

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 45/TT/2013**

**Coram:**

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

**Date of Hearing : 09.10.2014  
Date of Order : 15.06.2015**

**In the matter of:**

Approval for determination of transmission tariff for Asset-I: 400 kV D/C Balipara-Bongaigaon (Quad) Transmission line along with 2 nos. 63 MVAR line Reactor at both ends and 30% FSC at Balipara Sub-station (Anticipated DOCO: 1.4.2013) and Asset-II: 80 MVAR 420 kV Bus Reactor at Bongaigaon Sub-station along with associated bays (Anticipated DOCO: 1.4.2013) under North East/Northern Western Interconnector-I and Transmission System of Kameng Hydro Electric Project in North Eastern Region for tariff block 2009-14, 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 Limited,  
"Saudamini", Plot No.2,  
Sector-29, Gurgaon -122 001

.....**Petitioner**

**Vs**

1. Assam State Electricity Board,  
Bijulee Bhawan, Paltan Bazar,  
Guwahati-781 001, Assam
2. Meghalaya Energy Corporation Limited,  
(Formerly Meghalaya State Electricity Board)  
Short Round Road, Shillong-793 001
3. Government of Arunachal Pradesh,  
Itanagar,  
Arunachal Pradesh



4. Power & Electricity Department,  
Government of Mizoram,  
Mizoram, Aizwal
5. Electricity Department,  
Government of Manipur,  
Keishampat, Imphal
6. Department of Power,  
Government of Nagaland,  
Kohima, Nagaland
7. Tripura State Electricity Corporation Limited,  
Bidyut Bhawan, North Banamalipur,  
Agartala, Tripura-700 001

.....Respondents

**For petitioner** : Shri S. K. Venkatesan, PGCIL  
Shri M. M. Mondal, PGCIL  
Ms. Seema Gupta, PGCIL  
Shri S.S Raju, PGCIL

**For respondents** : None

### **ORDER**

The petition has been filed by Power Grid Corporation of India Limited (PGCIL) for approval of transmission charges for 400 kV D/C Balipara-Bongaigaon (Quad) Transmission line along with 2 nos. 63 MVAR line Reactor at both ends and 30% FSC at Balipara Sub-station and 80 MVAR 420 kV Bus Reactor at Bongaigaon Sub-station along with associated bays (hereinafter referred to as "transmission assets") under North East/Northern Western Interconnector-I and Transmission System of Kameng Hydro Electric Project in North Eastern Region from the date of commercial operation of the assets to 31.3.2014 for tariff block 2009-14 under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations' 2009 (hereinafter referred to as the "2009 Tariff Regulations").

2. The petitioner has been entrusted with the implementation of Transmission System associated with North East/Northern Western Interconnector-I Project. The Investment approval (IA) of the project was accorded by the petitioner's Board of Directors vide Memorandum No. C/CP/NER-NR.WR Intr-I dated 27.2.2009 at an estimated cost of ₹1113019 lakh including IDC of ₹106605 lakh (based on 4<sup>th</sup> quarter, 2008 price level). The scope of work covered under the project was segregated into three parts. The instant assets are covered under Part-B of the project and were scheduled to be commissioned within 48 months from the date of IA i.e. by 26.2.2013 say 1.3.2013. The scope of project broadly includes:-

### **Transmission Lines:**

#### **Part A: North East/Northern Western Interconnector-I**

- |  |           |
|--|-----------|
| a. Biswanath Chariyali-Agra+800 kV, 6000 MW HVDC bipole line                         | : 1971 km |
| b. Balipara-Biswanath Chariyali 400 kV D/C line                                      | : 73 km   |
| c. LILO of Ranganadi-Balipara 400 kV D/C line at Biswanath Chariyali (Pooling Point) | : 52 km   |
| d. Biswanath Chariyali-Biswanath Chariyali (AEGCL) 132 kV D/C line                   | : 22 km   |

