

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 35/TT/2013**

**Coram:**

**Shri A.K. Singhal, Member  
Shri A.S. Bakshi, Member**

**Date of Hearing : 03.03.2015**

**Date of Order : 09.10.2015**

**In the matter of:**

Approval of transmission tariff for 400 kV D/C Kishenpur-Samba transmission line along with bays at both ends, 1 no. 315 MVA, 400/220 kV ICT-I along with associated bays at Samba and 3 nos. 220 kV line bays under the Northern Region System Strengthening Scheme-XXII in Northern 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 Condition) Regulations, 2009.

**And in the matter of:**

Power Grid Corporation of India Limited,  
"Saudamani", Plot No.2,  
Sector-29, Gurgaon -122 001

**.....Petitioner**

**Vs**

1. Rajasthan Rajya Vidyut Prasaran Nigam Ltd.,  
Vidyut Bhawan, Vidyut Marg,  
Jaipur- 302 005.
2. Ajmer Vidyut Vitran Nigam Ltd.,  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur.
3. Jaipur Vidyut Vitran Nigam Ltd.,  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur.
4. Jodhpur Vidyut Vitran Nigam Ltd.,  
400 kV GSS Building (Ground Floor), Ajmer Road,  
Heerapura, Jaipur.



5. Himachal Pradesh State Electricity Board,  
Vidyut Bhawan, Kumar House Complex Building II,  
Shimla-171 004.
6. Punjab State Electricity Board,  
The Mall, Patiala-147 001.
7. Haryana Power Purchase Centre,  
Shakti Bhawan, Sector-6  
Panchkula (Haryana)-134 109
8. Power Development Department,  
Govt. of Jammu and Kashmir  
Mini Secretariat, Jammu.
9. Uttar Pradesh Power Corporation Ltd.,  
Shakti Bhawan, 14, Ashok Marg,  
Lucknow-226 001.
10. Delhi Transco Ltd.,  
Shakti Sadan, Kotla Road,  
New Delhi-110 002.
11. BSES Yamuna Power Ltd.,  
Shakti Kiran Building, Karkardooma,  
Delhi-110 092.
12. BSES Rajdhani Power Ltd.,  
BSES Bhawan, Nehru Place,  
New Delhi.
13. North Delhi Power Ltd.,  
Power Trading & Load Dispatch Group,  
Cennet Building, Adjacent to 66/11kV Pitampura-3,  
Grid Building, Near PP Jewellers,  
Pitampura, New Delhi-110 034.
14. Chandigarh Administration,  
Sector-9, Chandigarh.
15. Uttarakhand Power Corporation Ltd.,  
Urja Bhawan, Kanwali Road,  
Dehradun.
16. North Central Railway,  
Allahabad.



17. New Delhi Municipal Council,  
Palika Kendra, Sansad Marg,  
New Delhi-110 002.

...Respondents

For Petitioner : Ms. Sangeeta Edwards, PGCIL  
Shri S.S. Raju, PGCIL  
Shri M.M. Mondal, PGCIL  
Shri S.K. Venkatesan, PGCIL

For Respondents : None

### **ORDER**

The instant petition has been filed by Power Grid Corporation of India Ltd. (PGCIL) for approval of the transmission tariff for 400 kV D/C Kishenpur-Samba transmission line along with bays at both ends, 1 no. 315 MVA, 400/220 kV ICT-I along with associated bays at Samba and 3 nos. 220 kV line bays (hereinafter "the Asset") under the Northern Region System Strengthening Scheme-XXII (hereinafter "the Scheme"), for the tariff block 2009-14, in terms of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter "the 2009 Tariff Regulations").

2. The investment approval for the transmission project was accorded by the Board of Directors of the petitioner company, vide Memorandum No. C/CP/NRSS-XXII, dated 15.12.2010, at an estimated cost of ₹20978 lakh, including IDC of ₹1212 lakh (based on 2<sup>nd</sup> Quarter, 2010 price level).

