

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 247/TT/2015

Coram:

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

**Date of Hearing : 27.1.2016
Date of Order : 29.04.2016**

In the matter of:

Determination of transmission tariff for 02 No. 220 kV Line Bays at Moga under "Augmentation of Transformers in Northern Region- Part A" in Northern 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. Rajasthan Rajya Vidyut Prasaran Nigam Ltd.,
Vidyut Bhawan, Vidyut Marg,
Jaipur - 302 005.
2. Ajmer Vidyut Vitran Nigam Ltd.,
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur.
3. Jaipur Vidyut Vitran Nigam Ltd.,
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur.



4. Jodhpur Vidyut Vitran Nigam Ltd.,
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur
 5. Himachal Pradesh State Electricity Board,
Vidyut Bhawan, Kumar House Complex Building II,
Shimla - 171 004.
 6. Punjab State Electricity Board,
The Mall, Patiala - 147 001.
 7. Haryana Power Purchase Centre,
Shakti Bhawan, Sector - 6
Panchkula (Haryana) - 134 109
 8. Power Development Department,
Govt. of Jammu and Kashmir
Mini Secretariat, Jammu .
 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.,
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Urja Bhawan, Kanwali Road,
Dehradun

16. North Central Railway,
Allahabad

17. New Delhi Municipal Council,
Palika Kendra, Sansad Marg,
New Delhi - 110 002

....Respondents

The following were present:-

.For Petitioner: Shri S.S. Raju, PGCIL
Shri Rakesh Prasad, PGCIL
Shri Jasbir Singh, PGCIL
Shri Anshul Garg, PGCIL
Shri M.M. Mondal, PGCIL
Shri A.M.Pavgi, PGCIL
Shri P.V. Nath, PGCIL
Shri Mohd. Mohsin, PGCIL
Shri Subhash C Taneja, PGCIL
Shri S.K. Venkatasan, PGCIL
Smt. Treepti Sonkatar, PGCIL
Smt. Sangeeta Edwards, PGCIL

For Respondent: Shri S.K. Agrawal, Advocate, Rajasthan Discom
Shri S.P. Das, Advocate, Rajasthan Discom
Shri B.L Sharma, Advocate, Rajasthan Discom
Shri Gaurav Gupta, Advocate, PSEB

ORDER

The present petition has been filed by Power Grid Corporation of India Ltd. ("the petitioner") for determination of tariff for 02 No. 220 kV Line Bays at Moga under "Augmentation of Transformers in Northern Region- Part A" 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 28.6.2015 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 scheme has been discussed and agreed in the 30th Standing Committee Meeting (SCM) on Power System Planning of Northern Region held on 19.12.2011 at NRPC. The scope of work covered under the Transmission System for establishment of 02 No. 220 kV Line Bays at Moga under “Augmentation of Transformers in Northern Region- Part A” is as follows:-

- i. Extension of 400/220 kV Allahabad Substation-315 MVA, 400/220 kV Transformer
- ii. Extension of 400/220 Kv Bassi (Jaipur) Substation-500 MVA, 400/220 kV Transformer
- iii. Extension of 400/220 kV Merrut Substation-500 MVA, 400/220 kV Transformer
- iv. Extension of 400/220 kV Ludhiana Sub station-500 MVA, 400/220 Kv Transformer
- v. Extension of 400/220 kV Moga Sub station-500 MVA, 400/220 kV Transformer (as replacement for 2*250 MVA ICTs which will be refurbished and used as spare) along with) 02 Nos. kV Line Bays.



- vi. Extension of 400/220 kV Wagoora Sub station-500 MVA, 400/220 Kv Transformer
 - vii. 500 MVA 400/220 kV spare transformer for Northern Region-located at Neemrana.
4. 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/Aug. of transformers in in NR- Part -A dated 19.12.2012 at an estimated cost of ₹15604 lakh, which included IDC of ₹767 lakh based on October 2012 price level.
 - (b) The petitioner has sought approval of COD for 02 No. 220 kV Line Bays at Moga under “Augmentation of Transformers in Northern Region- Part A” in Northern Region in accordance with Regulation 4 (3) (ii) of the Tariff Regulations 2014.
 - (c) The petitioner has submitted that due to non-readiness of downstream system viz. 220kV downstream line of PSTCL, the petitioner is not able to provide services for the reasons not attributable to itself, its suppliers, or contractors, but on account of the delay in commissioning of downstream system by PSTCL. The petitioner has submitted that the case qualifies for consideration of the Commission for approval of date of commercial operation prior to the element of coming into regular service.
 - (d) The Commission has considered the submissions of the petitioner in respect of approval of COD of the transmission asset. The issue of time
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overrun and approval of COD in respect of commissioning of transmission asset has been dealt in the concerned para.

