

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

PETITION NO. 106/TT/2014

Coram:

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

**Date of Hearing: 16.11.2015
Date of Order : 21.12.2015**

In the matter of:

Determination of transmission tariff for (i) Asset 1- 400 kV D/C (Quad) Ranchi (New) – Ranchi (Old) – I transmission line and associated 400 kV Line bays at Ranchi (New) Sub-station and Ranchi (old) Sub-station (ii) Asset 2- 765/415 kV, 3 x 500 MVA ICT II at Ranchi along with associated bays at 765 kV Ranchi (New) sub-station under the common scheme for 765 KV Pooling Stations & n/w for NR, import by NR from ER and NER/SR/WR via ER and common scheme for network for WR and import by WR from ER and from NER/SR/WR via ER in the Western Region for the period from date of commercial operation to 31.3.2014 under Regulation-86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999, and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2009.

And in the matter of:

Power Grid Corporation of India Ltd,
SAUDAMINI, Plot No.-2, Sector-29,
Gurgaon-122001 (Haryana)

.....Petitioner

Versus

1. Madhya Pradesh Power Management Company Ltd.,
Shakti Bhawan, Rampur
Jabalpur - 482 008
2. Maharashtra State Electricity Distribution Company Limited,
Prakashgad, 4th floor
Andehri (East),
Mumbai - 400 052



3. Gujarat Urja Vikas Nigam Ltd.,
Sardar Patel Vidyut Bhawan,
Race Course Road,
Vadodara - 390 007
 4. Electricity Department, Government of Goa,
Vidyut Bhawan, Panaji,
Near Mandvi Hotel,
Goa - 403 001
 5. Electricity Department,
Administration of Daman and Diu,
Daman - 396 210
 6. Electricity Department,
Administration of Dadra Nagar Haveli,
U.T., Silvassa - 396 230
 7. Chhattisgarh State Electricity Board,
P.O. Sunder Nagar, Dangania, Raipur
Chhattisgarh - 492 013
 8. Madhya Pradesh Audyogik Kendra Vikas Nigam (Indore) Ltd.,
3/54, Press Complex, Agra - Bombay Road
Indore - 452 008
-Respondent(s)**

The following were present:

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

For Respondents: None



ORDER

The petition has been preferred by Power Grid Corporation of India Limited (hereinafter referred to as “the petitioner”), a transmission licensee, for determination of tariff under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as “the 2009 Tariff Regulations”) in respect of (i) Asset 1- 400 kV D/C (Quad) Ranchi (New) – Ranchi (Old) – Ckt-1 transmission line and associated 400 kV Line bays at Ranchi (New) sub-station and Ranchi (old) Sub-station (ii) Asset 2- 765/415 kV, 3 x 500 MVA ICT II at Ranchi along with associated bays at 765 kV Ranchi (New) Sub-station under the common scheme for 765 KV Pooling Stations & network for NR, import by NR from ER and NER/SR/WR via ER and common scheme for network for WR and import by WR from ER and from NER/SR/WR via ER in the Eastern Region for the period from date of commercial operation to 31.3.2014.

2. The respondents are distribution licensees, who are procuring transmission service from the petitioner, mainly beneficiaries of Western Region.

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

- a) The comprehensive transmission schemes for import of power from Eastern Region to Northern, Western and Southern Regions were evolved as a consequence of discussions at various Standing Committee and Regional Power Committee Meetings of the concerned regions. The need of the transmission system was agreed to in the 22nd meeting of Standing Committee on Power System Planning of Northern Region held on 12.3.2007. The implementation of the transmission



system was entrusted to the petitioner. The Investment Approval (IA) and expenditure sanction for the transmission system was accorded by the Board of Directors of the petitioner vide Memorandum No C/CP/DVC and Maithon RB Project dated 29.8.2008 at an estimated cost of ₹707533 lakh including an IDC of ₹71360 lakh (based on 1st Qtr 2008 price level). The transmission system was scheduled to be commissioned within 48 months from the date of IA in a progressive manner. Thus, the scheduled date of commissioning of the transmission system was 1.9.2012.

- b) Transmission tariff in respect of the assets covered in the instant petition were initially claimed along with other transmission assets covered under the instant transmission scheme, vide order dated 28.2.14 in Petition No. 101/TT/2012 based on anticipated date of commercial operation.
- c) As the commissioning of these two assets was getting delayed, the Commission vide its order dated 28.2.2014 in the above said petition determined the transmission tariff of the remaining assets and granted liberty to the petitioner to file separate petition for tariff determination of these two assets. The present petition has been filed in pursuance of the above directions.
- d) Subsequently, the petitioner filed the revised Petition No.106/TT/2014 on 17.5.2014 for tariff determination of the transmission assets for 2009-14 period.



