

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 275/TT/2015

Coram:

**Shri Gireesh B. Pradhan, Chairman
Shri A.K. Singhal, Member
Shri A.S. Bakshi, Member
Dr. M.K. Iyer, Member**

Date of Hearing: 22.03.2016

Date of Order : 29.07.2016

In the matter of:

Determination of transmission tariff of Asset I: 275.93 km OPGW Fibre optic cable along with associated equipments which are under commercial operation w.e.f. 1.4.2014, Asset II: 291.124 km OPGW fiber optic cable along with associated equipments (includes 88.63 km under cost apportionment with POWERTEL) which are under commercial operation w.e.f. 1.7.2014 and Asset III: 1717.112 km OPGW fiber optic cable along with associated equipments (includes 966.63 km under cost apportionment with POWERTEL) which are under commercial operation w.e.f. 30.3.2015 under "Fiber Optic Communication system for central sector sub-stations & Generating stations" in Southern Region under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulation 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2014.

And in the matter of:

Power Grid Corporation of India Limited
"Saudamini", Plot No.2,
Sector-29, Gurgaon -122 001

.....Petitioner

Vs

1. National Thermal Power Corporation Ltd. (NTPC)
NTPC Bhawan, Core-7, Scope Complex
7, Institutional Area, Lodhi Road, New Delhi 110003
2. Nevyeli Lignite Corporation Ltd.
P.O. Nevyeli – 607801
Cuddalore Dist., Tamil Nadu
3. Nuclear Power Corporation of India Ltd. (NPCIL)
Nabhikya Bhawan, Anu-Shakti



Mumbai – 400094

4. NTPC Tamil Nadu Energy Company Ltd. (NTECL)
G-Block, 123 & 123A, 12th Street, Anna Nagar (East)
Chennai – 600102
5. Meenakshi Energy Private Limited
Meenakshi Plot 119
Road No. 10, Jubilee Hills
Hyderabad – 500033
6. Simhapuri Energy Limited
6-3-866/2, 3rd Floor, Begumpet
Madhucon Green lands,
Hyderabad – 500016
7. LANCO, Kondapalli Power Pvt. Ltd.
Plot No. 4, Software Units Layout,
Hitech City, Madhapur,
Hyderabad – 500081
8. Andhra Pradesh Power Co-ordination Committee
APTRANSCO, Vidyut Soudha, Hyderabad 500082
9. Power Company of Karnataka Ltd.
Room No. 503, KPTCL Building, Kaveri Bhavan
Bangalore -560009, Karnataka
10. Kerala State Electricity Board
Vydyuthi Bhacanam, Pattom
Thiruvananthapuram – 695004
11. TANGEDCO
7th Floor, Eastern Wing
144, Anna Salai
Chennai
12. Electricity Department
Government of Puducherry
Puducherry – 605001
13. Electricity Department
Government of Goa
Curti-Ponda, Goa – 403401

..... Respondent

For petitioner : Shri M. M. Mondal, PGCIL
Shri S. K. Venkatesan, PGCIL
Shri S.S. Raju, PGCIL



Shri Rakesh Prasad, PGCIL
Shri Jasbir Singh, PGCIL
Shri Anshul Garg, PGCIL

For respondents : None

ORDER

The petition has been filed by Power Grid Corporation of India Limited (PGCIL) for determination of tariff from COD to 31.3.2019 for Asset I: 275.93 km OPGW Fibre optic cable along with associated equipments which are under commercial operation w.e.f. 1.4.2014, Asset II: 291.124 km OPGW fiber optic cable along with associated equipments (includes 88.63 km under cost apportionment with POWERTEL) which are under commercial operation w.e.f. 1.7.2014 and Asset III: 1717.112 km OPGW fiber optic cable along with associated equipments (includes 966.63 km under cost apportionment with POWERTEL) which are under commercial operation w.e.f. 30.3.2015 under "Fiber Optic Communication system for central sector sub-stations & Generating stations" in Southern Region under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulation 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2014.

2. The investment approval for the transmission project was accorded by the Board of Directors of the petitioner company vide letter dated 6.6.2012 at an estimated cost of ₹17416 lakh including IDC of ₹974 lakh, based on 4th Quarter, 2012 price level. As per the investment approval, the transmission asset was scheduled to be commissioned within 30 months, i.e. by 6.12.2014.



