

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

PETITION NO. 164/TT/2016

Coram:

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

**Date of Hearing: 11.11.2016
Date of Order : 28.12.2016**

In the Matter of:

Determination of transmission tariff of 2014-19 tariff period for "Transmission System for Phase-I Generation Projects in Orissa Part-C" in Western Region under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Regulation 6 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.

And in the Matter of:

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

.....Petitioner

Versus

1. Madhya Pradesh Power Management Company Ltd.
Shakti Bhawan, Rampur
Jabalpur - 482008
2. Maharashtra State Electricity Distribution Co. Ltd.
Prakashgad, 4th Floor
Andheri (East), Mumbai - 400 052
3. Gujarat Urja Vikas Nigam Ltd.
Sardar Patel Vidyut Bhawan,
Race Course Road
Vadodara - 390 007
4. Electricity Department Govt. Of Goa
Vidyut Bhawan, Panaji,
Near Mandvi Hotel, Goa - 403 001



5. Electricity Department
Administration of Daman & Diu
Daman - 396 210
6. Electricity Department
Administration Of Dadra Nagar Haveli
U.T., Silvassa - 396 230
7. Chhattisgarh State Electricity Board
P.O.Sunder Nagar, Dangania, Raipur
Chhatisgarh-492013
8. Madhya Pradesh Audyogik Kendra
Vikas Nigam (Indore) Ltd.
3/54, Press Complex, Agra-Bombay Road,
Indore-452 008

....Respondents

The following were present:

For Petitioner: Shri Rakesh Prasad, PGCIL
 Shri Jasbir Singh,PGCIL
 Shri S.K. Venkatasan, PGCIL

For respondents: None

ORDER

The present petition has been filed by Power Grid Corporation of India Ltd. (“the petitioner”) for determination of tariff for “Transmission System for Phase-I Generation Projects in Orissa Part-C” in Western Region (hereinafter referred to as “Project”) under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) for the period from date of commercial operation to 31.3.2019.

2. The details of Assets covered under the project are as given hereunder:



Name of Asset	COD
Final Tariff for 2009-14 was determined vide order dated 18.4.2016 in Petition No. 44/TT/2014	
Asset-I 3x80 MVAR line reactor with associated bays at Gwalior Sub-station used as bus reactor till commissioning of 765 kV Bina-Gwalior ckt-3,	1.2.2014
Asset-II 3x80 MVAR line reactor with associated bays at Bina Sub station to be used as bus till commissioning of 765 kV Bina-Gwalior Ckt-3,	1.3.2014
Final Tariff for 2009-14 was determined vide order dated 14.3.2016 in Petition No. 301/TT/2013	
Asset-III 400 kV 125 MVAR Bus Reactor at 765 kV Indore sub-station along with associated bays,	1.10.2013
Asset-IV 400 kV 125 MVAR Bus Reactor-I and Bus Reactor-II at 765 kV Gwalior Sub-station along with associated bays	1.10.2013
Asset-V(a) 765 kV D/C Jabalpur Pooling station- Bina transmission line Ckt-I and respective bay extension works at 765 kV Jabalpur Pooling S/s and 765 kV Bina S/s along with 3x80 MVAR Switchable Line Reactor	1.1.2014
Asset-V(b) 765 kV D/C Jabalpur Pooling Station- Bina transmission line Ckt-II and respective bay extension works at 765 kV Jabalpur Pooling S/s and 765 kV Bina S/s alongwith 240 MVAR	
Asset-VI 3x80 MVAR Switchable Line Reactors at Bina Sub-station only(for Jabalpur Pooling Station- Bina Ckt-I)	1.2.2014
Asset-VII 4*80 MVAR Switchable line reactors at Jabalpur Pooling sub-station only-Bina Ckt-2	1.2.2014

3. However it was observed that the tariff of the instant assets for the 2009-14 period was not trued-up. Accordingly, the petitioner was directed vide ROP dated 17.11.2016 to file the tariff forms for 2009-14 period for truing up along with the form for approval of



2014-19 tariff. The petitioner, vide affidavit dated 29.11.2016, has filed the revised tariff forms for the said assets. Based on the submission of the petitioner, the tariff for the 2009-14 period is trued up and tariff for 2014-19 period is determined in the instant petition.

4. The respondents are distribution licensees or electricity departments or power procurement companies of States, who are procuring transmission service from the petitioner, mainly beneficiaries of Western Region.

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

a) The investment approval for the project was accorded by Board of Directors of the petitioner's company vide Memorandum No. C/CP/Orissa Ph-I IPPs (Part-C) dated 17.3.2011, at an estimated cost of ₹256925 lakh, which included IDC of ₹16902 lakh (based on 3rd quarter 2010 price level). The scope of the scheme was discussed and approved in the 29th Standing Committee meeting of Western Region held on 10.9.2009. The transmission system was later discussed and agreed for implementation in the 11th WRPC held in Raipur on 25.9.2011. Revised Cost Estimate (RCE) of the project dated 9.3.2015 is submitted, at an estimated cost of ₹310551 lakh, including IDC of ₹25897 lakh, based on August, 2014 price level.

b) The annual transmission charges for 2009-14 tariff period for the transmission assets were determined vide order dated 14.3.2016 in Petition No. 301/TT/2013 and order dated 18.4.2016 in Petition No. 44/TT/2014 based on admitted capital cost given as under:-

(₹ in lakh)

Asset	Capital cost approved as on COD as per order in Petition No.44/TT/2014	IDC and IEDC disallowed	Excess initial spares disallowed
Asset-I	1973.23	0.00	0.00
Asset-II	2227.34	0.00	0.00
	Capital cost approved as on COD as per order Petition No. 103/TT/2013		
Asset-III	728.43	0.00	0.00
Asset-IV	916.87	0.00	0.00
Asset-V (Va+Vb)	91933.00	0.00	0.00
Asset-VI	1386.07	0.00	0.00
Asset-VII	1284.87	0.00	0.00

c) The debt:equity ratio of the instant assets was 70:30 as on COD. The additional capital expenditure approved was towards balance and retention payments. The capital cost and additional capital expenditure considered for determination of tariff for 2009-14 tariff period is as follows:

(₹ in lakh)

Asset	Apportioned approved cost	Capital cost as on COD	Allowed additional capital expenditure during 2013-14	Cost as on 31.03.2014
Asset-I	3282.27	1973.23	97.93	2071.16
Asset-II	3685.69	2227.34	148.78	2376.12
Asset-III	1134.89	728.43	48.02	776.45
Asset-IV	1425.84	916.87	183.94	1100.81
Asset-V (Va+Vb)	110042.08	91333.00	3687.26	95620.26
Asset-VI	3046.15	1386.07	107.47	1493.54
Asset-VII	3242.88	1284.87	492.27	1777.14

*Capital cost and additional capital expenditure had been worked out after adjusting IDC/IEDC on cash basis.

d) The annual fixed charges were determined vide order dated 14.3.2016 in Petition No. 301/TT/2013 and order dated 18.4.2016 in Petition No. 44/TT/2014 based the above capital cost and additional capital expenditure. The transmission charges allowed for the instant transmission assets for 2009-14 period is as given below:-



