

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 114/TT/2015**

**Coram:**

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

**Date of Hearing : 03.02.2016  
Date of Order : 22.02.2016**

**In the matter of:**

Truing up of transmission tariff for 2009-14 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 and determination of transmission tariff for 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for Transmission assets (Group-1) associated with 765 kV system for Central part of Northern Grid Part-II, in Northern Region under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999.

**And in the matter of:**

Power Grid Corporation of India Ltd.  
'SAUDAMINI', Plot No-2,  
Sector-29, Gurgaon -122 001 (Haryana).

.....**Petitioner**

**Versus**

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



4. Jodhpur Vidyut Vitran Nigam Limited  
400 kV GSS Building (Ground Floor), Ajmer Road  
Heerapura, Jaipur
5. Himachal Pradesh State Electricity Board,  
Vidyut Bhawan,  
Kumar House Complex Building II  
Shimla-171004
6. Punjab State Power Corporation Limited  
Thermal Shed T1 A, Near 22 Phatak  
Patiala-147001
7. Haryana Power Purchase Centre  
Shakti Bhawan, Sector-6  
Panchkula (Haryana) 134 109
8. Power Development Deptt.  
Govt. of Jammu & Kashmir  
Mini Secretariat, Jammu
9. Uttar Pradesh Power Corporation Limited  
Shakti Bhawan, 14, Ashok Marg  
Lucknow- 226001
10. Delhi Transco Limited  
Shakti Sadan, Kotla Road  
New Delhi- 110002
11. BSES Yamuna Power Limited  
BSES Bhawan, Nehru Place  
New Delhi
12. BSES Rajdhani Power Limited  
BSES Bhawan, Nehru Place  
New Delhi
13. North Delhi Power Limited  
Power Trading & Load Dispatch Group  
Cennet Building  
Pitampura, New Delhi-110034
14. Chandigarh Administration  
Sector-9, Chandigarh
15. Uttarakhand Power Corporation Limited  
Urja Bhawan, Kanwali Road  
Dehradun



16. North Central Railway  
Allahabad

17. New Delhi Municipal Council  
Palika Kendra, Sansad Marg  
New Delhi-110002

.....Respondents

The following were present:-

For Petitioner: Shri M. M. Mondal, PGCIL  
Shri Rakesh Prasad, PGCIL  
Smt Sangeeta Edwards, PGCIL  
Shri S. S. Raju, PGCIL  
Shri S. C. Taneja, PGCIL

For Respondent: Shri B L Sharma, Rajasthan Discoms

### **ORDER**

The present petition has been filed by Power Grid Corporation of India Ltd. ("the petitioner"), for truing up of capital expenditure under Regulation 6 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as "the 2009 Tariff Regulations") based on actual capital expenditure for the period 1.6.2012 to 31.3.2014 and for determination of tariff under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations") for the period from 1.4.2014 to 31.3.2019 for Transmission assets (Group-1) associated with 765 kV system for Central part of Northern Grid Part-II, in Northern Region (hereinafter referred as "transmission asset").



2. The respondents are mostly distribution licensees who are procuring transmission service from the petitioner, mainly beneficiaries of the Northern Region , transmission licensees and central power purchase entities of States

3. The petitioner has served the petition to the respondents and notice of this application has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003 (“the Act”). No comments have been received from the public in response to the notices published by the petitioner under Section 64 of the Act. The hearing in this matter was held on 3.2.2016. Reply has been filed by Respondents No. 2, 3 & 4, i.e. Ajmer Vidyut Vitran Nigam Ltd., Jaipur Vidyut Vitran Nigam Ltd. and Jodhpur Vidyut Vitran Nigam Ltd. vide affidavit dated 22.6.2015. The concerns expressed by respondents are being addressed in the respective paras of this order. In response to additional information sought vide communication dated 30.1.2016, the petitioner has submitted its replies vide affidavit dated 18.2.2016.

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

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

(a) The assets covered in the instant asset are as follows:-

| <b>Sr.No</b> | <b>Assets</b>  | <b>Referred as Asset Name</b> |
|--------------|--|-------------------------------|
| 1            | 765/400 kV, 1500 MVA (3x500) ICT-II along with 765 and 400 kV bays at Moga Sub-station | Asset-1                       |
| 2            | 765 kV Moga-Bhiwani line bays along with 240 MVAR Line Reactor at Moga Sub-station     | Asset-2                       |
| 3            | 765 kV 240 MVAR (3x80) Bus Reactor-I along with associated bays at Moga Sub-station    | Asset-3                       |
| 4            | 765 kV 240 MVAR (3x80) Bus Reactor-II along with                                       | Asset-4                       |



|   |   |         |
|---|---|---------|
|   | associated bays at Moga Sub-station   |         |
| 5 | 765/400 kV, 1500 MVA (3x500) ICT-I along with 765 and 400 kV bays at Moga Sub-station | Asset-5 |

- (b) The investment approval for the project was accorded by Board of Directors of the petitioner company vide letter dated 30.7.2009 bearing no. C/CP/765 kV at an estimated cost of ₹173636 lakh, which included IDC of ₹11662 lakh. The petitioner has developed the transmission asset in the Northern Region.
- (c) As per investment approval, accorded on 30.7.2009, the transmission project was to be commissioned within 30 months from the date of investment approval i.e. by 1.2.2012. The Asset-1 to 4 and Asset-5 was put under the commercial operation on 1.6.2012 and 1.9.2012 respectively after a delay of 4 months and 7 months. The Commission has condoned this delay in order dated 31.10.2014 in Petition No. 77/2012 on account of delay in land acquisition.
- (d) The tariff from 1.6.2012 to 31.3.2014 for Asset-1 to 4 and from 1.9.2012 to 31.3.2014 for Asset-5 was allowed vide order dated 31.10.2014 in Petition No. 77/2012 in accordance with the 2009 Tariff Regulations. The tariff allowed for Asset-1 to 4 and Asset-5 for the tariff period 2009-14 is as under:-

| Particulars                 | (₹ in lakh)           |         |                       |         |
|-----------------------------|-----------------------|---------|-----------------------|---------|
|                             | Asset-1 to 4          |         | Asset-5               |         |
|                             | 2012-13<br>(Pro-rata) | 2013-14 | 2012-13<br>(Pro-rata) | 2013-14 |
| Depreciation                | 982.49                | 1330.93 | 247.56                | 490.39  |
| Interest on Loan            | 1213.85               | 1538.03 | 310.07                | 579.32  |
| Return on equity            | 1015.74               | 1371.43 | 257.02                | 506.96  |
| Interest on Working Capital | 96.74                 | 126.53  | 23.54                 | 44.97   |



| Particulars    | Asset-1 to 4          |                | Asset-5               |                |
|----------------|-----------------------|----------------|-----------------------|----------------|
|                | 2012-13<br>(Pro-rata) | 2013-14        | 2012-13<br>(Pro-rata) | 2013-14        |
| O & M Expenses | 412.77                | 523.66         | 86.68                 | 157.10         |
| <b>Total</b>   | <b>3721.58</b>        | <b>4890.58</b> | <b>924.87</b>         | <b>1778.73</b> |

- (e) The Commission, vide order dated 31.10.2014 in Petition No. 77/2012, has determined the tariff for Asset-1 to 4 and Asset-5 for the tariff period 2009-14 considering the capital cost of ₹21222.25 lakh and ₹7555.03 lakh as on COD. The capital cost was considered after examination of the cost variation of the individual items and prudence check.
- (f) The MAT rate applicable as on 2008-09 was considered to arrive at rate of return on equity for the tariff period 2009-14, which is required to be adjusted as per the actual MAT rate applicable for the respective year at the time of truing up of tariff for 2009-14 tariff period.
- (g) The instant petition was filed by the petitioner on 17.4.2015 for determination of tariff.

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

6. The truing up of tariff for 2009-14 tariff period has been determined based on actual capital cost and additional capital expenditure during 2009-14 tariff period.