3. The scheme was approved in the 17th SRPC meeting dated 12th August, 2011. The petitioner has submitted revised communication network which was approved by SRPC on the 24th meeting of SRPC held on 15.3.2014. As per the revised communication network, total identified requirement which was under implementation was 5221 km besides sharing of 1161 km Powergrid Telecom Fibre Optic Network.

4. The broad scope of works is given below:-

Installation of

- a. 5207 km of OPGW fiber optic cable on existing /new EHV transmission lines of POWERGRID/SEBs
- b. 118 Nos. of Terminal equipment for communication based on Synchronous Digital Hierarchy (SDH) technology
- c. 90 Nos. of Multiplexers
- d. 45 Nos. of DC power Supply and
- e. 1 No. Network Management System (NMS).

Sharing of 499 km of OPGW Fibre under POWERGRID Telecom Network.

5. The instant petition covers following assets:-

Srl. No	Name of Asset
1	Asset: I 275.93 km OPGW Fibre optic cable along with associated equipments.
2	Asset II: 291.124 km OPGW fiber optic cable along with associated equipments (includes 88.63 km under cost apportionment with POWERTEL)
3	Asset III: 1717.112 km OPGW fiber optic cable along with associated equipments (includes 966.63 km under cost apportionment with POWERTEL)



6. This order has been issued after considering the petitioner's affidavit dated 4.5.2016.

7. Annual Fixed Charges for the instant assets was approved vide order dated 17.12.2015 in Petition No. 275/TT/2015 under Regulation 7(7) of the 2014 Tariff Regulations for the years 2014-19 and the tariff allowed is applicable from the date of commercial operation. Further, the transmission charges allowed are subject to adjustment as per Regulation 7(7) of the 2014 Tariff Regulations.

Date of Commercial operation

8. The petitioner has claimed the date of commercial operation of the instant transmission assets as 1.4.2014, 1.7.2014 and 30.3.2015 for Asset I, II & III respectively.

9. The petitioner was directed vide ROP dated 28.12.2015, to submit the certificate issued by RLDC as per Regulation 5 (2) of the 2014 Tariff Regulations in support of trial operation or commercial operation date and also submit the coloured SLD of all the assets under the scheme, clearly identifying the assets covered in the instant petition along with the upstream and downstream systems. In response, the petitioner vide affidavit dated 4.5.2016 submitted fibre optic expansion project diagram of Southern Region.

10. The petitioner was again directed vide RoP dated 22.3.2016 to submit RLDC certificate, details regarding the usage of the asset and whether communication signal has been established. In response, the petitioner vide affidavit dated 4.5.2016 has submitted that the RLDC certificate is applicable only for Asset-II and Asset-III i.e. the asset commissioned on 1.7.2014 and 30.3.2015 respectively. Asset-I was



commissioned during 2009-14 and declared under COD from 1.4.2014 and hence RLDC certificate is not applicable in case of Asset-I. With regard to Asset-II, the petitioner vide letter dated 12.2.2015 submitted RLDC certificate for trial run of commercial links. With regard to Asset-III, the petitioner has not submitted RLDC charging certificate. Further, vide affidavit dated 29.6.2016, the petitioner has submitted that the data communication has been established and all the links are in operation. Communication signal from sending end to receiving end has taken place and all the assets are in use.

11. We have considered the submission of the petitioner regarding date of commercial operation. Final tariff can be allowed for assets which are confirmed to have been commissioned on submission of RLDC certificate as provided under Regulation 5(2) of the 2014 Tariff Regulations or on confirmation whether communication link was established for assets commissioned under 2009 Tariff Regulations where RLDC certificate could not be obtained. Accordingly, the petitioner was directed to submit the RLDC certificate and confirm that communication signal has been established in case of Assets-I and III, vide "Record of Proceedings" dated 28.12.2015 and 22.3.2016. The petitioner has not submitted the RLDC certificates and instead submitted that RLDC certificate is not applicable in case of Asset I as it has been commissioned during 2009-14 and put under commercial operation during 2014-19 tariff period. In this reference, the petitioner has submitted vide affidavit dated 29.6.2016, that the data communication is established and all the links are in operation and communication signal from sending end to receiving end had taken place and all the assets are in use. It is further submitted that the Asset I covered under instant petition has been commissioned before 1.4.2014 hence the RLDC certificate is not applicable. Since Asset-II is



