

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**PETITION NO. 37/TT/2015**

**Coram:**  
**Shri A.S. Bakshi, Member**  
**Dr. M. K. Iyer, Member**

**Date of Hearing : 11.07.2016**  
**Date of Order : 18.07.2016**

**In the Matter of:**

Truing up of transmission tariff for 2009-14 tariff block under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2009 and determination of transmission tariff for 2014-19 tariff block under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2014 for Combined Assets of Transmission System associated with Koteshwar HEP (Effective DOCO 01.05.2011) in Northern Region consisting of **Asset-1**: 400 kV D/C Koteshwar HEP — Koteshwar Pooling Station Circuit - I & II along with associated bays (DOCO 1.4.2011), **Asset-2** : LILO of Circuit-I of 765 kV Tehri-Meerut Line at Koteshwar Pooling Station along with associated bays (DOCO 1.3.2011) and **Asset-3** : LILO of Circuit-II of 765 kV Tehri-Meerut Line at Koteshwar Pooling Station along with associated bays (DOCO 1.7.2011)

**And in the Matter of:**

Power Grid Corporation of India Ltd,  
SAUDAMINI, Plot No.-2, Sector-29,  
Gurgaon-122001 (Haryana)

**.....Petitioner**

**Versus**

1. Rajasthan Rajya Vidyut Prasan Nigam Limited  
Vidyut Bhawan, Vidyut Marg, Jaipur - 302005
2. Ajmer Vidyut Vitran Nigam Limited  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur
3. Jaipur Vidyut Vitran Nigam Ltd  
400 kV GSS Building (Ground Floor), Ajmer Road,



Heerapura, Jaipur.

4. Jodhpur Vidyut Vitran Nigam Ltd  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur
5. Himachal Pradesh State Electricity Board  
Vidyut Bhawan Kumar House Complex Building li  
Shimla-171004
6. Punjab State Electricity Board  
Thermal Shedtia, Near 22 Phatak  
Patiala-147001
7. Haryana Power Purchase Centre  
Shakti Bhawan, Sector~6  
Panchkula (Haryana) 134 109
8. Power Development Deptt.  
Government of Jammu & Kashmir  
Mini Secretariat, Jammu
9. Uttar Pradesh Power Corporation Ltd.  
(Formerly Uttar Pradesh State Electricity Board)  
Shakti Bhawan, 14, Ashok Marg  
Lucknow - 226 001
10. Delhi Transco Ltd  
Shakti Sadan, Kotla Road,  
New Delhi-110002
11. BSES Yamuna Power Ltd,  
BSES Bhawan, Nehru Place ,  
New Delhi.
12. BSES Rajdhani Power Ltd,  
BSES Bhawan, Nehru Place,  
New Delhi
13. HOG (PMG)  
Tata Power Delhi Distribution Ltd.  
33 kV Substation, Building  
Hudson Lane Kingsway Camp  
North Delhi - 110009
14. Chandigarh Administration  
Sector -9, Chandigarh.
15. Uttarakhand Power Corporation Ltd.



Urja Bhawan, Kanwali Road, Dehradun.

16. North Central Railway, Allahabad.

17. New Delhi Municipal Council  
Palika Kendra, Sansad Marg,  
New Delhi-110002

....Respondent(s)

The following were present:

For Petitioner: Shri S.S. Raju, PGCIL  
Shri Jasbir Singh, PGCIL  
Shri M M Mondal, PGCIL

For Respondents: None

### ORDER

The petition has been preferred by Power Grid Corporation of India Limited (hereinafter referred to as “the petitioner”), a transmission licensee, for revision of tariff under Regulation 6 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as “the 2009 Tariff Regulations”) based on truing up of capital expenditure for the period from COD to 31.3.2014 and for determination of tariff under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) for the period from 1.4.2014 to 31.3.2019 in respect of 400 kV D/C Koteshwar HEP — Koteshwar Pooling Station Circuit - I & II along with associated bays (hereinafter referred to as “Asset 1”); LILO of Circuit-I of 765 kV Tehri-Meerut Line at Koteshwar Pooling Station along with associated bays (hereinafter referred to as “Asset 2”); and LILO of Circuit-II of 765 kV Tehri-Meerut Line at



Koteshwar Pooling Station along with associated bays (hereinafter referred to as “Asset 3”);.

2. The respondents are Transmission & distribution licensees, who are procuring transmission service from the petitioner, mainly beneficiaries of Northern Region.

3. The brief facts of the case are as follows:-

a) The investment approval of the project was accorded by the Board of Directors of PGCIL vide its letter dated 1.6.2005 at an estimated cost of ₹26034.00 lakh, including IDC of ₹ 1334.00 lakh, based on 4th Quarter, 2004 price level. The scope of work covered broadly includes:-

Transmission Lines:

- i. Koteshwar-Tehri Pooling Point (Koteshwar) 400 kV D/C line
- ii. LILO of Tehri - Merrut 765 kV lines (charged at 400 kV level) at Tehri Pooling Point (Koteshwar) (Loop in with 400 kV D/C Triple) Snow bird line & loop out with 765 kV S/C lines)

Sub-stations: (To be implemented by PGCIL)

- i. 400 kV Tehri Pooling Point (Koteshwar) Gas Insulated Sub-station (GIS) - New 50% series compensation at existing Sub-station of Power Grid at Meerut (Extension) on Tehri Pooling Point (Koteshwar)
- Meerut 765 kV 2\*S/C lines (charged at 400 kV level)

b) The details of commercial operation of the assets covered in the instant petition are as follows :-



Assets	SCOD	COD	Time Over-run (months)
Asset-1	1.7.2008	1.4.2011	33
Asset-2		1.3.2011	32
Asset-3		1.7.2011	36

c) Time over-run of 11 months was condoned in case of all assets vide order dated 20.1.2014 in Petition No. 85/TT/2011 and the remaining part time over-run was disallowed. The petitioner filed an Appeal No. 117/2014 before APTEL against disallowance of IDC and IEDC for part of time over-run disallowed. The same was dismissed by APTEL vide judgement dated 16.9.2015.

d) The transmission tariff allowed for the instant assets vide order dated 20.1.2014 is depicted below:-

(₹ in lakh)					
Asset	Particulars	2010-11	2011-12	2012-13	2013-14
Asset -1	Approved AFC in Petition No. 85/TT/2011	0.00	1328.57	1429.39	1499.26
	Revised AFC	0.00	1359.00	1361.83	1360.00
Asset- 2	Approved AFC in Petition No. 85/TT/2011	68.52	841.60	910.51	957.33
	Revised AFC	70.46	859.56	874.57	884.15
Asset-3	Approved AFC in Petition No. 85/TT/2011	0.00	628.32	906.36	952.85
	Revised AFC	0.00	649.81	884.99	894.78

e) Annual fixed charges claimed by the petitioner for 2014-19 tariff period is as follows:-

(₹ in lakh)					
Name of Asset	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Asset-1,2 and 3	3041.83	3010.88	2941.05	2871.52	2802.46



4. As per Regulation 6 of the 2009 Tariff Regulations, the Commission shall carry out truing up exercise along with the tariff petition filed for the next tariff period, with respect to the capital expenditure including additional capital expenditure incurred up to 31.3.2014, as admitted by the Commission after prudence check at the time of truing up. Further, as per Regulation 15 of the 2009 Tariff Regulations, the petitioner is required to adjust the yearly impact of MAT rate in the truing up petition for 2009-14 tariff period.

5. In this context, the petitioner has filed the instant petition on 4.1.2015, for revision of tariff for the tariff period 2009-14 in accordance with Regulation 6 of the 2009 Tariff Regulations.

