

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 66/TT/2015

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

**Date of Hearing : 14.03.2016
Date of Order :.25.05.2016**

In the matter of:

Determination of transmission tariff for 765 kV Line bay & 3x80 MVAR line reactor at 765 kV Vadodara GIS for Vadodara-Dhule transmission line(IPTC) under "LINE BAYS AND REACTOR PROVISIONS AT POWERGRID SUB-STATIONS ASSOCIATED WITH SYSTEM STRENGTHENING FOR 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 Limited.
Shakti Bhawan, Rampur, Jabalpur-482008
2. Maharashtra State Electricity Distribution Co. Limited.
Prakashgad, 4th Floor, Bandra (East), Mumbai-400052
3. Gujarat Urja Vikas Nigam Limited.
Sardar Patel Vidyut Bhawan,
Race Course Road
Vadodara- 390007
4. Electricity Department
Govt. of Goa,
Vidyut Bhawan, Panaji- 403001



5. Electricity Department
Administration of Daman & Diu,
Daman- 396210
6. Electricity Department
Administration of Dadra Nagar Haveli,
U.T., Silvassa- 396230
7. Chhattisgarh State Electricity Board
P.O Sunder Nagar, Dangania, Raipur
Chhattisgarh-492013
8. Madhya Pradesh Audyogik Kendra Vikas Nigam (Indore) Limited
3/54, Press Complex, Agra-Bombay Road
Indore-452008
9. Sterlite Technologies Limited
C2, Mira Corporate Suits, 2nd Floor,
Okhla Crossing, Mathura Road, Ishwar Nagar
New Delhi-110066**Respondents**

The following were present:-

For Petitioner: Shri PiyushAwasthi, PGCIL
Shri Mohd. Mohsin, PGCIL
Shri Pankaj Sharma, PGCIL
Shri S.S. Raju, PGCIL
Shri Rakesh Prasad, PGCIL
Shri Jashbir Singh, PGCIL
Shri AryamanSaxena, PGCIL
Shri M.M. Mondal, PGCIL

For Respondent: Shri Kumar Mihir, Advocate, Sterlite
Shri Harshit Gupta, Sterlite

ORDER

The instant petition has been filed by Power Grid Corporation of India Ltd. ("the petitioner") for determination of tariff for 765 kV Line bay & 3x80 MVAR line reactor at 765 kV Vadodara GIS for Vadodara-Dhule transmission line (IPTC)



under “LINE BAYS AND REACTOR PROVISIONS AT POWERGRID SUB-STATIONS ASSOCIATED WITH SYSTEM STRENGTHENING FOR WESTERN REGION” for 2014-19 tariff period (hereinafter referred as “transmission asset”)under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) for the period starting from COD to 31.3.2019.

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

3. 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 company vide Memorandum No. C/CP/WR-182 dated 22.3.2012 at an estimated cost of ₹14571 lakh, which included IDC of ₹680 lakh. Apportioned approved cost for the transmission asset is ₹5608.87 lakh.

(b) The scope of the instant project is as under:-

Sub-station

1. Extension of 765kV Jabalpur Pooling substation
 - 765 kV line Bays : 1
 - 240 MVAR Switchable line reactor : 1
2. Extension of 765 kV Indore substation
 - 765 kV line Bays : 1
 - 240 MVAR line reactor : 1



3. Extension of 765 kV Aurangabad substation
 - 765 kV line Bays : 1
4. Extension of 765 kV Vadodara (GIS) substation
 - 765 kV line Bays : 1
 - 240 MVAR line reactor : 1

(c) The petitioner has claimed the revised transmission charges on account of actual COD as under:-

(₹ in lakh)				
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Depreciation	152.23	238.2	254.23	259.18
Interest on Loan	188.09	277.06	273.33	254.58
Return on Equity	169.24	264.93	282.88	288.42
Interest on Working Capital	15.57	22.94	23.8	23.78
O&M Expenses	69.53	90.12	93.11	96.2
Total	594.66	893.25	927.35	922.16

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

(₹ in lakh)				
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Maintenance Spares	13.08	13.52	13.97	14.43
O & M Expenses	7.27	7.51	7.76	8.02
Receivables	124.32	148.88	154.56	153.69
Total	144.67	169.91	176.29	176.14
Rate of Interest (%)	13.50%	13.50%	13.50%	13.50%
Interest	15.57	22.94	23.80	23.78

4. The annual transmission charges for the instant asset was allowed under Regulation 7(7) of the 2014 Tariff Regulations for inclusion in the PoC charges vide order dated 15.4.2015. The petitioner has submitted revised tariff forms vide



affidavit dated 16.3.2016. The petitioner has revised the capital cost as on COD and additional capitalization in its revised submission.