commissioned on 1.4.2014, the petitioner is required to submit the RLDC certificate as provided under Regulation 5(2) of the 2014 Tariff Regulations. The petitioner has submitted RLDC certificate in respect of Asset-II and has confirmed that data communication is established and all the links are in operation and communication signal from sending end to receiving end had taken place and asset is in use. As regards Asset-III, the petitioner has submitted vide affidavit dated 4.5.2016 that the RLDC certificate will be submitted shortly. However, no affidavit is submitted by the petitioner. As the petitioner has not submitted RLDC certificate in case of Asset-III, tariff of Asset-III is not allowed in this order. Accordingly, tariff for Assets-I and II are allowed in this order. The tariff allowed for Asset-III, vide order dated 17.12.2013, for inclusion in the POC tariff is withdrawn. NLDC is directed to withdraw the tariff allowed for Asset-III from the computation of POC charges. The petitioner is directed to claim tariff for Asset-III afresh alongwith RLDC certificate as provided under Regulation 5(2) of the 2014 Tariff Regulations.

Annual Fixed Charges for the period from COD to 31.3.2016

12. The petitioner has claimed transmission charges for the Asset-I and II as given hereunder:-

(₹ in lakh)					
Particulars	Asset- I				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	38.22	48.46	49.72	49.72	49.72
Interest on Loan	34.52	40.50	37.44	33.14	28.89
Return on equity	35.53	45.04	46.21	46.21	46.21
Interest on Working Capital	4.41	5.06	5.11	5.08	5.05
O & M Expenses	34.66	35.81	36.99	38.22	39.49
Total	147.34	174.87	175.47	172.37	169.36



Asset- II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	22.30	34.09	36.43	37.21	37.21
Interest on Loan	23.37	32.98	32.04	29.26	25.60
Return on equity	20.73	31.68	33.86	34.58	34.58
Interest on Working Capital	2.85	4.10	4.24	4.27	4.25
O & M Expenses	23.94	32.98	34.07	35.21	36.38
Total	93.19	135.83	140.64	140.53	138.02

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

Asset-I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	5.20	5.37	5.55	5.73	5.92
O & M expenses	2.89	2.98	3.08	3.19	3.29
Receivables	24.56	29.15	29.25	28.73	28.23
Total	32.65	37.50	37.88	37.65	37.44
Interest	4.41	5.06	5.11	5.08	5.05
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%

Asset-II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	4.79	4.95	5.11	5.28	5.46
O & M expenses	2.66	2.75	2.84	2.93	3.03
Receivables	20.71	22.64	23.44	23.42	23.00
Total	28.16	30.34	31.39	31.63	31.49
Interest	2.85	4.10	4.24	4.27	4.25
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%

14. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under Section 64 of the Electricity Act, 2003.

15. Having heard the representatives of the petitioner present and perused the material on record, we proceed to dispose of the petition.



Capital cost

16. Clause (2) of Regulation 9 of the 2014 Tariff Regulations provides as follows:-

"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 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."

17. Capital cost has been considered as per Regulation 9(2) of the 2014 Tariff Regulations. The petitioner has submitted Auditor's Certificate dated 8.9.2015 which shows the capital cost claimed by the petitioner as on actual COD and estimated additional capitalization projected to be incurred for Asset II. The summary of capital cost claimed by the petitioner is given below:-

(₹ in lakh)

Name of the Asset	Approved apportioned cost (As per Form 6)	Cost incurred as on COD	Estimated additional capital			Total estimated completion cost
			2014-15	2015-16	2016-17	
Asset I	1078.00	462.07	283.58	39.87	0.00	785.52
Asset II	645.00	425.59	88.24	49.34	24.67	587.84



18. According to Auditor Certificate in case of Asset I, the expenditure up to 31.3.2014 has been verified from the books of accounts of the project and projected expenditure is on the basis of details furnished by the Management; and in case of Asset II, the actual expenditure up to 31.3.2015 is has been verified from the books of accounts of the project and projected expenditure is on the basis of details furnished by the Management.

Cost Over- run.

19. The estimated completion cost for Assets I and II is within the apportioned approved cost.

Time Over- run

20. As per investment approval, the project was scheduled to be commissioned within 30 months from the date of Board of Director's approval i.e. 6.6.2012. The scheduled commissioning works out to be 5.12.2014. Asset-I was commissioned on 1.4.2014 and Asset-II was commissioned on 1.7.2014. Thus there is no time over-run.

