

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 556/TT/2014

Coram:

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

**Date of Hearing : 02.12.2015
Date of Order : 07.1.2016**

In the matter of:

Truing up of transmission tariff for 2009-14 tariff period and determination of transmission tariff for 2014-19 tariff period for combined assets of Ckt-I (Asset-I), Ckt-II (Asset-II) of 400 kV Teesta (Stage-V) Siliguri transmission line; and 315 MVA, 400/220 kV ICT-II at Baripada Sub-station along with associated bays (Asset-III) of transmission system under 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, VidyutBhawan,
Bailey Road, Patna-800001
2. South Bihar Power Distribution Company Limited,
2nd Floor, VidyutBhawan,
Bailey Road, Patna-800001
3. West Bengal State Electricity Distribution Company



BidyutBhawan, Bidhan Nagar,
Block DJ, Sector-II,
Salt Lake City, Kolkata-700091

4. Grid Corporation of Orissa Ltd.,
Shahid Nagar,Bhubaneshwar-751007
5. Damodar Valley Corporation,
DVC Tower, Maniktala
Civic Centre, VIP Road, Kolkata-700054
6. Power Department, Govt. of Sikkim,
Gangtok-737101
7. Jharkhand State Electricity Board,
In front of Main Secretariat,
Doranda, Ranchi-834002

.....Respondents

The following were present:

For Petitioner: ShriAngaruNaresh Kumar, PGCIL
Shri S. K. Niranjana, PGCIL
ShriJasbir Singh, PGCIL
ShriAnshulGarg,PGCIL
Shri S.S. Raju, PGCIL
ShriShashiBhushan, PGCIL
Shri J. Mazumder, PGCIL
ShriRakesh Prasad, PGCIL
Shri M.M. Mondal, PGCIL
Shri S. K. Venkatesan, PGCIL
Shri Sunil Kumar, PGCIL

For Respondent: None

ORDER

The present petition has been preferred by Power Grid Corporation of India Ltd. ('the petitioner'), a transmission licensee,for truing up of capital expenditure



and tariff for combined assets of Ckt-I (Asset-I), Ckt-II (Asset-II) of 400 kV Teesta (Stage-V) -Siliguri transmission line; and 315 MVA, 400/220 kV ICT-II at Baripada Sub-station along with associated bays (Asset-III) of transmission system under 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 actual capital 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 mostly distribution licensees and transmission licensees who are procuring transmission service from the petitioner, mainly beneficiaries of Eastern Region.

3. The petitioner has served the petition on 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 reply to the petition. The hearing in this matter was held on 2.12.2015. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of 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 instant petition covers Combined assets of Ckt-I (Asset-I), Ckt-II (Asset-II) of 400 kV Teesta (Stage-V) Siliguri transmission line; and 315 MVA, 400/220 kV ICT-II at Baripada Sub-station along with associated bays (Asset-III) of transmission system under Teesta(Stage-V) HEP in Eastern Region.
 - d. The actual date of commercial operation for Asset-I, Asset-II and Asset-III of the transmission elements are 1.2.2008, 1.6.2008, and 1.5.2008, respectively. Notional date of commercial operation of Asset-I and II is 1.6.2008.



- e. The tariff for 2009-14 period was allowed vide order dated 14.2.2012 in Petition No. 299/2010 in accordance with the 2009 Tariff Regulations. The tariff allowed for the tariff period 2009-14 is as under:-

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Combined Asset-I & II					
Depreciation	1453.66	1482.38	1483.83	1483.83	1483.83
Interest on Loan	1659.08	1557.03	1421.32	1282.97	1144.72
Return on Equity	1443.09	1471.62	1473.06	1473.06	1473.06
Interest on Working Capital	103.79	103.37	101.13	98.81	96.53
O & M Expenses	176.70	186.83	197.52	208.81	220.71
Total	4836.32	4801.23	4676.86	4547.48	4418.85
Asset-III					
Depreciation	60.46	61.51	62.57	62.57	62.57
Interest on Loan	67.12	62.85	58.49	52.80	47.11
Return on Equity	60.05	61.10	62.15	62.15	62.15
Interest on Working Capital	8.37	8.58	8.80	8.97	9.15
O & M Expenses	89.08	94.18	99.57	105.26	111.28
Total	285.07	288.22	291.57	291.74	292.25

- f. The Commission, in its order dated 14.2.2012 in Petition No. 299/2010 has determined the tariff based on admitted capital cost of ₹27000.94 lakh for Combined Asset-I&II and ₹1145.04 lakh for Asset III, as on 31.3.2009 and additional capital expenditure of ₹1088.00 lakh and ₹40.00 lakh proposed during the 2009-14 tariff period for Combined Asset-I & II and Asset-III, respectively, by the petitioner for the 2009-14 tariff period.
- g. The MAT rate applicable as on 2008-09 was considered to arrive at rate of return on equity for the 2009-14 tariff period, which is required to be



adjusted as per the actual MAT rate applicable for the respective year at the time of truing up of tariff for 2009-14 tariff period.

h. The instant petition was filed on 16.12.2014.

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

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

Capital Cost

6. The petitioner has claimed admitted capital cost of ₹27000.94 lakh as on 31.3.2009 and additional capitalization of ₹994.76 lakh in 2009-10, ₹119.14 lakh in 2010-11, ₹13.06 lakh in 2011-12, and ₹13.08 lakh in 2013-14, totalling to ₹1140.04 lakh during 2009-14 for Combined Asset-I and II. For Asset-III, the tariff has been claimed based on admitted capital cost of ₹1145.04 lakh as on 31.3.2009 and additional capitalization of ₹9.10 lakh in 2009-10, ₹7.27 lakh in 2010-11, ₹1.10 lakh in 2011-12, ₹23.01 lakh in 2012-13, and ₹2.67 lakh in 2013-14, totalling to ₹43.15 lakh during the 2009-14 tariff period. The petitioner has claimed additional capitalization towards Balance and Retention payment for works executed regarding transmission line and Sub-stations before cut-off date in accordance with Clause 1(i) of Regulation 9 of the 2009 Tariff Regulations and after the cut-off date in accordance with Clause 2(viii) of Regulation 9 of the 2009 Tariff Regulations.



7. The capital cost admitted as on 31.3.2009 vide order dated 14.2.2012 in Petition No. 299/2010 has been considered as the opening capital cost as on 1.4.2009 for truing up in accordance with Regulation 7 of the 2009 Tariff Regulations. Accordingly, the admitted capital cost of ₹27000.94 lakh for Combined Asset-I and II, and ₹1145.04lakh for Asset-III as on 1.4.2009 has been considered for truing up for the 2009-14 tariff period.

Additional Capital Expenditure

8. The petitioner has claimed additional capital expenditure for Combined Asset-I and II as ₹994.76 lakh in 2009-10, ₹119.14 lakh in 2010-11, ₹13.06 lakh in 2011-12, and ₹13.08 lakh in 2013-14, while for Asset-III, the additional capital expenditure claimed is ₹9.10 lakh in 2009-10, ₹7.27 lakh in 2010-11, ₹1.10 lakh in 2011-12, ₹23.01 lakh in 2012-13, and ₹2.67 lakh in 2013-14, and the petitioner has submitted Auditor's Certificate for the cost incurred.

