

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 212/TT/2014**

**Coram:**

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

**Date of Hearing : 02.12.2015  
Date of Order : 08.01.2016**

**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 of Combined elements of Kaiga - Narendra 400 kV DIC Transmission Line, 400/220 kV Sub-station at Narendra with one 315 MVA ICT and 2nd 315 MVA ICT at Narendra Sub-station under Kaiga-Narendra Transmission System in Southern 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. Karnataka Power Transmission Corporation Ltd.  
Kaveri Bhawan, Bangalore-560009
2. Transmission Corporation of Andhra Pradesh Ltd.  
(APTRANSCO), Vidyut Soudha  
Hyderabad-500082
3. Kerala State Electricity Board (KSEB)  
Vaidyuthi Bhavanam, Pattom  
Thiruvananthapuram-695004



4. Tamil Nadu Generation and Distribution Corporation Ltd.  
(Formerly Tamil Nadu Electricity Board)  
NPKRR Maaligai, 800, Anna Salai  
Chennai- 600002
5. Electricity Department  
Government of Pondicherry  
Pondicherry- 605001
6. Eastern Power Distribution Company of Andhra Pradesh Ltd.  
P&T Colony, Seethmadhara, Vishakhapatnam  
Andhra Pradesh
7. Southern Power Distribution Company of Andhra Pradesh  
Srinivasasa Kalyana Mandapam Backside  
Tiruchanoor Road, Kesavayana Gunta  
Tirupati- 517 501
8. Central Power Distribution Company of Andhra Pradesh  
Corporate Office, Mint Compound,  
Hyderabad- 500 063
9. Northern Power Distribution Company of Andhra Pradesh  
Opp. NIT Petrol Pump,  
Chaitanyapuri, Kazipet  
Warangal- 506 004
10. Bangalore Electricity Supply Company Ltd.  
Corporate Office, K.R. Circle  
Bangalore- 560 001
11. Gulbarga Electricity Supply Company Ltd.  
Station Main Road, Gulbarga
12. Hubli Electricity Supply Company Ltd.  
Navanagar, P B Road  
Hubli, Karnataka
13. MESCOM Corporate Office  
Paradigm Plaza, AB Shetty Circle  
Mangalore- 575 001
14. Chamundeswari Electricity Supply Corporation Ltd.  
New Kantharaj Urs Road, Saraswatipuram,  
Mysore-570 009



15. Electricity Department  
Government of Goa  
Vidyuti Bhawan, Panaji  
Goa- 403001

.....Respondents

The following were present:-

For Petitioner: Shri Anshul Garg, PGCIL  
Shri Angaru Naresh Kumar, PGCIL  
Shri Jasbir Singh, PGCIL  
Shri S K Niranjana, PGCIL  
Shri S.K. Venkatesan, PGCIL  
Shri M.M. Mondal, PGCIL  
Shri Shashi Bhushan, PGCIL  
Shri J. Mazumder, PGCIL  
Shri Rakesh Prasad, PGCIL  
Shri Sunil Kumar, PGCIL  
Shri S.S. Raju, PGCIL

For Respondent: Shri Vallinayagam, Advocate, TANGEDCO  
Shri Jayaprakash. R, TANGEDCO

### **ORDER**

The present petition has been preferred by Power Grid Corporation of India Ltd. ("the petitioner"), a transmission licensee, for truing up of capital expenditure and tariff for Combined elements of Kaiga - Narendra 400 kV DIC Transmission Line (COD: 1.11.2005) (Asset-I), 400/220 kV Substation at Narendra with one 315 MVA ICT (COD: 1.11.2005) (Asset-II) and 2nd 315 MVA ICT at Narendra Sub-station (COD: 1.9.2006) (Asset-III) under Kaiga- Narendra Transmission System in Southern Region (hereinafter referred as "transmission asset") 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 1.4.2009 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.

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

3. The petitioner has served the petition to the respondents and notice of this application has been published in the newspaper in accordance with Section 64 of 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 2.12.2015. During the hearing, Tamil Nadu Generation and Distribution Corporation Ltd. (TANGEDCO), Respondent No. 4, requested the Commission for one week time to file reply to the petition. The Commission directed Respondent No. 4 to file its reply by 10.12.2015 and the petitioner to file its rejoinder by 16.12.2015. The Commission during the hearing observed that in case no information is filed within the due date, the matter shall be considered based on the available records. Reply has been filed by TANGEDCO vide affidavit dated 16.12.2015. The concerns expressed by respondents are being addressed in the respective paras of this



order. The Commission further directed the petitioner to submit replies to the queries sought vide letter dated 27.11.2015 on affidavit with copy to respondents by 9.12.2015. In response, the petitioner has submitted the replies vide affidavit dated 2.12.2015 and rejoinder to reply filed by TANGADECOS vide affidavit dated 29.12.2015. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

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

(a) The investment approval for Asset-I was accorded by the Board of Directors of the petitioner company vide letter dated 30.8.2005 at an estimated cost of ₹18161 lakh including IDC of ₹3131 lakh. The investment approval for Asset-II and Asset-III was accorded vide Memorandum dated 27.2.2003 at an estimated cost of ₹6051 lakh including IDC of ₹487 lakh. Subsequently, Revised Cost Estimate for Asset-II and Asset-III was approved by Board of Directors of the petitioner company vide Memorandum dated 26.2.2008 at an estimated cost of ₹6231 lakh including IDC of ₹223 lakh. The notional date of the commercial operation of the transmission asset is 1.9.2006.

(b) The tariff from COD to 31.3.2009 for Asset-I and Asset-II including additional capitalization from COD to 31.3.2006 was allowed vide order dated 15.3.2007 in Petition No. 128/2006 in accordance with Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004.



- (c) The tariff for Asset-I and Asset-II for 2006-07 to 2008-09 was approved on account of further additional capitalization incurred during 2006-07 and tariff for Asset-III from COD to 31.3.2009 was allowed vide order dated 30.5.2008 in Petition No. 123/2007 in accordance with Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004.
- (d) Further, the transmission tariff was revised for the period 2005-06 to 2008-09 for Asset-I and Asset-II on account of inadvertent error, vide order dated 29.8.2008 in Petition No. 123/2007 in accordance with Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004.
- (e) The revised transmission tariff for Asset-II and Asset-III on account of additional capitalization incurred during 2008-09 was approved vide order dated 24.5.2010 in Petition No. 5/2010.
- (f) The tariff for combined assets (Asset-I, Asset-II and Asset-III) for 2009-14 period was allowed vide order dated 31.3.2011 in Petition No. 211/2010 in accordance with the 2009 Tariff Regulations. The tariff allowed for the tariff period 2009-14 is as under:-

|                  | <b>(₹ in lakh)</b> |         |         |         |         |
|------------------|--------------------|---------|---------|---------|---------|
| Particulars      | 2009-10            | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Depreciation     | 1078.13            | 1078.30 | 1078.47 | 1078.47 | 1078.47 |
| Interest on Loan | 897.43             | 810.15  | 722.45  | 634.36  | 546.97  |
| Return on equity | 1107.45            | 1107.62 | 1107.79 | 1107.79 | 1107.79 |



| Particulars                 | 2009-10        | 2010-11        | 2011-12        | 2012-13        | 2013-14        |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|
| Interest on Working Capital | 92.80          | 92.62          | 92.53          | 92.51          | 92.62          |
| O & M Expenses              | 570.54         | 603.22         | 637.79         | 674.18         | 712.70         |
| <b>Total</b>                | <b>3746.35</b> | <b>3691.91</b> | <b>3639.02</b> | <b>3587.31</b> | <b>3538.55</b> |

(g) The Commission, vide order dated 31.3.2011 in Petition No. 211/2010, has determined the tariff for the tariff period 2009-14 based on admitted capital cost of ₹21225.31 lakh as on 31.3.2009.