Treatment of Interest During Construction (IDC)

21. The petitioner claimed IDC of ₹27.19 and ₹19.78 lakh, on accrual basis, in Auditor Certificates dated 7.7.2014 and 8.9.2015, for Asset-I and Asset-II respectively. The petitioner, vide affidavit dated 4.5.2016, has further submitted that, in case of Asset-I, out of ₹27.19 lakh, the amount of IDC discharged up to COD is ₹10.42 lakh and balance IDC of ₹16.77 lakh has been discharged during 2014-15 and in case of Asset-II, out of ₹19.78 lakh, the amount of IDC discharged up to COD is ₹13.62 lakh and balance IDC of ₹6.16 lakh has been discharged during 2014-15.



The details of IDC claimed, discharged upto COD and discharged during 2014-15 are as follows:-

(₹ in lakh)				
Assets	Date of Auditor Certificate	IDC claimed on accrual basis	IDC discharged upto COD	Balance IDC discharged during 2014-15
Asset-I	7.7.2014	27.19	10.42	16.77
Asset-II	8.9.2015	19.78	13.62	6.16

22. Based on submitted information, IDC amounting to ₹10.27 lakh and ₹13.63 lakh for Assets-I and II respectively, have been worked out and allowed as on COD on cash basis. The un-discharged IDC of ₹16.92 lakh and ₹6.15 lakh for Assets-I and II respectively, has been reduced from the capital cost as on COD.

23. The balance IDC discharged after COD (i.e. in 2014-15) shall be allowed as additional capital expenditure of concerned year at the time of true up subject to the submission of details related to the payment of actual IDC on cash basis and submission of loan wise IDC discharged after COD.

Treatment of Incidental Expenditure during Construction (IEDC)

24. The petitioner vide CA Certificate dated 7.7.2014 and 8.9.2015, has claimed IEDC of ₹16.93 lakh and ₹8.36 lakh for Assets-I and II respectively.

25. The percentage on 'Hard Cost' as indicated in the Abstract Cost Estimate has been considered as the allowable limit to the IEDC. In the current petition, 10.75% of the 'Hard Cost' (i.e. ₹44.93 lakh and ₹42.73 lakh for Assets I and II respectively) is the maximum limit for allowing IEDC. Thus, IEDC claimed is within the abstract cost estimate, i.e. 10.75% of the hard cost, as on COD. Thus, IEDC of ₹16.93 lakh and ₹8.36 lakh for Asset I and II respectively, has been allowed as on COD.



Initial spares

26. The petitioner has not claimed any initial spare for Assets-I and II.

Capital cost as on COD

27. Details of the capital cost considered on COD for computing tariff are given below:-

(₹ in lakh)				
Asset	Capital cost as on COD claimed by petitioner	Undischarged IDC deducted as on COD.	IEDC disallowed on COD.	Capital cost as on COD considered for tariff calculation
1	2	3	4	5 = (2-3-4)
Asset-I	462.07	16.92	0.00	445.15
Asset-II	425.59	6.15	0.00	419.44

28. The above cost is allowed based on Auditor Certificate dated 8.9.2015 which mentions the length of OPGW links for Asset II as 291.124 km. However, the Asset II is for 291.124 km OPGW which includes 88.63 km under cost apportionment with POWERTEL. The Auditor Certificate is silent on the apportioned cost towards 88.63 km. Therefore, the petitioner is directed to submit, at the time of filing true up petition, revised Auditor Certificate which clearly mentions the separate details of cost towards 88.63 km which has been apportioned with POWERTEL and the cost incurred by the petitioner towards the remaining length i.e. 202.49 km (291.12 km- 88.63 km).

Projected additional capital expenditure

29. 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.

30. 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”.

Accordingly, the cut-off date of the instant transmission asset is 31.3.2017

31. Additional capital expenditure has been considered as per Regulation 14(1) of 2014 Tariff Regulations. The petitioner has claimed add cap for the financial year 2014-15, 2015-16 and 2016-17 as mentioned in the Table-I above. The cut-off date for the above mentioned Assets I and II is 31.3.2017. The projected additional capital expenditure as claimed by the petitioner has been considered for the purpose of calculation of tariff which is subject to true up.