3. The scope of work covered under the scheme is as follows:-

### **Transmission Lines**



1. Kishenpur-Samba 400 kV D/C line (with 2xS/C Portion near Kishenpur Sub-station end)

### **Sub-Stations**

1. New 2x315 MVA, 400/220 kV Sub-station at Samba
2. Extension of 400/220 kV Kishenpur Sub-station

### **Reactive Compensation**

1. 80 MVAR Bus Reactor at Samba Sub-station

4. As per the investment approval dated 15.12.2010, the transmission asset was scheduled to be commissioned within 32 months from the date of investment approval, i.e. by 1.9.2013 and the instant asset was commissioned on 1.4.2013. Provisional tariff in respect of the above mentioned asset was approved by the Commission vide its order dated 18.3.2013, subject to adjustment as per Regulation 5 (4) of the 2009 Tariff Regulations.

5. The petitioner has submitted that as per the directions of the Commission vide RoP dated 17.3.2015 in Petition No. 47/TT/2013, it has furnished audited cost incurred upto 31.3.2014. The petitioner vide affidavit dated 5.5.2015 has filed the revised auditor certificate with revised tariff forms with revised MAT rate and floating rate. The petitioner requested to consider the revised tariff forms for fixation of transmission tariff.

6. The petitioner has claimed transmission charges for the instant asset as given overleaf:-



(₹ in lakh)

Particulars	2013-14 (revised as per affidavit dated 5.5.2015)
Depreciation	650.45
Interest on Loan	796.08
Return on Equity	761.83
Interest on working capital	78.73
O & M Expenses	538.04
<b>Total</b>	<b>2825.13</b>

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

(₹ in lakh)

Particulars	2013-14 (revised as per affidavit dated 5.5.2015)
Maintenance Spares	80.71
O & M Expenses	44.84
Receivables	470.86
<b>Total</b>	<b>596.41</b>
Rate of Interest	13.20%
Interest	78.73

8. 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. Reply has been filed only by Respondent No. 2 Ajmer Vidyut Vitran Nigam Ltd (AVVNL) vide its affidavit dated 15.4.2013. The concerns expressed by the respondent are being addressed in the respective paras of this order.

9. Having heard the representatives of the petitioner present at the hearing and perused the material on record, we proceed to dispose of the petition.



## **Capital cost**

10. 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.”

11. The petitioner has, vide affidavit dated 6.8.2013, submitted details of apportioned approved cost, actual expenditure incurred as on the date of commercial operation and additional capital expenditure incurred/projected to be incurred for the asset covered in the petition as per details given overleaf:-



(₹ in lakh)

Apportioned / approved cost	Expenditure up to COD	Projected additional capitalization from COD to 31.3.2014	Total estimated completion cost	Projected expenditure 2014-15	Total estimated expenditure
17963.36	11956.61	2689.20	14645.81	1418.21	16064.02

12. The estimated completion cost is within the approved cost. However, there is cost variation in certain heads like 139.18% in preliminary investigation, right of way, forest clearance, PTCC, general civil works etc., 40.71% in Tower Steel Material, 17.68% in Conductors, 13.31% in Hardware fittings, 37.47% in Misc. Civil Works, 80.21% in Transformers and 20.83% in Emergency D.G. Set, an amount of ₹48.24 lakh has been spent on spares while the FR cost has not been indicated. Accordingly, the petitioner was directed vide letter dated 11.10.2013, the reasons for high cost estimated at FR stage, the data for capital cost benchmarking, reasons for variation cost in some of the items. In response, the petitioner vide affidavit dated 22.10.2014 submitted that detailed computation of FR estimates including the details of assets which were considered for preparing the basis of estimates, price level at which these estimates were prepared and the indices at the time of preparation of FR, placing order and at the time of COD has been submitted. The petitioner further submitted that data for capital cost Bench marking shall be submitted at the time of truing-up. The reason for cost variation in preliminary investigation, right of way, forest clearance, PTCC, general civil works etc. is due to difference in FR cost and actual cost. As regards variation in cost of transformer, the FR cost of transformer is ₹1004.63 lakh



instead of ₹1100.66 lakh. The actual cost of transformer is ₹931.83 lakh, which is less than FR cost.

