

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 514/TT/2014

Coram:

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

Date of Order : 20.04.2017

In the matter of:

Truing up of transmission tariff for 2013-14 in tariff period 2009-14 and determination of transmission tariff for 2014-19 tariff period, for **Asset-I:** 400 kV D/C Siliguri-Purnea transmission line and **Asset-II:** 400 kV D/C Purnea-Muzaffarpur transmission line and **Asset-III:** 220 kV D/C Muzaffarpur(PGCIL)-Muzaffarpur (BSEB) transmission line in Eastern Region associated with Tala Hydro Electric Project, East-North Inter-Connector and Northern Region Transmission System, 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:

Powerlinks Transmission Ltd
10th Floor, DLF Tower A,
District Centre, Jasola,
New Delhi-110 025

.....**Petitioner**

Vs

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

.....**Respondent**

2. West Bengal State Electricity Distribution Company Limited,
Bidyut Bhawan, Bidhan Nagar,
Block DJ, Sector-II, Salt Lake, Kolkata-700 091

3. Damodar Valley Corporation,
DVC Tower, Maniktala
Civil Centre, VIP Road, Kolkata-700 054



4. Bihar State Electricity Board,
Vidyut Bhawan, Bailey Road,
Patna-800 001
5. Grid Corporation of India Limited,
Vidyut Bhawan, Janpath,
Bhubaneswar-751 007
6. Power Department,
Govt. of Sikkim,
Gangtok-737 101
7. Jharkhand State Electricity Board,
In front of Main Secretariat,
Doranda, Ranchi-834 002

.....Proforma Respondents

For Petitioner: Shri Amit Kapur, Advocate for PTL
Shri Janmau. M, Advocate for PTL
Ms Nita Jha, Advocate for PTL
Shri Gajender Bhandari, Advocate for PTL
Shri Dilip Kumar, PTL

For Respondents: none

ORDER

The present petition has been filed by Powerlinks Transmission Limited ('the petitioner'), for truing up of capital expenditure and tariff for **Asset-I:** 400 kV D/C Siliguri-Purnea transmission line, **Asset-II:** 400 kV D/C Purnea-Muzaffarpur transmission line and **Asset-III:** 220 kV D/C Muzaffarpur(PGCIL)-Muzaffarpur (BSEB) transmission line, (hereinafter referred as "transmission assets"), in Eastern Region associated with Tala Hydro Electric Project, East-North Inter-Connector and Northern Region Transmission System, 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 actual 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. This order has been issued after considering the petitioner’s affidavit dated 20.10.2016.

3. 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 (“the Act”). The petitioner has served the petition to the respondents. None of the respondents have filed reply.

4. The hearing in the matter was held on 20.9.2016. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

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

a. The petitioner was granted license vide order dated 13.11.2003 to transmit electricity as a transmission licensee and for that purpose to construct, maintain and operate Inter-state transmission system associated with the Tala Hydro Electric Project (HEP) East-north Inter Connector and Northern Region Transmission System.

b. The instant assets were commissioned on 1.9.2006. Capital cost of ₹64990.72 lakh as on COD and additional capitalisation of ₹2368.64 lakh for the period from COD to 31.3.2007 was approved vide order dated 30.4.2008 in Petition No.148/2007 alongwith ATC for the period 2006-09.



c. Subsequently, vide order dated 30.7.2009 in Petition No.65/2009, additional capital expenditure of ₹3278.90 lakh and ₹81.35 lakh for 2007-08 and 2008-09 were approved for the instant assets.

d. In order dated 17.3.2011 in Petition No.288/2009, the additional capital expenditure on projected basis and ATC for the period 2009-14 were approved for the instant assets.

e. In order dated 16.5.2016 in Petition No.19/TT/2014, after reconciling the capital cost of 2006-09 tariff period, the trued-up ATC for the period 2009-13 and revised ATC for 2013-14 was approved for the instant assets.

f. The final tariff allowed for instant assets, vide order dated 16.5.2016 in Petition No.19/TT/2014, for 2013-14 is as under:-

(₹ in lakh)	
Particulars	2013-14
Depreciation	3747.01
Interest on Loan	2274.55
Return on Equity	4199.91
Interest on Working Capital	236.87
O & M Expenses	476.49
Sub-Total	10934.83
Transmission Majoration Factor	1093.48
Total	12028.31

g. Final tariff for instant assets, determined vide order dated 16.5.2016 in Petition No. 19/TT/2014 was based on admitted capital cost of ₹70690.71 lakh as on 1.4.2009 and ₹71390.64 lakh, as on 31.3.2013 after taking into consideration additional capital expenditure of ₹99.44, ₹373.81 lakh, ₹212.91 lakh and ₹13.77 lakh during 2009-10, 2010-11, 2011-12 and 2012-13 respectively, total being ₹699.93 lakh.



h. The MAT rate applicable for respective year was considered to arrive at rate of return on equity for the tariff period 2009-14, which is required to be adjusted at the time of truing up of tariff for 2013-14, in case of any change.

Truing-up of Annual Fixed Charges for Period 2013-14

6. The truing up of tariff for 2013-14 has been determined as discussed below.

Capital Cost and Additional Capital Expenditure

7. Clause (1) and Clause (3) of Regulation 6 of the 2009 Tariff Regulations provide that:-

“(1) The Commission shall carry out truing up exercise along with the tariff petition filed for the next tariff period, with respect to the capital expenditure including additional capital expenditure incurred up to 31.3.2014, as admitted by the Commission after prudence check at the time of truing up.-----”

“(3) The generating company or the transmission licensee, as the case may be, shall submit for the purpose of truing up, details of capital expenditure and additional capital expenditure incurred for the period from 1.4.2009 to 31.3.2014, duly audited and certified by the auditors;”

8. The capital cost of ₹71390.64 lakh of instant assets as on 1.4.2013 has been considered to true-up the tariff for 2013-14 as per details given hereunder:-

Particulars	As on 1.4.2009	Additional capital expenditure allowed vide order dated 16.5.2016					(₹ in lakh) Admitted cost as on 1.4.2013	
		2009-10	2010-11	2011-12	2012-13	Total		
Freehold Land	62.82	-	-	-	-	-	62.82	
Leasehold Land	-	-	-	-	-	-	-	
Building & Other Civil Works	984.57	-	-	-	-	-	984.57	
Transmission Line	69643.32	99.44	373.81	212.91	13.77	699.93	70343.25	
Sub-Station Equipments	-	-	-	-	-	-	-	
PLCC	-	-	-	-	-	-	-	
Total	70690.71	99.44	373.81	212.91	13.77	699.93	71390.64	



Additional Capital Expenditure

9. The petitioner has claimed ₹22.39 lakh (including normative IDC of ₹0.37 lakh) and ₹302.87 (including normative IDC of ₹4.91 lakh) on account of Tower collapse in Muzaffarpur (PGCIL)-Muzaffarpur (BSEB) transmission line and replacement of insulators respectively towards additional capital expenditure during 2013-14. The petitioner has also submitted that IDC has been computed based on the start date of the project and has prayed to approve the methodology adopted for computation of the IDC and inclusion of the same in the additional capitalization of various assets capitalized or projected to be capitalized during 2013-14.