- e) The Commission approved the provisional transmission tariff in respect of the transmission assets for 2013-14 vide Order dated 19.6.2014 in Petition no. 106/TT/2014.
- f) Both the transmission assets were put into commercial operation with effect from 1.2.2014.
- g) The petitioner has served the petition to the respondents and notice of this application has been published in the newspaper in accordance with Section 64 of the Electricity Act 2003. No comments/objections have been received from the public in response to the notice in newspaper. No submissions have been made by the respondents. The hearing in this matter was held on 16.11.2015.
- h) During the hearing, the representative of the petitioner submitted that this petition may be considered as a truing up petition as the actual capital cost and interest on loan for 2009-14 tariff period has been submitted.
- i) Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD

4. The transmission charges claimed by the petitioner based on the actual date of commercial operation are as below:-



(₹ in lakh)

Particulars	2013-14	
	Asset 1	Asset 2
Depreciation	153.45	57.04
Interest on Loan	186.21	74.02
Return on Equity	154.81	59.13
Interest on Working Capital	12.77	5.69
O & M Expenses	30.47	26.18
Total	537.71	222.06

5. The Interest on Working Capital has been claimed by the petitioner as below:-

(₹ in lakh)

Particulars	2013-14	
	Asset 1	Asset 2
Operation and Maintenance	15.23	13.09
Maintenance Spares	27.42	23.57
Receivables	400.22	229.43
Total working capital	442.87	266.08
Rate of Interest (%)	13.20	13.20
Interest of working capital	58.458	35.12
Pro rate Interest on working capital	9.74	5.85

6. Annual Fixed charges for 2009-14 tariff period is being determined in the succeeding paragraphs.

Capital Cost

7. Regulation 7 of the 2009 Tariff Regulations provides that:-

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

(a) The expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan – (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the fund deployed, - up to the date of commercial operation of the project, as admitted by the Commission, after prudence check.

- (b) capitalised initial spares subject to the ceiling rates specified in regulation 8; and
(c) additional capital expenditure determined under regulation 9:
Provided that the assets forming part of the project, but not in use shall be taken out of the capital cost.

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

8. The details of apportioned approved cost, actual expenditure incurred as on date of commercial operation and additional capital expenditure incurred/projected to be incurred for the period from COD to 31.3.2014 for the transmission asset as submitted by the petitioner are as follows:-

(₹ in lakh)

Name of the Element	Cost as per FR (apportioned)	Estimated cost on DOCO	Estimated additional capitalization DOCO to 31.3.2014	Total estimated cost as on 31.3.2014	Total estimated cost as on 31.3.2016
Asset 1	12426.67	17659.38	105.87	17765.25	19674.83
Asset 2	14188.7	6690.09	149.04	6839.13	15499.12
Total	26615.3	24349.47	254.91	24604.38	35173.95

9. The petitioner, vide Auditor`s Certificate dated 1.5.2014, has submitted the capital cost as on the date of commercial operation as ₹17659.38 lakh and ₹6690.09 lakh for Asset 1 and Asset 2 respectively, with additional capital expenditure for ₹105.87 lakh in 2013-14, ₹1336.70 lakh in 2014-15, ₹572.88 lakh in 2015-16 for Asset 1 and ₹149.04 lakh in 2013-14, ₹5196 lakh in 2014-15, ₹3463.99 lakh in 2015-16 for Asset 2 respectively. Since the petition is for 2009-14 tariff period, the additional capital expenditure and capital cost till 31.3.2014 is considered in the instant petition.



10. The total capital cost of ₹19674.83 lakh and ₹15499.12 lakh as on 31.3.2016, includes the cost of initial spares amounting to ₹132.17 lakh and ₹343.80 lakh in Asset 1 and Asset 2 respectively. The petitioner, vide affidavit dated 16.11.2015, has submitted that the initial spares procured upto COD is of ₹86.95 lakh for Asset I and ₹37.70 lakh for Asset II. The balance initial spares will be procured during 2014-15 and 2015-16 as estimated by the petitioner. The amount claimed towards initial spares is within the prescribed ceiling limit of 2009 Tariff Regulations and therefore allowed for capitalization.

Cost over-run

10. The estimated completion cost in case of Asset 1 is ₹17765.25 lakh up to 31.3.2014, and it exceeds the apportioned approved cost of ₹12426.70 lakh. In case of Asset 2, estimated completion cost of ₹6839.13 lakh up to 31.3.2014 is within the apportioned approved cost of ₹14188.70 lakh.

11. The petitioner has submitted the reasons for the cost over-run in the petition and vide affidavit dated 14.12.2014. The reasons submitted are identical and are as follows:-

- (a) Increase in the actual compensation offered by the District Administration and the Forest Department and higher cost of land compensation awarded by District Administration.
- (b) The line length envisaged in the FR was 55 km and it was based on the preliminary information of the Ranchi city around 2007. There has been a rapid and unprecedented growth of Ranchi after creation of Jharkhand state. Accordingly, 70 km of line length was considered in



the NIT. However, on actual execution, the final route length was 77 km. Thus, there was an increase of 22 km from the line length envisaged in the FR. Further, the petitioner submitted that there was increase in route length to minimize the involvement of forest area and also to avoid infringement of the route of the line with that of the proposed ring road around Ranchi which was not envisaged at FR stage.

