

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 105/TT/2013**

**Coram:**

**Shri Gireesh B. Pradhan, Chairperson  
Shri M. Deena Dayalan, Member  
Shri A.K. Singhal, Member**

**Date of Hearing : 13.05.2014**

**Date of Order : 03.02.2015**

**In the matter of:**

Approval of transmission tariff for (i) 1x80 MVAR, 420 kV, 3 phase Bus Reactor at 400 kV Balipara Sub-station under transmission system associated with North East/Northern Western Interconnector-I and Transmission System of Kameng Hydro Electric Project in North Eastern Region (Actual DOCO-1.10.2012) 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 respondent** : None

### **ORDER**

The petition has been filed by Power Grid Corporation of India Limited (PGCIL) for approval of transmission charges for (i) 1x80 MVAR, 420 kV, 3 phase Bus Reactor at 400 kV Balipara Sub-station under transmission system associated with North East/Northern Western Interconnector-I and Transmission System of Kameng Hydro Electric Project in North Eastern Region (hereinafter referred to as "transmission assets") 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 Board of Directors of PGCIL in its meeting held on 24.2.2009 at an estimated cost of ₹1113019 lakh including IDC of ₹106605 lakh (based on 4<sup>th</sup> quarter, 2008 price level). The estimated completion cost for the instant asset is ₹879.80 lakh against apportioned approved cost estimate of ₹1119.87 lakh. The scope of work covered under the project was segregated into three parts. The instant asset was covered under Part-B of the project and was scheduled to be commissioned within 48 months from the date of IA i.e. by 24.2.2013 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 (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 assets covered in the instant petition and their scheduled and the actual date of commercial operation (DOCO) is as follows:-

Particulars	Schedule DOCO as per IA	Actual DOCO
1x80 MVAR, 420 kV, 3 phase Bus Reactor at 400 kV Balipara Sub-station	1.3.2013	1.10.2012

4. The petitioner has filed the instant petition on the basis of actual DOCO. The petitioner has submitted that the assets in the instant petition are covered under Part-B of the Project.

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

Particulars	(₹ in lakh)	
	2012-13 (Pro-rata)	2013-14
Depreciation	14.92	44.74
Interest on Loan	17.47	49.71
Return on Equity	14.82	44.43
Interest on working capital	2.80	6.81
O & M Expenses	30.96	65.46
<b>Total</b>	<b>80.97</b>	<b>211.15</b>

6. 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	26.99	35.19
<b>Total</b>	<b>41.44</b>	<b>50.47</b>
Rate of Interest	13.50%	13.50%
<b>Interest</b>	<b>2.80</b>	<b>6.81</b>

7. 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 no respondent has filed any reply.

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

## **Capital Cost**

9. 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.”

10. The petitioner has submitted the capital cost incurred and capital cost projected to be incurred as on actual DOCO as per the auditor’s certificate vide affidavit dated 5.12.2013.

11. The details of apportioned approved cost, capital cost as on DOCO and estimated additional capital expenditure incurred or projected to be incurred for the assets covered in the petition are as overleaf:-

(₹ 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	
1119.87	315.80	499.00	65.00	-	879.80

### **Cost Over-run**

12. The estimated completion cost of the assets is ₹879.80 lakh against the apportioned approved cost of ₹1119.87 lakh. Hence, there is no cost over-run. However, it is observed that there is over estimation of FR cost by 27.29% and a variation of 28 % in the cost of Emergency DG set due to actual award price. Thus, the Commission directed the petitioner to submit on affidavit information as follows:-

- i) Details in respect of projects which formed the basis of FR cost; and
- ii) Reason for inclusion of outdoor lighting, emergency DG set and grounding system (amounting to ₹29 lakh) in the existing sub-station;