10. The petitioner had earlier claimed additional capital expenditure of ₹1335.04 lakh from 2010-11 to 2013-14 in Petition No. 19/TT/2014. However, the Commission had allowed additional capital expenditure of ₹699.93 lakh on cash basis, vide order dated 16.5.2016 in Petition No. 19/TT/2014. The observations made by the Commission in the said order are as follows:-

“34. We have considered the submissions of the petitioner regarding its claim for the revised additional capital expenditure. As regards claim on account of normative IDC, it is noted that the 2009 Tariff Regulations do not provide for normative IDC in respect of additional capital expenditure. In any case, the petitioner has not deployed any actual loan for additional capital expenditure. As such, the claim of the petitioner to the extent of normative IDC is not allowed.”

“39. The petitioner’s claim for amount of ₹279.46 lakh and ₹22.33 lakh during 2009-14 for additional capital expenditure on account of tower collapse in Siliguri-Purnea T/L and Muzaffarpur (PGCIL)-Muzaffarpur (BSEB) line as discussed at para-34 is allowed. However, the amount of ₹16 lakh for tower collapse in Muzaffarpur (PGCIL)-Muzaffarpur (BSEB) line, to be paid in 2014-15 has not been considered as it does not pertain to tariff period 2009-14. The petitioner is at liberty to claim this expenditure during the tariff period 2014-19.

40. As regards replacement of insulators, we have noted that the lines were commissioned on 1.9.2006 and the petitioner proposed to replace insulators of JSI make in the Siliguri-Purnea line and part of Purnea-Sahara section to improve the reliability and avoiding forced outage. In our view, handling of insulators flash over



is responsibility of the petitioner and is to be covered under O&M Expenses. Though, the petitioner has stated that the reason for hair line crack could not be established and its Board of Directors proposed to replace JSI make insulators, there seems to be a manufacturing problem in this type of make. We are not inclined to allow additional capitalization for replacement of insulator except when it is replaced by polymer insulator to avoid tripping during foggy condition.-----
-----.”

11. Therefore, in view of above, the petitioner’s claim for ₹302.87 (including normative IDC of ₹4.91 lakh) on account of replacement of insulators is not allowed as already observed in order dated 16.5.2016 in Petition No. 19/TT/2014. However, the petitioner’s claim of ₹22.02 lakh additional capital expenditure (excluding normative IDC of ₹0.37 lakh) on cash basis on account of tower collapse is allowed and considered for computation of tariff purpose in this order.

12. Thus, the details of allowable additional capital expenditure during 2013-14 (without Normative IDC) and completion cost as on 31.3.2014, are as below:-

Particulars	Admitted cost as on 31.3.2013/1.4.2013	2013-14	(₹ in lakh)
			Cost as on 31.3.2014
Tower Collapse Muzaffarpur	71390.64	22.02	71412.66

Debt: Equity Ratio

13. Clause (1) of Regulation 12 of the 2009 Tariff Regulations provides that:-

“12. Debt-Equity Ratio. (1) For a project declared under commercial operation on or after 1.4.2009, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:
Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff.”

14. The petitioner has claimed true up Annual Fixed Charge based on debt: equity ratio of 70:30 as admitted vide order dated 16.5.2016 in Petition No. 19/TT/2014. The admitted debt: equity ratio of 70:30 as admitted vide order



dated 16.5.2016 in Petition No. 19/TT/2014 has been considered for the purpose of truing up of the tariff for 2013-14.

15. The details of the debt: equity considered for the purpose of truing up of tariff of 2013-14 is as under:-

(₹ in lakh)

Particulars	Cost as on 1.4.2013		Cost as on 31.3.2014	
	Amount	%	Amount	%
Debt	49973.45	70.00	49988.86	70.00
Equity	21417.19	30.00	21423.80	30.00
Total	71390.64	100.00	71412.66	100.00

Return on Equity ("RoE")

16. Clause (3), (4) and (5) of the Regulation 15 of the 2009 Tariff Regulations provide 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 may be, 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."



17. The petitioner had submitted, applicable MAT rate of 20.961% and grossed up RoE of 19.610% for 2013-14 and the same was considered in the order dated 16.5.2016. As such, for truing up purpose, the computation of RoE for 2013-14 in the tariff period 2009-14 is worked out. Accordingly, the RoE as trued up is as under:-

(₹ in lakh)	
Particulars	2013-14
Approved vide order dated 16.5.2016	4199.91
Allowed after trued up	4200.56

Interest on Loan ("IOL")

18. Regulation 16 of the 2009 Tariff Regulations provides that:-

"16. (1) The loans arrived at in the manner indicated in regulation 12 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2009 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2009 from the gross normative loan.

(3) The repayment for the year of the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that year:

(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 annual depreciation allowed,.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project:

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.



(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:

Provided that the beneficiary or the transmission customers shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan.”

19. In these calculations, interest on loan has been worked out as given below:-

(a) The normative loan outstanding as on 1.4.2013 has been worked out by deducting the cumulative repayment as admitted vide order dated 16.5.2016 from the gross normative loan. The rate of interest is taken as weighted average rate of interest calculated on the basis of actual average loan portfolio for 2013-14;

(b) The repayment for 2013-14 in the tariff period 2009-14 has been considered to be equal to the depreciation allowed. Tariff for 2013-14 is worked out considering normative loan and normative repayments; and

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

20. The petitioner, in the loan portfolio has indicated the additional loan to meet out the add-cap during 2013-14. However, the petitioner, vide affidavit



dated 20.10.2016 has submitted that the add-cap during 2013-14 has been funded through internal accruals. As such, the additional loan has been excluded from the loan portfolio to determine the weighted average rate of interest. Further, the rates of interest, as submitted by the petitioner in the instant petition have been considered to work out interest on loan.

21. We have considered the submissions of the petitioner and accordingly calculated the IOL based on actual interest rate submitted by the petitioner, in accordance with Regulation 16 of the 2009 Tariff Regulations. The details of weighted average rate of interest are attached at Annexure-1 to this order. The IOL has been worked out as under:-

Particulars	(₹ in lakh)
	2013-14
Approved vide order dated 16.5.2016	2274.55
Allowed after truing-up	2275.25

Depreciation

22. Clause (4) of Regulation 17 of the 2009 Tariff Regulations provide as follows:-

“17. **Depreciation** (1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.