(h) 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.

(i) The instant petition was filed on 7.8.2014.

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

5. The truing up of tariff for 2009-14 tariff period has been determined as discussed below:-

#### **Capital Cost**

6. The petitioner has claimed admitted capital cost of ₹21225.31 lakh as on 31.3.2009 for the purpose of tariff. Further, the petitioner has claimed additional capitalisation of ₹100.89 lakh for the 2009-14 tariff period.

7. Last proviso to Clause (2) of Regulation 7 of the 2009 Tariff Regulations provides that:-



“Provided also that in case of the existing projects, the capital cost admitted by the Commission prior to 1.4.2009 duly trued up by excluding un-discharged liability, if any, as on 1.4.2009 and the additional capital expenditure projected to be incurred for the respective year of the tariff period 2009-14, as may be admitted by the Commission, shall form the basis for determination of tariff.”

8. The capital cost admitted as on 31.3.2009 vide order dated 31.3.2011 in Petition No. 211/2010 has been considered as the opening capital cost as on 1.4.2009 for determination of tariff in accordance with Regulation 7 of the 2009 Tariff Regulations. The admitted capital cost of ₹21225.31 lakh as on 31.3.2009 has been considered to work out the trued up tariff for the tariff period 2009-14.

#### **Additional Capital Expenditure**

9. The petitioner has claimed additional capitalization under Regulation 9(2)(i) and Regulation 9(2)(viii) of the 2009 Tariff Regulations.

10. Clause (2)(i) of Regulation 9 of the 2009 Tariff Regulations provides that:-

#### **“9. Additional Capitalisation.**

(2) The capital expenditure incurred on the following counts after the cut-off date may, in its discretion, be admitted by the Commission, subject to prudence check:

(i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court;  
.....”

11. Further, the last proviso to Clause (2) of Regulation 9 of the 2009 Tariff Regulations provides that:-

#### **“9. Additional Capitalisation.**

(viii) Any undischarged liability towards final payment/withheld payment due to contractual exigencies for works executed within the cut-off date, after prudence check of the details of such deferred liability, total estimated cost of package, reason for such withholding of payment and release of such payments etc.”





12. The petitioner has claimed additional capitalization of ₹31.89 lakh, ₹68.62 lakh, and ₹0.38 lakh for 2009-10, 2011-12, and 2013-14, respectively, on account of un-discharged liabilities towards sub-station and transmission line and land compensation paid as per Court order.

13. In this regard, TANGEDCO has submitted that additional capitalization claimed by the petitioner for the year 2009-10 is ₹31.89 lakh which is higher than the admitted additional capital expenditure of ₹6.40 lakh. TANGEDCO has submitted that the admitted capitalization of ₹6.40 lakh earlier allowed by the Commission was towards crop compensation. However, in the present petition, the petitioner has stated that the additional capitalization is towards un-discharged liabilities in respect of sub-station equipments and transmission lines. TANGEDCO has also observed that cut-off date of the project is 31.3.2009 and in order to qualify for expenditure to be allowed as un-discharged liabilities, the expenditure has to be incurred before 31.3.2009; however, the petitioner has incurred such expenditure during 2009-10. TANGEDCO has submitted that the additional capitalization claimed by the petitioner is not within the scope of Regulation 9(1) of the 2009 Tariff Regulations therefore, the claim of the petitioner is liable to be disallowed.

14. TANGEDCO also submitted that the petitioner has not incurred ₹6.40 lakh allowed by the Commission, hence, the same need to be refunded to the beneficiaries along with applicable interest as provided in the 2009 Tariff Regulations. TANGEDCO has further submitted that from the enclosures



submitted by the petitioner , it is seen that the claim of additional capitalization for 2011-12 and 2013-14 is towards the procurement of additional land, which is contradictory to para 12.0 of the petition, which states that the same is due to Court order for compensation and sought clarification in this regard. TANGEDCO has further submitted that the additional capitalization claimed by the petitioner is not as per the provisions laid down under Regulation 9(2) of the 2009 Tariff Regulations; hence, the claim of the petitioner is liable to be disallowed. In response, the petitioner vide affidavit dated 29.12.2015 has submitted that additional capitalization approved vide order dated 31.3.2011 in Petition No. 211/2010 was ₹6.40 lakh on account of expenditure towards liabilities to meet the award of arbitration or for compliance of the order or decree of the Court incurred after cut-off date. However, in the instant petition, the petitioner has submitted that an amount of ₹5.38 lakh has been paid during 2009-10 for tree crop compensation as per Court order. Further an additional capitalization of ₹95.51 lakh has been incurred during 2009-14 on account of the Service Tax, Stamp duty and Registration charges for land.

15. The Commission vide letter dated 27.11.2015 sought the reason for variation in additional capitalization for 2009-10 against the additional capitalization allowed as per order 31.3.2011. In response, the petitioner vide affidavit dated 2.12.2015 and 29.12.2015 has submitted that additional capitalization approved vide order dated 31.3.2011 in Petition No. 211/2010 was ₹6.40 lakh on account of expenditure towards liabilities to meet the award of arbitration or for compliance of the order or decree of the Court incurred after cut-



off date. However, in the instant petition the petitioner has submitted that an amount of ₹5.38 lakh has been paid during 2009-10 for tree crop compensation as per Court order. Further, an additional capitalization of ₹95.51 lakh has been incurred during 2009-14 on account of the Service Tax, Stamp duty and Registration charges for land. The petitioner has also submitted Auditor's Certificate dated 19.6.2014 to substantiate the additional capitalization incurred. As regards the issue raised by the TANGEDCO regarding refund of variation in actual additional capitalisation incurred with respect to additional capitalisation approved in the Order, it may be noted that while carrying out the truing up, actual additional capitalisation is considered subject to prudence check and hence, the impact of variation in additional capitalisation gets adjusted while carrying out the truing up. The total capital cost of ₹21326.20 lakh including actual additional capitalisation claimed by the petitioner is well within the overall approved cost of ₹24392 lakh. Hence, considering the submissions made by the petitioner, we have allowed total capital cost including additional capitalization under Regulation 9(2)(i) and Regulation 9(2)(viii) of the 2009 Tariff Regulations as shown in the table below:-

**(₹ in lakh)**

| <b>Cost as per Investment Approval is ₹24392 lakh</b> |                                       |                           |         |         |         |         |                                 |  |
|---|---------------------------------------|---------------------------|---------|---------|---------|---------|---------------------------------|--|
| Particulars   | Admitted capital cost as on 31.3.2009 | Additional capitalisation |         |         |         |         | Total additional capitalisation | Total capital cost including additional capitalisation as on 31.3.2014 |
|   |                                       | 2009-10                   | 2010-11 | 2011-12 | 2012-13 | 2013-14 |                                 |  |
| Approved in Order dated 31.3.2011                     | 21225.31                              | 0.00                      | 6.40    | 0.00    | 0.00    | 0.00    | 6.40                            | 21231.71   |



|        |          |       |      |       |      |      |        |          |
|--------|----------|-------|------|-------|------|------|--------|----------|
| Actual | 21225.31 | 31.89 | 0.00 | 68.62 | 0.00 | 0.38 | 100.89 | 21326.20 |
|--------|----------|-------|------|-------|------|------|--------|----------|

**Debt: Equity**

16. Clause 2 of Regulation 12 of the 2009 Tariff Regulations provides that:-

“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.”