9. Clause 1(i) of Regulation 9 of the 2009 Tariff Regulations provides as follows:-

“(1) The capital expenditure 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;.....”

10. Clause 2(viii) of Regulation 9 of the 2009 Tariff Regulations provides as follows:-

“(2) The capital expenditure incurred on the following counts after the cut-off date may, in its discretion be admitted by the Commission, subject to prudence check

.....



(viii) "Any undischarged liability towards final payment/withheld payment due to contractual exigencies for works executed within the cut-off date, after prudence check of the details of such deferred liability, total estimated cost of package, reason for such withholding of payment and release of such payments etc."

11. The petitioner has claimed additional capitalization towards Balance and Retention payment within cut-off date under Clause (1)(i) of Regulation 9 of the 2009 Tariff Regulations and beyond the cut-off date under Clause (2)(viii) of Regulation 9 of the 2009 Tariff Regulations. The petitioner was directed to submit necessary justification for claiming the balance and retention payment under Clause (2) of Regulation 9 of the 2009 Tariff Regulations. The petitioner in its reply vide affidavit dated 1.12.2015 submitted that against the approved additional capitalization of ₹1033 lakh for 2009-10 for the transmission system, actual additional capitalization is ₹1003.86 lakh and hence, there is a reduction of around ₹30.00 lakh. During 2010-14 period, as against approved additional capitalization ₹95.00 lakh, the actual additional capitalization was ₹179.33 lakh. The difference between allowed and actual additional capitalisation is on account of actual PV payment made/to be made towards final bill, and balance and retention payment, which gets finalized on receipt and reconciliation of bills.

12. The total capital cost of the transmission asset including additional capitalization incurred during the 2009-14 tariff period, works out to ₹28140.98 lakh for Combined Asset-land II and ₹1188.19 lakh for Asset-III, including additional capitalization incurred during the 2009-14 tariff period.



13. We have considered the submissions of the petitioner. The additional capitalization of ₹1140.04 lakh for Combined Asset-I and II and ₹43.15 lakh for Asset-III for the 2009-14 tariff period is allowed in accordance with Clause 1(i) and Clause 2(viii), respectively, of Regulation 9 of the 2009 Tariff Regulations, as the same is towards the balance and retention amount and the total Capital Cost including additional capitalisation amount is within approved apportioned cost of the assets (Approved apportioned cost is ₹ 30208 lakh for Asset I and II and ₹ 1307 lakh for Asset III). The summary of capital cost including additional capitalization approved and now tried up is shown in table below:-

(₹ in lakh)

Particulars	Admitted capital cost as on 31.3.2009	Additional capitalization					Total additional capitalization	Total capital cost including additional capitalization
		2009-10	2010-11	2011-12	2012-13	2013-14		
Combined Asset I & II								
Approved in order dated 14.2.2012	27000.94	1033.00	55.00	0.00	0.00	0.00	1088.00	28088.94
Actual	27000.94	994.76	119.14	13.06	0.00	13.08	1140.04	28140.98
Asset-III								
Approved in order dated 14.2.2012	1145.04	0.00	40.00	0.00	0.00	0.00	40.00	1185.04
Actual	1145.04	9.10	7.27	1.10	23.01	2.67	43.15	1188.19

Debt: Equity

14. 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.”

15. The petitioner has claimed true up Annual Fixed Charge based on debt:equity ratio of 70:30 for Combined Asset-I and II and 70:30 for Asset-III as considered by the Commission in its order dated 14.2.2012 in Petition No. 299/2010. The same is considered as opening debt:equity ratio as on 1.4.2009 for the purpose of true up of the approved tariff of tariff period 2009-14 as given under:-

Funding	Amount	(%)
Combined Asset- I & II		
Debt	18900.69	70.00
Equity	8100.25	30.00
Total	27000.94	100.00
Asset III		
Debt	801.53	70.00
Equity	343.51	30.00
Total	1145.04	100.00

16. With respect to additional capitalization, the petitioner has submitted the debt:equity ratio of 70:30 for Combined Asset-I and II and Asset-III. We have considered the submission of the petitioner and accordingly allow the debt:equity ratio in accordance with Clause 2 of Regulation 12 of the 2009 Tariff Regulations. The overall debt equity as on 31.3.2014 including additional capitalization is as under :-



(₹in lakh)

Funding	Amount	(%)
Combined Asset- I & II		
Debt	19698.72	70.00
Equity	8442.26	30.00
Total	28140.98	100.00
Asset III		
Debt	831.74	70.00
Equity	356.45	30.00
Total	1188.19	100.00

Interest on Loan (“IOL”)

17. Regulation 16 of the 2009 Tariff Regulations provides the methodology for working out weighted average rate of interest on loan. The Commission in its earlier order dated 8.6.2011 in Petition No. 238/2010 has held that:-

“...in case of floating rate of interest, any change in the rates of interest during the tariff period will be considered at the time of true up”.

18. The petitioner has submitted the weighted average rate of interest on loan based on its actual loan portfolio and rate of interest.

19. We have considered the submissions of the petitioner. The IOL is allowed 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 placed at **Annexure-I** and the IOL has been worked out and approved as follows:-



(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Combined Asset- I &II					
Approved vide order dated 14.2.2012	1659.08	1557.03	1421.32	1282.97	1144.72
As claimed by petitioner	1657.93	1556.68	1423.27	1285.15	1147.12
Allowed after true up	1657.93	1556.69	1423.26	1285.15	1147.12
Asset-III					
Approved vide order dated 14.2.2012	67.12	62.85	58.49	52.80	47.11
As claimed by petitioner	67.39	62.36	57.06	52.20	47.34
Allowed after true up	67.39	62.36	57.02	52.21	47.34

Return on Equity (“ROE”)

20. Clause (3), (4) and (5) of 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:

Rate of pre-tax return on equity = 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 true up in accordance with Regulation 6 of these regulations.”



21. The petitioner has submitted that the MAT rate considered in the tariff order approving transmission tariff for the transmission asset was 11.330%, as applicable for 2008-09. However, for truing up purpose, the computation of ROE for the 2009-14 tariff period has been done on the basis of actual MAT rate applicable during the 2009-14 tariff period. 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 (t) (%)	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

22. Accordingly, the ROE as trued up is shown in the table below:-

Particulars	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Combined Asset-I&II					
Approved vide order dated 14.2.2012	1443.09	1471.62	1473.06	1473.06	1473.06
As claimed by petitioner	1540.51	1629.28	1634.72	1635.10	1655.14
Allowed after true up	1540.51	1629.28	1634.72	1635.10	1655.14
Asset-III					
Approved vide order dated 14.2.2012	60.05	61.10	62.15	62.15	62.15
As claimed by petitioner	64.40	67.24	67.55	68.25	69.82
Allowed after true up	64.40	67.24	67.55	68.25	69.82

23. The return on equity allowed in the instant order is more than the return on equity allowed vide order dated 14.2.2012 due to increase in additional



capitalisation and increase in the applicable MAT rate for the purpose of grossing up of base rate of return on equity.