(2) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.

Provided that in case of hydro generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of the site;

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciable value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff.

(3) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.



(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-III 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 date of commercial operation shall be spread over the balance useful life of the assets.

(5) In case of the existing projects, the balance depreciable value as on 1.4.2009 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2009 from the gross depreciable value of the assets.

(6) 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.”

23. The depreciation, in order dated 16.5.2016, had been approved in accordance with Regulation 17 of the 2009 Tariff Regulations. The depreciation for 2013-14 in the tariff period 2009-14 has been worked out based on admitted capital expenditure as on 1.4.2013 as given below:-

(₹ in lakh)	
Particulars	2013-14
Approved vide order dated 16.5.2016	3747.01
Allowed after trued up	3747.59

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

24. Clause (g) of Regulation 19 of the 2009 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. The normative O&M Expenses are not required to be trued up. Accordingly, the total O&M Expenses allowed for the instant assets vide order dated 16.5.2016 in Petition No. 19/TT/2014 are as follows:-

(₹ in lakh)					
Particulars	2009-10	2010--11	2011-12	2012-13	2013-14
Approved vide Order dated 16.5.2016	381.52	403.42	426.57	450.92	476.49



25. However, the petitioner has claimed additional O&M Expenses of ₹117.92 lakh, in the tariff period 2009-14 on account of increase in employee cost due to revision in salaries during last three months of 2010-11 and for complete 2011-12. Therefore, the petitioner has considered the actual effect of salary revision in respective years for the purpose of recovering the additional O&M Expenses and to be allowed in the tariff. The petitioner has submitted the allocation of actual expenditure as under:-

(₹ in lakh)				
2010-11	2011-12	2012-13	2013-14	Total
7.70	34.28	36.68	39.25	117.92

26. During the hearing on 20.9.2016, the learned counsel submitted that the additional O&M Expenses may be allowed under Regulation 44 "Power to Relax" of the 2009 Tariff Regulations. We would like to clarify that while specifying the norms for the O & M Expenses, O & M Expenses for tariff period 2009-14 were arrived at on the basis of normalized actual O & M Expenses during the period 2003-04 to 2007-08 and the Commission has in the 2009 Tariff Regulations, given effect to impact of pay revision by factoring 50% on account of pay revision of the employees of PSUs after extensive consultations with the stakeholders, as one time compensation for employee cost. We do not see any reason why the admissible amount is inadequate to meet the requirement of the employee cost. In this order, we have allowed additional O&M Expenses as per the norms specified in the 2009 Tariff Regulations.

Interest on working capital ("IWC")

27. 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.

28. The rate of interest on working capital of 12.25% applicable as on 1.4.2009 for 2013-14 in the tariff period 2009-14 was approved in order dated 16.5.2016 in Petition No. 19/TT/2014. Therefore, applicable interest rate of 12.25% has been considered to work out the interest on working capital for 2013-14 in the tariff period 2009-14 in the instant petition. The IWC tried up is as under:-

(₹ in lakh)	
Particulars	2013-14
Maintenance Spares	71.47
O & M Expenses	39.71
Receivables	1822.80
Total	1933.98
Rate of Interest	12.25%
Interest	236.91

Transmission Majoration Factor (TMF)

29. The petitioner has submitted that Transmission Majoration Factor (TMF) was allowed vide order dated 1.7.2004 and 23.5.2016 in Petition No. 51 of 2004 and Petition No. 20/TT/2014 respectively. On similar lines, the petitioner has claimed Transmission Majoration Factor for 2013-14 and claimed the same as part of Annual Transmission Charges.

30. We have considered the submissions of the petitioner. TMF @ 10% mark up (pre-tax) on the Transmission Charges was approved as provided under Regulation 4.10A Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2001 vide orders dated 30.7.2009 in Petition No.65/2009, 17.3.2011 in Petition No.288/2009 and 16.5.2016 in Petition No. 19/TT/2014. As per the above said Regulation, TMF should be allowed for the



entire life of the transmission project. Accordingly, TMF is allowed @ of 10% mark up (pre-tax) on the Transmission Charges for 2013-14. The Commission in its order dated 6.5.2016 in Petition No. 18/TT/2014 has directed the staff to examine the impact of TMF and submit a report to the Commission. On the basis of the report, the Commission will take a view whether to continue with the TMF or not.

Incentive

31. The petitioner has claimed the 'Incentive' (pre-tax) based on the actual availability during 2013-14 on Annual Fixed Charges (including Majoration Charges). We have considered the submissions of the petitioner. Regulation-23 of the 2009 Tariff Regulations-2009 specifies as follows:-

“23. Computation and Payment of Transmission Charge for Inter-State Transmission System

(1) The fixed cost of the transmission system shall be computed on annual basis, in accordance with norms contained in these regulations, aggregated as appropriate, and recovered on monthly basis as transmission charge from the users, who shall share these charges in the manner specified in Regulation 33.

(2) The transmission charge (inclusive of incentive) payable for a calendar month for a transmission system or part thereof shall be
xxxx
xxxx

(3) The transmission charges shall be calculated separately for part of the transmission system having differing NATAF, and aggregated thereafter, according to their sharing by the beneficiaries.

(4) The transmission licensee shall raise the bill for the transmission charge (inclusive of incentive) for a month based on its estimate of TAFM. Adjustments, if any, shall be made on the basis of the TAFM to be certified by the Member-Secretary of the Regional Power Committee of the concerned region within 30 days from the last day of the relevant month.”

32. Accordingly, the petitioner is allowed to calculate and bill incentive as per Regulation 23 of the 2009 Tariff Regulations for recovery.



Annual Fixed Charges (AFC) For 2013-14

33. The detailed computation of the various components of the trued up annual fixed charges for the transmission assets for 2013-14 in the tariff period 2009-14 is as under:-

Particulars	(₹ in lakh) 2013-14
Gross Block	71390.64
Additional Capitalisation	22.02
Closing Gross Block	71412.66
Average Gross Block	71401.65
Depreciation	
Rate of Depreciation	5.2486%
Depreciable Value	64204.95
Remaining Depreciable Value	40178.08
Depreciation	3747.59
Interest on Loan	
Gross Normative Loan	49973.44
Cumulative Repayment upto Previous Year	24026.87
Net Loan-Opening	25946.58
Addition due to Additional Capitalisation	15.41
Repayment during the year	3747.59
Net Loan-Closing	22214.40
Average Loan	24080.49
Weighted Average Rate of Interest on Loan	9.4485%
Interest	2275.25
Return on Equity	
Opening Equity	21417.20
Addition due to Additional Capitalisation	6.61
Closing Equity	21423.80
Average Equity	21420.50
Return on Equity (Base Rate)	15.50%
Tax rate for the year (MAT)	20.961%
Rate of Return on Equity (Pre Tax)	19.610%
Return on Equity (Pre Tax)	4200.56
Interest on Working Capital	
Maintenance Spares	71.47
O & M expenses	39.71
Receivables	1822.80
Total	1,933.98
Rate of Interest	12.25%
Interest	236.91
Annual Transmission Charges	
Depreciation	3747.59