As per order dated 18.4.2016 in Petition No. 44/TT/2014

(₹ in lakh)

Particulars	Asset-I	Asset-II
	2013-14 (pro-rata)	2013-14 (pro-rata)
Depreciation	17.80	10.13
Interest on Loan	18.20	10.52
Return on Equity	19.83	11.28
Interest on Working Capital	2.08	1.13
O & M Expenses	15.27	7.64
Total	73.17	40.70

As per order dated 14.3.2016 in Petition No. 301/TT/2013

(₹ in lakh)

Particulars	Asset-III	Asset-IV	Asset-V (Va+Vb)	Asset-VI	Asset-VII
	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)
Depreciation	19.86	26.63	1237.16	12.67	13.47
Interest on Loan	20.16	26.39	1119.43	13.63	14.65
Return on Equity	22.13	29.68	1379.22	14.12	15.01
Interest on Working Capital	3.17	1.86	95.10	1.73	1.79
O & M Expenses	32.73	0.00	205.00	15.27	15.27
Total	98.05	84.55	4035.92	57.43	60.20

6. 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 actual capital expenditure including additional capital expenditure incurred up to 31.3.2014, 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. In this context, the petitioner has filed the instant petition for revision of tariff for the tariff period 2009-14 in accordance with Regulation 6 of the 2009 Tariff Regulations.



7. The petitioner has served the petition on the respondents and notice of this application has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003 ("the Act"). No comments/objections have been received from the public in response to the notice in newspaper. The hearing in this matter was held on 11.11.2016. MPPMCL has filed the reply in the matter vide affidavit dated 24.10.2016.

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

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

9. 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”.

10. 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 in the subsequent paragraphs.

Capital Cost

11. The petitioner has submitted vide Auditor's Certificates dated 19.8.2016 and 26.8.2015 the actual capital expenditure incurred as on COD for all assets. The petitioner has indicated the IDC undischarged as on COD. Details of capital expenditure claimed by the petitioner are as under:-



(₹ in lakh)

Asset	Capital cost as on COD as per Auditor Certificate (Accrual Basis)	Capital cost as on COD after adjustment of undischarged IDC (Cash Basis)
Asset-I	2031.09	1973.23
Asset-II	2305.34	2227.34
Asset-III	740.95	728.43
Asset-IV	1268.56	916.87
Asset-V (Va+Vb)	93229.79	91933.00
Asset-VI	1426.62	1386.07
Asset-VII	1317.85	1284.87

12. 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.”

13. The admissible capital cost of the transmission asset as on COD for the purpose of computation of tariff for 2009-14 tariff period is worked out in the subsequent paragraphs taking into consideration the IEDC and IDC and initial spares claimed and allowed.



IDC and IEDC

14. In order dated 18.4.2016 in Petition No. 44/TT/2014 and order dated 14.3.2016 in Petition No. 301/TT/2013, the IDC and IEDC on cash basis as on COD of the various assets was adjusted. Hence, the adjustment of capital cost in respect of IDC and IEDC are no longer required.

Initial Spares

15. The Commission, in order dated 18.4.2016 in Petition No. 44/TT/2014 and order dated 14.3.2016 in Petition No. 301/TT/2013 has approved the initial spares considering the capital cost up to 31.03.2014 after deducting the amount pertaining to initial spares discharged after COD. However, in the instant petition, petitioner has claimed the amount pertaining to initial spares discharged upto cut-off date of the said assets. Further, the petitioner has submitted projected additional capital expenditure up to cut-off date laid in the tariff period 2014-19. Hence, we have worked out the admissible initial spares by considering capital cost upto 31.3.2014 as in accordance with the 2009 Tariff Regulations.

16. MPPMCL has submitted that Asset-V consists of transmission line and substation and the petitioner has claimed initial spares as a whole for transmission line and substation. Initial spares for Asset-V should be allowed separately for transmission line and substation.

17. We have considered the submissions of the petitioner and respondent. Initial spares are allowed as provided in the 2009 tariff Regulations. Regulation 8 of the 2009 Tariff Regulations provide for ceiling norms for capitalization of initial spares in respect



of sub-station at 2.50% and 0.75% for transmission line. Accordingly, the initial spares claimed by the petitioner and allowed as per the 2009 Tariff Regulations are as given under:

(₹in lakh)

Particulars	Formula	Asset I	Asset II	Asset III	Asset IV
		S/S	S/S	S/S	S/S
Capital cost as on 31.3.2014	(a)	2125.94	2451.75	779.35	1109.82
Initial Spares as per Auditor`s Certificate	(c)	82.06	92.00	26.00	32.00
Ceiling limit as per Regulation 8 of 2009 regulations (%)	(e)	2.50	2.50	2.50	2.50
Initial spares worked out	(f)= ((b-d)*e)/(100%-e)	52.41	60.51	19.32	27.64
Excess initial spares	(g)=(d)-(f)	29.65	31.49	6.68	4.36

(₹in lakh)

Particulars	Formula	Asset V		Asset VI	Asset VII
		S/S	T/L	S/S	S/S
Capital cost as on 31.3.2014	(a)	10135.65	85960.77	1529.59	1803.35
Initial Spares as per Auditor`s Certificate	(c)	517.28	668.32	56.00	81.00
Ceiling limit as per Regulation 8 of 2009 regulations (%)	(e)	2.50	0.75	2.50	2.50
Initial spares worked out	(f)= ((b-d)*e)/(100%-e)	246.62	644.53	37.78	44.16
Excess initial spares	(g)=(d)-(f)	270.66	23.79	18.22	36.84

18. Accordingly, the capital cost of the instant assets as on COD considered is as follows:-

(₹ in lakh)

Asset	Capital cost on COD	Less: Excess initial spares	Capital cost as on COD considered for tariff determination
Asset-I	1973.23	29.65	1943.58
Asset-II	2227.34	31.46	2195.85



Asset	Capital cost on COD	Less: Excess initial spares	Capital cost as on COD considered for tariff determination
Asset-III	728.38	6.68	721.75
Asset-IV	916.87	4.36	912.51
Asset-V (Va+Vb)	91933.00	270.66+23.69=294.45	91638.56
Asset-VI	1386.07	18.22	1367.85
Asset-VII	1284.87	36.84	1248.03

Additional Capital Expenditure

19. Regulation 9(1) of the 2009 Regulations provides that:-

“(1) The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

- (i) Undischarged liabilities;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital spares within the original scope of work, subject to the provisions of regulation 8;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (v) Change in law:
XXXX”

20. The additional capital expenditure claimed by the petitioner is towards balance and retention payments and the same has been certified by the Auditor vide certificates dated 19.8.2015 and 26.8.2015. Further, the total capital expenditure during 2009-14 is within the total approved capital expenditure and the total cost as on 31.3.2014 is within the approved cost. Thus, the same is allowed for the purpose of revision of tariff in accordance with Regulation 9(1)(i) of the 2009 Tariff Regulations.

