

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 531/TT/2014

Coram:

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

Date of Hearing : 16.11.2015

Date of Order : 31.12.2015

In the matter of:

Determination of transmission tariff for 2009-14 and 2014-19 tariff period for shifting of 50 MVAR Line Reactor from Rengali to Baripada end under transmission system associated with Teesta (Stage-V) HEP in Eastern Region under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009, and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.

And in the matter of:

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

.....**Petitioner**

Versus

1. North Bihar Power Distribution Company Limited
2nd Floor, Vidyut Bhawan, Bailey Road, Patna-800 001
2. South Bihar Power Distribution Company Limited,
2nd floor, Vidyut Bhawan, Bailey Road, Patna-800 001
3. West Bengal State Electricity Distribution Company,
Bidyut Bhawan, Bidhan Nagar, Kolkata- 700 091
4. Grid Corporation of Orissa Ltd.
Shahid Nagar,
Bhubaneswar- 751 007
5. Damodar Valley Corporation
DVC Tower, Maniktala, Kolkata- 700 054



6. Power Department
Govt. of Sikkim, Gangtok- 737 101
7. Jharkhand State Electricity Board
Infront of Main Secretariat,
Doranda, Ranchi- 834002

....Respondents

The following were present:

For Petitioner: Shri Rakesh Prasad, PGCIL
 Shri M.M. Mondal, PGCIL
 Shri S.K. Venkatesan, PGCIL
 Shri Shashi Bhushan, PGCIL
 Shri Ved Prakash Rastogi, PGCIL
 Shri Jasbir Singh, PGCIL
 Shri S.S Raju, PGCIL
 Shri S.K Niranjan, PGCIL

For Respondent: None

ORDER

The present petition has been preferred by Power Grid Corporation of India Ltd. ('the petitioner'), a transmission licensee, for determination of tariff for Shifting of 50 MVAR Line Reactor from Rengali to Baripada end under transmission system associated with Teesta (Stage-V) HEP in Eastern Region (hereinafter referred as "transmission asset") under Regulation 6 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 Tariff Regulations") based on expenditure for the period 1.4.2009 to 31.3.2014, and for determination of tariff under Central Electricity Regulatory Commission (Terms and Conditions of Tariff)



Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) for the period from 1.4.2014 to 31.3.2019.

2. The respondents are distribution licensees or power procurement companies of States, who are procuring transmission service from the petitioner, mainly beneficiaries of Eastern Region.

3. The petitioner has served the petition to the respondents and notice of this application has been published in the newspaper 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. None of the respondents have filed any reply to the petition. The hearing in this matter was held on 16.11.2015. During the hearing, the Commission directed the petitioner to establish that time over-run was beyond petitioner’s control, along with submissions of complete sequence of activities to justify reasons for time over-run of more than 5 years. The information was to be submitted on affidavit with copy to respondents by 23.11.2015. During the hearing, the Commission also observed that in case no information is filed within due date the matter shall be considered based on available records. The petitioner has not submitted any additional information regarding the same. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose off the petition.

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

- a. The investment approval for the implementation of Transmission System associated with TEESTA (STAGE-V) HEP in Eastern Region was



accorded by Board of Directors of Powergrid vide its letter dated 17.10.2008, at an estimated cost of ₹31558 lakh.

- b. The scope of work covered under the project is as follows:-

Transmission Line:

Teesta-V HEP-Siliguri 400 kV D/C Line : 120 Km

Sub-stations

1. Extension of 400/220kV Siliguri S/S with 2 Nos. of line bays
2. Extension of 400/220kV Baripada S/S with 1x315 MVA Transformer and associated bays.
- 3. Shifting of 50 MVAR line reactor (of Rengali-Baripada line) from Rengali to Baripada end.**

- c. The shifting of 50 MVAR Line Reactor of Rengali – Baripada line was in the scope of works of Teesta-V transmission project. As per revised cost estimates dated 17.10.2008, the transmission asset was scheduled to be commissioned on 1.1.2009. The asset was put under commercial operation w.e.f. 1.3.2014.
- d. The instant petition was filed on 5.12.2014.
- e. Provisional tariff in respect of the above mentioned assets for 2014-15 and 2015-16 was approved by the Commission vide its order dated 15.4.2015, subject to adjustment as per Regulation 7 (7) of the 2014 Tariff Regulations. The Commission with regard to POC tariff for 2013-14 in the order dated 15.4.2015 ruled as under:
- “Transmission tariff for the instant transmission asset for March, 2014 shall be allowed as per the 2009 Tariff Regulations along with the final tariff for 2014-19 tariff period.”