#### **Part-B: Transmission System for immediate evacuation of power from Kameng HEP**

- |  |          |
|--|----------|
| a. Kameng-Balipara 400 kV D/C line   | : 65 km  |
| b. Balipara-Bongaigaon 400 kV D/C line (Quad conductor) with 30% Fixed Series Compensation at Balipara end | : 300 km |

#### **Part-C: Transmission System for immediate evacuation of power from Lower Subansiri HEP**

- |  |  |
|--|--|
| a. Lower Subansiri-Biswanath Chariyali (Pooling Point) |  |
|--|--|

400 kV two sub-station (2) D/C lines with twin lapwing conductor

: 2x175 km

**Sub-stations:**

**Part A: North-East/Northern Western Interconnector-I**

- a. Establishment of 400/132 kV Pooling Station at Biswanath Chariyali with 2x200 MVA, 400/132/33 kV transformers along with associated line bays
- b. HVDC rectifier module of 3000 MW at Biswanath Chariyali and inverter module of 3000 MW capacity at Agra
- c. Augmentation of 400 kV Agra Sub-station by 4x105 MVA, 400/220/33 kV transformer along with associated bays
- d. Extension of 400 kV line bays at Balipara Sub-station
- e. Extension of 132 kV line bays of Biswanath Chariyali (AEGCL)

**Part-B: Transmission System of immediate evacuation of power from Kameng HEP**

- a. 2<sup>nd</sup> 315 MVA, 400/220 kV ICT at Misa
- b. Extension of 400 kV line bays at Bongaigaon and Balipara Sub-stations

**Part C: Transmission System for immediate evacuation of power from Lower Subansiri HEP**

- a. Extension of 400 kV line bays at Biswanath Chariyali Pooling Sub-station.

3. The petitioner initially filed the instant petition based on the anticipated dates of commercial operation of the instant assets. However, vide affidavit dated 5.6.2014 submitted the revised date of commercial operation of assets covered in the instant petition and the details are as follows:-

Particulars	Schedule DOCO as per IA	Anticipated /Actual DOCO
Asset-I: 400 kV D/C Balipara-Bongaigaon (Quad) TL with 2 Nos. 63 MVAR line Reactor at both ends and 30% FSC at Balipara Sub-station	1.3.2013	1.7.2014 (Anticipated)
Asset-II: 80 MVAR, 420 kV Bus Reactor at Bongaigaon Sub-station along with associated bays		1.2.2013 (Actual)

4. As Asset-I was anticipated to be commissioned on 1.7.2014, i.e. during the 2014-19 period, the petitioner was directed to file a fresh petition in respect of Asset-I for determination of transmission tariff under the 2014 Tariff Regulations. As such, transmission tariff for only Asset-II is considered in this order.

5. Provisional tariff was allowed for both the assets vide order dated 18.3.2013 under Regulation 5(3) of the 2009 Tariff Regulations. In view of discussion at para 4, the provisional tariff granted in respect of Asset-I was withdrawn from the PoC calculations.

6. This order has been issued after considering PGCIL affidavits dated 1.7.2013, 26.2.2014, 5.6.2014, 20.10.2014 and 14.5.2015

7. The transmission charges claimed by the petitioner are as under:-

Particulars	(₹ in lakh)	
	2012-13 (Pro-rata)	2013-14
Depreciation	4.71	33.42
Interest on Loan	5.74	38.95
Return on Equity	4.68	33.19
Interest on working capital	0.92	6.05
O & M Expenses	10.32	65.46
<b>Total</b>	<b>26.37</b>	<b>177.07</b>

8. The details submitted by the petitioner in support of its claim for interest on working capital are as under:-

Particulars	(₹ in lakh)	
	2012-13 (Pro-rata)	2013-14
Maintenance Spares	9.29	9.82
O & M Expenses	5.16	5.46
Receivables	26.37	29.51
<b>Total</b>	<b>40.82</b>	<b>44.79</b>
Rate of Interest	13.50%	13.50%
<b>Interest</b>	<b>0.92</b>	<b>6.05</b>

9. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under Section 64 of the Electricity Act and none of the respondents have filed any reply.

