

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 87/TT/2015

Coram:

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

**Date of Hearing : 14.03.2016
Date of Order : 18.04.2016**

In the matter of:

Determination of transmission tariff for Meerut-Moga 765 kV S/C Transmission Line alongwith associated bays at Meerut &Moga 765/400 kV Sub-station with 2 Nos. 240 MVAR line reactors (1 no. switchable and and 1 no. non-switchable line reactor) each at Meerut &Moga under “Northern Regional Strengthening Scheme–XXVI” in Northern Region for 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. Rajasthan Rajya Vidyut Prasaran Nigam Limited,
Vidyut Bhawan, Vidyut Marg, Jaipur - 302005
2. Ajmer Vidyut Vitran Nigam Limited,
400 kV GSS Building (Ground Floor),
Ajmer Road, Heerapura, Jaipur
3. Jaipur Vidyut Vitran Nigam Limited,
400 kV GSS Building (Ground Floor),
Ajmer Road, Heerapura, Jaipur
4. Jodhpur Vidyut Vitran Nigam Limited,
400 kV GSS Building (Ground Floor),
Ajmer Road, Heerapura, Jaipur



5. Himachal Pradesh State Electricity Board,
VidyutBhawan, Kumar House Complex Building II,
Shimla-171 004
6. Punjab State Power Corporation Limited,
Thermal Shed TIA,
Near 22 Phatak, Patiala-147001
7. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-6,
Panchkula, Haryana - 134109
8. Power Development Department,
Govt. Of Jammu & Kashmir,
Mini Secretariat, Jammu
9. Uttar Pradesh Power Corporation Limited,
(Formerly Uttar Pradesh State Electricity Board),
Shakti Bhawan, 14, Ashok Marg,
Lucknow - 226 001
10. Delhi Transco Limited,
Shakti Sadan, Kotla Road,
New Delhi-110002
11. BSES Yamuna Power Limited,
BSES Bhawan, Nehru Place , New Delhi.
12. BSES Rajdhani Power Limited,
BSES Bhawan, Nehru Place, New Delhi
13. North Delhi Power Limited,
Power Trading & Load Dispatch Group Cennet Building,
Adjacent To 66/11 kV Pitampura-3,
Grid Building, Near PPJewellersPitampura,
New Delhi - 110034
14. Chandigarh Administration,
Sector -9, Chandigarh
15. Uttarakhand Power Corporation Limited,
UrjaBhawan, Kanwali Road, Dehradun
16. North Central Railway,
Allahabad



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

....Respondents

The following were present:-

For Petitioner: Shri S.S. Raju, PGCIL
Shri Rakesh Prasad, PGCIL
Shri Jasbir Singh, PGCIL
Smt. Sangeeta Edwards, PGCIL
Shri Aryaman Saxena, PGCIL
Shri M.M. Mondal, PGCIL

For Respondent: Shri Manoj Kumar Sharma, Advocate, Rajasthan Discoms
Shri Pradeep Mishra, Advocate, Rajasthan Discoms
Shri Gaurav Gupta, Advocate, PSPCL

ORDER

The present petition has been filed by Power Grid Corporation of India Ltd. ("the petitioner") for determination of tariff for Meerut-Moga 765 kV S/C Transmission Line along with associated bays at Meerut & Moga 765/400 kV Sub-stations with 2 Nos. 240 MVAR line reactors (1 no. switchable and 1 no. non-switchable line reactor) each at Meerut & Moga under "Northern Regional Strengthening Scheme-XXVI" for 2014-19 tariff period in Northern Region 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 (12.5.2015) to 31.3.2019.

2. 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 Northern Region.



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

(a) The investment approval and expenditure sanction to the transmission project was accorded by the Board of Directors of the petitioner company vide the Memorandum dated 27.9.2012 with an estimated cost of ₹80334.00 lakh including IDC of ₹4466.00 lakh, at 3rd Quarter, 2012 price level. The approved apportioned cost for the instant asset is ₹80334.00 lakh.

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

The scope of work covered under the project "Transmission system associated with Pallatana GBPP and Bongaigaon TPS" in North-Eastern Region are as follows:-

Transmission Line

i. Meerut – Moga S/C Transmission Line

Sub-station

- i. Extension of Meerut 765/400 kV Sub-station
- ii. Extension of Moga 765/400 kV Sub-station
- iii. 2 Nos. 240 MVAR Line Reactors each at Meerut and Moga

(c) The transmission system was scheduled to be commissioned within 30 months from the date of Investment Approval in a progressive manner. The scheduled date of commissioning of the transmission system was 25.3.2015. However, the actual date of commissioning was 12.5.2015 with a delay of 1 month and 18 days.



