

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 1/TT/2020**

**Coram:**

**Shri P. K. Pujari, Chairperson  
Shri I. S. Jha, Member  
Shri Pravas Kumar Singh, Member**

**Date of Order: 10.07.2021**

**In the matter of:**

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and revision of transmission tariff of 2001-04, 2004-09 and 2009-14 tariff periods and truing-up of transmission tariff of 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for 400 kV D/C Vijayawada-Nellore Transmission Line, 400 kV D/C Nellore-Sriperumbudur Line, New 400 kV Switching station at Nellore, extension of Vijayawada and Sriperumbudur Sub-station with associated bays under System Strengthening in Southern Region.

**And in the matter of:**

Power Grid Corporation of India Ltd.,  
"SAUDAMINI", Plot No-2,  
Sector-29, Gurgaon-122001 (Haryana).

**.....Petitioner**

**Versus**

1. Karnataka Power Transmission Corporation Ltd.,  
Kaveri Bhavan, Bangalore-560009.
2. Transmission Corporation of Andhra Pradesh Ltd.,  
Vidyut Soudha, Hyderabad-500082.
3. Kerala State Electricity Board,  
Vaidyuthi Bhavanam,  
Pattom, Thiruvananthapuram-695004.
4. Tamil Nadu Generation and Distribution Corporation Ltd.,  
(Formerly Tamil Nadu Electricity Board-TNEB),  
NPKRR Maaligai, 800, Anna Salai,

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- Chennai-600002.
5. Electricity Department,  
Government of Pondicherry,  
Pondicherry-605001.
  6. Eastern Power Distribution Company of Andhra Pradesh Ltd.,  
P&T Colony, Seethmmadhara, Vishakhapatnam,  
Andhra Pradesh.
  7. Southern Power Distribution Company of Andhra Pradesh Ltd.,  
Srinivasasa Kalyana Mandapam Backside,  
Tiruchanoor Road, Kesavayana Gunta,  
Tirupati-517501, Chittoor District, Andhra Pradesh.
  8. Central Power Distribution Company of Andhra Pradesh Ltd.,  
Corporate Office, Mint Compound,  
Hyderabad-500063, Telangana.
  9. Northern Power Distribution Company of Andhra Pradesh Ltd.,  
Opp. NIT Petrol Pump, Chaitanyapuri, Kazipet,  
Warangal-506004, Telangana.
  10. Bangalore Electricity Supply Company Ltd.,  
Corporate Office, K. R. Circle,  
Bangalore-560001, Karnataka.
  11. Gulbarga Electricity Supply Company Ltd.,  
Station Main Road, Gulbarga, Karnataka.
  12. Hubli Electricity Supply Company Ltd.,  
Navanagar, PB Road, Hubli,  
Karnataka.
  13. MESCOM Corporate Office,  
Paradigm Plaza, AB Shetty Circle,  
Mangalore-575001, Karnataka.
  14. Chamundeswari Electricity Supply Corporation Ltd.,  
927, L J Avenue, Ground Floor,  
New Kantharaj URS Road,  
Saraswatipuram, Mysore-570009, Karnataka.
  15. Electricity Department,  
Government of Goa, Vidyuti Bhawan,



Panaji, Goa-403001.

16. Transmission Corporation of Telangana Ltd.,  
Vidhyut Sudha, Khairatabad,  
Hyderabad-500082.

17. Tamil Nadu Transmission Corporation,  
NPKRR Maaligai, 800, Anna Salai,  
Chennai-600002.

.....Respondent(s)

**For Petitioner:** Shri S. S Raju, PGCIL  
Shri B. Dash, PGCIL  
Shri Ved Prakash Rastogi, PGCIL  
Shri A. K. Verma, PGCIL

**For Respondent:** Shri B. Vinodh Kanna, Advocate, TANGEDCO  
Shri R. Srinivasan, TANGEDCO  
Ms. R. Ramalakshmi, TANGEDCO

### **ORDER**

The instant petition has been filed by the Petitioner, Power Grid Corporation of India Ltd., a deemed transmission licensee, for revision of transmission tariff of 2001-04, 2004-09 and 2009-14 tariff periods, truing-up of the capital expenditure for 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and for determination of transmission tariff of the period from 1.4.2019 to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of 400 kV D/C Vijayawada-Nellore Transmission Line, 400 kV D/C Nellore-Sriperumbudur Line, New 400 kV Switching station at Nellore, extension of Vijayawada and Sriperumbudur Sub-station with associated bays (hereinafter referred to as “the transmission asset”) under System Strengthening in Southern Region.



2. The Petitioner has made the following prayers in this petition:

- “1) Approve the revised Transmission Tariff for 2001-04, 2004-09 block and transmission tariff for 2009-14 block for the assets covered under this petition, as per para 8 above.
- 2) Approve the trued up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 9 and 10 above.
- 3) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, 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 as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 9 and 10 above for respective block.
- 4) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 70 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure (if any) in relation to the filing of petition.
- 5) Allow the petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.
- 6) Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the respondents.
- 7) Allow the petitioner to file a separate petition before Hon’ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 10.5 above.
- 8) Allow the petitioner to claim the capital spares at the end of tariff block as per actual.
- 9) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.

*and pass such other relief as Hon’ble Commission deems fit and appropriate under the circumstances of the case and in the interest of justice”*

3. **Backdrop of the case**

- a) The Investment Approval (I.A.) for the construction of the transmission asset was accorded by the Central Government in Ministry of Power as per letter



dated 5.2.2001 at an estimated cost of ₹39628.00 lakh (at 1<sup>st</sup> quarter 2000 price level), including an IDC of ₹2900.00 lakh.

b) The scope of the work as per I.A. is as follows:

**Transmission Line**

- (i) 400 kV D/C Vijayawada-Nellore Transmission Line;
- (ii) 400 kV D/C Nellore-Sriperumbudur Transmission Line.

**Sub-station**

**400 kV Vijayawada**

- (i) 2 numbers of 400 kV bays extensions at Nellore.

**400 kV Nellore Switching Station**

- (i) 2 numbers of 400 kV bays at Vijayawada;
- (ii) 2 numbers of 400 kV bays at Sriperumbudur.