Capital cost summary from COD to 31.3.2019

32. Based on the above, the summary of capital cost considered for tariff from COD to 31.3.2019 is given below:-

(₹ In lakh)					
Particulars	Capital cost allowed as on COD	Add cap for 2014-15	Add cap for 2015-16	Add cap for 2016-17	Total estimated completion cost as on 31.3.2019
Asset-I	445.15	283.58	39.87	0.00	768.60
Asset-II	419.44	88.24	49.34	24.67	581.69



Debt- equity ratio

33. Clause 1 and 5 of Regulation 19 of the 2014 Tariff Regulations specifies as follows:-

“(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.

Explanation.-The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.”

“(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”

34. Debt-equity ratio as on actual COD and as on 31.3.2019 considered in the tariff calculation is as follows:-

(₹ in lakh)

	%	As on COD		As on 31.3.2019	
		Asset I	Asset II	Asset I	Asset II
Debt	70.00	311.61	293.61	538.02	407.18
Equity	30.00	133.54	125.83	230.58	174.51
Total	100.00	445.15	419.44	768.60	581.69

Additional capital expenditure has been considered in the debt-equity ratio of 70:30.

Return on equity

35. Clause (1) and (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 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:
- (iv) the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:
- (v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:
- (vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers.”

“25. Tax on Return on Equity: (1) The base rate of return on equity as allowed by the Commission under Regulation 24 shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax income on other income stream (i.e., income of non generation or non transmission business, as the case may be) shall not be considered for the calculation of “effective tax rate”.

“(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.”

36. We have computed ROE at the rate of 19.610% for tariff period 2014-19 after grossing up the ROE with MAT rate as per the above Regulation. 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. Accordingly, the ROE allowed is given below:-

(₹ in lakh)

Asset I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	133.54	218.62	230.58	230.58	230.58
Addition due to Additional Capitalisation	85.07	11.96	0.00	0.00	0.00
Closing Equity	218.62	230.58	230.58	230.58	230.58
Average Equity	176.08	224.60	230.58	230.58	230.58
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	20.961%	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre Tax)	19.610%	19.610%	19.610%	19.610%	19.610%

Asset II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	125.83	152.30	167.11	174.51	174.51
Addition due to Additional	26.47	14.80	7.40	0.00	0.00



Capitalisation					
Closing Equity	152.30	167.11	174.51	174.51	174.51
Average Equity	139.07	159.71	170.81	174.51	174.51
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	20.961%	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre Tax)	19.610%	19.610%	19.610%	19.610%	19.610%
Return on Equity (Pre Tax)	20.47	31.32	33.50	34.22	34.22

Interest on loan

37. Regulation 26 of the 2014 Tariff Regulations provides as under:-

“(1) The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.

(3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of decapitalisation of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of decapitalisation of such asset.

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.

(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.”

38. In keeping with the provisions of Regulation 26 of the 2014 Tariff Regulations, the petitioner’s entitlement to interest on loan has been calculated on the following basis:-



(i) Gross amount of loan, repayment of instalments and rate of interest and weighted average rate of interest on actual average loan have been considered as per Form 9C given in the petition.

(ii) The normative repayment for the tariff period 2014-19 shall deemed to be equal to the depreciation allowed for that period.

(iii) Weighted average rate of interest on actual average loan worked out as per (i) above is applied on the notional average loan during the year to arrive at the interest on loan.

39. Detailed calculations in support of the weighted average rates of interest have been given in Annexure-I and II to this order.

40. Based on the above, interest on loan has been calculated as follows:-

(₹ in lakh)

Asset I					
Particular	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	311.61	510.11	538.02	538.02	538.02
Cumulative Repayment up to Previous year	0.00	37.15	84.54	133.20	181.85
Net Loan-Opening	311.61	472.96	453.48	404.83	356.17
Addition due to Additional Capitalization	198.51	27.91	0.00	0.00	0.00
Repayment during the year	37.15	47.39	48.65	48.65	48.65
Net Loan-Closing	472.96	453.48	404.83	356.17	307.52
Average Loan	392.28	463.22	429.15	380.50	331.85
Weighted Avg Rate of Interest on Loan	8.5537%	8.5537%	8.5421%	8.5284%	8.5240%
Interest	33.55	39.62	36.66	32.45	28.29