17. The petitioner has claimed trued up Annual Fixed Charge based on debt-equity ratio of 70.15:29.85 admitted as on 31.3.2009, by the Commission in its order dated 31.3.2011 in Petition No. 211/2010 as opening debt:equity ratio as on 1.4.2009. The transmission assets covered in the instant petition are existing assets, as the COD is prior to 1.4.2009. The admitted debt:equity ratio of 70.15:29.85 as on 31.3.2009 has been considered as opening debt:equity ratio as on 1.4.2009 for the purpose of truing up of the approved tariff of tariff period 2009-14, as given under:-

| (₹ in lakh)  |                 |               |
|--------------|-----------------|---------------|
| Funding      | Amount          | (%)           |
| Debt         | 14890.12        | 70.15         |
| Equity       | 6335.19         | 29.85         |
| <b>Total</b> | <b>21225.31</b> | <b>100.00</b> |

18. With respect to additional capitalization, the petitioner has submitted the debt:equity ratio of 70:30 for 2009-10 to 2013-14. Debt: equity ratio is allowed in accordance with Clause 2 of Regulation 12 of the 2009 Tariff Regulations. The overall debt equity as on 31.3.2014 including additional capitalization is as under:-



| Funding      | Amount (in ₹ lakh) | (%)           |
|--------------|--------------------|---------------|
| Debt         | 14960.74           | 70.15         |
| Equity       | 6365.46            | 29.85         |
| <b>Total</b> | <b>21326.20</b>    | <b>100.00</b> |

### **Interest on Loan (“IOL”)**

19. 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”.

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

21. 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:-

| Particulars                         | (₹ in lakh) |         |         |         |         |
|-------------------------------------|-------------|---------|---------|---------|---------|
|                                     | 2009-10     | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Approved vide order dated 31.3.2011 | 897.43      | 810.15  | 722.45  | 634.36  | 546.97  |
| As claimed by petitioner            | 896.96      | 813.64  | 735.38  | 647.30  | 557.41  |
| Allowed after true up               | 896.96      | 813.65  | 735.39  | 647.30  | 557.41  |



22. The interest on loan has increased due to increase in average loan on account of increase in additional capitalization incurred during tariff period 2009-14.

**Return on Equity (“ROE”)**

23. 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:

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

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

(5) The generating company or the transmission licensee, as the case 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.”

24. The petitioner has submitted that MAT rate of 11.330% applicable for 2008-09 was considered in the order dated 20.10.2010. 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) % | Grossed up ROE<br>(Base rate/(1-t)) % |
|-------------|----------------|---------------------------------------|
| 2009-10     | 16.995         | 18.674                                |
| 2010-11     | 19.931         | 19.358                                |
| 2011-12     | 20.008         | 19.377                                |
| 2012-13     | 20.008         | 19.377                                |
| 2013-14     | 20.961         | 19.610                                |

25. Accordingly, the ROE as trued up is shown in the table below:-

| Particulars                         | (₹ in lakh) |         |         |         |         |
|-------------------------------------|-------------|---------|---------|---------|---------|
|                                     | 2009-10     | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Approved vide order dated 31.3.2011 | 1107.45     | 1107.62 | 1107.79 | 1107.79 | 1107.79 |
| As claimed by petitioner            | 1183.93     | 1228.22 | 1231.42 | 1233.41 | 1248.26 |
| Allowed after true up               | 1183.93     | 1228.22 | 1231.42 | 1233.41 | 1248.26 |

The variation in return on equity is on account of increase in the applicable MAT rate for the purpose of grossing up of base rate of return on equity.

### **Depreciation**

26. 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” |

27. 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."

28. The Commission, in its order dated 31.3.2011 in Petition No. 211/2010, has worked out the depreciation in accordance with Regulation 17 of the 2009 Tariff Regulations.

29. 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 as on COD has been considered as 32 years. 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. There is slight variation in allowed depreciation after true up with respect to petitioner's submission due to rounding off.

| Particulars                         | (₹ in lakh) |         |         |         |         |
|-------------------------------------|-------------|---------|---------|---------|---------|
|                                     | 2009-10     | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Approved vide order dated 31.3.2011 | 1078.13     | 1078.30 | 1078.47 | 1078.47 | 1078.47 |
| As claimed by petitioner            | 1078.98     | 1079.82 | 1079.82 | 1079.82 | 1079.82 |
| Allowed after true up               | 1078.97     | 1079.81 | 1079.81 | 1079.81 | 1079.81 |





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

30. 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. Accordingly, the O&M Expenses have been worked out as given in the table below:-

| Particulars   | 2009-10       | 2010-11       | 2011-12       | 2012-13       | 2013-14       |
|---|---------------|---------------|---------------|---------------|---------------|
| <b>O&amp;M Expense for line</b>                       |               |               |               |               |               |
| <b>Norm (₹ lakh/km)</b>                               |               |               |               |               |               |
| Double Circuit (Twin and Triple Conductor)            | 0.627         | 0.663         | 0.701         | 0.741         | 0.783         |
| <b>Asset (km)</b>                                     |               |               |               |               |               |
| 400 kV Kaiga Narendra D/C line                        | 107.66        | 107.66        | 107.66        | 107.66        | 107.66        |
| <b>Total O&amp;M Expense (line) (₹ lakh)</b>          |               |               |               |               |               |
| 400 kV Kaiga Narendra D/C line                        | 67.50         | 71.38         | 75.47         | 79.78         | 84.30         |
| <b>O&amp;M Expense for Bay</b>                        |               |               |               |               |               |
| <b>Norm (₹ lakh/Bay)</b>                              |               |               |               |               |               |
| 400 kV  | 52.40         | 55.40         | 58.57         | 61.92         | 65.46         |
| 220 kV  | 36.68         | 38.78         | 41.00         | 43.34         | 45.82         |
| <b>Bays</b>   |               |               |               |               |               |
| 400 kV  | 4             | 4             | 4             | 4             | 4             |
| 220 kV  | 8             | 8             | 8             | 8             | 8             |
| <b>Total O&amp;M expense (Bay) (₹ lakh)</b>           | <b>503.04</b> | <b>531.84</b> | <b>562.28</b> | <b>594.40</b> | <b>628.40</b> |
| <b>Total O&amp;M expense (Line and bays) (₹ lakh)</b> | <b>570.54</b> | <b>603.22</b> | <b>637.75</b> | <b>674.18</b> | <b>712.70</b> |

31. The O&M Expenses claimed by the petitioner for tariff period 2009-14 is same as that approved in the tariff order dated 31.3.2011 in Petition No. 211/2010. Accordingly, the O&M Expenses claimed by the petitioner, allowed and trued up are the same, and are as follows:-

(₹ in lakh)



| Particulars                         | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|-------------------------------------|---------|---------|---------|---------|---------|
| Approved vide order dated 31.3.2011 | 570.54  | 603.22  | 637.75  | 674.18  | 712.70  |
| As claimed by petitioner            | 570.54  | 603.22  | 637.75  | 674.18  | 712.70  |
| Allowed after true up               | 570.54  | 603.22  | 637.75  | 674.18  | 712.70  |

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

32. 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.

