

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 185/TT/2013**

**Coram:**

**Shri Gireesh B. Pradhan, Chairperson  
Shri A.K. Singhal, Member  
Shri A.S. Bakshi, Member**

**Date of Hearing: 26.08.2014**

**Date of Order : 29.05.2015**

**In the matter of:**

Petition under Section 62(1)(c) of the Electricity Act, 2003 for determination of wheeling charges in respect of Transmission System of Odisha Power Transmission Corporation Limited (OPTCL) comprising the 220 kV D/C Rourkela-Tarkera-Budhipadar-Korba (Odisha Portion) line and associated substation bays with effect from 1.4.2009 to 31.3.2014 for transmission of surplus power from NTPC power stations in Eastern Region (ER) to Western Region (WR).

**And in the matter of:**

Odisha Power Transmission Corporation Limited,  
Janpath, Bhubaneswar

**...Petitioner**

**Vs**

1. Chhattisgarh State Electricity Power Distribution Company Limited,  
Dangania, Raipur,  
Chhattisgarh
2. Madhya Pradesh Power Management Company Limited,  
Shakti Bhawan, Rampur,  
Jabalpur-482 008
3. Maharashtra State Electricity Distribution Company Limited,  
5th floor, Prakkashgad, Plot No. G-9,  
Bandra (East), Mumbai
4. Gujarat Urja Vikas Nigam Limited,  
Sardar Patel Vidyut Bhawan,  
Race Course Road, Vadodara-390 007

5. Electricity Department,  
Government of Goa, Vidyut Bhawan,  
Division-II, Panaji, Goa

6. Electricity Department,  
Administration of Daman and Diu,  
Silvasa, Daman

.....**Respondents**

**For petitioner** : Shri R K Mehta, Advocate, OPTCL  
Shri Ishita Chaudhuri Dasgupta, Advocate, OPTCL  
Shri S. K. Pasi, OPTCL  
Shri M.R. Das, OPTCL

**For respondents** : Shri Dilip Singh, MPPMCL

### **ORDER**

This petition has been filed by Orissa Power Transmission Corporation Limited (OPTCL) seeking approval of wheeling charges in respect of Transmission System of OPTCL comprising the 220 kV D/C Rourkela-Tarkera-Budhipadar-Korba (Odisha Portion) Line and associated sub-station bays (hereinafter referred to as “the transmission asset”) for the period from 1.4.2009 to 31.3.2014 for transmission of surplus power from NTPC power stations in Eastern Region (ER) to Western Region (WR) based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, (hereinafter referred to as “the 2009 Tariff Regulations”).

2. The surplus power from NTPC power stations in Eastern Region (ER) to the constituents of Western Region (WR) is transmitted through the Transmission System of Odisha Power Transmission Corporation Limited (OPTCL) comprising the 220 kV D/C Rourkela-Tarkera-Budhipadar-Korba (Odisha Portion) line and associated eight number sub-station bays with effect from May,1997.

3. Details of the assets for which tariff is being determined in this order are as under:-

**A. Transmission Lines:**

- (a) 220 kV Rourkela-Tarkera D/C line (15.34 km)
- (b) 220 kV Tarkera-Budhipadar (110.21 km) D/C line including two outgoing bays at Tarkera
- (c) 220 kV Budhipadar-Korba (Odisha Portion-60 km) D/C line.

**B. Substation:**

- (d) 4 nos. of bays (2 nos. incoming and 2 nos. outgoing) bays at Budhipadar

4. For the period 2001-04, the petitioner filed Petition No.6/2004 for determination of charges in respect of Transmission System of GRIDCO for wheeling of power from NTPC stations in Eastern Region (ER) through their system to MPSEB. The Commission directed EREB to calculate wheeling charges in accordance with the principles contained in the notification dated 26.3.2001 (The terms and conditions of tariff for the period 1.4.2001 to 31.3.2004). Based on the calculation submitted by the Member Secretary, EREB, the “wheeling charges” for the 2001-04 period was allowed by order dated 23.3.2007. “Wheeling charges” for the instant transmission assets for the period 2004-09 were allowed vide order dated 22.2.2014 and corrigendum dated 7.5.2015 in Petition No. 25/TT/2011.