- (c) The cost over-run in some of the items was also due to higher award cost received in competitive bidding compared to initial estimates. For procurement, open competitive bidding route is followed and by providing equal opportunity to all eligible firms, lowest possible market prices for required product/services is obtained and contracts are awarded on the basis of lowest evaluated eligible bidder. The best competitive bid prices against tenders may happen to be lower or higher than the cost estimate depending upon the prevailing market conditions.

12. We have considered the submissions of the petitioner. The capital cost of Asset 2 is within the apportioned approved cost and there is cost over-run in case of Asset 1. The petitioner has attributed the cost over-run in case of Asset 1 to increase in compensation, change in route and line length and higher award costs due to competitive bidding. The justification given by the petitioner for cost over-run in case of Asset 1 is not sufficient to arrive at reasoned decision. Accordingly, the capital cost in respect of Asset 1 is restricted to ₹12426.70 lakh. However,



liberty is given to the petitioner to submit the detailed justification for cost over-run in case of Asset 1 for consideration of the Commission at the time of truing.

Time Over-run

13. As per the investment approval, the transmission assets were scheduled to be commissioned within 48 months of the sanction i.e. on 1.9.2012. However, these assets were commissioned on 1.2.2014. Thus, there is a time over-run of 17 months in respect of both the assets.

14. As regards Asset 1, it is seen from the documents submitted by the petitioner that the period of 17 months delay from the scheduled date of commercial operation (1.9.2012) to the actual date of commercial operation (1.2.2014) concurrently includes the following over-runs:-

(a) Delay in granting forest clearance by the State and Central Authorities:

The investment approval for the scheme was granted on 29.8.2008. Forest land involved in the instant line assets is 13.375 Ha in Ranchi-Ranchi (New) Line-I. The petitioner submitted the proposal for diversion of forest land for construction of transmission lines on 14.11.2009 to the Nodal officer, Jharkhand State forest department, Ranchi. The final clearance was issued on 13.11.2013 and tree felling order was received on 9.12.2013

(b) Delay on account of stopping of work under the directions of the District Administration due to alleged infringement of the lines with the proposed ring road around Ranchi. First meeting regarding infringement with National highway was held on 25.1.2012. Consequent to a series of letters, meetings and communication as evidenced by the letters



submitted by the petitioner, the matter was finally resolved after route realignment as suggested by National Highway Authorities of India on 10.10.2013.

15. As regards Asset 2, the petitioner has submitted the following reasons for the delay of 17 months:-

(a) Land Acquisition: Inadvertently, a small piece of land in the middle of the sub-station land was not included by State Government Authorities. While the rest of the land was handed over on 29.4.2011, this small pieced was handed over only on 12.12.2012. It took almost 36 months for acquiring physical possession of land after the depositing the payment to the State Government authorities.

(b) As the area is infested by Maoist groups, there were several disturbances such as bundh, de-mobilisation and re-mobilisation of construction gangs, etc. While the delay attributable to this factor cannot be quantified, the same caused an adverse impact on the progress of work. The petitioner has mentioned that the naxal attacks started from 15-1-2011 and immediate correspondences was done by the petitioner and the police was deployed on 14-9-2012. The petitioner has also furnished documentary evidence in support of the disturbance and the action taken by it to counter the same.

16. We have considered the submissions of the petitioner and our views are given below.

Asset 1:



(a) As regards, forest clearance, it is noted that generally, walk over survey takes around 30 days of time (depending on the area to be covered). Post survey file preparation takes another 10-15 days of time. One can simultaneously obtain Gram Panchayat NOC, Collector certificates, DFO certificates etc. For area less than 40 Hectares, forest land diversion Stage I process takes around 6 months and 3 months for Stage II clearance. Similarly, for area larger than 40 Hectares, Stage I clearance takes around 12-14 months and then another 3 months for Stage II clearance. In the instant case, the investment approval for the scheme was granted on 29.8.2008. Forest land involved in the instant line assets is 13.375 Ha in Ranchi-Ranchi (New) Line-I and 12.461 Ha in Ranchi-Ranchi (New) Line-II. The petitioner submitted the proposal for diversion of forest land for construction of transmission lines in 14.11.2009 to the Nodal officer, Jharkhand State forest department, Ranchi. The petitioner has not provided any justification for the delay during the period 29.8.2008 to 14.11.2009 i.e. from investment approval date to the submission of first proposal. Considering that it takes 3 months to complete the walk over survey and related initiation activities, the proposal should have been submitted by 1.12.2008. However, the petitioner submitted the proposal for forest clearance on 1.11.2009, petitioner took seven months to submit the proposal. We are of the view that the delay in obtaining the forest clearance is attributable to the petitioner and hence the same cannot be condoned.