Interest on Loan	2275.25
Return on Equity	4200.56
Interest on Working Capital	236.91
O & M Expenses	476.49
Sub-Total	10936.80
Transmission Majoration Factor	1093.68
Total	12030.48

Sharing of Transmission Charges

34. In view of Transmission Service Agreement entered into between the petitioner and Respondent No. 1 and also BPTAs entered into between Respondent No. 1 and the beneficiaries Respondents No. 2 to 7, Respondent No. 1 shall raise bills for the charges, including the Transmission Majoration Factor approved in this order. The transmission charges allowed shall be recovered on monthly basis in accordance with Regulation 23 and shall be shared by the respondents in accordance with Regulation 33 of the 2009 Tariff Regulations up to 30.6.2011. With effect from 1.7.2011, the billing, collection and disbursement of the transmission charges shall be governed by the provision of Central Electricity Regulatory Commission (Sharing of Inter-state Transmission Charges and Losses) Regulations, 2010 as amended from time to time.

Determination of Annual Transmission Charges for 2014-19

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

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	3792.96	3814.51	3833.57	3852.77	3862.47
Interest on Loan	1983.58	1648.94	1309.09	967.26	609.65
Return on Equity	4251.21	4275.22	4296.45	4317.85	4328.66
Interest on Working Capital	254.63	248.76	242.67	236.59	229.70
O&M Expenses	431.01	445.22	459.84	475.25	491.09
Sub-Total	10713.39	10432.65	10141.62	9849.72	9521.57
Transmission Majoration Factor	1071.31	1043.26	1014.16	984.97	952.16
Total	11784.70	11475.91	11155.78	10834.69	10473.73



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

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	64.65	66.78	68.98	71.29	73.66
O & M Expenses	35.92	37.10	38.32	39.60	40.92
Receivables	1785.56	1738.77	1690.27	1641.62	1586.93
Total	1886.13	1842.65	1797.57	1752.51	1701.51
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	254.63	248.76	242.67	236.59	229.70

Capital Cost

37. 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.”

(2) xxx

(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.”

38. The element wise capital cost, admitted as on 31.3.2014 for instant assets has been considered as capital cost as on 1.4.2014. Thus, ₹71412.66 lakh has been considered as the admitted capital cost of the instant assets as on 1.4.2014 as per details hereunder:-

Particulars	(₹ in lakh)
	Capital cost as on 31.3.2014 as determined in true up for 2013-14 in tariff period 2009-14
Freehold Land	62.82
Leasehold Land	-
Building & Other Civil Works	984.57



Transmission Line	70365.27
Sub-Station Equipments	-
PLCC	-
Total	71412.66

Additional Capital Expenditure

39. Clause (1) and (3) 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.

“(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after the cut-off date, may be admitted by the Commission, subject to prudence check:”

“(ix) In case of transmission system, any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement due to obsolesce of technology, replacement of switchyard equipment due to increase of fault level, tower strengthening, communication equipment, emergency restoration system, insulators cleaning infrastructure, replacement of porcelain insulator with polymer insulators, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system; and”

42. The petitioner has claimed total additional capital expenditure of ₹1543.64 lakh from 2014-15 to 2017-18. The petitioner has submitted that the additional capital expenditure approved by the Commission vide order dated 17.3.2011 in



Petition No. 288/2009 and in subsequent orders, represent the equipment and services cost associated with the project. Further, the petitioner has submitted that Interest During Construction (IDC) was not estimated during filing of the Petition No. 288/2009 and therefore not factored in the proposal of additional capital expenditure. Thus, the additional capital expenditure approved by the Commission vide order dated 17.3.2011 in Petition No. 288/2009, does not include IDC. The petitioner, therefore, based on the start date of the project, as also submitted in Petition No. 19/TT/2014 has computed the IDC and has prayed to approve the methodology adopted for computation of the IDC and inclusion of the same in the additional capitalization of various assets capitalized or projected to be capitalized during 2014-19 tariff period. The details of petitioner's claim for additional capital expenditure including the normative IDC are as below:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	Total
Sap Implementation	39.95	-	-	-	39.95
Insulators replacement	356.90	362.02	359.69	367.58	1446.19
Tower Collapse	16.33	-	-	-	16.33
Compression Machines	5.00	-	-	-	5.00
IR Camera	36.17	-	-	-	36.17
Total	454.35	362.02	359.69	367.58	1543.64

43. The details of petitioner's claim for normative IDC included in the additional capital expenditure above are as under:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	Total
Sap Implementation	-	-	-	-	-
Insulators replacement	11.51	11.67	11.59	11.83	46.61
Tower Collapse	0.53	-	-	-	0.53
Compression Machines	-	-	-	-	-
IR Camera	1.17	-	-	-	1.17
Total	13.21	11.67	11.59	11.83	48.31



44. The details of petitioner's claim for the additional capital expenditure excluding normative IDC are as below:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	Total
Sap Implementation	39.95	-	-	-	39.95
Insulators replacement	345.39	350.35	348.10	355.75	1399.59
Tower Collapse	15.80	-	-	-	15.80
Compression Machines	5.00	-	-	-	5.00
IR Camera	35.00	-	-	-	35.00
Total	441.14	350.35	348.10	355.75	1495.33

45. The petitioner has submitted that add-cap for the cost of SAP for all the lines is ₹110.13 lakh and the cost has been apportioned according to line length and has claimed ₹15.11 lakh, ₹22.57 lakh and ₹2.27 lakh for Asset-I, Asset-II and Asset-III respectively (₹39.95 lakh for combined asset) during 2014-15. The line length of Asset-I, Asset-II and Asset-III is 320 Ckt. km, 478 Ckt. km and 48 Ckt. km i.e. 13.72%, 20.50% and 2.06% respectively of the total line length of the project being 2332 Ckt. km. The petitioner has submitted reason for implementation of SAP is to have the robust ERP system as the existing ERP system is technically outdated and not capable for fulfilling the present requirement of business like capturing the maintenance data and billing and collection recording after the implementation of PoC mechanism. Implementation of SAP has various benefits and systematic functionality, such as inventory management, financials, controlling, sales & distribution, plant maintenance, human capital management, and Governance Risk & Compliances etc. Accordingly, the proportionate implementation cost of SAP has been claimed under Regulation 14(3) (ix) of the 2014 Tariff Regulations.