5. The petitioner has served the petition to 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. The hearing in this matter was held on 29.4.2016. Respondent No.9, Bhopal Dhule Transmission Company Limited (**BDTCL**), Subsidiary of Sterlite Technologies Limited, Respondent No. 9 has filed their reply vide affidavit dated 21.3.2016. The petitioner has submitted its rejoinder vide affidavit dated 13.5.2016. The petitioner has also submitted additional information vide affidavit dated 16.3.2016 and 11.5.2016. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

Commercial Operation Date(“COD”)

6. The petitioner has claimed the date of the commercial operation as 14.6.2015. 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”

7. The petitioner has submitted RLDC certificate issued by WRLDC, POSOCO, vide letter dated 16.3.2016 in support of the claim of commercial operation in accordance with Regulation 5(2) of the 2014 Tariff Regulations indicating completion of successful trial operation. Accordingly, the commercial operation date (COD) of the transmission asset has been considered as 14.6.2015. The tariff is worked out from COD to 31.3.2019.

Capital Cost

8. The petitioner has claimed capital cost of ₹2910.43 lakh as on COD after adjusting the accrued IDC. The capital cost as on COD also includes the cost of IDC, IEDC and initial spares.

9. Regulation 9 (1) and (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.”

10. The details of apportioned approved cost, capital cost as on date of commercial operation and estimated additional capital expenditure incurred or projected to be incurred for the instant asset covered in the petition are as under:-

	Approved apportioned cost as per FR	Capital cost as on COD	Additional capitalization			Total estimated completion cost
			2015-16	2016-17	2017-18	
Asset	5608.87	2910.43	1361.27	419.94	187.39	4879.03

(₹ in lakh)

Time over-run

11. As per the investment approval, the commissioning schedule of the project is 24 months from the date of investment approval. The investment approval was



accorded on 22.3.2012 and the schedule date of commercial operation was 21.3.2014 i.e. 1.4.2014 against which the asset was commissioned on 14.6.2015. Hence, there is a time over-run of 14 months and 14 days in commissioning of the asset. The petitioner has submitted following reasons for time over-run:-

- a) Delay in land allotment:** The petitioner submitted that requisition for land for Vadodara Sub-station was submitted to Collector in 22.6.2009, and with lot of continuous persuasion the land was allotted on 13.8.2013 and immediately possession was taken and construction was started. Therefore total time involved in land allotment was 50 months from the date of submission of requisition for land allotment. However, time involved in land allotment was 18 months from the date of investment approval.
- b) Non-readiness of associated transmission line:** The petitioner submitted that its scope consists of 765 kV bay along with line reactor at Vaodara GIS. However, the associated transmission line with bay at Dhule constructed by BDTCL was delayed. The petitioner also submitted that it had commenced the work of bay at Vadodara keeping in view the parallel timelines of associated transmission line with bay at Dhule with subsequent shift/delay in associated transmission line with bay at Dhule. Further, BDTCL vide affidavit dated 31.3.2015 submitted that 765 kV Dhule-Vadodara S/C transmission line and Dhule Sub-station has been commissioned on 2.2.2015 and 28.2.2015 respectively, based on



electrical inspector approval for energization. Therefore the Dhule Vadodara transmission line was commissioned after delay of 10 months from the scheduled COD. The petitioner submitted that the progress of the project was discussed with existing agencies for timely completion of the elements matching with the associated transmission line time.

12. Respondent BDTCL submitted that it has declared deemed commissioning of the Dhule-Vadodara (DV) transmission line with effect from 9.2.2015, before the transmission asset were commissioned by the petitioner. The petitioner was also directed to expedite the commissioning of the transmission asset in its order dated 14.4.2015 in Petition No. 66/TT/2015. BDTCL further, submitted that under the TSA, BDTCL is entitled to receive transmission charges with effect from the date of deemed commissioning of the Dhule-Vadodara line i.e. 9.2.2015. However, BDTCL is receiving transmission charges only with effect from 13.6.2015 that is after the date on which the transmission asset were commissioned by the petitioner. According to BDTCL, declaration of deemed COD is in accordance with Article 6.2.1 of the TSA due to the non-availability of the transmission asset to be constructed by the Powergrid. Article 6.2.1 of the TSA is stated as below:-

“6.2 Commercial Operation

6.2.1 An Element of the Project shall be declared to have achieved COD seventy two (72) hours following the connection of the Element with the Interconnection Facilities or seven (7) days after the date on which it is declared by the TSP to be ready for charging but is not able to be charged for reasons not attributable to the TSP or seven (7) days after the date of deferment, if any, pursuant to Article 6.1.2.