- (b) As regards route realignment, it is observed that the construction of transmission lines had to be stopped under the instructions of the District Administration. It is seen that the first meeting regarding infringement with National highway was held on 25.1.2012. Consequent to a series of letters, meetings and communication as evidenced by the letters submitted by the petitioner, the issue was resolved on 10.10.2013. We are convinced that the petitioner had pursued the matter diligently and the delay on account of route realignment is attributable to reasons beyond the control of the petitioner. Thus, the time over-run during 25.1.2012 to 10.10.2013 is condoned. Needless to add that the delay till 10.10.2013 in obtaining Forest Clearance is subsumed in the above period.
- (c) It is seen from the details furnished by the petitioner that action for Forest clearance as well as Route Realignment were initiated in November, 2009 and January, 2012 respectively. Both these dates are well before the scheduled date of commercial operation i.e. 1.9.2012. Ironically, these activities concluded on 9.12.2013 and 10.10.2013, respectively. Thus, the time over-run from 1.9.2012 to 10.10.2013 is concurrently attributable to both these activities.
- (d) Time over-run beyond 10.10.2013 is attributable to delay in obtaining Forest Clearance till 9.12.2013, and final preparations, synchronization and clearances for trial operation from 9.12.2013 to 1.2.2014.



(e) Based on the above, out of the total time over-run of 17 months in respect of Asset 1, we condone the delay up to 10.10.2013 on account of route realignment requirement which could not be anticipated by the petitioner. We are also aware of the fact that after the issue of route realignment was resolved, the petitioner required some time for implementation, synchronization and clearances for trial operation, etc before the actual commissioning of the assets. Accordingly, we condone the delay of fifteen months upto 30.11.2013. The time over-run from 1.12.2013 to 1.2.2014 is condoned and proportionate IDC and IEDC for the period two months is disallowed.

17. As regards Asset 2, the documents submitted by the petitioner depict that the possession of major part of land was acquired on 29.4.2011. The remaining parcel admeasuring 1.92 acres was handed over on 12.2.2012 i.e. after nearly 19 months. We hold that the delay in this regard is beyond the control of the petitioner. The time over-run of 17 months in the commissioning of Asset 2 being less than the 19 months delay caused by the inadvertence of the State Revenue authorities, we condone the same.

18. In view of the time over-run in respect of Asset 1, proportionate IDC and IEDC are disallowed from the capital cost as under:-

(₹ in lakh)		
Details of IDC & IEDC (As per Auditor Certificate)		
Period	IDC	IEDC
Up to 1.9.2012	2563.52	653.54

From 1.9.2012 to 1.2.2014	712.93	208.07
Total	2563.52	653.54

(₹ in lakh)

Proportionate IDC & IEDC disallowed for 2 months			
Period	IDC	IEDC	Total
Up to 1.9.2012	-	-	-
From 1.9.2012 to 1.2.2014	83.87	24.48	108.35
Total disallowed	83.87	24.48	108.35

19. Consequent to the above , the capital cost as on DOCO works out as under:-

(₹ in lakh)

Asset	Capital cost as on DOCO	Deduction on account of IDC and IEDC	Capital cost after deduction
Asset 1	17659.38	108.35	17551.03
Asset 2	6690.10	-	6690.10

20. As mentioned hereinabove, the capital cost as on COD is higher than the apportioned approved cost in respect of Asset 1. Accordingly, the capital cost in respect of Asset 1 is restricted to ₹12426.70 lakh. Capital cost of Asset 2 as on date of commercial operation amounting to ₹6690.10 lakh is within the apportioned approve cost and therefore the same is allowed as such.

21. Tariff is being determined in this order based on the above capital cost as on date of commercial operation.

Additional Capital Expenditure



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

“Additional Capitalisation: (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;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital Spares within the original scope of work, subject to the provisions of Regulation 8;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (v) Change in Law.”

23. Further, clause (11) of Regulation 3 of the 2009 Tariff Regulations defines ‘cut-off’ date as under:-

“cut-off date” means 31st March of the year closing after 2 years of the year of commercial operation of the project, and in case the project is declared under commercial operation in the last quarter of the year, the cut-off date shall be 31st March of the year closing after 3 years of the year of commercial operation”.

24. As per the above definition, the cut-off date in respect of the subject transmission asset is 31.3.2016.

25. The petitioner has submitted that there has been as additional capital expenditure of ₹105.87 lakh from COD to 31.3.2014 for Asset 1, however, since the capital cost of the Asset 1 as on COD has been restricted to the apportioned cost as per FR, the additional capital expenditure for 2009-14 tariff period has not been considered in respect of Asset 1.