13. We have considered the submission of the petitioner. It is observed that the estimates made by the petitioner are high in case of all the assets. The petitioner has submitted that the cost variation is due to lower awarded rates received through competitive bidding. The cost variation in case of the instant assets is approved. However, the petitioner is directed to adopt a prudent procedure while estimating the cost of different elements of the transmission projects.

#### **Treatment of IDC and IEDC**

14. The instant asset was scheduled to be commissioned within 32 months from the date of investment approval i.e. by 1.9.2013 and the asset was commissioned on 1.4.2013. There is no time over-run in commissioning of the instant asset

15. During hearing on 3.3.2015, the petitioner was directed to submit reasons for consideration of 3 Nos. 220 kV line bays at Samba Sub-station and its utilization, as these bays were not included in the scope of work, approved by the petitioner's Board of Directors. In response, the petitioner has submitted, vide affidavit dated 5.5.2015, that in the investment approval the broad scope of the project are indicated, whereas the bays are not specified. It has further submitted that bays are specified in Feasibility Report (FR) and enclosed copies of FR indicating number of bays.





### **Computation of IDC**

16. The petitioner was directed to submit the details of IDC on cash basis paid up to COD. In response, the petitioner vide affidavits dated 5.5.2015 and 15.7.2015 submitted the information sought vide ROP and IDC break-up respectively. In the original petition, the petitioner has claimed IDC of ₹698.08 lakh as on COD, on accrual basis. However, vide affidavit dated 15.7.2015, the petitioner has claimed IDC of ₹416.21 lakh as on COD on cash basis and the balance amount i.e. ₹281.87 lakh (₹698.08 lakh - ₹416.21 lakh) on accrual basis. The balance amount has been claimed in the year 2013-14, which is being treated as un-discharged liability, and would be considered in tariff once it is paid subject to prudence check and submission of adequate information at the time of truing-up. However, on the basis of details of loans submitted by the petitioner, IDC on cash basis as on COD works out to ₹415.32 lakh, presuming that petitioner has not defaulted any payment of the interest on any loan, and the same has been considered for the determination of tariff. The following table shows the allowed IDC on cash basis up to COD:-

(₹ in lakh)

<b>IDC</b>		
Total IDC Claimed (Accrued Basis)	Total IDC Claimed (Cash Basis)	IDC Worked Out & being allowed (Cash Basis)
698.08	416.21	415.32

IDC so allowed will be reviewed at the time of truing up on the submission of the adequate information by the petitioner in respect of IDC. The petitioner is directed to submit the details of IDC discharged in the instant case at the time of



true up. The petitioner is also directed to confirm whether the un-discharged portion of IDC to be claimed during 2013-14 is included in the additional capital expenditure.

### **Computation of IEDC**

17. The petitioner has not submitted any supporting document in relation to the IEDC claimed. In the absence of detailed computation of IEDC, the percentage on hard cost indicated in the Abstract Cost Estimate, is considered as the allowable limit to the IEDC. In the instant petition, 10.75% of the hard cost is being taken as IEDC limit as per the abstract cost estimate and the IEDC claimed is ₹482.75 lakh, which is below 10.75% of the hard cost, as on COD. Hence, IEDC claimed by the petitioner has been considered for the purpose of tariff determination. Hence, the same has been allowed to be capitalized as on COD and the corresponding IEDC working is described below:-

(₹ in lakh)

<b>IEDC</b>		
Claimed	Worked out	Allowed for tariff
482.75	482.75	482.75

18. The petitioner is directed to submit the year-wise details of the actual IEDC incurred and paid up to COD, which would be considered at the time of truing-up on the submission of the adequate information by the petitioner.