**Sriperumbudur Sub-station**

- (i) 2 numbers of 400 kV bays extensions at Nellore.

c) The transmission asset was put under commercial operation and 1.3.2003 and there was no time over-run in the commissioning. The complete scope of the work as per I.A. is covered in the instant petition.

d) The transmission tariff of the transmission asset for the period from 1.3.2003 to 31.3.2004 based on the terms and conditions of determination of tariff contained in the Commission's notification dated 26.3.2001 was determined vide order dated 16.3.2005 in Petition No. 123/2002.

e) The transmission charges for the period from 1.4.2004 to 31.3.2009 and additional capital expenditure (ACE) during 2001-04 after COD was approved vide order dated 14.1.2006 in Petition No. 48/2005 and the same were subsequently revised vide order dated 20.7.2009 in Petition No. 43/2009 on account of ACE incurred during 2004-05 and 2005-07.

f) The transmission tariff of the transmission asset for the period from 1.4.2009 to 31.3.2014 was approved vide order dated 17.9.2010 in Petition No. 56/2010 in accordance with the 2009 Tariff Regulations.



g) The transmission tariff of 2009-14 tariff period was trued-up and transmission tariff for 2014-19 tariff period was allowed vide order dated 4.12.2015 in Petition No. 167/TT/2014.

h) The Petitioner has sought revision of transmission tariff approved for 2001-04 and 2004-09 tariff periods on account of change in Interest on Loan (IoL) and Interest on Working Capital (IWC) to the extent of revision in IoL and in Maintenance Spares in terms of the judgments of the Appellate Tribunal for Electricity (APTEL) dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters and 13.6.2007 in Appeal No. 139 of 2006 and batch matters; consequential revision of transmission tariff allowed for 2009-14 tariff period; truing up of tariff of 2014-19 tariff period; and determination of transmission tariff of 2019-24 tariff period for the transmission asset.

i) APTEL in judgment dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters pertaining to generating stations of NTPC had considered 4 (four) issues. The issues considered by APTEL and its decisions are as given in the following table:

<b>Sr. No.</b>	<b>Issue</b>	<b>APTEL's decision/direction</b>
1	Whether APTEL can enquire into the validity of Regulations framed by the Commission	Challenge to the validity of Regulations framed by the Commission falls outside the purview of APTEL
2	Computation of IoL	In view of the order of APTEL dated 14.11.2016 in Appeal Nos. 94 and 96 of 2005 and order dated 24.1.2007 passed in Appeal Nos. 81 to 87, 89 to 93 of 2005, computation of loan has to be based on loan repayment on normative basis. The Commission is required to recalculate the loan outstanding as on 31.3.2004 based on loan repayment on normative basis
3(a)	O&M Expenses: Inadequate provision of employee costs as part of O&M Expenses due to variation in salary and wages	Commission's view upheld
3(b)	O&M Expenses: Non-inclusion of incentives and ex-gratia payment to employees	Commission's view upheld
4	Cost of spares for calculation of working capital	Commission's view upheld



j) APTEL in its judgment dated 13.6.2007 in Appeal No. 139 of 2006 and batch matters pertaining to generating stations of NTPC had considered 9 (nine) issues. The issues considered and the decisions of APTEL are given in the following table:

<b>Sr. No.</b>	<b>Issue</b>	<b>APTEL's decision/direction</b>
I	Computation of outstanding loan at the beginning of the tariff period i.e. 1.4.2004	The Commission is required to recalculate the loan outstanding as on 31.3.2004 based on loan repayment on normative basis
II	Consequence of refinance of Loan	Commission to consider the issue afresh
III	Treating depreciation available as deemed repayment of loan	Commission to make a fresh computation of outstanding loan
IV	Admissibility of depreciation up to 90%	Commission to consider the issue afresh
V	Cost of Maintenance Spares	Commission to consider the issue afresh
VI	Impact of de-capitalisation of the assets on cumulative repayment of loan	The cumulative repayment of the loan proportionate to the assets decapitalized required to be reduced. The Commission to act accordingly
VII	Non-consideration of normative transit loss for coal import.	Commission to consider afresh the transit losses for coal imported from coal mines other than the dedicated ones
VIII	Foreign Exchange Rate Variation (FERV)	FERV has been kept as pass through to ensure that any liability or gain, if any, arising on account of any variation in foreign exchange rates is passed on to the beneficiary as held in order dated 4.10.2006 in Appeal Nos. 135 to 140 of 2005. Commission to act accordingly
IX	Computation of interest on loan in Singrauli Station	Net loan closing at the end of a year is reflected as net loan opening on the first day of the next year. Commission shall re-compute the interest accordingly

k) The Commission and certain interested parties preferred Civil Appeals against the APTEL's judgments before the Hon'ble Supreme Court in 2007. The Appeals were admitted and initially stay was granted by the Hon'ble Supreme Court. Subsequently, on an assurance by NTPC that the issues under Appeal would not be pressed for implementation during the pendency of the Appeals, the stay was vacated by the Hon'ble Supreme Court.



l) Based on APTEL's judgments dated 22.1.2007 and 13.6.2007, the Petitioner had sought re-determination of transmission tariff of its transmission assets of 2001-04 and 2004-09 tariff periods in Petition No. 121/2007. The Commission after taking into consideration the pendency of Appeals before the Hon'ble Supreme Court adjourned the said petition *sine die* and directed that the same be revived after the disposal of the Civil Appeals by the Hon'ble Supreme Court.

m) The Hon'ble Supreme Court vide its judgment dated 10.4.2018, dismissed the said Civil Appeals filed against APTEL's said judgments. Thus, the judgments of APTEL have attained finality.

n) Consequent to the Hon'ble Supreme Court's order dated 10.4.2018 in NTPC matters, Petition No. 121/2007 was listed for hearing on 8.1.2019. The Commission vide order dated 18.1.2019 in Petition No. 121/2007, directed the Petitioner to submit its claim separately for the assets at the time of filing of truing up petitions for 2014-19 tariff period.

o) The instant petition was heard on 18.5.2021 and in view of APTEL's judgments dated 22.1.2007 and 13.6.2007 and the order of Hon'ble Supreme Court dated 10.4.2018, tariff is being revised. Period-wise transmission tariff is being re-worked based on the Tariff Regulations applicable for the respective tariff periods and suitable assumptions have been made at certain places and applied, which are indicated.

4. The respondents are distribution licensees and power departments, which are procuring transmission service from the Petitioner, mainly beneficiaries of Southern Region.

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notice published in the newspapers by





the Petitioner. Tamil Nadu Generation and Distribution Corporation Ltd. (TANGEDCO), Respondent No. 4, has filed its reply vide affidavit dated 12.5.2021 and has raised the issues of retrospective revision of tariff for 2001-04, 2004-09 and 2009-14 periods, applicability and recovery of GST and sharing of transmission charges. The Petitioner has filed its rejoinder vide affidavit dated 20.5.2021. The issues raised by TANGEDCO and the clarifications given by the Petitioner have been dealt in the relevant paragraphs of this order.