21. The capital expenditure as on COD and additional capital expenditure from COD to 31.3.2014 allowed is as depicted below:



(₹ in lakh)

Name of Asset	Apportioned approved cost		Capital cost as on COD	Additional capital expenditure (2013-14)	Capital cost as on 31.3.2014
Asset-I	3282.27	Approved in Order dated 18.4.2016	1973.23	97.93	2071.16
		Claimed by the petitioner	1973.23	97.93	2071.16
		Allowed in this Order	1943.58	97.93	2071.16
Asset-II	3685.69	Approved in Order dated 18.4.2016	2227.34	148.78	2376.12
		Claimed by the petitioner	2227.34	148.78	2376.12
		Allowed in this Order	2195.85	148.78	2344.63
Asset-III	1134.89	Approved in Order dated 14.3.2016	728.43	48.02	776.45
		Claimed by the petitioner	728.43	48.02	776.45
		Allowed in this Order	721.75	48.02	769.77
Asset-IV	1425.84	Approved in Order dated 14.3.2016	916.87	183.94	1100.81
		Claimed by the petitioner	916.87	183.94	1100.81
		Allowed in this Order	912.51	183.94	1096.45
Asset-V	110042.08	Approved in Order dated 14.3.2016	91933.00	3687.26	95620.26
		Claimed by the petitioner	91933.00	3687.26	95620.26
		Allowed in this Order	91638.56	3687.26	95325.38
Asset-VI	3046.15	Approved in Order dated 14.3.2016	1386.07	107.47	1493.54
		Claimed by the petitioner	1386.07	107.47	1493.54
		Allowed in this Order	1367.85	107.47	1475.32
Asset-VII	3242.88	Approved in Order dated 14.3.2016	1284.87	492.27	1777.14
		Claimed by the petitioner	1284.87	492.27	1777.14
		Allowed in this Order	1248.02	492.27	1740.29

Debt: Equity

22. 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.”

23. The debt:equity ratio admitted by the Commission vide order dated 14.3.2016 in Petition No. 301/TT/2013 and order dated 18.4.2016 in Petition No. 44/TT/2014 as on COD was 70:30, for determination of tariff in accordance with the Regulation 12 of the 2009 Tariff Regulations.

24. 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	(%)
Asset-I						
Debt	1360.50	70.00	68.55	70.00	1429.06	70.00
Equity	583.07	30.00	29.38	30.00	612.45	30.00
Total	1943.58	100.00	97.93	100.00	2041.51	100.00
Asset-II						
Debt	1537.09	70.00	104.15	70.00	1641.24	70.00
Equity	658.75	30.00	44.63	30.00	703.39	30.00
Total	2195.85	100.00	148.78	100.00	2344.63	100.00
Asset-III						
Debt	505.22	70.00	33.61	70.00	538.84	70.00
Equity	216.52	30.00	14.41	30.00	230.93	30.00
Total	721.75	100.00	48.02	100.00	769.77	100.00
Asset-IV						
Debt	638.75	70.00	128.76	70.00	767.51	70.00
Equity	273.75	30.00	55.18	30.00	328.93	30.00
Total	912.51	100.00	183.94	100.00	1096.45	100.00
Asset-V						
Debt	64146.99	70.00	2590.18	70.25	66737.17	70.01
Equity	27491.57	30.00	1097.08	29.75	28588.65	29.99



Total	91638.56	100.00	3687.26	100.00	95325.82	100.00
Asset-VI						
Debt	957.50	70.00	75.23	70.00	1032.73	70.00
Equity	410.36	30.00	32.24	30.00	442.60	30.00
Total	1367.85	100.00	107.47	100.00	1475.32	100.00
Asset-VII						
Debt	873.62	70.00	344.59	70.00	1218.20	70.00
Equity	374.41	30.00	147.68	30.00	522.09	30.00
Total	1248.02	100.00	492.27	100.00	1740.29	100.00

Return on Equity (“ROE”)

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

“(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.

(5) The generating company or the transmission licensee, as the case may be, 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 (%)
2009-10	16.995	18.674
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:-

(₹ in lakh)

	Asset-I	Asset-II	Asset-III	Asset-IV
Return on Equity	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)
Approved in previous order	19.83	11.28	22.13	29.68
Claimed by the petitioner	19.83	11.28	22.13	29.67
Allowed in this Order	19.54	11.13	21.94	29.55

(₹ in lakh)

	Asset-V	Asset-VI	Asset-VI
Return on Equity	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)
Approved in previous order	1379.22	14.12	15.01
Claimed by the petitioner	1379.00	14.12	15.01
Allowed in this Order	1374.70	13.94	14.65

Interest on Loan (“IoL”)

28. Regulation 16 of the 2009 Tariff Regulations provide the methodology for working out weighted average rate of IoL. The Commission in its earlier order dated 8.6.2011 in Petition No. 238/2010 has dealt with similar issue and held that:-

“...in case of floating rate of interest, any change in the rates of interest during the tariff period will be considered at the time of true up”.

29. 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 are placed in Annexure-1.The IoL worked out is as follows:

(₹ in lakh)

	Asset-I	Asset-II	Asset-III	Asset-IV
Interest on Loan	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)
Approved in previous order	18.20	10.52	20.16	26.39
Claimed by the petitioner	18.19	10.52	20.13	26.37
Allowed in this Order	17.92	10.37	19.95	26.26

(₹ in lakh)

	Asset-V	Asset-VI	Asset-VI
Interest on Loan	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)
Approved in previous order	1119.43	13.63	14.65
Claimed by the petitioner	1106.97	13.66	14.63
Allowed in this Order	1103.50	13.49	14.28

Depreciation

30. 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)

	Asset-I	Asset-II	Asset-III	Asset-IV
Depreciation	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)
Approved in previous order	17.80	10.13	19.86	26.63
Claimed by the petitioner	17.80	10.13	19.86	26.63
Allowed in this Order	17.53	9.99	19.69	26.52

(₹ in lakh)

	Asset-V	Asset-VI	Asset-VI
Depreciation	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)
Approved in previous order	1237.16	12.67	13.47
Claimed by the petitioner	1237.15	12.67	13.47
Allowed in this Order	1233.27	12.51	13.15



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

31. Clause (g) of Regulation 19 of the 2009 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. 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)

	Asset-I	Asset-II	Asset-III	Asset-IV
O & M Expenses	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)
Approved in previous order	15.27	7.64	32.73	0.00
Claimed by the petitioner	15.27	7.64	32.73	0.00
Allowed in this Order	15.27	7.64	32.73	0.00

(₹ in lakh)

	Asset-V	Asset-VI	Asset-VI
O & M Expenses	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)
Approved in previous order	205.00	15.27	15.27
Claimed by the petitioner	205.00	15.27	15.27
Allowed in this Order	205.00	15.27	15.27

Interest on Working Capital (“IWC”)

32. 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)