- (d) The Annual Fixed Cost was approved for the years and 2015-16 and 2016-17 for inclusion in PoC charges as per Regulation 7(7) of the 2014 Tariff Regulations vide order dated 20.8.2015.
- (e) The petitioner has claimed a capital cost of ₹62932.57 lakh as on COD (12.5.2015) and additional capital expenditure of ₹9649.20 lakh in 2014-19 tariff period.
- (f) 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 published in newspaper. None of the respondents have filed any reply. The hearing in this matter was held on 14.3.2016. The petitioner vide affidavit dated 30.6.2015 has submitted the COD certificate dated 11.5.2015 and the RLDC's trial run operation certificate dated 22.5.2015.
- (g) The Commission had directed the petitioner to submit capital cost as on actual COD along with Auditor Certificate including additional information in respect of the instant petition. The petitioner, vide affidavit dated 10.3.2016, has submitted the revised capital cost along with revised Auditor Certificate and tariff forms.
- (h) The petitioner has claimed the transmission charges as under:-

(₹ in lakh)

Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Depreciation	3102.19	3751.85	3833.03	3833.03
Interest on Loan	2573.72	2931.25	2764.12	2501.58
Return on Equity	3584.74	4335.37	4429.16	4429.16
Interest on Working Capital	236.35	280.62	281.70	276.58
O & M Expenses	419.82	488.70	505.09	521.78
Total	9916.82	11787.79	11813.10	11562.13

(i) 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
O & M Expenses	39.44	40.73	42.09	43.48
Maintenance Spares	70.99	73.31	75.76	78.27
Receivables	1863.15	1964.63	1968.85	1927.02
Total working capital	1973.58	2078.67	2086.70	2048.77
Rate of Interest	13.50	13.50	13.50	13.50
Interest on working capital	266.43	280.62	281.70	276.58
Pro-rata Interest on working capital	236.62	280.62	281.70	276.58

(j) Having heard the representatives of the petitioner and perused the material on record, we proceed to determine the tariff in accordance with the Tariff Regulations, 2014.

Date of Commercial Operation (“COD”)

4. The petitioner has claimed the date of the commercial operation of the instant transmission asset as 1.8.2015. 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”

5. The petitioner has submitted RLDC certificate, issued by NRLDC, POSOCO vide letter dated 22.5.2015 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 of the transmission asset has been considered as 12.5.2015 and the tariff is worked out from 12.5.2015 to 31.3.2019.

Capital Cost

6. The petitioner has claimed a capital cost of ₹62932.57 lakh as on COD for the transmission asset vide affidavit dated 10.3.2016. The capital cost submitted by the petitioner is as under:-

Capital cost as on COD as per Auditor's Certificate	Additional capital expenditure		Capital cost as on COD after disallowing IEDC/IDC
	2015-16	2016-17	
64171.83	5336.28	3073.66	62601.88

The petitioner has adjusted the IDC and IEDC amount discharged after COD from the capital cost as on COD and considered the same as additional expenditure during 2015-16 for the purpose of tariff. The petitioner's claim of the additional capital expenditure is as under:-



(₹in lakh)

	Capital cost as on COD as per Auditor's Certificate	Additional capital expenditure		Estimated completion cost
		2015-16	2016-17	
As per Auditor Certificate	64171.83	5336.28	3073.66	72581.77
Less : Undischarged liability	-1239.26	+1239.26	0.00	
Total	62932.57	6575.54	3073.66	72581.77

7. 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.”

8. We have considered the submissions of the petitioner with regard to the capital cost. The capital cost of the transmission assets admitted as on COD have been worked out in the subsequent paragraphs taking into consideration the time over-run, IEDC and IDC and initial spares allowed for the instant assets.

Time Over-run

9. As per the investment approval dated 27.9.2012, the transmission assets were scheduled to be commissioned within 30 months of investment approval. Hence, the scheduled date of commissioning works out to 26.3.2015. However, the transmission assets were commissioned on 12.5.2015. Thus, there is a time over-run of 1 month and 18 days.