Provided that an Element shall be declared to have achieved COD only after all the Element(s), if any, which are pre-required to have achieved COD as defined in



Schedule 3 of this Agreement, have been declared to have achieved their respective COD.”

13. BDTCL submitted that it has also communicated the deemed commissioning of the Dhule-Vadodara line to the petitioner. BDTCL also submitted that the commissioning of the transmission asset is not pre-requisite under Schedule 3 of the TSA for the Dhule-Vadodara line to be commissioned. Deemed commissioning of the Dhule-Vadodara line was declared in accordance with Schedule 3 of the TSA. In view of the above, BDTCL submitted that BDTCL is entitled to receive transmission charges for the Dhule-Vadodara line with effect from the COD of the Dhule-Vadodara line i.e. 9.2.2015, in accordance with the provisions of the TSA, CERC (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 and the Billing, Collection and Distribution Procedure. However, BDTCL is currently receiving transmission charges only from 13.6.2015 onwards.

14. In response the petitioner vide affidavit dated 13.5.2016 submitted that the issue raised by BDTCL regarding remedy sought by claiming transmission charges from their commercial operation date in a petition filed by the petitioner for determination of tariff is beyond the scope of the instant petition and thus need not be addressed by the petitioner.

15. We have considered the submission of the BDTCL. The determination of tariff of transmission line developed by Bhopal Dhule Transmission Company is different from the determination of tariff of the subject transmission assets. The tariff of transmission line developed by Bhopal Dhule Transmission Company is



governed under Section 63 of the Electricity Act, 2003 and tariff based bidding guidelines (TBCBG) issued by Government under Section 63 of the Electricity Act, 2003. The BDTCL has entered into Transmission Service Agreement as per tariff based bidding guidelines issued by the Government and the issue raised by them is to be dealt in accordance with TSA. The issue of commercial operation date of the transmission line developed by the BDTCL for giving effect the recovery of transmission charges was addressed by the Commission in its order dated 26.11.2015 in Petition No. 122/MP/2015. We are of the view that the issue raised by the BDTCL is beyond the scope of the instant petition.

16. In view of the above submissions of the petitioner it is observed that time over-run was mainly due to delay in land allotment and non-readiness of associated transmission lines which was beyond the control of the petitioner. Out of total delay of 14 months and 14 days, delay of 10 months was on account of delay in commissioning of Dhule-Vadodara transmission line. Further, delay of 4 months and 14 days has been covered under the delay in allotment of land. Therefore the delay of 14 months and 14 days is beyond the control of the petitioner and hence, the same has been condoned.

Treatment of Initial spares:

17. Regulation 13(d) of the 2014 Tariff Regulations provides that initial spares shall be capitalised as a percentage of plant and machinery cost upto cut-off date, subject to following ceiling norms:-



- “(a) Coal-based/lignite-fired thermal generating stations - 4.0%
 (b) Gas Turbine/Combined Cycle thermal generating stations - 4.0%
 (c) Hydro generating stations including pumped storage hydro generating station. - 4.0%
 (d) Transmission system
- | | |
|---------------------------------------------------|---------|
| (i) Transmission line | - 1.00% |
| (ii) Transmission Sub-station (Green Field) | - 4.00% |
| (iii) Transmission Sub-station (Brown Field) | - 6.00% |
| (iv) Series Compensation devices and HVDC Station | - 4.00% |
| (v) Gas Insulated Sub-station (GIS) | - 5.00% |
| (vi) Communication system | - 3.5%” |

18. The petitioner has claimed initial spares of 6.00% of plant and machinery cost for Sub-station which is within the ceiling limit specified in the 2014 Tariff Regulations.

IDC & IEDC:

19. The petitioner vide affidavit dated 30.3.2016 has submitted the details of accrued IDC which will be discharged during 2015-16 and 2016-17. Accordingly, the accrual IDC has been adjusted from the capital cost as on COD and the same has been considered as part of additional capitalization in addition to the additional capitalization submitted through the Auditor Certificate.