	Asset-I	Asset-II	Asset-III	Asset-IV
Interest on working capital	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)
Approved in previous order	2.08	1.13	3.17	1.86
Claimed by the petitioner	2.08	1.13	3.17	1.86
Allowed in this Order	2.06	1.12	3.15	1.85



(₹ in lakh)

	Asset-V	Asset-VI	Asset-VI
Interest on working capital	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)
Approved in previous order	95.10	1.73	1.79
Claimed by the petitioner	94.82	1.74	1.80
Allowed in this Order	94.56	1.72	1.77

APPROVED ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD

33. 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-I	Asset-II	Asset-III	Asset-IV
	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)
Depreciation				
Opening Gross Block	1943.58	2195.85	721.75	912.51
Additional Capitalisation	97.93	148.78	48.02	183.94
Closing Gross Block	2041.51	2344.63	769.77	1096.45
Average Gross Block	1992.54	2270.24	745.76	1004.48
Rate of Depreciation (%)	5.28%	5.28%	5.28%	5.28%
Depreciable Value*	1793.29	2043.21	671.18	904.03
Balance useful life of the asset	25.00	25.00	25.00	25.00
Elapsed life	1.00	1.00	1.00	1.00
Remaining Depreciable Value	1793.29	2043.21	671.18	904.03
Depreciation during the year	17.53	9.99	19.69	26.52
Depreciation upto previous year	0.00	0.00	0.00	0.00
Cumulative depreciation (incl. of AAD)	17.53	9.99	19.69	26.52
Interest on Loan				
Gross Normative Loan	1360.50	1537.09	505.22	638.75
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00
Net Loan-Opening	1360.50	1537.09	505.22	638.75
Additions	68.55	104.15	33.61	128.76
Repayment during the year	17.53	9.99	19.69	26.52
Net Loan-Closing	1411.52	1631.25	519.15	740.99



Particulars	Asset-I	Asset-II	Asset-III	Asset-IV
	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)
Average Loan	1386.01	1584.17	512.19	689.87
Weighted Average Rate of Interest on Loan (%)	7.7567%	7.8587%	7.7902%	7.6122%
Interest on Loan	17.92	10.37	19.95	26.26
Return on Equity				
Opening Equity	583.07	658.75	216.52	273.75
Additions	29.38	44.63	14.41	55.18
Closing Equity	612.45	703.39	230.93	328.93
Average Equity	597.76	681.07	223.73	301.34
Return on Equity (Base Rate) (%)	15.500%	15.500%	15.500%	15.500%
MAT rate for the respective year (%)	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (%)	19.610%	19.610%	19.610%	19.610%
Return on Equity	19.54	11.13	21.94	29.55
Interest on Working Capital				
O & M expenses	7.64	7.64	5.46	0.00
Maintenance Spares	13.75	13.75	9.82	0.00
Receivables	72.32	80.50	32.49	28.06
Total	93.71	101.88	47.76	28.06
Rate of Interest(%)	13.20%	13.20%	13.20%	13.20%
Interest on Working Capital	2.06	1.12	3.15	1.85
Annual Transmission Charges				
Depreciation	17.53	9.99	19.69	26.52
Interest on Loan	17.92	10.37	19.95	26.26
Return on Equity	19.54	11.13	21.94	29.55
Interest on Working Capital	2.06	1.12	3.15	1.85
O & M Expenses	15.27	7.64	32.73	0.00
Total	72.32	40.25	97.46	84.17

(₹ in lakh)

Particulars	Asset-V	Asset-VI	Asset-VI
	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)
Depreciation			
Opening Gross Block	91638.56	1367.85	1248.02
Additional Capitalisation	3687.26	107.47	492.27
Closing Gross Block	95325.82	1475.32	1740.29



Particulars	Asset-V	Asset-VI	Asset-VI
	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)
Average Gross Block	93482.19	1421.59	1494.16
Rate of Depreciation (%)	5.28%	5.28%	5.28%
Depreciable Value*	84047.98	1279.43	1344.74
Balance useful life of the asset	25.00	25.00	25.00
Elapsed life	1.00	1.00	1.00
Remaining Depreciable Value	84047.98	1279.43	1344.74
Depreciation during the year	1233.27	12.51	13.15
Depreciation upto previous year	0.00	0.00	0.00
Cumulative depreciation (incl. of AAD)	1233.27	12.51	13.15
Interest on Loan			
Gross Normative Loan	64146.99	957.50	873.62
Cumulative Repayment upto Previous Year	0.00	0.00	0.00
Net Loan-Opening	64146.99	957.50	873.62
Additions	2590.18	75.23	344.59
Repayment during the year	1233.27	12.51	13.15
Net Loan-Closing	65503.90	1020.22	1205.06
Average Loan	64825.45	988.86	1039.34
Weighted Average Rate of Interest on Loan (%)	6.8091%	8.1849%	8.2445%
Interest on Loan	1103.50	13.49	14.28
Return on Equity			
Opening Equity	27491.57	410.36	374.41
Additions	1097.08	32.24	147.68
Closing Equity	28588.65	442.60	522.09
Average Equity	28040.11	426.48	448.25
Return on Equity (Base Rate) (%)	15.500%	15.500%	15.500%
MAT rate for the respective year (%)	20.961%	20.961%	20.961%
Rate of Return on Equity (%)	19.610%	19.610%	19.610%
Return on Equity	1374.70	13.94	14.65
Interest on Working Capital			
O & M expenses	68.33	7.64	7.64
Maintenance Spares	123.00	13.75	13.75
Receivables	2674.02	56.93	59.13
Total	2865.35	78.32	80.51
Rate of Interest(%)	13.20%	13.20%	13.20%
Interest on Working Capital	94.56	1.72	1.77



Particulars	Asset-V	Asset-VI	Asset-VI
	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)
Annual Transmission Charges			
Depreciation	1233.27	12.51	13.15
Interest on Loan	1103.50	13.49	14.28
Return on Equity	1374.70	13.94	14.65
Interest on Working Capital	94.56	1.72	1.77
O & M Expenses	205.00	15.27	15.27
Total	4011.02	56.93	59.13

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2014-19 TARIFF PERIOD

34. The petitioner has combined all the assets covered in the project and has claimed one combined tariff for all the assets for 2014-19 tariff period. The petitioner has submitted effective COD for the Combined Assets for computation of tariff as 1.1.2014. However, the petitioner has not submitted the detailed computation of effective COD in line with Regulation 27 of the 2014 Tariff Regulations. As a provisional measure, we have considered the effective COD as submitted by the petitioner i.e. 1.1.2014 for tariff computation. The petitioner is hereby directed to submit detailed computation for determination of effective COD at the time of truing up. The tariff charges claimed for 2014-19 tariff period as under:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	5713.32	6067.99	6262.06	6262.06	6262.06
Interest on Loan	5044.39	5084.19	4975.00	4564.18	4047.30
Return on Equity	6369.07	6770.39	6992.46	6992.46	6992.46
Interest on Working Capital	457.69	478.11	487.35	480.15	470.57
O & M Expenses	1148.89	1186.94	1226.30	1267.08	1309.16
Total	18733.36	19587.62	19943.17	19565.93	19081.55

