

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram

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

Petition No. 111/2004

In the matter of

Approval of tariff in respect of 400 kV Vindhyachal Stage-I transmission system in Western 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. Madhya Pradesh State Electricity Board, Jabalpur
2. Maharashtra State Electricity Board, Mumbai
3. Gujarat Electricity Board, Vadodara
4. Electricity Department, Govt of Goa, Panaji, Goa
5. Electricity Department, Admn. of Dadra and Nagar Haveli, Silvassa
6. Chhattisgarh State Electricity Board, Raipur
7. Electricity Department, Admn. Of Daman & Diu, Daman **.....Respondents**

**Petition No.113/2004
With I.A.No.57/2006**

And in the matter of

Approval of transmission tariff for 400 kV D/C Singrauli-Vindhyachal transmission line along with (2x250 MW) HVDC back to back at Vindhyachal between Northern Region and Western Region for the period from 1.4.2004 to 31.3.2009.

And in the matter of

Power Grid Corporation of India Ltd

.... Petitioner

Vs

1. Madhya Pradesh State Electricity Board, Jabalpur
2. Electricity Department, Govt. of Goa, Panaji, Goa
3. Electricity Department, Admn. of Daman & Diu, Daman
4. Gujarat Urja Vikas Nigam Ltd., Vadodara
5. Electricity Department, Admn. of Dadra & Nagar Haveli, Silvassa
6. Maharashtra State Electricity Distribution Co. Ltd., Mumbai
7. Chhattisgarh State Electricity Board, Raipur
8. Madhya Pradesh Audyogik Kandra Vikas Nigam (Indore) Ltd., Indore
9. Himachal Pradesh State Electricity Board, Shimla

10. Punjab State Electricity Board, Patiala
 11. Haryana Vidyut Prasaran Nigam Ltd., Panchkula
 12. Power Development Deptt., Govt. of J&K, Jammu
 13. Uttar Pradesh Power Corporation Ltd., Lucknow
 14. Delhi Transco Ltd., New Delhi
 15. Chandigarh Administration, Chandigarh
 16. Uttaranchal Power Corporation Ltd., Dehradun
 17. Rajasthan Power Procurement Centre, Jaipur
 18. Ajmer Vidyut Vitran Nigam Ltd., Ajmer Road, Heerapura
 19. Jodhpur Vidyut Vitran Nigam Ltd., Ajmer Road, Heerapura
 20. Jaipur Vidyut Vitran Nigam Ltd., Ajmer Road, Heerapura
 21. North Central Railway Hqrs., Allahabad
- Respondents**

Petition No. 117/2004

And in the matter of

Approval of tariff in respect of 400 kV Korba transmission system in Western 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

8. Madhya Pradesh State Electricity Board, Jabalpur
9. Maharashtra State Electricity Board, Mumbai
10. Gujarat Electricity Board, Vadodara
11. Electricity Department, Govt of Goa, Panaji, Goa
12. Electricity Department, Admn. of Dadra and Nagar Haveli, Silvassa
13. Chhattisgarh State Electricity Board, Raipur
14. Electricity Department, Admn. Of Daman & Diu, Daman **.....Respondents**

Petition No. 138/2004
With I.A. No. 54/2006

And in the matter of

Approval of transmission tariff for 400 kV D/C Ramagundam-Bhadrawati (Chandrapur) Transmission System between Southern Region and Western 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. Karnataka Power Transmission Corporation Ltd., Bangalore
2. Transmission Corporation of Andhra Pradesh, Hyderabad
3. Kerala State Electricity Board, Thriuvanathapuram
4. Tamil Nadu Electricity Board, Chennai
5. Electricity Deptt., Government of Pondicherry, Pondicherry

6. Electricity Deptt., Govt. of Goa, Panaji
7. Madhya Pradesh Electricity Board, Jabalpur
8. Electricity Deptt., Administration of Daman & Diu, Daman
9. Gujarat Urja Vikas Nigam Ltd., Vadodara
10. Electricity Deptt., Administration of Dadra Nagar Haveli, Silvassa
11. Maharashtra State Electricity Distribution Co. Ltd, Mumbai
12. Chhattisgarh State Electricity Board, Raipur
13. Madhya Pradesh Audyogik Kandra Vikas Nigam (Indore) Ltd., Indore.

.Respondents

ORDER

In these petitions, the petitioner, Power Grid Corporation of India Ltd had sought approval for tariff in respect of its various transmission systems in Western 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 various elements of the transmission systems 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 IV 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 Vindhyaachal Stage -I Additional Transmission System in Western Region for the period 1.4.2001 to 31.3.2004.

