

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 370/TT/2014

Coram:

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

**Date of Hearing : 14.03.2016
Date of Order : 30.03.2016**

In the matter of:

Determination of transmission tariff for 400 kV, 63 MVAR Bus Reactor at Indore Sub-station under Sasan UMPP TS in Western Region for the 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999.

And in the matter of:

Power Grid Corporation of India Ltd.
'SAUDAMINI', Plot No-2,
Sector-29, Gurgaon -122 001 (Haryana).

.....**Petitioner**

Versus

1. Madhya Pradesh Power Management Company Ltd.
Shakti Bhawan, Rampur
Jabalpur – 482008
2. Madhya Pradesh Audyogik Kendra
Vikas Nigam (Indore) Ltd.
3/54, Press Complex, Agra-Bombay Road,
Indore-452 008
3. Rajasthan Rajya Vidyut Prasaran Nigam Ltd.,
Vidyut Bhawan, Vidyut Marg,
Jaipur - 302 005.
4. Ajmer Vidyut Vitran Nigam Ltd.(AVVNL),
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur



5. Jaipur Vidyut Vitran Nigam Ltd.(JVVNL),
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur.
6. Jodhpur Vidyut Vitran Nigam Ltd.(JdVVNL),
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur
7. Punjab State Electricity Board,
The Mall, Patiala - 147 001.
8. Haryana Power Purchase Centre,
Shakti Bhawan, Sector - 6
Panchkula (Haryana) - 134 109
9. Uttar Pradesh Power Corporation Ltd.,
Shakti Bhawan, 14, Ashok Marg,
Lucknow - 226 001.
10. Delhi Transco Ltd.,
Shakti Sadan, Kotla Road,
New Delhi - 110 002
11. BSES Yamuna Power Ltd.,
Shakti Kiran Building, Karkardooma,
Delhi – 110 092.
12. BSES Rajdhani Power Ltd.,
BSES Bhawan, Nehru Place,
New Delhi.
13. North Delhi Power Ltd.,
Power Trading & Load Dispatch Group,
Cennet Building,
Adjacent to 66/11kV Pitampura - ,
Grid Building, Near PP Jewellers,
Pitampura, New Delhi - 110 034
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 - 110 002
18. Maharashtra State Electricity Distribution Co. Ltd.
Prakashgad, 4th Floor
Andheri (East), Mumbai - 400 052
19. Gujarat Urja Vikas Nigam Ltd.
Sardar Patel Vidyut Bhawan,
Race Course Road
Vadodara - 390 007
20. Electricity Department Govt. Of Goa
Vidyut Bhawan, Panaji,
Near Mandvi Hotel, Goa - 403 001
21. Electricity Department
Administration of Daman & Diu
Daman - 396 210
22. Electricity Department
Administration of Dadra Nagar Haveli
U.T., Silvassa - 396 230
23. Chhattisgarh State Electricity Board
P.O.Sunder Nagar, Dangania, Raipur
Chhatisgarh-492013
24. Sasan Power Ltd,
1st Floor, I Block
Dhirubhai Ambani Knowledge City (DAKC),
Thane-Belapur Road, Koparkhairane,
Navi Mumbai

....Respondents

The following were present:-

For Petitioner: Shri S.S. Raju, PGCIL
 Shri Rakesh Prasad, PGCIL
 Shri Jasbir Singh, PGCIL
 Shri Aryaman Saxena, PGCIL
 Shri P. Awasthi, PGCIL
 Shri Mohd. Mohsin, PGCIL
 Shri P. Sharma, PGCIL
 Shri A.M. Pavgi, PGCIL
 Shri P.V. Nath, PGCIL
 Smt. Archana Kumari, PGCIL



Shri Amit Yadav, PGCIL
Shri M.M. Mondal, PGCIL

For Respondent: Shri Gaurav Gupta, Advocate, PSPCL

ORDER

The petition has been preferred by Power Grid Corporation of India Limited ("the petitioner") 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 COD to 31.3.2019 in respect of 400 kV, 63 MVAR Bus Reactor at Indore Sub-station under Sasan UMPP TS in Western Region (hereinafter referred to as "the transmission asset").