**Re: Interest on Loan (IoL)**

6. APTEL while dealing with the issue of computation of IoL, in judgement dated 22.1.2007, observed that IoL for the period from 1.4.1998 to 31.3.2001 shall be computed only on normative loan repayment as per its judgement dated 14.11.2006 in Appeal Nos. 94 and 96 of 2005. APTEL vide its judgment dated 14.11.2006 had set aside the Commission's methodology of computation of loan on the actual repayment basis or normative repayment whichever is higher and held that the Commission is required to adopt normative debt repayment methodology for working out IoL liability for the period from 1.4.1998 to 31.3.2001. In view of the above, the interest allowed for 2001-04 and 2004-09 tariff periods is revised on the basis of the normative debt repayment methodology.

**Re: Additional Capital Expenditure (ACE)**

7. APTEL vide judgment dated 13.6.2007 in Appeal No. 139 of 2006 and others held that ACE after COD should also be considered for computation of maintenance spares. In view of the above, maintenance spares to be considered for computation of working capital for 2004-09 periods are also required to be revised taking into consideration ACE after COD.



**Re: Depreciation**

8. As regards depreciation, APTEL in its judgement dated 13.6.2007 in Appeal No. 139 of 2006 observed that depreciation is an expense and it cannot be deployed for deemed repayment of loan and accordingly directed the Commission to compute the outstanding loan afresh. In view of the above directions of APTEL, the outstanding loan allowed for the transmission asset for 2001-04 and 2004-09 periods is revised in the instant order.

9. The revision of transmission tariff allowed for 2001-04 and 2004-09 tariff periods necessitates the revision of transmission tariff allowed for 2009-14 tariff period, which is also being done in the present order. The implementation of the directions of APTEL in judgments dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters and dated 13.6.2007 in Appeal No. 139 of 2006 and batch matters was kept pending in case of the Petitioner awaiting the outcome of the Civil Appeals filed before the Hon'ble Supreme Court. Taking into consideration the facts of the case and keeping in view the interest of the consumers, we are of the view that the beneficiaries should not be burdened with the carrying cost for the difference in the tariff allowed earlier and allowed in the instant order for 2001-04, 2004-09 and 2009-14 tariff periods. Therefore, we direct that the Petitioner will neither claim nor pay any carrying cost from or to the beneficiaries for the difference, if any, in the tariff allowed earlier and the tariff being allowed in the instant order. Further, the said difference in tariff shall be recovered/ paid over a period of six months from the date of issue of this order.



10. This order is issued considering the submissions made by the Petitioner in the petition vide affidavit dated 9.8.2019, Petitioner's affidavit dated 31.7.2020, TANGEDCO's reply vide affidavit dated 12.5.2021 and Petitioner's rejoinder to TANGEDCO's reply filed on 20.5.2021.

11. The hearing in this matter was held on 18.5.2021 through video conference and the order was reserved. Having heard the representatives of the Petitioner, learned counsel for TANGEDCO and after perusal of the materials on record, we proceed to dispose of the petition.

12. TANGEDCO has submitted that the Electricity Act, 2003 and the Tariff Regulations of the Commission do not envisage/ permit retrospective revision of the bills that is proposed by the Petitioner with effect from 1.4.2001. TANGEDCO has referred to judgement of the Hon'ble Supreme Court dated 3.3.2009 in the Civil Appeal No. 1110 of 2007 in the matter of U.P. Power Corporation Ltd. vs. NTPC Ltd. {(2009) 6 SCC 235}.

13. TANGEDCO has further submitted that distribution companies have large customer base, which keeps changing every year. The various parameters on the basis of which ARR is determined and also the basis on which tariff for consumers is determined keep changing and it is not possible to charge the tariff retrospectively. The consumers of one tariff period are different from that of the subsequent and earlier tariff periods. The arrears pertaining to two decades cannot be recovered from the present consumers and it is legally not tenable. Accordingly, TANGEDCO has prayed that retrospective revision of tariff may not be allowed to the Petitioner with



effect from 2001-04 and that the Petitioner may be directed to file a fresh petition for truing up of 2014-19 tariff period and determination of tariff of 2019-24 tariff period.

14. In response, the Petitioner vide affidavit dated 20.5.2021, has submitted that TANGEDCO's claim that the retrospective revision of the bills is not envisaged, is erroneous and misconceived as there have been numerous instances wherein the tariffs for the past periods have been revised and the same is adjusted and recovered in tariff of subsequent years. The concept of true-up by its very nature relates to adjustments for the past period. The Petitioner has submitted that reliance placed by TANGEDCO on decision of the Hon'ble Supreme Court dated 3.3.2009 in the Civil Appeal No. 1110 of 2007 in the matter of U.P. Power Corporation Ltd. vs. NTPC Ltd. {(2009) 6 SCC 235} is misplaced as the said decision has upheld the Commission's power to revise the tariff of any utility.

15. The Petitioner referring to the matter of Chhattisgarh State Power Distribution Company Ltd. vs. Chhattisgarh State Electricity Regulatory Commission {(2012) SCC Online APTEL 140, Paras 7.1 to 7.4} submitted that it is a settled position of law that if in the tariff order, an aspect has been decided against the Regulations, the same can be corrected in truing up. The Petitioner further submitted that in the instant matter, the Regulations which had been interpreted by the Commission in the tariff orders have subsequently been interpreted differently by APTEL. Therefore, at the stage of truing up, the consequential relief can be given to the Petitioner and accordingly, the Petitioner has requested to approve the tariff as claimed in the Petition. The Petitioner has relied upon the Commission's orders dated 31.7.2020 and 5.3.2021 in Petition Nos. 288/TT/2019 and 290/TT/2020 respectively wherein similar contentions of BRPL



have been rejected and the Commission has allowed revision of tariff for 2001-04, 2004-09 and 2009-14 tariff periods.

16. We have considered the submissions made by the Petitioner and TANGEDCO. We observe that the contentions of TANGEDCO regarding revision of tariff for 2001-04, 2004-09 and 2009-14 tariff periods are similar to that of BRPL. It was placed before us that the Commission has decided the issue in various petitions including Petition No. 288/TT/2019 and Petition No. 290/TT/2020. TANGEDCO had raised this issue in several other petitions as well and the Commission, in terms of its findings in Petition No. 288/TT/2019 and Petition No. 290/TT/2020, rejected the contentions of TANGEDCO. Accordingly, in terms of orders dated 31.7.2020 and 5.3.2021 in Petition Nos. 288/TT/2019 and 290/TT/2020, respectively, we do not find any merit in the submissions of TANGEDCO and, therefore, reject the same and proceed with revision of tariff of 2001-04 and 2004-09 tariff periods and consequent revision in the tariff allowed for the 2009-04 tariff period.