- f. The asset was covered under Petition No. 299/2010 with anticipated COD as 1.12.2010. However, since COD was not achieved at the time of issuance of tariff order, i.e., 14.2.2012, the Commission had directed the petitioner to re-file the petition for the said asset. The asset was scheduled to be commissioned on 1.1.2009 against which the asset was put under commercial operation on 1.3.2014.
- g. The Commission in its order dated 15.4.2015 had ruled as follows:
- “If the present petition is considered as petition under the 2009 Tariff Regulations, the petitioner would be required to file truing up petition after grant of final tariff in the instant petition. Grant of final tariff is likely to take some time and this would delay the filing of petition under Regulation 6 of the 2009 Tariff Regulations. Further, this would lead to filing of multiple petitions. Hence, we are inclined to consider the instant petition as truing up petition for 2009-14 period to avoid duplication of petitions and the consequent delay.”
- h. The Commission has accordingly carried out the truing up of expenses for 2013-14 in accordance with the 2009 Tariff Regulations and determination of tariff for 2014-19 in accordance with the 2014 Tariff Regulations.

TRUING UP OF ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD

5. The petitioner has claimed the annual transmission charges for the 2009-14 tariff period as under:-

(₹in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	-	-	-	-	0.90
Interest on Loan	-	-	-	-	1.15
Return on equity	-	-	-	-	1.01
Interest on Working Capital	-	-	-	-	0.07
O & M Expenses	-	-	-	-	0.00
Total	-	-	-	-	3.13



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

Particulars	(₹in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Maintenance Spares	-	-	-	-	0.00
O & M expenses	-	-	-	-	0.00
Receivables	-	-	-	-	6.03
Total	-	-	-	-	6.03
Rate of Interest (%)	-	-	-	-	13.20
Interest	-	-	-	-	0.07

7. The truing up of tariff for the 2009-14 tariff period has been determined as discussed below:-

Capital Cost

8. Regulation 7 of the 2009 Tariff Regulations provides as follows:-

“(1) Capital cost for a project shall include:-

- (a) The expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan – (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 fund deployed, - up to the date of commercial operation of the project, as admitted by the Commission, after prudence check.
- (b) capitalized initial spares subject to the ceiling rates specified in regulation 8; and
- (c) additional capital expenditure determined under Regulation 9:

Provided that the assets forming part of the project, but not in use shall be taken out of the capital cost.

(2) The capital cost admitted by the Commission after prudence check shall form the basis for determination of tariff:

Provided that in case of the thermal generating station and the transmission system, prudence check of capital cost may be carried out based on the benchmark norms to be specified by the Commission from time to time:



Provided further that in cases where benchmark norms have not been specified, prudence check may include scrutiny of the reasonableness of the capital expenditure, financing plan, interest during construction, use of efficient technology, cost over-run and time over-run, and such other matters as may be considered appropriate by the Commission for determination of tariff.”

9. The petitioner has submitted that against the approved apportioned cost of ₹258.85 lakh, the actual completed cost as on COD is ₹205.68 lakh and no additional capitalization has been claimed.

10. The petitioner has submitted the apportioned approved cost, actual expenditure incurred as on the date of commercial operation and additional capital expenditure incurred/projected to be incurred for the assets for 2009-14 as follows.

(₹ in lakh)

Asset	Approved apportioned cost	Expenditure upto COD	Actual Additional capitalization from COD to 31.3.2014	Total Additional capitalization	Total capital Cost
Asset	258.85	205.68	0.00	0.00	205.68

11. The petitioner was directed vide ROP dated 30.1.2015 to submit data in respect of benchmarking of capital cost for reactor. The petitioner submitted the same vide affidavit dated 13.11.2015. The Commission enquired about the use of vacated reactor bays at Rengali Sub-station. The petitioner submitted that all associated reactor bay equipment at Rengali Sub-station have been transferred to Baripada Sub-station.