2. The scope of works covered under Sasan UMPP transmission system is as under:-

Part - A: Transmission System of Sasan (4000 MW) UMPP

Transmission Lines:

- i. Sasan - Satna 765 kV 2xS/C line :Ckt-I 268 km & Ckt II - 279 km
- ii. Satna - Bina 765 kV 2xS/C line :Ckt-I 272 km & Ckt-II- 274 km
- iii. LILO of both circuits of one of Vindhyachal-Jabalpur 400 kV D/C line at Sasan: 8 km
- iv. Bina - Bina (MPPTCL) 400 kV D/C line: 5 km
- v. Sasaram - Fatehpur 765 kV S/C line: 352 km
- vi. Fatehpur - Agra 765 kV S/C line: 340 km

Sub-stations:

- i. Establishment of 765/400 kV, 2x1000 MVA Sub-station at Satna
- ii. Line bays for operation of Agra-Gwalior-Bina-Seoni S/C lines at 765 kV level



Part - B: Regional System Strengthening in WR for Sasan UMPP

Transmission Lines:

- i. Bina - Indore 735 kV S/C line : 320 km
- ii. Indore - (MPPTL) 400 kV D/C (Quad) line : 60 km

Sub-stations:

- i. Establishment of 765/400 kV, 2x1500 MVA Sub-station at Indore
- ii. Upgrading Bina & Gwalior Sub-stations to 765/400 kV 2x1000 MVA, 765/400 kV at Bina and 2x1500 MVA, 765/400 kV at Gwalior

3. The respondents in the instant petition are distribution licensees, who are procuring transmission service from the petitioner, mainly the beneficiaries of Northern and Western Region.

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

a) The Investment approval for SASAN UMPP Transmission System was accorded by Board of Directors of the petitioner vide their letter C/CP/Sasan dated 10.12.2008 at an estimated cost of ₹703188.00 lakh including IDC of ₹76782.00 lakh (based on 2nd Quarter, 2008 price level). The approved apportioned cost for the instant asset is ₹711.09 lakh.

b) The transmission asset was scheduled to be commissioned within 48 months from the date of Investment Approval. Thus, the scheduled date of commissioning of the transmission asset was 1.1.2013. However, there is a time over-run of 15 months in the commissioning of the transmission asset and the actual COD was 1.4.2014.



c) The provisional tariff for the instant asset was allowed under Regulation 7(7) of the 2014 Tariff Regulations for inclusion in the PoC charges vide order dated 11.12.2014.

d) The petitioner has claimed a capital cost of ₹367.33 lakh as on COD (1.4.2014) for the transmission asset and an additional capital expenditure of ₹173.18 lakh in 2014-15, ₹10.00 lakh in 2015-16 and ₹5.00 lakh in 2016-17 during 2014-19 tariff period.

5. 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 have been received from the public in response to the notices published by the petitioner under Section 64 of the Act. Ajmer Vidyut Vitran Nigam Limited (AVVNL), Respondent No. 4, Jaipur Vidyut Vitran Nigam Limited (JVVNL), Respondent No. 5, and Jodhpur Vidyut Vitran Nigam Limited (JdVVNL) Respondent No. 6, (hereinafter collectively referred to as “Rajasthan Discoms”) have filed their reply vide a common affidavit dated 3.12.2014. Rajasthan Discoms in its reply have prayed that the various components of tariff such as O&M expenses, interest on working capital claimed by the petitioner should be checked prudently and should be allowed only as per the norms mentioned in the regulations.

6. The hearing in this matter was held on 14.3.2016. The petitioner was directed to submit rejoinder to the objections raised by respondents, however the petitioner has not submitted any rejoinder. The petitioner has submitted the



revised auditor's certificate and tariff forms vide its affidavit dated 22.3.2016. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

7. The transmission charges claimed by the petitioner based on the actual date of commercial operation are as below:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	23.98	28.84	29.23	29.37	29.37
Interest on Loan	8.90	13.16	12.45	11.58	10.61
Return on Equity	26.72	32.28	32.73	32.88	32.88
Interest on Working Capital	4.70	5.15	5.27	5.37	5.47
O&M Expenses	60.30	62.30	64.37	66.51	68.71
Total	124.60	141.73	144.05	145.71	147.04