26. The additional capital expenditure of ₹149.04 lakh for Asset 2 has been claimed during 2013-14 on account of balance/retention payments. Since it is

within the original scope of work and the total capital expenditure during 2009-14 is within the limits of the total approved capital expenditure, the same is allowed for the purpose of revision of tariff in accordance with Regulation 6 of the 2009 Tariff Regulations.

27. The debt: equity ratio of 70:30 for additional capital expenditure as claimed by the petitioner is in accordance with the Regulation 12 (3) of the 2009 Tariff Regulations and hence, same has been considered towards financing of the additional capital expenditure.

Debt: Equity

28. Regulation 12 of the 2009 Tariff Regulations provides as under:-

“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:

(2) 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.

(3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”

29. The debt:equity ratio of 70:30 has been considered as on the date of commercial operation for determination of tariff in accordance with the Regulation 12 of the 2009 Tariff Regulations.



30. The details of the debt:equity considered for the purpose of tariff for 2009-14 tariff period is as follows:-

(₹ in lakh)

Funding	Capital Cost as on 31.3.2009	(%)	Additional Capital Expenditure during 2009-14	(%)	Total Cost as on 31.3.2014
Asset 1					
Debt	8698.67	70.00	-	70.00	8698.67
Equity	3728.00	30.00	-	30.00	3728.00
Total	12426.67	100.00		100.00	12426.67
Asset 2					
Debt	4683.07	70.00	104.33	70.00	4787.40
Equity	2007.03	30.00	44.71	30.00	2051.74
Total	6690.10	100.00	149.04	100.00	6839.14

Return on Equity (ROE)

31. 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.”

32. Regulation 15 of the 2009 Tariff Regulations provides for grossing up of ROE with the actual tax rate for the purpose of ROE. The petitioner has submitted the rate of Return on Equity applicable for the year 2013-14 as 17.481%, however, the ROE has been worked out by considering actual MAT rate for 2013-14 in accordance with Regulation 15 of the 2009 Tariff Regulations as follows:-

(₹ in lakh)

Return on Equity	2013-14 (Pro rata)	
	Asset 1	Asset 2
Opening Equity	3728.00	2007.03
Additions	-	44.71
Closing Equity	3728.00	2051.74
Average Equity	3728.00	2029.39
Return on Equity (Base Rate) (%)	15.500	15.500
MAT Rate for respective year (%)	20.960	20.960
Rate of Return on Equity (%)	19.610	19.610
Return on Equity	121.85	66.33

Interest on Loan (“IoL”)

33. Clause (5) and (6) of Regulation 16 of the 2009 Tariff Regulations provide the methodology for working out weighted average rate of IoL as under:-

“(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.”

34. The weighted average rate of IoL has been considered on the basis of actual loan portfolio and the rate of interest submitted by the petitioner. By considering the above, the IoL has been worked out in accordance with Regulation 16 of the 2009 Tariff Regulations. The details of weighted average rate of interest for 2009-14 tariff period are placed at Annexure-1 and Annexure-2 in respect of Asset 1 and Asset 2 respectively. IoL allowed is as follows:-

(₹ in lakh)

Interest on Loan	2013-14 (Pro-rata)	
	Asset 1	Asset 2
Gross Normative Loan	8,698.67	4683.07
Cumulative Repayment upto Previous Year	-	-
Net Loan-Opening	8,698.67	4683.07
Additions	-	104.33
Repayment during the year	129.18	57.04
Net Loan-Closing	8,569.48	4730.36
Average Loan	8,634.08	4706.71
Weighted Average Rate of Interest on Loan (%)	9.0581	9.4362
Interest on Loan	130.35	74.02

Depreciation

35. The depreciation has been worked out as per the methodology provided in the Regulation 17 of the 2009 Tariff Regulations. The depreciation has been worked out and allowed as follows:-

(₹ in lakh)

Particulars	2013-14 (Pro-rata)	
	Asset 1	Asset 2
Depreciation		
Opening Gross Block	12426.70	6690.10
Additional Capitalisation	-	149.04
Closing Gross Block	12426.70	6839.14

Particulars	2013-14 (Pro-rata)	
	Asset 1	Asset 2
Depreciation		
Average Gross Block	12426.70	6764.62
Freehold Land (Av. Cost)	197.76	-
Rate of Depreciation (%)	5.20	5.06
Depreciable Value	11006.04	6088.16
Balance useful life of the asset	35	25
Elapsed life	0	0
Remaining Depreciable Value	-	67.07
Depreciation during the year	129.18	57.04
Depreciation upto previous year	-	-
Cumulative depreciation (incl. of AAD)	129.18	57.04

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

36. Clause (g) of Regulation 19 of the 2009 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. Normative O&M Expenses in respect of the transmission assets covered in the instant petition are as under:

(₹ in lakh)