**Date of commercial operation**

5. The Commission in its order dated 22.2.2014 in Petition No.25/TT/2011 has observed as given overleaf:-

“5. As per the Report dated 30.09.2005 on “Fixation of Wheeling Charges in respect of Transmission System of GRIDCO for wheeling of power from NTPC stations in ER through their system to MPSEB with effect from 01.04.2001”, submitted to the Commission by Member Secretary, Eastern Region Electricity Board, date of commercial operation and the capital cost of different assets covered in the petition are as below:-

Assets	Date of commercial operation	(₹ in lakh)
		Cost as on DOCO
<b>Asset-1:</b> 220 kV Rourkela-Tarkera D/C line including two incoming bays at Tarkera.	15-12-1993	758.18
<b>Asset-2:</b> 220 kV D/C Tarkera-Budhipadar line including two outgoing bays.	29.03.1994	1705.70
<b>Asset-3:</b> 2 nos. 220 kV D/C incoming and 2 nos. outgoing bays at Budhipadar S/S.	29.03.1994	800.56
<b>Asset-4:</b> 220 kV D/C Budhipadar-Korba line (Odisha portion).	Assumed to be prior to 1991	720.00

6. .... Thus, the notational dates of commercial operation considered for working out the tariff are as follows:-

Assets	Notional DOCO
<b>Asset-1:</b> 220 kV Rourkela-Tarkera D/C line including two incoming bays at Tarkera.	1.4.1994
<b>Asset-2:</b> 220 kV D/C Tarkera-Budhipadar line including two outgoing bays.	1.4.1994
<b>Asset-3:</b> 2 nos. 220 kV D/C incoming and 2 nos. outgoing bays at Budhipadar S/S.	1.4.1994
<b>Asset-4:</b> 220 kV D/C Budhipadar-Korba line (Odisha portion).	1.4.1991

The above dates of commercial operation have been considered for the purpose of computation of useful life of the instant transmission assets.

6. Details of the “wheeling charges” claimed by the petitioner are as under:-

Particulars	Asset - 1				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	13.05	13.05	13.05	13.05	13.05
Interest on Loan	-	-	-	-	-
Return on equity	89.01	89.01	89.01	89.01	89.01
Interest on Working Capital	6.00	6.22	6.46	6.71	6.97
O & M Expenses	77.49	81.92	86.62	91.56	96.79
<b>Total</b>	<b>185.56</b>	<b>190.21</b>	<b>195.14</b>	<b>200.33</b>	<b>205.83</b>

(₹ in lakh)

Particulars	Asset-2				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	25.24	25.24	25.24	25.24	25.24
Interest on Loan	-	-	-	-	-
Return on equity	200.26	200.26	200.26	200.26	200.26
Interest on Working Capital	9.85	10.15	10.46	10.79	11.14
O & M Expenses	103.01	108.86	115.17	121.73	128.67
<b>Total</b>	<b>338.36</b>	<b>344.51</b>	<b>351.14</b>	<b>358.02</b>	<b>365.31</b>

Particulars	Asset-3				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	16.89	16.89	16.89	16.89	16.89
Interest on Loan	-	-	-	-	-
Return on equity	93.99	93.99	93.99	93.99	93.99
Interest on Working Capital	6.44	6.68	6.93	7.19	7.47
O & M Expenses	146.72	155.12	164.00	173.36	183.28
<b>Total</b>	<b>264.04</b>	<b>272.68</b>	<b>281.81</b>	<b>291.43</b>	<b>301.63</b>

Particulars	Asset-4				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	4.20	4.20	4.20	4.20	4.20
Interest on Loan	-	-	-	-	-
Return on equity	84.53	84.53	84.53	84.53	84.53
Interest on Working Capital	2.66	2.70	2.75	2.80	2.86
O & M Expenses	16.14	17.04	18.06	19.08	20.16
<b>Total</b>	<b>107.53</b>	<b>108.48</b>	<b>109.55</b>	<b>110.62</b>	<b>111.75</b>

7. The details submitted by the petitioner in support of its claim for interest on working capital are given under:-

(₹ in lakh)

Particulars	Asset-1				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	11.62	12.29	12.99	13.73	14.52
O & M expenses	6.46	6.83	7.22	7.63	8.07
Receivables	30.93	31.70	32.52	33.39	34.30
<b>Total</b>	<b>49.01</b>	<b>50.82</b>	<b>52.73</b>	<b>54.75</b>	<b>56.89</b>
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
<b>Interest</b>	<b>6.00</b>	<b>6.22</b>	<b>6.46</b>	<b>6.71</b>	<b>6.97</b>
Particulars	Asset-2				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	15.45	16.33	17.28	18.26	19.30
O & M expenses	8.58	9.07	9.60	10.14	10.72
Receivables	56.39	57.42	58.42	59.67	60.68
<b>Total</b>	<b>80.43</b>	<b>82.82</b>	<b>85.29</b>	<b>88.07</b>	<b>90.70</b>
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
<b>Interest</b>	<b>9.85</b>	<b>10.15</b>	<b>10.46</b>	<b>10.79</b>	<b>11.14</b>

(₹ in lakh)