13. The petitioner, vide affidavit dated 21.10.2014, submitted as under:-

- i) The FR cost for the Project is mainly based on the main contracts (LOAs) for transmission lines and sub-station works and it may also include other contracts/LOAs for equipment/items not covered under the main contract but are required under the instant project. Accordingly, the petitioner had submitted a list of main contracts (LOA) which have been considered for broadly working out the FR cost for the project,

vide affidavit dated 21.8.2014. However, as the main contract LOAs do not cover all the equipments for a new project, the cost of 80 MVAR, 420 kV, 3 phase Bus Reactor at 400 kV Balipara Sub-station in the FR is based on the contract for reactor Package-B for Transmission System associated with NRSS IX to XII (for Kanpur & Ballabgarh Sub-station portion) awarded to M/s. BHEL.

Further, the petitioner has submitted that the difficulties and constraints in tabulating the cost details of all the packages/projects considered for the purpose of preparing FR of a particular project will be submitted shortly.

- ii) The outdoor lighting, emergency DG set and grounding system mentioned in the Form-5B of the petition is the standard format of the Commission for submission of actual cost vis-à-vis FR cost. The outdoor lighting, emergency DG set and grounding system have not been implemented in the subject asset and cost has also not been included. However, under the heading of DG set, cost of part auxiliary system and power and control cables has been indicated. In the Encl-1, the PVC power and Control cables (1.1 kV grade), Fire protection system (Complete U/G & O/G piping and accessories), LT Switchgear (415 V ACDB, 220V DCDB, 50V DCDB) etc. are the part of auxiliary system and the cost for the same has been considered in Form-5B under heading of DG set.



14. On perusal of the documents submitted by the petitioner, it is observed that only Letter of Award (LOA) number, name of the project and contractor has been submitted. The names of projects and their suppliers do not serve any useful purpose. The petitioner has not submitted details on the basis of which FR cost details were assumed and has cited difficulty in tabulating cost details of all the projects considered for preparing FR and has stated that it shall furnish the same shortly vide a separate affidavit. However, the petitioner has not submitted any affidavit so far. The Commission also notes that the petitioner is a Navaratna PSU and is expected to maintain and furnish proper records of cost details. The submission made by the petitioner is not acceptable. The Commission directs the petitioner to submit the cost details while filing of truing-up petition.

15. We have considered the submissions of the petitioner that 'lighting, emergency DG set and grounding system', mentioned in Form-5B of the petition is the standard format for CERC. However, in place of that the petitioner has included 'PVC power & control cables', 'Fire protection system' and 'LT switchgear' etc. which are part of "auxiliaries" in the heading under DG set. The expenditure of ₹29.42 lakh towards aforementioned items is allowed. However, the petitioner is cautioned that the equipments should be placed under their proper heading in Form-5B.

16. Accordingly, capital cost considered for assets covered in the petition is admitted as claimed.

### **Time Over-run**

17. The commissioning schedule of the project is 48 months from the date of IA i.e. 24.2.2009. Hence, the assets were to be commissioned by 24.2.2013 i.e. 1.3.2013. The assets have been commissioned on 1.10.2012. Hence, there is no time over-run in commissioning of the instant assets. Accordingly, the IDC and IEDC have been allowed as claimed and included in the capital cost for the purpose of tariff.

### **Initial Spares**

18. The petitioner has claimed the cost of the initial spares as ₹21.79 lakh for the assets. It is observed that initials spares claimed by the petitioner are within the ceiling limit specified in clause 8 of Tariff Regulations, 2014 and hence same have been allowed in the capital cost.

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

(₹ in lakh)	
Particulars	Assets
Freehold land	-
Leasehold land	-
Building and Civil works	-
Transmission Line	-
Sub-Station Equipments	315.80
PLCC	-
<b>Total Capital Cost</b>	<b>315.80</b>

## **Projected Additional Capital Expenditure**

20. 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.”

21. 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”.

Therefore, the cut-off date for the instant assets is 31.3.2015.