46. The petitioner, in case of Siliguri-Purnea transmission line i.e. Asset-I in combined asset, has also claimed add-cap (including normative IDC) of ₹1446.19 lakh during 2014-15, 2015-16, 2016-17 and 2017-18, on account of replacement of insulators. Further, the petitioner vide affidavit dated 20.10.2016 has submitted that amount of ₹46.61 lakh on account of normative IDC is applicable for add-cap of ₹1446.19 lakh being cost of insulators replacement. The petitioner, in case of Asset-III, has also claimed an amount of ₹16.33 lakh (including normative IDC of ₹0.53 lakh). In addition, the petitioner has claimed add-cap for amount of ₹5.00 lakh for compression machines and ₹36.17 lakh (including normative IDC of ₹1.17 lakh) for IR camera during 2014-15.

47. The petitioner, vide affidavit dated 20.10.2016, has submitted that the additional capitalization projected to be incurred during the tariff period 2014-19 shall be funded through its internal accruals. It may be noted that the 2014 Tariff Regulations do not specifically provide for normative IDC in respect of additional capitalization, as the petitioner has not deployed any actual loan for additional capital expenditure. Hence, total Normative IDC of ₹48.31 lakh for insulator replacement, tower collapse and IR camera is not allowed.

48. We have considered the submissions of the petitioner regarding its claim for add-cap on account of cost of SAP implementation. The additional capitalization of ₹39.95 lakh in respect of combined asset on account of SAP Implementation in 2014-15 has been considered for the purpose of tariff calculation in this order.

49. With regard to replacement of insulators, the petitioner has submitted that it has replaced all 160 kN insulators on Siliguri-Purnea line between tower location



no. 100 to 300 during 2012-13 and 2013-14. Further, the issue was been taken up with the manufactures and various tests were conducted on unused samples as well as Insulators removed from the line and after the tests, it had been concluded that the samples with hairline crack failed in the test. Although, the reason for the hairline crack could not be established, it has been proposed to replace all the balance JSI make 160 kN Insulators in Siliguri-Purnea line and in part of the Purnea-Saharsa section. The matter was also discussed in the OCC meeting. As such, in the 92nd OCC meeting, members opined that hairline cracks on insulators may be either due to design defect or due to normal adverse effect of operation. Therefore, the OCC recommended that some authority like CPRI must certify whether the present case is within preview of design defect or because of any other reason. Accordingly, the matter was referred to CPRI and CPRI in its report has given the following recommendations:-

- a) The laboratory investigation of new and aged insulators showed twenty percent failures of aged insulators when compared to new insulators;
- b) Most of the insulators failed in the field are of tension mode strings compared to suspension insulators as per the PID measurement;
- c) Almost all failures have taken place during foggy condition at night;
- d) The reason of the failure of insulators is development of hairline cracks on porcelain surface which is causing flash over during foggy/humid condition. The reason of development of these hairline cracks may be attributed to gradual ageing during use of the insulators over a period of time more than six year;
- e) The defective 160kN insulators should be replaced at the earliest in



order to restore the reliability of the lines; and

- f) The 160kN insulators may be replaced by polymer insulators as polymer insulators are free from such problems.

50. We have considered the submissions of the petitioner. The petitioner on the recommendations in the 92nd OCC meeting sought the reasons for hairline cracks in insulators to be tested by CPRI. CPRI has tested the removed insulators to find out the cause of failure of insulators. The CPRI report also concluded that the insulators with hairline cracks failed the test and it is causing flash over during foggy/humid condition. The reason of development of these hairline cracks has been attributed to gradual ageing and has therefore recommended replacement of all the JSI make insulators with porcelain insulators. We are of the view that the existing insulators are required to be replaced with the polymer insulators for efficient operation of the instant assets. Accordingly, the additional capital expenditure of ₹1399.59 lakh (excluding normative IDC of ₹46.61 lakh) towards replacement of damaged insulators with porcelain insulators is admissible under Regulation 14(3)(ix), which provides for replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system.

51. With regard to the petitioner's claim for additional capital expenditure towards tower collapse, the petitioner has submitted that during 2013-14 one of the towers of 220 kV Double Circuit Muzaffarpur (PGCIL)-Muzaffarpur (BSEB) Line had collapsed due to severe cyclone in Muzaffarpur District. From the



examination of the tower, it was found that a very high intensity storm with rains and localized whirlwind (tornado) led to the collapse of the tower. From the visual examination of the four Transmission Line Tower, it was established that the actual wind speed had considerably exceeded the design speed. The petitioner has claimed the same under Regulation 14(3)(ix) of 2014 Tariff Regulations. The additional capital expenditure on account of tower collapse has been earlier allowed in order dated 16.5.2016 in Petition No.19/TT/2014. However, an amount of ₹16.33 lakh was not allowed as it was claimed for the year 2014-15, which fell during tariff period 2014-19. Regulation 14(3)(vi) of 2014 Tariff Regulations provides for additional capitalization on account of “Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments” Therefore, we are of the view that the amount of ₹15.80 lakh (excluding normative IDC of ₹0.53 lakh) claimed for 2014-15 is admissible.

52. However, in case of tower collapse and replacement of insulators, the petitioner has neither submitted Auditor’s/Management Certificate indicating the segregated values for these replacements nor the decapitalized value of the old assets. The petitioner has submitted an Auditors’ Certificate, vide affidavit dated 20.10.2016, indicating value for 2014-15 and 2015-16 under the heads “Additions to transmission line” and “Plant and Equipment Others”. These values are entirely different from the add-cap claimed during these years under “Tower Collapse Replacement” and “Insulator Replacement”. The petitioner has also submitted Form 10B (Statement of De-capitalization) for both these assets with the remarks “Not Required”.



53. In view of above, ₹15.80 lakh and ₹1399.59 lakh towards tower collapse during 2014-15 and replacement of insulators respectively during 2014-19 have not been considered for tariff purpose in this order. However, the petitioner is at liberty to submit the details of additional capitalization along with Auditors' Certificate indicating segregated values of the assets i.e. tower collapse and insulator replacement and decapitalized value of the old assets, on affidavit, alongwith Form-10B at the time of true up.