Depreciation

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

"17. Depreciation:

...
(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."

25. The useful life of the transmission asset has been considered as per Regulations 3 (42) and 17 (4) of the 2009 Tariff Regulations. For the purpose of calculation, the weighted average useful life of the Combined Asset I and Asset II as on COD has been considered as 35 years and for Asset III, the same has been considered as 25 years. The depreciation for the tariff period 2009-14 has been worked out in accordance with Regulation 17 of the 2009 Tariff Regulations based on admitted capital expenditure and additional capitalization as under:-

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Combined Asset-I & II					
Approved vide order dated 14.2.2012	1453.66	1482.38	1483.83	1483.83	1483.83
As claimed by petitioner	1452.65	1482.06	1485.55	1485.89	1486.24
Allowed after true up	1452.65	1482.05	1485.54	1485.89	1486.23
Asset-III					
Approved vide order dated 14.2.2012	60.46	61.51	62.57	62.57	62.57
As claimed by petitioner	60.70	61.13	61.35	61.99	62.67



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Allowed after true up	60.70	61.13	61.35	61.99	62.67

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

26. The petitioner has computed O&M expense for the assets mentioned in the petition and in accordance with the O&M norms specified in Regulation 19(g) of the 2009 Tariff Regulations. Accordingly, the O&M Expenses have been worked out as given in the table below:-

Particulars		2009-10	2010-11	2011-12	2012-13	2013-14
Combined Asset- I & II						
Actual No of bays(nos)	400 kV Bays	2	2	2	2	2
Actual line length(km)	400 kV D/C line	114.67	114.67	114.67	114.67	114.67
Norms as per Regulation	400 kV D/C line(₹ lakh/km)	0.627	0.663	0.701	0.741	0.783
	400 kV Bays (₹ lakh/bay)	52.40	55.40	58.57	61.92	65.46
Total (₹ in lakh)		176.70	186.83	197.52	208.81	220.71
Asset-III						
Actual No of bays(nos)	No of bays	2	2	2	2	2
Norms as per Regulation	220 kV (₹ lakh/bay)	36.68	38.78	41.00	43.34	45.82
	400 kV (₹ lakh/bay)	52.40	55.40	58.57	61.92	65.46
Total (₹ in lakh)		89.08	94.18	99.57	105.26	111.28

27. The O&M Expenses claimed by the petitioner for the tariff period 2009-14 are same as that approved in the tariff order dated 14.2.2012 in Petition No. 299/2010. Accordingly, the O&M Expenses claimed by the petitioner, allowed and trued up are the same, and are as follows:-



(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Combined Asset- I & II					
Approved vide order dated 14.2.2012	176.70	186.83	197.52	208.81	220.71
As claimed by petitioner	176.70	186.83	197.52	208.81	220.71
Allowed after true up	176.70	186.83	197.52	208.81	220.71
Asset-III					
Approved vide order dated 14.2.2012	89.08	94.18	99.57	105.26	111.28
As claimed by petitioner	89.08	94.18	99.57	105.26	111.28
Allowed after true up	89.08	94.18	99.57	105.26	111.28

Interest on Working Capital("IWC")

28. 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 that the rate of interest on working capital has been considered as 12.25% 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.

30. The Commission in its order dated 14.2.2012 in Petition No. 299/2010 approved rate of interest on working capital of 12.25% as applicable for 2008-09. In accordance with Clause (3) of Regulation 18 of the 2009 Tariff Regulations, as amended, rate of interest on working capital shall be on normative basis and in case of transmission assets declared under commercial operation prior to 1.4.2009 shall be equal to short-term Prime Lending Rate as applicable as on



1.4.2009. State Bank of India short-term Prime Lending Rates on 1.4.2009 was 12.25%. Therefore, interest rate of 12.25% has been considered to work out the interest on working capital in the instant case.

31. The IWC trued up is as under:-

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Combined Asset- I& II					
Maintenance Spares	26.50	28.02	29.63	31.32	33.11
O & M expenses	14.72	15.57	16.46	17.40	18.39
Receivables	822.26	826.91	807.60	786.20	768.27
Total	863.49	870.51	853.69	834.93	819.77
Rate of Interest(%)	12.25	12.25	12.25	12.25	12.25
Interest	105.78	106.64	104.58	102.28	100.42
Asset-III					
Maintenance Spares	13.36	14.13	14.94	15.79	16.69
O & M expenses	7.42	7.85	8.30	8.77	9.27
Receivables	48.34	48.93	49.06	49.46	50.07
Total	69.12	70.91	72.29	74.02	76.03
Rate of Interest(%)	12.25	12.25	12.25	12.25	12.25
Interest	8.47	8.69	8.86	9.07	9.31

32. The IWC claimed by the petitioner, allowed and trued up are as shown in the table below:-

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Combined Asset- I & II					
Approved vide order dated 14.2.2012	103.79	103.37	101.13	98.81	96.53
As claimed by petitioner	105.78	106.64	104.58	102.28	100.42
Allowed after true up	105.78	106.64	104.58	102.28	100.42
Asset-III					
Approved vide order dated 14.2.2012	8.37	8.58	8.80	8.97	9.15
As claimed by petitioner	8.47	8.69	8.86	9.07	9.31
Allowed after true up	8.47	8.69	8.86	9.07	9.31



33. The variation in IWC is on account of increase in receivables due to increase in ROE, Interest and Depreciation on account of actual additional capital expenditure and variation in ROE on account of applicable MAT rate during the 2009-14 tariff period.

ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD

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

(₹ in lakh)					
COMBINED ASSET-I & II	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Block					
Opening Gross block	27000.94	27995.70	28114.84	28127.90	28127.90
Addition during 2009-14 due to Projected Additional Capitalization	994.76	119.14	13.06	0.00	13.08
Closing Gross block	27995.70	28114.84	28127.90	28127.90	28140.98
Average Gross block	27498.32	28055.27	28121.37	28127.90	28134.44
Depreciation					
Rate of Depreciation(%)	5.283	5.283	5.283	5.283	5.283
Depreciable Value	24748.49	25249.74	25309.23	25315.11	25321.00
Elapsed Life (Beginning of the year)	0	1	2	3	4
Weighted Balance Useful life of the assets	35	34	33	32	31
Remaining Depreciable Value	24748.49	23797.10	22374.53	20894.86	19414.86
Depreciation	1452.65	1482.05	1485.54	1485.89	1486.23
Interest on Loan					
Gross Normative Loan	18900.69	19597.02	19680.42	19689.56	19689.56
Cumulative Repayment upto Previous Year	729.03	2181.68	3663.73	5149.28	6635.17
Net Loan-Opening	18171.66	17415.34	16016.69	14540.28	13054.39
Addition due to Additional Capitalization	696.33	83.40	9.14	0.00	9.16
Repayment during the year	1452.65	1482.05	1485.54	1485.89	1486.23
Net Loan-Closing	17415.34	16016.69	14540.28	13054.39	11577.32