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

### **Capital Cost**

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

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

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

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

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

12. The petitioner has submitted the capital cost incurred and capital cost projected to be incurred as on the actual date of commercial operation as per management certificate dated 29.3.2013 vide affidavit dated 1.7.2013. The details of apportioned approved cost, capital cost as on the date of commercial operation and estimated additional capital expenditure incurred or projected to be incurred for the asset covered in the petition are as under:-

(₹ in lakh)

Apportioned approved cost	Cost incurred up to DOCO	Projected expenditure			Total estimated completion Cost
		DOCO to 31.3.2013	2013-2014	2014-2015	
875.50	513.38	44.58	150.00	26.89	734.85

13. The estimated completion cost of the assets is ₹734.85 lakh against the apportioned approved cost of ₹875.50 lakh. Hence, there is no cost over-run. Accordingly, the capital cost claimed by the petitioner is considered for the purpose of computation of transmission charges.

14. The commissioning schedule of the project is 48 months from the date of IA i.e. 27.2.2009. Hence, the assets were to be commissioned by 26.2.2013 i.e. 1.3.2013. The instant assets have been commissioned on 1.2.2013. Hence, there is no time over-run in commissioning of the assets.

### **Treatment of IDC & IEDC**

15. The petitioner has claimed ₹106.61 lakh towards Interest During Construction (IDC) as on the date of commercial operation. However, detailed working of IDC calculation i.e. details of IDC paid upto the date of commercial operation as well as after the date of commercial operation are not available. As per the provisions of Regulation 7(1) read with Regulation 3(2) of the 2009 Tariff Regulations, IDC has to be worked out on cash basis. Accordingly, IDC has been worked out based on the loans deployed for the asset as per Form-13, assuming that the petitioner has not made any default in the payment of interest. Considering cash basis methodology, IDC up to COD i.e. 1.2.2013 works out to ₹8.36 lakh. The amount of IDC accrued as on the date of commercial operation and to be discharged after the date of commercial operation has not been considered in the capital cost due to non-availability of adequate information. The petitioner is directed to submit the detailed working corresponding to the IDC and also the actual cash expenditure in Form 14A to enable the Commission to consider the un-discharged liability once it is discharged subject to prudence check and submission of adequate information by the petitioner.

16. Similarly, the petitioner has claimed ₹46.45 lakh as Incidental Expenditure During Construction (IEDC). The petitioner has not submitted detailed computations for admissible IEDC. Therefore, IEDC has been worked out as 5% on Hard Cost submitted in the Abstract Cost Estimates by the petitioner. Thus, in the absence of proper and sufficient details, IEDC claimed is restricted



to 5% of Hard Cost i.e. ₹18.02 lakh upto date of commercial operation for the purpose of the tariff in the instant petition.

17. Regulation 9 of the 2009 Tariff Regulations provides for the treatment of undischarged liabilities after the same are discharged. However, as the petitioner has not submitted the required information with regard to the IDC/IEDC actually discharged, we are not inclined to allow the amount of IDC/IEDC as claimed by the petitioner. The petitioner is directed to submit the amount of IDC/IEDC pertaining to the transmission asset considered in this petition upto date of commercial operation and balance IDC/IEDC discharged after the date of commercial operation. IDC/IEDC allowed shall be reviewed at the time of truing up on submission of adequate and proper information by the petitioner in respect of IDC and IEDC.

### **Initial Spares**

18. Regulation 8 of the 2009 Tariff Regulations specifies ceiling norms for capitalization of initial spares in respect of transmission system as under:-

**“8. Initial Spares.** Initial spares shall be capitalised as a percentage of the original project cost, subject to following ceiling norms:

(iv) Transmission system

(a) Transmission line - 0.75%

(b) Transmission Sub-station - 2.5%

(c) Series Compensation devices and HVDC Station - 3.5%

Provided that where the benchmark norms for initial spares have been published as part of the benchmark norms for capital cost under first proviso to clause (2) of regulation 7, such norms shall apply to the exclusion of the norms specified herein.