54. The petitioner has claimed add-cap of ₹5.00 lakh on account of compression machines. The petitioner has submitted that during emergency O&M works, the compression work is required to be done on conductor and these machines are not suitable due to their weight. To save the outage time of the line, light weight Compression Machines are required which may be used on conductor and on ground. The petitioner has also claimed ₹35.00 lakh (excluding normative IDC of ₹1.17 lakh) towards Infrared ("IR") Radiation. The petitioner has submitted that Infrared ("IR") Radiation is utilized by an IR Camera to detect overheating joints and parts, a telltale sign of their failure, to eliminate potential hazards. Thermal imaging has therefore become a core predictive maintenance tool in the online inspection programs. Therefore, it proposes to utilize the same technology for intensive regular surveys of the transmission lines as well as quick safety checks of energized equipment before beginning maintenance work that will help it to avoid costly service interruptions and exorbitant equipment losses. The petitioner has claimed the replacement of Compression Machines and IR under Regulation 14(3)(ix) of the 2014 Tariff Regulations.



55. We have considered the submissions of petitioner regarding compression machine and IR. The use of compression machine and IR Camera are common expenditure covered within the repairs and maintenance expenses and falls within the category of tools and tackles. These instruments are being used for the purpose of day to day maintenance of transmission lines and sub-stations. As per Regulation 14(3)(x) of the 2014 Tariff Regulations, any expenditure on acquiring the minor items like tools or tackles after the cut-off date are not to be considered for additional capitalization. As such, we are of the view that the expenditure of compression machine and IR camera, which is in the nature of tools and tackles may be met from O&M Expenses. Therefore, we are not inclined to allow the expenditure towards replacement of compression machines and IR.

56. The details of add-cap allowed and estimated completion cost as on 31.3.2019 are as under:-

(₹ in lakh)

Asset-I		
Cost as on 1.4.2014	Projected additional capital expenditure during 2014-15	Estimated completion cost as on 31.3.2019
71412.66	39.95	71452.61

Debt: Equity Ratio

57. Clause 3 of Regulation 19 of the 2014 Tariff Regulations specifies as follows:-

“(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.”



58. The debt: equity ratio of 70:30 was admitted after true-up for the tariff period ending 31.3.2014 for instant assets. The debt: equity ratio of 70: 30 has also been considered for add-cap during 2014-15. The details of the debt: equity as on 1.4.2014 and as on 31.3.2019 considered for the purpose of tariff for the 2014-19 tariff period are as under:-

(₹ in lakh)

Particulars	As on 1.4.2014		As on 31.3.2019	
	Amount	%	Amount	%
Debt	49988.86	70.00	50016.82	70.00
Equity	21423.80	30.00	21435.79	30.00
Total	71412.66	100.00	71452.61	100.00

Interest on Loan (“IOL”)

59. Regulation 26 of the 2014 Tariff Regulations with regard to Interest on Loan specifies 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.”

60. The interest on loan has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations by considering latest available rates of interest for 2013-14 for arriving at the weighted average rate of interest. However, as discussed at para-20 the additional loan has been excluded from the loan portfolio to determine the weighted average rate of interest. Any change in rate of interest subsequently is subject to truing-up on submission of actual rate of interest at the time of truing-up.

61. The details of weighted average rate of interest are at Annexure-2 and the IOL has been worked out and allowed as under:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross loan opening	49988.86	50016.82	50016.82	50016.82	50016.82
Cumulative Repayment upto previous year	27774.46	31523.68	35273.96	39024.24	42774.52
Net Loan-Opening	22214.40	18493.14	14742.86	10992.58	7242.30
Additions during the year	27.97	-	-	-	-
Repayment during the year	3749.23	3750.28	3750.28	3750.28	3750.28
Net Loan-Closing	18493.14	14742.86	10992.58	7242.30	3492.02
Average Loan	20353.77	16618.00	12867.72	9117.44	5367.16
Weighted Rate of Interest	9.4471%	9.4448%	9.4408%	9.4311%	9.4044%
Interest	1922.84	1569.54	1214.81	859.87	504.75

Return on Equity (“ROE”)

62. Clause (1) and (2) of Regulation 24 and Clause (1) and (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.”

63. The petitioner has computed ROE at the rate of 19.610% after grossing up the ROE with MAT rate of 20.961% as per the above Regulations. 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 and allowed is as under:-

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	21423.80	21435.79	21435.79	21435.79	21435.79
Addition due to Additional Capitalisation	11.99	-	-	-	-
Closing Equity	21435.79	21435.79	21435.79	21435.79	21435.79
Average Equity	21429.79	21435.79	21435.79	21435.79	21435.79
Return on Equity (Base Rate) (%)	15.50%	15.50%	15.50%	15.50%	15.50%
MAT rate for 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)	4202.38	4203.56	4203.56	4203.56	4203.56



Depreciation

64. Regulation 27 of the 2014 Tariff Regulations with regard to depreciation specifies as follows:-

"27. Depreciation:

(1) 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.

(3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:

Provided that in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff:

Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.

(4) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.



(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.”

64. We have considered the submission made by the petitioner with reference to depreciation. The instant assets shall complete their 12 years life in 2018-19. Therefore, remaining depreciable value of the instant assets has been spread over in the balance useful life after 2018-19 as provided under Regulation 27 of the 2014 Tariff Regulations. The details of the depreciation allowed are given hereunder:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block	71412.66	71452.61	71452.61	71452.61	71452.61
Additions during the year due to projected additional capitalization	39.95	-	-	-	-
Closing Gross block	71452.61	71452.61	71452.61	71452.61	71452.61
Average gross block	71432.64	71452.61	71452.61	71452.61	71452.61
Rate of Depreciation (%)	5.2486%	5.2486%	5.2486%	5.2486%	5.2486%
Depreciable Value	64232.83	64250.81	64250.81	64250.81	64250.81
Remaining Depreciable Value	36458.38	32727.13	28976.85	25226.57	21476.29
Depreciation	3749.23	3750.28	3750.28	3750.28	3750.28

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

65. Regulation 29 (4) (a) of the 2014 Tariff Regulations specifies the norms for operation and maintenance expenses for the transmission system based on the type of sub-station and the transmission line. Norms specified in respect of the elements covered in the instant petition are as overleaf:-



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
D/C single conductor T/L (₹ lakh/km)	0.303	0.313	0.324	0.334	0.346
D/C (bundled conductor) with four or more conductors T/L (₹ lakh/km)	1.062	1.097	1.133	1.171	1.210

66. The petitioner has claimed O&M Expenses as per Regulation 29 (4) (a) of the 2014 Tariff Regulations. The petitioner has further submitted that it has filed a civil appeal before the Hon'ble Supreme Court on the issue of O&M expenses allowed earlier and the present claim is without prejudice to its rights in the said appeal. As such, it has claimed normative O&M Expenses. The O&M Expenses claimed by the petitioner for the period 2014-19 are as under:-

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
399 km-D/C (bundled conductor) with four or more conductors T/L	423.74	437.70	452.07	467.23	482.79
24 km-D/C single conductor T/L	7.27	7.51	7.78	8.02	8.30
Total	431.01	445.22	459.84	475.25	491.09