6. The petitioner has served the petition on the respondents and notice of this application has been published in the newspaper in accordance with Section 64 of the Electricity Act 2003. No comments/objections have been received from the public in response to the notice in newspaper. None of the respondents have filed reply to the petition. The hearing in this matter was held on 11.7.2016.

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

#### **TRUING UP OF ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD**

8. Clause (3) of the Regulation 6 of the 2009 Tariff Regulations provides as under:-

“(3) The generating company or the transmission licensee, as the case may be, shall submit for the purpose of truing up, details of capital expenditure and additional capital expenditure incurred for the period from 1.4.2009 to 31.3.2014, duly audited and certified by the auditors”.

9. The petitioner has submitted the information as required under the 2009 Tariff Regulations for truing up of annual fixed charges for 2009-14 tariff period. The tariff for 2009-14 tariff period has been trued up as discussed in the subsequent paragraphs.

### **Capital Cost**

10. The capital cost as on COD claimed by the petitioner for the purpose of tariff determination is as follows:-

(₹ in lakh)							
Asset	Particulars	Capital Cost Approved as on COD	Addition Capital Expenditure				Total Capital Cost as on 31.3.2014
			2010-11	2011-12	2012-13	2013-14	
Asset-1	Approved in Petition No. 85/TT/2011	6993.44* (7623.93-630.49)	0.00	321.36	1193.35	0.00	8508.15
	Actual (Claimed)	6993.44	0.00	192.10	150.49	81.98	7418.02
Asset-2	Approved in Petition No. 85/TT/2011	4048.10* (4343.16-295.06)	37.83	236.07	727.84	0.00	5049.84
	Actual in Petition No. 85/TT/2011	4048.08	27.83	178.98	144.64	81.98	4481.51
Asset-3	Approved in Petition No. 85/TT/2011	4099.21* (4461.16-361.95)	0.00	208.76	725.24	0.00	5033.21
	Actual (Claimed)	4133.34	0.00	187.77	144.64	81.98	4547.73

\* Capital Cost is after deducting disallowed IDC and IEDC.

11. Clause (1) of Regulation 7 of the 2009 Tariff Regulations provides that:-

“(1) Capital cost for a project shall include:

(a) the expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan - (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed,

- up to the date of commercial operation of the project, as admitted by the Commission, after prudence check;

(b) capitalised initial spares subject to the ceiling rates specified in regulation 8; and

(c) additional capital expenditure determined under regulation 9:

Provided that the assets forming part of the project, but not in use shall be taken out of the capital cost.”

12. The petitioner has submitted the Auditor’s Certificate dated 14.10.2014 (for Asset 1 & 2) and 5.12.2014 (for Asset 3) in support of the claim of the capital cost for the transmission assets. The capital cost of the transmission assets has been worked out in the subsequent paragraphs after the treatment of the IEDC, IDC and initial spares.

### **IDC and IEDC**

13. It is observed that the total capital cost on COD claimed by the petitioner, as certified by the Auditor’s Certificate dated 14.10.2014 (for Asset 1 & 2) and 5.12.2014 (for Asset 3) in respect of aforesaid assets is the same as in the order dated 20.1.2014 in Petition No. 85/TT/2011 for these assets.

14. The time over-run of 11 months out of time over-run of 33 months, 32 months and 36 months for Asset 1, Asset 2 and Asset 3 respectively was condoned and IDC & IEDC was disallowed for the remaining period. IDC and IEDC claimed by the petitioner are same as allowed in order dated 20.1.2014. The details of IDC and IEDC disallowed and the capital cost are as follows:-

(₹ in lakh)

<b>Assets</b>	<b>Capital cost claimed as per Auditor's Certificate</b>	<b>IDC and IEDC disallowed</b>	<b>Capital cost after disallowing IEDC and IDC</b>
Asset 1	7623.93	630.49	6993.44
Asset 2	4343.16	295.06	4048.10
Asset 3	4495.28	361.95	4133.33





### Treatment of Initial Spares

15. The details of initial spares claimed by the petitioner and proportionate initial spares after deduction of IDC and IEDC from capital cost are as follows:-

(₹ in lakh)

Asset	Claimed by the petitioner		Proportionate initial spares	
	TL	S/S	TL	S/S
Asset 1	0.00	94.73	0.00	86.90
Asset 2	0.00	94.73	0.00	88.29
Asset 3	0.00	94.73	0.00	87.10

(TL-Transmission Line, S/S-Sub-station)

16. The initial spares claimed by the petitioner for all the transmission assets are within ceiling limits specified under the 2009 Tariff Regulations. Accordingly, the capital cost as on COD allowed after deducting the excess initial spares and considered for computation of tariff are as follows:-

(₹ in lakh)

Assets	Capital cost on COD after deducting IEDC and IDC	Excess initial spares disallowed		Capital cost allowed as on COD for tariff determination purpose
		TL	SS	
Asset 1	6993.44	TL	0.00	6993.44
		SS	0.00	
Asset 2	4048.10	TL	0.00	4048.10
		SS	0.00	
Asset 3	4133.33	TL	0.00	4133.33
		SS	0.00	

(TL-Transmission Line, S/S-Sub-station)

### Additional Capital Expenditure

17. Regulation 6(1) of the 2009 Regulations provides that:-

“The Commission shall carry out truing up exercise along with the tariff petition filed for the next tariff period, with respect to the capital expenditure including additional capital expenditure incurred up to 31.3.2014”



18. The additional capital expenditure approved by the Commission in the previous order and that claimed by the petitioner based on actual expenditure are depicted below:-

(₹ in lakh)

Asset	Particulars	Capital Cost as on COD	Addition Capital Expenditure				Total Capital Cost as on 31.3.2014
			2010-11	2011-12	2012-13	2013-14	
Asset-1	Approved in Petition No. 85/TT/2011	6993.44	0.00	321.36	1193.35	0.00	8508.15
	Actual (Claimed)	6993.44	0.00	192.11	150.49	81.98	7418.02
Asset-2	Approved in Petition No. 85/TT/2011	4048.10	37.83	236.07	727.84	0.00	5049.84
	Actual (Claimed)	4048.08	27.83	178.98	144.64	81.98	4481.51
Asset-3	Approved in Petition No. 85/TT/2011	4099.21	0.00	208.76	725.24	0.00	5033.21
	Actual (Claimed)	4133.34	0.00	187.77	144.64	81.98	4547.73

19. The petitioner has submitted the Auditor's Certificates dated 14.10.2014 (for Asset 1 & 2) and 5.12.2014 (for Asset 3) certifying the actual capital cost incurred towards additional capitalization for all the transmission assets. The petitioner has submitted the additional capital expenditure during 2009-14 tariff period is on account of balance and retention payments towards the transmission assets. The petitioner has claimed the actual additional capital expenditure during 2009-14 period under the provision of Regulation 9(1) and 9(2) of the 2009 Tariff Regulations.

20. The capital addition claimed by the petitioner is based on actual capital expenditure incurred as per the Auditor Certificate dated 14.10.2014 (for Asset 1 & 2)



and 5.12.2014 (for Asset 3) and the same is within the original scope of work. The additional capital expenditure claimed by the petitioner towards balance and retention payments is allowed for truing up under Regulation 9(1)(i) and 9 (2)(viii) of 2009 Tariff Regulations.