19. The petitioner has claimed ₹23.75 lakh towards the cost of the initial spares for the instant assets. It is observed that initial spares claimed by the petitioner exceed the ceiling limit specified in Regulation 8 of the 2009 Tariff Regulations and accordingly it is restricted. The initial spares allowed in the capital cost are as follows:-

(₹ in lakh)

Particulars	Capital cost claimed up to 31.3.2014	Initial spares claimed	Capital Cost considering IDC on cash basis and IEDC allowed as on DOCO	Proportionate initial spares as on DOCO	Ceiling limit	Initial spares worked out	Excess initial spares claimed
Sub-station	707.96	23.75	581.27	19.50	2.50%	14.40	5.10

20. The capital cost as on the date of commercial operation after taking into account admissible IDC, IEDC and admissible cost of initial spares has been considered for the purpose of the determination of transmission tariff as under:-

(₹ in lakh)

Capital cost as on DOCO	Amount claimed		Hard cost as on DOCO	Amount worked out		Capital cost allowed as on DOCO	Excess initial spares	Capital cost as on DOCO allowed for tariff calculation
	IDC	IEDC		IDC	IEDC			
(A)	(B)	(C)	(D)=(A)-(B)-(C)	(E)	(F)	(G)=(D)+(E)+(F)	(H)	(I)=(G)-(H)
<b>As per Auditor's Certificate dated 22.7.2013</b>								
513.38	106.61	46.45	360.32	8.36	18.02	386.694	5.096	381.598

### Projected Additional Capital Expenditure

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

“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.”

22. Clause (11) of Regulation 3 of the 2009 Tariff Regulations defines “cut-off” date as under:-

“cut-off date” means 31<sup>st</sup> 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 31<sup>st</sup> March of the year closing after 3 years of the year of commercial operation”.

23. Therefore, the cut-off date for the instant assets is 31.3.2016.

24. The admissibility of additional capital expenditure incurred after the date of commercial operation is to be dealt in accordance with the provisions of Regulation 9 (1) of the 2009 Tariff Regulations. The projected additional capital expenditure claimed is mainly on account of balance and retention payments.

25. It is observed that the additional capital expenditure incurred and projected to be incurred for the instant assets from the date of commercial operation to 31.3.2013 and during 2013-14 and 2014-15 is on account of Balance/Retention payments. The additional capital expenditure claimed by the petitioner upto 31.3.2014 is within the cut-off date and accordingly is allowed in terms of Regulation 9 (1) (i) of the 2009 Tariff Regulations. The additional capital expenditure claimed by the petitioner during 2014-15 falls beyond the tariff period 2009-14. Hence, it shall be considered in the next tariff period. The

projected additional capital expenditure shall be reviewed at the time of truing up on the submission of the actual additional capital expenditure. The details of additional capital expenditure claimed by the petitioner and allowed are as under:-

(₹ in lakh)

Capital cost as on DOCO allowed	Additional Capital expenditure claimed		Total completion cost as on 31.3.2014
	2012-13	2013-14	
381.60	44.58	150.00	576.18

### **Debt-Equity Ratio**

26. Regulation 12 of the 2009 Tariff Regulations provides as follows:-

“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: Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

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

(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.”

27. The petitioner has claimed debt: equity in the ratio of 70:30 as on the date of commercial operation of the instant assets and for additional capital

expenditure and it is in accordance with the above Regulations and has been considered for the purpose of computation of tariff. The details of debt-equity ratio in respect of the instant assets as on date of commercial operation and as on 31.3.2014 are as under:-

(₹ in lakh)

Particulars	Cost as on date of commercial operation		Cost as on 31.3.2014	
	Amount	%	Amount	%
Debt	267.12	70.00	403.33	70.00
Equity*	114.48	30.00	172.85	30.00
<b>Total</b>	<b>381.60</b>	<b>100.00</b>	<b>576.18</b>	<b>100.00</b>

28. The above stated debt-equity ratios have been applied for the purpose of tariff calculation in this order.

### **Return on Equity**

29. Regulation 15 of the 2009 Tariff Regulations provides as under:-

“15. (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 12.