(₹ in lakh)	
Particulars	Asset
Capital cost as on COD	2920.65
Less: Accrual IDC discharged during 2015-16	6.99
Less: Accrual IDC discharged during 2016-17	3.23
Capital Cost considered as on COD	2910.43

Additional Capital Expenditure

20. The petitioner has proposed additional capitalization of ₹1361.27 lakh, ₹419.94 lakh and ₹187.39 lakh for the year 2015-16, 2016-17 and 2017-18 respectively towards balance and retention payment under Regulation 14(1)(i) of



2014 Tariff Regulations. The petitioner has claimed additional capitalization including the accrual IDC discharged during 2015-16 and 2016-17. It is observed that total estimated completion cost including additional capitalization for 2015-16, 2016-17 and 2017-18 is within the approved apportioned cost. The additional capitalization is towards the balance and retention payment for the work within the original scope of work.

21. 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.”

22. The cut-off date for the asset works out to be 31.3.2018. The additional capitalization claimed by the petitioner is within the cut-off date. The additional capitalization for 2015-16, 2016-17 and 2017-18 is allowed under Regulation 14(1)(i) of the 2014 Tariff Regulations. The details of additional capitalization allowed is as follows:-

Cost as per Investment Approval is ₹5608.87 lakh						
Capital cost as on 14.6.2015 (COD)	Additional capitalisation projected				Total additional capitalisation	Total capital cost including additional capitalisation as on 31.3.2019
	2015-16	2016-17	2017-18	2018-19		
2910.43	1361.27	419.94	187.39	0.00	1968.60	4879.03

Debt:Equity Ratio

23. 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.”

24. The petitioner has considered debt:equity ratio as 70:30 as on COD. We have considered debt:equity ratio of 70:30 as on COD and for additional capitalization during 2015-16, 2016-17 and 2017-18. The details of the debt:equity as on the date of COD and 31.3.2019 considered for the purpose of tariff computation for the 2014-19 tariff period is as follows:-

(₹ in lakh)

Asset	As on 14.6.2015		Additional capitalization during 2014-19		As on 31.3.2019	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	2037.30	70.00	1378.02	70.00	3415.32	70.00
Equity	873.13	30.00	590.58	30.00	1463.71	30.00
Total	2910.43	100.00	1968.60	100.00	4879.03	100.00

Interest on Loan (“IOL”)

25. 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.”

26. We have considered the weighted average rate of IOL on the basis of rate prevailing as on 1.4.2015. Further, the petitioner has prayed to allow it to bill and adjust impact on interest on loan due to change in interest rate on account of floating rate of interest applicable during 2014-19 period, if any from the respondents. The IOL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. The petitioner’s prayer to bill and adjust the impact on interest on loan due to change in interest rate on account of floating rate of interest applicable during 2014-19 period from the respondents will be considered at the time of truing up. The details of weighted average rate of interest are placed at **Annexure** and the IOL has been worked out as follows:-

(₹ in lakh)				
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Gross loan opening	2037.30	2990.19	3284.15	3415.32
Cumulative Repayment upto previous year	0.00	152.34	390.54	644.78
Net Loan-Opening	2037.30	2837.85	2893.60	2770.54
Additions during the year	952.89	293.96	131.17	0.00
Repayment during the year	152.34	238.20	254.23	259.18
Net Loan-Closing	2837.85	2893.60	2770.54	2511.36
Average Loan	2437.57	2865.73	2832.07	2640.95
Rate of Interest (%)	9.6790	9.6680	9.6507	9.6393
Interest	188.23	277.06	273.32	254.57



Return on Equity("ROE")

27. Clause (1)& (2) of Regulation 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 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:

Provided that:

i. in case of projects commissioned on or after 1st April, 2014, an additional return of **0.50 %** shall be allowed, if such projects are completed within the time line specified in **Appendix-I.**"

"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."

28. The petitioner has computed ROE at the rate of 19.705% for the period 2015-19 after grossing up the ROE with MAT rate as per the above Regulation. The Petitioner has considered the MAT Rate of 21.34% for the period 2015-19. The petitioner has further submitted that the grossed up ROE is subject to truing up based on the actual tax paid along with any additional tax or interest, duly adjusted for any refund of tax including the interest received from IT authorities, pertaining to the tariff period 2014-19 on actual gross income of any financial



year. Any under-recovery or over-recovery of grossed up ROE after truing up shall be recovered or refunded to the beneficiaries on year to year basis.