21. The additional capital expenditure during 2010-11 to 2013-14 tariff period has been allowed after disallowing IDC and IEDC and excess initial spares, the net additional capital expenditure considered for truing up is as follows:-

(₹ in lakh)

Assets	Capital Cost as on COD	Addition Capital Expenditure				Total capital cost as on 31.3.2014
		2010-11	2011-12	2012-13	2013-14	
Asset 1	6993.44	-	192.11	150.49	81.98	7418.02
Asset 2	4048.10	27.83	178.99	144.64	81.98	4481.54
Asset 3	4133.33	-	187.77	144.64	81.98	4547.72

### **Debt: Equity**

22. The debt:equity ratio of 70:30 for additional capital expenditure as claimed by the petitioner is in accordance with the Regulation 12 (3) of the 2009 Tariff Regulations and hence, same has been considered towards financing of the additional capital expenditure.

23. 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:

(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.”

24. In respect of the additional capitalization, debt: equity ratio of 70:30 has been considered in line with Regulation 12 of the 2009 Tariff Regulations. The details of the debt: equity considered for the purpose of tariff for 2009-14 tariff period is as follows:-

(₹ in lakh)

Funding	Capital cost as on COD	(%)	Additional capital expenditure during 2009-14	(%)	Total Cost as on 31.3.2014	(%)
<b>Asset 1</b>						
Debt	4895.41	70.00	297.21	70.00	5192.61	70.00
Equity	2098.03	30.00	127.37	30.00	2225.41	30.00
<b>Total</b>	<b>6993.44</b>	<b>100.00</b>	<b>424.58</b>	<b>100.00</b>	<b>7418.02</b>	<b>100.00</b>
<b>Asset 2</b>						
Debt	2833.67	70.00	303.41	70.00	3137.08	70.00
Equity	1214.43	30.00	130.03	30.00	1344.46	30.00
<b>Total</b>	<b>4048.10</b>	<b>100.00</b>	<b>433.44</b>	<b>100.00</b>	<b>4481.54</b>	<b>100.00</b>
<b>Asset 3</b>						
Debt	2893.33	70.00	290.07	70.00	3183.40	70.00
Equity	1240.00	30.00	124.32	30.00	1364.32	30.00
<b>Total</b>	<b>4133.33</b>	<b>100.00</b>	<b>414.39</b>	<b>100.00</b>	<b>4547.72</b>	<b>100.00</b>

### Return on Equity (“ROE”)

25. Clause (3), (4) and (5) of the Regulation 15 of the 2009 Tariff Regulations provide that :-

“(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:

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

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

(5) The generating company or the transmission licensee, as the case maybe, shall recover the shortfall or refund the excess Annual Fixed Charge on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission:

Provided further that Annual Fixed Charge with respect to the tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations.”

26. The variation in the tax rate during the 2009-14 tariff period applicable to the petitioner as per the Finance Act of the relevant year for the purpose of grossing up of return on equity (ROE) has been furnished as follows:-

Year	MAT Rate claimed in the current petition	Grossed up ROE (Base Rate/(1-t)) claimed in the current petition
2010-11	19.931%	19.358%
2011-12	20.008%	19.377%
2012-13	20.008%	19.377%
2013-14	20.961%	19.610%

27. The ROE as trued up and allowed is as follows:-

Particulars	Asset 1		
	2011-12	2012-13	2013-14
Approved in Petition No. 85/TT/2011	375.18	414.90	446.19
Claimed by the petitioner	412.12	422.07	433.99
Allowed after true up in this order	412.12	422.08	434.00

(₹ in lakh)



(₹ in lakh)

Particulars	Asset 2			
	2010-11 (Pro-rata)	2011-12	2012-13	2013-14
Approved in Petition No. 85/TT/2011	17.77	220.47	245.74	264.83
Claimed by the petitioner	19.66	242.14	251.54	261.23
Allowed after true up in this order	19.66	242.14	251.55	261.24

(₹ in lakh)

Particulars	Asset 3		
	2011-12 (Pro-rata)	2012-13	2013-14
Approved in Petition No. 85/TT/2011	165.34	244.94	263.96
Claimed by the petitioner	184.28	255.36	265.10
Allowed after true up in this order	184.30	255.39	265.14

### Interest on Loan (“IoL”)

28. The petitioner has submitted the weighted average rate of IoL, based on its actual loan portfolio and rate of interest. Accordingly, the IoL has been calculated based on actual interest rate submitted by the petitioner, in accordance with the Regulation 16 of the 2009 Tariff Regulations. The details of weighted average rate of interest is placed in Annexure-1. The IoL worked out is as follows:-

(₹ in lakh)

Particulars	Asset 1		
	2011-12	2012-13	2013-14
Approved in Petition No. 85/TT/2011	431.90	444.25	442.55
Claimed by the petitioner	428.31	405.10	377.92
Allowed after true up in this order	428.31	405.10	377.91



(₹ in lakh)

Particulars	Asset 2			
	2010-11 (Pro-rata)	2011-12	2012-13	2013-14
Approved in Petition No. 85/TT/2011	22.08	262.85	272.81	272.88
Claimed by the petitioner	22.13	260.79	250.40	236.60
Allowed after true up in this order	22.13	260.79	250.40	236.60

(₹ in lakh)

Particulars	Asset 3		
	2011-12 (Pro-rata)	2012-13	2013-14
Approved in Petition No. 85/TT/2011	192.76	268.09	267.86
Claimed by the petitioner	194.04	251.27	237.57
Allowed after true up in this order	194.02	251.25	237.56

### Depreciation

29. The depreciation has been worked out as per the methodology provided in the Regulation 17 of the 2009 Tariff Regulations. The depreciation allowed is as follows:-

(₹ in lakh)

Particulars	Asset 1		
	2011-12	2012-13	2013-14
Approved in Petition No. 85/TT/2011	373.15	412.93	444.44
Claimed by the petitioner	369.63	378.67	384.74
Allowed after true up in this order	369.62	378.67	384.74

(₹ in lakh)

Particulars	Asset 2			
	2010-11 (Pro-rata)	2011-12	2012-13	2013-14
Approved in Petition No. 85/TT/2011	17.53	217.31	242.55	261.77



Claimed by the petitioner	17.48	215.34	223.89	229.81
Allowed after true up in this order	17.49	215.35	223.90	229.81

(₹ in lakh)

Particulars	Asset 3		
	2011-12 (Pro-rata)	2012-13	2013-14
Approved in Petition No. 85/TT/2011	163.02	241.81	260.95
Claimed by the petitioner	163.87	227.26	233.17
Allowed after true up in this order	163.87	227.26	233.18

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

30. Clause (g) of Regulation 19 of the 2009 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. The normative O&M Expenses are not required to be trued up. Accordingly, the total allowable O&M expenses for the instant assets have been worked out based on norms of O&M Expenses and the details are as follows:-

(₹ in lakh)

Particulars	Asset 1		
	2011-12	2012-13	2013-14
Approved in Petition No. 85/TT/2011	119.06	125.87	133.07
Claimed by the petitioner	119.06	125.87	133.07
Allowed after true up in this order	119.06	125.87	133.07





(₹ in lakh)

Particulars	Asset 2			
	2010-11 (Pro-rata)	2011-12	2012-13	2013-14
Approved in Petition No. 85/TT/2011	9.64	122.39	129.39	136.79
Claimed by the petitioner	9.65	122.39	129.39	136.79
Allowed after true up in this order	9.65	122.39	129.39	136.79

(₹ in lakh)

Particulars	Asset 3		
	2011-12 (Pro-rata)	2012-13	2013-14
Approved in Petition No. 85/TT/2011	92.37	130.20	137.64
Claimed by the petitioner	92.36	130.20	137.64
Allowed after true up in this order	92.36	130.20	137.64