Asset II					
Particular	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	293.61	355.38	389.91	407.18	407.18
Cumulative Repayment up to Previous year	0.00	22.03	55.73	91.77	128.59
Net Loan-Opening	293.61	333.35	334.19	315.42	278.60
Addition due to Additional Capitalization	61.77	34.54	17.27	0.00	0.00
Repayment during the year	22.03	33.70	36.04	36.82	36.82



Net Loan-Closing	333.35	334.19	315.42	278.60	241.78
Average Loan	313.48	333.77	324.80	297.01	260.19
Weighted Avg. Rate of Interest on Loan	9.8113%	9.7674%	9.7608%	9.7494%	9.7389%
Interest	23.09	32.60	31.70	28.96	25.34

Depreciation

41. Regulation 27 of the 2014 Tariff Regulations provide as follows:-

"27. Depreciation:

Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units or elements thereof.

Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.

(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."

42. The instant assets are put under commercial operation during 2014-15. Thus, depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix-II of 2014 Tariff Regulations.



43. Based on the above, the depreciation has been considered as under :-

(₹ in lakh)

Asset I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	445.15	728.73	768.60	768.60	768.60
Addition during 2009-14 due to Projected Additional Capitalization	283.58	39.87	0.00	0.00	0.00
Closing Gross Block	728.73	768.60	768.60	768.60	768.60
Average Gross Block	586.94	748.67	768.60	768.60	768.60
Rate of Depreciation	6.3300%	6.3300%	6.3300%	6.3300%	6.3300%
Depreciable Value	528.25	673.80	691.74	691.74	691.74
Remaining Depreciable Value	528.25	491.09	443.70	395.05	346.40
Depreciation	37.15	47.39	48.65	48.65	48.65

Asset II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	419.44	507.68	557.02	581.69	581.69
Addition during 2009-14 due to Projected Additional Capitalisation	88.24	49.34	24.67	0.00	0.00
Closing Gross Block	507.68	557.02	581.69	581.69	581.69
Average Gross Block	463.56	532.35	569.36	581.69	581.69
Rate of Depreciation	6.3300%	6.3300%	6.3300%	6.3300%	6.3300%
Depreciable Value	417.21	479.12	512.42	523.52	523.52
Remaining Depreciable Value	417.21	395.18	361.48	325.44	288.62
Depreciation	22.03	33.70	36.04	36.82	36.82

Operation & Maintenance Expenses (O&M Expenses)

44. As regards O&M Expenses, the Commission vide order dated 8.12.20011 in Petition No.68/2010, had observed that the petitioner should be allowed O & M expenses on actual basis for the communication systems already in operation under ULDC schemes in different region. The relevant extract of order is as under:-

27. “..... It is observed that O&M charges for the year 2008-09 vary from 3.54% to 8.59% of the capital cost as on 31.03.2009 for different regions. We are of the view that the petitioner should be allowed O & M expenses on actual for the communication systems already in operation under ULDC schemes in different regions. However, for the new systems, the O&M norms would be decided at the time of framing of regulation for communication system.”

45. The petitioner was directed vide ROP dated 22.3.2016, to submit the actual O&M Expenses year wise along with details. In response, petitioner vide affidavit



dated 29.6.2016 has submitted that actual O&M Expenses for 2014-15 towards Asset-I and II are ₹5.75 lakh and ₹4.46 lakh respectively. Break up of O&M Expenses has also been provided vide Auditor's Certificate dated 15.6.2016. The petitioner has claimed self-insurance reserved as expenses under O&M Expenses which is not allowable as expenses. Accordingly, O&M Expenses of ₹4.60 lakh and ₹3.57 lakh respectively for Assets-I and II for the year 2014-15, on actual basis, are allowed and from 2014-15 onwards the same shall be allowed at the escalation rate of 3.32% as per Regulation 29(4)(C) of 2014 Tariff Regulations. The details of O&M Expenses allowed for the instant assets for the 2014-19 tariff period are as follows:-

(₹ in lakh)					
Asset	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	4.60	4.75	4.91	5.07	5.24
Asset-II	3.57	4.92	5.08	5.25	5.42

Interest on working capital

46. Clause C (i) of Regulation 28 and Clause 5 of Regulation 3 of the 2014 Tariff Regulations specify as follows:-

“28. Interest on Working Capital

- (C)(i) Receivables equivalent to two months of fixed cost;
- (ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and
- (iii) Operation and maintenance expenses for one month”