(e) The petitioner has claimed the transmission charges as under:-

(₹ in lakh)

Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Depreciation	21.41	32.86	34.92	34.92
Interest on Loan	22.89	33.02	32.50	29.68
Return on Equity	23.75	36.45	38.74	38.74
Interest on Working Capital	5.22	7.33	7.59	7.69
O&M Expenses	66.14	90.12	93.10	96.20
Total	139.41	199.78	206.85	207.23

(f) 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	7.27	7.51	7.76	8.02
O & M Expenses	13.08	13.52	13.97	14.43
Receivables	30.64	33.30	34.47	34.54
Total	50.99	54.32	56.20	56.98
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest	5.22	7.33	7.59	7.69

5. The petitioner has submitted additional information vide affidavits dated 11.12.2015, 29.12.2015 and 11.1.2016.

6. 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 27.1.2016. Ajmer Vidyut Vitran Nigam Limited (AVVNL), Respondent No. 2, Jaipur Vidyut Vitran Nigam Limited (JVVNL), Respondent No. 3, and Jodhpur Vidyut Vitran Nigam Limited (JdVVNL) Respondent No. 4, (hereinafter collectively referred to as “Rajasthan Discoms”) have filed their reply vide a common affidavit dated 11.1.2016 raising the objections regarding delay in commissioning of the asset, GST, O&M expenses, and service tax. The petitioner has not submitted the rejoinder for the reply filed by respondents. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

Date of Commercial Operation (COD)

7. The petitioner has claimed the date of the commercial operation of the instant transmission asset as 28.6.2015. 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:

Provided that:

(i) where the transmission line or substation is dedicated for evacuation of power from a particular generating station, the generating company and transmission licensee shall endeavour to commission the generating station and the transmission system simultaneously as far as practicable and shall ensure the



same through appropriate Implementation Agreement in accordance with Regulation 12(2) of these Regulations :

(ii) in case a transmission system or an element thereof is prevented from regular service for reasons not attributable to the transmission licensee or its supplier or its contractors but is on account of the delay in commissioning of the concerned generating station or in commissioning of the upstream or downstream transmission system, the transmission licensee shall approach the Commission through an appropriate application for approval of the date of commercial operation of such transmission system or an element thereof.

xxx

xxx”

8. The petitioner has sought approval of COD in accordance with Regulation 4 (3) (ii) of the Tariff Regulations 2014. The petitioner has submitted that due to non-readiness of downstream system viz. 220kV downstream transmission line the petitioner is not able to provide services for the reasons not attributable to itself, its suppliers, or contractors, but on account of the delay in commissioning of downstream system by PSTCL. The petitioner has submitted that the case qualifies for consideration of the Commission for approval of date of commercial operation prior to the element of coming into regular service.

9. The Commission has considered the averments made by the petitioner. It is observed that the 220 kV downstream PSTCL line has since not been commissioned causing time overrun of 9 months from the scheduled date of commercial operation. The issue of time overrun has been addressed in detail in the concerned para in the present order.

10. The date of the commercial operation of the instant transmission asset was 28.6.2015. In support of the claim of commercial operation in accordance with



Regulation the petitioner has submitted RLDC certificate stating that bays were idle charged (no load charged) as the power flow could not be started due to non readiness of downstream system.

11. We have considered the submission of the petitioner w.r.t COD of the subject assets. It is observed that the petitioner has submitted the RLDC certificate for trial run operation which states that transmission assets have been charged with no load condition in absence of corresponding state transmission system. We understand that due to non commissioning of the downstream transmission system of state, the trial run operation would not be possible in this case. The petitioner has sought approval of COD of 28.6.2014 from the date of charging the assets. As regard the petitioner prayer for approval of commercial operation under the Regulation 4(3)(ii) of the 2014 Tariff Regulations as the petitioner is prevented for the commissioning of the assets due to non commissioning of downstream system, we are of the view that the issue of delay in the transmission assets due to non commissioning of downstream system is dealt by the Commission in several orders. The Commission, in its order 11/SM/2014 dated 5.8.2015, has examined this issue in detail. In order dated 5.8.2015, the Commission has adopted a solution to consider the COD from the date of charging, however, the transmission charges shall be borne by the respective State beneficiaries. Accordingly, we hold that the petitioner prayer for approval of commercial operation date for Asset D and Asset E has been allowed



in this order subject to sharing of the transmission charges as decided in the subsequent para of this order.