10. The petitioner has submitted, vide affidavit dated 10.3.2016, that there were instances of beating of gang members and even firing on gang member by looters. Due to this the construction of line got delayed. The petitioner has placed on record the copy of FIRs dated 21.5.2014, 11.6.2014, 19.6.2014, 21.6.2014, 29.9.2014, 10.2.2015, 18.2.2015, 22.2.2015, 2.3.2015, 24.3.2015, 25.3.2015, 3.4.2015 and newspaper reports. The petitioner has further submitted that due to communal violence in Muzaffarnagar and Shamli District in the year



2013, the commissioning of 765KV S/C Meerut-Moga Transmission Line got delayed. The petitioner has also submitted the newspaper cuttings in support of violence incidence. The petitioner has submitted that there is a minor delay in execution of the transmission asset and the same was beyond the control of the petitioner. The petitioner has prayed to condone the delay in completion of subject assets as the same is beyond the control of the petitioner in line with Regulation 12(2)(i) of the 2014 Tariff Regulation.

11. We have considered the submission of the petitioner regarding the delay in execution of the transmission asset. It is evident from the FIR copies submitted by the petitioner that there was theft of the transmission tower material from the sites. We are of the view that safety of the materials and equipment of the transmission asset are the responsibility of the petitioner and the petitioner should have taken adequate security measures for the safety of the materials and equipment. The Hon'ble APTEL in its judgement in Appeal No. 134 of 2011 has observed as follows:-

“8. As indicated above, the Central Commission has, in the impugned order, in respect of 4 months delay has held that the theft of the equipment can not be considered to be valid reason to condone the delay as the safety of material was the responsibility of the Appellant and delay due to theft could not be treated as force majeure event. This finding for rejecting the explanation with regard to delay of 4 months due to the theft cannot be said to be perverse. As correctly pointed out by the Central Commission, the Appellant who was well aware of the route of transmission line, should have made adequate measures to ensure the safety of the locations during construction. As this was not done, we can not hold the explanation for 4 months delay by citing the theft incident as satisfactory.

9. Therefore, we confirm the finding of the Central Commission in respect of 4 months delay.”



12. Thus, in view of the above, any delay due to theft of the material cannot be condoned. It is observed that communal violence due to clashes in Muzaffarnagar and Shamli districts of Uttar Pradesh took place during August and September, 2013. The petitioner has also submitted the newspaper reports regarding the violence in Muzaffarnagar and Shamli District during 2013. The petitioner has attributed the theft of material to the violence. However, it is noticed that violence took place in 2013 and the theft, as per the documents submitted by the petitioner, took place in 2014 and 2015. The violence in Muzaffarnagar and Shamli districts and the theft of material took place years apart and attributing the theft of the transmission material and equipment to communal violence is farfetched. Further, the petitioner has not demonstrated how these events affected the execution of work. In view of the above, we are not inclined to condone the delay of 1 month and 18 days. Accordingly, IDC and IEDC for the said period are disallowed.

IDC and IEDC

13. The petitioner has submitted the IDC and IEDC amount up to the scheduled COD and for the period from the scheduled COD to COD in its submission dated 10.3.2016 as depicted below:-

IDC/IDC	Total	Upto SCOD	SCOD to COD
IDC (₹ in lakh)	4400.89	4149.41	251.48
IEDC (₹ in lakh)	1386.22	1307.01	79.21

14. The petitioner has also submitted the actual IDC and IEDC discharged up to COD and that discharged after COD as mentioned below:-



Particulars	Amount (₹ in lakh)
Total IDC as per the Auditor's Certificate	4400.89
IDC discharged upto COD	3161.63
Accrual IDC upto COD (to be discharged during 2015-16)	1239.26

15. The petitioner has adjusted the IDC and IEDC amount discharged after COD from the capital cost as on COD and considered the same as additional expenditure during 2015-16. The capital cost as on COD is worked out by disallowing the IDC and IEDC discharged after COD and the IEDC and IDC amount for the period from scheduled COD to COD. The capital cost as on COD worked out is as follows:-

Capital cost as on COD as per Auditor's Certificate	IDC and IEDC for 1 month and 18 days (from SCOD to COD)		IEDC and IDC discharged after COD		Capital cost as on COD after disallowing IEDC and IDC
	IEDC	IDC	IEDC	IDC	
64171.83	79.21	251.48	-	1239.26*	62601.88

*The IDC amount is discharged during 2015-16, and considered as add. cap. during the period.