29. The petitioner has further submitted that adjustment due to any additional tax demand including interest duly adjusted for any refund of the tax including interest received from IT authorities shall be recoverable/adjustable after completion of income tax assessment of the financial year.

30. Regulation 24 read with Regulation 25 of the 2014 Tariff Regulations provides for grossing up of return on equity with the effective tax rate for the purpose of return on equity. It further provides that in case the generating company or transmission licensee is paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of return on equity. The petitioner has submitted that MAT rate is applicable to the petitioner's company. We have considered the MAT rate applicable during 2013-14 for the purpose of return on equity, which shall be trued up with actual tax rate in accordance with Regulation 25 (3) of the 2014 Tariff Regulations. The ROE allowed for the asset is given below:-

(₹ in lakh)				
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Opening Equity	873.13	1281.51	1407.49	1463.71
Additional Capitalization	408.38	125.98	56.22	0.00
Closing Equity	1281.51	1407.49	1463.71	1463.71
Average Equity	1077.32	1344.50	1435.60	1463.71
Return on Equity (Base Rate)(%)	15.50	15.50	15.50	15.50
Tax rate for the year (%)	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax) (%)	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	168.55	263.66	281.52	287.03



Depreciation

31. 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.”

32. 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”



33. The petitioner has claimed depreciation considering capital expenditure of ₹2910.43 lakh as on 14.6.2015 with additional capitalization of ₹1361.27 lakh, ₹419.94 lakh and ₹187.39 lakh for 2015-16, 2016-17 and 2017-18 respectively.

34. We have considered the submissions of the petitioner and have computed depreciation considering capital expenditure as on 15.12.2015 and additional capitalization for 2015-16, 2016-17 and 2017-18. The weighted average useful life of the asset has been considered as 25 years for the asset in accordance with the above regulation. The details of the depreciation allowed for the asset is given hereunder:-

Particulars	(₹ in lakh)			
	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Opening Gross block	2910.43	4271.70	4691.64	4879.03
Additional Capitalization	1361.27	419.94	187.39	0.00
Closing Gross block	4271.70	4691.64	4879.03	4879.03
Average Gross block	3591.07	4481.67	4785.34	4879.03
Rate of Depreciation (%)	5.317	5.315	5.313	5.312
Depreciable Value	3231.96	4033.50	4306.80	4391.13
Elapsed Life of the assets at beginning of the year	0	1	2	3
Weighted Balance Useful life of the assets	25	24	23	22
Remaining Depreciable Value	3231.96	3881.16	3916.26	3746.35
Depreciation	152.34	238.20	254.23	259.18

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

35. The petitioner has computed normative O&M Expenses as per Regulation 29(4)(a) of the 2014 Tariff Regulations. Accordingly, the petitioner’s entitlement to O&M expenses have been worked out as given hereunder:-



Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Norm (₹ lakh/bay)				
765 kV	87.22	90.12	93.11	96.20
Number of bay				
765 kV	1	1	1	1
Total O&M Expense (bay) (₹in lakh)	69.59	90.12	93.11	96.20

36. 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.

37. 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”)

38. As per 2014 Tariff Regulations the components of the working capital and the interest thereon are discussed hereinafter:-

(i) Receivables



As per Regulation 28(1) (c) (i) of the 2014 Tariff Regulations, receivables will be equivalent to two months average billing calculated on target availability level. The petitioner has claimed the receivables on the basis of 2 months transmission charges claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis of 2 months transmission charges.

(ii) Maintenance Spares

Regulation 28 (1) (c) (ii) of the 2014 Tariff Regulations provides for maintenance spares @ 15% per annum of the O&M Expenses from 1.4.2014. The petitioner has claimed maintenance spares for the instant asset and value of maintenance spares has accordingly been worked out as 15% of O&M Expenses.

(iii) O & M Expenses

Regulation 28 (1) (c) (iii) of the 2014 Tariff Regulations provides for operation and maintenance expenses for one month to be included in the working capital. The petitioner has claimed O & M Expenses for the instant asset and value of O & M Expenses has accordingly been worked out by considering 1 month O&M Expenses.

(iv) Rate of interest on working capital

Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the



year during the tariff period 2014-15 to 2018-19 in which the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later. Further, the 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. The rate of interest on working capital considered is 13.50% (SBI Base Rate of 10% plus 350 basis points).