**Revision of Transmission Charges for 2001-04, 2004-09 and 2009-14 Tariff Periods**

**2001-04 Period**

17. The Commission vide order dated 16.3.2005 in Petition No. 123/2002 had allowed the following transmission charges for the transmission asset for 2001-04 tariff period:

(₹ in lakh)

Particulars	2002-03 (Pro-rata 1 month)	2003-04
Depreciation	74.64	895.73
Interest on Loan	230.74	2709.51
Return on Equity	58.32	699.86
Advance against Depreciation	0.00	0.00



Interest on Working Capital	11.18	134.43
O&M Expenses	58.88	749.02
<b>Total</b>	<b>433.76</b>	<b>5188.55</b>

18. The Petitioner has claimed the following revised transmission charges for the transmission asset for 2001-04 tariff period in the instant petition:

Particulars	(₹ in lakh)	
	2002-03 (Pro-rata 1 month)	2003-04
Depreciation	74.64	895.73
Interest on Loan	230.75	2709.51
Return on Equity	58.32	699.86
Advance against Depreciation	0.00	0.00
Interest on Working Capital	11.21	137.57
O&M Expenses	58.88	749.02
<b>Total</b>	<b>433.80</b>	<b>5191.69</b>

19. We have considered the submissions of the Petitioner. The transmission tariff is allowed for the transmission asset on the basis of the following:

- a) Admitted capital cost as on 1.3.2003 of ₹33116.13 lakh for the transmission asset;
- b) Weighted Average Rate of Interest on actual loan, Weighted Average Rate of Depreciation (WAROD), Rate of IWC and O&M Expenses as per order dated 16.3.2005 in Petition No. 123/2002.

20. There was ACE during 2001-04 period, which necessitates revision of the maintenance spares component for calculating IWC. As ACE during 2001-04 period is less than 20% of the apportioned approved cost for the transmission asset, the impact of the same has only been considered for revising the computation of Maintenance Spares component of IWC, in line with APTEL's judgment dated 13.6.2007.

21. In view of the above, the revised transmission charges approved for the transmission asset for 2001-04 tariff period are as follows:



(₹ in lakh)

Particulars	2002-03 (Pro-rata 1 month)	2003-04
Depreciation	74.64	895.73
Interest on Loan	230.74	2709.51
Return on Equity	58.32	699.86
Advance against Depreciation	0.00	0.00
Interest on Working Capital	11.21	135.63
O&M Expenses	58.88	749.02
<b>Total</b>	<b>433.80</b>	<b>5189.75</b>

22. The Annual Fixed Charges (AFC) allowed earlier for 2001-04 period vide order dated 16.3.2005 in Petition No. 123/2002, revised AFC claimed in the instant petition and the revised AFC approved in the instant order is as follows:

(₹ in lakh)

Particulars	2002-03 (Pro-rata 1 month)	2003-04
AFC allowed vide order dated 16.3.2005 in Petition No. 123/2002	433.76	5188.55
AFC claimed by the Petitioner in the instant petition	433.80	5191.69
AFC approved in the instant order	433.80	5189.75

### 2004-09 Period

23. The Commission vide order dated 14.1.2006 in Petition No. 48/2005 had allowed the transmission charges for the transmission asset which were further revised vide order dated 20.7.2009 in Petition No. 43/2009 on account ACE incurred during 2004-05 and 2005-07. The revised transmission charges allowed for 2004-09 tariff period are as follows:

(₹ in lakh)

Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	937.26	938.46	938.73	938.73	938.73
Interest on Loan	2648.77	2526.26	2338.29	2109.96	1881.62
Return on Equity	807.71	809.68	810.11	810.11	810.11
Advance against Depreciation	0.00	0.00	1248.42	1478.57	1478.58
Interest on Working Capital	125.29	125.90	147.21	150.22	149.45
O&M Expenses	465.42	483.99	503.94	523.16	544.97



<b>Total</b>	<b>4984.44</b>	<b>4884.30</b>	<b>5986.70</b>	<b>6010.75</b>	<b>5803.45</b>
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24. The Petitioner has claimed the following revised transmission charges for the transmission asset for 2004-09 tariff period in the instant petition:

(₹ in lakh)					
<b>Particulars</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Depreciation	937.26	938.46	938.73	938.73	938.73
Interest on Loan	2648.76	2526.26	2338.29	2109.97	1881.62
Return on Equity	807.71	809.68	810.11	810.11	810.11
Advance against Depreciation	0.00	0.00	1248.42	1478.57	1478.57
Interest on Working Capital	128.92	129.80	151.35	154.61	154.10
O&M Expenses	465.42	483.99	503.94	523.16	544.97
<b>Total</b>	<b>4988.06</b>	<b>4888.19</b>	<b>5990.84</b>	<b>6015.15</b>	<b>5808.11</b>

25. We have considered the submissions of the Petitioner. The transmission tariff is allowed for the transmission asset on the basis of the following:

- a) Admitted capital cost as on 1.4.2004 of ₹34500.39 lakh for the transmission asset which includes ACE of ₹1384.26 lakh for 2001-04 tariff period;
- b) ACE of ₹93.77 lakh during 2004-09 tariff period, which was approved by the Commission vide order dated 20.7.2009 in Petition No. 43/2009;
- c) Weighted Average Rate of Interest on actual loan, WAROD, Rate of IWC and O&M Expenses considered as per order dated 20.7.2009 in Petition No. 43/2009.

26. In view of the above, the revised transmission charges approved for the transmission asset for 2004-09 tariff period is as follows:

(₹ in lakh)					
<b>Particulars</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Depreciation	937.26	938.46	938.73	938.73	938.73
Interest on Loan	2648.77	2526.26	2338.29	2109.96	1881.62
Return on Equity	807.71	809.68	810.11	810.11	810.11
Advance against Depreciation	0.00	0.00	1248.42	1478.57	1478.58
Interest on Working Capital	126.90	127.67	149.09	152.21	151.56
O&M Expenses	465.42	483.99	503.94	523.16	544.97





<b>Total</b>	<b>4986.06</b>	<b>4886.05</b>	<b>5988.59</b>	<b>6012.75</b>	<b>5805.58</b>
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27. AFC allowed earlier for 2004-09 period vide order dated 20.7.2009 in Petition No. 43/2009, revised AFC claimed in the instant petition and the revised AFC approved in the instant order is as follows:

<b>Particulars</b>	<b>(₹ in lakh)</b>				
	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
AFC allowed vide order dated 20.7.2009 in Petition No. 43/2009	4984.44	4884.30	5986.70	6010.75	5803.45
AFC claimed by the Petitioner in the instant petition	4988.06	4888.19	5990.84	6015.15	5808.11
AFC approved in the instant order	4986.06	4886.05	5988.59	6012.75	5805.58

### **2009-14 Period**

28. The Commission vide order dated 17.9.2010 in Petition No. 56/2010 had allowed the tariff for the transmission asset for 2009-14 tariff period which was trued-up vide order dated 4.12.2015 in Petition No. 167/TT/2014. The trued-up tariff allowed vide order dated 4.12.2015 is as follows:

<b>Particulars</b>	<b>(₹ in lakh)</b>				
	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Depreciation	1820.51	1820.51	1820.51	1820.51	1820.51
Interest on Loan	1699.33	1542.54	1412.68	1227.03	1038.22
Return on Equity	1080.57	1120.15	1121.25	1121.25	1134.74
Interest on Working Capital	133.46	133.17	132.77	131.30	130.17
O&M Expenses	751.28	794.35	839.84	887.82	938.39
<b>Total</b>	<b>5485.15</b>	<b>5410.72</b>	<b>5327.05</b>	<b>5187.90</b>	<b>5062.02</b>

29. The Petitioner has claimed the following revised transmission charges for the transmission asset for 2009-14 period in this petition:

<b>Particulars</b>	<b>(₹ in lakh)</b>				
	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Depreciation	1820.51	1820.51	1820.51	1820.51	1820.51
Interest on Loan	1699.32	1542.53	1412.68	1227.03	1038.22
Return on Equity	1080.57	1120.15	1121.25	1121.25	1134.74
Interest on Working Capital	133.46	133.17	132.77	131.30	130.17



O&M Expenses	751.28	794.35	839.84	887.82	938.39
<b>Total</b>	<b>5485.14</b>	<b>5410.72</b>	<b>5327.05</b>	<b>5187.90</b>	<b>5062.03</b>

30. We have considered the submissions of the Petitioner. The revised transmission tariff is approved for the transmission asset on the basis of the following:

- a) Admitted capital cost of ₹34594.16 lakh as on 1.4.2009;
- b) Weighted Average Rate of Interest on actual loan and WAROD considered from order dated 4.12.2015 in Petition No. 167/TT/2014.

31. The Petitioner has not claimed ACE in 2009-14 tariff period and in view of the above, the revised transmission charges approved for the transmission asset for 2009-14 tariff period are as follows:

(₹ in lakh)

<b>Particulars</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Depreciation	1820.51	1820.51	1820.51	1820.51	1820.51
Interest on Loan	1699.33	1542.54	1412.68	1227.03	1038.22
Return on Equity	1080.57	1120.15	1121.25	1121.25	1134.74
Interest on Working Capital	133.46	133.17	132.77	131.30	130.17
O&M Expenses	751.28	794.35	839.84	887.82	938.39
<b>Total</b>	<b>5485.15</b>	<b>5410.72</b>	<b>5327.05</b>	<b>5187.90</b>	<b>5062.02</b>

32. AFC allowed earlier for 2009-14 tariff period vide order dated 4.12.2015 in Petition No. 167/TT/2014, revised AFC claimed in the instant petition and AFC approved in the instant order are as follows:

(₹ in lakh)

<b>Particulars</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
AFC allowed vide order dated 4.12.2015 in Petition No. 167/TT/2014	5485.15	5410.72	5327.05	5187.90	5062.02
AFC claimed by the Petitioner in the instant petition	5485.14	5410.72	5327.05	5187.90	5062.03
AFC approved in the instant order	5485.15	5410.72	5327.05	5187.90	5062.02



### **Truing up of Annual Fixed Charges of 2014-19 Tariff Period**

33. The details of the trued-up transmission charges claimed by the Petitioner in respect of the transmission asset for 2014-19 tariff period is as follows:

(₹ in lakh)

<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	1820.50	469.66	469.66	469.66	469.66
Interest on Loan	851.07	718.94	643.57	590.52	549.98
Return on Equity	1135.60	1140.81	1140.23	1140.23	1143.30
Interest on Working Capital	134.97	102.54	102.41	102.86	103.74
O&M Expenses	856.86	885.57	914.84	945.20	976.57
<b>Total</b>	<b>4799.00</b>	<b>3317.52</b>	<b>3270.71</b>	<b>3248.47</b>	<b>3243.25</b>

34. The details of trued-up IWC claimed by the Petitioner in respect of the transmission asset for 2014-19 tariff period are as follows:

(₹ in lakh)

<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
O & M Expenses	71.41	73.80	76.24	78.77	81.38
Maintenance Spares	128.53	132.84	137.23	141.78	146.49
Receivables	799.83	552.92	545.12	541.41	540.54
<b>Total Working Capital</b>	<b>999.77</b>	<b>759.56</b>	<b>758.59</b>	<b>761.96</b>	<b>768.41</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>134.97</b>	<b>102.54</b>	<b>102.41</b>	<b>102.86</b>	<b>103.74</b>

### **Capital Cost**

35. The Commission vide order dated 4.12.2015 in Petition No. 167/TT/2014 had allowed capital cost as on 1.4.2014 of ₹34594.16 lakh with no projected ACE for determination of transmission tariff of 2014-19 tariff period. The admitted capital cost of ₹34594.16 lakh for the transmission asset as on 31.3.2014 has been considered for working out the trued-up tariff for 2014-19 tariff period. Therefore, the considered capital cost in the instant order as on 1.4.2014 and 31.3.2019 is ₹34594.16 lakh.

### **Debt-Equity Ratio**

36. The debt-equity ratio has been allowed in accordance with Regulation 19(3) of the 2014 Tariff Regulations. As per Regulation 19(3) of the 2014 Tariff Regulations,



the debt-equity ratio allowed by the Commission for determination of transmission tariff for the period ending on 31.3.2014 shall be considered. Accordingly, the details of the debt-equity ratio as on 1.4.2014 and 31.3.2019 in respect of the transmission asset is as follows:

Particulars	Capital Cost as on 1.4.2014 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	28807.64	83.27	28807.64	83.27
Equity	5786.52	16.73	5786.52	16.73
<b>Total</b>	<b>34594.16</b>	<b>100.00</b>	<b>34594.16</b>	<b>100.00</b>

### **Depreciation**

37. The Gross Block during 2014-19 tariff period has been depreciated at WAROD. WAROD at Annexure-I has been worked out after taking into account the depreciation rates of transmission asset as prescribed in the 2014 Tariff Regulations. The transmission asset has completed 12 years of life as on 31.3.2015. Therefore, the remaining depreciable value has been spread across the balance useful life in accordance with Regulation 27(5) of the 2014 Tariff Regulations and trued-up depreciation allowed is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Depreciation</b>					
Opening Gross Block	34594.16	34594.16	34594.16	34594.16	34594.16
ACE	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	34594.16	34594.16	34594.16	34594.16	34594.16
Average Gross Block	34594.16	34594.16	34594.16	34594.16	34594.16
Freehold Land	12.72	12.72	12.72	12.72	12.72
Weighted average rate of Depreciation (WAROD) (in %)	5.26	1.36	1.36	1.36	1.36
Balance useful life of the asset (Year)	23	22	21	20	19
Lapsed life of the asset (Year)	11	12	13	14	15
Depreciable Value	31123.30	31123.30	31123.30	31123.30	31123.30
Remaining Depreciable Value at the beginning	12152.89	10332.38	9862.73	9393.07	8923.42



of the year					
<b>Depreciation during the year</b>	<b>1820.51</b>	<b>469.65</b>	<b>469.65</b>	<b>469.65</b>	<b>469.65</b>
Cumulative Depreciation at the end of the year	20790.91	21260.57	21730.22	22199.88	22669.53
Remaining Depreciable Value at the end of the year	10332.38	9862.73	9393.07	8923.42	8453.77