Asset	Particulars	No. of Bays/Line length	O&M as per Norms	O&M allowed (Pro-rata)
Asset 1	400 kV Bay	2	130.92	30.47
	S/C (Bundle Conductor- 4 sub-c)	77.311	51.88	
	Total		182.80	
Asset 2	765 kV Bay	1	91.64	26.18
	400 kV Bay	1	65.46	
	Total		157.10	

Interest on Working Capital (“IWC”)

37. The IWC has been worked out as per the methodology provided in the Regulation 18 of the 2009 Tariff Regulations.

(₹ in lakh)

	2013-14 (Pro-rata)	
	Asset 1	Asset 2
Interest on Working Capital		
O & M expenses	15.23	13.09

	2013-14 (Pro-rata)	
	Asset 1	Asset 2
Interest on Working Capital		
Maintenance Spares	27.42	23.57
Receivables	422.07	229.43
Total	464.71	266.08
Rate of Interest (%)	13.20%	13.20%
Interest on Working Capital	10.22	5.85

APPROVED ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD

38. Based on the foregoing, the annual fixed charges for the transmission assets for the 2009-14 tariff period is summarised below:-

(₹ in lakh)

Particulars	2013-14	
	Asset 1	Asset 2
Depreciation		
Opening Gross Block	12426.67	6690.10
Additional Capitalisation	-	149.04
Closing Gross Block	12426.67	6839.14
Average Gross Block	12426.67	6764.62
Rate of Depreciation (%)	5.20%	5.06%
Depreciable Value	11006.02	6088.16
Balance Useful life of the asset	35	25
Elapsed Life	0	0
Remaining Depreciable Value	-	67.07
Depreciation during the year	129.18	57.04
Cumulative Depreciation	129.18	57.04
Interest on Loan		
Gross Normative Loan	8698.67	4683.07
Cumulative Repayment upto Previous Year	-	-
Net Loan-Opening	8698.67	4683.07
Additions	0.00	104.33
Repayment during the year	129.18	57.04
Net Loan-Closing	8569.48	4730.36
Average Loan	8634.08	4706.71
Weighted Average Rate of Interest on Loan (%)	9.0581%	9.4362%
Interest on Loan	782.08	444.14
Pro rate Interest on Normative Loan	130.35	74.02
Return on Equity		
Opening Equity	3728.00	2007.03
Additions	-	44.71
Closing Equity	3728.00	2051.74

Particulars	2013-14	
	Asset 1	Asset 2
Average Equity	3728.00	2029.39
Return on Equity (Base Rate) (%)	15.500	15.500
MAT rate for the respective year (%)	20.960	20.960
Rate of Return on Equity (%)	19.610	19.610
Return on Equity	731.08	397.97
Pro rate Return on Equity	121.85	66.33
Interest on Working Capital		
O & M expenses	15.23	13.09
Maintenance Spares	27.42	23.57
Receivables	422.07	229.43
Total	464.71	266.08
Rate of Interest (%)	13.20	13.20
Interest on Working Capital	61.34	35.12
Pro rate Interest on working capital	10.22	5.85
Annual Transmission Charges		
Depreciation	129.18	57.04
Interest on Loan	130.35	74.02
Return on Equity	121.85	66.33
Interest on Working Capital	10.22	5.85
O & M Expenses	30.47	26.18
Total	422.07	229.43

Filing Fee and the Publication Expenses

39. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. 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 Regulation 42 of the 2009 Tariff Regulations.

Licence Fee & RLDC Fees and Charges

40. The petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 42A (1) (b) of the 2009 Tariff Regulations for 2009-14 tariff period. The petitioner shall also be entitled for recovery of RLDC fee & charges in accordance with Regulations 42A (1) (a) of the 2009 Tariff Regulations for 2009-14 tariff period.

Service Tax

41. The petitioner has prayed for reimbursement of service tax if it is subjected to such tax in future. We are of the view that the petitioner's prayer is premature.

Sharing of Transmission Charges

42. 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.

43. This order disposes of Petition No. 106/TT/2014.

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

Sd/-
(A.S. Bakshi)
Member



Annexure 1

CALCUALTION OF AVERAGE RATE OF INTEREST

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Bond XXVIII					
Gross Opening Loan	-	-	-	-	1000.00
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	166.67
Net Loans Opening	-	-	-	-	833.33
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	0.00
Net Closing Loan	-	-	-	-	833.33
Average Net Loan	-	-	-	-	833.33
Rate of Interest on Loan	-	-	-	-	9.33
Interest on Loan	-	-	-	-	77.75
Bond XXIX					
Gross Opening Loan	-	-	-	-	500.00
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	41.67
Net Loans Opening	-	-	-	-	458.33
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	41.67
Net Closing Loan	-	-	-	-	416.66
Average Net Loan	-	-	-	-	437.50
Rate of Interest on Loan	-	-	-	-	9.20
Interest on Loan	-	-	-	-	40.25
Bond XXX					
Gross Opening Loan	-	-	-	-	2000.00
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	0.00
Net Loans Opening	-	-	-	-	2000.00
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	166.67
Net Closing Loan	-	-	-	-	1833.33
Average Net Loan	-	-	-	-	1916.67
Rate of Interest on Loan	-	-	-	-	8.80
Interest on Loan	-	-	-	-	168.67