Initial Spares

16. The petitioner has claimed initial spares of ₹606.47 lakh for the transmission line equipment and ₹479.52 lakh for sub-station equipment as certified vide Auditor's Certificate dated 19.2.2016. The details of initial spares claimed by the petitioner and allowed as per 2014 Tariff Regulations are as follows:-

Particulars	(₹ in lakh)	
	Transmission line	Sub-station
Capital cost (plant and machinery cost excluding IDC and IEDC, land and civil works cost)	61065.12	5729.53
Initial spares claimed	606.47	479.52
Norms (%)	1.00%	6.00%



Particulars	Transmission line	Sub-station
Initial spares worked out as per norms	610.69	335.11
Excess initial spares	0.00	144.41

17. The excess initial spares as worked out above have been disallowed from the capital cost of the transmission asset. The capital cost as on COD considered for the purpose of computation of tariff is as follows:-

(₹ in lakh)	
Particulars	Amount
Capital cost as on COD (after adjusting IDC/IEDC disallowed) on cash basis	62601.88
Excess initial spares	144.41
Capital cost as on COD considered for tariff determination	62457.47

Additional Capital Expenditure

18. 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.

19. 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;”

20. The cut-off date of the transmission asset is 31.3.2017. The petitioner has proposed additional capitalization of ₹5336.28 lakh and ₹3073.66 lakh for the years 2015-16 and 2016-17 respectively towards balance and retention payment under Regulation 14(1)(i) of the 2014 Tariff Regulations.

21. The IDC discharged after the COD and disallowed from the capital cost of the transmission asset as on COD has been considered as additional capital expenditure during 2015-16. Accordingly, additional capitalization of ₹6575.54 lakh and ₹3073.66 lakh is within the cut-off date and it is allowed under Regulation 14(1)(i) of 2014 Tariff Regulations as mentioned below subject to true up on actual basis:-

Approved apportioned cost(RCE)	Capital cost as on COD	Additional Capital Expenditure			(₹ in lakh)
		2015-16	2016-17	Total	Estimated completion cost on 31.3.2019



80334.00	62457.47* (64171.83- 1569.95-144.41)	6575.54** (5336.28+156 9.95)	3073.66	9649.2	72106.67
----------	--	------------------------------------	---------	--------	----------

*IDC/IEDC of ₹1569.95 lakh and excess initial spares of ₹144.41 lakh disallowed from capital cost as on COD.

** IDC of ₹1569.95 lakh added as it is discharged on 2015-16

Debt:EquityRatio

22. 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:

- where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:
- the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:
- 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.”

23. The petitioner has considered the debt: equity ratio of 70.00:30.00, which is in line with the 2014 Tariff Regulations, hence same is considered for calculation of tariff. We have considered debt:equity ratio of 70.00:30.00 for additional capitalization during 2015-16 and 2016-17. The details of the debt:equity as on the date of COD i.e. 1.8.2015 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 COD		Additional capital expenditure during 2014-19		As on 31.3.2019	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	43720.23	70.00	6754.44	70.00	50474.67	70.00
Equity	18737.24	30.00	2894.76	30.00	21632.00	30.00
Total	62457.47	100.00	9649.20	100.00	72106.67	100.00

Interest on Loan (“IOL”)



24. 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.”

25. We have considered the weighted average rate of IOL on the basis of rate prevailing as on COD. 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-I** and the IOL has been worked out as follows:-

(₹ in lakh)				
Interest on Loan	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Gross normative loan	43720.23	48323.10	50474.67	50474.67
Cumulative repayment upto previous year	0.00	3073.50	6800.26	10608.20
Net loan-opening	43720.23	45249.60	43674.40	39866.47
Additions	4602.88	2151.56	0.00	0.00
Repayment during the year	3073.50	3726.76	3807.94	3807.94
Net loan-closing	45249.60	43674.40	39866.47	36058.53
Average loan	44484.92	44462.00	41770.44	37962.50
Weighted average rate of interest	6.4756	6.5498	6.5755	6.5480



Interest on Loan	2015-16 (pro-rata)	2016-17	2017-18	2018-19
on loan (%)				
Interest on loan	2880.68	2912.18	2746.61	2485.77
Pro rate interest on normative loan	2550.11	2912.18	2746.61	2485.77

Return on Equity("ROE")

26. Clause (1) and (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."

27. The petitioner has claimed ROE at the rate of 20.34% after grossing up the ROE of 16.00% (15.50% + 0.50% additional ROE for timely completion) with



MAT rate as per the above said Regulation. 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.