8. 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	5.03	5.19	5.36	5.54	5.73
Maintenance Spares	9.05	9.35	9.66	9.98	10.31
Receivables	20.77	23.62	24.01	24.29	24.51
Total working capital	34.85	38.16	39.03	39.81	40.55
Rate of Interest	13.50	13.50	13.50	13.50	13.50
Interest of working capital	4.70	5.15	5.27	5.37	5.47

Date of Commercial Operation (COD)

9. The petitioner has claimed the date of the commercial operation of the instant transmission asset as 1.4.2014. Regulation 4(3) of the 2014 Tariff Regulations provides as follows:-



“4. Date of Commercial Operation: The date of commercial operation of a generating station or unit or block thereof or a transmission system or element thereof shall be determined as under:

xxx

(3) Date of commercial operation in relation to a transmission system shall mean the date declared by the transmission licensee from 0000 hour of which an element of the transmission system is in regular service after successful trial operation for transmitting electricity and communication signal from sending end to receiving end:

xxx
xxx”

10. The petitioner has submitted the CEA inspection certificate dated 18.3.2014 and the self declaration certificate dated 1.4.2014, in respect of the claim of commercial operation date in accordance with Regulation 5(2) of the 2014 Tariff Regulations indicating completion of successful trial operation. The Commission had directed the petitioner to submit the RLDC certificate for the trial run operation for the transmission asset. However the petitioner has not submitted the trial run operation certificate. It is observed that for the assets where the COD is on 1.4.2014 the petitioner has not submitted the trial run operation certificate, as the trial run was operation was done during the 2009-14 tariff period and the RLDC certificate was not required as per the 2009 Tariff Regulations. The commercial operation date of the transmission asset has been provisionally considered as 1.4.2014 and the tariff is worked out from 1.4.2014 to 31.3.2019. However, the petitioner is directed to submit the RLDC certificate at the time of truing up.



Capital Cost

11. Regulation 9 (1) ,(2) and 10 (1) of the 2014 Tariff Regulations specify as follows:-

“9. Capital Cost: (1) The Capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects.

(2) The Capital Cost of a new project shall include the following:

- a) the expenditure incurred or projected to be incurred up to the date of commercial operation of the project;
- b) Interest during construction and financing charges, on the loans (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;
- c) Increase in cost in contract packages as approved by the Commission;
- d) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 11 of these regulations;
- e) capitalised Initial spares subject to the ceiling rates specified in Regulation 13 of these regulations;
- f) expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 14 of these regulations;
- g) adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD as specified under Regulation 18 of these regulations; and
- h) adjustment of any revenue earned by the transmission licensee by using the assets before COD.”

“10. Prudence Check of Capital Expenditure: The following principles shall be adopted for prudence check of capital cost of the existing or new projects:

(1) In case of the thermal generating station and the transmission system, prudence check of capital cost may be carried out taking into consideration the benchmark norms specified/to be specified by the Commission from time to time: Provided that in cases where benchmark norms have not been specified, prudence check may include scrutiny of the capital expenditure, financing plan, interest during construction, incidental expenditure during construction for its reasonableness, use of efficient technology, cost over-run and time over-run, competitive bidding for procurement and such other matters as may be considered appropriate by the Commission for determination of tariff.”



12. The capital cost of ₹368.00 lakh as on COD is certified by the Auditor's Certificate dated 17.3.2016.

13. The petitioner vide its affidavit dated 22.3.2016 has submitted that the IDC discharged upto COD is ₹41.75 lakh and ₹0.67 lakh of IDC is being discharged after COD. The petitioner has deducted the IDC amount discharged after the COD from the capital cost as on COD. Thus, the petitioner has claimed capital cost of ₹367.33 lakh as on COD for the transmission asset.

14. The approved apportioned cost of the instant asset is ₹711.09 lakh and the estimated completion cost is ₹555.51 lakh. Thus, there is no cost over-run in case of the instant asset. The admissible capital cost of the transmission asset as on COD is worked out in the subsequent paragraphs considering the time over-run and initial spares.

Time Over-run

15. As per the investment approval, the commissioning schedule of the project was 48 months from the date of investment approval. The investment approval was accorded on 10.12.2008 and hence the scheduled date of commercial operation works out to be 10.12.2012. The date of the commercial operation of the instant transmission asset was 1.4.2014 and hence there is time over-run of almost 15 months.