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Bond XXXI					
Gross Opening Loan	-	-	-	-	200.00
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	0.00
Net Loans Opening	-	-	-	-	200.00
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	16.67
Net Closing Loan	-	-	-	-	183.33
Average Net Loan	-	-	-	-	191.67
Rate of Interest on Loan	-	-	-	-	8.90
Interest on Loan	-	-	-	-	17.06
Bond XXXIII					
Gross Opening Loan	-	-	-	-	3000.00
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	0.00
Net Loans Opening	-	-	-	-	3000.00
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	0.00
Net Closing Loan	-	-	-	-	3000.00
Average Net Loan	-	-	-	-	3000.00
Rate of Interest on Loan	-	-	-	-	8.64
Interest on Loan	-	-	-	-	259.20
Bond XXXII					
Gross Opening Loan	-	-	-	-	500.00
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	0.00
Net Loans Opening	-	-	-	-	500.00
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	41.67
Net Closing Loan	-	-	-	-	458.33
Average Net Loan	-	-	-	-	479.17
Rate of Interest on Loan	-	-	-	-	8.84
Interest on Loan	-	-	-	-	42.36
Bond XXXIV					
Gross Opening Loan	-	-	-	-	1243.00



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	0.00
Net Loans Opening	-	-	-	-	1243.00
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	0.00
Net Closing Loan	-	-	-	-	1243.00
Average Net Loan	-	-	-	-	1243.00
Rate of Interest on Loan	-	-	-	-	8.84
Interest on Loan	-	-	-	-	109.88
BOND XXXV					
Gross Opening Loan	-	-	-	-	500.00
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	0.00
Net Loans Opening	-	-	-	-	500.00
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	0.00
Net Closing Loan	-	-	-	-	500.00
Average Net Loan	-	-	-	-	500.00
Rate of Interest on Loan	-	-	-	-	9.64
Interest on Loan	-	-	-	-	48.20
BOND XXXVI					
Gross Opening Loan	-	-	-	-	1100.00
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	0.00
Net Loans Opening	-	-	-	-	1100.00
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	0.00
Net Closing Loan	-	-	-	-	1100.00
Average Net Loan	-	-	-	-	1100.00
Rate of Interest on Loan	-	-	-	-	9.25
Interest on Loan	-	-	-	-	101.75
BOND XXXVIII					
Gross Opening Loan	-	-	-	-	100.00
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	0.00
Net Loans Opening	-	-	-	-	100.00



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	0.00
Net Closing Loan	-	-	-	-	100.00
Average Net Loan	-	-	-	-	100.00
Rate of Interest on Loan	-	-	-	-	9.25
Interest on Loan	-	-	-	-	9.25
BOND XXXIX					
Gross Opening Loan	-	-	-	-	100.00
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	0.00
Net Loans Opening	-	-	-	-	100.00
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	0.00
Net Closing Loan	-	-	-	-	100.00
Average Net Loan	-	-	-	-	100.00
Rate of Interest on Loan	-	-	-	-	9.40
Interest on Loan	-	-	-	-	9.40
SBI (21.03.2012)					
Gross Opening Loan	-	-	-	-	1595.00
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	0.00
Net Loans Opening	-	-	-	-	1595.00
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	0.00
Net Closing Loan	-	-	-	-	1595.00
Average Net Loan	-	-	-	-	1595.00
Rate of Interest on Loan	-	-	-	-	10.25
Interest on Loan	-	-	-	-	163.49
BOND XLIII					
Gross Loan Opening	-	-	-	-	523.57
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	0.00
Net Loans Opening	-	-	-	-	523.57
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	0.00

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Net Closing Loan	-	-	-	-	523.57
Average Net Loan	-	-	-	-	523.57
Rate of Interest on Loan	-	-	-	-	7.93
Interest on Loan	-	-	-	-	41.52
Summary					
Gross Opening Loan	-	-	-	-	12361.57
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	208.34
Net Loans Opening	-	-	-	-	12153.23
Add: Draw(s) during the Year	-	-	-	-	
Less: Repayments of Loan during the year	-	-	-	-	266.68
Net Closing Loan	-	-	-	-	11886.55
Average Net Loan	-	-	-	-	12019.89
Rate of Interest on Loan(%)	-	-	-	-	9.0581%
Interest on Loan	-	-	-	-	1088.77

