45	1850.45	1850.45
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	115.67	119.79	124.16	128.72	133.60
O & M Expenses	813.56	846.10	880.63	914.70	952.36
<b>Total</b>	<b>3227.76</b>	<b>3264.41</b>	<b>3303.31</b>	<b>3341.95</b>	<b>3384.48</b>