33. The petitioner has submitted that the rate of interest on working capital has been considered as 12.25% as per clause (3) of Regulation 18 of the 2009 Tariff Regulations 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.

34. The Commission, vide order dated 31.3.2011 in Petition No. 211/2010, has approved rate of interest on working capital as 12.25% as applicable for 2008-09. In accordance with clause (3) of Regulation 18 of the 2009 Tariff Regulations, as amended, rate of interest on working capital shall be on normative basis and in case of transmission assets declared under commercial operation prior to 1.4.2009, shall be equal to short-term Prime Lending Rate as applicable as on 1.4.2009. State Bank of India short-term Prime Lending Rate on 1.4.2009 was 12.25%. Therefore, interest rate of 12.25% has been considered to work out the interest on working capital in the instant case.



35. The IWC trued up is as under:-

| (₹ in lakh)          |              |              |              |              |              |
|----------------------|--------------|--------------|--------------|--------------|--------------|
| Particulars          | 2009-10      | 2010-11      | 2011-12      | 2012-13      | 2013-14      |
| Maintenance Spares   | 85.58        | 90.48        | 95.66        | 101.13       | 106.90       |
| O & M expenses       | 47.55        | 50.27        | 53.15        | 56.18        | 59.39        |
| Receivables          | 637.47       | 636.69       | 629.96       | 621.69       | 615.66       |
| Total                | 770.59       | 777.44       | 778.77       | 779.00       | 781.96       |
| Rate of Interest (%) | 12.25        | 12.25        | 12.25        | 12.25        | 12.25        |
| <b>Interest</b>      | <b>94.40</b> | <b>95.24</b> | <b>95.40</b> | <b>95.43</b> | <b>95.79</b> |

| (₹ in lakh)                         |         |         |         |         |         |
|-------------------------------------|---------|---------|---------|---------|---------|
| Particulars                         | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| Approved vide order dated 31.3.2011 | 92.80   | 92.62   | 92.53   | 92.51   | 92.62   |
| As claimed by petitioner            | 94.40   | 95.24   | 95.40   | 95.43   | 95.79   |
| Allowed after true up               | 94.40   | 95.24   | 95.40   | 95.43   | 95.79   |

The IWC has increased on account of increase in receivables due to variation in IOL, Depreciation and ROE due to increase and 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**

36. The detailed computation of the various components of the trued up annual fixed charges for the transmission asset for the tariff period 2009-14 is summarised below:-

| (₹ in lakh)               |          |          |          |          |          |
|---------------------------|----------|----------|----------|----------|----------|
| Particulars               | 2009-10  | 2010-11  | 2011-12  | 2012-13  | 2013-14  |
| <b>Gross Block</b>        |          |          |          |          |          |
| Gross Opening Block       | 21225.31 | 21257.20 | 21257.20 | 21325.82 | 21325.82 |
| Additional Capitalisation | 31.89    | 0.00     | 68.62    | 0.00     | 0.38     |
| Gross Closing Block       | 21257.20 | 21257.20 | 21325.82 | 21325.82 | 21326.20 |
| Average Gross Block       | 21241.25 | 21257.20 | 21291.51 | 21325.82 | 21326.01 |
|                           |          |          |          |          |          |



| Particulars                                   | 2009-10  | 2010-11  | 2011-12  | 2012-13  | 2013-14  |
|---|----------|----------|----------|----------|----------|
| <b>Depreciation</b>                           |          |          |          |          |          |
| Rate of Depreciation (%)                      | 5.080    | 5.080    | 5.072    | 5.063    | 5.063    |
| Depreciable Value                             | 18624.28 | 18638.63 | 18607.76 | 18638.63 | 18638.46 |
| Elapsed Life (Beginning of the year)          | 2        | 3        | 4        | 5        | 6        |
| Weighted Balance Useful life of the assets    | 30       | 29       | 28       | 27       | 26       |
| Remaining Depreciable Value                   | 16058.46 | 14993.84 | 13883.15 | 12834.22 | 11754.23 |
| Depreciation                                  | 1078.97  | 1079.81  | 1079.81  | 1079.81  | 1079.81  |
| Cumulative Depreciation                       | 3644.79  | 4724.61  | 5804.42  | 6884.23  | 7964.05  |
|   |          |          |          |          |          |
| <b>Interest on Loan</b>                       |          |          |          |          |          |
| Gross Normative Loan                          | 14890.12 | 14912.44 | 14912.44 | 14960.47 | 14960.47 |
| Cumulative Repayment upto Previous Year       | 2992.06  | 4071.03  | 5150.85  | 6230.66  | 7310.47  |
| Net Loan-Opening                              | 11898.06 | 10841.41 | 9761.59  | 8729.81  | 7650.00  |
| Additional Capitalisation                     | 22.32    | 0.00     | 48.03    | 0.00     | 0.27     |
| Repayment during the year                     | 1078.97  | 1079.81  | 1079.81  | 1079.81  | 1079.81  |
| Net Loan-Closing                              | 10841.41 | 9761.59  | 8729.81  | 7650.00  | 6570.45  |
| Average Loan                                  | 11369.73 | 10301.50 | 9245.70  | 8189.90  | 7110.22  |
| Weighted Average Rate of Interest on Loan (%) | 7.8890   | 7.8984   | 7.9539   | 7.9036   | 7.8395   |
| Interest                                      | 896.96   | 813.65   | 735.39   | 647.30   | 557.41   |
|   |          |          |          |          |          |
| <b>Return on Equity</b>                       |          |          |          |          |          |
| Opening Equity                                | 6335.19  | 6344.76  | 6344.76  | 6365.35  | 6365.35  |
| Addition due to Additional Capitalisation     | 9.57     | 0.00     | 20.59    | 0.00     | 0.11     |
| Closing Equity                                | 6344.76  | 6344.76  | 6365.35  | 6365.35  | 6365.46  |
| Average Equity                                | 6339.98  | 6344.76  | 6355.05  | 6365.35  | 6365.40  |
| Return on Equity (Base Rate) (%)              | 15.50    | 15.50    | 15.50    | 15.50    | 15.50    |
| MAT rate for the year (%)                     | 16.995   | 19.931   | 20.008   | 20.008   | 20.961   |
| Rate of Return on Equity (Pre Tax) (%)        | 18.674   | 19.358   | 19.377   | 19.377   | 19.610   |
| Return on Equity (Pre Tax)                    | 1183.93  | 1228.22  | 1231.42  | 1233.41  | 1248.26  |
|   |          |          |          |          |          |
| <b>Interest on Working Capital</b>            |          |          |          |          |          |
| Maintenance Spares                            | 85.58    | 90.48    | 95.66    | 101.13   | 106.90   |
| O & M expenses                                | 47.55    | 50.27    | 53.15    | 56.18    | 59.39    |
| Receivables                                   | 637.47   | 636.69   | 629.96   | 621.69   | 615.66   |
| Total   | 770.59   | 777.44   | 778.77   | 779.00   | 781.96   |
| Interest                                      | 94.40    | 95.24    | 95.40    | 95.43    | 95.79    |