16. The petitioner has attributed the time over-run to delay in land acquisition for Indore Sub-station and the World Bank tendering process. The petitioner has submitted that due to delay in acquisition of the land for Indore Sub-station, the



action for procurement of the Reactor package was also delayed. Procurement action for the Reactor package was initiated in March, 2010 after completion of land acquisition for Indore Sub-station in February, 2010 in order to avoid uncertainty.

17. The petitioner has further submitted that the Reactor package, being a World Bank funded package, was awarded on 31.1.2012, through ICB route, after getting necessary approvals from the World Bank at various stages of the procurement action. As such, the process of award of the Reactor package took a long time due to compliance of World Bank requirements. Thus, award of the Reactor package took around two years (23 months) because of complexity of the process. The petitioner has further submitted that the 765/400 kV Indore Sub-station was commissioned on 30.6.2013. In comparison to this, the 63 MVAR, 400 KV Reactor was commissioned within 9 months of completion of Indore Sub-station. The petitioner, vide affidavit dated 22.3.2016, has submitted the copy of correspondence made with the concerned authorities towards acquisition of land for the 765/400 kV Indore Sub-station.

18. We have considered the submissions of the petitioner. As per the petitioner's submission the time over-run in commissioning of the instant asset is due to the delay in the land acquisition for Indore Sub-station and the World Bank tendering process, which led to delay in tendering process and consequential delay in award of the bus reactor package. The issue of delay in acquisition of land for Indore Sub-station was dealt by us in Petition No.108/TT/2013. It is



observed that the petitioner has submitted the proposal of land acquisition of private land to the Collector, Indore on 6.9.2007. There was resentment and agitation by the farmers of the proposed land. So alternate land was identified at Hatunia Village, Tehsil Sanver. The fresh proposal was initiated for land acquisition for alternate site at Hatunia on 25.8.2008 and physical possession of land was taken under police protection on 15.2.2010. Therefore, 18 months was consumed in getting land for Indore Sub-station. The petitioner could not commission the instant asset at Indore Sub-station as the sub-station was not commissioned. The time over-run of 18 months in acquisition of land for Indore Sub-station was condoned by us vide order dated 28.3.2016 in Petition No.108/TT/2013. Besides this, there was delay in procurement of the instant Reactor. We are of the view that the time taken for land acquisition and World Bank tendering process was beyond the control of the petitioner and hence the time over-run of 15 months in respect of the instant transmission asset is condoned.

Initial Spares

19. The petitioner has claimed initial spares of ₹12.89 lakh pertaining to sub-station corresponding to capital cost of ₹499.99 lakh (excluding IDC, IEDC, Land cost and cost of civil works) as on the cut-off date. The total initial spares claimed by the petitioner are within the limits prescribed under Regulation 13 of the Tariff Regulation, 2014 and therefore the same is being allowed.

Additional Capital Expenditure



20. 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 recognised 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; and
- (v) Change in Law or compliance of any existing law:”

Provided that the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution shall be submitted along with the application for determination of tariff.

21. Clause (13) of Regulation 3 of the 2014 Tariff Regulations defines “cut-off” date as under:-

“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 the year, the cut-off date shall be 31st March of the year closing after three years of the year of commercial operation”.

Provided that the cut-off date may be extended by the Commission if it is proved on the basis of documentary evidence that the capitalisation could not be made within the cut-off date for reasons beyond the control of the project developer;”

22. The cut-off date in the case of instant transmission asset is 31.3.2017.



23. The petitioner has claimed an additional capital expenditure of ₹173.18 lakh in 2014-15, ₹10.00 lakh in 2015-16 and ₹5.00 lakh in 2016-17 towards balance and retention payment under Regulation 14(1)(i) of 2014 Tariff Regulations. It is observed that total estimated completion cost of ₹555.51 lakh including the additional capitalization of ₹188.18 lakh during 2014-19 tariff period is within the approved apportioned cost of ₹711.09 lakh. Accordingly, estimated additional capital expenditure of ₹173.18 lakh in 2014-15, ₹10.00 lakh in 2015-16 and ₹5.00 lakh in 2016-17 towards balance and retention payment is within the cut-off date and hence it is allowed under Regulation 14(1)(i) of 2014 Tariff Regulations, subject to true up on actual basis.