22. The admissibility of additional capital expenditure (Add-Cap.) incurred after DOCO 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.

23. We have considered the submissions made by the petitioner. We have noted 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, is on account of Balance/Retention payments. The additional capital expenditure claimed by the petitioner is within the cut-off date and accordingly, it is allowed in terms of Regulation 9 (1) (i) of the 2009 Tariff Regulations. 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 Add-cap claimed by the petitioner and allowed are as follows:-

(₹ in lakh)

Additional Capital expenditure claimed		Additional Capital expenditure allowed	
2012-13	2013-14	2012-13	2013-14
499.00	65.00	499.00	65.00

### **Debt-Equity Ratio**

24. 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.”

25. Details of debt-equity ratio in respect of the assets covered in this petition as on date of commercial operation are as under:-

(₹ in lakh)

Particulars	Cost as on date of commercial operation	
	Amount	%
Debt	188.00	59.53
Equity*	127.80	40.47
<b>Total</b>	<b>315.80</b>	<b>100.00</b>

\*Equity has been restricted to 30% as per 2009 Tariff Regulations

26. Detail of debt-equity ratio for Add-cap during 2012-13, 2013-14 and as on 31.3.2014 of the assets is as given under:-

(₹ in lakh)

Particulars	Add-cap-2012-13		Add-cap-2013-14		As on 31.3.2014	
	Amount	%	Amount	%	Amount	%
Debt	382.36	76.63	45.51	70.00	648.93	73.76
Equity	116.64	23.37*	19.50	30.00	230.88	26.24*
<b>Total</b>	<b>499.00</b>	<b>100.00</b>	<b>65.00</b>	<b>100.00</b>	<b>879.81</b>	<b>100.00</b>

\*Equity has been restricted to actual of 23.37% for add cap during 2012-13 and 26.24% for capital cost as on 31.3.2014 as per 2009 Tariff Regulations.

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

### **Return on Equity**

28. 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 trued up in accordance with Regulation 6 of these regulations".

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

Particulars	₹ in lakh)	
	2012-13 (Pro-rata)	2013-14
Opening Equity	94.74	211.38
Addition due to Additional Capitalization	116.64	19.50
Closing Equity	211.38	230.88
Average Equity	153.06	221.13
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>13.38</b>	<b>38.66</b>

30. 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**

31. 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.”

32. In keeping with the provisions of Regulation 16 of the 2009 Tariff Regulations, the petitioner’s entitlement to 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 5.12.2013 submitted by the petitioner.

(b) The repayment for the tariff period 2009-14 has been considered to be equal to the depreciation allowed for that period.

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

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



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

35. Based on the above, interest on loan allowed is as under:-

Particulars	₹ in lakh)	
	2012-13 (Pro-rata)	2013-14
Gross Normative Loan	221.06	603.42
Cumulative Repayment upto Previous Yr	-	14.92
Net Loan-Opening	221.06	588.50
Addition due to Additional Capitalisation	382.36	45.51
Repayment during the year	14.92	44.74
Net Loan-Closing	588.50	589.27
Average Loan	404.78	588.88
Weighted Avg. Rate of Interest on Loan	9.0002%	8.9438%
<b>Interest</b>	<b>18.22</b>	<b>52.67</b>

### Depreciation

36. 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.”

37. 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, all 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	315.80	814.80
Additional Capital Expenditure	499.00	65.01
Closing Gross Block	814.80	879.81
Average Gross Block	565.30	847.31
Rate of Depreciation	5.2800%	5.2800%
Depreciable Value	508.77	762.57
Remaining Depreciable Value	508.77	747.65
<b>Depreciation</b>	<b>14.92</b>	<b>44.74</b>

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

38. 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

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

(₹ in lakh)	
2012-13 (Pro-rata)	2013-14
30.96	65.46

40. 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 would 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.

41. 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**

42. 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 assets covered in the petition has been worked out accordingly.