### **Treatment of initial spares**

19. Regulation 8 of 2009 Tariff Regulations provides that initial spares shall be capitalised as a percentage of the original project cost, subject to following ceiling norms:-

Transmission line	0.75%
Transmission sub-station	2.5%
Series compensation devices & HVDC Station	3.5%

The petitioner vide affidavit dated 5.5.2015, has submitted the year-wise liability discharged corresponding to initial spares. Hence, the excess initial spares is worked out year-wise and it is observed that there are no excess initial spares claimed during 2012-13 and 2013-14. The details of the initial spares claimed and allowed are as follows:-

(₹ in lakh)

Year-Wise	Years-wise initial spares claimed, as per affidavit dated 5.5.2015	Initial spares claimed (pro-rata)*		Total initial spares
		Sub-station	Transmission	
2012-2013	45.18	35.91	45.18	45.18
2013-2014	15.42	12.26	15.42	15.42
2014-2015	-	NA	NA	NA
2015-2016	205.77	NA	NA	NA

\*The petitioner has claimed the initial spares of ₹211.70 lakh and ₹54.67 lakh for sub-station and transmission line respectively. The initial spares for 2015-16 would be considered in the next tariff period according to the 2014 Tariff Regulations.

20. The capital cost as on COD, after computing IDC, IEDC and adjustment of initial spares as on COD is as follows: -



(₹ in lakh)

Total capital cost as on COD as per Auditor's certificate dated 1.12.2014	Capital cost considered as on COD after considering IDC on cash basis and IEDC as worked out	Excess initial spares (T/L and S/S)	Total capital cost allowed for tariff calculation as on COD
11,956.61	11673.85	0.00	11673.85

Thus, capital cost of ₹11673.85 lakh has been considered as on COD for tariff purpose.

### **Projected additional capital expenditure**

21. 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.”

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”.

As per the above definition, cut-off date in respect of the transmission asset covered in the instant petition is 31.3.2015.



23. AVVNL has submitted that the petitioner has claimed the additional capital expenditure for balance and retention payments and the petitioner should confirm that all the work is completed and the completed cost within the cost indicated.

24. The additional capital expenditure amounting to ₹1986.07 lakh, claimed by the petitioner, is towards balance/retention payments for the period 2013-14 and it is admissible under Regulation 9(1) of 2009 Tariff Regulations. The additional capital expenditure claimed for the year 2014-15 shall be dealt under the 2014 Tariff Regulations.

### **Debt- equity ratio**

25. 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:

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.”

26. Details of debt-equity in respect of the asset as on the date of commercial operation are given hereunder:-

(₹ in lakh)

<b>Capital cost as on date of commercial operation</b>		
<b>Particulars</b>	<b>Amount</b>	<b>%</b>
Debt	8171.74	70.00
Equity	3502.11	30.00
<b>Total</b>	<b>11673.85</b>	<b>100.00</b>

27. Detail of debt-equity ratio of asset as on 31.3.2014 is as per details given hereunder:-

(₹ in lakh)

<b>Capital cost as on 31.3.2014</b>		
<b>Particulars</b>	<b>Amount</b>	<b>%</b>
Debt	9561.99	70.00
Equity	4097.94	30.00
<b>Total</b>	<b>13659.93</b>	<b>100.00</b>

28. Debt-equity ratio for additional capital expenditure is also 70:30.

### **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:

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

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

30. The petitioner has claimed the return on equity as per Regulation 15 of the 2009 Tariff Regulations months. The petitioner has also claimed additional return on equity @ 0.5% for commissioning the instant asset within the timeline specified in the Appendix-II of the 2009 Tariff Regulations. The timeline specified in the said Appendix for completion of 400 kV D/C (twin conductor) line is 34 months and against this the instant asset was commissioned within 27 months from the date of investment approval. AVVNL has submitted that additional return on equity of 0.5% should be allowed only if all the elements covered in the scope of the project are completed within the timeline specified in Appendix-II of the 2009 Tariff Regulations.



31. We have considered the submissions of the petitioner and respondent. In the instant case, all the elements covered in the scope of the scheme were commissioned within the timeline specified in the Appendix II of the 2009 Tariff Regulations. Accordingly, additional return on equity of 0.5% is allowed.