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



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	95.74	98.91	102.19	105.59	109.10
Maintenance Spares	172.33	178.04	183.95	190.06	196.37
Receivables	3122.23	3264.60	3323.86	3260.99	3180.26
Total	3390.30	3541.55	3610.00	3556.64	3485.73
Rate of Interest (%)	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	457.69	478.11	487.35	480.15	470.57

Capital Cost

36. 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;”

37. The petitioner has claimed capital cost of combined assets is ₹105215.48 lakh as on 31.3.2014. We have considered the capital cost of ₹104793.79 lakh, as worked out in earlier paras, as the opening capital cost on 1.4.2014 for determination of tariff in accordance with Regulation 9 of the 2014 Tariff Regulations as shown below:-

(₹in lakh)

Name of Asset	Apportioned approved cost	Capital cost as on 31.3.2014
Asset-I	3282.27	2041.51
Asset-II	3685.69	2344.63
Asset-III	1134.89	769.77
Asset-IV	1425.84	1096.45
Asset-V(Va+Vb)	110042.08	95325.82



Name of Asset	Apportioned approved cost	Capital cost as on 31.3.2014
Asset-VI	3046.15	1475.32
Asset-VII	3242.88	1740.29
Total	125859.80	104793.79

Initial spares

38. The cut-off date is 31.3.2016 for Assets-II and IV and 31.3.2017 for other assets. Initial spares have been calculated and adjusted based on capital cost as on 31.3.2014, in the absence of actual expenditure for tariff period 2014-19. However, the petitioner is directed to submit actual expenditure at the time of truing up for computation of initial spares.

Additional Capital Expenditure

39. Clause (1) of Regulation 14 of the 2014 Tariff Regulations provides as under:-

“(1) The capital expenditure in respect of the new project or an existing project incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

- (i) Undischarged liabilities recognized to be payable at a future date;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 13;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law; and
- (v) Change in law or compliance of any existing law:
XXX”

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

“Cut - off Date” means 31st 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 31st March of the year closing after three years of the year of commercial operation:”



41. The cut-off date is 31.3.2016 for Assets-II and IV and 31.3.2017 for other assets.

42. The petitioner has claimed additional capital expenditure for 2014-19 tariff period under Regulation 14(1) of the 2014 Tariff Regulations. We have considered the submissions of the petitioner with regard to the estimated capital expenditure during 2014-19. The above mentioned additional capital expenditure is towards balance and retention payments and the same has been certified by the Auditor vide certificates dated 19.8.2015 and 26.8.2015 for all the assets. Further, the total capital cost for all the assets as on 31.3.2019 is within the approved apportioned cost of the project. Thus, the same is allowed for the purpose of revision of tariff in accordance with Regulation 14(1) of the 2014 Tariff Regulations. The additional capital expenditure allowed is as shown below:-

(₹in lakh)

Name of Asset	Apportioned approved cost	Capital cost as on 1.4.2014	Additional capital expenditure allowed			Capital cost as on 31.3.2019
			2014-15	2015-16	Total	
Asset-I	3282.27	2041.51	466.80	744.31	1211.11	3252.62
Asset-II	3685.69	2344.63	507.94	801.63	1309.57	3654.20
Asset-III	1134.89	769.77	104.13	157.47	261.60	1031.37
Asset-IV	1425.84	1096.45	57.35	149.66	207.01	1303.46
Asset-V(Va+Vb)	110042.08	95325.82	4113.17	4372.75	8485.92	103811.74
Asset-VI	3046.15	1475.32	423.54	282.85	706.39	2181.71
Asset-VII	3242.88	1740.29	420.75	1040.92	1461.67	3201.96
Total	125859.80	104793.79	6093.68	7549.59	13643.27	118437.06

Debt: Equity

43. 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.”

44. The normative debt:equity ratio has been considered to work out the tariff in accordance with the 2014 Tariff Regulations as given below:-

(₹ in lakh)

Funding	Capital cost as on 31.3.2014	(%)	Additional capital expenditure during 2014-19	(%)	Total cost as on 31.3.2019	(%)
Debt	73427.26	70.01	9550.29	70.00	82977.55	70.01
Equity	31455.83	29.99	4092.98	30.00	35548.81	29.99
Total	104883.09	100.00	13643.27	100.00	118526.36	100.00

Return on Equity (“ROE”)

45. 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.”

46. The petitioner has submitted that MAT rate is applicable to the petitioner's company. Accordingly, the MAT rate of 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)				
Return on Equity	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	31455.83	33283.93	35548.81	35548.81	35548.81
Additions	1828.10	2264.88	0.00	0.00	0.00
Closing Equity	33283.93	35548.81	35548.81	35548.81	35548.81
Average Equity	32369.88	34416.37	35548.81	35548.81	35548.81
Rate of Return on Equity (%)	15.500%	15.500%	15.500%	15.500%	15.500%
MAT Rate for respective yr (%)	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	6347.88	6749.20	6971.28	6971.28	6971.28

Interest on Loan (“IoL”)

47. 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.”



48. 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. IoL allowed is as follows:-

(₹ in lakh)					
Interest on Loan	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	73427.26	77692.84	82977.55	82977.55	82977.55
Cumulative Repayment upto Previous Year	1332.66	7028.44	13078.88	19323.38	25567.89
Net Loan-Opening	72094.60	70664.40	69898.67	63654.17	57409.66
Additions	4265.58	5284.71	0.00	0.00	0.00
Repayment during the year	5695.78	6050.44	6244.51	6244.51	6244.51
Net Loan-Closing	70664.40	69898.67	63654.17	57409.66	51165.15
Average Loan	71379.50	70281.54	66776.42	60531.91	54287.41
Weighted Average Rate of Interest on Loan (%)	7.0463%	7.2143%	7.4308%	7.5206%	7.4363%
Interest on Loan	5029.61	5070.35	4962.02	4552.38	4036.95

Depreciation

49. Clause (2), (5) and (6) of Regulation 27 of the 2014 Tariff Regulations provide as follows:-

"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.”

50. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2014 and accumulated depreciation up to 31.3.2014. depreciation up to 2014-19 tariff period has been calculated annually based on Straight Line Method and at rates specified in Appendix-II of the 2014 Tariff Regulations. The detailed calculations for depreciation for the transmission asset are worked out and allowed as follows:-

(₹ in lakh)					
Depreciation	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	104883.09	110976.77	118526.36	118526.36	118526.36
Additional Capitalisation	6093.68	7549.59	0.00	0.00	0.00
Closing Gross Block	110976.77	118526.36	118526.36	118526.36	118526.36
Average Gross Block	107929.93	114751.56	118526.36	118526.36	118526.36
Rate of Depreciation (%)	5.28%	5.27%	5.27%	5.27%	5.27%
Depreciable Value*	97050.94	103190.41	106587.73	106587.73	106587.73
Balance useful life of the asset	32.00	31.00	30.00	29.00	28.00
Elapsed life	1.00	2.00	3.00	4.00	5.00
Remaining Depreciable Value	95718.28	96161.97	93508.85	87264.34	81019.84
Depreciation during the year	5695.78	6050.44	6244.51	6244.51	6244.51
Depreciation upto previous yr	1332.66	7028.44	13078.88	19323.38	25567.89
Cumulative depreciation	7028.44	13078.88	19323.38	25567.89	31812.40



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

51. Clause 3(a) of Regulation 29 of the 2014 Tariff Regulations specifies 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:-

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
D/C Bundled(4 or more Sub-conductor)					
Line length(km)	230.12	230.12	230.12	230.12	230.12
Norms(₹ lakh/km)	1.06	1.10	1.13	1.17	1.21
400 kV Bays:					
No. of Bays	01	01	01	01	01
Norms(₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
765 kV Bays:					
No. of Bays	10	10	10	10	10
Norms(₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.20
Total O&M Expenses (₹ lakh)	1148.89	1186.94	1226.30	1267.08	1309.16

52. 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. 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 asset as per prevailing norms.



Interest on Working Capital (IWC)

53. 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;”

54. 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%.

55. 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)

Interest on Working Capital	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	95.70	98.87	102.15	105.55	109.05
Maintenance Spares	172.33	178.04	183.94	190.06	196.37
Receivables	3113.10	3255.64	3315.04	3252.37	3171.89
Total	3381.14	3532.55	3601.14	3547.98	3477.31
Rate of Interest (%)	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	456.45	476.89	486.15	478.98	469.44



ANNUAL FIXED CHARGES FOR THE 2014-19 TARIFF PERIOD

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

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation					
Opening Gross Block	104883.09	110976.77	118526.36	118526.36	118526.36
Additional Capitalisation	6093.68	7549.59	0.00	0.00	0.00
Closing Gross Block	110976.77	118526.36	118526.36	118526.36	118526.36
Average Gross Block	107929.93	114751.56	118526.36	118526.36	118526.36
Rate of Depreciation (%)	5.28%	5.27%	5.27%	5.27%	5.27%
Depreciable Value	97050.94	103190.41	106587.73	106587.73	106587.73
Balance useful life of the asset	32.00	31.00	30.00	29.00	28.00
Elapsed life	1.00	2.00	3.00	4.00	5.00
Remaining Depreciable Value	95718.28	96161.97	93508.85	87264.34	81019.84
Depreciation during the year	5695.78	6050.44	6244.51	6244.51	6244.51
Depreciation upto previous year	1332.66	7028.44	13078.88	19323.38	25567.89
Cumulative depreciation (incl. of AAD)	7028.44	13078.88	19323.38	25567.89	31812.40
Interest on Loan					
Gross Normative Loan	73427.26	77692.84	82977.55	82977.55	82977.55
Cumulative Repayment upto Previous Year	1332.66	7028.44	13078.88	19323.38	25567.89
Net Loan-Opening	72094.60	70664.40	69898.67	63654.17	57409.66
Additions	4265.58	5284.71	0.00	0.00	0.00
Repayment during the year	5695.78	6050.44	6244.51	6244.51	6244.51
Net Loan-Closing	70664.40	69898.67	63654.17	57409.66	51165.15
Average Loan	71379.50	70281.54	66776.42	60531.91	54287.41
Weighted Average Rate of Interest on Loan (%)	7.0463%	7.2143%	7.4308%	7.5206%	7.4363%
Interest on Loan	5029.61	5070.35	4962.02	4552.38	4036.95
Return on Equity					
Opening Equity	31455.83	33283.93	35548.81	35548.81	35548.81
Additions	1828.10	2264.88	0.00	0.00	0.00
Closing Equity	33283.93	35548.81	35548.81	35548.81	35548.81
Average Equity	32369.88	34416.37	35548.81	35548.81	35548.81
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
MAT rate for the	20.961%	20.961%	20.961%	20.961%	20.961%



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
respective year					
Rate of Return on Equity	19.610%	19.610%	19.610%	19.610%	19.610%
Return on Equity	6347.88	6749.20	6971.28	6971.28	6971.28
Interest on Working Capital					
O & M expenses	95.70	98.87	102.15	105.55	109.05
Maintenance Spares	172.33	178.04	183.94	190.06	196.37
Receivables	3113.10	3255.64	3315.04	3252.37	3171.89
Total	3381.14	3532.55	3601.14	3547.98	3477.31
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest on Working Capital	456.45	476.89	486.15	478.98	469.44
Annual Transmission Charges					
Depreciation	5695.78	6050.44	6244.51	6244.51	6244.51
Interest on Loan	5029.61	5070.35	4962.02	4552.38	4036.95
Return on Equity	6347.88	6749.20	6971.28	6971.28	6971.28
Interest on Working Capital	456.45	476.89	486.15	478.98	469.44
O & M Expenses	1148.89	1186.94	1226.30	1267.08	1309.16
Total	18678.61	19533.82	19890.26	19514.23	19031.33

Filing Fee and the Publication Expenses

57. 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

58. 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

59. The petitioner has sought to recover Service Tax on transmission charges separately from the respondents, if at any time service tax on transmission is withdrawn from negative list in future. We are of the view that the petitioner's prayer is premature.

Goods & Service Tax

60. The petitioner has prayed for reimbursement of tax, if any, on account of proposed implementation of GST. We are of the view that petitioner's prayer is premature.

Sharing of Transmission Charges

61. 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.

62. This order disposes of Petition No.164/TT/2016.

Sd/-
(Dr. M.K. Iyer)
Member

Sd/-
(A.S. Bakshi)
Member



DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO 2009-14

(₹ in lakh)

Asset-I				
Particulars	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXXVII-Loan 1-	9.25	130.00	0.00	130.00
BOND XXXIX-Loan 2-	9.40	25.00	0.00	25.00
SBI (21.03.2012)-Loan 8-	10.25	35.00	0.00	35.00
BOND - XL-Loan 4-	9.30	75.00	0.00	75.00
BOND - XLI-Loan 5-	8.85	2.00	0.00	2.00
BOND-XLII- Loan 6-	8.80	6.00	0.00	6.00
IFC (IFC-B LOAN) (31419-01)- Loan 7- 63.12	2.42	40.02	0.00	40.02
IFC (ICFF LOAN) (31419-02)- Loan 13-63.12	3.27	20.01	0.00	20.01
FC - BOND (17.01.2013)-Loan 9-63.12	4.10	92.98	0.00	92.98
BOND - XLIII-ADDCAP FOR 2013-2014 Loan	7.93	0.00	2.16	2.16
BOND - XLII-Loan 10-	7.93	955.26	0.00	955.26
BOND - XLIII-ADDCAP FOR 2013-2014 Loan 11-	8.70	0.00	66.40	66.40
		1381.27	68.56	1449.83

(₹ in lakh)