7. Respondents No. 2, 3 & 4, i.e. Ajmer Vidyut Vitran Nigam Ltd., Jaipur Vidyut Vitran Nigam Ltd. and Jodhpur Vidyut Vitran Nigam Ltd. have submitted that the revised transmission tariff as submitted by the petitioner for both the assets for tariff period 2009-14 in Para 10 is on higher side as compared to the



tariff approved by the Commission. Thus, the Commission has been requested to thoroughly scrutinize the expenses claimed by the petitioner.

### **Capital Cost**

8. The petitioner has claimed revised capital cost of ₹21484.20 lakh for Asset-1 to 4 and ₹7532.74 lakh for Asset-5 as on COD for the purpose of tariff.

9. Clause (1) of 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 funds 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.”

10. The petitioner was directed to furnish the justification for claiming revised capital cost as on COD for the assets. In response, the petitioner vide affidavit dated 18.2.2016, has submitted that the IDC and IEDC which was based on Management Certificate has undergone changed after audit for the year 2012-13. Further submitted that allocation of IDC/IEDC was done on estimated basis for assets commissioned during the year and was finalized after the audit. The



petitioner has submitted the Auditor's Certificate certifying the capital cost and additional capitalization claimed. The revised capital cost of ₹21484.20 lakh has been considered as on COD for tariff computation from 1.6.2012 to 31.3.2014 for Asset-1 to 4. Further the revised capital cost of ₹7532.74 lakh has been considered as on COD for tariff computation from 1.9.2012 to 31.3.2014 for Asset-5.

### **Initial Spares**

11. Regulation 8 of the 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%” |

12. Regulation 3(29) of the 2009 Tariff Regulations provides that:-

“(29) ‘**original project cost**’ means the capital expenditure incurred by the generating company or the transmission licensee, as the case may be, within the original scope of the project up to the cut-off date as admitted by the Commission;”

13. The petitioner has claimed cost of initial spares of 1.87% and 2.15% for Asset-1 to 4 and Asset-5 respectively for Sub-station which is within the ceiling norm of 2.50% as specified in the 2009 Tariff Regulations. We have considered the same for tariff computation.

### **Additional Capital Expenditure**

14. The petitioner has claimed additional capitalization under Regulation 9(1)(i) of the 2009 Tariff Regulations.





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

**“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; “

16. The petitioner has claimed additional capitalization of ₹3130.20 and ₹1661.14 lakh for 2012-13 and 2013-14 respectively towards balance and retention payment for Asset-1 to 4. Further, the petitioner has claimed additional capitalization of ₹1378.24 lakh and ₹507.05 lakh for 2012-13 and 2013-14 respectively for Asset-5 towards balance and retention payment.

17. The total capital cost of ₹26275.54 lakh for Asset-1 to 4 including actual additional capitalisation claimed by the petitioner is well within the approved apportioned cost of ₹34360.45 lakh. Further, the total capital cost of ₹9418.03 lakh for Asset-5 including actual additional capitalisation claimed by the petitioner is well within the overall approved apportioned cost of ₹14411.21 lakh Hence, considering the submissions made by the petitioner, we have allowed total capital cost including additional capitalization under Regulation 9(1)(i) of the 2009 Tariff Regulations as shown in the table below:-

(₹ in lakh)

| <b>Cost as per Investment Approval is ₹34360.45 lakh</b> |                   |                       |         |         |               |                                    |
|--|-------------------|-----------------------|---------|---------|---------------|------------------------------------|
| Particulars  | Name of the asset | Capital cost upto COD | 2012-13 | 2013-14 | Total add cap | Total capital cost as on 31.3.2014 |
| Approved in order dated 31.10.2014                       | Asset-1 to 4      | 21222.25              | 4039.70 | 1777.82 | 5817.52       | 27039.77                           |
| Allowing in this order                                   |                   | 21484.20              | 3130.20 | 1661.14 | 4791.34       | 26275.54                           |



| <b>Cost as per Investment Approval is ₹14411.21 lakh</b> |                   |                       |         |         |               |                                    |
|--|-------------------|-----------------------|---------|---------|---------------|------------------------------------|
| Particulars  | Name of the asset | Capital cost upto COD | 2012-13 | 2013-14 | Total add cap | Total capital cost as on 31.3.2014 |
| Approved in order dated 31.10.2014                       | Asset-5           | 7555.03               | 1693.11 | 837.36  | 2530.47       | 10085.50                           |
| Allowing in this order                                   |                   | 7532.74               | 1378.24 | 507.05  | 1885.29       | 9418.03                            |

### **Debt: Equity**

18. Clause 1 & 3 of Regulation 12 of the 2009 Tariff Regulations provides that:-

“(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.

.....

(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.”

19. The petitioner has claimed true up Annual Fixed Charge based on debt-equity ratio of 70:30 admitted as on 1.6.2012 and 1.9.2012, by the Commission in its order dated 31.10.2014 in Petition No. 77/2012 for Asset-1 to 4 and Asset-5 respectively. The admitted debt:equity ratio of 70:30 as on 1.6.2012 for Asset-1 to 4 and 1.9.2012 for Asset-5 has been considered for the purpose of trueing up of the approved tariff of tariff period 2009-14, as given under:-

| Funding (Asset-1 to 4) | Amount (in ₹ lakh) | (%)           |
|------------------------|--------------------|---------------|
| Debt                   | 15038.94           | 70.00         |
| Equity                 | 6445.26            | 30.00         |
| <b>Total</b>           | <b>21484.20</b>    | <b>100.00</b> |

| Funding (Asset-5) | Amount (in ₹ lakh) | (%)           |
|-------------------|--------------------|---------------|
| Debt              | 5272.92            | 70.00         |
| Equity            | 2259.82            | 30.00         |
| <b>Total</b>      | <b>7532.74</b>     | <b>100.00</b> |

20. With respect to additional capitalization, the petitioner has submitted the debt:equity ratio of 70:30 for 2012-13 and 2013-14 for Asset-1 to 4 and Asset-5. The petitioner was directed to confirm that the actual equity infused for additional capitalization during the 2009-14 tariff period is not less than 30%. In response, the petitioner vide affidavit dated 18.2.2016, has submitted that actual loan deployed for all the years are at 70% and the balance amount has been deployed as equity which is 30% of the expenditure. The overall debt equity as on 31.3.2014 for Asset-1 to 4 and Asset-5 including additional capitalization is as under:-

| Funding (Asset-1 to 4) | Amount (in ₹ lakh) | (%)           |
|------------------------|--------------------|---------------|
| Debt                   | 18392.88           | 70.00         |
| Equity                 | 7882.66            | 30.00         |
| <b>Total</b>           | <b>26275..54</b>   | <b>100.00</b> |

| Funding (Asset-5) | Amount (in ₹ lakh) | (%)           |
|-------------------|--------------------|---------------|
| Debt              | 6592.63            | 70.00         |
| Equity            | 2825.40            | 30.00         |
| <b>Total</b>      | <b>9418.03</b>     | <b>100.00</b> |

### **Interest on Loan (“IOL”)**

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

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

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

23. We have considered the submissions of the petitioner and accordingly calculated the IOL based on actual interest rate submitted by the petitioner, in accordance with Regulation 16 of the 2009 Tariff Regulations. The details of weighted average rate of interest are placed at **Annexure-I** and the IOL has been worked out and allowed as follows:-

(₹ in lakh)

| Particulars                          | Asset-1 to 4          |         | Asset-5               |         |
|--------------------------------------|-----------------------|---------|-----------------------|---------|
|                                      | 2012-13<br>(pro-rata) | 2013-14 | 2012-13<br>(pro-rata) | 2013-14 |
| Approved vide order dated 31.10.2014 | 1213.85               | 1538.03 | 310.07                | 579.32  |
| As claimed by petitioner             | 1190.29               | 1469.04 | 304.42                | 552.14  |
| Allowed after true up                | 1190.29               | 1469.05 | 304.42                | 552.15  |

24. The variation in Interest on loan is on account of variation in actual weighted average interest rate, capital cost as on COD and additional capitalization for 2009-14 tariff period.