Time Over-Run

12. As per the investment approval, the commissioning schedule of the project is 22 months from the date of investment approval. The investment approval was accorded on 06.12.2012 and hence the schedule date of commercial operation was 5.10.2014. The date of the commercial operation of the instant transmission asset was 28.6.2014 and hence there is time over-run of nearly 9 months. The petitioner has attributed the delay in commissioning of the asset to is mainly due to non-readiness of 220kV downstream .

13. We have considered the submissions of the petitioner and as discussed in foregoing para, it is fact that the assets could not be commissioned due to downstream system, we hold that the delay 9 months in the commissioning of the subject assets is condoned. Accordingly, IDC and IEDC amount corresponding to the period of time overrun is capitalised.

Capital Cost

14. 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.”

15. The petitioner, vide affidavit dated 11.3.2016 and 15.3.2016, has submitted the revised tariff forms and Auditor’s Certificate. The petitioner has claimed capital cost of ₹483.71 lakh as on COD and additional capitalization of ₹97.10 lakh and ₹77.64 lakh for the years 2015-16 and 2016-17. The petitioner has further submitted that the IEDC discharged upto COD is ₹29.42 lakh and out of IDC of ₹47.69 lakh, ₹35.69 lakh has been discharged upto COD and balance ₹7.19 lakh ₹4.82 lakh has been discharged during 2015-16 and 2016-17



respectively. We have considered the capital cost of after adjusting the total discharged IDC for determination of tariff for the 2014-19 tariff period given as here under:-

(₹ in lakh)			
	Upto COD	2015-16	2016-17
Capital Expenditure	406.60	97.10	77.64
IEDC Discharged	29.42	0.00	0.00
IDC Discharged	35.69	7.19	4.82
Capital Cost Allowed	471.71	104.29	87.07

Initial Spares

16. The petitioner, vide Auditor`s certificate dated 23.7.2015, has claimed initial spares of ₹23.44 lakh pertaining to transmission line corresponding to capital cost of ₹581.34 lakh (excluding IDC, IEDC, Land cost and cost of civil works) as on the cut-off date 31.03.2018.. We have worked out the admissible initial spares by considering capital cost as per Auditor`s Certificate in accordance with the 2014 Tariff Regulations.

17. Regulation 13 of the 2014 Tariff Regulations provide for ceiling norms for capitalization of initial spares in respect of substation (brown field) at 6.00%. Accordingly, the initial spares have been allowed as under:-

Particulars	Logical Formula	Substation Line: Amount
Cost as on cut off date	(a)	581.34
Cost deducting excess IDC	(b)	581.34
Initial Spares as per Auditor`s Certificate	(c)	23.44



Proportionate Initial Spares claimed after deducting IDC	$(d) = (c)/(a) * (b)$	23.44
Ceiling limit as per Regulation 8 of 2009 regulations	$(e)(\%)$	6.00%
Initial spares worked out	$(f) = ((b-d)*e)/(100\%-e)$	35.61
Excess initial spares claimed	$(g)=(d)-(f)$	0.00

Additional Capital Expenditure

18. The petitioner vide Auditor's certificate, has proposed additional capitalization of ₹97.10 lakh and ₹77.64 lakh for the years 2015-16 and 2016-17 respectively towards balance and retention payment under Regulation 14(1)(i) of 2014 Tariff Regulations.

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;"

Accordingly, the cut-off date of the transmission asset is 31.3.2018. It is observed that total estimated completion cost of ₹685.45 lakh including the additional capitalization of ₹104.29 lakh(including ₹ 7.19 lakh IDC discharged on 2015-16) and ₹82.46 lakh(including ₹4.82 lakh IDC discharged on 2016-17) is within the cut-off date and lies within the approved apportioned cost of ₹660.44 lakh.