| Particulars                        | 2009-10        | 2010-11        | 2011-12        | 2012-13        | 2013-14        |
|------------------------------------|----------------|----------------|----------------|----------------|----------------|
| <b>Annual Transmission Charges</b> |                |                |                |                |                |
| Depreciation                       | 1078.97        | 1079.81        | 1079.81        | 1079.81        | 1079.81        |
| Interest on Loan                   | 896.96         | 813.65         | 735.39         | 647.30         | 557.41         |
| Return on Equity                   | 1183.93        | 1228.22        | 1231.42        | 1233.41        | 1248.26        |
| Interest on Working Capital        | 94.40          | 95.24          | 95.40          | 95.43          | 95.79          |
| O & M Expenses                     | 570.54         | 603.22         | 637.75         | 674.18         | 712.70         |
| <b>Total</b>                       | <b>3824.80</b> | <b>3820.14</b> | <b>3779.77</b> | <b>3730.13</b> | <b>3693.97</b> |

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

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

| (₹ in lakh)                 |                |                |                |                |                |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|
| Particulars                 | 2014-15        | 2015-16        | 2016-17        | 2017-18        | 2018-19        |
| Depreciation                | 1079.82        | 1079.82        | 1079.82        | 1079.82        | 1079.82        |
| Interest on Loan            | 468.52         | 378.76         | 292.31         | 212.15         | 135.27         |
| Return on equity            | 1248.27        | 1248.27        | 1248.27        | 1248.27        | 1248.27        |
| Interest on Working Capital | 100.56         | 99.69          | 98.94          | 98.38          | 97.94          |
| O & M Expenses              | 655.00         | 676.78         | 699.24         | 722.42         | 746.42         |
| <b>Total</b>                | <b>3552.17</b> | <b>3483.32</b> | <b>3418.58</b> | <b>3361.04</b> | <b>3307.72</b> |

38. 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   | 98.25         | 101.52        | 104.89        | 108.36        | 111.96        |
| O & M expenses       | 54.58         | 56.40         | 58.27         | 60.20         | 62.20         |
| Receivables          | 592.03        | 580.55        | 569.76        | 560.17        | 551.29        |
| <b>Total</b>         | <b>744.86</b> | <b>738.47</b> | <b>732.92</b> | <b>728.74</b> | <b>725.45</b> |
| Rate of Interest (%) | 13.50         | 13.50         | 13.50         | 13.50         | 13.50         |
| <b>Interest</b>      | <b>100.56</b> | <b>99.69</b>  | <b>98.94</b>  | <b>98.38</b>  | <b>97.94</b>  |



### **Capital Cost**

39. Clause (1) & (3) of Regulation 9 of the 2014 Tariff Regulations specifies 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.”

40. The petitioner has claimed capital expenditure of ₹21326.20 lakh as on 31.3.2014 and no additional capitalization for the tariff period 2014-19. The trued up capital cost of ₹21326.20 lakh as on 31.3.2014 is considered to work out the tariff for tariff period 2014-19.

### **Additional Capital Expenditure**

41. The petitioner has not projected any additional capitalization for the tariff period 2014-19. Accordingly, no additional capital expenditure has been considered for the tariff period 2014-19.

### **Debt:Equity Ratio**

42. 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.”

43. The petitioner has considered debt:equity ratio as 70.15:29.85 as on 31.3.2014. The admitted debt:equity ratio of 70.15:29.85 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, as there is no additional capitalization, debt:equity ratio will remain the same for the 2014-19 tariff period. The details of the debt:equity as on 1.4.2014 considered for the purpose of tariff for the 2014-19 tariff period is as follows:-

| Particulars  | Amount (in ₹ lakh) | (%)           |
|--------------|--------------------|---------------|
| Debt         | 14960.74           | 70.15         |
| Equity       | 6365.46            | 29.85         |
| <b>Total</b> | <b>21326.20</b>    | <b>100.00</b> |

#### **Interest on Loan (“IOL”)**

44. 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.”



45. 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:-

| (₹ in lakh)                                 |               |               |               |               |               |
|---|---------------|---------------|---------------|---------------|---------------|
| Particulars                                 | 2014-15       | 2015-16       | 2016-17       | 2017-18       | 2018-19       |
| Gross loan opening                          | 14960.74      | 14960.74      | 14960.74      | 14960.74      | 14960.74      |
| Cumulative Repayment upto COD/previous year | 8390.29       | 9470.10       | 10549.91      | 11629.73      | 12709.54      |
| Net Loan-Opening                            | 6570.45       | 5490.64       | 4410.82       | 3331.01       | 2251.20       |
| Additions during the year                   | 0.00          | 0.00          | 0.00          | 0.00          | 0.00          |
| Repayment during the year                   | 1079.81       | 1079.81       | 1079.81       | 1079.81       | 1079.81       |
| Net Loan-Closing                            | 5490.64       | 4410.82       | 3331.01       | 2251.20       | 1171.38       |
| Average Loan                                | 6030.54       | 4950.73       | 3870.92       | 2791.10       | 1711.29       |
| Rate of Interest (%)                        | 7.7691        | 7.6507        | 7.5515        | 7.6010        | 7.9048        |
| <b>Interest</b>                             | <b>468.52</b> | <b>378.76</b> | <b>292.31</b> | <b>212.15</b> | <b>135.27</b> |

### **Return on Equity (“ROE”)**

46. 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."

47. The petitioner has computed ROE at the rate of 19.610% after grossing up the ROE 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. In this regard, TANGEDCO has submitted that the petitioner cannot claim the difference in tax from the beneficiaries and is entitled for grossing up of ROE only on the actual tax paid during the respective financial year. TANGEDCO has submitted that the difference in tax liabilities should not be passed on to the beneficiaries unless there is any amendment in the provisions in Income Tax Act providing retrospective effect. In this regard, the petitioner vide affidavit dated 29.12.2015 submitted that as per Regulation 25(3) of the 2014 Tariff Regulations, the grossed up rate of ROE at the end of every financial year shall be trued up based on actual tax paid together with any additional tax demand including interest thereon duly adjusted for any refund of tax including interest received from the 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 rate on return



on equity after truing up, shall be recovered or refunded to beneficiaries or the long term transmission customers/DICs as the case may be on year to year basis.

48. 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.