### Interest on Working Capital (IWC)

31. The IWC has been worked out as per the methodology provided in the Regulation 18 of the 2009 Tariff Regulations and allowed as under:-

(₹ in lakh)

Particulars	Asset 1		
	2011-12	2012-13	2013-14
Approved in Petition No. 85/TT/2011	29.28	31.44	33.01
Claimed by the petitioner	29.88	30.12	30.28
Allowed after true up in this order	29.88	30.12	30.28

(₹ in lakh)

Particulars	Asset 2			
	2010-11 (Pro-rata)	2011-12	2012-13	2013-14
Approved in Petition No. 85/TT/2011	1.50	18.57	20.01	21.06
Claimed by the	1.54	18.90	19.35	19.72



petitioner				
Allowed after true up in this order	1.54	18.90	19.36	19.72

(₹ in lakh)

Particulars	Asset 3		
	2011-12 (Pro-rata)	2012-13	2013-14
Approved in Petition No. 85/TT/2011	14.84	21.32	22.43
Claimed by the petitioner	15.26	20.90	21.30
Allowed after true up in this order	15.26	20.90	21.30

### **APPROVED ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD**

32. The detailed computation of the various components of the trued up annual fixed charges for the instant transmission assets for the tariff period 2009-14 is summarised below:-

(₹ in lakh)

Particulars	Asset 1		
	2011-12	2012-13	2013-14
<b>Depreciation</b>			
Opening Gross Block	6993.44	7185.55	7336.04
Additional Capitalisation	192.11	150.49	81.98
Closing Gross Block	7185.55	7336.04	7418.02
Average Gross Block	7089.50	7260.80	7377.03
Rate of Depreciation (%)	5.21	5.22	5.22
Depreciable Value	6372.03	6534.72	6639.33
Balance useful life of the asset	31.00	30.00	29.00
Elapsed life	0.00	1.00	2.00
Remaining Depreciable Value	6372.03	5786.43	5506.30
Depreciation during the year	369.62	378.67	384.74
Cumulative depreciation (incl. of AAD)	369.62	748.29	1133.02
<b>Interest on Loan</b>			
Gross Normative Loan	4895.41	5029.89	5135.23
Cumulative Repayments up to Previous Year	0.00	369.62	748.29
Net Loan-Opening	4895.41	4660.26	4386.94
Additions	134.48	105.34	57.39
Repayment during the year	369.62	378.67	384.74



<b>Asset 1</b>			
<b>Particulars</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Net Loan-Closing	4660.26	4386.94	4059.59
Average Loan	4777.84	4523.60	4223.27
Weighted Average Rate of Interest on Loan (%)	0.09	0.09	0.09
Interest on Loan	428.31	405.10	377.91
<b>Return on Equity</b>			
Opening Equity	2098.03	2155.67	2200.81
Additions	57.63	45.15	24.59
Closing Equity	2155.67	2200.81	2225.41
Average Equity	2126.85	2178.24	2213.11
Return on Equity (Base Rate) (%)	15.500	15.500	15.500
MAT Rate for respective year (%)	20.008	20.008	20.961
Rate of Return on Equity (%)	19.377	19.377	19.610
Return on Equity	412.12	422.08	434.00
<b>Interest on Working Capital</b>			
O & M Expenses	9.92	10.49	11.09
Maintenance Spares	17.86	18.88	19.96
Receivables	226.50	226.97	226.67
Total Working Capital	254.28	256.34	257.71
Rate of Interest (%)	11.75	11.75	11.75
Interest of working capital	29.88	30.12	30.28
<b>Annual Transmission Charges</b>			
Depreciation	369.62	378.67	384.74
Interest on Loan	428.31	405.10	377.91
Return on Equity	412.12	422.08	434.00
Interest on Working Capital	29.88	30.12	30.28
O & M Expenses	119.06	125.87	133.07
<b>Total</b>	<b>1358.99</b>	<b>1361.83</b>	<b>1360.00</b>

(₹ in lakh)

<b>Asset 2</b>				
<b>Particulars</b>	<b>2010-11 (Pro-rata)</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
<b>Depreciation</b>				
Opening Gross Block	4048.10	4075.93	4254.92	4399.56
Additional Capitalisation	27.83	178.99	144.64	81.98
Closing Gross Block	4075.93	4254.92	4399.56	4481.54
Average Gross Block	4062.02	4165.43	4327.24	4440.55
Rate of Depreciation (%)	5.17	5.17	5.17	5.18
Depreciable Value	3647.30	3740.37	3886.00	3985.66
Balance useful life of the asset	29.00	28.00	27.00	26.00



<b>Asset 2</b>				
<b>Particulars</b>	<b>2010-11 (Pro-rata)</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Elapsed life	0.00	1.00	2.00	3.00
Remaining Depreciable Value	3647.30	3507.52	3429.26	3299.10
Depreciation during the year	17.49	215.35	223.90	229.81
Cumulative depreciation (incl. of AAD)	17.49	232.85	456.74	686.56
<b>Interest on Loan</b>				
Gross Normative Loan	2833.67	2853.15	2978.44	3079.69
Cumulative Repayments upto Previous Year	0.00	17.49	232.85	456.74
Net Loan-Opening	2833.67	2835.66	2745.60	2622.95
Additions	19.48	125.29	101.25	57.39
Repayment during the year	17.49	215.35	223.90	229.81
Net Loan-Closing	2835.66	2745.60	2622.95	2450.52
Average Loan	2834.66	2790.63	2684.27	2536.73
Weighted Average Rate of Interest on Loan (%)	9.3679	9.3450	9.3285	9.3268
Interest on Loan	22.13	260.79	250.40	236.60
<b>Return on Equity</b>				
Opening Equity	1214.43	1222.78	1276.48	1319.87
Additions	8.35	53.70	43.39	24.59
Closing Equity	1222.78	1276.48	1319.87	1344.46
Average Equity	1218.60	1249.63	1298.17	1332.17
Return on Equity (Base Rate) (%)	0.16	0.16	0.16	0.16
MAT Rate for respective year (%)	0.20	0.20	0.20	0.21
Rate of Return on Equity (%)	0.19	0.19	0.19	0.20
Return on Equity	19.66	242.14	251.55	261.24
<b>Interest on Working Capital</b>				
O & M Expenses	9.65	10.20	10.78	11.40
Maintenance Spares	17.37	18.36	19.41	20.52
Receivables	140.93	143.26	145.77	147.36
Total Working Capital	167.95	171.82	175.96	179.28
Rate of Interest (%)	0.11	0.11	0.11	0.11
Interest of working capital	1.54	18.90	19.36	19.72
<b>Annual Transmission Charges</b>				
Depreciation	17.49	215.35	223.90	229.81
Interest on Loan	22.13	260.79	250.40	236.60
Return on Equity	19.66	242.14	251.55	261.24
Interest on Working Capital	1.54	18.90	19.36	19.72
O & M Expenses	9.65	122.39	129.39	136.79
<b>Total</b>	<b>70.47</b>	<b>859.57</b>	<b>874.60</b>	<b>884.16</b>