COMBINED ASSET-I & II	2009-10	2010-11	2011-12	2012-13	2013-14
Average Loan	17793.50	16716.02	15278.49	13797.34	12315.86
Weighted Average Rate of Interest on Loan(%)	9.3176	9.3125	9.3155	9.3145	9.3142
Interest	1657.93	1556.69	1423.26	1285.15	1147.12
Return on Equity					
Opening Equity	8100.25	8398.68	8434.42	8438.34	8438.34
Additions	298.43	35.74	3.92	0.00	3.92
Closing Equity	8398.68	8434.42	8438.34	8438.34	8442.26
Average Equity	8249.47	8416.55	8436.38	8438.34	8440.30
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
MAT Rate for respective year (%)	16.995	19.931	20.008	20.008	20.961
Return on Equity (Pre Tax) (%)	18.674	19.358	19.377	19.377	19.610
Return on Equity (Pre Tax)	1540.51	1629.28	1634.72	1635.10	1655.14
Interest on Working Capital					
Maintenance Spares	26.50	28.02	29.63	31.32	33.11
O & M expenses	14.72	15.57	16.46	17.40	18.39
Receivables	822.26	826.91	807.60	786.20	768.27
Total	863.49	870.51	853.69	834.93	819.77
Interest	105.78	106.64	104.58	102.28	100.42
Annual Transmission Charges					
Depreciation	1452.65	1482.05	1485.54	1485.89	1486.23
Interest on Loan	1657.93	1556.69	1423.26	1285.15	1147.12
Return on Equity	1540.51	1629.28	1634.72	1635.10	1655.14
Interest on Working Capital	105.78	106.64	104.58	102.28	100.42
O & M Expenses	176.70	186.83	197.52	208.81	220.71
Total	4933.56	4961.48	4845.63	4717.23	4609.63

(₹ in lakh)

ASSET-III	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Block					
Opening Gross block	1145.04	1154.14	1161.41	1162.51	1185.52
Addition during 2009-14 due to Projected Additional Capitalization	9.10	7.27	1.10	23.01	2.67
Closing Gross block	1154.14	1161.41	1162.51	1185.52	1188.19
Average Gross block	1149.59	1157.78	1161.96	1174.02	1186.86
Depreciation					



ASSET-III	2009-10	2010-11	2011-12	2012-13	2013-14
Rate of Depreciation(%)	5.280	5.280	5.280	5.280	5.280
Depreciable Value	1034.63	1042.00	1045.76	1056.61	1068.17
Elapsed Life (Beginning of the year)	0	1	2	3	4
Weighted Balance Useful life of the assets	25	24	23	22	21
Remaining Depreciable Value	1001.02	947.69	890.33	839.82	789.39
Depreciation	60.70	61.13	61.35	61.99	62.67
Interest on Loan					
Gross Normative Loan	801.53	807.90	812.99	813.76	829.87
Cumulative Repayment upto Previous Year	33.61	94.31	155.44	216.79	278.78
Net Loan-Opening	767.92	713.59	657.55	596.97	551.09
Addition due to Additional Capitalization	6.37	5.09	0.77	16.11	1.87
Repayment during the year	60.70	61.13	61.35	61.99	62.67
Net Loan-Closing	713.59	657.55	596.97	551.09	490.30
Average Loan	740.76	685.57	627.26	574.03	520.69
Weighted Average Rate of Interest on Loan (%)	9.0971	9.0961	9.0907	9.0945	9.0909
Interest	67.39	62.36	57.02	52.21	47.34
Return on Equity					
Opening Equity	343.51	346.24	348.42	348.75	355.65
Additions	2.73	2.18	0.33	6.90	0.80
Closing Equity	346.24	348.42	348.75	355.65	356.45
Average Equity	344.88	347.33	348.59	352.20	356.05
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
MAT Rate for respective year (%)	16.995	19.931	20.008	20.008	20.961
Return on Equity (Pre Tax) (%)	18.674	19.358	19.377	19.377	19.610
Return on Equity (Pre Tax)	64.40	67.24	67.55	68.25	69.82
Interest on Working Capital					
Maintenance Spares	13.36	14.13	14.94	15.79	16.69
O & M expenses	7.42	7.85	8.30	8.77	9.27
Receivables	48.34	48.93	49.06	49.46	50.07
Total	69.12	70.91	72.29	74.02	76.03
Interest	8.47	8.69	8.86	9.07	9.31
Annual Transmission Charges					



ASSET-III	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	60.70	61.13	61.35	61.99	62.67
Interest on Loan	67.39	62.36	57.02	52.21	47.34
Return on Equity	64.40	67.24	67.55	68.25	69.82
Interest on Working Capital	8.47	8.69	8.86	9.07	9.31
O & M Expenses	89.08	94.18	99.57	105.26	111.28
Total	290.04	293.59	294.34	296.77	300.42

DETERMINATION OF ANNUAL TRANSMISSION CHARGES FOR 2014-19

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Asset-I & II					
Depreciation	1489.39	1492.21	1492.21	1492.21	1492.21
Interest on Loan	1012.53	877.24	738.35	599.44	460.52
Return on Equity	1658.67	1661.80	1661.80	1661.80	1661.80
Interest on Working Capital	106.91	104.30	101.49	98.69	95.90
O & M Expenses	201.67	208.42	215.32	222.46	229.84
Total	4469.17	4343.97	4209.17	4074.60	3940.27
Asset-III					
Depreciation	65.78	68.82	68.82	68.82	68.82
Interest on Loan	45.25	42.79	36.54	30.28	24.03
Return on Equity	73.29	76.68	76.68	76.68	76.68
Interest on Working Capital	9.91	10.19	10.23	10.29	10.35
O & M Expenses	102.51	105.91	109.43	113.06	116.81
Total	296.74	304.39	301.70	299.13	296.69

36. 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
Combined Asset-I & II					
Maintenance Spares	30.25	31.26	32.30	33.37	34.48
O & M expenses	16.81	17.37	17.94	18.54	19.15
Receivables	744.86	724.00	701.53	679.10	656.71



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Total	791.92	772.63	751.77	731.01	710.34
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	106.91	104.30	101.49	98.69	95.90
Asset-III					
Maintenance Spares	15.38	15.89	16.41	16.96	17.52
O & M expenses	8.54	8.83	9.12	9.42	9.73
Receivables	49.46	50.73	50.28	49.86	49.45
Total	73.38	75.45	75.81	76.24	76.70
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	9.91	10.19	10.23	10.29	10.35

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.”