12. The petitioner was further directed to submit the original FR cost and its components vide ROP dated 30.1.2015. The petitioner submitted the same vide affidavit dated 13.11.2015 as follows:-

Item Description	Amount in ₹lakh
Supply of Sub-stations items such as lattice structure, cables, lightning items, etc.	89.49
Erection of reactor bay equipments, Control & Relay panels, cabling, station lightning, etc., including making foundations wherever required. Extension of cable ducts, erection of lattice structure for all these equipments	96.18
Supply of new hardware items	13.05
Erection of above hardware items	0.30
Dismantling of reactor and certain bay equipments and shifting from Rengali to Baripada	14.22
Transportation of reactor tank including transit insurance	8.66
Charges for servicing including consumables, gaskets etc of reactor, C & R panels and other Sub-station equipments	15.53
Fire fighting	9.09
IDC & IEDC, etc.	12.33
Total	258.85

13. The petitioner further submitted a notes of meeting of Board of Directors in which the RCE was approved and the justification for the same. We have considered the submissions of the petitioner, and observed that actual expenditure claimed by the petitioner upto COD is ₹205.68 lakh, is within the approved apportioned cost of ₹258.85 lakh in RCE dated 17.9.2008. Accordingly, the capital cost of ₹205.68 lakh has been considered for the purpose of tariff.



Time over-run

14. The petitioner was directed to submit detailed justification for the time over-run and chronology of activities leading to the delay of 62 months for the commissioning of the asset, establishing that such delay was beyond its control. The petitioner submitted that as the reactor was to be installed in the energized switchyard, shutdown of the reactor was required for construction of fire walls and other works. In the absence of timely shutdown, commissioning was delayed. The reactor was test charged in March 2013, and one unit failed, which was commissioned after a year after repair and maintenance works. The petitioner submitted that the transportation and other problems resulted in further delay of commissioning.

15. The petitioner, vide affidavit dated 13.11.2015, has submitted the detailed reasons along with activity which got delayed. The extract of the reasons is given as under :-

a) Dismantling activity was planned from 1.9.2008 to 20.9.2008. However, same was due to non-deployment of dismantling group on time by the contractor. The transportation activity was planned from 21.9.2008 to 30.9.2008, however, same was delayed due to non-deployment of transportation group on time by the contractor. Due to delay in dismantling and transportation activity, installation of reactor on foundation also got delayed.

b) A construction of firewall, Cable tray, Tower Erection, beam erection, cable laying, and readiness of TG tower was to be completed in 30 days from



1.8.2008 to 31.10.2008 which got delayed due to non deployment of erection group on time by M/s Siemens and completed from 10.7.2011 to 20.7.2011. The left out works of cable laying by M/s. Siemens was completed by M/s Oriental Electricals on risk and cost of M/s Siemens;

c) The testing and charging was to be completed by 11.12.2008 to 31.12.2008 as per original schedule of work, however, at the time of testing, B-phase caught fire on 4.3.2013 at 11:38 hours damaging 400kV B-ph HV bushing, PRD Buchholz. All control cables got burnt along with Epoxy CT mono- blocks of HV, Neutral bushing and gasket at site inspection.

16. The Commission further enquired as to how voltage was controlled at Baripada during the delay period of 62 months. The petitioner vide affidavit dated 13.11.2015 submitted that the voltage during off-peak hours was very high during the 62 months, so feeders were shutdown at CPCC, Kolkata. In some cases, one or more feeders tripped due to over- voltage and during light load conditions, it was crossing maximum voltage limit which requires opening of connected lines, thus reducing reliability and stability of grid.

17. The petitioner was directed to submit the voltage profile of Baripada before and after one year of installation of the reactor. The petitioner has submitted the same vide affidavit dated 13.11.2015. The petitioner was asked whether any reactor bay was in place at Baripada Sub-station before shifting of reactor from Rengali. The petitioner submitted that there was no reactor bay at Baripada Sub-station before shifting of the reactor. The subject asset was



originally claimed by JTTs project in Petition No.142/2010. The reactor was initially under operation as line reactor at Rengali end for providing compensation at Kolaghat- Rengali TL, thereafter, it was shifted to Baripada Sub-station for providing desired compensation for the LILLO of Kolaghat Rengali Transmission line at Baripada Sub-station. As per the voltage data, it has been observed that voltage at 400 kV side of Baripada Sub-station is continuously high, which caused the requirement of reactors to control the over voltage conditions.