28. The petitioner has claimed additional ROE of 0.50% towards timely completion of the transmission asset under the Regulation 24 (2) of 2014 Tariff Regulation as mentioned below:-

“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 timeline specified in Appendix-I:
- ii. the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:
- iii. additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid.”

29. We have considered the submissions made by the petitioner. 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. Accordingly, the MAT rate applicable during 2013-14 has been considered 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. We allow the petitioner's claim of additional ROE of 0.50% towards timely completion of the transmission asset. The ROE allowed for the instant transmission asset is given below:-

(₹ in lakh)

Return on Equity	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Opening Equity	18737.24	20709.90	21632.00	21632.00
Additions	1972.66	922.10	0.00	0.00
Closing Equity	20709.90	21632.00	21632.00	21632.00
Average Equity	19723.57	21170.95	21632.00	21632.00
Return on Equity (Base Rate) (%)	16.000	16.000	16.000	16.000
MAT Rate for respective year (%)	21.342	21.342	21.342	21.342
Rate of Return on Equity (%)	20.341	20.341	20.341	20.341
Return on Equity	4012.00	4306.41	4400.19	4400.19
Pro rate Return on Equity	3551.60	4306.41	4400.19	4400.19

Depreciation

30. 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.”

31. 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”

32. The weighted average useful life of the asset has been considered as 35 years in accordance with the above regulation. The details of the depreciation allowed are given hereunder:-

(₹ in lakh)				
Depreciation	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Opening Gross Block	62457.47	69033.01	72106.67	72106.67
Additional Capitalisation	6575.54	3073.66	0.00	0.00
Closing Gross Block	69033.01	72106.67	72106.67	72106.67
Average Gross Block	65745.24	70569.84	72106.67	72106.67
Rate of Depreciation (%)	5.28	5.28	5.28	5.28
Depreciable Value	59170.71	63512.85	64896.00	64896.00
Balance useful life of the asset	34	33	32	31
Elapsed life	0	1	2	3
Remaining Depreciable Value	59170.71	60439.35	58095.74	54287.80
Depreciation during the year	3073.50	3726.76	3807.94	3807.94
Cumulative depreciation (incl. of AAD)	3073.50	6800.26	10608.20	14416.14

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



33. The instant petition covers one 765 kV/S/C Transmission line of 337.46 KM and 3 bays of 765 kV voltage level. Regulation 29(3)(a) of the 2014 Tariff Regulations specifies the following norms for O&M Expenses for a 765 kV bay:-

Particulars	2015-16	2016-17	2017-18	2018-19
Norm (₹lakh/bay)				
765 kV	87.22	90.12	93.11	96.2
Transmission Line (₹ lakh/Km)				
765kV S/C 4 Sub-Conductor	0.606	0.627	0.647	0.669

34. 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.

35. 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.



36. 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:-

(₹in lakh)

Asset	Year			
	2015-16 (pro-rata)	2016-17	2017-18	2018-19
765 kV bays (3 No.)	231.63	270.36	279.33	288.60
765 kV Transmission Line (337.46 km)	187.31	218.34	225.76	233.18
Total	418.94	488.70	505.09	521.78

Interest on Working Capital (“IWC”)

37. 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).



38. The interest on working capital allowed is shown in the table below:-

(₹ in lakh)

Interest on Working Capital	2015-16 (pro-rata)	2016-17	2017-18	2018-19
O & M expenses	39.44	40.72	42.09	43.48
Maintenance Spares	70.99	73.30	75.76	78.27
Receivables	1850.43	1952.16	1956.65	1915.11
Total	1960.85	2066.19	2074.50	2036.86
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest on Working Capital	264.71	278.94	280.06	274.98
Pro rate Interest on working capital	234.34	278.94	280.06	274.98