(2) Return on equity shall be computed on pre-tax basis at the base rate of 15.5% for thermal generating stations, transmission system and run of the river generating station, and 16.5% for the storage type generating stations including pumped storage hydro generating stations and run of river generating station with pondage and shall be grossed up as per clause (3) of this regulation:

Provided that in case of projects commissioned on or after 1st April, 2009, an additional return of 0.5% shall be allowed if such projects are completed within the timeline specified in **Appendix-II**:

Provided further that the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever.

(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 financial year during the tariff period shall be tried up in accordance with Regulation 6 of these regulations".

30. Regulation 15 of 2009 Tariff Regulation provides for working out return on equity. Accordingly, return on equity has been worked out as under:-

(₹ in lakh)

Particulars	2012-13 (Pro-rata)	2013-14
Opening Equity	114.48	127.85
Addition due to Additional Capitalization	13.37	45.00
Closing Equity	127.85	172.85
Average Equity	121.16	150.35
Return on Equity (Base Rate )	15.50%	15.50%
Tax rate for the year 2008-09 (MAT)	11.33%	11.33%
Rate of Return on Equity (Pre-tax )	17.481%	17.481%
<b>Return on Equity (Pre-tax)</b>	<b>3.53</b>	<b>26.28</b>

31. The petitioner's prayer for recovery of the shortfall or refund the excess Annual Fixed Charges, on account of RoE due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 of the respective financial year directly without making any application before the Commission shall be dealt with Regulation 15 (5) of 2009, Tariff Regulation. RoE has been computed @ 17.481% p.a on average equity as per Regulation 15 of the 2009 Tariff Regulations.

## Interest on Loan

32. Regulation 16 of the 2009 Tariff Regulations provides as under:-

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

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

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

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

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

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

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

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

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

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

33. In keeping with the provisions of Regulation 16 of the 2009 Tariff Regulations, the petitioner's entitlement of interest on loan has been calculated on the following basis:-

(a) Gross amount of loan, repayment of instalments and rate of interest and weighted average rate of interest on actual average loan have been considered as per the affidavit dated 1.7.2013 submitted by the petitioner;

(b) The repayment for the tariff period 2009-14 is deemed to be equal to the depreciation allowed for that period;

(c) Notwithstanding moratorium period availed by the transmission licensee, the repayment of the loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed; and

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

34. Accordingly, the interest on loan has been calculated on the basis of prevailing rate available as on the date of commercial operation.

35. Detailed calculations in support of the weighted average rates of interest have been given at Annexure.

36. Based on the above, interest on loan allowed is as follows:-



(₹ in lakh)

Particulars	2012-13 (Pro-rata)	2013-14
Gross Normative Loan	267.12	298.33
Cumulative Repayment upto Previous Yr	-	3.55
Net Loan-Opening	267.12	294.77
Addition due to Additional Capitalisation	31.21	105.00
Repayment during the year	3.55	26.46
Net Loan-Closing	294.77	373.31
Average Loan	280.95	334.04
Weighted Avg. Rate of Interest on Loan	9.2360%	9.2369%
<b>Interest</b>	<b>4.32</b>	<b>30.86</b>

### Depreciation

37. Regulation 17 of the 2009 Tariff Regulations provides as follows:-

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

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

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

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

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

(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-III to these regulations for the assets of the generating station and transmission system:

Provided that, the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the assets.

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

(6) Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.”