18. It is observed that the petitioner has submitted the detailed reasons for time over-run for 62 months, along with data with respect to benchmarking of capital cost for reactor, the detailed revised cost estimates and voltage profiles of Baripada for one year. Based on the analysis of the reasons submitted towards time delay of 62 months, the Commission observed that except for four months delay caused due to B-phase line reactor catching fire; all other reasons for delay are attributable to delay on account of contractors etc. Under such circumstances, the liquidated damages levied on contractors as per the provisions of the contract and recovered from the contractors needs to be adjusted in the Capital Cost while determining the Annual Fixed Charges (AFC). The Commission directs the petitioner to submit the complete details of liquidated damages levied as per provisions of Contract and liquidated damages recovered from the contractors within 3 months of recovery of liquidated damages recovered from the contractors along with copies of Contract and final settlement statement with contractors.



19. It is observed that even though there is no cost over-run on account of the delay the procurers had to suffer high voltage conditions which is not desirable. The petitioner in future should follow prudent utility practices to avoid such instances of delay.

20. As the petitioner has not availed any loan for this asset, there is no direct impact of time over-on capital cost due to interest during construction and IEDC, The actual capital cost of ₹205.68 lakh claimed by the petitioner is lower than the approved capital cost of ₹258.85 lakh. The Commission at this stage has considered the capital cost of ₹205.68 lakh as claimed by the petitioner, which will be subject to adjustment, once the details of liquidated damages recovered are submitted by the petitioner.

Initial Spares

21. The petitioner has not claimed any initial spares towards the works completed.

Additional Capital Expenditure

22. The petitioner has not claimed any additional capital expenditure for the 2009-14 tariff period.

Debt: Equity

23. Clause 2 of Regulation 12 of the 2009 Tariff Regulations provides that:

“In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2009, debt:equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2009 shall be considered.”



24. The petitioner has claimed Annual Fixed Charge for 2009-14 tariff period based on debt:equity ratio of 70:30. The transmission asset covered in the instant petition is a new asset as the COD is after 1.4.2009, in accordance with the 2009 Tariff Regulations.

25. The Commission asked the petitioner to submit approval from competent authority for equity contribution towards the project and necessary approval of foreign equity, if any. The petitioner submitted in its replies vide affidavit dated 13.11.2015 that no foreign equity has been issued by the petitioner. The completion cost of the asset is only ₹205.68 lakh. Since the element was envisaged at the time of implementation of the project, no loan allocation was made for the said asset. As per the 2009 Tariff Regulations, if equity invested is more than 30%, excess equity will be treated as normative loan. Based on this, tariff has been claimed in the petition. Accordingly, debt:equity ratio has been considered for the purpose of tariff for the 2009-14 tariff is given as under:-

(₹in lakh)

Funding	Actual Debt:Equity deployed Amount	(%)	Debt:Equity ratio considered Amount	(%)
Debt	0.00	0.00	143.98	70.00
Equity	205.68	100.00	61.7	30.00
Total	205.68	100.00	205.68	100.00

Interest on Loan (“IOL”)

26. Regulation 16 of the 2009 Tariff Regulations provides the methodology for working out weighted average rate of interest on loan. The Petitioner has submitted that 100% equity is deployed for the said asset and as per the 2009



Tariff Regulations, 70% capital cost is considered as normative loan and interest on loan is calculated accordingly.

27. The petitioner was directed to submit the details for computation of weighted average interest on loans. The petitioner has submitted vide affidavit dated 13.11.2015 that interest rate of Bond- XLV, i.e., 9.65%, has been considered, as drawl date of this loan, i.e., 28.2.2014, is the nearest to COD of the said asset. The Commission in the absence of any actual loan availed for the Asset has considered the interest rate equivalent to the interest rate applicable for the bond as submitted the petitioner, as the drawl date of loan from the bond is close to COD of the Asset. The Commission has computed the interest on loan from 1.3.2014 to 31.3.2014, for the 2009-14 tariff period as shown below:

(₹in lakh)