49. We have considered the submissions made by the petitioner and the respondent. 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:-

| <b>(₹ in lakh)</b>        |         |         |         |         |         |
|---------------------------|---------|---------|---------|---------|---------|
| Particulars               | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 |
| Opening Equity            | 6365.46 | 6365.46 | 6365.46 | 6365.46 | 6365.46 |
| Additional Capitalisation | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    |
| Closing Equity            | 6365.46 | 6365.46 | 6365.46 | 6365.46 | 6365.46 |



| Particulars                            | 2014-15        | 2015-16        | 2016-17        | 2017-18        | 2018-19        |
|--|----------------|----------------|----------------|----------------|----------------|
| Average Equity                         | 6365.46        | 6365.46        | 6365.46        | 6365.46        | 6365.46        |
| 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>1248.27</b> | <b>1248.27</b> | <b>1248.27</b> | <b>1248.27</b> | <b>1248.27</b> |

### **Depreciation**

50. 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."

51. The petitioner in the instant petition has submitted that the assets will complete 12 years on 1.9.2018. The petitioner has computed depreciation considering capital expenditure of ₹21326.20 lakh as on 31.3.2014 and no additional capitalization during the 2014-19 tariff period.



52. We have considered the submission made by the petitioner with reference to depreciation. Depreciation is allowed as provided under Regulation 27 of the 2014 Tariff Regulations. The details of the depreciation allowed is given hereunder:-

| (₹ in lakh)   |                |                |                |                |                |
|---|----------------|----------------|----------------|----------------|----------------|
| Particulars   | 2014-15        | 2015-16        | 2016-17        | 2017-18        | 2018-19        |
| Opening Gross block                                 | 21326.20       | 21326.20       | 21326.20       | 21326.20       | 21326.20       |
| Additional Capitalisation                           | 0.00           | 0.00           | 0.00           | 0.00           | 0.00           |
| Gross block at the end of the year                  | 21326.20       | 21326.20       | 21326.20       | 21326.20       | 21326.20       |
| Average gross block                                 | 21326.20       | 21326.20       | 21326.20       | 21326.20       | 21326.20       |
| Freehold Land                                       | 616.61         | 616.61         | 616.61         | 616.61         | 616.61         |
| Rate of Depreciation (%)                            | 5.063          | 5.063          | 5.063          | 5.063          | 5.063          |
| Depreciable Value                                   | 18638.63       | 18638.63       | 18638.63       | 18638.63       | 18638.63       |
| Elapsed Life of the assets at beginning of the year | 7              | 8              | 9              | 10             | 11             |
| Weighted Balance Useful life of the assets          | 25             | 24             | 23             | 22             | 21             |
| Remaining Depreciable Value                         | 10674.59       | 9594.78        | 8514.96        | 7435.15        | 6355.34        |
| <b>Depreciation</b>                                 | <b>1079.81</b> | <b>1079.81</b> | <b>1079.81</b> | <b>1079.81</b> | <b>1079.81</b> |

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

53. 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 for line</b>            |         |         |         |         |         |
| <b>Norm (₹ lakh/km)</b>                    |         |         |         |         |         |
| Double Circuit (Twin and Triple Conductor) | 0.707   | 0.731   | 0.755   | 0.780   | 0.806   |
| <b>Asset (km)</b>                          |         |         |         |         |         |



| Particulars   | 2014-15       | 2015-16       | 2016-17       | 2017-18       | 2018-19       |
|---|---------------|---------------|---------------|---------------|---------------|
| 400 kV Kaiga Narendra D/C line                        | 107.66        | 107.66        | 107.66        | 107.66        | 107.66        |
| <b>Total O&amp;M Expense (line) (₹ lakh)</b>          |               |               |               |               |               |
| 400 kV Kaiga Narendra D/C line                        | 76.12         | 78.70         | 81.28         | 83.97         | 86.77         |
| <b>O&amp;M Expense for Bay</b>                        |               |               |               |               |               |
| <b>Norm (₹ lakh/Bay)</b>                              |               |               |               |               |               |
| 400 kV  | 60.30         | 62.30         | 64.37         | 66.51         | 68.71         |
| 220 kV  | 42.21         | 43.61         | 45.06         | 46.55         | 48.10         |
| <b>Bays</b>   |               |               |               |               |               |
| 400 kV  | 4             | 4             | 4             | 4             | 4             |
| 220 kV  | 8             | 8             | 8             | 8             | 8             |
| <b>Total O&amp;M expense (Bay) (₹ lakh)</b>           | <b>578.88</b> | <b>598.08</b> | <b>617.96</b> | <b>638.44</b> | <b>659.64</b> |
| <b>Total O&amp;M expense (Line and bays) (₹ lakh)</b> | <b>655.00</b> | <b>676.78</b> | <b>699.24</b> | <b>722.41</b> | <b>746.41</b> |

54. 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.

55. With respect to the revision in O&M norms, TANGEDCO has submitted that the Commission while determining the norms for 2014 Tariff Regulations has considered the submissions made by all the stakeholders and accordingly



notified the O&M norms. TANGEDCO has further submitted that the norms determined by the Commission are in accordance with the guidance issued by the Central Electricity Authority and other authorities. The Commission in its Statement of Reasons for the 2014 Tariff Regulations has briefly discussed the issues raised by the utilities. Hence, there should not be any further increase in O&M norms as the norms allowed are on the higher side. Also, there cannot be any petition for power to relax the norms determined by the Commission. In response, the petitioner vide affidavit dated 29.12.2015 submitted that being a Central Public Sector Unit (CPSU), the scheme of wage revision is binding on the petitioner. However, the actual impact of wage hike (due w.e.f. 1.1.2017) has not been factored in fixation of normative O&M norms for tariff period 2014-19. Further, the petitioner submitted that in line with Regulation 19(f) (ii) of 2009 Tariff Regulations, norms for O&M expenses for the year 2009-10 were derived considering the impact of wage hike of the employees under PSUs.

56. 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.

57. 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>655.00</b> | <b>676.78</b> | <b>699.24</b> | <b>722.41</b> | <b>746.41</b> |



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

58. 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;”

59. 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%.

60. 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 allowed is shown in the table below:-

| (₹ in lakh)          |               |              |              |              |              |
|----------------------|---------------|--------------|--------------|--------------|--------------|
| Particulars          | 2014-15       | 2015-16      | 2016-17      | 2017-18      | 2018-19      |
| Maintenance Spares   | 98.25         | 101.52       | 104.89       | 108.36       | 111.96       |
| O & M expenses       | 54.58         | 56.40        | 58.27        | 60.20        | 62.20        |
| Receivables          | 592.02        | 580.55       | 569.76       | 560.17       | 551.28       |
| Total                | 744.86        | 738.47       | 732.92       | 728.73       | 725.45       |
| Rate of Interest (%) | 13.50         | 13.50        | 13.50        | 13.50        | 13.50        |
| <b>Interest</b>      | <b>100.56</b> | <b>99.69</b> | <b>98.94</b> | <b>98.38</b> | <b>97.94</b> |