### **Return on Equity (“ROE”)**

25. Clause (3), (4) and (5) of Regulation 15 of the 2009 Tariff Regulations provide that:-

“(3) The rate of return on equity shall be computed by grossing up the base rate with the Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as per the Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be.



(4) Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below:

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

Where “t” is the applicable tax rate in accordance with clause (3) of this regulation.

(5) The generating company or the transmission licensee, as the case maybe, shall recover the shortfall or refund the excess Annual Fixed Charge on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission:

Provided further that Annual Fixed Charge with respect to the tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations.”

26. The petitioner has submitted that MAT rate of 11.330% applicable for 2008-09 was considered in the order dated 31.10.2014 However, for truing up purpose, the computation of RoE for the tariff period 2009-14 has been done on the basis of actual MAT rate applicable during 2009-14. The petitioner has submitted the variation in the MAT rate during 2009-14 as per the Finance Act of the relevant year for the purpose of grossing up of ROE, as below:-

| Particulars | MAT Rate (t)<br>% | Grossed up ROE<br>(Base rate/(1-t)) % |
|-------------|-------------------|---------------------------------------|
| 2012-13     | 20.008            | 19.377                                |
| 2013-14     | 20.961            | 19.610                                |

27. Accordingly, ROE as allowed for Asset-1 to 4 and Asset-5 is shown in the table below:-



(₹ in lakh)

| Particulars                          | Asset-1 to 4          |         | Asset-5               |         |
|--------------------------------------|-----------------------|---------|-----------------------|---------|
|                                      | 2012-13<br>(pro-rata) | 2013-14 | 2012-13<br>(pro-rata) | 2013-14 |
| Approved vide order dated 31.10.2014 | 1015.74               | 1371.43 | 257.02                | 506.96  |
| As claimed by petitioner             | 1116.57               | 1496.93 | 278.80                | 539.15  |
| Allowed after true up                | 1116.57               | 1496.93 | 278.80                | 539.15  |

The variation in return on equity is on account of variation in capital cost as on COD, additional capitalization for 2009-14 tariff period and increase in the applicable MAT rate for the purpose of grossing up of base rate of return on equity.

### **Depreciation**

28. Clause (42) of Regulation 3 of the 2009 Tariff Regulations defines useful life as follows:-

“**useful life**’ in relation to a unit of a generating station and transmission system from the COD shall mean the following, namely:-

|                              |           |
|------------------------------|-----------|
| .....                        |           |
| (c) AC and DC sub-station    | 25 years  |
| (d) Hydro generating station | 35 years  |
| (e) Transmission line        | 35 years” |

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

#### **"17. Depreciation:**

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

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



30. The Commission, in its order dated 31.10.2014 in Petition No. 77/2012, has worked out the depreciation in accordance with Regulation 17 of the 2009 Tariff Regulations.

31. The weighted average useful life of the transmission asset has been considered as per Regulations 3 (42) and 17 (4) of the 2009 Tariff Regulations. For the purpose of calculation, the weighted average useful life of the asset has been considered as 25 years for Asset-1 to 4 & Asset-5. The depreciation for the tariff period 2009-14 has been worked out in accordance with Regulation 17 of the 2009 Tariff Regulations based on admitted capital expenditure as under.

| (₹ in lakh)                          |                       |         |                       |         |
|--------------------------------------|-----------------------|---------|-----------------------|---------|
| Particulars                          | Asset-1 to 4          |         | Asset-5               |         |
|                                      | 2012-13<br>(pro-rata) | 2013-14 | 2012-13<br>(pro-rata) | 2013-14 |
| Approved vide order dated 31.10.2014 | 982.49                | 1330.93 | 247.56                | 490.39  |
| As claimed by petitioner             | 974.64                | 1294.48 | 242.27                | 464.83  |
| Allowed after true up                | 974.64                | 1294.48 | 242.27                | 464.83  |

The variation in depreciation is on account of variation in capital cost as on COD and additional capitalization for 2009-14 tariff period.

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

32. The petitioner has computed O&M expenses for the assets mentioned in the petition and in accordance with the O&M norms for lines and bays specified in Regulation 19(g) of the 2009 Tariff Regulations. The O&M Expenses claimed by the petitioner for Asset-1 to 4 & Asset-5 are same as that approved in the tariff orders. Accordingly, the O&M Expenses claimed by the petitioner, allowed and trued up are as follows:-

(₹ in lakh)

| Particulars                          | Asset-1 to 4          |         | Asset-5               |         |
|--------------------------------------|-----------------------|---------|-----------------------|---------|
|                                      | 2012-13<br>(pro-rata) | 2013-14 | 2012-13<br>(pro-rata) | 2013-14 |
| Approved vide order dated 31.10.2014 | 412.77                | 523.66  | 86.68                 | 157.10  |
| As claimed by petitioner             | 412.77                | 523.66  | 86.68                 | 157.10  |
| Allowed after true up                | 412.77                | 523.66  | 86.68                 | 157.10  |

### **Interest on working capital (“IWC”)**

33. Sub-clause (c) of clause (1) of Regulation 18 of the 2009 Tariff Regulations provides the components of the working capital for the transmission system and clause (3) of Regulation 18 of the 2009 Tariff Regulations provides for the rate of interest of working capital.

34. The petitioner has submitted that the rate of interest on working capital has been considered as 13.50% for Asset-1 to 4 and Asset-5 as per clause (3)(ii) of Regulation 18 of the 2009 Tariff Regulations (Second Amendment), and the components of working capital are also considered in accordance with Sub-clause (c) of clause (1) of Regulation 18 of the 2009 Tariff Regulations.

35. In accordance with Clause (3)(ii) of Regulation 18 of the 2009 Tariff Regulations (Second Amendment), rate of interest on working capital shall be on normative basis and in case of transmission assets declared under commercial operation after 1.7.2010 shall be equal to SBI Base Rate plus 350 basis points as on 1<sup>st</sup> April of the year in which the transmission asset was declared under commercial operation. State Bank of India Base Rate as on 1.4.2012 was 10.00%. Therefore, interest rate of 13.50% for Asset-1 to 4 and Asset-5 has been considered to work out the interest on working capital in the instant case.





36. The IWC trued up is as under:-

(₹ in lakh)

| Particulars          | 2012-13<br>(Pro-rata) | 2013-14       | 2012-13<br>(Pro-rata) | 2013-14      |
|----------------------|-----------------------|---------------|-----------------------|--------------|
|                      | Asset-1 to 4          |               | Asset-5               |              |
| Maintenance Spares   | 61.92                 | 78.55         | 13.00                 | 23.57        |
| O & M expenses       | 34.40                 | 43.64         | 7.22                  | 13.09        |
| Receivables          | 632.10                | 818.52        | 155.99                | 292.95       |
| Total                | 728.41                | 940.71        | 176.22                | 329.61       |
| Rate of Interest (%) | 13.50                 | 13.50         | 13.50                 | 13.50        |
| <b>Interest</b>      | <b>98.34</b>          | <b>127.00</b> | <b>23.79</b>          | <b>44.50</b> |

(₹ in lakh)

| Particulars                          | Asset-1 to 4          |         | Asset-5               |         |
|--------------------------------------|-----------------------|---------|-----------------------|---------|
|                                      | 2012-13<br>(pro-rata) | 2013-14 | 2012-13<br>(pro-rata) | 2013-14 |
| Approved vide order dated 31.10.2014 | 96.74                 | 126.53  | 23.54                 | 44.97   |
| As claimed by petitioner             | 98.33                 | 127.00  | 23.79                 | 44.50   |
| Allowed after true up                | 98.34                 | 127.00  | 23.79                 | 44.50   |

37. The variation in IWC is on account of variation in IOL, Depreciation and ROE due to variation in Capital Cost, additional capitalisation and further increase in ROE on account of applicable MAT rate during 2009-14 tariff period.