Particulars	2013-14 (Pro rata)
COD	1.3.2014
Period considered for computation	1month
Gross loan opening as on COD	143.98
Cumulative Repayment up to COD	0.00
Net Loan-Opening as on COD	143.98
Additions during the year	0.00
Repayment during the year	0.90
Net Loan-Closing	143.08
Average Loan for the year	143.53
Rate of Interest (%) for the year	9.65
Interest	1.15

Return on Equity (“ROE”)

28. Clause (3), (4) and (5) of the Regulation 15 of the 2009 Tariff Regulations provides that:

“(3) The rate of return on equity shall be computed by grossing up the base rate with the Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as



per the Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be.

(4) Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below:

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

Where "t" is the applicable tax rate in accordance with clause (3) of this regulation.

(5) The generating company or the transmission licensee, as the case maybe, shall recover the shortfall or refund the excess Annual Fixed Charge on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission:

Provided further that Annual Fixed Charge with respect to the tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations."

12. The petitioner has submitted that the MAT rate considered in the tariff order approving transmission tariff for the transmission asset for tariff period 2009-14 was 11.330%, as applicable for 2008-09. However, for truing up purpose, the computation of RoE for tariff period 2009-14 has been done on the basis of actual MAT rate applicable during 2009-14. The petitioner has submitted the variation in the MAT rate during 2009-14 as per the Finance Act of the relevant year for the purpose of grossing up of ROE, as below:-

Particulars	MAT Rate (%)	Grossed up RoE (Base rate/(1-t))(%)
2009-10	16.995	18.674
2010-11	19.931	19.358
2011-12	20.008	19.377
2012-13	20.008	19.377
2013-14	20.961	19.610



13. Accordingly, the Commission has computed ROE from 1.3.2014 to 31.03.2014 for 2009-14 tariff period as shown below:-

(₹in lakh)

Particulars	2013-14 (Pro rata)
COD	1.3.2014
Period considered for computation	1 month
Opening Equity as on COD	61.70
Additional Capitalization after COD	0
Closing Equity	61.70
Average Equity for the year	61.70
Return on Equity (Base Rate) (%) for the year	15.500
MAT rate for the year (%)	20.961
Rate of Return on Equity (Pre Tax) (%)	19.610
Return on Equity (Pre Tax)	1.01

Depreciation

14. Regulation 17 of the 2009 Tariff Regulations provides for the methodology to workout the depreciation.

15. The depreciation from 1.3.2014 to 31.03.2014 for the tariff period 2009-14 has been worked out in accordance with Regulation 17 of the 2009 Tariff Regulations based on actual capital expenditure as under:-

(₹in lakh)

Particulars	2013-14 (Pro rata)
COD	1-3-14
Period considered for computation	1 month
Gross block as on COD	205.68
Additional Capitalization after COD	0.00
Gross block at the end of the year	205.68
Average gross block for the year	205.68
Rate of Depreciation (%) for the year	5.280
Depreciable Value	185.11
Elapsed Life	0.08
Weighted Balance Useful life of the assets	25
Remaining Depreciable Value	185.11
Depreciation	0.90



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

16. The petitioner has not claimed any O&M Expenses, as O&M Expenses are not applicable for line reactor.

Interest on working capital (“IWC”)

17. Sub-clause (c) of clause (1) of Regulation 18 of the 2009 Tariff Regulations provides the components of the working capital for the transmission system and clause (3) of Regulation 18 of the 2009 Tariff Regulations provides for the rate of interest of working capital.

29. The petitioner has submitted the rate of interest on working capital as 13.20% for the period 1.3.2014 to 31.3.2014 as per Clause (3) of Regulation 18 of the 2009 Tariff Regulations and the components of working capital are also considered in accordance with Sub-clause (c) of clause (1) of Regulation 18 of the 2009 Tariff Regulations.

18. The Commission in accordance with Clause (3) of Regulation 18 of the 2009 Tariff Regulations, as amended, has considered the rate of interest on working capital on normative basis, i.e., equal to State Bank of India Base Rate as applicable as on 1.4.2013 plus 350 basis points. State Bank of India Base Rate on 1.4.2013 was 9.70%. Therefore, interest rate of 13.20% (9.70% plus 350 basis points) has been considered to work out the interest on working capital in the instant case.