24. The details of capital cost as on COD and additional capitalization from COD to 31.3.2019 is as under:-

(₹ in lakh)

Approved apportioned cost	Expenditure up to COD	Projected during 2014- 15	Projected expenditure during 2015- 16	Projected expenditure during 2016- 17	Estimated completion cost
711.09	367.33	173.18	10.00	5.00	555.51

Debt:Equity Ratio

25. Regulation 19 (1) of the 2014 Tariff Regulations specifies 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:

Provided that:

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



- ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:
- iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt : equity ratio.”

26. The petitioner has considered debt:equity ratio as 70.00:30.00 as on COD.

The petitioner’s claim is in line with the 2014 Tariff Regulations. We have considered debt:equity ratio of 70.00:30.00 as on COD and for additional capitalization during 2014-19 tariff period. The details of the debt:equity as on the date of COD, i.e 1.4.2014 and 31.3.2019 considered for the purpose of tariff computation for the 2014-19 tariff period is as follows:-

(₹ in lakh)

Funding	Capital cost as on 31.3.2014	(%)	Additional capital expenditure during	(%)	Total Cost as on 31.3.2019	(%)
Debt	257.13	70.00	131.73	70.00	388.86	70.00
Equity	110.20	30.00	56.45	30.00	166.65	30.00
Total	367.33	100.00	188.18	100.00	555.51	100.00

Interest on Loan (“IOL”)

27. Clause (5) & (6) of Regulation 26 of the 2014 Tariff Regulations provides as under:-

“(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.”



28. The weighted average rate of IoL has been considered on the basis of rate prevailing as on COD. 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.

29. The Rajasthan Discoms have submitted that some part of the loan is funded through bonds of fixed rate of interest on which the floating rate of interest issue does not arise. We agree with submission of the Rajasthan Discoms. The rate of interest shall be adjusted to the extent of floating rate of interest only.

30. We have considered the submission of the petitioner and the respondent. 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 at Annexure-1, IoL allowed is as follows:-

	(₹ in lakh)				
Interest on Loan	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	257.13	378.36	385.36	388.86	388.86
Cumulative Repayment upto Previous Year	0.00	23.97	52.77	81.97	111.30
Net Loan-Opening	257.13	354.39	332.59	306.89	277.56
Additions	121.23	7.00	3.50	0.00	0.00
Repayment during the year	23.97	28.80	29.20	29.33	29.33
Net Loan-Closing	354.39	332.59	306.89	277.56	248.23
Average Loan	305.76	343.49	319.74	292.22	262.89
Weighted Average Rate of Interest on Loan (%)	2.9076	3.8265	3.8894	3.9567	4.0289
Interest on Loan	8.89	13.14	12.44	11.56	10.59

Return on Equity ("ROE")



31. Clause (1) & (2) of Regulation 24 and Clause (2) of Regulation 25(2) 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 and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:

xxx

xxx”

“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.”

32. It further provides that in case the generating company or transmission licensee paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of ROE. 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 allowed is as follows:-

(₹ in lakh)

Return on Equity	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	110.20	162.15	165.15	166.65	166.65
Additions	51.95	3.00	1.50	0.00	0.00
Closing Equity	162.15	165.15	166.65	166.65	166.65
Average Equity	136.18	163.65	165.90	166.65	166.65
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	26.70	32.09	32.53	32.68	32.68

Depreciation

33. 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."

34. Clause (67) of Regulation 3 of the 2014 Tariff Regulations defines useful life as follows:-



“(67) ‘Useful life’ in relation to a unit of a generating station and transmission system from the COD shall mean the following, namely:

- (a) Coal/Lignite based thermal generating station 25 years
- (b) Gas/Liquid fuel based thermal generating station 25 years
- (c) AC and DC sub-station 25 years
- (d) Gas Insulated Substation (GIS) 25 years
- (d) Hydro generating station including pumped Storage hydro generating stations 35 years
- (e) Transmission line (including HVAC & HVDC) 35 years
- (f) Communication system 15 years”

35. The petitioner has claimed depreciation considering capital expenditure of ₹367.33 lakh as on 1.4.2014 with additional capitalization ₹173.18 lakh in 2014-15, ₹10.00 lakh in 2015-16 and ₹5.00 lakh in 2016-17 for the 2014-19 tariff period.