“(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 petitioner has claimed capital expenditure of ₹28140.98lakh for Combined Asset-I and II and ₹1188.19 lakh for Asset-III as on 31.3.2014 including additional capitalization during the tariff period 2009-14. Further, the petitioner has projected additional capital expenditure of ₹106.71 lakh in 2014-15 for Combined Asset- I and II and ₹115.17 lakh for Asset- III in 2014-15 during the tariff period 2014-19.



39. The trued up capital cost of ₹28140.98lakh for Combined Asset-I and II and ₹1188.19 lakh for Asset-III as on 31.3.2014 is considered for the purpose of tariff for tariff period 2014-19.

Additional Capital Expenditure

40. The petitioner has claimed additional capitalization of ₹106.71 lakh in 2014-15 for Combined Asset- I and II and ₹115.17 lakh for Asset- III in 2014-15 during the 2014-19 tariff period.

41. The petitioner has claimed the additional capitalization on account of balance and retention payment after the cut-off date on account of un-discharged liabilities under Clause (2)(iv) of Regulation 14 of the 2014 Tariff Regulations.

42. Clause (2)(iv) of Regulation 14 of the 2014 Tariff Regulations provides as follows:-

“(2) The capital expenditure incurred or projected to be incurred in respect of the new project on the following counts within the original scope of work after the cut-off date may be admitted by the Commission, subject to prudence check:

.....

(iv) Any liability for works executed prior to the cut-off date, after prudence check of the details of such un-discharged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.”

43. However, the above regulation is applicable to new projects and not for existing projects. The admissibility of additional capitalization for existing assets, after cut-off date is covered under Clause (3)(vi) of Regulation 14 of the 2014 Tariff Regulations.



44. Clause (3)(vi) of Regulation 14 of the 2014 Tariff Regulations, provides as follows:-

“(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:

.....

(vi) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;”

45. We, therefore approve the additional capitalization towards work claimed by the petitioner under Clause 3(vi) of Regulation 14 of the 2014 Tariff Regulations.

46. The total capital cost as on 31.3.2019 of the transmission asset for Combined Asset I and II including additional capitalization of ₹106.71 lakh works out to be ₹28247.69 lakh and for Asset-III the capital cost including additional capitalization of ₹115.17 lakh works out to ₹1303.36 lakh.

47. We have considered the petitioner’s submission of additional capitalization for 2014-15 as the same is on account of balance and retention payment made after cut-off date for works within original scope of work and executed within the cut-off date. The total Capital Cost including additional capital expenditure is within the approved apportioned cost of the assets (Approved apportioned cost is ₹ 30208 lakh for Asset I and II and ₹ 1307 lakh for Asset III).

48. Accordingly, the Commission has approved the additional capitalisation of ₹106.71 lakh for Combined Asset- I and II and ₹ 115.17 lakh for Asset-III in 2014-15 as claimed by the petitioner in accordance with Clause (3)(vi) of Regulation 14



of the 2014 Tariff Regulations. The total capital cost including additional capitalisation during the 2014-19 period considered by the Commission is given in table below:-

(₹ in lakh)

Particulars	Capital cost as on 31.3.2014	Additional capitalization					Total additional capitalization	Total capital cost including additional capitalization
		2014-15	2015-16	2016-17	2017-18	2018-19		
Combined Asset-I & II	28140.98	106.71	0.00	0.00	0.00	0.00	106.71	28247.69
Asset-III	1188.19	115.17	0.00	0.00	0.00	0.00	115.17	1303.36

Debt:Equity Ratio

49. Clause 3 of Regulation 19 of the 2014 Tariff Regulations specifies 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.”

50. The admitted debt:equity ratio of the assets for the tariff period ending 31.3.2014 has been considered as opening debt:equity ratio as on 1.4.2014.

51. The details of the debt:equity approved as on 31.3.2014 and considered as on 1.4.2014 for the purpose of tariff for 2014-19 tariff period is as follows:-

(₹ in lakh)

Combined Asset-I & II	Admitted as on 31.3.2014	
Funding	Amount	(%)
Debt	19698.72	70.00
Equity	8442.26	30.00
Total	28140.98	100.00
Asset-III	Admitted as on	



	31.3.2014	
Funding	Amount	(%)
Debt	831.74	70.00
Equity	356.45	30.00
Total	1188.19	100.00

52. For additional capitalisation, the petitioner has proposed normative debt:equity ratio of 70:30 and the same has been considered. The details of the debt:equity including additional capitalization are as follows:-

(₹ in lakh)

Combined Asset-I & II		
Funding	Amount	(%)
Debt	19773.42	70.00
Equity	8474.27	30.00
Total	28247.69	100.00
Asset-III		
Funding	Amount	(%)
Debt	912.36	70.00
Equity	391.00	30.00
Total	1303.36	100.00

Interest on Loan ("IOL")

53. Clause (5) and (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.”

54. The weighted average rate of IOL has been considered on the basis of rate prevailing as on 1.4.2014. The petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during 2014-19 tariff period shall be adjusted at the time of truing up. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up or next revision of tariff. By considering above, the IOL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of weighted average rate of interest are placed at **Annexure-II** and the IOL has been worked out and allowed as follows:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Asset-I & II					
Gross Normative Loan	19698.72	19773.42	19773.42	19773.42	19773.42
Cumulative Repayment upto Previous Year	8124.56	9613.96	11106.17	12598.39	14090.60
Net Loan-Opening	11577.32	10162.62	8670.41	7178.19	5685.98
Addition due to Additional Capitalization	74.70	0.00	0.00	0.00	0.00
Repayment during the year	1489.40	1492.21	1492.21	1492.21	1492.21
Net Loan-Closing	10162.62	8670.41	7178.19	5685.98	4193.76
Average Loan	10869.97	9416.51	7924.30	6432.09	4939.87
Weighted Average Rate of Interest on Loan(%)	9.3149	9.3160	9.3175	9.3195	9.3224
Interest	1012.53	877.25	738.35	599.44	460.52
Asset-III					
Gross Normative Loan	831.74	912.36	912.36	912.36	912.36
Cumulative Repayment upto Previous Year	341.44	407.22	476.04	544.86	613.67
Net Loan-Opening	490.30	505.14	436.32	367.50	298.69
Addition due to Additional Capitalization	80.62	0.00	0.00	0.00	0.00



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Repayment during the year	65.78	68.82	68.82	68.82	68.82
Net Loan-Closing	505.14	436.32	367.50	298.69	229.87
Average Loan	497.72	470.73	401.91	333.09	264.28
Weighted Average Rate of Interest on Loan (%)	9.0908	9.0910	9.0914	9.0919	9.0927
Interest	45.25	42.79	36.54	30.28	24.03

Return on Equity("ROE")

55. 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:

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

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."

56. 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.

57. 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.