38. The petitioner has claimed actual depreciation as a component of Annual Fixed Charges. The instant assets were put under commercial operation during 2012-13. Accordingly, the instant assets will complete 12 years beyond 2013-14. Thus, depreciation has been calculated annually based on Straight Line Method and at rates specified in Appendix-III of the 2009 Tariff Regulations, as per details hereunder:-

Particulars	(₹ in lakh)	
	2012-13 (Pro-rata)	2013-14
Opening Gross Block	381.60	426.18
Additional Capital Expenditure	44.58	150.00
Closing Gross Block	426.18	576.18
Average Gross Block	403.89	501.18
Rate of Depreciation	5.2800%	5.2800%
Depreciable Value	363.50	451.06
Remaining Depreciable Value	363.50	447.51
<b>Depreciation</b>	<b>3.55</b>	<b>26.46</b>

### **Operation & Maintenance Expenses (O&M Expenses)**

39. The norms for O&M Expenses for the transmission system based on the type of sub-station and the transmission line are prescribed vide clause (g) of Regulation 19 of the 2009 Tariff Regulations. The norms for assets covered in this petition are as under:-

#### **Norms for Sub-station:**

Element	(₹ lakh per bay)				
	2009-10	2010-11	2011-12	2012-13	2013-14
400 kV bay	52.40	55.40	58.57	61.92	65.46

40. Accordingly, as per norms specified in 2009 Tariff Regulations, O&M Expenses have been allowed as under:-

Element	(₹ in lakh)	
	2012-13 (Pro-rata)	2013-14
1 no. 400 kV bay	10.32	65.46
<b>Total</b>	<b>10.32</b>	<b>65.46</b>

41. The petitioner has submitted that O & M Expenses for the period 2009-14 were arrived at on the basis of normalized actual O & M Expenses during the period 2003-04 to 2007-08. The wage hike of 50% on account of pay revision of the employees of public sector undertaking has also been considered while calculating the O & M Expenses for the tariff period 2009-14. The petitioner has further submitted that it may approach the Commission for additional manpower cost on account of wage revision (if any) during the tariff block 2009-14 for claiming in the tariff.

42. The Commission has given effect to impact of pay revision in the 2009 Tariff Regulations by factoring 50% on account of pay revision of the employees of PSUs after extensive stakeholders' consultation, as one time compensation for employee cost. We do not see any reason why the admissible amount is inadequate to meet the requirement of the employee cost. In this order, we have allowed O&M Expenses as per the existing norms.

### **Interest on Working Capital**

43. The petitioner is entitled to claim interest on working capital as per the 2009 Tariff Regulations. The components of the working capital and the petitioner's entitlement to interest thereon are discussed hereunder:-

#### **(i) Receivables**

As per Regulation 18(1) (c) (i) of the 2009 Tariff Regulations, receivables as a component of working capital will be equivalent to two months of fixed cost. The petitioner has claimed the receivables on the basis of 2 months of annual transmission charges claimed in the petition. In the

tariff being allowed, receivables have been worked out on the basis of 2 months transmission charges.

**(ii) Maintenance Spares**

Regulation 18 (1) (c) (ii) of the 2009 Tariff Regulations provides for maintenance spares @ 15% per annum of the O & M Expenses as part of the working capital from 1.4.2009. The value of maintenance spares has accordingly been worked out.

**(iii) O & M Expenses**

Regulation 18(1) (c) (iii) of the 2009 Tariff Regulations provides for O&M Expenses for one month to be included in the working capital. The petitioner has claimed O&M Expenses for 1 month of the respective year. This has been considered in the working capital.

**(iv) Rate of Interest on Working Capital**

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 shall be equal to State Bank of India Base Rate @ 13.50% (Base rate as on 1.4.2012 and 350 basis points) for asset. The interest on working capital for the instant assets covered in the petition has been worked out accordingly.

44. Computations in support of interest on working capital allowed are as follows:-

Particulars	₹ in lakh	
	2012-13 (Pro-rata)	2013-14
Maintenance Spares	9.29	9.82
O & M Expenses	5.16	5.46
Receivables	22.56	25.77
Total	37.01	41.04
Rate of Interest	13.50%	13.50%
<b>Interest</b>	<b>0.83</b>	<b>5.54</b>

### **Transmission Charges**

45. The transmission charges allowed for the assets are as given under:-

Particulars	₹ in lakh	
	2012-13 (Pro-rata)	2013-14
Depreciation	3.55	26.46
Interest on Loan	4.32	30.86
Return on Equity	3.53	26.28
Interest on Working Capital	0.83	5.54
O & M Expenses	10.32	65.46
<b>Total</b>	<b>22.56</b>	<b>154.60</b>

### **Filing Fee and the Publication Expenses**

46. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. The petitioner has clarified that reimbursement of expenditure has been claimed in terms of Regulation 42 of the 2009 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 Regulation 42A (1) (a) of the 2009 Tariff Regulations.