Particulars	Asset-3				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	5.50	5.82	6.15	6.50	6.87
O & M expenses	3.06	3.23	3.42	3.61	3.82
Receivables	44.01	45.45	46.97	48.57	50.27
<b>Total</b>	<b>52.57</b>	<b>54.50</b>	<b>56.54</b>	<b>58.68</b>	<b>60.96</b>
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
<b>Interest</b>	<b>6.44</b>	<b>6.68</b>	<b>6.93</b>	<b>7.19</b>	<b>7.47</b>
Particulars	Asset-4				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	2.42	2.56	2.71	2.86	3.02
O & M expenses	1.35	1.42	1.51	1.59	1.68
Receivables	17.92	18.08	18.26	18.44	18.63
<b>Total</b>	<b>21.69</b>	<b>22.06</b>	<b>22.47</b>	<b>22.89</b>	<b>23.33</b>
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
<b>Interest</b>	<b>2.66</b>	<b>2.70</b>	<b>2.75</b>	<b>2.80</b>	<b>2.86</b>

8. The petitioner has made the following prayers:-

"(a) Determine the Wheeling charges in respect of Transmission System of Orissa Power Transmission Corporation Limited (OPTCL) comprising the 220 kV D/C Rourkela-Tarkera-Budhipadar-Korba (Odisha Portion) line and associated substation bays with effect from 1.4.2009 to 31.3.2014 for transmission of power from stations in Eastern Region (ER) to Western Region (WR).

(b) Direct Member Secretary, ERPC to allocate the Wheeling charges to the beneficiaries of Western Region in the ratio of duration and quantum of contracted power in line with Para 40 of order dated 23.03.2007 passed by this Hon'ble Commission."

9. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under Section 64 of the Electricity Act. Madhya Pradesh Power Management Company Limited (MPPMCL), Respondent No. 2 has filed reply dated 31.5.2014 and has raised the issue like determination of Wheeling charges, sharing of transmission charges, Return on Equity, Depreciation and Interest on Working Capital. The petitioner has filed its rejoinder vide affidavit dated 15.7.2014. The objections of

the respondent and submissions of the petitioner have been dealt with in the relevant paragraphs of this order.

10. Having heard the representatives of the parties, the petitioner and perused the material on record, we proceed to dispose of the petition.

11. MPPMCL has in its reply vide affidavit dated 31.5.2014 submitted that the prayers made by the petitioner are not in accordance with the 2009 Tariff Regulations. "Wheeling charges" have not been defined in the 2009 Tariff Regulations and the petitioner should have prayed for determination of transmission and not determination of "wheeling charges" and the petitioner should modify the prayer accordingly. MPPMCL has further submitted that the transmission charges are sought to be allocated through a direction by the Commission to Member Secretary, ERPC in the ratio of duration and quantum of contracted power by the beneficiaries of Western Region as against sharing by the beneficiaries in accordance with Regulation 23 of the 2009 Tariff Regulations.

12. The petitioner vide rejoinder dated 15.7.2014 has submitted that though the term "wheeling charges" has not been defined in the 2009 Tariff Regulations, the definition is covered under Section 2(76) of the Electricity Act, 2003 (Act) and in view of the provisions under Regulation 3(44) of the 2009 Tariff Regulations the petition is maintainable. The petitioner further submitted that on a similar petition, the Commission has allowed the "wheeling charges" for the 2004-09 period vide order dated 22.2.2014 in Petition No. 25/TT/2011. As regards sharing of "wheeling charges", the petitioner has submitted that the petitioner's prayer for allocation of "wheeling

charges” among beneficiaries of WR in the ratio of duration and quantum of contracted power by Member Secretary, ERPC is in line with the Commission’s order dated 23.3.2007 in Petition No. 6/2004 for period 2001-04 which has been adopted in its order dated 22.2.2014 in Petition No. 25/TT/2011 for tariff period 2004-09. The petitioner has also submitted that the Regulation 23 of the 2009 Tariff Regulations is not applicable for sharing of Wheeling charges, as the OPTCL transmission system is yet to be included in the Inter-State Transmission System (ISTS).

13. We have considered the submissions made by the petitioner and the MPPMCL. The petitioner has prayed for determination of wheeling charges. The term “wheeling” has been defined in sub-section (76) of Section 2 of the Act as under:-

“(76) “wheeling” means the operation whereby the distribution system and associated facilities of a transmission licensee or distribution licensee, as the case may be, are used by another person for the conveyance of electricity on payment of charges to be determined under Section 62”

From the above provision, it is apparent that wheeling charges were to be determined under Section 62 of the Act. The Commission is determining the tariff of the transmission assets under Section 62 of the Act. Based on the transmission charges determined, ERPC shall determine the wheeling charges in proportion to the transmission asset being used by various utilities. Therefore, we do not see any infirmity in the prayer of the petitioner.

### **Capital Cost**

14. The capital cost is defined in Regulation 7 of the 2009 Tariff Regulations. The tenth proviso to Regulation 7 (2) of the 2009 Tariff Regulations provides as under:-



“Provided also that in case of the existing projects, the capital cost admitted by the Commission prior to 1.4.2009 and the additional expenditure projected to be incurred for the respective year of the tariff period 2009-14, as may be admitted by the Commission, shall form the basis for determination of tariff.”