Asset-II				
Particulars	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXXVII-Loan 1-	9.25	187.00	0.00	187.00
BOND XXXIX-Loan 2-	9.40	20.00	0.00	20.00
SBI (21.03.2012)-Loan 8-	10.25	30.00	0.00	30.00
BOND - XL-Loan 4-	9.30	65.00	0.00	65.00
IFC (IFC-B LOAN) (31419-01)- Loan 62.65	2.41	36.18	0.00	36.18
IFC (ICFF LOAN) (31419-02)- Loan 62.65	3.26	15.50	0.00	15.50
FC - BOND (17.01.2013)-Loan	4.10	82.69	0.00	82.69



Asset-II				
Particulars	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
62.65				
BOND - XLIII-ADDCAP FOR 2013-2014 Loan 6 Accrual IDC	7.93	0.00	1.66	1.66
BOND - XLII-Loan 5-	7.93	1122.76	0.00	1122.76
BOND - XLIV-ADDCAP FOR 2013-2014 Loan 9-	8.70	0.00	102.49	102.49
		1559.13	104.15	1663.28

(₹ in lakh)

Asset-III				
Particulars	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXXVII-Loan 1-	9.25	110.00	0.00	110.00
BOND XXXIX-DOCO drawl on 29 March 2012	9.40	10.00	0.00	10.00
SBI (21.03.2012)-Loan 2-	10.21	15.00	0.00	15.00
BOND - XL- DOCO drawl on 28 June 2012	9.30	25.00	0.00	25.00
BOND-XLI-DOCO –DRAWL ON 19 OCT 2012	8.85	6.00	0.00	6.00
BOND-XLII-DOCO –DRAWL ON 13 March 2013	8.80	7.00	0.00	7.00
IFC (IFC-B LOAN) (31419-01)- Loan 63.12	2.43	40.02	0.00	40.02
IFC (ICFF LOAN) (31419-02)- Loan 63.12	3.28	15.02	0.00	15.02
FC - BOND (17.01.2013)-Loan 63.12	4.10	54.99	0.00	54.99
BOND - XLIV-ADDCAP FOR 2013-2014	8.70	0.00	6.74	6.74
BOND - XLIV-ADDCAP FOR 2013-2014 Loan 6-	8.70	0.00	26.88	26.88
BOND - XLIV-DOCO	8.70	226.85	0.00	226.85
		509.88	33.62	543.50



(₹ in lakh)

Asset-IV				
Particulars	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXXVII-Loan 1-	9.25	115.00	0.00	110.00
BOND XXXIX-DOCO drawl on 29 March 2012	9.40	16.00	0.00	10.00
SBI (21.03.2012)-DOCO drawl on 21 Mar 2012	10.21	20.00	0.00	15.00
BOND - XL- DOCO drawl on 28 June 2012	9.30	25.00	0.00	25.00
BOND-XLI-DOCO –DRAWL ON 19 OCT 2012	8.85	1.00	0.00	6.00
BOND-XLII-DOCO –DRAWL ON 13 March 2013	8.80	5.00	0.00	7.00
IFC (IFC-B LOAN) (31419-01)- Loan 63.12	2.43	45.00	0.00	40.02
IFC (ICFF LOAN) (31419-02)- Loan 63.12	3.28	20.00	0.00	15.02
FC - BOND (17.01.2013)-Loan 63.12	4.10	50.00	0.00	54.99
BOND - XLIII-ADDCAP FOR 2013-2014	7.93	0.00	6.82	6.74
BOND-XLIII-DOCO	7.93	344.85	0.00	
BOND - XLIV-ADDCAP FOR 2013-2014 Loan 12-	8.70	0.00	121.95	26.88
		641.85	128.77	770.62

(₹ in lakh)

Asset-V				
Particulars	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXXVII-Loan 1-	9.25	4343.00	0.00	4343.00
BOND XXXIX-Loan 2-	9.40	5150.00	0.00	5150.00
SBI (21.03.2012)- Loan 2-	10.25	4900.00	0.00	4900.00
BOND - XL- Loan 4	9.30	11600.00	0.00	11600.00
BOND-XLI- Loan 7	8.85	342.00	0.00	342.00
BOND-XLII- Loan 5	8.80	830.00	0.00	830.00
IFC (IFC-B LOAN) (31419-01)- Loan 62.41	2.43	7390.59	0.00	7390.59
IFC (ICFF LOAN) (31419-02)- Loan 62.41	3.28	3101.34	0.00	3101.34



Asset-V				
Particulars	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
FC - BOND (17.01.2013)-Loan 62.41	4.10	17592.69	0.00	17592.69
BOND - XLIII-DOCO	7.93	250.00	0.00	250.00
BOND - XLIV-ADDCAP FOR 2013-2014 Add Cap Accrual	8.70	0.00	583.46	583.46
BOND - XLIV-ADDCAP FOR 2013-2014 Loan 11-	8.70	0.00	2006.72	2006.72
BOND - XLIV-DOCO	8.70	8615.09	0.00	8615.09
		64114.71	2590.18	66704.89

(₹ in lakh)

Asset-VI				
Particulars	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXXVII-Loan 1-	9.25	253.00	0.00	253.00
BOND XXXIX-Loan 2-	9.40	50.00	0.00	50.00
SBI (21.03.2012)- Loan 2-	10.25	20.00	0.00	20.00
BOND - XL- Loan 4	9.30	30.00	0.00	30.00
BOND-XLI- Loan 5	8.85	2.00	0.00	2.00
BOND-XLII- Loan 6	8.80	3.00	0.00	3.00
IFC (IFC-A LOAN) (31419-01)- Loan 7 - 63.12	3.27	1.64	0.00	1.64
IFC (IFC-B LOAN) (31419-01)- Loan 8 - 63.12	2.42	17.99	0.00	17.99
IFC (ICFF LOAN) (31419-02)- Loan 9 63.12	3.27	8.02	0.00	8.02
FC-Bond (17.1.2013) Loan 10 63.12	4.10	33.01	0.00	33.01
BOND - XLIII-ADDCAP FOR 2013-2014 Add Cap Loan 14 Accrual IDC	7.93	0.00	3.15	3.15
BOND - XLIII- Loan 11	7.93	551.31	0.00	551.31
BOND - XLIV-ADDCAP FOR 2013-2014 Loan 12	8.70	0.00	72.08	72.08
		969.97	75.23	1045.20



(₹ in lakh)

Asset-VII				
Particulars	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXXVII-Loan 1-	9.25	225.00	0.00	225.00
BOND XXXIX-Loan 2-	9.40	75.00	0.00	75.00
SBI (21.03.2012)- Loan 3-	10.25	25.00	0.00	25.00
BOND - XL- Loan 4	9.30	40.00	0.00	40.00
BOND-XLI- Loan 5	8.85	3.00	0.00	3.00
BOND-XLII- Loan 6	8.80	4.00	0.00	4.00
IFC (IFC-A LOAN) (31419-00)- Loan 63.12	3.27	2.27	0.00	2.27
IFC (IFC-B LOAN) (31419-00)- Loan 8 63.12	2.42	29.98	0.00	29.98
IFC (ICFF LOAN) (31419-01)- Loan 9- 63.12	3.27	14.01	0.00	14.01
FC - BOND (17.01.2013)-Loan 63.12	4.10	52.01	0.00	52.01
BOND - XLIII-Loan 11	7.93	275.00	0.00	275.00
BOND - XLIV-ADDCAP FOR 2013-2014 Add Cap	8.70	0.00	344.58	344.58
BOND - XLIV-DOCO	8.70	154.18	0.00	154.18
		899.45	344.58	1244.03