<b>Asset 3</b>			
<b>Particulars</b>	<b>2011-12 (Pro-rata)</b>	<b>2012-13</b>	<b>2013-14</b>
<b>Depreciation</b>			
Opening Gross Block	4133.33	4321.10	4465.74
Additional Capitalisation	187.77	144.64	81.98
Closing Gross Block	4321.10	4465.74	4547.72
Average Gross Block	4227.22	4393.42	4506.73
Rate of Depreciation (%)	5.17	5.17	5.17
Depreciable Value	3795.98	3954.08	4056.06
Balance useful life of the asset	29.00	28.00	27.00
Elapsed life	0.00	1.00	2.00
Remaining Depreciable Value	3795.98	3562.95	3431.75
Depreciation during the year	163.87	227.26	233.18
Cumulative depreciation (incl. of AAD)	163.87	391.13	624.31
<b>Interest on Loan</b>			
Gross Normative Loan	2893.33	3024.77	3126.02
Cumulative Repayments upto Previous Year	0.00	163.87	391.13
Net Loan-Opening	2893.33	2860.90	2734.89
Additions	131.44	101.25	57.39
Repayment during the year	163.87	227.26	233.18
Net Loan-Closing	2860.90	2734.89	2559.10
Average Loan	2877.12	2797.90	2646.99
Weighted Average Rate of Interest on Loan (%)	8.9915	8.9801	8.9745
Interest on Loan	194.02	251.25	237.56
<b>Return on Equity</b>			
Opening Equity	1240.00	1296.33	1339.72
Additions	56.33	43.39	24.59
Closing Equity	1296.33	1339.72	1364.32
Average Equity	1268.16	1318.03	1352.02
Return on Equity (Base Rate) (%)	15.50	15.50	15.50
MAT Rate for respective year (%)	20.008	20.008	20.961
Rate of Return on Equity (%)	19.377	19.377	19.610
Return on Equity	245.73	255.39	265.14
<b>Interest on Working Capital</b>			
O & M Expenses	10.26	10.85	11.47
Maintenance Spares	18.47	19.53	20.65
Receivables	144.40	147.50	149.13
Total Working Capital	173.14	177.88	181.25
Rate of Interest (%)	0.12	0.12	0.12
Interest of working capital	15.26	20.90	21.30



<b>Asset 3</b>			
<b>Particulars</b>	<b>2011-12 (Pro-rata)</b>	<b>2012-13</b>	<b>2013-14</b>
<b>Annual Transmission Charges</b>			
Depreciation	163.87	227.26	233.18
Interest on Loan	194.02	251.25	237.56
Return on Equity	184.30	255.39	265.14
Interest on Working Capital	15.26	20.90	21.30
O & M Expenses	92.36	130.20	137.64
<b>Total</b>	<b>649.81</b>	<b>885.01</b>	<b>894.80</b>

### **DETERMINATION OF ANNUAL FIXED CHARGES FOR 2014-19 TARIFF PERIOD**

33. The tariff charges claimed by the petitioner for 2014-19 tariff period is as follows:-

<b>Particulars</b>	<b>(₹ in lakh)</b>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	865.19	876.36	876.36	876.36	876.36
Interest on Loan	795.11	729.80	650.12	570.41	490.70
Return on Equity	980.39	993.22	993.22	993.22	993.22
Interest on Working Capital	78.60	78.24	77.02	75.81	74.63
O & M Expenses	322.54	333.26	344.33	355.72	367.55
<b>Total</b>	<b>3041.83</b>	<b>3010.88</b>	<b>2941.05</b>	<b>2871.52</b>	<b>2802.46</b>

### **Capital Cost**

34. Clause (3) and (6) of Regulation 9 of 2014 Tariff Regulation provide as follows:-

“(3) The Capital cost of an existing project shall include the following:

(a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;

(b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and

(c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15.”

“(6) The following shall be excluded or removed from the capital cost of the existing and new project:

(a) The assets forming part of the project, but not in use; (b) Decapitalisation of Asset;”



35. The petitioner has combined all the assets for claiming tariff during 2014-19 tariff period and accordingly the capital cost of all the assets as on 31.3.2014 after combining is ₹16447.29 lakh, as was worked out by the Commission and the same has been considered as opening capital cost as on 1.4.2014 for determination of tariff in accordance with Regulation 9 of the 2014 Tariff Regulations.

### **Additional Capital Expenditure**

36. Clause (3) of Regulation 14 of the 2014 Tariff Regulations provides as under:-

“(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:

- (i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law;
- (ii) Change in law or compliance of any existing law;
- (iii) Any expenses to be incurred on account of need for higher security and safety of the plant as advised or directed by appropriate Government Agencies of statutory authorities responsible for national security/internal security;
- (iv) Deferred works relating to ash pond or ash handling system in the original scope of work;
- (v) Any liability for works executed prior to the cut-off date, after prudence check of the details of such undischarged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.;
- (vi) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments.”

37. Clause 13 of Regulation 3 of the 2014 Tariff Regulations defines “cut-off” as follows:-

“Cut - off Date” means 31<sup>st</sup> March of the year closing after two years of the year of commercial operation of whole or part of the project, and in case the whole or part of the project is declared under commercial operation in the last quarter of a year, the cut - off date shall be 31<sup>st</sup> March of the year closing after three years of the year of commercial operation.”

38. The cut-off date for the assets works out to be 31.3.2014. The petitioner has claimed additional capital expenditure during 2014-15 and this additional capital expenditure considered for 2014-19 tariff period is shown below:

(₹ in lakh)

Assets	Particulars	Capital Cost as on 1.4.2014	Addition Capital Expenditure 2014-19		Total Capital Cost as on 31.3.2019
			2014-15	Total	
Combined Assets 1,2 and 3	Claimed	16447.29	436.12	436.12	16883.41
	Approved in this order	16447.28	436.10	436.10	16883.38

39. Further, the total capital cost for all the assets as on 31.3.2019 is within the approved apportioned cost of ₹21834.00 lakh. Thus, the same is allowed for the purpose of revision of tariff in accordance with Regulation 14(3) of the 2014 Tariff Regulations.

### **Debt: Equity**

40. Clause (1) and (3) of Regulation 19 of the 2014 Tariff Regulations provide as under:-\*

“19. Debt-Equity Ratio: (1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan.”

“(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, debt equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.”

“(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 as maybe 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.”





41. The details of the debt:equity considered for the purpose of tariff for 2014-19 tariff period is as follows:-

(₹ in lakh)

Funding	Capital cost as on 1.4.2014	(%)	Additional capital expenditure during 2014-19	(%)	Total Cost as on 31.3.2019	(%)
Debt	11513.10	70.00	305.27	70.00	11818.37	70.00
Equity	4934.18	30.00	130.83	30.00	5065.01	30.00
<b>Total</b>	<b>16447.28</b>	<b>100.00</b>	<b>436.10</b>	<b>100.00</b>	<b>16883.38</b>	<b>100.00</b>

### **Return on Equity (ROE)**

42. Clause (1) and (2) of Regulations 24 and Clause (2) of Regulation 25 of the 2014 Tariff Regulations specify as under:-

“24. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system”

“25. Tax on Return on Equity:

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

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

Where “t” is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess.”

43. The petitioner has submitted that MAT rate is applicable to the petitioner's company. Accordingly, the MAT rate applicable during the 2013-14 has been considered for the purpose of ROE, which shall be trued up with actual tax rate in accordance with Clause (3) of Regulation 25 of the 2014 Tariff Regulations. The ROE has been worked out and allowed as follows:-



(₹ in lakh)

<b>Return on Equity</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Equity	4934.18	5065.01	5065.01	5065.01	5065.01
Additions	130.83	0.00	0.00	0.00	0.00
Closing Equity	5065.01	5065.01	5065.01	5065.01	5065.01
Average Equity	4999.60	5065.01	5065.01	5065.01	5065.01
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity	980.44	993.27	993.27	993.27	993.27

### **Interest on Loan (“IoL”)**

44. Clause 5 and Clause 6 of Regulation 26 of the 2014 Tariff Regulations provides that:-

“(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.”

45. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2014. The petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during 2014-19 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up or next revision of tariff. By considering above, the IoL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of weighted average rate of interest for 2014-19 tariff period are placed in Annexure-2 and the IoL has been worked out and allowed as follows:-



(₹ in lakh)

Interest on Loan	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	11513.10	11818.37	11818.37	11818.37	11818.37
Cumulative Repayment upto Previous Year	2443.89	3309.07	4185.44	5061.80	5938.16
Net Loan-Opening	9069.21	8509.29	7632.93	6756.57	5880.21
Additions	305.27	0.00	0.00	0.00	0.00
Repayment during the year	865.19	876.36	876.36	876.36	876.36
Net Loan-Closing	8509.29	7632.93	6756.57	5880.21	5003.84
Average Loan	8789.25	8071.11	7194.75	6318.39	5442.02
Weighted Average Rate of Interest on Loan (%)	9.0462	9.0421	9.0358	9.0276	9.0167
Interest on Loan	795.09	729.80	650.10	570.40	490.69

### **Depreciation**

46. Clause (2), (5) and (6) of Regulation 27 of the 2014 Tariff Regulations provide that:-

"27. Depreciation:

...(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. 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"

"(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-II 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 the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.

(6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets."

47. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2014 and accumulated depreciation up to 31.3.2014. The detailed calculations for depreciation for the transmission asset are worked out and allowed as follows:-



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	16447.28	16883.38	16883.38	16883.38	16883.38
Additional Capitalisation	436.10	0.00	0.00	0.00	0.00
Closing Gross Block	16883.38	16883.38	16883.38	16883.38	16883.38
Average Gross Block	16665.33	16883.38	16883.38	16883.38	16883.38
Rate of Depreciation (%)	5.19	5.19	5.19	5.19	5.19
Depreciable Value*	14966.29	15162.53	15162.53	15162.53	15162.53
Balance useful life of the asset	29.00	28.00	27.00	26.00	25.00
Elapsed life	0.00	1.00	2.00	3.00	4.00
Remaining Depreciable Value	14966.29	13420.98	12544.62	11668.26	10791.90
Depreciation during the year	865.19	876.36	876.36	876.36	876.36
Depreciation up to previous year	0.00	865.19	1741.55	2617.91	3494.27
Cumulative depreciation	865.19	1741.55	2617.91	3494.27	4370.64

\*after adjusting free hold land

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

48. Clause 3(a) of Regulation 29 of the 2014 Tariff Regulations specify the norms for O&M Expenses for the transmission system. The total allowable O&M Expenses for the instant assets have been worked out and allowed are as follows:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Total O&amp;M Expenses</b> (₹ lakh)	322.54	333.26	344.33	355.72	367.55

49. The petitioner has further submitted that the wage revision of the employees of the petitioner company is due during 2014-19 and actual impact of wage hike which will be effective from a future date has also not been factored in fixation of the normative O&M rate specified for the 2014-19 tariff period. The petitioner has also prayed that it will approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase.

50. We have considered the submissions of the petitioner. We would like to clarify that any application filed by the petitioner for revision of O&M Expenses on account of wage revision will be dealt with in accordance with the appropriate provisions of the 2014



Tariff Regulations. The O&M Expenses are allowed for the instant transmission assets as per the prevailing norms.

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

51. Clause 1 (c) of Regulation 28 and Clause 5 of Regulation 3 of the 2014 Tariff Regulations specifies as follows:

#### **“28. Interest on Working Capital**

- (c) (i) Receivables equivalent to two months of fixed cost;  
(ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and  
(iii) Operation and maintenance expenses for one month”

“(5) ‘Bank Rate’ means the base rate of interest as specified by the State Bank of India from time to time or any replacement thereof for the time being in effect plus 350 basis points;”

52. The petitioner has submitted that it has computed interest on working capital for the tariff block 2014-19 considering the SBI Base Rate plus 350 basis points as on 1.4.2014. The rate of interest on working capital considered is 13.50%.

53. The interest on working capital is worked out in accordance with Regulation 28 of the 2014 Tariff Regulations. The rate of interest on working capital considered is 13.50% (SBI Base Rate of 10% plus 350 basis points). The components of the working capital and interest thereon have been worked as follows:-

	(₹ in lakh)				
<b>Interest on Working Capital</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
O & M expenses	26.88	27.77	28.69	29.64	30.63
Maintenance Spares	48.38	49.99	51.65	53.36	55.13
Receivables	506.98	501.82	490.18	478.60	467.08
Total	582.24	579.58	570.52	561.60	552.85
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	78.60	78.24	77.02	75.82	74.63



## **ANNUAL FIXED CHARGES FOR THE 2014-19 TARIFF PERIOD**

54. The transmission charges allowed for the instant transmission assets for the 2014-19 tariff period are summarised below:-

	(₹ in lakh)				
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
<b>Depreciation</b>					
Opening Gross Block	16447.28	16883.38	16883.38	16883.38	16883.38
Additional Capitalisation	436.10	0.00	0.00	0.00	0.00
Closing Gross Block	16883.38	16883.38	16883.38	16883.38	16883.38
Average Gross Block	16665.33	16883.38	16883.38	16883.38	16883.38
Rate of Depreciation (%)	5.19	5.19	5.19	5.19	5.19
Depreciable Value	14966.29	15162.53	15162.53	15162.53	15162.53
Balance useful life of the asset	29.00	28.00	27.00	26.00	25.00
Elapsed life	0.00	1.00	2.00	3.00	4.00
Remaining Depreciable Value	14966.29	13420.98	12544.62	11668.26	10791.90
Depreciation during the year	865.19	876.36	876.36	876.36	876.36
Cumulative depreciation (incl. of AAD)	865.19	1741.55	2617.91	3494.27	4370.64
<b>Interest on Loan</b>					
Gross Normative Loan	11513.10	11818.37	11818.37	11818.37	11818.37
Cumulative Repayments upto Previous Year	2443.89	3309.07	4185.44	5061.80	5938.16
Net Loan-Opening	9069.21	8509.29	7632.93	6756.57	5880.21
Additions	305.27	0.00	0.00	0.00	0.00
Repayment during the year	865.19	876.36	876.36	876.36	876.36
Net Loan-Closing	8509.29	7632.93	6756.57	5880.21	5003.84
Average Loan	8789.25	8071.11	7194.75	6318.39	5442.02
Weighted Average Rate of Interest on Loan (%)	9.0462	9.0421	9.0358	9.0276	9.0167
Interest on Loan	795.09	729.80	650.10	570.40	490.69
<b>Return on Equity</b>					
Opening Equity	4934.18	5065.01	5065.01	5065.01	5065.01
Additions	130.83	0.00	0.00	0.00	0.00
Closing Equity	5065.01	5065.01	5065.01	5065.01	5065.01
Average Equity	4999.60	5065.01	5065.01	5065.01	5065.01
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (%)	19.610	19.610	19.610	19.610	19.610



<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Return on Equity	980.44	993.27	993.27	993.27	993.27
<b>Interest on Working Capital</b>					
O & M Expenses	26.88	27.77	28.69	29.64	30.63
Maintenance Spares	48.38	49.99	51.65	53.36	55.13
Receivables	506.98	501.82	490.18	478.60	467.08
Total Working Capital	582.24	579.58	570.52	561.60	552.85
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest of working capital	78.60	78.24	77.02	75.82	74.63
<b>Annual Transmission Charges</b>					
Depreciation	865.19	876.36	876.36	876.36	876.36
Interest on Loan	795.09	729.80	650.10	570.40	490.69
Return on Equity	980.44	993.27	993.27	993.27	993.27
Interest on Working Capital	78.60	78.24	77.02	75.82	74.63
O & M Expenses	322.54	333.26	344.33	355.72	367.55
<b>Total</b>	<b>3041.87</b>	<b>3010.94</b>	<b>2941.09</b>	<b>2871.57</b>	<b>2802.51</b>

### **Deferred Tax Liability**

55. The petitioner has sought recovery of deferred tax liability before 1.4.2009 from the beneficiaries or long term consumers/ DICs as and when materialized. The deferred tax liability shall be dealt as per Regulations 49 of the 2014 Tariff Regulations, as amended. Accordingly, the petitioner is entitled to recover the deferred tax liability upto 31.3.2009 whenever the same gets materialized directly from the beneficiaries or long term transmission customers /DICs.