15. The Commission, vide its order dated 22.2.2014 in Petition No. 25/TT/2011 observed as given under:-

“19. The Commission, vide its order dated 23.03.2007 in Petition No. 6/2004 admitted ₹3984.44 lakh towards capital expenditure for determining the wheeling charges. Accordingly, based on the above order of the Commission, gross block/capital expenditure of ₹3984.44 lakh as on 1.4.2004 has been considered in the present petition for the purpose of tariff determination.

20. The petitioner has not claimed any additional capital expenditure during the period 2004-09”

16. The petitioner has claimed the following capital expenditure as on 1.4.2009:-

		(₹ in lakh)
Particulars	Particulars	Cost as on 1.4.2009
<b>Asset-1</b>	220 kV Rourkela-Tarkera D/C line including two incoming bays at Tarkera.	758.18
<b>Asset-2</b>	220 kV D/C Tarkera-Budhipadar line including two outgoing bays.	1705.70
<b>Asset-3</b>	2 nos. 220 kV D/C incoming and 2 nos. outgoing bays at Budhipadar Sub-station.	800.56
<b>Asset-4</b>	220 kV D/C Budhipadar-Korba line	720.00
	<b>Total</b>	<b>3984.44</b>

### **Additional Capital Expenditure**

17. The petitioner has not claimed any additional capital expenditure during the period 2009-14.

### **Debt- Equity Ratio**

18. As regards debt-equity ratio, Regulation 12 of the 2009 Tariff Regulations, provides as under:-

“12. Debt-Equity Ratio (1) For a project declared under commercial operation on or after 1.4.2009, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff:

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

**Explanation-** The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

(2) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2009 shall be considered.

(3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”

19. The Commission, vide order dated 22.2.2014 in Petition No. 25/TT/2011 has observed as under:-

“22. The Debt-Equity ratio considered for Fixation of Wheeling Charges for 2001-04 period was 50:50. Therefore, in line with clause (1) above, Debt-Equity ratio of 50:50 has been considered in the tariff calculations for 2004-09 period. The details of Debt-Equity as on the date of commercial operation of the assets are as follows. The same Debt-Equity ratio is applicable for 1.4.2004 and 31.3.2009.”

20. The debt-equity considered for fixation of “wheeling charges” for the 2004-09 period was 50:50. The same debt-equity ratio of 50:50 has been considered for computation of “wheeling charges” for the 2009-14 tariff period. The debt-equity ratio of the transmission assets as on 1.4.2009 and 31.3.2014 are the same as there is no add-cap. The details are as given overleaf:-

(₹ in lakh)

Particulars	Asset-1		Asset-2		Asset-3		Asset-4	
	Amount	%	Amount	%	Amount	%	Amount	%
Debt	379.09	50.00	852.85	50.00	400.28	50.00	360.00	50.00
Equity	379.09	50.00	852.85	50.00	400.28	50.00	360.00	50.00
<b>Total</b>	<b>758.18</b>	<b>100.00</b>	<b>1705.70</b>	<b>100.00</b>	<b>800.56</b>	<b>100.00</b>	<b>720.00</b>	<b>100.00</b>

### Return on Equity

21. As regards return on equity, Regulation 15 of the 2009 Tariff Regulations, provides the following:-

“15. (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 12.

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% for thermal generating stations, transmission system and run of the river generating station, and 16.5% for the storage type generating stations including pumped storage hydro generating stations and run of river generating station with pondage and shall be grossed up as per clause (3) of this regulation:

Provided that in case of projects commissioned on or after 1st April, 2009, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in **Appendix-II**:

Provided further that the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever.

(3) The rate of return on equity shall be computed by grossing up the base rate with the Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as per the Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be:

(4) Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where t is the applicable tax rate in accordance with clause (3) of this regulation.”

22. The petitioner has claimed return on the basis of equity as on 1.4.2009 and claimed RoE on pretax basis @ 23.481% for the tariff period 2009-14. The respondent MPPMCL has submitted that the rate claimed by the

petitioner is applicable only if normal corporate tax @ 33.99% is paid by the petitioner and as per Form-3 submitted by the petitioner the petitioner has not paid any tax. As such, RoE @ 15.50% is only payable. In response, the petitioner has submitted in its rejoinder that it is not correct that no tax has been paid by them. The petitioner has submitted that although no tax has been paid in the first two years i.e. 2009-10 and 2010-11 due to credit on account of carry forward of unabsorbed depreciation of earlier years, allowed under the income Tax Act, 1961, Minimum Alternate Tax (MAT) has been paid for the next two years (2011-12 and 2012-13) @ 20.00775%. Tax for the year 2013-14 has been paid at the normal corporate tax rate of 33.990%.