32. Based on the above, the return on equity considered as follows:-

(₹ in lakh)

Particulars	2013-14
Opening equity	3502.11
Addition due to additional capital expenditure	595.82
Closing equity	4097.94
Average equity	3800.02
Return on equity (Base Rate )	<b>16.00%</b>
Tax rate for the year 2008-09 (MAT) 2013-14	20.96%
Rate of Return on Equity (Pre Tax)	20.243%
<b>Return on Equity (Pre Tax)</b>	<b>769.24</b>

### Interest on loan

33. 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.”

34. 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 on actual loans have been considered as per the petition;

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



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

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

36. Based on the above, interest on loan has been calculated are given as follows:-

**(₹ in lakh)**

Particulars	2013-14
Gross Normative Loan	8171.74
Cumulative Repayment up to previous year	0.00
Net Loan-Opening	8171.74
Addition due to additional capital expenditure	1390.25
Repayment during the year	635.63
Net Loan-Closing	8926.36
Average Loan	8549.05
Weighted Average Rate of Interest on Loan	9.1090%
Interest	<b>778.74</b>

### **Depreciation**

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

“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 asset in the instant petition was commissioned on 1.4.2013 and will complete 12 years beyond 2013-14 and thus depreciation has been calculated annually, based on Straight Line Method and at rates specified in Appendix-III to the 2009 Tariff Regulations. Accordingly, depreciation has been worked out on the basis of capital expenditure as on the date of commercial operation and additional capital expenditure incurred/ projected to be incurred thereafter, wherein depreciation for the first year has been calculated on *pro-rata* basis for the part of year.

39. Based on the above, the following depreciation has been considered:-



(₹ in lakh)

Particulars	2013-14
Opening Gross Block	11673.85
Additional Capital Expenditure	1986.07
Closing Gross Block	13659.92
Average Gross Block	12666.89
Rate of Depreciation	5.0180%
Depreciable Value	10057.58
Remaining Depreciable Value	10057.58
Depreciation	<b>635.63</b>

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

40. Clause (g) of Regulation 19 of the 2009 Tariff Regulations specifies the norms for O&M Expenses based on the type of sub-station and line. Norms prescribed in respect of the elements covered in the instant petition are as given below. AVVNL has submitted that higher O&M Expenses than specified in 2009 Tariff Regulations may not be allowed:-

Element	2013-14
400 kV D/C twin conductor T/Line (₹ lakh/ km)	0.783
400 kV bay (₹ lakh/ bay)	65.46
220 kV bay (₹ lakh/ bay)	45.82

41. Accordingly, the following O&M Expenses are allowed in respect of the assets covered in this petition:-

(₹ in lakh)

Element	2013-14
35.07 km, D/C twin conductor T/Line	27.46
5 no., 400 kV bays	327.30
4 no., 220 kV bay	183.28
<b>Total O&amp;M Expenses</b>	<b>538.04</b>



42. The petitioner has submitted that O & M expenses for the period 2009-14 was 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.

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

#### **Interest on working capital**

44. 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) Maintenance Spares**

Regulation 18 (1) (c) (ii) of the 2009 Tariff Regulations provides for maintenance spares @ 15% per annum of the O&M Expenses from



1.4.2009. The value of maintenance spares has accordingly been worked out.

**(ii) O & M Expenses**

Regulation 18 (1) (c) (iii) of the 2009 Tariff Regulations provides for operation and maintenance 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.

**(iii) 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 transmission charges in the petition. In the tariff being allowed, receivables have been worked out on the basis of 2 months of transmission charges.

**(iv) Rate of interest on working capital**

As provided under the 2014 Tariff Regulations, State Bank of India Base Rate of 13.20% as on 1.4.2012 plus 350 bps has been considered for interest on working capital.