### **ANNUAL FIXED CHARGES FOR 2009-14 TARIFF PERIOD**

38. The detailed computation of the various components of the trued up annual fixed charges for Asset-1 to 4 & Asset-5 for the tariff period 2009-14 is summarised below:-

(₹ in lakh)

| Particulars               | Asset-1 to 4          |          | Asset-5               |         |
|---------------------------|-----------------------|----------|-----------------------|---------|
|                           | 2012-13<br>(Pro-rata) | 2013-14  | 2012-13<br>(Pro-rata) | 2013-14 |
| <b>Gross Block</b>        |                       |          |                       |         |
| Gross Opening Block       | 21484.20              | 24614.40 | 7532.74               | 8910.98 |
| Additional Capitalisation | 3130.20               | 1661.14  | 1378.24               | 507.05  |
| Gross Closing Block       | 24614.40              | 26275.54 | 8910.98               | 9418.03 |
| Average Gross Block       | 23049.30              | 25444.97 | 8221.86               | 9164.51 |
|                           |                       |          |                       |         |
| <b>Depreciation</b>       |                       |          |                       |         |
| Rate of Depreciation (%)  | 5.074                 | 5.087    | 5.051                 | 5.072   |

| Particulars                                   | Asset-1 to 4          |          | Asset-5               |         |
|---|-----------------------|----------|-----------------------|---------|
|   | 2012-13<br>(Pro-rata) | 2013-14  | 2012-13<br>(Pro-rata) | 2013-14 |
| Depreciable Value                             | 20070.45              | 22214.35 | 7130.11               | 7978.49 |
| Elapsed Life (Beginning of the year)          | 0                     | 1        | 0                     | 1       |
| Weighted Balance Useful life of the assets    | 25                    | 24       | 25                    | 24      |
| Remaining Depreciable Value                   | 20070.45              | 21239.71 | 7130.11               | 7736.22 |
| Depreciation                                  | 974.64                | 1294.48  | 242.27                | 464.83  |
|   |                       |          |                       |         |
| <b>Interest on Loan</b>                       |                       |          |                       |         |
| Gross Normative Loan                          | 15038.94              | 17230.08 | 5272.92               | 6237.69 |
| Cumulative Repayment upto Previous Year       | 0.00                  | 974.64   | 0.00                  | 242.27  |
| Net Loan-Opening                              | 15038.94              | 16255.44 | 5272.92               | 5995.42 |
| Additional Capitalisation                     | 2191.14               | 1162.80  | 964.77                | 354.94  |
| Repayment during the year                     | 974.64                | 1294.48  | 242.27                | 464.83  |
| Net Loan-Closing                              | 16255.44              | 16123.76 | 5995.42               | 5885.53 |
| Average Loan                                  | 15647.19              | 16189.60 | 5634.17               | 5940.48 |
| Weighted Average Rate of Interest on Loan (%) | 9.1285                | 9.0740   | 9.2625                | 9.2947  |
| Interest                                      | 1190.29               | 1469.05  | 304.42                | 552.15  |
|   |                       |          |                       |         |
| <b>Return on Equity</b>                       |                       |          |                       |         |
| Opening Equity                                | 6445.26               | 7384.32  | 2259.82               | 2673.29 |
| Additional Capitalisation                     | 939.06                | 498.34   | 413.47                | 152.11  |
| Closing Equity                                | 7384.32               | 7882.66  | 2673.29               | 2825.40 |
| Average Equity                                | 6914.79               | 7633.49  | 2466.56               | 2749.35 |
| Return on Equity (Base Rate) (%)              | 15.50                 | 15.50    | 15.50                 | 15.50   |
| MAT rate for the year (%)                     | 20.008                | 20.961   | 20.008                | 20.961  |
| Rate of Return on Equity (Pre Tax) (%)        | 19.377                | 19.610   | 19.377                | 19.610  |
| Return on Equity (Pre Tax)                    | 1116.57               | 1496.93  | 278.80                | 539.15  |
|   |                       |          |                       |         |
| <b>Interest on Working Capital</b>            |                       |          |                       |         |
| Maintenance Spares                            | 61.92                 | 78.55    | 13.00                 | 23.57   |
| O & M expenses                                | 34.40                 | 43.64    | 7.22                  | 13.09   |
| Receivables                                   | 632.10                | 818.52   | 155.99                | 292.95  |
| Total   | 728.41                | 940.71   | 176.22                | 329.61  |
| Interest                                      | 98.34                 | 127.00   | 23.79                 | 44.50   |
|   |                       |          |                       |         |
| <b>Annual Transmission Charges</b>            |                       |          |                       |         |
| Depreciation                                  | 974.64                | 1294.48  | 242.27                | 464.83  |
| Interest on Loan                              | 1190.29               | 1469.05  | 304.42                | 552.15  |



| Particulars                 | Asset-1 to 4          |                | Asset-5               |                |
|-----------------------------|-----------------------|----------------|-----------------------|----------------|
|                             | 2012-13<br>(Pro-rata) | 2013-14        | 2012-13<br>(Pro-rata) | 2013-14        |
| Return on Equity            | 1116.57               | 1496.93        | 278.80                | 539.15         |
| Interest on Working Capital | 98.34                 | 127.00         | 23.79                 | 44.50          |
| O & M Expenses              | 412.77                | 523.66         | 86.68                 | 157.10         |
| <b>Total</b>                | <b>3792.60</b>        | <b>4911.12</b> | <b>935.96</b>         | <b>1757.72</b> |

### **DETERMINATION OF ANNUAL TRANSMISSION CHARGES FOR 2014-19**

39. Respondents No. 2, 3 & 4, i.e. Ajmer Vidyut Vitran Nigam Ltd., Jaipur Vidyut Vitran Nigam Ltd. and Jodhpur Vidyut Vitran Nigam Ltd. have submitted that various components of tariff such as O&M expense, interest on working capital, etc. should be checked prudently and allowed only as per the norms mentioned in the 2014 Tariff Regulation while determination of tariff for 2014-19 tariff period.

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

| (₹ in lakh)                 |                |                |                |                |                |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|
| Particulars                 | 2014-15        | 2015-16        | 2016-17        | 2017-18        | 2018-19        |
| Depreciation                | 1889.43        | 1963.88        | 1963.88        | 1963.88        | 1963.88        |
| Interest on Loan            | 2061.59        | 2020.21        | 1839.77        | 1659.22        | 1479.86        |
| Return on equity            | 2222.81        | 2345.77        | 2345.77        | 2345.77        | 2345.77        |
| Interest on Working Capital | 176.75         | 181.49         | 178.53         | 175.60         | 172.74         |
| O & M Expenses              | 627.12         | 647.92         | 669.46         | 691.68         | 714.62         |
| <b>Total</b>                | <b>6977.70</b> | <b>7159.27</b> | <b>6997.41</b> | <b>6836.15</b> | <b>6676.87</b> |

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

| (₹ in lakh)          |               |               |               |               |               |
|----------------------|---------------|---------------|---------------|---------------|---------------|
| Particulars          | 2014-15       | 2015-16       | 2016-17       | 2017-18       | 2018-19       |
| Maintenance Spares   | 94.07         | 97.19         | 100.42        | 103.75        | 107.19        |
| O & M expenses       | 52.26         | 53.99         | 55.79         | 57.64         | 59.55         |
| Receivables          | 1162.95       | 1193.21       | 1166.24       | 1139.36       | 1112.81       |
| Total                | 1309.28       | 1344.39       | 1322.45       | 1300.75       | 1279.55       |
| Rate of Interest (%) | 13.50         | 13.50         | 13.50         | 13.50         | 13.50         |
| <b>Interest</b>      | <b>176.75</b> | <b>181.49</b> | <b>178.53</b> | <b>175.60</b> | <b>172.74</b> |



### **Capital Cost**

42. Clause (1) & (3) of Regulation 9 of the 2014 Tariff Regulations specify as follows:-

“(1) The Capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects.”

“(3) The Capital cost of an existing project shall include the following:

- (a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;
- (b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and
- (c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15.”