### **Licence Fee**

47. The petitioner has submitted that in O&M norms for tariff block 2009-14, the cost associated with license fees had not been captured and the license fee may be allowed to be recovered separately from the respondents. The petitioner

has submitted that the licence fee has been a new component of cost to the transmission licence under O&M stage of the project and has become incidental to the petitioner only from 2008-09. The petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 42A (1) (b) of the 2009 Tariff Regulations.

### **Service Tax**

48. The petitioner has made a prayer to be allowed to bill and recover the service tax on transmission charges separately from the respondents, if it is subjected to such service tax in future. The petitioner submitted that service tax on transmission has been put on negative list w.e.f. 1.4.2012 and therefore the transmission charges, is exclusive of service tax and shall be born and additionally paid by the respondents. We consider petitioner's prayer pre-mature and accordingly this prayer is rejected.

### **Sharing of Transmission Charges**

49. 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.

50. This order disposes of Petition No. 45/TT/2013.

sd/-  
**(A.S. Bakshi)**  
Member

sd/-  
**(A.K. Singhal)**  
Member

sd/-  
**(Gireesh B. Pradhan)**  
Chairperson

**Annexure**

(₹ in lakh)

<b>CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN</b>			
	<b>Details of Loan</b>	<b>2012-13</b>	<b>2013-14</b>
<b>1</b>	<b>Bond XXXII</b>		
	Gross loan opening	<b>20.00</b>	<b>20.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	20.00	20.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	1.67
	Net Loan-Closing	20.00	18.33
	Average Loan	20.00	19.17
	Rate of Interest	8.84%	8.84%
	Interest	1.77	1.69
	Rep Schedule	12 annual instalments from 29.03.2014	
<b>2</b>	<b>Bond XL</b>		
	Gross loan opening	<b>309.37</b>	<b>309.37</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	309.37	309.37
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	309.37	309.37
	Average Loan	309.37	309.37
	Rate of Interest	9.30%	9.30%
	Interest	28.77	28.77
	Rep Schedule	12 annual instalments from 28.06.2016	
<b>3</b>	<b>Bond XXXIII</b>		
	Gross loan opening	<b>20.00</b>	<b>20.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	20.00	20.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	20.00	20.00
	Average Loan	20.00	20.00
	Rate of Interest	8.64%	8.64%
	Interest	1.73	1.73
	Rep Schedule	12 annual instalments from 08.07.2014	
<b>4</b>	<b>Bond XXXIV</b>		
	Gross loan opening	<b>5.00</b>	<b>5.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	5.00	5.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	5.00	5.00
	Average Loan	5.00	5.00
	Rate of Interest	8.84%	8.84%
	Interest	0.44	0.44
	Rep Schedule	12 annual instalments	

		from 21.10.2014	
<b>5</b>	<b>Bond XXXV</b>		
	Gross loan opening	<b>5.00</b>	<b>5.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	5.00	5.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	5.00	5.00
	Average Loan	5.00	5.00
	Rate of Interest	9.64%	9.64%
	Interest	0.48	0.48
	Rep Schedule	12 annual instalments from 31.05.2015	
	<b>Total Loan</b>		
	Gross loan opening	359.37	359.37
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	359.37	359.37
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	1.67
	Net Loan-Closing	359.37	357.70
	Average Loan	359.37	358.54
	Rate of Interest	<b>9.2360%</b>	<b>9.2369%</b>
	<b>Interest</b>	<b>33.19</b>	<b>33.12</b>