Annexure 2

CALCULATION OF AVERAGE RATE OF INTEREST

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Bond XXVIII					
Gross Opening Loan	-	-	-	-	50.00
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	8.33
Net Loans Opening	-	-	-	-	41.67
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	0.00
Net Closing Loan	-	-	-	-	41.67
Average Net Loan	-	-	-	-	41.67
Rate of Interest on Loan	-	-	-	-	9.33
Interest on Loan	-	-	-	-	3.89
Bond XXIX					
Gross Opening Loan	-	-	-	-	50.00
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	4.17
Net Loans Opening	-	-	-	-	45.83
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	4.17
Net Closing Loan	-	-	-	-	41.66
Average Net Loan	-	-	-	-	43.75
Rate of Interest on Loan	-	-	-	-	9.20
Interest on Loan	-	-	-	-	4.02
Bond XXX					
Gross Opening Loan	-	-	-	-	100.00
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	0.00
Net Loans Opening	-	-	-	-	100.00
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	8.33
Net Closing Loan	-	-	-	-	91.67
Average Net Loan	-	-	-	-	95.84
Rate of Interest on Loan	-	-	-	-	8.80
Interest on Loan	-	-	-	-	8.43



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Bond XXXI					
Gross Opening Loan	-	-	-	-	200.00
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	0.00
Net Loans Opening	-	-	-	-	200.00
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	16.67
Net Closing Loan	-	-	-	-	183.33
Average Net Loan	-	-	-	-	191.67
Rate of Interest on Loan	-	-	-	-	8.90
Interest on Loan	-	-	-	-	17.06
Bond XXXIII					
Gross Opening Loan	-	-	-	-	100.00
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	0.00
Net Loans Opening	-	-	-	-	100.00
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	0.00
Net Closing Loan	-	-	-	-	100.00
Average Net Loan	-	-	-	-	100.00
Rate of Interest on Loan	-	-	-	-	8.64
Interest on Loan	-	-	-	-	8.64
Bond XXXIV					
Gross Opening Loan	-	-	-	-	365.00
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	0.00
Net Loans Opening	-	-	-	-	365.00
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	0.00
Net Closing Loan	-	-	-	-	365.00
Average Net Loan	-	-	-	-	365.00
Rate of Interest on Loan	-	-	-	-	8.84
Interest on Loan	-	-	-	-	32.27
Bond XXXV					
Gross Opening Loan	-	-	-	-	200.00



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	0.00
Net Loans Opening	-	-	-	-	200.00
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	0.00
Net Closing Loan	-	-	-	-	200.00
Average Net Loan	-	-	-	-	200.00
Rate of Interest on Loan	-	-	-	-	9.64
Interest on Loan	-	-	-	-	19.28
BOND XXXVI					
Gross Opening Loan	-	-	-	-	100.00
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	0.00
Net Loans Opening	-	-	-	-	100.00
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	0.00
Net Closing Loan	-	-	-	-	100.00
Average Net Loan	-	-	-	-	100.00
Rate of Interest on Loan	-	-	-	-	9.35
Interest on Loan	-	-	-	-	9.35
BOND XXXVIII					
Gross Opening Loan	-	-	-	-	100.00
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	0.00
Net Loans Opening	-	-	-	-	100.00
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	0.00
Net Closing Loan	-	-	-	-	100.00
Average Net Loan	-	-	-	-	100.00
Rate of Interest on Loan	-	-	-	-	9.25
Interest on Loan	-	-	-	-	9.25
					0.00
BOND XXXIX					
Gross Opening Loan	-	-	-	-	100.00
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	0.00
Net Loans Opening	-	-	-	-	100.00



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	0.00
Net Closing Loan	-	-	-	-	100.00
Average Net Loan	-	-	-	-	100.00
Rate of Interest on Loan	-	-	-	-	9.40
Interest on Loan	-	-	-	-	9.40
SBI (21.03.2012)					
Gross Opening Loan	-	-	-	-	2355.00
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	0.00
Net Loans Opening	-	-	-	-	2355.00
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	0.00
Net Closing Loan	-	-	-	-	2355.00
Average Net Loan	-	-	-	-	2355.00
Rate of Interest on Loan	-	-	-	-	10.25
Interest on Loan	-	-	-	-	241.39
BOND XLIII					
Gross Loan Opening	-	-	-	-	963.06
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	0.00
Net Loans Opening	-	-	-	-	963.06
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	0.00
Net Closing Loan	-	-	-	-	963.06
Average Net Loan	-	-	-	-	963.06
Rate of Interest on Loan	-	-	-	-	7.93
Interest on Loan	-	-	-	-	76.37
Summary					
Gross Opening Loan	-	-	-	-	4683.06
Cumulative Repayments of Loans upto Previous Year	-	-	-	-	12.50
Net Loans Opening	-	-	-	-	4670.56
Add: Draw(s) during the Year	-	-	-	-	0.00
Less: Repayments of Loan during the year	-	-	-	-	29.17



Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Net Closing Loan	-	-	-	-	4641.39
Average Net Loan	-	-	-	-	4655.98
Rate of Interest on Loan%	-	-	-	-	9.4362%
Interest on Loan	-	-	-	-	439.35