23. The issue was again raised by MPPMCL during the hearing on 26.8.2014. The Commission directed the petitioner to file documentary proof by way of deposit of the advance tax for the year 2013-14 to establish that it has paid tax at normal corporate rate. The petitioner vide additional affidavit dated 26.8.2014 submitted that the amount of Tax Deducted At Source (TDS) on their revenue stream being higher than the amount of tax liability, they have not deposited any advance/self assessment tax and have instead enclosed a copy of Form-26AS as downloaded from the site of Income Tax Department. Though, the petitioner has established that they did not have to pay any advance/self assessment tax, but has not submitted proof to establish that normal corporate tax rate was applicable to the petitioner for the year 2013-14.

24. In our opinion, as submitted by the petitioner there may not be a need of actual cash outflow of tax in all the years but a tax liability may exist which

may get adjusted with a credit for carry forward of unabsorbed depreciation or a higher amount of TDS, which seems to be the case of the petitioner. The petitioner is directed to submit on affidavit a proof of having paid and assessed for tax at normal corporate rate for year 2013-14, by a certified copy of the computation of income/return of Income Tax or a copy of the tax audit report showing the rate of tax liability rate or a certified copy of the assessment order for the financial year 2013-14 at the truing up petition. The petitioner is further directed to submit on affidavit the reasons for not depositing the Minimum Alternate Tax (MAT) during 2009-10 and 2010-11 and same is in compliance to the Section 115 J of the Income Tax Act, 1961. The petitioner is also directed to file a copy of the Assessment Orders issued by the Income Tax Department for the year 2009-10 to 2013-14 at the time of truing up.

25. There is no additional capital expenditure during 2009-14, as stated in para 17. Details of the return on equity allowed are as follows:-

(₹ in lakh)

Particulars	Asset-1				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity	379.09	379.09	379.09	379.09	379.09
Addition due to Additional Capitalisation	-	-	-	-	-
Closing Equity	379.09	379.09	379.09	379.09	379.09
Average Equity	379.09	379.09	379.09	379.09	379.09
Return on Equity (base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09	11.330%	11.330%	11.330%	11.330%	11.330%
Rate of RoE (Pre-Tax)	17.481%	17.481%	17.481%	17.481%	17.481%
<b>Return on Equity (Pre-Tax)</b>	<b>66.27</b>	<b>66.27</b>	<b>66.27</b>	<b>66.27</b>	<b>66.27</b>

Particulars	Asset-2				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity	852.85	852.85	852.85	852.85	852.85
Addition due to Additional Capitalisation	-	-	-	-	-
Closing Equity	852.85	852.85	852.85	852.85	852.85
Average Equity	852.85	852.85	852.85	852.85	852.85

Return on Equity (base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09	11.330%	11.330%	11.330%	11.330%	11.330%
Rate of RoE (Pre-Tax)	17.481%	17.481%	17.481%	17.481%	17.481%
<b>Return on Equity (Pre-Tax)</b>	<b>149.09</b>	<b>149.09</b>	<b>149.09</b>	<b>149.09</b>	<b>149.09</b>

Particulars	Asset-3				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity	400.28	400.28	400.28	400.28	400.28
Addition due to Additional Capitalisation	-	-	-	-	-
Closing Equity	400.28	400.28	400.28	400.28	400.28
Average Equity	400.28	400.28	400.28	400.28	400.28
Return on Equity (base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09	11.330%	11.330%	11.330%	11.330%	11.330%
Rate of RoE (Pre-Tax)	17.481%	17.481%	17.481%	17.481%	17.481%
<b>Return on Equity (Pre-Tax)</b>	<b>69.97</b>	<b>69.97</b>	<b>69.97</b>	<b>69.97</b>	<b>69.97</b>

Particulars	Asset-4				
	2009-10	2010-11	2011-12	2012-13	2013-14
Opening Equity	360.00	360.00	360.00	360.00	360.00
Addition due to Additional Capitalisation	-	-	-	-	-
Closing Equity	360.00	360.00	360.00	360.00	360.00
Average Equity	360.00	360.00	360.00	360.00	360.00
Return on Equity (base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09	11.330%	11.330%	11.330%	11.330%	11.330%
Rate of RoE (Pre-Tax)	17.481%	17.481%	17.481%	17.481%	17.481%
<b>Return on Equity (Pre-Tax)</b>	<b>62.93</b>	<b>62.93</b>	<b>62.93</b>	<b>62.93</b>	<b>62.93</b>

### Interest on loan

26. As per the petition, loan has already been repaid, hence, Interest on Loan component is NIL.

### Depreciation

27. As regards depreciation, Regulation 17 of the 2009 Tariff Regulations provides as follows:-

“17. **Depreciation** (1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.

(2) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.

Provided that in case of hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site;

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciable value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff.

(3) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-III to these regulations for the assets of the generating station and transmission system:

Provided that, the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the assets.

(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2009 from the gross depreciable value of the assets.

(6) Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.”

28. MPPMCL has submitted that petitioner has considered depreciation by spreading over balance depreciable value of all four assets as on 1.4.2009 over the balance useful life of the assets.