67. The O&M Expenses claimed by the petitioner are as specified in Regulation 29(4)(a) of the 2014 Tariff Regulations. The claim of the petitioner is allowed, subject to the outcome of the Civil Appeal filed by the petitioner before the Hon'ble Supreme Court. The O&M Expenses allowed are as under:-

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
399 km-D/C (bundled conductor) with four or more conductors T/L	423.738	437.703	452.067	467.229	482.790
24 km-D/C single conductor T/L	7.272	7.512	7.776	8.016	8.304
Total	431.010	445.215	459.843	472.245	491.094

Interest on Working Capital ("IWC")

68. Clause 1 (c) and 3 of Regulation 28 and Clause 5 of Regulation 3 of the 2014 Tariff Regulations specify as follows:-



“28. Interest on Working Capital: (1) The working capital shall cover:

(a)-----

(c) Hydro generating station including pumped storage hydro electric generating station and transmission system including communication system:

(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) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later”

“(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;”

69. 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 capital as determined is as below:-

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	64.65	66.78	68.98	70.84	73.66
O & M expenses	35.92	37.10	38.32	39.35	40.92
Receivables	1759.43	1702.07	1644.16	1585.82	1528.58
Total	1,860.00	1,805.95	1,751.45	1,696.01	1,643.17
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	251.10	243.80	236.45	228.96	221.83

Transmission Majoration Factor (TMF)

70. The petitioner has claimed TMF of 2014-19 tariff period as well. As stated in para 30 above, TMF is allowed for 2014-19 tariff period as provided under Regulation 4.10A Central Electricity Regulatory Commission (Terms and Conditions) Regulations. As stated earlier, the same will be reviewed by the



Commission after the submissions of the report on TMF by the staff of the Commission.

Incentive

71. The petitioner has claimed the 'Incentive' (pre-tax) based on the estimated/projected availability during 2014-19 on Annual Fixed Charges (including Majoration Charges) under Regulation 33 of the 2014 Tariff Regulations. Accordingly, the petitioner is allowed to calculate and bill incentive as provided under Regulation 35(1) read with Regulation 38 of the 2014 Tariff Regulations.

Annual Transmission Charges

72. The Annual Transmission Charges allowed for the instant transmission assets are as follows:-

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	3749.23	3750.28	3750.28	3750.28	3750.28
Interest on Loan	1922.84	1569.54	1214.81	859.87	504.75
Return on Equity	4202.38	4203.56	4203.56	4203.56	4203.56
Interest on Working Capital	251.10	243.80	236.45	228.96	221.83
O&M Expenses	431.01	445.21	459.84	472.25	491.09
Sub-Total	10556.56	10212.40	9864.94	9514.92	9171.51
Transmission Majoration Factor	1055.66	1021.24	986.49	951.49	917.15
Total	11612.21	11233.63	10851.43	10466.41	10088.66

Sales Tax Liability

73. The petitioner has submitted that it applied for registration under U.P. Sales Tax Act in the State of Uttar Pradesh and it had mentioned its business as "Transmission of Electricity and Power" in the Application form under the heading "Business of the Company". Accordingly, the petitioner was granted Certificate of Registration on 3.3.2004. The U.P. Sales Tax Department issued a show cause



notice dated 14.9.2011, under Section 7(4) of the Central Sales Tax Act, 1956, for canceling of registration alleging that registration can be issued only for the business of generation or distribution of electricity whereas the company is into transmission of electricity. The department issued a show-cause notice under Section 10(A) of the Central Sales Tax Act, 1956 on 2.5.2012 and 3.2.2014 as to why Differential Tax in form of penalty should not be levied for purchase of goods against the issue of Form C. The department contended that the petitioner is not entitled to issue Form C as it is into the business of transmission of electricity. Accordingly, the department raised a demand equivalent to the Differential Tax i.e. 12% to be paid less 4% Concessional Tax paid. The petitioner has submitted that a total demand of ₹26.44 crore has been raised for the years 2004-05 to 2008-09 out of which a demand of ₹1.49 crore pertains to 2008-09. The petitioner has not yet paid the amount and has preferred an appeal before the Hon'ble High Court of Allahabad. The petitioner has sought liberty to seek approval of the Commission for capitalization of such penal sales tax amount and recovery of the transmission charges pertaining to corresponding capitalisation once the above liability is actually incurred by the petitioner.

74. We have considered the submissions of the petitioner. We are not expressing view as to whether the claim for reimbursement of Differentiate Tax shall be admissible in tariff or not. If the petitioner approaches the Commission after the disposal of the appeal by the Hon'ble High Court of Allahabad, its request will be considered in accordance with law.



Filing Fee and Publication Expenses

75. The petitioner has sought reimbursement of fee paid by it for filing the true-up petition for 2013-14 in tariff period 2009-14 as well as for filing the petition and publication expenses for tariff period 2014-19. The petitioner shall be entitled for reimbursement of the filing fees for true-up petition for tariff period 2009-14 as well as filing fees and publication expenses in connection with the tariff period 2014-19, directly from the beneficiaries on pro-rata basis in accordance with respective Tariff Regulations.

Licence Fee and RLDC Fees and Charges

76. The petitioner has requested to allow license fee/RLDC fees and charges both for tariff period 2009-14 and 2014-19. The petitioner shall be entitled for reimbursement of licence fee in accordance with respective Tariff Regulations.

Sharing of Transmission Charges

77. The billing, collection and disbursement of the transmission charges approved for 2014-19 tariff period 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.

78. This order disposes of Petition No. 514/TT/2014.

sd/-
(M.K. Iyer)
Member

sd/-
(A.S. Bakshi)
Member

sd/-
(A.K. Singhal)
Member

sd/-
(Gireesh B. Pradhan)
Chairperson



Annexure-1

(₹ in lakh)