43. The petitioner has claimed capital expenditure of ₹35693.57 lakh as on 31.3.2014 for the tariff period 2014-19. The trued up capital cost of ₹35693.57 lakh as on 31.3.2014 as admitted by the Commission is considered as opening capital cost as on 1.4.2014 to work out the tariff for tariff period 2014-19.

### **Additional Capital Expenditure**

44. The petitioner has projected additional capitalization of ₹4180.18 lakh for 2014-19 tariff period towards balance and retention payments under Regulation 14(1)(i) of the 2014 Tariff Regulations. The petitioner was directed to confirm that the amount of balance and retention payment yet to be made along with the details of contract for which the payment has been retained. In response, the petitioner vide affidavit dated 18.2.2016 submitted the contractor-wise details of balance and retention payment to be made during 2014-19 for Combined Asset-1 to 4 and Asset-5.



45. As the total Capital Cost including additional capitalisation during 2014-19 period is well within the approved apportioned cost, we have allowed additional capitalization of ₹4180.18 lakh for 2014-19 tariff period towards balance and retention payments under Regulation 14(1)(i) of 2014 Tariff Regulations and have considered the same for tariff computation.

| Particulars | Admitted capital cost as on 31.3.2014 | Additional capitalisation projected |         |         |         |         | Total additional capitalisation | Total capital cost including additional capitalisation as on 31.3.2019 |
|-------------|---------------------------------------|-------------------------------------|---------|---------|---------|---------|---------------------------------|--|
|             |                                       | 2014-15                             | 2015-16 | 2016-17 | 2017-18 | 2018-19 |                                 |  |
| Approved    | 35693.57                              | 4180.18                             | 0.00    | 0.00    | 0.00    | 0.00    | 4180.18                         | 39873.75   |

### **Debt:Equity Ratio**

46. Clause 3 of Regulation 19 of the 2014 Tariff Regulations specifies as under:-

“(3) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2014, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.”

47. The petitioner has considered debt:equity ratio as 70:30 as on 31.3.2014. The admitted debt:equity ratio of 70:30 after true-up for the tariff period ending 31.3.2014 has been considered as opening debt:equity ratio as on 1.4.2014. Further, we have considered debt:equity ratio of 70:30 for additional capitalization during 2014-15. The details of the debt:equity considered for the purpose of tariff for 2014-19 tariff period is as follows:-

| Particulars  | As on 1.4.2014     |               | Additional capitalization during 2014-15 |               | As on 31.3.2019    |               |
|--------------|--------------------|---------------|--|---------------|--------------------|---------------|
|              | Amount (in ₹ lakh) | (%)           | Amount (in ₹ lakh)                       | (%)           | Amount (in ₹ lakh) | (%)           |
| Debt         | 24985.51           | 70.00         | 2926.13                                  | 70.00         | 27911.64           | 70.00         |
| Equity       | 10708.06           | 30.00         | 1254.05                                  | 30.00         | 11962.11           | 30.00         |
| <b>Total</b> | <b>35693.57</b>    | <b>100.00</b> | <b>4180.18</b>                           | <b>100.00</b> | <b>39873.75</b>    | <b>100.00</b> |

### **Interest on Loan (“IOL”)**

48. Clause (5) & (6) of Regulation 26 of the 2014 Tariff Regulations are reproduced as under:-

“(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:

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

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

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

49. The weighted average rate of IOL has been considered on the basis of rate prevailing as on 1.4.2014. The IOL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of weighted average rate of interest are placed at **Annexure-II** and the IOL has been worked out and allowed as follows:-

| Particulars                                 | (₹ in lakh) |          |          |          |          |
|---|-------------|----------|----------|----------|----------|
|   | 2014-15     | 2015-16  | 2016-17  | 2017-18  | 2018-19  |
| Gross loan opening                          | 24985.51    | 27911.64 | 27911.64 | 27911.64 | 27911.64 |
| Cumulative Repayment upto COD/previous year | 2976.22     | 4865.64  | 6829.51  | 8793.39  | 10757.26 |
| Net Loan-Opening                            | 22009.29    | 23046.00 | 21082.13 | 19118.25 | 17154.38 |
| Additions during the year                   | 2926.13     | 0.00     | 0.00     | 0.00     | 0.00     |
| Repayment during the year                   | 1889.42     | 1963.87  | 1963.87  | 1963.87  | 1963.87  |



| Particulars          | 2014-15        | 2015-16        | 2016-17        | 2017-18        | 2018-19        |
|----------------------|----------------|----------------|----------------|----------------|----------------|
| Net Loan-Closing     | 23046.00       | 21082.13       | 19118.25       | 17154.38       | 15190.51       |
| Average Loan         | 22527.65       | 22064.06       | 20100.19       | 18136.32       | 16172.44       |
| Rate of Interest (%) | 9.1514         | 9.1561         | 9.1531         | 9.1486         | 9.1505         |
| <b>Interest</b>      | <b>2061.59</b> | <b>2020.21</b> | <b>1839.78</b> | <b>1659.22</b> | <b>1479.86</b> |

### **Return on Equity (“ROE”)**

50. Clause (1) & (2) of Regulation 24 and Clause (2) of Regulation 25 of the 2014 Tariff Regulations specify as under:-

**“24. Return on Equity:** (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.  
(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system”

**“25. Tax on Return on Equity:**

(2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where “t” is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess.”

51. The petitioner has computed ROE at the rate of 19.610% after grossing up the ROE of 15.50% with MAT rate as per the above Regulation. The petitioner has further submitted that the grossed up ROE is subject to truing up based on the actual tax paid along with any additional tax or interest, duly adjusted for any refund of tax including the interest received from IT authorities, pertaining to the tariff period 2014-19 on actual gross income of any financial year. Any under-recovery or over-recovery of grossed up ROE after truing up shall be recovered or refunded to the beneficiaries on year to year basis.



52. The petitioner has further submitted that adjustment due to any additional tax demand including interest duly adjusted for any refund of the tax including interest received from IT authorities shall be recoverable/adjustable after completion of income tax assessment of the financial year.

53. We have considered the submissions made by the petitioner. Regulation 24 read with Regulation 25 of the 2014 Tariff Regulations provides for grossing up of return on equity with the effective tax rate for the purpose of return on equity. It further provides that in case the generating company or transmission licensee is paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of return on equity. The petitioner has submitted that MAT rate is applicable to the petitioner's company. Accordingly, the MAT rate applicable during 2013-14 has been considered for the purpose of return on equity, which shall be trued up with actual tax rate in accordance with Regulation 25 (3) of the 2014 Tariff Regulations. Accordingly, the ROE determined by the Commission is given below:-

| (₹ in lakh)                            |                |                |                |                |                |
|--|----------------|----------------|----------------|----------------|----------------|
| Particulars                            | 2014-15        | 2015-16        | 2016-17        | 2017-18        | 2018-19        |
| Opening Equity                         | 10708.06       | 11962.11       | 11962.11       | 11962.11       | 11962.11       |
| Addition to Equity during the year     | 1254.05        | 0.00           | 0.00           | 0.00           | 0.00           |
| Closing Equity                         | 11962.11       | 11962.11       | 11962.11       | 11962.11       | 11962.11       |
| Average Equity                         | 11335.09       | 11962.11       | 11962.11       | 11962.11       | 11962.11       |
| Return on Equity (Base Rate) (%)       | 15.50          | 15.50          | 15.50          | 15.50          | 15.50          |
| MAT rate for the year (%)              | 20.961         | 20.961         | 20.961         | 20.961         | 20.961         |
| Rate of Return on Equity (Pre Tax) (%) | 19.610         | 19.610         | 19.610         | 19.610         | 19.610         |
| <b>Return on Equity (Pre Tax)</b>      | <b>2222.81</b> | <b>2345.77</b> | <b>2345.77</b> | <b>2345.77</b> | <b>2345.77</b> |



## Depreciation

54. Clause (2), (5) and (6) of Regulation 27 of the 2014 Tariff Regulations provide as follows:-

### **"27. Depreciation:**

(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis"

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

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

(6) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets."