29. In response to the above, the petitioner has submitted in its rejoinder that at the time of filing the petition, the order for Petition No. 25/TT/2011 had not been passed by the Commission and as such the petitioner has computed the depreciation following the norms laid down in the 2009 Tariff Regulations considering the closing balance for Financial Year 2008-09 as indicated in the Petition No. 25/TT/2011. The petitioner has requested to allow depreciation as per the 2009 Tariff Regulations.

30. In the meantime, the Commission has issued order dated 22.2.2014 and corrigendum dated 7.5.2015 in Petition No. 25/TT/2011. The life of all four assets has been considered as per notional date of commercial operation as per order dated 22.2.2014 and corrigendum dated 7.5.2015 in Petition No. 25/TT/2011.

31. In view of above, depreciation has been considered by spreading the balance depreciable value of the asset over its balance useful life in line with the 2009 Tariff Regulations. For working out the life of assets, notional dates of commercial operation, mentioned in para 5 above, have been considered and concept of 'Weighted Average Useful Life', wherever applicable, has been applied. Further, the Cumulative Depreciation/Advanced Against Depreciation of the instant transmission assets as on 31.3.2009, has been considered as given hereunder:-

(₹ in lakh)

Particulars	Cumulative Depreciation / Advance Against Depreciation as on 31.3.2009
Asset-1	470.29
Asset-2	1037.21
Asset-3	521.43
Asset-4	528.40

32. Details of the depreciation worked out are as follows:-

(₹ in lakh)

Particulars	Asset-1				
	2009-10	2010-11	2011-12	2012-13	2013-14
As per last order	758.18	758.18	758.18	758.18	758.18
Addition due to Addl. Capitalisation	-	-	-	-	-
Gross Block	758.18	758.18	758.18	758.18	758.18
Average Gross Block	758.18	758.18	758.18	758.18	758.18
Rate of Depreciation	5.28%	5.28%	5.28%	5.28%	5.28%
Depreciable Value	682.36	682.36	682.36	682.36	682.36
Elapsed life (Beginning of the year)	15	16	17	18	19
Balance Useful life of the asset	15	14	13	12	11
Remaining Depreciable Value	212.07	197.93	183.80	169.66	155.52
Depreciation	14.14	14.14	14.14	14.14	14.14
Cumulative Depreciation/Advance against Depreciation	<b>484.43</b>	<b>498.57</b>	<b>512.70</b>	<b>526.84</b>	<b>540.98</b>



(₹ in lakh)

Particulars	Asset-2				
	2009-10	2010-11	2011-12	2012-13	2013-14
As per last order	1705.70	1705.70	1705.70	1705.70	1705.70
Addition due to Addl. Capitalisation	-	-	-	-	-
Gross Block	1705.70	1705.70	1705.70	1705.70	1705.70
Average Gross Block	1705.70	1705.70	1705.70	1705.70	1705.70
Rate of Depreciation	5.28%	5.28%	5.28%	5.28%	5.28%
Depreciable Value	1535.13	1535.13	1535.13	1535.13	1535.13
Elapsed life (Beginning of the year)	15	16	17	18	19
Balance Useful life of the asset	18	17	16	15	14
Remaining Depreciable Value	497.92	470.26	442.60	414.93	387.27
Depreciation	27.66	27.66	27.66	27.66	27.66
Cumulative Depreciation/Advance against Depreciation	<b>1064.87</b>	<b>1092.53</b>	<b>1120.20</b>	<b>1147.86</b>	<b>1175.52</b>
Particulars	Asset-3				
	2009-10	2010-11	2011-12	2012-13	2013-14
As per last order	800.56	800.56	800.56	800.56	800.56
Addition due to Addl. Capitalisation	-	-	-	-	-
Gross Block	800.56	800.56	800.56	800.56	800.56
Average Gross Block	800.56	800.56	800.56	800.56	800.56
Rate of Depreciation	5.28%	5.28%	5.28%	5.28%	5.28%
Depreciable Value	720.50	720.50	720.50	720.50	720.50
Elapsed life (Beginning of the year)	15	16	17	18	19
Balance Useful life of the asset	10	9	8	7	6
Remaining Depreciable Value	199.07	179.16	159.26	139.35	119.44
Depreciation	19.91	19.91	19.91	19.91	19.91
Cumulative Depreciation/Advance against Depreciation	<b>541.34</b>	<b>561.25</b>	<b>581.16</b>	<b>601.06</b>	<b>620.97</b>

Particulars	Asset-4				
	2009-10	2010-11	2011-12	2012-13	2013-14
As per last order	720.00	720.00	720.00	720.00	720.00
Addition due to Addl. Capitalisation	-	-	-	-	-
Gross Block	720.00	720.00	720.00	720.00	720.00
Average Gross Block	720.00	720.00	720.00	720.00	720.00
Rate of Depreciation	5.28%	5.28%	5.28%	5.28%	5.28%
Depreciable Value	648.00	648.00	648.00	648.00	648.00
Elapsed life (Beginning of the year)	18	19	20	21	22
Balance Useful life of the asset	17	16	15	14	13
Remaining Depreciable Value	119.60	112.56	105.53	98.49	91.46
Depreciation	7.04	7.04	7.04	7.04	7.04
Cumulative Depreciation/Advance against Depreciation	<b>535.44</b>	<b>542.47</b>	<b>549.51</b>	<b>556.54</b>	<b>563.58</b>