Accordingly, additional capitalization for the subject asset is allowed under Regulation 14(1)(i) of 2014 Tariff Regulations.

(₹ in lakh)

Asset	Approved Apportioned Cost as per FR	Capital cost as on COD	Additional Capital Expenditure			Estimated Completion Cost as on 31.3.2019
			2014-15	2015-16	2016-17	
Asset I	660.44	471.71	0.00	104.29	82.46	658.45

Debt:Equity Ratio

20. 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.”

21. 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 and 2016-17. The details of the debt:equity as on the date of COD, i.e 28.6.2015 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- 28.6.2015		Additional capitalization during 2014-19		As on 31.3.2019	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	330.19	70.00	130.72	70.00	460.92	70.00
Equity	141.51	30.00	56.02	30.00	197.54	30.00
Total	471.71	100.00	186.74	100.00	658.45	100.00



Interest on Loan (“IOL”)

22. 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.”

23. We have considered the weighted average rate of IOL on the basis of rate prevailing as on 1.4.2014. 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 petitioner has also prayed that they will approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase. 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)

Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Gross loan opening	330.19	403.19	460.92	460.92
Cumulative Repayment upto previous year	0.00	21.10	53.84	88.76
Net Loan-Opening	330.19	382.09	407.08	372.16
Additions during the year	73.00	57.72	0.00	0.00
Repayment during the year	21.10	32.73	34.92	34.92
Net Loan-Closing	382.09	407.08	372.16	337.24
Average Loan	356.14	394.59	389.62	354.70
Rate of Interest (%)	8.3401	8.3401	8.3517	8.3772
Interest	22.56	32.91	32.54	29.71

Return on Equity (“ROE”)

24. 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.”

25. The petitioner has claimed ROE at the rate of 20.961% after grossing up the ROE of 15.5% 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.

26. 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.

27. 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. The ROE allowed for the instant transmission asset is given below:-

Particulars	(₹ in lakh)			
	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Opening Equity	141.51	172.80	197.54	197.54
Additional Capitalization	31.29	24.74	0.00	0.00
Closing Equity	172.80	197.54	197.54	197.54
Average Equity	157.15	185.17	197.54	197.54
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500
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)	23.41	36.31	38.74	38.74

Depreciation

28. 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.”

29. 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”

30. The petitioner has claimed depreciation considering capital expenditure of ₹471.71 lakh as on 28.6.2015 with additional capitalization of ₹104.29 lakh and ₹87.07 lakh for the 2014-19 tariff period.

31. We have computed depreciation considering capital expenditure of ₹471.71 lakh as on 28.6.2015 with additional capitalization of ₹104.29 lakh and ₹87.07 lakh for 2014-15 and 2015-16 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)

Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Opening Gross Block	471.71	575.99	658.45	658.45
Additional Capitalisation	104.29	82.46	0.00	0.00



Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Closing Gross Block	575.99	658.45	658.45	658.45
Average Gross Block	523.85	617.22	658.45	658.45
Rate of Depreciation (%)	5.30	5.30	5.30	5.30
Depreciable Value	471.46	555.50	592.61	592.61
Balance useful life of the asset	25.00	24.00	23.00	22.00
Elapsed life	0.00	1.00	2.00	3.00
Remaining Depreciable Value	471.46	534.40	538.77	503.85
Depreciation during the year	21.10	32.73	34.92	34.92
Depreciation upto previous year	0.00	21.10	53.84	88.76
Cumulative depreciation (incl. of AAD)	21.10	53.84	88.76	123.68

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

32. Regulation 29(4)(a) of the 2014 Tariff Regulations specifies the following norms for O&M Expenses for 9.238 km 220kV Double Circuit AC transmission Line.

Particulars	2015-16	2016-17	2017-18	2018-19
Substation Norm (₹ lakh/bay)				
220KV	43.61	45.06	46.55	48.10

33. The petitioner has claimed O&M Expenses as specified in sub-clause (a) of clause (4) of Regulation 29 of the 2014 Tariff Regulations. The details of O&M Expenses allowed are given hereunder:-

(₹ in lakh)

O&M Expenses			
2015-16 (pro-rata)	2016-17	2017-18	2018-19
66.25	90.12	93.10	96.20



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.

Interest on Working Capital (“IWC”)

36. 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).