55. The petitioner has computed depreciation considering capital expenditure of ₹35693.57 lakh as on 31.3.2014 and additional capitalization of ₹4180.18 lakh for Combined Asset-1 to 5 for the 2014-19 tariff period.

56. We have considered the submissions of the petitioner and have allowed depreciation under Regulation 27 of the 2014 Tariff Regulations. The details of the depreciation allowed are given hereunder:-

|   | (₹ in lakh) |          |          |          |          |
|---|-------------|----------|----------|----------|----------|
| Particulars   | 2014-15     | 2015-16  | 2016-17  | 2017-18  | 2018-19  |
| Opening Gross block                                 | 35693.57    | 39873.75 | 39873.75 | 39873.75 | 39873.75 |
| Additional Capitalisation                           | 4180.18     | 0.00     | 0.00     | 0.00     | 0.00     |
| Gross block at the end of the year                  | 39873.75    | 39873.75 | 39873.75 | 39873.75 | 39873.75 |
| Average gross block                                 | 37783.66    | 39873.75 | 39873.75 | 39873.75 | 39873.75 |
| Freehold land                                       | 1739.74     | 2404.04  | 2404.04  | 2404.04  | 2404.04  |
| Rate of Depreciation (%)                            | 5.001       | 4.925    | 4.925    | 4.925    | 4.925    |
| Depreciable Value                                   | 32439.53    | 33722.74 | 33722.74 | 33722.74 | 33722.74 |
| Elapsed Life of the assets at beginning of the year | 2           | 3        | 4        | 5        | 6        |



| Particulars                                | 2014-15  | 2015-16  | 2016-17  | 2017-18  | 2018-19  |
|--|----------|----------|----------|----------|----------|
| Weighted Balance Useful life of the assets | 23       | 22       | 21       | 20       | 19       |
| Remaining Depreciable Value                | 29463.31 | 28857.10 | 26893.23 | 24929.35 | 22965.48 |
| <b>Depreciation</b>                        | 1889.42  | 1963.87  | 1963.87  | 1963.87  | 1963.87  |

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

57. Respondents No. 2, 3 & 4, i.e. Ajmer Vidyut Vitran Nigam Ltd., Jaipur Vidyut Vitran Nigam Ltd. and Jodhpur Vidyut Vitran Nigam Ltd. have submitted that the 2014 Tariff Regulations have been framed after detailed discussion and consultation. Thus, the sanctity of the regulations should be maintained and any request by petitioner for revision in O&M norms should not be considered. Further, the expected wage rise in future should be scrutinized in a detailed manner and any additional changes should be allowed in accordance with the law.

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

| (₹ in lakh)                          |               |               |               |               |               |
|--------------------------------------|---------------|---------------|---------------|---------------|---------------|
| Particulars                          | 2014-15       | 2015-16       | 2016-17       | 2017-18       | 2018-19       |
| <b>O&amp;M Expense</b>               |               |               |               |               |               |
| <b>Norm (₹lakh/bay)</b>              |               |               |               |               |               |
| 765 kV                               | 84.42         | 87.22         | 90.12         | 93.11         | 96.20         |
| 400 kV                               | 60.30         | 62.30         | 64.37         | 66.51         | 68.71         |
| <b>Number of Bay</b>                 |               |               |               |               |               |
| 765 kV                               | 6             | 6             | 6             | 6             | 6             |
| 400 kV                               | 2             | 2             | 2             | 2             | 2             |
| <b>Total O&amp;M Expense (₹lakh)</b> | <b>627.12</b> | <b>647.92</b> | <b>669.46</b> | <b>691.68</b> | <b>714.62</b> |



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

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

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

| (₹ in lakh)                     |               |               |               |               |               |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|
| Particulars                     | 2014-15       | 2015-16       | 2016-17       | 2017-18       | 2018-19       |
| <b>O&amp;M Expenses Allowed</b> | <b>627.12</b> | <b>647.92</b> | <b>669.46</b> | <b>691.68</b> | <b>714.62</b> |

### **Interest on Working Capital (“IWC”)**

62. Clause 1 (c) of Regulation 28 and Clause 5 of Regulation 3 of the 2014 Tariff Regulations specify as follows:-

#### **“28. Interest on Working Capital**

(c)(i) Receivables equivalent to two months of fixed cost;

(ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and



(iii) Operation and maintenance expenses for one month”

“(5)Bank Rate’ means the base rate of interest as specified by the State Bank of India from time to time or any replacement thereof for the time being in effect plus 350 basis points;”

63. The petitioner has submitted that it has computed Interest on working capital for the tariff period 2014-19 considering the SBI Base Rate as on 1.4.2014 plus 350 basis points. The rate of interest on working capital considered is 13.50%.

64. The interest on working capital is worked out in accordance with Regulation 28 of the 2014 Tariff Regulations. The rate of interest on working capital considered is 13.50% (SBI Base Rate of 10% plus 350 basis points). The interest on working capital as determined by the Commission is shown in the table below:-

| (₹ in lakh)          |               |               |               |               |               |
|----------------------|---------------|---------------|---------------|---------------|---------------|
| Particulars          | 2014-15       | 2015-16       | 2016-17       | 2017-18       | 2018-19       |
| Maintenance Spares   | 94.07         | 97.19         | 100.42        | 103.75        | 107.19        |
| O & M Expenses       | 52.26         | 53.99         | 55.79         | 57.64         | 59.55         |
| Receivables          | 1162.95       | 1193.21       | 1166.24       | 1139.36       | 1112.81       |
| Total                | 1309.28       | 1344.39       | 1322.44       | 1300.75       | 1279.56       |
| Rate of Interest (%) | 13.50         | 13.50         | 13.50         | 13.50         | 13.50         |
| <b>Interest</b>      | <b>176.75</b> | <b>181.49</b> | <b>178.53</b> | <b>175.60</b> | <b>172.74</b> |

### Annual Transmission Charges

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

| (₹ in lakh)               |          |          |          |          |          |
|---------------------------|----------|----------|----------|----------|----------|
| Particulars               | 2014-15  | 2015-16  | 2016-17  | 2017-18  | 2018-19  |
| <b>Gross Block</b>        |          |          |          |          |          |
| Opening Gross Block       | 35693.57 | 39873.75 | 39873.75 | 39873.75 | 39873.75 |
| Additional Capitalisation | 4180.18  | 0.00     | 0.00     | 0.00     | 0.00     |
| Closing Gross Block       | 39873.75 | 39873.75 | 39873.75 | 39873.75 | 39873.75 |