### **Operation & Maintenance Expenses (O&M Expenses)**

33. The norms for O&M Expenses for the transmission system based on the type of sub-station and the transmission line are specified in clause (g) of

Regulation 19 of the 2009 Tariff Regulations. Accordingly, the following amount of O&M Expenses have been considered for the purpose of tariff calculations:-

(₹ in lakh)

Element	2009-10	2010-11	2011-12	2012-13	2013-14
D/C Transmission line (₹ lakh/ckt-km)	0.269	0.284	0.301	0.318	0.336
220 kV bay (₹ lakh/bay)	36.68	38.78	41.00	43.34	45.82

34. Based on the above norms, year-wise O & M Expenses for 185.55 km of transmission line and eight bays have been worked out from 2009-10 to 2013-14 and the details are summarized below:-

(₹ in lakh)

S. No.	Element	2009-10	2010-11	2011-12	2012-13	2013-14
1	220 kV Rourkela-Tarkera D/C line (15.35 km)	4.13	4.36	4.62	4.88	5.16
	2 nos. of 220 kV incoming bays at Tarkera	73.36	77.56	82.00	86.68	91.64
2	220 kV Tarkera-Budhipadar D/C line (110.21 km)	29.65	31.30	33.17	35.05	37.03
	2 nos. 220 kV outgoing bays at Tarkera	73.36	77.56	82.00	86.68	91.64
3	2 nos. 220 kV incoming and 2 nos. outgoing bays at Budhipadar	146.72	155.12	164.00	173.36	183.28
4	220 kV D/C Budhipadar-Korba line (Odisha portion-60.00 km)	16.14	17.04	18.06	19.08	20.16
<b>Total</b>		<b>343.36</b>	<b>362.94</b>	<b>383.85</b>	<b>405.73</b>	<b>428.91</b>

### **Interest on Working Capital (IWC)**

35. As per the 2009 Tariff Regulations the components of the working capital and the interest thereon are discussed hereunder:-

### **(i) Receivables**

As per Regulation 18(1) (c) (i) of the 2009 Tariff Regulations, receivables as a component of working capital will be equivalent to two months of annual transmission charges. In the tariff being allowed, receivables have been worked out on the basis of 2 months transmission charges.

### **(ii) Maintenance Spares**

Regulation 18 (1) (c) (ii) of the 2009 Tariff Regulations provides for maintenance spares @ 15% per annum of the O & M Expenses as part of the working capital from 1.4.2009. The value of maintenance spares has accordingly been worked out.

### **(iii) O & M Expenses**

Regulation 18(1) (c) (iii) of the 2009 Tariff Regulations provides for O&M Expenses for one month to be included in the working capital. This has been considered in the working capital.

### **(iv) Rate of Interest on Working Capital**

In accordance with clause (3) of Regulation 18 of the 2009 Tariff Regulations, as amended, rate of interest on working capital shall be on normative basis and shall be equal to State Bank of India Base Rate @ 12.25% (Base rate as on 1.4.2009 and 350 basis points) for asset. The interest on working capital for all the assets covered in the petition has been worked out accordingly.

36. MPPMCL has submitted that IWC should be reduced on account of reduction in two months receivables due to reduction in ROE from 23.41% to

15.50% per annum. In response, the petitioner has requested to allow IWC as per the norms specified in the 2009 Tariff Regulations. We would like to clarify that the IWC is allowed as per the norms specified in the 2009 Tariff Regulations.

37. The necessary computations in support of interest on working capital are herein below:-

(₹ in lakh)