58. 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 shown in the table below:-



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Asset-I &II					
Opening Equity	8442.26	8474.27	8474.27	8474.27	8474.27
Addition due to Additional Capitalization	32.01	0.00	0.00	0.00	0.00
Closing Equity	8474.27	8474.27	8474.27	8474.27	8474.27
Average Equity	8458.27	8474.27	8474.27	8474.27	8474.27
Return on Equity Base Rate (%)	15.50	15.50	15.50	15.50	15.50
MAT Rate for the year(%)	20.961	20.961	20.961	20.961	20.961
Rate of Return of Equity(Pre-Tax)	19.610	19.610	19.610	19.610	19.610
Return on Equity(Pre-Tax)	1658.67	1661.80	1661.80	1661.80	1661.80
Asset-III					
Opening Equity	356.45	391.00	391.00	391.00	391.00
Addition due to Additional Capitalization	34.55	0.00	0.00	0.00	0.00
Closing Equity	391.00	391.00	391.00	391.00	391.00
Average Equity	373.73	391.00	391.00	391.00	391.00
Return on Equity Base Rate (%)	15.50	15.50	15.50	15.50	15.50
MAT Rate for the year(%)	20.961	20.961	20.961	20.961	20.961
Rate of Return of Equity(Pre-Tax)	19.610	19.610	19.610	19.610	19.610
Return on Equity(Pre-Tax)	73.29	76.68	76.68	76.68	76.68

Depreciation

59. 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.”

60. The petitioner has computed depreciation considering capital expenditure of ₹28140.98lakhfor Asset-I and II and₹1188.19 lakh for Asset-IIIas on 31.3.2014.

61. We haveconsidered 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)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Asset- I & II					
Opening Gross block	28140.98	28247.69	28247.69	28247.69	28247.69
Additions during the year due to projected additional capitalization	106.71	0.00	0.00	0.00	0.00
Closing Gross block	28247.69	28247.69	28247.69	28247.69	28247.69
Rate of Depreciation(%)	5.283	5.283	5.283	5.283	5.283
Depreciable Value	25374.90	25422.92	25422.92	25422.92	25422.92
Remaining Depreciable Value	17982.53	16541.15	15048.94	13556.72	12064.51
Depreciation	1489.40	1492.21	1492.21	1492.21	1492.21
Asset-III					
Opening Gross block	1188.19	1303.36	1303.36	1303.36	1303.36
Additions during the year due to projected additional capitalization	115.17	0.00	0.00	0.00	0.00
Closing Gross block	1303.36	1303.36	1303.36	1303.36	1303.36
Rate of Depreciation (%)	5.280	5.280	5.280	5.280	5.280
Depreciable Value	1121.20	1173.02	1173.02	1173.02	1173.02
Remaining Depreciable Value	779.75	765.80	696.99	628.17	559.35
Depreciation	65.78	68.82	68.82	68.82	68.82



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

62. The petitioner has computed normative O&M Expenses as per sub clause (a) of clause (3) of Regulation 29 of the 2014 Tariff Regulations. Accordingly, the petitioner’s entitlement to O&M expenses has been worked out as given hereunder:-

		(₹ in lakh)				
Particulars		2014-15	2015-16	2016-17	2017-18	2018-19
Combined Asset- I & II						
Actual No of bays(nos)	400 kV Bays	2	2	2	2	2
Actual line length(km)	400 kV D/C line	114.67	114.67	114.67	114.67	114.67
Norms as per Regulation	400 kV D/C line(₹lakh/km)	0.707	0.731	0.755	0.780	0.806
	400 kV Bays (₹lakh/bay)	60.30	62.30	64.37	66.51	68.71
Total (₹ in lakh)		201.67	208.42	215.32	222.46	229.84
Asset-III						
Actual No of bays(nos)	No of bays	2	2	2	2	2
Norms as per Regulation	220 kV (₹lakh/bay)	42.21	43.61	45.06	46.55	48.10
	400 kV (₹lakh/bay)	60.30	62.30	64.37	66.51	68.71
Total		102.51	105.91	109.43	113.06	116.81

63. The petitioner has submitted that O&M Expense norms for the tariff period 2014-19 have been arrived on the basis of normalized actual O&M Expenses during the period 2008-13. The petitioner has further submitted that the wage revision of the employees of the petitioner Company is due during 2014-19 and actual impact of wage hike, which will be effective at a future date, has not been factored in fixation of the normative O&M rate specified for the tariff period 2014-19. The petitioner has prayed to be allowed to approach the Commission for



suitable revision in the norms of O&M Expenses for claiming the impact of such increase.

64. The O&M Expenses have been worked out as per the norms of O&M Expenses specified in the 2014 Tariff Regulations. As regards impact of wage revision, we would like to clarify that any application filed by the petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations.

65. The details of O&M Expenses allowed are given hereunder:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Asset -I & II	201.67	208.42	215.32	222.46	229.84
Asset III	102.51	105.91	109.43	113.06	116.81

Interest on Working Capital (“IWC”)

66. 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;”

67. 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



1.4.2014plus 350 basis points. The rate of interest on working capital considered is 13.50%.

68. 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 by the Commission is shown in the table below:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Asset I & II					
Maintenance Spares	30.25	31.26	32.30	33.37	34.48
O & M expenses	16.81	17.37	17.94	18.54	19.15
Receivables	744.86	724.00	701.53	679.10	656.71
Total	791.92	772.63	751.77	731.01	710.34
Rate of Interest(%)	13.50	13.50	13.50	13.50	13.50
Interest	106.91	104.31	101.49	98.69	95.90
Asset-III					
Maintenance Spares	15.38	15.89	16.41	16.96	17.52
O & M expenses	8.54	8.83	9.12	9.42	9.73
Receivables	49.45	50.73	50.28	49.85	49.45
Total	73.37	75.44	75.82	76.24	76.70
Rate of Interest(%)	13.50	13.50	13.50	13.50	13.50
Interest	9.91	10.18	10.24	10.29	10.35

Annual Transmission Charges

69. The detailed computation of the various components of the annual fixed charges for the transmission asset for the tariff period 2014-19is summarised below:-



(₹ in lakh)

COMBINED ASSET-I &II	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block					
Opening Gross block	28140.98	28247.69	28247.69	28247.69	28247.69
Addition during 2014-19 due to Projected Additional Capitalization	106.71	0.00	0.00	0.00	0.00
Closing Gross block	28247.69	28247.69	28247.69	28247.69	28247.69
Average Gross block	28194.34	28247.69	28247.69	28247.69	28247.69
Depreciation					
Rate of Depreciation(%)	5.283	5.283	5.283	5.283	5.283
Depreciable Value	25374.90	25422.92	25422.92	25422.92	25422.92
Elapsed Life (Beginning of the year)	5	6	7	8	9
Weighted Balance Useful life of the assets	30	29	28	27	26
Remaining Depreciable Value	17982.53	16541.15	15048.94	13556.72	12064.51
Depreciation	1489.40	1492.21	1492.21	1492.21	1492.21
Cumulative Depreciation	8881.77	10373.98	11866.20	13358.41	14850.63
Interest on Loan					
Gross Normative Loan	19698.72	19773.42	19773.42	19773.42	19773.42
Cumulative Repayment upto Previous Year	8124.56	9613.96	11106.17	12598.39	14090.60
Net Loan-Opening	11577.32	10162.62	8670.41	7178.19	5685.98
Addition due to Additional Capitalization	74.70	0.00	0.00	0.00	0.00
Repayment during the year	1489.40	1492.21	1492.21	1492.21	1492.21
Net Loan-Closing	10162.62	8670.41	7178.19	5685.98	4193.76
Average Loan	10869.97	9416.51	7924.30	6432.09	4939.87
Weighted Average Rate of Interest on Loan (%)	9.3149	9.3160	9.3175	9.3195	9.3224
Interest	1012.53	877.25	738.35	599.44	460.52
Return on Equity					
Opening Equity	8442.26	8474.27	8474.27	8474.27	8474.27
Additions	32.01	0.00	0.00	0.00	0.00
Closing Equity	8474.27	8474.27	8474.27	8474.27	8474.27
Average Equity	8458.27	8474.27	8474.27	8474.27	8474.27
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
MAT Rate for respective year (%)	20.961	20.961	20.961	20.961	20.961
Return on Equity (Pre Tax) (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	1658.67	1661.80	1661.80	1661.80	1661.80
Interest on Working Capital					