| Particulars                                   | 2014-15  | 2015-16  | 2016-17  | 2017-18  | 2018-19  |
|---|----------|----------|----------|----------|----------|
| Average Gross Block                           | 37783.66 | 39873.75 | 39873.75 | 39873.75 | 39873.75 |
|   |          |          |          |          |          |
| <b>Depreciation</b>                           |          |          |          |          |          |
| Rate of Depreciation (%)                      | 5.001    | 4.925    | 4.925    | 4.925    | 4.925    |
| Depreciable Value                             | 32439.53 | 33722.74 | 33722.74 | 33722.74 | 33722.74 |
| Elapsed Life (Beginning of the year)          | 2        | 3        | 4        | 5        | 6        |
| Weighted Balance Useful life of the assets    | 23       | 22       | 21       | 20       | 19       |
| Remaining Depreciable Value                   | 29463.31 | 28857.10 | 26893.23 | 24929.35 | 22965.48 |
| Depreciation                                  | 1889.42  | 1963.87  | 1963.87  | 1963.87  | 1963.87  |
|   |          |          |          |          |          |
| <b>Interest on Loan</b>                       |          |          |          |          |          |
| Gross Normative Loan                          | 24985.51 | 27911.64 | 27911.64 | 27911.64 | 27911.64 |
| Cumulative Repayment upto Previous Year       | 2976.22  | 4865.64  | 6829.51  | 8793.39  | 10757.26 |
| Net Loan-Opening                              | 22009.29 | 23046.00 | 21082.13 | 19118.25 | 17154.38 |
| Additions                                     | 2926.13  | 0.00     | 0.00     | 0.00     | 0.00     |
| Repayment during the year                     | 1889.42  | 1963.87  | 1963.87  | 1963.87  | 1963.87  |
| Net Loan-Closing                              | 23046.00 | 21082.13 | 19118.25 | 17154.38 | 15190.51 |
| Average Loan                                  | 22527.65 | 22064.06 | 20100.19 | 18136.32 | 16172.44 |
| Weighted Average Rate of Interest on Loan (%) | 9.1514   | 9.1561   | 9.1531   | 9.1486   | 9.1505   |
| Interest                                      | 2061.59  | 2020.21  | 1839.78  | 1659.22  | 1479.86  |
|   |          |          |          |          |          |
| <b>Return on Equity</b>                       |          |          |          |          |          |
| Opening Equity                                | 10708.06 | 11962.11 | 11962.11 | 11962.11 | 11962.11 |
| Additions                                     | 1254.05  | 0.00     | 0.00     | 0.00     | 0.00     |
| Closing Equity                                | 11962.11 | 11962.11 | 11962.11 | 11962.11 | 11962.11 |
| Average Equity                                | 11335.09 | 11962.11 | 11962.11 | 11962.11 | 11962.11 |
| Return on Equity (Base Rate) (%)              | 15.50    | 15.50    | 15.50    | 15.50    | 15.50    |
| MAT Rate for the year 2013-14 (%)             | 20.961   | 20.961   | 20.961   | 20.961   | 20.961   |
| Rate of Return on Equity (Pre Tax) (%)        | 19.610   | 19.610   | 19.610   | 19.610   | 19.610   |
| Return on Equity (Pre Tax)                    | 2222.81  | 2345.77  | 2345.77  | 2345.77  | 2345.77  |
|   |          |          |          |          |          |
| <b>Interest on Working Capital</b>            |          |          |          |          |          |
| Maintenance Spares                            | 94.07    | 97.19    | 100.42   | 103.75   | 107.19   |
| O & M expenses                                | 52.26    | 53.99    | 55.79    | 57.64    | 59.55    |
| Receivables                                   | 1162.95  | 1193.21  | 1166.24  | 1139.36  | 1112.81  |
| Total   | 1309.28  | 1344.39  | 1322.44  | 1300.75  | 1279.56  |
| Interest                                      | 176.75   | 181.49   | 178.53   | 175.60   | 172.74   |



| Particulars                        | 2014-15        | 2015-16        | 2016-17        | 2017-18        | 2018-19        |
|------------------------------------|----------------|----------------|----------------|----------------|----------------|
| <b>Annual Transmission Charges</b> |                |                |                |                |                |
| Depreciation                       | 1889.42        | 1963.87        | 1963.87        | 1963.87        | 1963.87        |
| Interest on Loan                   | 2061.59        | 2020.21        | 1839.78        | 1659.22        | 1479.86        |
| Return on Equity                   | 2222.81        | 2345.77        | 2345.77        | 2345.77        | 2345.77        |
| Interest on Working Capital        | 176.75         | 181.49         | 178.53         | 175.60         | 172.74         |
| O & M Expenses                     | 627.12         | 647.92         | 669.46         | 691.68         | 714.62         |
| <b>Total</b>                       | <b>6977.70</b> | <b>7159.26</b> | <b>6997.41</b> | <b>6836.14</b> | <b>6676.86</b> |

66. The petitioner has sought recovery of deferred tax liability before 1.4.2009 from the beneficiaries or long term consumers/ DICs as and when materialized. However, the COD of the asset is after 2009, hence the claim of the petitioner is not maintainable.

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

67. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 52 of the 2014 Tariff Regulations. The petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with clause (1) of Regulation 52 of the 2014 Tariff Regulations.

#### **Licence Fee and RLDC Fees and Charges**

68. The petitioner has requested to allow the petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. The petitioner shall be entitled for reimbursement of licence fee and RLDC fees and

charges in accordance with Clause (2)(b) and (2)(a), respectively, of Regulation 52 of the 2014 Tariff Regulations.

### **Service Tax**

69. The petitioner has sought to recover Service Tax on Transmission Charges separately from the Respondents, if at any time service tax on transmission is withdrawn from negative list in future. In this regard, Respondents No. 2, 3 & 4, i.e. Ajmer Vidyut Vitran Nigam Ltd., Jaipur Vidyut Vitran Nigam Ltd. and Jodhpur Vidyut Vitran Nigam Ltd. have submitted that this is on presumption basis and should not be allowed by the Commission. We are of the view that the petitioner's prayer is premature.

### **Sharing of Transmission Charges**

70. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time, as provided in Regulation 43 of the 2014 Tariff Regulations.

71. This Order disposes of Petition No. 114/TT/2015.

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

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



**ANNEXURE-I****DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO****(₹ in lakh)**

| Particulars (Asset-1 to 4)                 | Interest Rate (%) | Loan deployed as on COD | Additions during the tariff period | Total           |
|--|-------------------|-------------------------|------------------------------------|-----------------|
| BOND XXIX DOCO                             | 9.20%             | 135.00                  | 0.00                               | 135.00          |
| BOND XXX DOCO                              | 8.80%             | 358.11                  | 0.00                               | 358.11          |
| BOND XXXI DOCO                             | 8.90%             | 1020.00                 | 0.00                               | 1020.00         |
| BOND XXXIV DOCO                            | 8.84%             | 3070.00                 | 0.00                               | 3070.00         |
| BOND XXXV DOCO                             | 9.64%             | 810.00                  | 0.00                               | 810.00          |
| BOND XXXVI DOCO                            | 9.35%             | 7952.39                 | 0.00                               | 7952.39         |
| BOND XXXVII DOCO                           | 9.25%             | 800.00                  | 0.00                               | 800.00          |
| BOND XXXVIII DOCO                          | 9.25%             | 400.00                  | 0.00                               | 400.00          |
| BOND XXXIX DOCO                            | 9.40%             | 493.44                  | 0.00                               | 493.44          |
| SBI (21.03.2012)-ADDCAP FOR 2013-14 ADDCAP | 0.00%             | 0.00                    | 0.00                               | 0.00            |
| BOND XLII-ADDCAP FOR 2012-2013 ADDCAP      | 8.80%             | 0.00                    | 193.65                             | 193.65          |
| BOND XLIII-ADDCAP FOR 2012-2013 ADDCAP     | 7.93%             | 0.00                    | 1997.49                            | 1997.49         |
| BOND XLIII-ADDCAP FOR 2013-2014 ADDCAP     | 0.00%             | 0.00                    | 0.00                               | 0.00            |
| <b>Total</b>                               |                   | <b>15038.94</b>         | <b>2191.14</b>                     | <b>17230.08</b> |

**(₹ in lakh)**

| Particulars (Asset-5)              | Interest Rate (%) | Loan deployed as on COD | Additions during the tariff period | Total  |
|------------------------------------|-------------------|-------------------------|------------------------------------|--------|
| BOND XXIX DOCO DRAWL ON 1-SEP-2012 | 9.20%             | 40.00                   | 0.00                               | 40.00  |
| BOND XXX DOCO                      | 8.80%             | 236.51                  | 0.00                               | 236.51 |
| BOND XXXI DOCO DRAWL ON 1-SEP-2012 | 8.90%             | 420.00                  | 0.00                               | 420.00 |
| BOND XXXIII DOCO                   | 8.64%             | 46.00                   | 0.00                               | 46.00  |
| BOND XXXIV DOCO                    | 8.84%             | 430.00                  | 0.00                               | 430.00 |
| BOND XXXV DOCO DRAWL ON 1-SEP-2012 | 9.64%             | 250.00                  | 0.00                               | 250.00 |





| Particulars (Asset-5)                      | Interest Rate (%) | Loan deployed as on COD | Additions during the tariff period | Total          |
|--|-------------------|-------------------------|------------------------------------|----------------|
| BOND XXXVI DOCO DRAWL ON 1-SEP-2012        | 9.35%             | 2843.73                 | 0.00                               | 2843.73        |
| BOND XXXVII DOCO DRAWL ON 1-SEP-2012       | 9.25%             | 606.68                  | 0.00                               | 606.68         |
| BOND XXXVIII- DOCO                         | 9.40%             | 400.00                  | 0.00                               | 400.00         |
| SBI (21.03.2012)-ADDCAP FOR 2012-13 ADDCAP | 0.00%             | 0.00                    | 609.83                             | 609.83         |
| SBI (21.03.2012)-ADDCAP FOR 2013-14 ADDCAP | 0.00%             | 0.00                    | 0.00                               | 0.00           |
| BOND XLIII-ADDCAP FOR 2012-2013 ADDCAP     | 7.93%             | 0.00                    | 354.94                             | 354.94         |
| <b>Total</b>                               |                   | <b>5272.92</b>          | <b>964.77</b>                      | <b>6237.69</b> |