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR TARIFF PERIOD 2009-14

(₹ in lakh)

Asset-I	
Summary	2013-14
Gross Opening Loan	1381.27
Cumulative Repayments of Loans upto Previous Year	0.00
Net Loans Opening	1381.27
Add: Draw(s) during the Year	68.56
Less: Repayments of Loan during the year	0.00
Net Closing Loan	1449.83
Average Net Loan	1415.55
Rate of Interest on Loan (%)	7.7567%
Interest on Loan	109.80



(₹ in lakh)

Asset-II	
Summary	2013-14
Gross Opening Loan	1559.13
Cumulative Repayments of Loans upto Previous Year	0.00
Net Loans Opening	1559.13
Add: Draw(s) during the Year	104.15
Less: Repayments of Loan during the year	0.00
Net Closing Loan	1663.28
Average Net Loan	1611.21
Rate of Interest on Loan (%)	7.8587%
Interest on Loan	126.62

(₹ in lakh)

Asset-III	
Summary	2013-14
Gross Opening Loan	509.88
Cumulative Repayments of Loans upto Previous Year	0.00
Net Loans Opening	509.88
Add: Draw(s) during the Year	33.62
Less: Repayments of Loan during the year	0.00
Net Closing Loan	543.50
Average Net Loan	526.69
Rate of Interest on Loan (%)	7.7902%
Interest on Loan	41.03

(₹ in lakh)

Asset-IV	
Summary	2013-14
Gross Opening Loan	641.85
Cumulative Repayments of Loans upto Previous Year	0.00
Net Loans Opening	641.85
Add: Draw(s) during the Year	128.77
Less: Repayments of Loan during the year	0.00
Net Closing Loan	770.62
Average Net Loan	706.24
Rate of Interest on Loan (%)	7.6122%
Interest on Loan	53.76



(₹ in lakh)

Asset-V	
Summary	2013-14
Gross Opening Loan	64114.71
Cumulative Repayments of Loans upto Previous Year	0.00
Net Loans Opening	64114.71
Add: Draw(s) during the Year	2590.18
Less: Repayments of Loan during the year	0.00
Net Closing Loan	66704.89
Average Net Loan	65409.80
Rate of Interest on Loan (%)	6.8091%
Interest on Loan	4453.75

(₹ in lakh)

Asset-VI	
Summary	2013-14
Gross Opening Loan	969.97
Cumulative Repayments of Loans upto Previous Year	0.00
Net Loans Opening	969.97
Add: Draw(s) during the Year	75.23
Less: Repayments of Loan during the year	0.00
Net Closing Loan	1045.20
Average Net Loan	1007.59
Rate of Interest on Loan (%)	8.1849%
Interest on Loan	82.47

(₹ in lakh)

Asset-VII	
Summary	2013-14
Gross Opening Loan	899.45
Cumulative Repayments of Loans upto Previous Year	0.00
Net Loans Opening	899.45
Add: Draw(s) during the Year	344.58
Less: Repayments of Loan during the year	0.00
Net Closing Loan	1244.03
Average Net Loan	1071.74
Rate of Interest on Loan (%)	8.2445%
Interest on Loan	88.36



DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO 2014-19

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period	Total
BOND XXXVII-Loan 1-	9.25	5360.00	0.00	5360.00
BOND XXXIX-Loan 2-	9.40	5346.00	0.00	5346.00
SBI (21.03.2012)-Loan 8-	10.25	5010.00	0.00	5010.00
BOND XL-Loan 3-	9.30	11860.00	0.00	11860.00
BOND - XLI-Loan 4-	8.85	356.00	0.00	356.00
BOND - XLII-Loan 5-	8.80	855.00	0.00	855.00
IFC (IFC-A LOAN) (31419-00)-Loan 10 - 63.12	3.23	4.04	0.00	4.04
IFC (IFC-B LOAN) (31419-01)-Loan 11 - 63.12	2.38	172.99	0.00	172.99
IFC (IFC-B LOAN) (31419-01)-doco-62.65	2.38	36.18	0.00	36.18
IFC (IFC-B LOAN) (31419-01)-doco 2- 62.41	2.38	7244.99	0.00	7244.99
IFC (ICFF LOAN) (31419-02)-Loan 13-63.12	3.23	77.04	0.00	77.04
IFC (ICFF LOAN) (31419-02)-doco-62.65	3.23	15.50	0.00	15.50
IFC (ICFF LOAN) (31419-02)-doco 2-62.41	3.23	3039.99	0.00	3039.99
FC - BOND (17.01.2013)-Loan 15-63.12	4.10	283.00	0.00	283.00
FC - BOND (17.01.2013)-doco-62.65	4.10	82.70	0.00	82.70
FC - BOND (17.01.2013)-doco 2-62.41	4.10	17264.98	0.00	17264.98
BOND - XLIII-ADDCAP FOR 2014-2015 accrual IDC-	7.93	0.00	122.83	122.83
BOND - XLIII-Loan 5-	7.93	3516.19	0.00	3516.19
BOND - XLIV-ADDCAP FOR 2014-2015 Loan 22 Accrual IDC-	8.70	0.00	353.76	353.76
BOND - XLIV-Loan 7-	8.70	13091.22	0.00	13091.22
SBI (2014-15)-ADDCAP FOR 2014-2015 Loan 20-	10.25	0.00	547.41	547.41
SBI (2014-15)-Loan 9-	10.25	35.00	0.00	35.00
BOND XLVI -ADDCAP FOR 2014-2015 Loan 19-	9.30	0.00	2650.54	2650.54
Bond XLVIII-ADDCAP FOR 2014-2015 Loan 18-	8.20	0.00	302.62	302.62
BOND XLIX-ADDCAP FOR 2014-2015 Loan 17-	8.15	0.00	288.41	288.41
Total		73650.82	4265.57	77916.39



CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR TARIFF PERIOD 2014-19

(₹ in lakh)

Summary	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	73650.84	77916.39	77916.39	77916.39	77916.39
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	4173.75	9820.94	12357.98
Net Loans Opening	73650.84	77916.39	73742.64	68095.45	65558.41
Add: Draw(s) during the Year	4265.57	0.00	0.00	0.00	0.00
Less: Repayments of Loan during the year	0.00	4173.75	5647.19	2537.04	7018.70
Net Closing Loan	77916.41	73742.64	68095.45	65558.41	58539.71
Average Net Loan	75783.63	75829.52	70919.05	66826.93	62049.06
Rate of Interest on Loan (%)	7.0463%	7.2143%	7.4308%	7.5206%	7.4363%
Interest on Loan	5339.94	5470.60	5269.85	5025.81	4614.13