4. The decision 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 in to 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 Western Region were filed in Petition No 42/2007.

13. In respect of 400 kV D/C Singrauli-Vindhyachal Transmission line with (2 x 250 MW) HVDC back to back at Vindhyachal between Northern Region and Western Region and 400 kV D/C Ramagundam-Bhadrawati (Chandrapur) Transmission System in Southern Region and Western Region for the period from 1.4.2004 to 31.3.2009, the petitioner had filed I.A.No. 57/2006 and 54/2006 respectively for revision of tariff. Vide order dated 4.12.2006, interlocutory applications were taken on record as the revised petitions for approval of tariff. Accordingly, the petitioner had published its revised tariff proposals in accordance with law.

14. 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 IV of this order.

15. Revision of the capital cost on the above basis has resulted in the revision of notional equity as on 1.4.2004 and accordingly return thereon. This has consequently led to the revision of interest on working capital. 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.

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

17. Accordingly, I.A. No. 57/2006 in Petition No. 113/2004 and I.A. No. 54/2006 in Petition No. 138/2004 stand disposed of.

Sd/-

(R KRISHNAMOORTHY)
MEMBER
New Delhi, dated 14th February, 2008

sd/-

(BHANU BHUSHAN)
MEMBER

Annexure - I

1. Petition No. 111/2004
2. Subject: Approval of tariff in respect of 400 kV Vindhyachal Stage-I transmission system in Western Region for the period from 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	403.06	403.06	403.06	403.06	403.06
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	1329.15	1329.15	1329.15	1329.15	1329.15
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	105.44	109.55	113.91	118.45	123.33
O & M Expenses	792.09	823.69	857.69	890.34	927.51
Total	2629.74	2665.45	2703.81	2741.00	2783.05

- (b) Computation of capital cost

(Rs. in lakh)

Cost approved in the order dated 14.12.2005, as on 1.4.2001 (Gross block)	27029.02
Cumulative Depreciation up to 1997	8046.64
Admitted capital cost as on 1.4.2001 for tariff purpose	18982.38
Additional capitalization due to works from 1.4.2001 to 31.3.2004	0.00
Additional capitalization due to FERV 1.4.2001 to 31.3.2004	5.43
Total capital cost as on 1.4.2004 considered for calculation for tariff purpose	18987.81

- (c) Computation of equity: Rs.9493.91 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	403.06	403.06	403.06	403.06	403.06
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	1892.37	1892.37	1892.37	1892.37	1892.37
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	115.23	119.34	123.70	128.24	133.12
O & M Expenses	792.09	823.69	857.69	890.34	927.51
Total	3202.75	3238.46	3276.82	3314.00	3356.06

6. Revised tariff computations

(a) Capital cost

Cost approved in the order dated 14.12.2005, as on 1.4.2001	27029.02
Additional capitalization due to works from 1.4.2001 to 31.3.2004	0.00
Additional capitalization due to FERV from 1.4.2001 to 31.3.2004	5.43
Total capital cost as on 1.4.2004	27034.45

(b) Equity and return on equity:

Equity as on 1.4.2004 as per order dated

14.12.2005. Rs. 9493.91 lakh

Addition on account of restitution of equity Rs. 4023.32 lakh

Reduction on account of FERV up to 31.3.2001 Rs. 20.39 lakh

Reduction on account of FERV for the period from 1.4.2001 to 31.3.2004 Rs. 2.71 lakh

Net equity as on 1.4.2004 Rs. 13494.13 lakh

Return on equity Rs.1889.18 lakh per annum

(c) Interest on working capital

(Rs. in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	524.42	555.88	589.24	624.59	662.07
O & M expenses	66.01	68.64	71.47	74.20	77.29
Receivables	533.24	539.19	545.58	551.78	558.79
Total	1,123.66	1,163.71	1,206.29	1,250.57	1,298.15
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	115.18	119.28	123.65	128.18	133.06

(d) Revised annual transmission charges

(Rs.in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	402.98	402.98	402.98	402.98	402.98
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	1889.18	1889.18	1889.18	1889.18	1889.18
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	115.18	119.28	123.65	128.18	133.06
O & M Expenses	792.09	823.69	857.69	890.34	927.51
Total	3199.43	3235.13	3273.50	3310.68	3352.73

Annexure II

1. Petition No.113/2004
2. Approval of tariff in respect of 400 kV D/C Singrauli-Vindhyachal transmission line along with (2x250 MW) HVDC back to back at Vindhyachal between Northern Region and Western Region for the period from 1.4.2004 to 31.3.2009.
3. Date of order of approval of tariff: 15.12.2005.
4. **Original tariff**
 - (a) Summary of the tariff awarded