### **Filing Fee and the Publication Expenses**

56. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. The petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with Regulation 52 (1) of the 2014 Tariff Regulations.



### **Licence Fee & RLDC Fees and Charges**

57. The petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 52 (2) (b) of the 2014 Tariff Regulations for 2014-19 tariff period. The petitioner shall also be entitled for recovery of RLDC fee & charges in accordance with Regulations 52 (2) (a) of the 2014 Tariff Regulations for 2014-19 tariff period.

### **Service Tax**

58. The petitioner has prayed for reimbursement of service tax if it is subjected to such tax in future. We are of the view that the petitioner's prayer is premature.

### **Foreign Exchange Rate Variation**

59. The petitioner has sought recovery of FERV on foreign loans deployed as provided in Clause 50 of the 2014 Tariff Regulations. The petitioner is entitled to recover the FERV directly from the beneficiaries or the long term transmission customers/DICs as the case may be, in accordance with Clause 1 of Regulation 51 of the 2014 Tariff Regulations.

### **Sharing of Transmission Charges**

60. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time as provided in Regulation 43 of the 2014 Tariff Regulations.

61. This order disposes of Petition No. 37/TT/2015.

Sd/-

**(Dr. M.K. Iyer)**  
**Member**

Sd/-

**(A.S. Bakshi)**  
**Member**





**ANNEXURE-I**

(₹ in lakh)

<b>Asset 1</b>				
<b>Particulars</b>	<b>Interest Rate (%)</b>	<b>Loan deployed as on 1.4.2011</b>	<b>Additions during the tariff period</b>	<b>Total</b>
BOND XXIV-DOCO Loan 1-	9.95	274.00	0.00	274.00
BOND XXVII-DOCO Loan 2-	9.47	910.00	0.00	910.00
BOND XXVIII-DOCO Loan 3-	9.33	332.00	0.00	332.00
BOND XXIX-DOCO Loan 4-	9.20	263.00	0.00	263.00
BOND XXX-DOCO Loan 5-	8.80	110.00	0.00	110.00
BOND XXXI-DOCO Loan 6-	8.90	546.80	0.00	546.80
BOND XXXIII-DOCO Loan 7-	8.64	2459.50	0.00	2459.50
BOND-XXXIV-ADDCAP FOR 2011-2012 Add Cap Loan 1-	8.84	0.00	17.98	17.98
BOND-XXXIV-ADDCAP FOR 2011-2012 Add Cap Loan 2-	8.84	0.00	116.50	116.50
BOND-XXXV-ADDCAP FOR 2012-2013 Add Cap Loan 3-	8.84	0.00	73.60	73.60
BOND XXXVI-ADDCAP FOR 2012-2013 Add Cap Loan 4-	9.64	0.00	31.75	31.75
BOND XXXVI-ADDCAP FOR 2013-2014 Add Cap Loan 5-	9.35	0.00	57.39	57.39
<b>Total</b>		<b>4895.30</b>	<b>297.22</b>	<b>5192.52</b>

(₹ in lakh)

<b>Asset 2</b>				
<b>Particulars</b>	<b>Interest Rate (%)</b>	<b>Loan deployed as on 1.4.2010</b>	<b>Additions during the tariff period</b>	<b>Total</b>
BOND XXIV-DOCO Loan 1-	9.95	455.00	0.00	455.00
BOND XXVII-DOCO Loan 2-	9.47	970.00	0.00	970.00
BOND XXVIII-DOCO Loan 3-	9.33	493.00	0.00	493.00
BOND XXIX-DOCO Loan 4-	9.20	447.00	0.00	447.00
BOND XXX-DOCO Loan 5-	8.80	343.00	0.00	343.00
BOND XXXI-DOCO Loan 6-	8.90	125.66	0.00	125.66
BOND-XXXIV-ADDCAP FOR 2010-2011 ADDCAP Loan 1-	8.84	0.00	19.48	19.48
BOND-XXXIV-ADDCAP FOR 2011-2012 Add Cap Loan 2-	8.84	0.00	8.79	8.79
BOND-XXXIV-ADDCAP FOR 2011-2012 Add Cap Loan 3-	8.84	0.00	116.50	116.50
BOND-XXXV-ADDCAP FOR 2012-2013 Add Cap Loan 4-	9.64	0.00	101.26	101.26



BOND XXXVI-ADDCAP FOR 2013-2014 Add Cap Loan 5-	9.35	0.00	57.39	57.39
<b>Total</b>		<b>2833.66</b>	<b>303.42</b>	<b>3137.08</b>

(₹ in lakh)

<b>Asset 3</b>				
<b>Particulars</b>	<b>Interest Rate (%)</b>	<b>Loan deployed as on 1.4.2011</b>	<b>Additions during the tariff period</b>	<b>Total</b>
BOND XXIV-DOCO Loan 1-	9.95	159.00	0.00	159.00
BOND XXVII-DOCO Loan 2-	9.47	631.00	0.00	631.00
BOND XXVIII-DOCO Loan 3-	9.33	198.00	0.00	198.00
BOND XXIX-DOCO Loan 4-	9.20	150.00	0.00	150.00
BOND XXX-DOCO Loan 5-	8.80	47.00	0.00	47.00
BOND XXXI-DOCO Loan 6-	8.90	361.00	0.00	361.00
BOND XXXIII-DOCO Loan 7-	8.64	1323.50	0.00	1323.50
BOND-XXXIV-ADDCAP FOR 2011-2012 Add Cap Loan 1-	8.84	0.00	131.45	131.45
BOND-XXXIV-DOCO Loan 8-	8.84	24.00	0.00	24.00
BOND XXXVI-ADDCAP FOR 2012-2013 Add Cap Loan 2-	9.35	0.00	101.26	101.26
BOND XXXVI-ADDCAP FOR 2013-2014 Add Cap Loan 3-	9.35	0.00	57.39	57.39
<b>Total</b>		<b>2893.50</b>	<b>290.10</b>	<b>3183.60</b>

(₹ in lakh)

<b>Combined Assets for 2014-19 (Asset 1,2 &amp; 3)</b>				
<b>Particulars</b>	<b>Interest Rate (%)</b>	<b>Loan deployed as on 1.4.2014</b>	<b>Additions during the tariff period</b>	<b>Total</b>
BOND XXIV-I.DOCO Loan 1-	9.95	455.00	0.00	455.00
BOND XXIV-12.DOCO Loan 1-	9.95	274.00	0.00	274.00
BOND XXIV-24.DOCO Loan 1-	9.95	159.00	0.00	159.00
BOND XXVII-13.DOCO Loan 2-	9.47	910.00	0.00	910.00
BOND XXVII-2.DOCO Loan 2-	9.47	970.00	0.00	970.00
BOND XXVII-25.DOCO Loan 2-	9.47	631.00	0.00	631.00
BOND XXVIII-14.DOCO Loan 3-	9.33	332.00	0.00	332.00