19. The IWC from 1.3.2014 to 31.3.2014 for the 2009-14 tariff period is as under:-



(₹ in lakh)

Particulars	2013-14
Maintenance Spares	0.00
O & M expenses	0.00
Receivables	0.52
Total	0.52
Rate of Interest(%)	13.20
Interest	0.07

ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD

20. The detailed computation of the various components of the annual fixed charges for the transmission asset for the 2009-14 tariff period is summarised below:-

(₹ in lakh)

Particulars	2013-14
COD	1-3-14
Period considered for computation	1 month
Gross Block	
Opening Gross block as on COD	205.68
Addition during 2009-14 due to Projected Additional Capitalization	0.00
Closing Gross block	205.68
Average Gross block	205.68
Depreciation	
Rate of Depreciation (%) for a year	5.280
Depreciable Value	185.112
Elapsed Life	0.08
Weighted Balance Useful life of the assets	24.92
Remaining Depreciable Value	185.11
Depreciation for the year	0.90
Cumulative Depreciation	0.90
Interest on Loan	



Particulars	2013-14
Gross Normative Loan as on COD	143.98
Cumulative Repayment upto COD	0.00
Net Loan-Opening upto COD	143.98
Addition due to Additional Capitalization	0.00
Repayment during the year	0.90
Net Loan-Closing	143.08
Average Loan for the year	143.53
Weighted Average Rate of Interest on Loan (%)	9.6500
Interest	1.15
Return on Equity	
Gross Notional Equity as on COD	61.70
Addition due to Additional Capitalization	0.00
Opening Equity as on COD	61.70
Addition due to Additional Capitalization	0.00
Closing Equity	61.70
Return on Equity(Base Rate) (%)	15.500
MAT rate for the respective year (%)	20.961
Rate of Return on Equity (Pre Tax) (%)	19.610
Return on Equity (Pre Tax)	1.01
Interest on Working Capital	
Maintenance Spares	0.00
O & M expenses	0.00
Receivables	0.52
Total	0.52
Interest	0.07
Annual Transmission Charges	
Depreciation	0.90
Interest on Loan	1.15
Return on Equity	1.01
Interest on Working Capital	0.07
O & M Expenses	0.00
Total	3.14

DETERMINATION OF ANNUAL TRANSMISSION CHARGES FOR 2014-19

21. The petitioner has claimed the transmission charges as under:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	10.86	10.86	10.86	10.86	10.86
Interest on Loan	13.28	12.24	11.19	10.14	9.09
Return on Equity	12.10	12.10	12.10	12.10	12.10
Interest on Working Capital	0.83	0.81	0.79	0.76	0.74
O & M Expenses	-	-	-	-	-



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Total	37.07	36.01	34.94	33.86	32.79

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	-	-	-	-	-
O & M Expenses	-	-	-	-	-
Receivables	6.18	6.00	5.82	5.64	5.47
Total	6.18	6.00	5.82	5.64	5.47
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	0.83	0.81	0.79	0.76	0.74

Capital Cost

23. Clause (1) and (3) of Regulation 9 of the 2014 Tariff Regulations provides as follows:-

“(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.”

“(3) The Capital cost of an existing project shall include the following:

- (a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;
- (b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and
- (c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15.”

24. The petitioner has claimed capital cost of ₹205.68 lakh as on COD, i.e., 1.3.2014 for the purpose of tariff. Further, the petitioner has submitted that no additional capitalization is proposed to be incurred in the 2014-19tariff period.

25. The admitted capital cost of ₹205.68 lakh as on 1.4.2014 is considered for the purpose of tariff for tariff period 2014-19.



Additional Capital Expenditure

26. The petitioner has not claimed any additional expenditure for the tariff period 2014-19. No additional capital expenditure has been considered for the tariff period 2014-19.

Debt: Equity Ratio

27. Clause 3 of Regulation 19 of the 2014 Tariff Regulations provides as under:-

“(3) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2014, debt:equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.”