COMBINED ASSET-I &II	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	30.25	31.26	32.30	33.37	34.48
O & M expenses	16.81	17.37	17.94	18.54	19.15
Receivables	744.86	724.00	701.53	679.10	656.71
Total	791.92	772.63	751.77	731.01	710.34
Interest	106.91	104.31	101.49	98.69	95.90
Annual Transmission Charges					
Depreciation	1489.40	1492.21	1492.21	1492.21	1492.21
Interest on Loan	1012.53	877.25	738.35	599.44	460.52
Return on Equity	1658.67	1661.80	1661.80	1661.80	1661.80
Interest on Working Capital	106.91	104.31	101.49	98.69	95.90
O & M Expenses	201.67	208.42	215.32	222.46	229.84
Total	4469.17	4343.99	4209.17	4074.60	3940.27

	(₹ in lakh)				
ASSET-III	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block					
Opening Gross block	1188.19	1303.36	1303.36	1303.36	1303.36
Addition during 2014-19 due to Projected Additional Capitalization	115.17	0.00	0.00	0.00	0.00
Closing Gross block	1303.36	1303.36	1303.36	1303.36	1303.36
Average Gross block	1245.78	1303.36	1303.36	1303.36	1303.36
Depreciation					
Rate of Depreciation(%)	5.280	5.280	5.280	5.280	5.280
Depreciable Value	1121.20	1173.02	1173.02	1173.02	1173.02
Elapsed Life (Beginning of the year)	5	6	7	8	9
Weighted Balance Useful life of the assets	20	19	18	17	16
Remaining Depreciable Value	779.75	765.80	696.99	628.17	559.35
Depreciation	65.78	68.82	68.82	68.82	68.82
Cumulative Depreciation/ Advance against Depreciation	407.22	476.04	544.86	613.67	682.49
Interest on Loan					
Gross Normative Loan	831.74	912.36	912.36	912.36	912.36
Cumulative Repayment upto Previous Year	341.44	407.22	476.04	544.86	613.67
Net Loan-Opening	490.30	505.14	436.32	367.50	298.69
Addition due to Additional Capitalization	80.62	0.00	0.00	0.00	0.00



ASSET-III	2014-15	2015-16	2016-17	2017-18	2018-19
Repayment during the year	65.78	68.82	68.82	68.82	68.82
Net Loan-Closing	505.14	436.32	367.50	298.69	229.87
Average Loan	497.72	470.73	401.91	333.09	264.28
Weighted Average Rate of Interest on Loan (%)	9.0908	9.0910	9.0914	9.0919	9.0927
Interest	45.25	42.79	36.54	30.28	24.03
Return on Equity					
Opening Equity	356.45	391.00	391.00	391.00	391.00
Additions	34.55	0.00	0.00	0.00	0.00
Closing Equity	391.00	391.00	391.00	391.00	391.00
Average Equity	373.73	391.00	391.00	391.00	391.00
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
MAT Rate for respective year (%)	20.961	20.961	20.961	20.961	20.961
Return on Equity (Pre Tax) (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	73.29	76.68	76.68	76.68	76.68
Interest on Working Capital					
Maintenance Spares	15.38	15.89	16.41	16.96	17.52
O & M expenses	8.54	8.83	9.12	9.42	9.73
Receivables	49.45	50.73	50.28	49.85	49.45
Total	73.37	75.44	75.82	76.24	76.70
Interest	9.91	10.18	10.24	10.29	10.35
Annual Transmission Charges					
Depreciation	65.78	68.82	68.82	68.82	68.82
Interest on Loan	45.25	42.79	36.54	30.28	24.03
Return on Equity	73.29	76.68	76.68	76.68	76.68
Interest on Working Capital	9.91	10.18	10.24	10.29	10.35
O & M Expenses	102.51	105.91	109.43	113.06	116.81
Total	296.73	304.38	301.70	299.13	296.69

Filing Fee and Publication Expenses

70. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 52 of the 2014 Tariff Regulations. The petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the



beneficiaries on pro-rata basis in accordance with clause (1) of Regulation 52 of the 2014 Tariff Regulations.

Licence Fee and RLDC Fees and Charges

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

Service Tax

72. 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

73. 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

74. 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.

75. This Order disposes of Petition No. 556/TT/2014.

Sd/-

(Dr. M. K. Iyer)
Member

Sd/-

(A.S. Bakshi)
Member



DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO

COMBINED ASSET- I & II

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2009	Additions during the tariff period	Total
BOND XVII-DOCO XVII	7.39	10.00	0.00	10.00
BOND XIX-DOCO XIX	9.25	1400	0.00	1400.00
BOND XX-DOCO XX	8.93	4581.00	0.00	4581.00
BOND XXIII-DOCO XXIII	9.25	3391.00	0.00	3391.00
BOND XXIV-DOCO XXIV	9.95	191.00	0.00	191.00
BOND XXV-DOCO XXV-	10.10	2786.00	0.00	2786.00
BOND XXVI-DOCO XXIV-	9.30	3374.00	0.00	3374.00
BOND XXVIII-DOCO XXVII	9.33	16.11	0.00	16.11
BOND XXX-ADD CAP FOR 2009-2010 ADD CAP XXX-	8.80	0.00	398.00	398.00
BOND XXXI-ADD CAP FOR 2009-2010 XXXI Add Cap 9-10-	8.90	0.00	298.33	298.33
BOND XXXI-ADD CAP FOR 2010-11 XXXI Add Cap 10-11-	8.90	0	83.40	83.40
BOND XXXI-ADD CAP FOR 2011-12 XXXI Add cap 11-12-	8.90	0	9.14	9.14
BOND XXXI-ADD CAP FOR 2013-14 add cap 13-14	8.90	0.00	9.16	9.16
Total		15749.11	798.03	16547.14