**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN  
FOR TARIFF PERIOD 2009-14**

(₹ in lakh)

| Details of Loan (Asset-1 to 4)                  | 2012-13  | 2013-14  |
|---|----------|----------|
| Gross Opening Loan                              | 15038.94 | 17230.08 |
| Cumulative Repayment of loan upto previous year | 0.00     | 11.25    |
| Net Loan Opening                                | 15038.94 | 17218.83 |
| Additions during the year                       | 2191.14  | 1162.80  |
| Repayment during the year                       | 11.25    | 126.09   |
| Net Loan Closing                                | 17218.83 | 18255.54 |
| Average Loan                                    | 16128.89 | 17737.19 |
| Weighted Average Rate of Interest (%)           | 9.1285%  | 9.0740%  |
| Interest  | 1472.32  | 1609.48  |

(₹ in lakh)

| Details of Loan (Asset-5)                       | 2012-13 | 2013-14 |
|---|---------|---------|
| Gross Opening Loan                              | 5272.92 | 6237.69 |
| Cumulative Repayment of loan upto previous year | 0.00    | 3.33    |
| Net Loan Opening                                | 5272.92 | 6234.36 |
| Additions during the year                       | 964.77  | 354.94  |
| Repayment during the year                       | 3.33    | 58.04   |
| Net Loan Closing                                | 6234.36 | 6531.26 |
| Average Loan                                    | 5753.64 | 6382.81 |
| Weighted Average Rate of Interest (%)           | 9.2625% | 9.2947% |
| Interest  | 532.93  | 593.26  |



**ANNEXURE-II****DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO****(₹ in lakh)**

| Particulars (Asset-5)                                | Interest Rate (%) | Loan deployed as on COD | Additions during the tariff period | Total   |
|--|-------------------|-------------------------|------------------------------------|---------|
| BOND XXIX-1. DOCO                                    | 9.20%             | 135.00                  | 0.00                               | 135.00  |
| BOND XXIX-14. DOCO<br>DRAWL ON 1-SEP-2012            | 9.20%             | 40.00                   | 0.00                               | 40.00   |
| BOND XXX-19. DOCO                                    | 8.80%             | 236.51                  | 0.00                               | 236.51  |
| BOND XXX-9. DOCO                                     | 8.80%             | 358.11                  | 0.00                               | 358.11  |
| BOND XXXI-15. DOCO<br>DRAWL ON 1-SEP-2012            | 8.90%             | 420.00                  | 0.00                               | 420.00  |
| BOND XXXI-2. DOCO                                    | 8.90%             | 1020.00                 | 0.00                               | 1020.00 |
| BOND XXXIII-20. DOCO                                 | 8.64%             | 46.00                   | 0.00                               | 46.00   |
| BOND XXXIV-21. DOCO                                  | 8.84%             | 430.00                  | 0.00                               | 430.00  |
| BOND XXXIV-3. DOCO                                   | 8.84%             | 3070.00                 | 0.00                               | 3070.00 |
| BOND XXXV-16. DOCO<br>DRAWL ON 1-SEP-2012            | 9.64%             | 250.00                  | 0.00                               | 250.00  |
| BOND XXXV-4. DOCO                                    | 9.64%             | 810.00                  | 0.00                               | 810.00  |
| BOND XXXVI-17. DOCO<br>DRAWL ON 1-SEP-2012           | 9.35%             | 2843.73                 | 0.00                               | 2843.73 |
| BOND XXXVI-5. DOCO                                   | 9.35%             | 7952.39                 | 0.00                               | 7952.39 |
| BOND XXXVII-18. DOCO<br>DRAWL ON 1-SEP-2012          | 9.25%             | 606.68                  | 0.00                               | 606.68  |
| BOND XXXVII-6 DOCO                                   | 9.25%             | 800.00                  | 0.00                               | 800.00  |
| BOND XXXVIII-22. DOCO                                | 9.25%             | 400.00                  | 0.00                               | 400.00  |
| BOND XXXVIII-7. DOCO                                 | 9.40%             | 400.00                  | 0.00                               | 400.00  |
| BOND XXXIX-8. DOCO                                   | 9.40%             | 493.44                  | 0.00                               | 493.44  |
| SBI (21.03.2012)-13.<br>ADDCAP FOR 2013-14<br>ADDCAP | 10.25%            | 801.12                  | 0.00                               | 801.12  |
| SBI (21.03.2012)-24.<br>ADDCAP FOR 2012-13<br>ADDCAP | 10.25%            | 609.83                  | 0.00                               | 609.83  |
| SBI (21.03.2012)-25.<br>ADDCAP FOR 2013-14<br>ADDCAP | 10.25%            | 354.94                  | 0.00                               | 354.94  |
| BOND XLII-10. ADDCAP FOR<br>2012-2013 ADDCAP         | 8.80%             | 193.65                  | 0.00                               | 193.65  |
| BOND XLIII-11. ADDCAP<br>FOR 2012-2013 ADDCAP        | 7.93%             | 1997.49                 | 0.00                               | 1997.49 |
| BOND XLIII-12. ADDCAP<br>FOR 2013-2014 ADDCAP        | 7.93%             | 361.68                  | 0.00                               | 361.68  |



| Particulars (Asset-5)                  | Interest Rate (%) | Loan deployed as on COD | Additions during the tariff period | Total           |
|--|-------------------|-------------------------|------------------------------------|-----------------|
| BOND XLIII-ADDCAP FOR 2012-2013 ADDCAP | 7.93%             | 354.94                  | 0.00                               | 354.94          |
| <b>Total</b>                           |                   | <b>24985.51</b>         | <b>0.00</b>                        | <b>24985.51</b> |

**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN  
FOR TARIFF PERIOD 2014-19**

(₹ in lakh)

| Details of Loan (Combined Asset-1 to 5)         | 2014-15        | 2015-16        | 2016-17        | 2017-18        | 2018-19        |
|---|----------------|----------------|----------------|----------------|----------------|
| Gross Opening Loan                              | 24985.51       | 24985.51       | 24985.51       | 24985.51       | 24985.51       |
| Cumulative Repayment of loan upto previous year | 198.71         | 678.33         | 1363.51        | 2928.97        | 4720.61        |
| Net Loan Opening                                | 24786.80       | 24307.18       | 23622.00       | 22056.54       | 20264.90       |
| Additions during the year                       | 0.00           | 0.00           | 0.00           | 0.00           | 0.00           |
| Repayment during the year                       | 479.62         | 685.18         | 1565.46        | 1791.64        | 1791.64        |
| Net Loan Closing                                | 24307.18       | 23622.00       | 22056.54       | 20264.90       | 18473.26       |
| Average Loan                                    | 24546.99       | 23964.59       | 22839.27       | 21160.72       | 19369.08       |
| Weighted Average Rate of Interest (%)           | 9.1514%        | 9.1561%        | 9.1531%        | 9.1486%        | 9.1505%        |
| <b>Interest</b>                                 | <b>2246.39</b> | <b>2194.22</b> | <b>2090.49</b> | <b>1935.91</b> | <b>1772.37</b> |