38. The details of depreciation approved vide order dated 4.12.2015 in Petition No. 167/TT/2014, depreciation claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

<b>Particulars</b>	<b>(₹ in lakh)</b>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Allowed vide order dated 4.12.2015 in Petition No. 167/TT/2014	1820.51	469.65	469.65	469.65	469.65
Claimed by the Petitioner in the instant petition	1820.50	469.66	469.66	469.66	469.66
Approved after true-up in this order	1820.51	469.65	469.65	469.65	469.65

### **Interest on Loan (IoL)**

39. The Petitioner has claimed the weighted average rate of IoL based on its actual loan portfolio and rate of interest. Accordingly, IoL has been calculated based on actual interest rate submitted by the Petitioner in accordance with Regulation 26 of the 2014 Tariff Regulations. The trued-up IoL allowed in respect of the transmission asset is as follows:

<b>Particulars</b>	<b>(₹ in lakh)</b>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Gross Normative Loan	28807.64	28807.64	28807.64	28807.64	28807.64
Cumulative Repayments up to Previous Year	18970.38	20790.88	21260.54	21730.19	22199.85
Net Loan-Opening	9837.26	8016.76	7547.10	7077.45	6607.79
Additions	0.00	0.00	0.00	0.00	0.00
Repayment during the year	1820.51	469.65	469.65	469.65	469.65
Net Loan-Closing	8016.76	7547.10	7077.45	6607.79	6138.14
Average Loan	8927.01	7781.93	7312.27	6842.62	6372.97
Weighted Average Rate of Interest on	9.5337	9.2386	8.8013	8.6305	8.6301



Loan (in %)					
<b>Interest on Loan</b>	<b>851.08</b>	<b>718.94</b>	<b>643.57</b>	<b>590.55</b>	<b>549.99</b>

40. The details of IoL allowed vide order dated 4.12.2015 in Petition No. 167/TT/2014, IoL claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

<b>Particulars</b>	<b>(₹ in lakh)</b>				
	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Allowed vide order dated 4.12.2015 in Petition No. 167/TT/2014	851.07	718.94	643.57	590.52	549.99
Claimed by the Petitioner in the instant petition	851.07	718.94	643.57	590.52	549.98
Approved after true-up in this order	851.08	718.94	643.57	590.55	549.99

### **Return on Equity (RoE)**

41. The Petitioner has claimed RoE for the transmission asset in terms of Regulations 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that it is liable to pay income tax at Minimum Alternate Tax (MAT) rates and has claimed following effective tax rates for 2014-19 tariff period:

<b>Year</b>	<b>Claimed effective tax rate (in %)</b>	<b>Grossed-up RoE [(Base Rate)/(1-t)] (in %)</b>
2014-15	21.018	19.624
2015-16	21.382	19.716
2016-17	21.338	19.705
2017-18	21.337	19.704
2018-19	21.549	19.758

42. We have considered the submissions of the Petitioner. The Commission in order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the effective tax rate for the Petitioner based on the notified MAT rates and the same is given in the table below:

<b>Year</b>	<b>Notified MAT rates (in %) (inclusive of surcharge &amp; cess)</b>	<b>Effective tax (in %)</b>
2014-15	20.961	20.961
2015-16	21.342	21.342
2016-17	21.342	21.342



2017-18	21.342	21.342
2018-19	21.549	21.549

43. The MAT rates considered in order dated 27.4.2020 for the purpose of grossing up of rate of RoE for truing up of the tariff of 2014-19 tariff period, in terms of the provisions of the 2014 Tariff Regulations, is considered in the instant case which is as follows:

Year	Notified MAT rates (in %) (inclusive of surcharge & cess)	Base rate of RoE (%)	Grossed-up RoE [(Base Rate)/(1-t)] (%)
2014-15	20.961	15.50	19.610
2015-16	21.342	15.50	19.705
2016-17	21.342	15.50	19.705
2017-18	21.342	15.50	19.705
2018-19	21.549	15.50	19.758

44. The Petitioner has claimed RoE for 2014-19 period after grossing up RoE of 15.50% with Effective Tax rates (based on MAT rates) each year as per Regulation 25(3) of the 2014 Tariff Regulations. RoE is trued-up on the basis of the MAT rate applicable in the respective years and is allowed for the transmission asset as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	5786.52	5786.52	5786.52	5786.52	5786.52
Additions	0.00	0.00	0.00	0.00	0.00
Closing Equity	5786.52	5786.52	5786.52	5786.52	5786.52
Average Equity	5786.52	5786.52	5786.52	5786.52	5786.52
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
<b>Return on Equity</b>	<b>1134.74</b>	<b>1140.23</b>	<b>1140.23</b>	<b>1140.23</b>	<b>1143.30</b>



45. The details of RoE allowed vide order dated 4.12.2015 in Petition No. 167/TT/2014, RoE claimed by the Petitioner in the instant petition and true-up in the instant order are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 4.12.2015 in Petition No. 167/TT/2014	1134.74	1134.74	1134.74	1134.74	1134.74
Claimed by the Petitioner in the instant petition	1135.60	1140.81	1140.23	1140.23	1143.30
Approved after true-up in this order	1134.74	1140.23	1140.23	1140.23	1143.30

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

46. The total O&M Expenses claimed by the Petitioner for the transmission asset are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
340.644 km D/C twin conductor at Vijaywada-Nellore 188.996 km D/C twin conductor at Nellore-Sriperumbudur 8 numbers of 400 kV bays at (Vijaywada-Nellore Bay I&II, Nellore-Vijaywada Bay I&II, Nellore-Sriperumbudur Bay I&II and Sriperumbudur-Nellore Bay I&II)					
Claimed by the Petitioner in the instant petition	856.86	885.57	914.84	945.20	976.57

47. Regulation 29(3) of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. The norms specified in respect of the elements covered in the transmission asset are as follows:

Particulars	Norms for 2014-15	Norms for 2015-16	Norms for 2016-17	Norms for 2017-18	Norms for 2018-19
400 kV sub-station bays (₹ lakh /bay)	60.30	62.30	64.37	66.51	68.71
D/C Twin/Triple Conductor (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806