## Annual Transmission Charges

61. 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                           | 21326.20    | 21326.20 | 21326.20 | 21326.20 | 21326.20 |
| Additional Capitalisation                     | 0.00        | 0.00     | 0.00     | 0.00     | 0.00     |
| Closing Gross Block                           | 21326.20    | 21326.20 | 21326.20 | 21326.20 | 21326.20 |
| Average Gross Block                           | 21326.20    | 21326.20 | 21326.20 | 21326.20 | 21326.20 |
|   |             |          |          |          |          |
| <b>Depreciation</b>                           |             |          |          |          |          |
| Rate of Depreciation (%)                      | 5.063       | 5.063    | 5.063    | 5.063    | 5.063    |
| Depreciable Value                             | 18638.63    | 18638.63 | 18638.63 | 18638.63 | 18638.63 |
| Elapsed Life (Beginning of the year)          | 7           | 8        | 9        | 10       | 11       |
| Weighted Balance Useful life of the assets    | 25          | 24       | 23       | 22       | 21       |
| Remaining Depreciable Value                   | 10674.59    | 9594.78  | 8514.96  | 7435.15  | 6355.34  |
| Depreciation                                  | 1079.81     | 1079.81  | 1079.81  | 1079.81  | 1079.81  |
|   |             |          |          |          |          |
| <b>Interest on Loan</b>                       |             |          |          |          |          |
| Gross Normative Loan                          | 14960.74    | 14960.74 | 14960.74 | 14960.74 | 14960.74 |
| Cumulative Repayment upto Previous Year       | 8390.29     | 9470.10  | 10549.91 | 11629.73 | 12709.54 |
| Net Loan-Opening                              | 6570.45     | 5490.64  | 4410.82  | 3331.01  | 2251.20  |
| Additions                                     | 0.00        | 0.00     | 0.00     | 0.00     | 0.00     |
| Repayment during the year                     | 1079.81     | 1079.81  | 1079.81  | 1079.81  | 1079.81  |
| Net Loan-Closing                              | 5490.64     | 4410.82  | 3331.01  | 2251.20  | 1171.38  |
| Average Loan                                  | 6030.54     | 4950.73  | 3870.92  | 2791.10  | 1711.29  |
| Weighted Average Rate of Interest on Loan (%) | 7.7691      | 7.6507   | 7.5515   | 7.6010   | 7.9048   |
| Interest                                      | 468.52      | 378.76   | 292.31   | 212.15   | 135.27   |
|   |             |          |          |          |          |
| <b>Return on Equity</b>                       |             |          |          |          |          |
| Opening Equity                                | 6365.46     | 6365.46  | 6365.46  | 6365.46  | 6365.46  |
| Additions                                     | 0.00        | 0.00     | 0.00     | 0.00     | 0.00     |





| Particulars                            | 2014-15        | 2015-16        | 2016-17        | 2017-18        | 2018-19        |
|--|----------------|----------------|----------------|----------------|----------------|
| Closing Equity                         | 6365.46        | 6365.46        | 6365.46        | 6365.46        | 6365.46        |
| Average Equity                         | 6365.46        | 6365.46        | 6365.46        | 6365.46        | 6365.46        |
| 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)             | 1248.27        | 1248.27        | 1248.27        | 1248.27        | 1248.27        |
|  |                |                |                |                |                |
| <b>Interest on Working Capital</b>     |                |                |                |                |                |
| Maintenance Spares                     | 98.25          | 101.52         | 104.89         | 108.36         | 111.96         |
| O & M expenses                         | 54.58          | 56.40          | 58.27          | 60.20          | 62.20          |
| Receivables                            | 592.02         | 580.55         | 569.76         | 560.17         | 551.28         |
| Total                                  | 744.86         | 738.47         | 732.92         | 728.73         | 725.45         |
| Interest                               | 100.56         | 99.69          | 98.94          | 98.38          | 97.94          |
|  |                |                |                |                |                |
| <b>Annual Transmission Charges</b>     |                |                |                |                |                |
| Depreciation                           | 1079.81        | 1079.81        | 1079.81        | 1079.81        | 1079.81        |
| Interest on Loan                       | 468.52         | 378.76         | 292.31         | 212.15         | 135.27         |
| Return on Equity                       | 1248.27        | 1248.27        | 1248.27        | 1248.27        | 1248.27        |
| Interest on Working Capital            | 100.56         | 99.69          | 98.94          | 98.38          | 97.94          |
| O & M Expenses                         | 655.00         | 676.78         | 699.24         | 722.41         | 746.41         |
| <b>Total</b>                           | <b>3552.15</b> | <b>3483.32</b> | <b>3418.58</b> | <b>3361.03</b> | <b>3307.70</b> |

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

62. 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**

63. 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**

64. 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, TANGEDCO has submitted that the Service Tax for transmission of electricity is presently under negative list, hence, the claim of the petitioner is premature and not reasonable. In response, the petitioner vide affidavit dated 29.12.2015 submitted that Service Tax is to be paid by the respondents only in case the same is paid by the petitioner. We are of the view that the petitioner's prayer is premature.

### **Deferred Tax Liability**

65. 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 under Regulation 49 of the 2014 Tariff Regulations. In this regard, TANGEDCO has submitted that petitioner has not furnished the details with the works executed prior to the cut-off date, total estimated cost of package, reasons for such withholding of payment, etc., as required under Regulation 14(2) of the



2014 Tariff Regulations. Hence, in the absence of the above, TANGEDCO has submitted that the claim of the petitioner is unreasonable. In response, the petitioner vide affidavit dated 29.12.2015 submitted that it has furnished the details of additional capitalization vide Auditors Certificate dated 19.6.2014 along with the petition. The deferred tax liability shall be dealt as per Regulation 49 of the 2014 Tariff Regulations, as amended. Accordingly, the petitioner is entitled to recover the deferred tax liability upto 31.3.2009 whenever the same materializes, directly from the beneficiaries or long term transmission customers /DICs.

#### **Sharing of Transmission Charges**

66. 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.