28. The petitioner has considered debt:equity ratio as 70:30 and the same has been considered for determination of tariff for the period ending 31.3.2014. The debt:equity ratio of 70:30 for the tariff period ending 31.3.2014 has been considered as opening debt:equity ratio as on 1.4.2014. The details of the debt:equity considered for the purpose of tariff for 2014-19 tariff period are as follows:-

(in ₹lakh)

Funding	Amount	(%)
Debt	143.98	70.00
Equity	61.70	30.00
Total	205.68	100.00

Interest on Loan (“IOL”)

29. Clause (5) & (6) of Regulation 26 of the 2014 Tariff Regulations are reproduced 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.”

30. The weighted average rate of IOL has been considered on the basis of rate prevailing as on 1.4.2014.

31. The Petitioner has submitted that 100% equity is deployed for the said asset and hence, 70% of capital cost is considered as normative loan and interest on loan is calculated accordingly.

32. The Commission asked the petitioner to submit the details for computation of the weighted average interest rate on loans. The petitioner has accordingly submitted vide affidavit dated 14.11.2015 that interest rate of Bond- XLV, i.e., 9.65%, has been considered, as the drawl date of this loan, i.e., 28.2.2014, is the nearest to COD of the said asset. The Commission has computed the interest on loan for the 2014-19 tariff period as shown below:

	(₹ in lakh)				
Details of Loan	2014-15	2015-16	2016-17	2017-18	2018-19
Gross loan opening	143.98	143.98	143.98	143.98	143.98
Cumulative Repayment upto Previous year	0.90	11.76	22.62	33.48	44.34
Net Loan-Opening	143.08	132.22	121.36	110.50	99.64



Details of Loan	2014-15	2015-16	2016-17	2017-18	2018-19
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	10.86	10.86	10.86	10.86	10.86
Net Loan-Closing	132.22	121.36	110.50	99.64	88.78
Average Loan	137.65	126.79	115.93	105.07	94.21
Rate of Interest(%)	9.6500	9.6500	9.6500	9.6500	9.6500
Interest	13.28	12.23	11.19	10.14	9.09

Return on Equity (“ROE”)

33. 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....
.....”

“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.”

34. The petitioner has computed ROE at the rate of 19.610% after grossing up the ROE with MAT rate as per the above 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.

35. 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.

36. 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. Accordingly, the ROE determined by the Commission is given below:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	61.70	61.70	61.70	61.70	61.70
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	61.70	61.70	61.70	61.70	61.70
Average Equity	61.70	61.70	61.70	61.70	61.70
Return on Equity (Base Rate)(%)	15.500	15.500	15.500	15.500	15.500
MAT rate for the year(%)	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)	12.10	12.10	12.10	12.10	12.10



Depreciation

37. 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."

38. The petitioner has submitted that the assets are commissioned as on 1.3.2014. The depreciable value is calculated in accordance with Regulation 27 of the 2014 Tariff Regulations.

39. We have considered the submission made by the petitioner with reference to depreciation. Depreciation is allowed as provided under Regulation 27 of the 2014 Tariff Regulations. The details of the depreciation allowed are given hereunder:-

	(₹ in lakh)				
Details of Depreciation	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block	205.68	205.68	205.68	205.68	205.68
Additions during the year due to projected additional capitalization	0.00	0.00	0.00	0.00	0.00
Closing Gross block	205.68	205.68	205.68	205.68	205.68



Details of Depreciation	2014-15	2015-16	2016-17	2017-18	2018-19
Rate of Depreciation (%)	5.280	5.280	5.280	5.280	5.280
Depreciable Value	185.11	185.11	185.11	185.11	185.11
Elapsed Life (Beginning of the year)	1	2	3	4	5
Weighted Balance Useful life of the assets	24	23	22	21	20
Remaining Depreciable Value	185.11	184.21	173.35	162.49	151.63
Depreciation	10.86	10.86	10.86	10.86	10.86

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

40. The petitioner has not claimed any O&M expenses as O&M expenses are not applicable for line reactor.

Interest on Working Capital (“IWC”)

41. Clause 1 (c) 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”

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

42. The petitioner has submitted that it has computed interest on working capital for the tariff period 2014-19 considering the SBI Base Rate as on 1.4.2014 plus 350 basis points. The rate of interest on working capital considered is 13.50%.