(Rs. in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	273.41	273.41	273.41	273.41	273.41
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	785.40	785.40	785.40	785.40	785.40
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	69.29	72.01	74.87	77.89	81.08
O & M Expenses	647.52	673.54	700.48	728.34	757.59
Total	1775.62	1804.36	1834.17	1865.05	1897.49

- (b) Computation of capital cost

(Rs. in lakh)

Cost approved in the order dated 15.12.2005, as on 1.4.2001 (Gross block)	17584.90
Cumulative Depreciation up to 31.3.1997	6492.53
Admitted capital cost as on 1.4.2001 for tariff purpose	11092.37
Additional capitalization due to works from 1.4.2001 to 31.3.2004	0.00
Additional capitalization due to FERV 1.4.2001 to 31.3.2004	127.67
Total capital cost as on 1.4.2004 considered for tariff purpose	11220.04

- (c) Computation of equity: Rs. 5610.02 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	273.41	273.41	273.41	273.41	273.41
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	1239.84	1239.84	1239.84	1239.84	1239.84
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	77.19	79.91	82.77	85.79	88.98
O & M Expenses	647.52	673.54	700.48	728.34	757.59
Total	2237.96	2266.70	2296.51	2327.39	2359.82

6. Revised tariff computations

(a) Capital cost

Cost approved in the order dated 15.12.2005, as on 1.4.2001	17584.90
Additional capitalization due to works from 1.4.2001 to 31.3.2004	0.00
Additional capitalization due to FERV from 1.4.2001 to 31.3.2004	127.67
Total capital cost as on 1.4.2004	17712.57

(b) Equity and return on equity:

Equity as on 1.4.2004 as per order

dated 15.12.2005 Rs. 5610.02 lakh

Addition on account of restitution of equity Rs. 3246.27 lakh

Reduction on account of FERV up to 31.3.2001 Rs. 479.59 lakh

Reduction on account of FERV for the period from 1.4.2001 to 31.3.2004 Rs. 63.83 lakh

Net equity as on 1.4.2004 Rs. 8312.87 lakh

Return on equity Rs.1163.80 lakh per annum

(c) Interest on working capital

(Rs. in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	326.10	345.66	366.40	388.39	411.69
O & M expenses	53.96	56.13	58.37	60.70	63.13
Receivables	360.10	364.89	369.86	375.00	380.41
Total	740.16	766.68	794.63	824.08	855.23
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	75.87	78.58	81.45	84.47	87.66

(d) Revised annual transmission charges

(Rs.in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	273.41	273.41	273.41	273.41	273.41
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	1163.80	1163.80	1163.80	1163.80	1163.80
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	75.87	78.58	81.45	84.47	87.66
O & M Expenses	647.52	673.54	700.48	728.34	757.59
Total	2160.60	2189.34	2219.14	2250.02	2282.46

Annexure III

1. Petition No.117/2004
2. Approval of tariff in respect of 400 kV Korba transmission system in Western Region for the period from 1.4.2004 to 31.3.2009.
3. Date of order of approval of tariff: 15.12.2005.

4. **Original tariff**

(a) Summary of the tariff awarded

(Rs. in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	359.58	359.58	359.58	359.58	359.58
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	1073.74	1073.74	1073.74	1073.74	1073.74
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	101.91	105.92	110.18	114.58	119.33
O & M Expenses	1169.09	1215.79	1265.71	1314.25	1368.77
Total	2704.33	2755.03	2809.21	2862.16	2921.42

(b) Computation of capital cost

(Rs. in lakh)

Cost approved in the order dated 15.12.2005, as on 1.4.2001 (Gross block)	23393.78
Cumulative Depreciation up to 31.3.1997	8096.75
Admitted capital cost as on 1.4.2001 for tariff purpose	15297.03
Additional capitalization due to works from 1.4.2001 to 31.3.2004	0.00
Additional capitalization due to FERV 1.4.2001 to 31.3.2004	42.16
Total capital cost as on 1.4.2004 considered for tariff purpose	15339.20

- (c) Computation of equity: Rs.7669.60 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	359.58	359.58	359.58	359.58	359.58
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	1640.46	1640.46	1640.46	1640.46	1640.46
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	111.76	115.77	120.03	124.43	129.18
O & M Expenses	1169.09	1215.79	1265.71	1314.25	1368.77
Total	3280.89	3331.60	3385.78	3438.72	3497.99