67. This Order disposes of Petition No. 212/TT/2014.

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

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



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

| Particulars   | Interest Rate (%) | Loan deployed as on 1.4.2009 | Additions during the tariff period | Total    |
|---|-------------------|------------------------------|------------------------------------|----------|
| BOND IX-DOCO- 1 Nov 2005  | 12.25             | 431.00                       | 0.00                               | 431.00   |
| BOND X-DOCO- 1 Nov 2005   | 10.90             | 1254.00                      | 0.00                               | 1254.00  |
| BOND XI-Option-I-DOCO- 1 Nov 2005                                   | 9.80              | 1012.00                      | 0.00                               | 1012.00  |
| BOND XII-DOCO- 1 Nov 2005   | 9.70              | 71.00                        | 0.00                               | 71.00    |
| BOND XIII-Option-I-DOCO- 1 Nov 2005                                 | 8.63              | 888.00                       | 0.00                               | 888.00   |
| BOND XV-DOCO- 1 Nov 2005  | 6.68              | 3000.00                      | 0.00                               | 3000.00  |
| BOND XVI-DOCO- 1 Nov 2005   | 7.10              | 2365.00                      | 0.00                               | 2365.00  |
| BOND XVII- ADDCAP FOR 2005-2006- 31 Mar 2006                        | 7.39              | 282.00                       | 0.00                               | 282.00   |
| BOND XVII-DOCO- 1 Nov 2005  | 7.39              | 3190.00                      | 0.00                               | 3190.00  |
| BOND XVIII- ADDCAP FOR 2005-2006- 31 Mar 2006                       | 8.15              | 362.85                       | 0.00                               | 362.85   |
| BOND XVIII-DOCO- 1 Sept 2006  | 8.15              | 437.15                       | 0.00                               | 437.15   |
| BOND XVIII-DOCO- 9 Mar 2006   | 8.15              | 100.00                       | 0.00                               | 100.00   |
| BOND XIX- ADDCAP FOR 2006-2007- 31 Mar 2007                         | 9.25              | 230.00                       | 0.00                               | 230.00   |
| BOND XXII- ADDCAP FOR 2006-2007 DRAWAL ON 2 Sep 2006 - 2 Sep 2006   | 8.68              | 35.10                        | 0.00                               | 35.10    |
| BOND XXII- ADDCAP FOR 2006-2007 DRAWAL ON 30 Mar 2007 - 30 Mar 2007 | 8.68              | 150.00                       | 0.00                               | 150.00   |
| BOND XXII- ADDCAP FOR 2006-2007 DRAWAL ON 31 Mar 2007 - 31 Mar 2007 | 8.68              | 284.90                       | 0.00                               | 284.90   |
| Oriental Bank of Commerce-DOCO- 1-Nov-2005                          | 9.60              | 466.00                       | 0.00                               | 466.00   |
| Punjab National Bank-II-DOCO- 1 Nov-2005                            | 8.89              | 559.00                       | 0.00                               | 559.00   |
| Total   |                   | 15118.00                     | 0.00                               | 15118.00 |



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

(₹ in lakh)

| Details of Loan                                 | 2009-10  | 2010-11  | 2011-12  | 2012-13  | 2013-14  |
|---|----------|----------|----------|----------|----------|
| Gross Opening Loan                              | 15118.00 | 15118.00 | 15118.00 | 15118.00 | 15118.00 |
| Cumulative Repayment of loan upto previous year | 2527.69  | 3833.65  | 5197.95  | 6562.25  | 7926.55  |
| Net Loan Opening                                | 12590.31 | 11284.35 | 9920.05  | 8555.75  | 7191.45  |
| Additions during the year                       | 0.00     | 0.00     | 0.00     | 0.00     | 0.00     |
| Repayment during the year                       | 1305.96  | 1364.30  | 1364.30  | 1364.30  | 1321.20  |
| Net Loan Closing                                | 11284.35 | 9920.05  | 8555.75  | 7191.45  | 5870.25  |
| Average Loan                                    | 11937.33 | 10602.20 | 9237.90  | 7873.60  | 6530.85  |
| Interest  | 941.73   | 837.40   | 734.77   | 622.30   | 511.99   |
| Weighted Average Rate of Interest (%)           | 7.8890   | 7.8984   | 7.9539   | 7.9036   | 7.8395   |



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

| Particulars   | Interest Rate (%) | Loan deployed as on 1.4.2014 | Additions during the tariff period | Total           |
|---|-------------------|------------------------------|------------------------------------|-----------------|
| BOND IX-DOCO- 1 Nov 2005  | 12.25             | 431.00                       | 0.00                               | 431.00          |
| BOND X-DOCO- 1 Nov 2005   | 10.90             | 1254.00                      | 0.00                               | 1254.00         |
| BOND XI-Option-I-DOCO- 1 Nov 2005                                   | 9.80              | 1012.00                      | 0.00                               | 1012.00         |
| BOND XII-DOCO- 1 Nov 2005   | 9.70              | 71.00                        | 0.00                               | 71.00           |
| BOND XIII-Option-I-DOCO- 1 Nov 2005                                 | 8.63              | 888.00                       | 0.00                               | 888.00          |
| BOND XV-DOCO- 1 Nov 2005  | 6.68              | 3000.00                      | 0.00                               | 3000.00         |
| BOND XVI-DOCO- 1 Nov 2005   | 7.10              | 2365.00                      | 0.00                               | 2365.00         |
| BOND XVII- ADDCAP FOR 2005-2006-31 Mar 2006                         | 7.39              | 282.00                       | 0.00                               | 282.00          |
| BOND XVII-DOCO- 1 Nov 2005  | 7.39              | 3190.00                      | 0.00                               | 3190.00         |
| BOND XVIII- ADDCAP FOR 2005-2006- 31 Mar 2006                       | 8.15              | 362.85                       | 0.00                               | 362.85          |
| BOND XVIII-DOCO- 1 Sept 2006  | 8.15              | 437.15                       | 0.00                               | 437.15          |
| BOND XVIII-DOCO- 9 Mar 2006   | 8.15              | 100.00                       | 0.00                               | 100.00          |
| BOND XIX- ADDCAP FOR 2006-2007-31 Mar 2007                          | 9.25              | 230.00                       | 0.00                               | 230.00          |
| BOND XXII- ADDCAP FOR 2006-2007 DRAWAL ON 2 Sep 2006 - 2 Sep 2006   | 8.68              | 35.10                        | 0.00                               | 35.10           |
| BOND XXII- ADDCAP FOR 2006-2007 DRAWAL ON 30 Mar 2007 - 30 Mar 2007 | 8.68              | 150.00                       | 0.00                               | 150.00          |
| BOND XXII- ADDCAP FOR 2006-2007 DRAWAL ON 31 Mar 2007 - 31 Mar 2007 | 8.68              | 284.90                       | 0.00                               | 284.90          |
| Oriental Bank of Commerce-DOCO- 1-Nov-2005                          | 9.60              | 466.00                       | 0.00                               | 466.00          |
| Punjab National Bank-II-DOCO- 1 Nov-2005                            | 8.89              | 559.00                       | 0.00                               | 559.00          |
| <b>Total</b>  |                   | <b>15118.00</b>              | <b>0.00</b>                        | <b>15118.00</b> |

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

(₹ in lakh)

| Details of Loan                                 | 2014-15  | 2015-16  | 2016-17  | 2017-18  | 2018-19  |
|---|----------|----------|----------|----------|----------|
| Gross Opening Loan                              | 15118.00 | 15118.00 | 15118.00 | 15118.00 | 15118.00 |
| Cumulative Repayment of loan upto previous year | 9247.75  | 10568.95 | 11890.15 | 13021.45 | 14062.49 |
| Net Loan Opening                                | 5870.25  | 4549.05  | 3227.85  | 2096.55  | 1055.51  |
| Additions during the year                       | 0.00     | 0.00     | 0.00     | 0.00     | 0.00     |
| Repayment during the year                       | 1321.20  | 1321.20  | 1131.30  | 1041.04  | 730.54   |
| Net Loan Closing                                | 4549.05  | 3227.85  | 2096.55  | 1055.51  | 324.97   |
| Average Loan                                    | 5209.65  | 3888.45  | 2662.20  | 1576.03  | 690.24   |
| Interest  | 404.74   | 297.49   | 201.04   | 119.79   | 54.56    |
| Weighted Average Rate of Interest (%)           | 7.7691   | 7.6507   | 7.5515   | 7.6010   | 7.9048   |