39. The interest on working capital allowed for the asset is shown in the table below:-

(₹ in lakh)				
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Maintenance Spares	10.44	13.52	13.97	14.43
O & M expenses	5.80	7.51	7.76	8.02
Receivables	99.05	148.66	154.32	153.45
Total	115.28	169.69	176.05	175.90
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest	15.56	22.91	23.77	23.75

Annual Transmission Charges

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

(₹ in lakh)				
Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Gross Block				
Opening Gross Block	2910.43	4271.70	4691.64	4879.03
Additional Capitalization	1361.27	419.94	187.39	0.00
Closing Gross Block	4271.70	4691.64	4879.03	4879.03



Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Average Gross Block	3591.07	4481.67	4785.34	4879.03
Depreciation				
Rate of Depreciation (%)	5.317	5.315	5.313	5.312
Depreciable Value	3231.96	4033.50	4306.80	4391.13
Elapsed Life of the assets at beginning of the year	0	1	2	3
Weighted Balance Useful life of the assets	25	24	23	22
Remaining Depreciable Value	3231.96	3881.16	3916.26	3746.35
Depreciation	152.34	238.20	254.23	259.18
Interest on Loan				
Gross Normative Loan	2037.30	2990.19	3284.15	3415.32
Cumulative Repayment upto Previous Year	0.00	152.34	390.54	644.78
Net Loan-Opening	2037.30	2837.85	2893.60	2770.54
Additions	952.89	293.96	131.17	0.00
Repayment during the year	152.34	238.20	254.23	259.18
Net Loan-Closing	2837.85	2893.60	2770.54	2511.36
Average Loan	2437.57	2865.73	2832.07	2640.95
Weighted Average Rate of Interest on Loan (%)	9.6790	9.6680	9.6507	9.6393
Interest	188.23	277.06	273.32	254.57
Return on Equity				
Opening Equity	873.13	1281.51	1407.49	1463.71
Additions	408.38	125.98	56.22	0.00
Closing Equity	1281.51	1407.49	1463.71	1463.71
Average Equity	1077.32	1344.50	1435.60	1463.71
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50
MAT Rate for the year 2013-14(%)	20.961	20.961	20.961	20.961
Rate of Return on Equity (%)	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	168.55	263.66	281.52	287.03
Interest on Working Capital				
Maintenance Spares	10.44	13.52	13.97	14.43
O & M expenses	5.80	7.51	7.76	8.02
Receivables	99.05	148.66	154.32	153.45
Total	115.28	169.69	176.05	175.90
Interest	15.56	22.91	23.77	23.75



Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Annual Transmission Charges				
Depreciation	152.34	238.20	254.23	259.18
Interest on Loan	188.23	277.06	273.32	254.57
Return on Equity	168.55	263.66	281.52	287.03
Interest on Working Capital	15.56	22.91	23.77	23.75
O & M Expenses	69.59	90.12	93.11	96.20
Total	594.27	891.94	925.95	920.73

Filing Fee and Publication Expenses

41. 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

42. 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

43. 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 of service tax is premature.

Sharing of Transmission Charges

44. 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.

45. This order disposes of Petition No. 66/TT/2015.

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

Sd/-
(A.S. Bakshi)
Member



ANNEXURE

DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO 2014-19

Particulars	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
SBI(21.03.2012)- Loan 2-	9.95%	1746.9	0	1746.90
BOND - XLIII-Loan 1-	7.93%	200	0	200.00
BOND - XLIX-Loan 3-	8.15%	33.42	0	33.42
Proposed Loan 2015-2016 (8.40%)- Loan 4-	8.40%	56.98	0	56.98
Total		2037.30	0.00	2037.30

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

(₹ in lakh)

Particulars	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	2037.30	2037.30	2037.30	2037.30
Cumulative Repayment of loan upto previous year	0.00	0.00	158.81	334.29
Net Loan Opening	2037.30	2037.30	1878.49	1703.01
Additions during the year	0.00	0.00	0.00	0.00
Repayment during the year	0.00	158.81	175.48	175.48
Net Loan Closing	2037.30	1878.49	1703.01	1527.53
Average Loan	2037.30	1957.90	1790.75	1615.27
Rate of Interest (%)	9.679%	9.668%	9.651%	9.639%
Interest	197.19	189.29	172.82	155.70