“3(5) ‘Bank Rate’ means the base rate of interest as specified by the State Bank of India from time to time or any replacement thereof for the time being in effect plus 350 basis points;”



47. The petitioner is entitled to claim interest on working capital as per the 2014 Tariff Regulations. The components of the working capital and the petitioner's entitlement to interest thereon are discussed hereunder:-

(i) Receivables

Receivables as a component of working capital will be equivalent to two months fixed cost. The petitioner has claimed the receivables on the basis of 2 months' annual transmission charges. In the tariff being allowed, receivables have been worked out on the basis of 2 months transmission charges.

(ii) Rate of interest on working capital

The rate of interest on working capital considered is 13.50% (SBI Base Rate of 10% plus 350 basis points).

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

(₹ in lakh)

Asset- I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	0.69	0.71	0.74	0.76	0.79
O & M Expenses	0.38	0.40	0.41	0.42	0.44
Receivables	18.75	23.18	23.12	22.43	21.75
Total	19.83	24.29	24.26	23.61	22.97
Interest	2.68	3.28	3.28	3.19	3.10
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%

Asset- II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	0.71	0.74	0.76	0.79	0.81
O & M expenses	0.40	0.41	0.42	0.44	0.45
Receivables	15.73	17.51	18.15	17.97	17.39
Total	16.84	18.66	19.34	19.20	18.65
Interest	1.71	2.52	2.61	2.59	2.52
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%

Transmission charges

49. The details of the tariff allowed for Assets I and II are as under:-



(₹ in lakh)

Asset- I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	37.15	47.39	48.65	48.65	48.65
Interest on Loan	33.55	39.62	36.66	32.45	28.29
Return on Equity	34.53	44.04	45.22	45.22	45.22
Interest on Working Capital	2.68	3.28	3.28	3.19	3.10
O & M Expenses	4.6	4.75	4.91	5.07	5.24
Total	112.51	139.09	138.71	134.58	130.50

Asset-II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	22.03	33.70	36.04	36.82	36.82
Interest on Loan	23.09	32.60	31.70	28.96	25.34
Return on Equity	20.47	31.32	33.50	34.22	34.22
Interest on Working Capital	1.71	2.52	2.61	2.59	2.52
O & M Expenses	3.57	4.92	5.08	5.25	5.42
Total	70.87	105.06	108.93	107.84	104.32

Filing fee and the publication expenses

50. 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

51. The petitioner has requested to allow the petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. We are of the view that 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

52. The petitioner has made a prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents, if at any time service tax on transmission is withdrawn from negative list at any time in future. The petitioner has further prayed that if any taxes and duties including cess etc. are imposed by any statutory/Government/municipal authorities, it shall be allowed to be recovered from the beneficiaries. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

Sharing of Transmission Charges

53. The tariff for transmission (communication system) of Electricity (Annual Fixed Cost) as shall be shared as per Regulation 43 of 2014 Tariff Regulations. These charges shall be recovered on monthly basis and the billing collection and disbursement of transmission charges shall be governed by provision of Central Electricity Regulatory Commission (sharing of interstate Transmission Charges and Losses) Regulations, 2010 as amended time to time.

54. This order disposes of Petition No. 275/TT/2015.

(Dr. M.K. Iyer)
Member

(A.S. Bakshi)
Member

(A.K. Singhal)
Member

(Gireesh B. Pradhan)
Chairperson



Annexure -I

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(₹ in lakh)