Particulars	Asset-1				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	11.62	12.29	12.99	13.73	14.52
O & M expenses	6.46	6.83	7.22	7.63	8.07
Receivables	27.24	28.02	28.84	29.70	30.62
<b>Total</b>	<b>45.32</b>	<b>47.13</b>	<b>49.05</b>	<b>51.07</b>	<b>53.21</b>
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
<b>Interest</b>	<b>5.55</b>	<b>5.77</b>	<b>6.01</b>	<b>6.26</b>	<b>6.52</b>
Particulars	Asset-2				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	15.45	16.33	17.28	18.26	19.30
O & M expenses	8.58	9.07	9.60	10.14	10.72
Receivables	48.10	49.12	50.23	51.38	52.59
<b>Total</b>	<b>72.13</b>	<b>74.52</b>	<b>77.10</b>	<b>79.78</b>	<b>82.61</b>
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
<b>Interest</b>	<b>8.84</b>	<b>9.13</b>	<b>9.44</b>	<b>9.77</b>	<b>10.12</b>
Particulars	Asset-3				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	22.01	23.27	24.60	26.00	27.49
O & M expenses	12.23	12.93	13.67	14.45	15.27
Receivables	40.97	42.44	43.99	45.63	47.37
<b>Total</b>	<b>75.20</b>	<b>78.63</b>	<b>82.26</b>	<b>86.08</b>	<b>90.13</b>
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
<b>Interest</b>	<b>9.21</b>	<b>9.63</b>	<b>10.08</b>	<b>10.54</b>	<b>11.04</b>
Particulars	Asset-4				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	2.42	2.56	2.71	2.86	3.02
O & M expenses	1.35	1.42	1.51	1.59	1.68
Receivables	14.73	14.89	15.06	15.24	15.43
<b>Total</b>	<b>18.49</b>	<b>18.86</b>	<b>19.28</b>	<b>19.70</b>	<b>20.14</b>
Rate of Interest	12.25%	12.25%	12.25%	12.25%	12.25%
<b>Interest</b>	<b>2.27</b>	<b>2.31</b>	<b>2.36</b>	<b>2.41</b>	<b>2.47</b>

## Transmission charges

38. The transmission charges being allowed for the transmission assets are summarized hereunder:-

(₹ in lakh)

Particulars	Asset-1				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	14.14	14.14	14.14	14.14	14.14
Interest on Loan	-	-	-	-	-
Return on Equity	66.27	66.27	66.27	66.27	66.27
Interest on Working Capital	5.55	5.77	6.01	6.26	6.52
O & M Expenses	77.49	81.92	86.62	91.56	96.80
<b>Total</b>	<b>163.45</b>	<b>168.10</b>	<b>173.04</b>	<b>178.22</b>	<b>183.72</b>
Particulars	Asset-2				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	27.66	27.66	27.66	27.66	27.66
Interest on Loan	-	-	-	-	-
Return on Equity	149.09	149.09	149.09	149.09	149.09
Interest on Working Capital	8.84	9.13	9.44	9.77	10.12
O & M Expenses	103.01	108.86	115.17	121.73	128.67
<b>Total</b>	<b>288.60</b>	<b>294.74</b>	<b>301.36</b>	<b>308.25</b>	<b>315.54</b>
Particulars	Asset-3				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	19.91	19.91	19.91	19.91	19.91
Interest on Loan	-	-	-	-	-
Return on Equity	69.97	69.97	69.97	69.97	69.97
Interest on Working Capital	9.21	9.63	10.08	10.54	11.04
O & M Expenses	146.72	155.12	164.00	173.36	183.28
<b>Total</b>	<b>245.81</b>	<b>254.63</b>	<b>263.96</b>	<b>273.78</b>	<b>284.20</b>
Particulars	Asset-4				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	7.04	7.04	7.04	7.04	7.04
Interest on Loan	-	-	-	-	-
Return on Equity	62.93	62.93	62.93	62.93	62.93
Interest on Working Capital	2.27	2.31	2.36	2.41	2.47
O & M Expenses	16.14	17.04	18.06	19.08	20.16
<b>Total</b>	<b>88.37</b>	<b>89.32</b>	<b>90.39</b>	<b>91.46</b>	<b>92.59</b>

## Sharing of transmission charges

39. The petitioner has prayed for a direction to Member Secretary, ERPC to allocate the wheeling charges to the beneficiaries of the Western Region in the ratio of duration and quantum of contracted power in terms of para 40 of

the order dated 23.3.2007. The Commission had issued a direction vide order dated 22.2.2014 in Petition No. 25/TT/2011 to Member Secretary, ERPC to apportion the wheeling charges based on the tariff determined for the period 2004-09 in proportion to the duration and quantum of power wheeled to the constituents of the Western Region. In respect of the transmission charges determined for the period 2009-14 in this order, we direct the Member Secretary, ERPC to apportion the wheeling charges based on the tariff determined in this order in proportion to the duration and quantum of power wheeled to the constituents of the Western Region and issue the REA for the period 1.4.2009 to 30.6.2011. Wheeling charges allowed for these assets for the period 1.4.2009 to 30.6.2011 shall be adjusted in the ARR approved by the State Commission for the said period.

40. Wheeling charges/transmission charges of these lines from 1.7.2011 onwards shall be included in the PoC computation and will be shared by the beneficiaries in accordance with the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010. Further, the wheeling charges/transmission charges allowed herein for the period 1.7.2011 to 31.3.2014 shall be recovered by the CTU from all the DICs and reimbursed to OPTCL. Wheeling charges reimbursed to OPTCL shall be adjusted in the ARR approved by the State Commission.

41. This order disposes of Petition No. 185/TT/2013.

sd/-  
**(A.S. Bakshi)**  
**Member**

sd/-  
**(A.K. Singhal)**  
**Member**

sd/-  
**(Gireesh B. Pradhan)**  
**Chairperson**