ASSET-III

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2009	Additions during the tariff period	Total
BOND XIX-DOCO	9.25	250.00	0.00	250.00
BOND XX-DOCO	8.93	310	0.00	310.00
BOND XXIII-DOCO	9.25	9.00	0.00	9.00
BOND XXVIII-DOCO DRAWAL ON 15-DEC-2008	9.33	55.00	0.00	55.00



Particulars	Interest Rate (%)	Loan deployed as on 1.4.2009	Additions during the tariff period	Total
BOND XXXI-ADD CAP FOR 2009-2010 XXXI Add cap 9-10-	8.90	0.00	6.37	6.37
BOND XXXI-ADD CAP FOR 2010-2011 XXXI Add cap 10-11-	8.90	0.00	5.09	5.09
BOND XXXI-ADD CAP FOR 2011-2012 XXXI Add cap 11-12-	8.90	0.00	0.00	0.00
BOND XXXI-ADD CAP FOR 2012-13 XXXI Add cap 12-13-	8.90	0.00	16.88	16.88
BOND XXXI-ADD CAP FOR 2013-14 XXXI Add cap 13-14-	8.90	0.00	1.87	1.87
Total		624.00	30.21	654.21

WEIGHTED AVERAGE RATE OF INTEREST ON LOAN DURING 2009-14 TARIFF

PERIOD

COMBINED ASSET- I& II

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Opening Loan	19113.00	19809.33	19892.73	19901.87	19901.87
Cumulative Repayments of loans upto previous year	0.00	1.00	798.92	2110.18	3703.11
Net Loans Opening	19113.00	19808.33	19093.81	17791.69	16198.76
Add: Drawals during the year	696.33	83.40	9.14	0.00	9.16
Less: Repayment(s) of loans during the year	1.00	797.92	1311.26	1592.93	1659.43
Net Closing Loans	19808.33	19093.81	17791.69	16198.76	14548.49
Average Net Loan	19460.67	19451.07	18442.75	16995.23	15373.63
Rate of Interest on Loan (%)	9.3176	9.3125	9.3155	9.3145	9.3142
Interest on Loan	1813.27	1811.39	1718.03	1583.02	1431.93

ASSET-III

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Gross Opening Loan	624.00	630.37	635.46	636.23	652.34



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Cumulative Repayments of loans upto previous year	0.00	0.00	47.41	94.82	146.81
Net Loans Opening	624.00	630.37	588.05	541.41	505.53
Add: Drawals during the year	6.37	5.09	0.77	16.11	1.87
Less: Repayment(s) of loans during the year	0.00	47.41	47.41	51.99	54.50
Net Closing Loans	630.37	588.05	541.41	505.53	452.90
Average Net Loan	627.19	609.21	564.73	523.47	479.22
Rate of Interest on Loan(%)	9.0971	9.0961	9.0907	9.0945	9.0909
Interest on Loan	57.06	55.41	51.34	47.61	43.57



DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO

COMBINED ASSET- I& II

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period	Total
BOND XVII-DOCO XVII	7.39	10.00	0.00	10.00
BOND XIX-DOCO XIX	9.25	1400	0.00	1400.00
BOND XX-DOCO XX	8.93	4581.00	0.00	4581.00
BOND XXIII-DOCO XXIII	9.25	3391.00	0.00	3391.00
BOND XXIV-DOCO XXIV	9.95	191.00	0.00	191.00
BOND XXV-DOCO XXV-	10.10	2786.00	0.00	2786.00
BOND XXVI-DOCO XXIV-	9.30	3374.00	0.00	3374.00
BOND XXVIII-DOCO XXVII	9.33	3380.00	0.00	3380.00
BOND XXX-ADD CAP FOR 2009-2010 ADD CAP XXX-	8.80	398.00	0.00	398.00
BOND XXXI-ADD CAP FOR 2009-2010 XXXI Add Cap 9-10-	8.90	298.33	0.00	298.33
BOND XXXI-ADD CAP FOR 2010-11 XXXI Add Cap 10-11-	8.90	83.4	0.00	83.40
BOND XXXI-ADD CAP FOR 2011-12 XXXI Add cap 11-12-	8.90	9.14	0.00	9.14
BOND XXXI-ADD CAP FOR 2013-14 add cap 13-14	8.90	9.16	0.00	9.16
Total		19911.03	0.00	19911.03

ASSET-III

(₹ in lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period	Total
BOND XIX-DOCO	9.25	250.00	0.00	250.00
BOND XX-DOCO	8.93	310	0.00	310.00
BOND XXIII-DOCO	9.25	9.00	0.00	9.00
BOND XXVIII-DOCO DRAWAL ON 15-DEC-2008	9.33	55.00	0.00	55.00



Particulars	Interest Rate (%)	Loan deployed as on 1.4.2014	Additions during the tariff period	Total
BOND XXXI-ADD CAP FOR 2009-2010 XXXI Add cap 9-10-	8.90	6.37	0.00	6.37
BOND XXXI-ADD CAP FOR 2010-2011 XXXI Add cap 10-11-	8.90	5.09	0.00	5.09
BOND XXXI-ADD CAP FOR 2011-2012 XXXI Add cap 11-12-	8.90	0.77	0.00	0.77
BOND XXXI-ADD CAP FOR 2012-13 XXXI Add cap 12-13-	8.90	16.11	0.00	16.11
BOND XXXI-ADD CAP FOR 2013-14 XXXI Add cap 13-14-	8.90	1.87	0.00	1.87
Total		654.21	0.00	654.21

WEIGHTED AVERAGE RATE OF INTEREST ON LOAN DURING 2014-19 TARIFF

PERIOD

COMBINED ASSET- I & II

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	19911.03	19911.03	19911.03	19911.03	19911.03
Cumulative Repayments of loans upto previous year	5362.50	7021.93	8681.36	10340.79	12000.22
Net Loans Opening	14548.53	12889.10	11229.67	9570.24	7910.81
Add: Drawals during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loans during the year	1659.43	1659.43	1659.43	1659.43	1659.43
Net Closing Loans	12889.10	11229.67	9570.24	7910.81	6251.38
Average Net Loan	13718.82	12059.39	10399.96	8740.53	7081.10
Rate of Interest on Loan(%)	9.3149	9.3160	9.3175	9.3195	9.3224
Interest on Loan	1277.90	1123.46	969.01	814.57	660.13



ASSET-III**(₹ in lakh)**

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	654.21	654.21	654.21	654.21	654.21
Cumulative Repayments of loans upto previous year	201.31	255.81	310.31	364.81	419.31
Net Loans Opening	452.90	398.40	343.90	289.40	234.90
Add: Drawals during the year	0.00	0.00	0.00	0.00	0.00
Less: Repayment(s) of loans during the year	54.50	54.50	54.50	54.50	54.50
Net Closing Loans	398.40	343.90	289.40	234.90	180.40
Average Net Loan	425.65	371.15	316.65	262.15	207.65
Rate of Interest on Loan(%)	9.0908	9.0910	9.0914	9.0919	9.0927
Interest on Loan	38.69	33.74	28.79	23.83	18.88