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN						
	Details of Loan	2009-10	2010-11	2011-12	2012-13	2013-14
1	IFC					
	Gross loan opening	14958.11	14958.11	14958.11	14958.11	14958.11
	Cumulative Repayment upto DOCO/previous year	2491.58	3738.09	4984.60	6231.11	7477.62
	Net Loan-Opening	12466.53	11220.02	9973.51	8727.00	7480.49
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	1246.51	1246.51	1246.51	1246.51	1246.51
	Net Loan-Closing	11220.02	9973.51	8727.00	7480.49	6233.98
	Average Loan	11843.28	10596.77	9350.26	8103.75	6857.24
	Rate of Interest	8.80%	8.80%	8.80%	8.80%	8.80%
	Interest	1042.21	932.52	822.82	713.13	603.44
	Rep Schedule	24 equal half yearly instalments from 15.07.2007				
2	ADB					
	Gross loan opening	13300.27	13300.27	13300.27	13300.27	13300.27
	Cumulative Repayment upto DOCO/previous year	2215.44	3323.80	4432.15	5540.51	6648.86
	Net Loan-Opening	11084.83	9976.47	8868.12	7759.76	6651.41
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	1108.36	1108.36	1108.36	1108.36	1108.36
	Net Loan-Closing	9976.47	8868.12	7759.76	6651.41	5543.05
	Average Loan	10530.65	9422.30	8313.94	7205.58	6097.23
	Rate of Interest	9.14%	9.14%	9.14%	9.14%	9.14%
	Interest	962.50	861.20	759.89	658.59	557.29
	Rep Schedule	24 semi annual equal instalments from 15.07.2007				
3	IDFC					
	Gross loan opening	11238.10	11238.10	11238.10	11238.10	11238.10
	Cumulative Repayment upto DOCO/previous year	1871.94	2808.45	3744.96	4681.47	5617.97
	Net Loan-Opening	9366.16	8429.65	7493.14	6556.64	5620.13
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	936.51	936.51	936.51	936.51	936.51
	Net Loan-Closing	8429.65	7493.14	6556.64	5620.13	4683.62
	Average Loan	8897.91	7961.40	7024.89	6088.38	5151.87
	Rate of Interest	10.48%	9.34%	9.20%	9.20%	10.08%
	Interest	932.50	743.59	646.29	560.13	519.31
	Rep Schedule	48 quarterly instalments from 15.04.2007				
4	SBI					
	Gross loan opening	10007.28	10007.28	10007.28	10007.28	10007.28
	Cumulative Repayment upto DOCO/previous year	1871.49	2705.43	3539.37	4373.31	5207.25
	Net Loan-Opening	8135.79	7301.85	6467.91	5633.97	4800.03
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	833.94	833.94	833.94	833.94	833.94
	Net Loan-Closing	7301.85	6467.91	5633.97	4800.03	3966.09
	Average Loan	7718.82	6884.88	6050.94	5217.00	4383.06
	Rate of Interest	10.19%	9.16%	9.03%	9.03%	10.15%



	Interest	786.55	630.66	546.40	471.10	444.88
	Rep Schedule	48 quarterly instalments from 31.03.2007				
	Total Loan					
	Gross loan opening	49503.76	49503.76	49503.76	49503.76	49503.76
	Cumulative Repayment upto DOCO/previous year	8450.45	12575.76	16701.08	20826.39	24951.70
	Net Loan-Opening	41053.31	36928.00	32802.68	28677.37	24552.06
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	4125.31	4125.31	4125.31	4125.31	4125.31
	Net Loan-Closing	36928.00	32802.68	28677.37	24552.06	20426.74
	Average Loan	38990.65	34865.34	30740.03	26614.71	22489.40
	Rate of Interest	9.5504%	9.0863%	9.0286%	9.0286%	9.4485%
	Interest	3723.76	3167.96	2775.41	2402.95	2124.91



Annexure-2

(₹ in lakh)

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN						
	Details of Loan	2014-15	2015-16	2016-17	2017-18	2018-19
1	IFC					
	Gross loan opening	14958.11	14958.11	14958.11	14958.11	14958.11
	Cumulative Repayment upto DOCO/previous year	8724.13	9970.64	11217.15	12463.66	13710.17
	Net Loan-Opening	6233.98	4987.47	3740.96	2494.45	1247.94
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	1246.51	1246.51	1246.51	1246.51	1246.51
	Net Loan-Closing	4987.47	3740.96	2494.45	1247.94	1.43
	Average Loan	5610.73	4364.22	3117.71	1871.20	624.69
	Rate of Interest	8.80%	8.80%	8.80%	8.80%	8.80%
	Interest	493.74	384.05	274.36	164.67	54.97
	Rep Schedule	24 semi annual equal instalments from 15.07.2007				
2	ADB					
	Gross loan opening	13300.27	13300.27	13300.27	13300.27	13300.27
	Cumulative Repayment upto DOCO/previous year	7757.22	8865.58	9973.93	11082.29	12190.64
	Net Loan-Opening	5543.05	4434.69	3326.34	2217.98	1109.63
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	1108.36	1108.36	1108.36	1108.36	1108.36
	Net Loan-Closing	4434.69	3326.34	2217.98	1109.63	1.27
	Average Loan	4988.87	3880.52	2772.16	1663.80	555.45
	Rate of Interest	9.14%	9.14%	9.14%	9.14%	9.14%
	Interest	455.98	354.68	253.38	152.07	50.77
	Rep Schedule	24 semi annual equal instalments from 15.07.2007				
3	IDFC					
	Gross loan opening	11238.10	11238.10	11238.10	11238.10	11238.10
	Cumulative Repayment upto DOCO/previous year	6554.48	7490.99	8427.50	9364.01	10300.51
	Net Loan-Opening	4683.62	3747.11	2810.60	1874.10	937.59
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	936.51	936.51	936.51	936.51	921.08
	Net Loan-Closing	3747.11	2810.60	1874.10	937.59	16.51
	Average Loan	4215.37	3278.86	2342.35	1405.84	477.05
	Rate of Interest	10.08%	10.08%	10.08%	10.08%	10.08%
	Interest	424.91	330.51	236.11	141.71	48.09
	Rep Schedule	48 quarterly instalments from 15.04.2007				
4	SBI					
	Gross loan opening	10007.28	10007.28	10007.28	10007.28	10007.28
	Cumulative Repayment upto DOCO/previous year	6041.29	6875.23	7709.17	8543.11	9377.05
	Net Loan-Opening	3965.99	3132.05	2298.11	1464.17	630.23
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	833.94	833.94	833.94	833.94	718.47
	Net Loan-Closing	3132.05	2298.11	1464.17	630.23	-88.24
	Average Loan	3549.02	2715.08	1881.14	1047.20	271.00



	Rate of Interest	10.15%	10.15%	10.15%	10.15%	10.15%
	Interest	360.23	275.58	190.94	106.29	27.51
	Rep Schedule	48 quarterly instalments from 31.03.2007				
	Total Loan					
	Gross loan opening	49503.76	49503.76	49503.76	49503.76	49503.76
	Cumulative Repayment upto DOCO/previous year	29077.12	33202.43	37327.75	41453.06	45578.37
	Net Loan-Opening	20426.64	16301.33	12176.01	8050.70	3925.39
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	4125.31	4125.31	4125.31	4125.31	3994.41
	Net Loan-Closing	16301.33	12176.01	8050.70	3925.39	-69.03
	Average Loan	18363.98	14238.67	10113.36	5988.04	1928.18
	Rate of Interest	9.4471%	9.4448%	9.4408%	9.4311%	9.4044%
	Interest	1734.86	1344.82	954.78	564.74	181.33