48. The O&M Expenses are allowed for the transmission asset as per the norms specified in Regulation 29(3) of the 2014 Tariff Regulations and are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
8 numbers 400 Kv	482.40	498.40	514.96	532.08	549.68





sub-station bays					
529.64 kms D/C Twin Conductor	374.46	387.17	399.88	413.12	426.89
<b>Total</b>	<b>856.86</b>	<b>885.57</b>	<b>914.84</b>	<b>945.20</b>	<b>976.57</b>

49. The details of O&M Expenses allowed vide order dated 4.12.2015 in Petition No. 167/TT/2014, claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 4.12.2015 in Petition No. 167/TT/2014	856.86	885.57	914.84	945.20	976.57
Claimed by the Petitioner in the instant petition	856.86	885.57	914.84	945.20	976.57
Approved after true-up in this order	856.86	885.57	914.84	945.20	976.57

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

50. IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and the trued-up IWC allowed for the transmission asset for 2014-19 tariff period are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Interest on Working Capital</b>					
O&M Expenses (O&M Expenses for 1 month)	71.40	73.80	76.24	78.77	81.38
Maintenance Spares (15% of O&M expenses)	128.53	132.84	137.23	141.78	146.49
Receivables (Equivalent to 2 months of fixed cost)	799.69	552.82	545.12	541.42	540.54
<b>Total Working Capital</b>	<b>999.62</b>	<b>759.45</b>	<b>758.58</b>	<b>761.96</b>	<b>768.41</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>134.95</b>	<b>102.53</b>	<b>102.41</b>	<b>102.87</b>	<b>103.74</b>

51. The details of IWC allowed vide order dated 4.12.2015 in Petition No. 167/TT/2014, IWC claimed by the Petitioner in the instant petition and trued-up in the instant order are shown as follows:



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 4.12.2015 in Petition No. 167/TT/2014	134.95	102.40	102.28	102.74	103.54
Claimed by the Petitioner in the instant petition	134.97	102.54	102.41	102.86	103.74
Approved after true-up in this order	134.95	102.53	102.41	102.87	103.74

### **Approved Annual Fixed Charges of 2014-19 Tariff Period**

52. The trued-up AFC approved for the transmission asset for 2014-19 tariff period are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	1820.51	469.65	469.65	469.65	469.65
Interest on Loan	851.08	718.94	643.57	590.55	549.99
Return on Equity	1134.74	1140.23	1140.23	1140.23	1143.30
Interest on Working Capital	134.95	102.53	102.41	102.87	103.74
O&M Expenses	856.86	885.57	914.84	945.20	976.57
<b>Total</b>	<b>4798.12</b>	<b>3316.92</b>	<b>3270.71</b>	<b>3248.51</b>	<b>3243.25</b>

53. Accordingly, the Annual Transmission Charges as approved vide order dated 4.12.2015 in Petition No. 167/TT/2014, claimed by the Petitioner in the instant petition and approved after truing up in the instant order is as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 4.12.2015 in Petition No. 167/TT/2014	4798.13	3311.30	3265.08	3242.85	3234.49
Claimed by the Petitioner in the instant petition	4799.00	3317.52	3270.71	3248.47	3243.25
Approved after true-up in this order	4798.12	3316.92	3270.71	3248.51	3243.25

### **Determination Of Annual Fixed Charges for 2019-24 Tariff Period**

54. The Petitioner has claimed the following transmission charges for 2019-24 tariff period:



(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	469.66	469.66	469.66	469.66	469.66
Interest on Loan	509.45	468.92	428.39	387.86	347.33
Return on Equity	1143.30	1143.30	1143.30	1143.30	1143.30
Interest on Working Capital	63.61	64.23	64.77	65.34	65.83
O&M Expenses	727.26	752.71	779.02	806.18	834.18
<b>Total</b>	<b>2913.28</b>	<b>2898.82</b>	<b>2885.14</b>	<b>2872.34</b>	<b>2860.30</b>

55. The details of IWC claimed by the Petitioner for 2019-24 period are as follows:

(₹ in lakh)

Particular	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	60.61	62.73	64.92	67.18	69.52
Maintenance Spares	109.09	112.91	116.85	120.93	125.13
Receivables	358.19	357.39	355.70	354.12	351.68
<b>Total Working Capital</b>	<b>527.89</b>	<b>533.03</b>	<b>537.47</b>	<b>542.23</b>	<b>546.33</b>
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>63.61</b>	<b>64.23</b>	<b>64.77</b>	<b>65.34</b>	<b>65.83</b>

### Capital Cost

56. Regulation 19 of the 2019 Tariff Regulations provides as follows:

**“19 Capital Cost:** (1) *The Capital cost of the generating station or the transmission system, as the case may be, as determined by the Commission after prudence check in accordance with these regulations shall form the basis for determination of tariff for existing and new projects.*

(2) *The Capital Cost of a new project shall include the following:*

- (a) *The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- (b) *Interest during construction and financing charges, on the loans (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;*
- (c) *Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*
- (d) *Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*
- (e) *Capitalised Initial Spares subject to the ceiling rates in accordance with these regulations;*
- (f) *Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;*
- (g) *Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;*



- (h) Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;*
- (i) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (j) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;*
- (k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;*
- (l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;*
- (m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;*
- (n) Expenditure on account of change in law and force majeure events; and*
- (o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*

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

- (a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;*
- (b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;*
- (c) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and*
- (f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*

*(4) The capital cost in case of existing or new hydro generating station shall also include:*

- (a) cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and*
- (b) cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) project in the affected area.*

*(5) The following shall be excluded from the capital cost of the existing and new projects:*

- (a) The assets forming part of the project, but not in use, as declared in the tariff petition;*



*(b) De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:*

*Provided that in case replacement of transmission asset is recommended by Regional Power Committee, such asset shall be decapitalised only after its redeployment;*

*Provided further that unless shifting of an asset from one project to another is of permanent nature, there shall be no de-capitalization of the concerned assets.*

*(c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;*

*(d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and*

*(e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment.”*

57. The Petitioner has claimed capital cost of ₹34594.16 lakh as on 31.3.2019 for the transmission asset. The same has been worked out by the Commission as on 31.3.2019 and considered as the opening capital cost as on 1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

58. The Petitioner has not projected any ACE during 2019-24 tariff period for the transmission asset. Accordingly, the capital cost considered for 2019-24 tariff period is as follows:

(₹ in lakh)		
Capital Cost as on 1.4.2019	ACE for the 2019-24 period	Capital Cost as on 31.3.2024
34594.16	0.00	34594.16