45. Necessary computations in support of interest on working capital are given overleaf:-



(₹ in lakh)

Particulars	2013-14
Maintenance Spares	80.71
O & M Expenses	44.84
Receivables	466.63
Total	592.18
Interest	78.17

### **Transmission charges**

46. The transmission charges being allowed for the assets are summarized hereunder:-

(₹ in lakh)

Particulars	2013-14
Depreciation	635.63
Interest on Loan	778.74
Return on Equity	769.24
Interest on Working Capital	78.17
O & M Expenses	538.04
Total	<b>2799.81</b>

### **Filing fee and the publication expenses**

47. 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**

48. 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 shall be entitled for reimbursement of licence fee in accordance with Regulation 42 A (1) (b) of the 2009 Tariff Regulations.

**Service tax**

49. 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. We consider petitioner's prayer premature and accordingly this prayer is rejected.

**Sharing of Transmission Charges**

50. 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.

51. This order disposes of Petition No. 35/TT/2013.

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

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

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





**Annexure****CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN****(₹ in lakh)**

<b>Details of Loan</b>		<b>2013-14</b>
<b>1</b>	<b>Bond XXXIV</b>	
	Gross loan opening	1040.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1040.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1040.00
	Average Loan	1040.00
	Rate of Interest	8.84%
	Interest	91.94
	Rep Schedule	12 annual installments from 21.10.2014
<b>2</b>	<b>Bond XXXVI</b>	
	Gross loan opening	200.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	200.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	200.00
	Average Loan	200.00
	Rate of Interest	9.35%
	Interest	18.70
	Rep Schedule	15 annual installments from 29.08.2016.
<b>3</b>	<b>Bond XXXVII</b>	
	Gross loan opening	<b>2300.00</b>
	Cumulative Repayment upto DOCO/previous year	<b>0.00</b>
	Net Loan-Opening	2300.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	2300.00
	Average Loan	2300.00
	Rate of Interest	9.25%
	Interest	212.75
	Rep Schedule	12 annual installments from 26.12.2015.
<b>4</b>	<b>Bond XL</b>	
	Gross loan opening	2500.00



	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	2500.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	2500.00
	Average Loan	2500.00
	Rate of Interest	9.30%
	Interest	232.50
	Rep Schedule	12 annual installments from 28.06.2016
<b>5</b>	<b>Bond XLII (Add. Cap. 2013-2014)</b>	
	Gross loan opening	0.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	103.32
	Repayment during the year	0.00
	Net Loan-Closing	103.32
	Average Loan	51.66
	Rate of Interest	8.80%
	Interest	4.55
	Rep Schedule	Bullet Payment as on 13.03.2023
<b>6</b>	<b>Bond XLII</b>	
	Gross loan opening	1509.63
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	1509.63
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1509.63
	Average Loan	1509.63
	Rate of Interest	8.80%
	Interest	132.85
	Rep Schedule	Bullet Payment as on 13.03.2023
<b>7</b>	<b>Bond XLIII ( Add.Cap. 2013-2014)</b>	
	Gross loan opening	0.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	538.93
	Repayment during the year	0.00
	Net Loan-Closing	538.93
	Average Loan	269.47
	Rate of Interest	7.93%
	Interest	21.37



	Rep Schedule	12 annual installments from 20.05.2017
<b>8</b>	<b>SBI (21.3.2012) - Add. Cap. 2013-2014</b>	
	Gross loan opening	0.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	748.00
	Repayment during the year	0.00
	Net Loan-Closing	748.00
	Average Loan	374.00
	Rate of Interest	10.29%
	Interest	38.49
	Rep Schedule	Half Yearly Installment from 31.8.2016
<b>9</b>	<b>Bond XLI</b>	
	Gross loan opening	820.00
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	820.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	820.00
	Average Loan	820.00
	Rate of Interest	8.85%
	Interest	72.57
	Rep Schedule	12 annual installments from 19.10.2016
	<b>Total Loan</b>	
	Gross loan opening	8369.63
	Cumulative Repayment upto DOCO/previous year	0.00
	Net Loan-Opening	8369.63
	Additions during the year	1390.25
	Repayment during the year	0.00
	Net Loan-Closing	9759.88
	Average Loan	9064.76
	Rate of Interest	<b>9.1090%</b>
	<b>Interest</b>	825.71