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

(₹ in lakh)

Particulars	2012-13 (Pro-rata)	2013-14
Maintenance Spares	9.29	9.82
O & M Expenses	5.16	5.46
Receivables	26.75	34.71
Total	41.20	49.99
Rate of Interest	13.50%	13.50%
<b>Interest</b>	<b>2.78</b>	<b>6.75</b>

#### Transmission Charges

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

(₹ in lakh)

Particulars	2012-13 (Pro-rata)	2013-14
Depreciation	14.92	44.74
Interest on Loan	18.22	52.67
Return on Equity	13.38	38.66
Interest on Working Capital	2.78	6.75
O & M Expenses	30.96	65.46
<b>Total</b>	<b>80.26</b>	<b>208.28</b>

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

45. 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**

46. 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**

47. 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**

48. 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.

49. This order disposes of Petition No. 105/TT/2013.

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

sd/-  
**(M. Deena Dayalan)**  
Member

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

**Annexure**

(₹ in lakh)

<b>Calculation of Weighted Average Rate of Interest on Actual Loans</b>			
	<b>Details of Loan</b>	<b>2012-13</b>	<b>2013-14</b>
<b>1</b>	<b>Bond XXXIII</b>		
	Gross loan opening	<b>30.00</b>	<b>30.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	30.00	30.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	30.00	30.00
	Average Loan	30.00	30.00
	Rate of Interest	8.64%	8.64%
	Interest	<b>2.59</b>	<b>2.59</b>
	Rep Schedule	12 Equal annual instalments from 08.07.2014	
<b>2</b>	<b>Bond XLI</b>		
	Gross loan opening	<b>0.00</b>	<b>382.36</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	0.00	382.36
	Additions during the year	382.36	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	382.36	382.36
	Average Loan	191.18	382.36
	Rate of Interest	8.85%	8.85%
	Interest	<b>16.92</b>	<b>33.84</b>
	Rep Schedule	12 Equal Annual Instalments from 19.10.2016	
<b>3</b>	<b>BOND-XXVIII</b>		
	Gross loan opening	<b>100.00</b>	<b>100.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>8.33</b>
	Net Loan-Opening	100.00	91.67
	Additions during the year	0.00	0.00
	Repayment during the year	8.33	8.33
	Net Loan-Closing	91.67	83.33
	Average Loan	95.83	87.50
	Rate of Interest	9.33%	9.33%
	Interest	<b>8.94</b>	<b>8.16</b>
	Rep Schedule	12 Equal Annual Instalments from 15.12.2012	
<b>4</b>	<b>Bond XXXIV</b>		
	Gross loan opening	<b>16.00</b>	<b>16.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	16.00	16.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	16.00	16.00
	Average Loan	16.00	16.00
	Rate of Interest	8.84%	8.84%
	Interest	<b>1.41</b>	<b>1.41</b>
	Rep Schedule	12 Equal Annual Instalments from	



		21.10.2014	
<b>5</b>	<b>Bond XXXVIII</b>		
	Gross loan opening	<b>42.00</b>	<b>42.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>	<b>0.00</b>
	Net Loan-Opening	42.00	42.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	42.00	42.00
	Average Loan	42.00	42.00
	Rate of Interest	9.250%	9.250%
	Interest	<b>3.89</b>	<b>3.89</b>
	Rep Schedule	Full payment on 09.03.2027	
	<b>Total Loan</b>		
	Gross loan opening	<b>188.00</b>	<b>570.36</b>
	Cumulative Repayment upto DOCO/previous year	0.00	8.33
	Net Loan-Opening	188.00	562.03
	Additions during the year	382.36	0.00
	Repayment during the year	8.33	8.33
	Net Loan-Closing	562.03	553.69
	Average Loan	375.01	557.86
	Rate of Interest	<b>9.0002%</b>	<b>8.9438%</b>
	<b>Interest</b>	33.75	49.89