6. **Revised tariff computations**

(a) Capital cost

Cost approved in the order dated 15.12.2005, as on 1.4.2001	23393.78
Additional capitalization due to works from 1.4.2001 to 31.3.2004	0.00
Additional capitalization due to FERV from 1.4.2001 to 31.3.2004	42.16
Total capital cost as on 1.4.2004	23435.94

(b) Equity and return on equity:

Equity as on 1.4.2004 as per order

dated 15.12.2005 Rs. 7669.60 lakh

Addition on account of restitution of equity Rs. 4048.37 lakh

Reduction on account of FERV up to 31.3.2001 Rs. 158.38 lakh

Reduction on account of FERV for the period from 1.4.2001 to 31.3.2004 Rs. 21.08 lakh

Net equity as on 1.4.2004 Rs. 11538.51 lakh

Return on equity Rs.1615.39 lakh per annum

(c) Interest on working capital

(Rs. in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	446.12	472.89	501.27	531.34	563.22
O & M expenses	97.42	101.32	105.48	109.52	114.06
Receivables	542.32	550.77	559.80	568.62	578.50
Total	1,085.86	1,124.97	1,166.54	1,209.48	1,255.78
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	111.30	115.31	119.57	123.97	128.72

(d) Revised annual transmission charges

(Rs.in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	358.11	358.11	358.11	358.11	358.11
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	1615.39	1615.39	1615.39	1615.39	1615.39
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	111.30	115.31	119.57	123.97	128.72
O & M Expenses	1169.09	1215.79	1265.71	1314.25	1368.77
Total	3253.89	3304.60	3358.78	3411.73	3470.99

Annexure IV

1. Petition No.138/2004
2. Approval of tariff in respect of 400 kV D/C Ramagundum-Bhadrawati (Chandrapur) Transmission System in Southern Region and Western Region for the period from 1.4.2004 to 31.3.2009.
3. Date of order of approval of tariff: 20.12.2005.
4. **Original tariff**

- (a) Summary of the tariff awarded

(Rs. in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	90.53	90.53	90.53	90.53	90.53
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	274.82	274.82	274.82	274.82	274.82
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	21.55	22.37	23.23	24.12	25.08
O & M Expenses	193.11	200.83	209.06	217.10	226.09
Total	580.01	588.54	597.63	606.57	616.52

- (b) Computation of capital cost

(Rs. in lakh)

Cost approved in the order dated 20.12.2005, as 1.4.2001 (Gross block)	5146.15
Cumulative Depreciation up to 31.3.1997	1260.00
Admitted capital cost as on 1.4.2001 for tariff purpose	3886.15
Additional capitalization due to works from 1.4.2001 to 31.3.2004	0.00
Additional capitalization due to FERV 1.4.2001 to 31.3.2004	39.82
Total capital cost as on 1.4.2004 for tariff purpose	3925.97

- (c) Computation of equity: Rs. 1962.98 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	90.53	90.53	90.53	90.53	90.53
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	363.02	363.02	363.02	363.02	363.02
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	23.09	23.90	24.76	25.66	26.62
O & M Expenses	193.11	200.83	209.06	217.10	226.09
Total	669.75	678.28	687.37	696.30	706.25

6. Revised tariff computations

(a) Capital cost

Cost approved in the order dated 20.12.2005, as on 1.4.2001	5146.15
Additional capitalization due to works from 1.4.2001 to 31.3.2004	0.00
Additional capitalization due to FERV from 1.4.2001 to 31.3.2004	39.82
Total capital cost as on 1.4.2004	5185.97

(b) Equity and return on equity:

Equity as on 1.4.2004 as per order

dated 20.12.2005 Rs. 1962.98 lakh

Addition on account of restitution of equity Rs. 630.00 lakh

Reduction on account of FERV up to 31.3.2001 Rs. 149.57 lakh

Reduction on account of FERV for the period from 1.4.2001 to 31.3.2004 Rs. 19.91 lakh

Net equity as on 1.4.2004 Rs. 2423.50 lakh

Return on equity Rs. 339.29 lakh per annum

(c) Interest on working capital

(Rs. in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Maintenance Spares	97.53	103.38	109.59	116.16	123.13
O & M expenses	16.09	16.74	17.42	18.09	18.84
Receivables	107.41	108.83	110.35	111.83	113.49
Total	221.03	228.95	237.35	246.09	255.46
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	22.66	23.47	24.33	25.22	26.19

(d) Revised annual transmission charges

(Rs.in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	89.39	89.39	89.39	89.39	89.39
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	339.29	339.29	339.29	339.29	339.29
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	22.66	23.47	24.33	25.22	26.19
O & M Expenses	193.11	200.83	209.06	217.1	226.09
Total	644.45	652.98	662.07	671.01	680.96