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

(₹ in lakh)

Particulars	2015-16 (pro- rata)	2016-17	2017-18	2018-19
Maintenance Spares	5.52	7.51	7.76	8.01
O & M expenses	9.94	13.52	13.97	14.43
Receivables	23.09	33.23	34.48	34.54
Total	38.54	54.26	56.20	56.99
Rate of Interest (%)	13.50	13.50	13.50	13.50
Interest	5.20	7.32	7.59	7.69

Annual Transmission Charges

38. 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	471.71	575.99	658.45	658.45
Additional Capitalisation	104.29	82.46	0.00	0.00
Closing Gross Block	575.99	658.45	658.45	658.45
Average Gross Block	523.85	617.22	658.45	658.45
Rate of Depreciation (%)	5.30	5.30	5.30	5.30
Depreciable Value	471.46	555.50	592.61	592.61
Balance useful life of the asset	25.00	24.00	23.00	22.00



Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Elapsed life	0.00	1.00	2.00	3.00
Remaining Depreciable Value	471.46	534.40	538.77	503.85
Depreciation during the year	21.10	32.73	34.92	34.92
Depreciation upto previous year	0.00	21.10	53.84	88.76
Cumulative depreciation (incl. of AAD)	21.10	53.84	88.76	123.68
Interest on Loan				
Gross Normative Loan	330.19	403.19	460.92	460.92
Cumulative Repayment upto Previous Year	0.00	21.10	53.84	88.76
Net Loan-Opening	330.19	382.09	407.08	372.16
Additions	73.00	57.72	0.00	0.00
Repayment during the year	21.10	32.73	34.92	34.92
Net Loan-Closing	382.09	407.08	372.16	337.24
Average Loan	356.14	394.59	389.62	354.70
Weighted Average Rate of Interest on Loan (%)	8.3401	8.3401	8.3517	8.3772
Interest on Loan	22.56	32.91	32.54	29.71
Return on Equity				
Opening Equity	141.51	172.80	197.54	197.54
Additions	31.29	24.74	0.00	0.00
Closing Equity	172.80	197.54	197.54	197.54
Average Equity	157.15	185.17	197.54	197.54
Return on Equity (Base Rate)	15.500	15.500	15.500	15.500
MAT rate for the respective year	20.961	20.961	20.961	20.961
Rate of Return on Equity	19.610	19.610	19.610	19.610
Return on Equity	23.41	36.31	38.74	38.74
Interest on Working Capital				
O & M expenses	5.52	7.51	7.76	8.01
Maintenance Spares	9.94	13.52	13.97	14.43
Receivables	23.09	33.23	34.48	34.54
Total	38.54	54.26	56.20	56.99
Rate of Interest	13.50	13.50	13.50	13.50
Interest on Working Capital	5.20	7.32	7.59	7.69
Annual Transmission Charges				



Particulars	2015-16 (pro-rata)	2016-17	2017-18	2018-19
Depreciation	21.10	32.73	34.92	34.92
Interest on Loan	22.56	32.91	32.54	29.71
Return on Equity	23.41	36.31	38.74	38.74
Interest on Working Capital	5.20	7.32	7.59	7.69
O & M Expenses	66.25	90.12	93.10	96.20
Total	138.52	199.40	206.88	207.26

Filing Fee and Publication Expenses

39. 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

40. 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

41. 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

42. The transmission charges for the instant assets shall be borne by the beneficiary Discom till the commissioning of the downstream system. Once the downstream system is commissioned by the Discom, 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.

43. This order disposes of Petition No. 247/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**

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2015	Additions during the tariff period	Total
				(Rs in lakh)
BOND - XLIII-CHILD 1	7.9300	225.00	0.00	225.00
BOND XLVI	9.3000	94.95	0.00	94.95
Proposed Loan 2015-16 (Bond L)	8.4000	18.65	0.00	18.65
Total		338.60	0.00	338.60

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	338.60	338.60	338.60	338.60
Cumulative Repayment of loan upto previous year	0.00	0.00	0.00	18.75
Net Loan Opening	338.60	338.60	338.60	319.85
Additions during the year	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	18.75	18.75
Net Loan Closing	338.60	338.60	319.85	301.10
Average Loan	338.60	338.60	329.23	310.48
Rate of Interest(%)	8.3401%	8.3401%	8.3517%	8.3772%
Interest	28.24	28.24	27.50	26.01