43. The interest on working capital is worked out in accordance with Regulation 28 of the 2014 Tariff Regulations. The rate of interest on working capital considered is 13.50% (SBI Base Rate of 10% plus 350 basis points). The interest on working capitals determined by the Commission is shown in the table below:-

(₹ in lakh)

Interest on Working Capital	Tariff for 2014-19				
	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	0.00	0.00	0.00	0.00	0.00
O & M Expenses	0.00	0.00	0.00	0.00	0.00
Receivables	6.18	6.00	5.82	5.64	5.46
Total	6.18	6.00	5.82	5.64	5.46
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	0.83	0.81	0.79	0.76	0.74

Annual Transmission Charges

44. The Annual Transmission Charges allowed for the transmission assets given hereunder:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	10.86	10.86	10.86	10.86	10.86
Interest on Loan	13.28	12.23	11.19	10.14	9.09
Return on Equity	12.10	12.10	12.10	12.10	12.10
Interest on WC	0.83	0.81	0.79	0.76	0.74
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Total	37.08	36.00	34.93	33.86	32.79

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

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block					



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block	205.68	205.68	205.68	205.68	205.68
Addition during 2009-14 due to Projected Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Gross block	205.68	205.68	205.68	205.68	205.68
Average Gross block	205.68	205.68	205.68	205.68	205.68
Depreciation					
Rate of Depreciation (%)	5.280	5.280	5.280	5.280	5.280
Depreciable Value	185.11	185.11	185.11	185.11	185.11
Elapsed Life (Beginning of the year)	1	2	3	4	5
Weighted Balance Useful life of the assets	24	23	22	21	20
Remaining Depreciable Value	184.21	173.35	162.49	151.63	140.77
Depreciation	10.86	10.86	10.86	10.86	10.86
Interest on Loan					
Gross Normative Loan	143.98	143.98	143.98	143.98	143.98
Cumulative Repayment upto Previous Year	0.90	11.76	22.62	33.48	44.34
Net Loan-Opening	143.08	132.22	121.36	110.50	99.64
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Repayment during the year	10.86	10.86	10.86	10.86	10.86
Net Loan-Closing	132.22	121.36	110.50	99.64	88.78
Average Loan	137.65	126.79	115.93	105.07	94.21
Weighted Average Rate of Interest on Loan (%)	9.6500	9.6500	9.6500	9.6500	9.6500
Interest	13.28	12.23	11.19	10.14	9.09
Return on Equity					
Opening Equity	61.70	61.70	61.70	61.70	61.70
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	61.70	61.70	61.70	61.70	61.70
Average Equity	61.70	61.70	61.70	61.70	61.70
Return on Equity (Base Rate)(%)	15.50	15.50	15.50	15.50	15.50
MAT Rate for the year 2013-14 (%)	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)	12.10	12.10	12.10	12.10	12.10



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Interest on Working Capital					
Maintenance Spares	0.00	0.00	0.00	0.00	0.00
O & M expenses	0.00	0.00	0.00	0.00	0.00
Receivables	6.18	6.00	5.82	5.64	5.46
Total	6.18	6.00	5.82	5.64	5.46
Interest	0.83	0.81	0.79	0.76	0.74
Annual Transmission Charges					
Depreciation	10.86	10.86	10.86	10.86	10.86
Interest on Loan	13.28	12.23	11.19	10.14	9.09
Return on Equity	12.10	12.10	12.10	12.10	12.10
Interest on Working Capital	0.83	0.81	0.79	0.76	0.74
O & M Expenses	0.00	0.00	0.00	0.00	0.00
Total	37.08	36.00	34.93	33.86	32.79

Filing Fee and Publication Expenses

46. 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 Charges

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



Service Tax

48. 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 is premature.

Deferred Tax Liability

49. The petitioner has sought recovery of deferred tax liability before 1.4.2009 from the beneficiaries or long term consumers/ DICs as and when materialized under Regulation 49 of the 2014 Tariff Regulations. The deferred tax liability shall be dealt as per Regulation 49 of the 2014 Tariff Regulations, as amended. Accordingly, the petitioner is entitled to recover the deferred tax liability upto 31.3.2009 whenever the same materializes directly from the beneficiaries or long term transmission customers /DICs.

Sharing of Transmission Charges

50. 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.



51. This order disposes of Petition No. 531/TT/2014.

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

Sd/-
(A.S. Bakshi)
Member