36. We have computed depreciation considering capital expenditure of ₹367.33 lakh as on 1.4.2014 with additional capitalization ₹173.18 lakh in 2014-15, ₹10.00 lakh in 2015-16 and ₹5.00 lakh in 2016-17 respectively. The weighted average useful life of the asset has been considered as 25 years in accordance with the above regulation. The details of the depreciation allowed are given hereunder:-

(₹ in lakh)

Depreciation	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	367.33	540.51	550.51	555.51	555.51
Additional Capitalisation	173.18	10.00	5.00	0.00	0.00
Closing Gross Block	540.51	550.51	555.51	555.51	555.51
Average Gross Block	453.92	545.51	553.01	555.51	555.51
Rate of Depreciation (%)	5.28	5.28	5.28	5.28	5.28
Depreciable Value	408.53	568.89	502.21	502.21	499.96
Balance useful life of the asset	25	24	23	22	21
Elapsed life	0	1	2	3	4
Remaining Depreciable Value	408.53	466.99	444.94	417.99	388.66
Depreciation during the year	23.97	28.80	29.20	29.33	29.33
Cumulative depreciation (incl. of AAD)	23.97	52.77	81.97	111.30	140.63



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

37. The petitioner has claimed O&M Expenses as specified in sub-clause (a) of clause (3) of Regulation 29 of the 2014 Tariff Regulations. The details of O&M Expenses allowed are given hereunder:-

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
400 kV Bays:					
No. of Bays	1	1	1	1	1
Norms (₹ lakh/Bay)	60.300	62.300	64.370	66.510	68.710
Total O&M Expenses (₹ lakh)	60.30	62.30	64.37	66.51	68.71

38. The petitioner has submitted that norms for O&M Expenses for the tariff period 2014-19 have been arrived on the basis of normalized actual O&M Expenses during the period 2008-13. The petitioner has further submitted that the wage revision of the employees of the petitioner is due during the 2014-19 tariff period and actual impact of wage hike, which will be effective at a future date, has not been factored in fixation of the normative O&M rate specified for the tariff period 2014-19. The petitioner has prayed to be allowed to approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase.

39. Rajasthan Discoms have submitted that the 2014 Tariff Regulation have been framed after detailed discussion and consultation. Thus the sanctity of the regulations should be maintained and any request by the petitioner for revision in O&M norms should not be entertained. Rajasthan Discoms have further submitted that in the matter of the expected wage rise in future as mentioned by



the petitioner should be looked upon in a detailed manner and only after proper scrutiny any additional changes should be allowed and the same should be in accordance with the law.

40. The O&M Expenses have been worked out as per the norms of O&M Expenses specified in the 2014 Tariff Regulations. As regards impact of wage revision, any application filed by the petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations.

Interest on Working Capital (“IWC”)

41. 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;”

42. The petitioner has considered the rate of interest on working capital to be 13.50%.

43. 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	5.03	5.19	5.36	5.54	5.73
Maintenance Spares	9.05	9.35	9.66	9.98	10.31
Receivables	20.76	23.58	23.97	24.24	24.46
Total	34.83	38.12	38.99	39.76	40.50
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	4.70	5.15	5.26	5.37	5.47

Annual Transmission Charges

44. The detailed computation of the various components of the annual fixed charges for the transmission asset for the tariff period 2014-19 is summarised below:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation					
Opening Gross Block	367.33	540.51	550.51	555.51	555.51
Additional Capitalisation	173.18	10.00	5.00	0.00	0.00
Closing Gross Block	540.51	550.51	555.51	555.51	555.51
Average Gross Block	453.92	545.51	553.01	555.51	555.51
Rate of Depreciation (%)	5.28	5.28	5.28	5.28	5.28
Depreciable Value	408.53	568.89	502.21	502.21	499.96
Balance useful life of the asset	25.00	24.00	23.00	22.00	21.00
Elapsed life	0.00	1.00	2.00	3.00	4.00
Remaining Depreciable Value	408.53	466.99	444.94	417.99	388.66
Depreciation during the year	23.97	28.80	29.20	29.33	29.33
Cumulative depreciation	23.97	52.77	81.97	111.30	140.63
Interest on Loan					
Gross Normative Loan	257.13	378.36	385.36	388.86	388.86
Cumulative Repayments upto Previous Year	0.00	23.97	52.77	81.97	111.30
Net Loan-Opening	257.13	354.39	332.59	306.89	277.56
Additions	121.23	7.00	3.50	0.00	0.00
Repayment during the year	23.97	28.80	29.20	29.33	29.33
Net Loan-Closing	354.39	332.59	306.89	277.56	248.23
Average Loan	305.76	343.49	319.74	292.22	262.89
Weighted Average Rate of Interest on Loan (%)	2.9076	3.8265	3.8894	3.9567	4.0289
Interest on Loan	8.89	13.14	12.44	11.56	10.59