	Details of Loan	2014-15	2015-16	2016-17	2017-18	2018-19
1	SBI (21.03.2012)					
	Gross loan opening	48.34	48.34	48.34	48.34	48.34
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	4.39	8.79
	Net Loan-Opening	48.34	48.34	48.34	43.95	39.55
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	4.39	4.39	4.39
	Net Loan-Closing	48.34	48.34	43.95	39.55	35.16
	Average Loan	48.34	48.34	46.14	41.75	37.35
	Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
	Interest	4.95	4.95	4.73	4.28	3.83
	Rep Schedule	22 Semi Annual Instalment from 31.08.2016				
2	BOND XLIII					
	Gross loan opening	221.00	221.00	221.00	221.00	221.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	18.42
	Net Loan-Opening	221.00	221.00	221.00	221.00	202.58
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	18.42	18.42
	Net Loan-Closing	221.00	221.00	221.00	202.58	184.17
	Average Loan	221.00	221.00	221.00	211.79	193.38
	Rate of Interest	7.93%	7.93%	7.93%	7.93%	7.93%
	Interest	17.53	17.53	17.53	16.80	15.33
	Rep Schedule	12 Annual Instalment from 20.05.2017				
3	BOND XLII					
	Gross loan opening	4.11	4.11	4.11	4.11	4.11
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	4.11	4.11	4.11	4.11	4.11
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	4.11	4.11	4.11	4.11	4.11
	Average Loan	4.11	4.11	4.11	4.11	4.11
	Rate of Interest	8.80%	8.80%	8.80%	8.80%	8.80%
	Interest	0.36	0.36	0.36	0.36	0.36
	Rep Schedule	Final Payment on 13.03.2023				
4	BOND XLV					
	Gross loan opening	50.00	50.00	50.00	50.00	50.00



Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	4.17
Net Loan-Opening	50.00	50.00	50.00	50.00	45.83
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	4.17	4.17
Net Loan-Closing	50.00	50.00	50.00	45.83	41.67
Average Loan	50.00	50.00	50.00	47.92	43.75
Rate of Interest	9.65%	9.65%	9.65%	9.65%	9.65%
Interest	4.83	4.83	4.83	4.62	4.22
Rep Schedule	12 Annual Instalment from 28.02.2018				
Total Loan					
Gross loan opening	323.45	98.34	98.34	98.34	98.34
Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	4.39	31.37
Net Loan-Opening	323.45	323.45	323.45	319.06	292.08
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	4.39	26.98	26.98
Net Loan-Closing	323.45	323.45	319.06	292.08	265.10
Average Loan	323.45	323.45	321.25	305.57	278.59
Rate of Interest	8.5537%	8.5537%	8.5421%	8.5284%	8.5240%
Interest	27.67	27.67	27.44	26.06	23.75



Annexure-II

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN

(₹ in lakh)

	Details of Loan	2014-15	2015-16	2016-17	2017-18	2018-19
1	SBI (21.03.2012)					
	Gross loan opening	106.39	106.39	106.39	106.39	106.39
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	9.67	19.34
	Net Loan-Opening	106.39	106.39	106.39	96.72	87.05
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	9.67	9.67	9.67
	Net Loan-Closing	106.39	106.39	96.72	87.05	77.37
	Average Loan	106.39	106.39	101.55	91.88	82.21
	Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
	Interest	10.90	10.90	10.41	9.42	8.43
	Rep Schedule	22 Semi Annual Instalment from 31.08.2016				
2	BOND XLV					
	Gross loan opening	191.52	191.52	191.52	191.52	191.52
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	15.96
	Net Loan-Opening	191.52	191.52	191.52	191.52	175.56
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	15.96	15.96
	Net Loan-Closing	191.52	191.52	191.52	175.56	159.60
	Average Loan	191.52	191.52	191.52	183.54	167.58
	Rate of Interest	9.65%	9.65%	9.65%	9.65%	9.65%
	Interest	18.48	18.48	18.48	17.71	16.17
	Rep Schedule	12 Annual Instalment from 28.02.2018				
3	BOND XLVI					
	Gross loan opening	0.00	61.77	61.77	61.77	61.77
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	61.77	61.77	61.77	61.77
	Additions during the year	61.77	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	61.77	61.77	61.77	61.77	61.77
	Average Loan	30.89	61.77	61.77	61.77	61.77
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	2.87	5.74	5.74	5.74	5.74
	Rep Schedule	3 instalments on 04.09.2019, 04.09.2024 and 04.09.2029				
	Total Loan					
	Gross loan opening	297.91	359.68	359.68	359.68	359.68
	Cumulative Repayment upto DOCO/previous year	0.00	0.00	0.00	9.67	35.30
	Net Loan-Opening	297.91	359.68	359.68	350.01	324.38



Additions during the year	61.77	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	9.67	25.63	25.63
Net Loan-Closing	359.68	359.68	350.01	324.38	298.74
Average Loan	328.80	359.68	354.84	337.19	311.56
Rate of Interest	9.8113%	9.7674%	9.7608%	9.7494%	9.7389%
Interest	32.26	35.13	34.64	32.87	30.34