Annual Transmission Charges

39. 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	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Depreciation				
Opening Gross Block	62457.47	69033.01	72106.67	72106.67
Additional Capitalisation	6575.54	3073.66	0.00	0.00
Closing Gross Block	69033.01	72106.67	72106.67	72106.67
Average Gross Block	65745.24	70569.84	72106.67	72106.67
Rate of Depreciation (%)	5.28	5.28	5.28	5.28
Depreciable Value	59170.71	63512.85	64896.00	64896.00
Balance useful life of the asset	34	33	32	31
Elapsed life	0	1	2	3
Remaining Depreciable Value	59170.71	60439.35	58095.74	54287.80
Depreciation during the year	3073.50	3726.76	3807.94	3807.94
Cumulative depreciation (incl. of AAD)	3073.50	6800.26	10608.20	14416.14
Interest on Loan				
Gross Normative Loan	43720.23	48323.10	50474.67	50474.67
Cumulative Repayments upto Previous Year	0.00	3073.50	6800.26	10608.20
Net Loan-Opening	43720.23	45249.60	43674.40	39866.47
Additions	4602.88	2151.56	0.00	0.00
Repayment during the year	3073.50	3726.76	3807.94	3807.94
Net Loan-Closing	45249.60	43674.40	39866.47	36058.53
Average Loan	44484.92	44462.00	41770.44	37962.50



Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Weighted Average Rate of Interest on Loan (%)	6.4756	6.5498	6.5755	6.5480
Interest on Loan	2550.11	2912.18	2746.61	2485.77
Return on Equity				
Opening Equity	18737.24	20709.90	21632.00	21632.00
Additions	1972.66	922.10	0.00	0.00
Closing Equity	20709.90	21632.00	21632.00	21632.00
Average Equity	19723.57	21170.95	21632.00	21632.00
Return on Equity (Base Rate) (%)	16.000	16.000	16.000	16.000
MAT Rate for respective year (%)	21.342	21.342	21.342	21.342
Rate of Return on Equity (%)	20.341	20.341	20.341	20.341
Return on Equity	3551.60	4306.41	4400.19	4400.19
Interest on Working Capital				
O & M Expenses	39.44	40.72	42.09	43.48
Maintenance Spares	70.99	73.30	75.76	78.27
Receivables	1850.43	1952.16	1956.65	1915.11
Total Working Capital	1960.85	2066.19	2074.50	2036.86
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest of working capital	234.34	278.94	280.06	274.98
Annual Transmission Charges				
Depreciation	3073.50	3726.76	3807.94	3807.94
Interest on Loan	2550.11	2912.18	2746.61	2485.77
Return on Equity	3551.60	4306.41	4400.19	4400.19
Interest on Working Capital	234.34	278.94	280.06	274.98
O & M Expenses	418.94	488.70	505.09	521.78
Total	9828.49	11712.98	11739.89	11490.66

Filing Fee and Publication Expenses

40. 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

41. 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

42. The petitioner has sought to recover servicetax 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

43. 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.

44. This order disposes of Petition No. 87/TT/2015.

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 V-DOCO-63.78	1.69	16420.77	0.00	16420.77
SBI (21.03.2012)-DOCO-	10.10	2551.00	0.00	2551.00
BOND - XL-DOCO-	8.85	3423.00	0.00	3423.00
BOND - XLIII-DOCO-	7.93	1587.00	0.00	1587.00
BOND - XLIV-DOCO-	8.70	4215.70	0.00	4215.70
BOND-XLV-DOCO-	9.65	2376.00	0.00	2376.00
SBI (2014-15) DOCO	10.10	3908.00	0.00	3908.00
BOND - XLVI-DOCO-	9.30	4389.00	0.00	4389.00
BOND - XLVII-DOCO-	8.93	3576.00	0.00	3576.00
BOND - XLIXAddcap for 2015-16	8.15	0.00	484.67	484.67
BOND - XLIX DOCO	8.15	1606.33	0.00	1606.33
Proposed loan 2015-16 (10.10%) -Add cap for 2015-16	10.10	0.00	382.81	382.81
Total		44052.80	867.48	44920.28

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	44052.80	44920.28	44920.28	44920.28
Cumulative Repayments of Loans upto Previous Year	297.21	896.57	2019.65	3479.55
Net Loans Opening	43755.59	44023.71	42900.63	41440.73
Add: Draw(s) during the Year	867.48	0.00	0.00	0.00
Less: Repayments of Loan during the year	599.36	1123.08	1459.90	3166.42
Net Closing Loan	44023.71	42900.63	41440.73	38274.31
Average Net Loan	43889.65	43462.17	42170.68	39857.52
Rate of Interest on Loan (%)	6.4756	6.5498	6.5755	6.5480
Interest on Loan	2842.13	2846.69	2772.93	2609.86