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity					
Opening Equity	110.20	162.15	165.15	166.65	166.65
Additions	51.95	3.00	1.50	0.00	0.00
Closing Equity	162.15	165.15	166.65	166.65	166.65
Average Equity	136.18	163.65	165.90	166.65	166.65
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	26.70	32.09	32.53	32.68	32.68
Interest on Working Capital					
O & M Expenses	5.03	5.19	5.36	5.54	5.73
Maintenance Spares	9.05	9.35	9.66	9.98	10.31
Receivables	20.76	23.58	23.97	24.24	24.46
Total Working Capital	34.83	38.12	38.99	39.76	40.50
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest of working capital	4.70	5.15	5.26	5.37	5.47
Annual Transmission Charges					
Depreciation	23.97	28.80	29.20	29.33	29.33
Interest on Loan	8.89	13.14	12.44	11.56	10.59
Return on Equity	26.70	32.09	32.53	32.68	32.68
Interest on Working Capital	4.70	5.15	5.26	5.37	5.47
O & M Expenses	60.30	62.30	64.37	66.51	68.71
Total	124.56	141.49	143.80	145.45	146.78

Filing Fee and Publication Expenses

45. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 52 of the 2014 Tariff Regulations. 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 clause (1) of Regulation 52 of the 2014 Tariff Regulations.

Licence Fee and RLDC Fees and Charges



46. The petitioner has requested to allow the petitioner to bill and recover license fee and RLDC fees and charges, separately from the respondents. The petitioner shall be entitled for reimbursement of licence fee and RLDC fees and charges in accordance with Clause (2) (b) and (2) (a), respectively, of Regulation 52 of the 2014 Tariff Regulations.

Service Tax

47. The petitioner has prayed for reimbursement of service tax if it is subjected to such tax in future. Rajasthan Discoms have submitted that the petitioner's prayer is on presumption basis, and the same should not be allowed by the Hon'ble Commission. We are of the view that the petitioner's prayer is premature.

Sharing of Transmission Charges

48. 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.

49. This order disposes of Petition No. 370/TT/2014.

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

Sd/-
(A.S. Bakshi)
Member



ANNEXURE-I

DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO 2014-19

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
IBRD IV ADDL-ADDCAP for 2014-15 addcap-14-15-1-	1.61	0.00	19.96	19.96
IBRD IV ADDL-ADDCAP for 2014-15 addcap-14-15-2-60.61	1.61	0.00	0.48	0.48
IBRD IV ADDL-doco-60.61	1.61	257.11	0.00	257.11
BOND XLVI-ADDCAP FOR 2014-15 addcap-14-15-3-	9.30	0.00	101.27	101.27
Total		257.11	121.71	378.82

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

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	257.11	378.82	378.82	378.82	378.82
Cumulative Repayments of Loans upto Previous Year	13.11	22.66	32.29	42.03	51.89
Net Loans Opening	244.00	356.16	346.53	336.79	326.93
Add: Draw(s) during the Year	121.71	0.00	0.00	0.00	0.00
Less: Repayments of Loan during the year	9.55	9.63	9.74	9.86	9.95
Net Closing Loan	356.16	346.53	336.79	326.93	316.98
Average Net Loan	300.08	351.35	341.66	331.86	321.96
Rate of Interest on Loan (%)	2.9076	3.8265	3.8894	3.9567	4.0289
Interest on Loan	8.73	13.44	13.29	13.13	12.97