<b>Combined Assets for 2014-19 (Asset 1,2 &amp; 3)</b>				
<b>Particulars</b>	<b>Interest Rate (%)</b>	<b>Loan deployed as on 1.4.2014</b>	<b>Additions during the tariff period</b>	<b>Total</b>
BOND XXVIII-26.DOCO Loan 3-	9.33	198.00	0.00	198.00
BOND XXVIII-3.DOCO Loan 3-	9.33	493.00	0.00	493.00
BOND XXIX-15.DOCO Loan 4-	9.20	263.00	0.00	263.00
BOND XXIX-27.DOCO Loan 4-	9.20	150.00	0.00	150.00
BOND XXIX-4.DOCO Loan 4-	9.20	447.00	0.00	447.00
BOND XXX-16.DOCO Loan 5-	8.80	110.00	0.00	110.00
BOND XXX-28.DOCO Loan 5-	8.80	47.00	0.00	47.00
BOND XXX-5.DOCO Loan 5-	8.80	343.00	0.00	343.00
BOND XXXI-17.DOCO Loan 6-	8.90	546.80	0.00	546.80
BOND XXXI-29.DOCO Loan 6-	8.90	361.00	0.00	361.00
BOND XXXI-6.DOCO Loan 6-	8.90	125.66	0.00	125.66
BOND XXXIII-18.DOCO Loan 7-	8.64	2459.50	0.00	2459.50
BOND XXXIII-30.DOCO Loan 7-	8.64	1323.50	0.00	1323.50
BOND-XXXIV-19.ADDCAP FOR 2011-2012 Add Cap Loan 1-	8.84	17.98	0.00	17.98
BOND-XXXIV-20.ADDCAP FOR 2011-2012 Add Cap Loan 2-	8.84	116.50	0.00	116.50
BOND-XXXIV-31.DOCO Loan 8-	8.84	24.00	0.00	24.00
BOND-XXXIV-32.ADDCAP FOR 2011-2012 Add Cap Loan 1-	8.84	131.45	0.00	131.45
BOND-XXXIV-7.ADDCAP FOR 2010-2011 ADDCAP Loan 1-	8.84	19.48	0.00	19.48
BOND-XXXIV-8.ADDCAP FOR 2011-2012 Add Cap Loan 2-	8.84	8.79	0.00	8.79
BOND-XXXIV-9.ADDCAP FOR 2011-2012 Add Cap Loan 3-	8.84	116.50	0.00	116.50
BOND-XXXV-10.ADDCAP FOR 2012-2013 Add Cap Loan 4-	9.64	101.26	0.00	101.26
BOND-XXXV-21.ADDCAP FOR 2012-2013 Add Cap Loan 3-	9.64	73.60	0.00	73.60
BOND XXXVI-11.ADDCAP FOR 2013-2014 Add Cap Loan 5-	9.35	57.39	0.00	57.39



Combined Assets for 2014-19 (Asset 1,2 & 3)				
Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period	Total
BOND XXXVI-22.ADDCAP FOR 2012-2013 Add Cap Loan 4-	9.35	31.75	0.00	31.75
BOND XXXVI-23.ADDCAP FOR 2013-2014 Add Cap Loan 5-	9.35	57.39	0.00	57.39
BOND XXXVI-33.ADDCAP FOR 2012-2013 Add Cap Loan 2-	9.35	101.26	0.00	101.26
BOND XXXVI-34.ADDCAP FOR 2013-2014 Add Cap Loan 3-	9.35	57.39	0.00	57.39
<b>Total</b>		<b>11513.20</b>	<b>0.00</b>	<b>11513.20</b>

(₹ in lakh)

Asset 1			
Summary	2011-12	2012-13	2013-14
Gross Opening Loan	4895.30	5029.78	5135.13
Cumulative Repayments of Loans upto Previous Year	22.83	121.49	269.74
<b>Net Loans Opening</b>	<b>4872.47</b>	<b>4908.29</b>	<b>4865.39</b>
Add: Draw(s) during the Year	134.48	105.35	57.39
Less: Repayments of Loan during the year	98.66	148.25	202.99
<b>Net Closing Loan</b>	<b>4908.29</b>	<b>4865.39</b>	<b>4719.79</b>
Average Net Loan	4890.38	4886.84	4792.59
Rate of Interest on Loan (%)	8.9646%	8.9552%	8.9484%
<b>Interest on Loan</b>	<b>438.40</b>	<b>437.63</b>	<b>428.86</b>

(₹ in lakh)

Asset 2				
Summary	2011-12	2012-13	2013-14	2011-12
Gross Opening Loan	2833.66	2853.14	2978.43	3079.69
Cumulative Repayments of Loans upto Previous Year	0.00	37.92	156.67	353.75
<b>Net Loans Opening</b>	<b>2833.66</b>	<b>2815.22</b>	<b>2821.76</b>	<b>2725.94</b>
Add: Draw(s) during the Year	19.48	125.29	101.26	57.39
Less: Repayments of Loan during the year	37.92	118.75	197.08	236.13
<b>Net Closing Loan</b>	<b>2815.22</b>	<b>2821.76</b>	<b>2725.94</b>	<b>2547.20</b>
Average Net Loan	2824.44	2818.49	2773.85	2636.57
Rate of Interest on Loan (%)	9.3680%	9.3452%	9.3283%	9.3268%



<b>Interest on Loan</b>	264.59	263.39	258.75	245.91
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(₹ in lakh)

<b>Asset 3</b>			
<b>Summary</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Gross Opening Loan	2893.50	3024.95	3126.21
Cumulative Repayments of Loans upto Previous Year	13.25	79.08	173.91
<b>Net Loans Opening</b>	<b>2880.25</b>	<b>2945.87</b>	<b>2952.30</b>
Add: Draw(s) during the Year	131.45	101.26	57.39
Less: Repayments of Loan during the year	65.83	94.83	128.83
<b>Net Closing Loan</b>	<b>2945.87</b>	<b>2952.30</b>	<b>2880.86</b>
Average Net Loan	2913.06	2949.09	2916.58
Rate of Interest on Loan (%)	8.9916%	8.9801%	8.9745%
<b>Interest on Loan</b>	<b>261.93</b>	<b>264.83</b>	<b>261.75</b>

(₹ in lakh)

<b>Combined Assets for 2014-19 (Asset 1,2 &amp; 3)</b>					
<b>Summary</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Gross Opening Loan	11513.20	11513.20	11513.20	11513.20	11513.20
Cumulative Repayments of Loans upto Previous Year	1352.10	2271.52	3205.51	4159.86	5114.21
<b>Net Loans Opening</b>	<b>10161.10</b>	<b>9241.68</b>	<b>8307.69</b>	<b>7353.34</b>	<b>6398.99</b>
Add: Draw(s) during the Year	0.00	0.00	0.00	0.00	0.00
Less: Repayments of Loan during the year	919.42	933.99	954.35	954.35	954.35
<b>Net Closing Loan</b>	<b>9241.68</b>	<b>8307.69</b>	<b>7353.34</b>	<b>6398.99</b>	<b>5444.64</b>
Average Net Loan	9701.39	8774.69	7830.52	6876.17	5921.82
Rate of Interest on Loan (%)	9.0462%	9.0420%	9.0359%	9.0276%	9.0166%
<b>Interest on Loan</b>	<b>877.61</b>	<b>793.41</b>	<b>707.56</b>	<b>620.75</b>	<b>533.95</b>