### **Debt-Equity Ratio**

59. Regulation 18 of the 2019 Tariff Regulations provides as follows:

**“18. Debt-Equity Ratio:** (1) For new projects, the debt-equity ratio of 70:30 as on date of commercial operation shall be considered. 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:*

- i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:*
- ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*
- iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.*

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

*(2) The generating company or the transmission licensee, as the case may be, shall submit the resolution of the Board of the company or approval of the competent authority in other cases regarding infusion of funds from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.*

*(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, debt: equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2019 shall be considered:*

*Provided that in case of a generating station or a transmission system including communication system which has completed its useful life as on or after 1.4.2019, if the equity actually deployed as on 1.4.2019 is more than 30% of the capital cost, equity in excess of 30% shall not be taken into account for tariff computation;*

*Provided further that in case of projects owned by Damodar Valley Corporation, the debt: equity ratio shall be governed as per sub-clause (ii) of clause (2) of Regulation 72 of these regulations.*

*(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2019, the Commission shall approve the debt: equity ratio in accordance with clause (1) of this Regulation.*

*(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 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.”*





60. The debt-equity considered for the purpose of computation of tariff for 2019-24 tariff period is as follows:

Particulars	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	28807.64	83.27	28807.64	83.27
Equity	5786.52	16.73	5786.52	16.73
<b>Total</b>	<b>34594.16</b>	<b>100.00</b>	<b>34594.16</b>	<b>100.00</b>

### **Depreciation**

61. Regulations 33(1), 33(2) and 33(5) of the 2019 Tariff Regulations provide as follows:

**"33. Depreciation:** (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element there of including communication system. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units:

*Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined."*

*"(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 a 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-I** 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."*

62. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The



transmission asset has completed 12 years of life as on 31.3.2015. Accordingly, the remaining depreciable value has been spread across the balance useful life in accordance with Regulation 33(5) of the 2019 Tariff Regulations. The depreciation allowed for the transmission asset for 2019-24 period is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Depreciation</b>					
Opening Gross Block	34594.16	34594.16	34594.16	34594.16	34594.16
Projected ACE	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	34594.16	34594.16	34594.16	34594.16	34594.16
Average Gross Block	34594.16	34594.16	34594.16	34594.16	34594.16
Freehold Land	12.72	12.72	12.72	12.72	12.72
Weighted average rate of Depreciation (WAROD) (in %)	1.36	1.36	1.36	1.36	1.36
Balance useful life at the beginning of the year (Year)	18	17	16	15	14
Lapsed life of the asset (Year)	16	17	18	19	20
Depreciable Value	31123.30	31123.30	31123.30	31123.30	31123.30
Remaining Depreciable Value at the beginning of the year	8453.77	7984.11	7514.46	7044.81	6575.15
<b>Depreciation during the year</b>	<b>469.65</b>	<b>469.65</b>	<b>469.65</b>	<b>469.65</b>	<b>469.65</b>
Cumulative Depreciation at the end of the year	23139.18	23608.84	24078.49	24548.14	25017.80
Remaining Depreciable Value at the end of the year	7984.11	7514.46	7044.81	6575.15	6105.50

### **Interest on Loan (IoL)**

63. Regulation 32 of the 2019 Tariff Regulations provides as follows:

**“32. Interest on loan capital:** (1) *The loans arrived at in the manner indicated in regulation 18 of these regulations shall be considered as gross normative loan for calculation of interest on loan.*

(2) *The normative loan outstanding as on 1.4.2019 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2019 from the gross normative loan.*

(3) *The repayment for each of the year of the tariff period 2019-24 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalisation of such asset.*

(4) *Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall*





*be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.*

*(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.*

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

64. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2019. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during 2019-24 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up. Therefore, IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL approved for the transmission asset for 2019-24 tariff period is as follows:

	(₹ in lakh)				
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Gross Normative Loan	28807.64	28807.64	28807.64	28807.64	28807.64
Cumulative Repayments up to Previous Year	22669.53	23139.18	23608.84	24078.49	24548.14
Net Loan-Opening	6138.11	5668.46	5198.80	4729.15	4259.50
Additions	0.00	0.00	0.00	0.00	0.00
Repayment during the year	469.65	469.65	469.65	469.65	469.65
Net Loan-Closing	5668.46	5198.80	4729.15	4259.50	3789.84
Average Loan	5903.28	5433.63	4963.98	4494.32	4024.67
Weighted Average Rate of Interest on Loan (in %)	8.6301	8.6301	8.6301	8.6301	8.6301
<b>Interest on Loan</b>	<b>509.46</b>	<b>468.93</b>	<b>428.39</b>	<b>387.86</b>	<b>347.33</b>



## **Return on Equity (RoE)**

65. Regulations 30 and 31 of the 2019 Tariff Regulations provides as follows:

**“30. Return on Equity:** (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with Regulation 18 of these regulations.

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating station, transmission system including communication system and run-of river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run-of river generating station with pondage:

Provided that return on equity in respect of additional capitalization after cut-off date beyond the original scope excluding additional capitalization due to Change in Law, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system;

Provided further that:

i. In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC;

ii. in case of existing generating station, as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC, rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;

iii. in case of a thermal generating station, with effect from 1.4.2020:

a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;

b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:

Provided that the detailed guidelines in this regard shall be issued by National Load Dispatch Centre by 30.6.2019.”

**“31. Tax on Return on Equity:**(1) The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be.



*The actual tax paid on income from other businesses including deferred tax liability (i.e. income from business other than business of generation or transmission, as the case may be) shall be excluded for the calculation of effective tax rate.*

*(2) Rate of return on equity shall be rounded off to three decimal places and shall 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 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.*

**Illustration-**

*(i) In case of a generating company or a transmission licensee paying Minimum Alternate Tax (MAT) @ 21.55% including surcharge and cess:*

$$\text{Rate of return on equity} = 15.50 / (1 - 0.2155) = 19.758\%$$

*(ii) In case of a generating company or a transmission licensee paying normal corporate tax including surcharge and cess:*

- (a) Estimated Gross Income from generation or transmission business for FY 2019-20 is Rs 1,000 crore;*
- (b) Estimated Advance Tax for the year on above is Rs 240 crore;*
- (c) Effective Tax Rate for the year 2019-20 = Rs 240 Crore / Rs 1000 Crore = 24%;*
- (d) Rate of return on equity = 15.50 / (1 - 0.24) = 20.395%.*

*(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year 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 income tax authorities pertaining to the tariff period 2019-24 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee, as the case may be. 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 customers, as the case may be, on year to year basis.”*

66. The Petitioner has submitted that MAT rate is applicable to the Petitioner's company. Accordingly, MAT rate applicable in 2019-20 has been considered for the purpose of RoE, which shall be trued-up with actual tax rate in accordance with



Regulation 31(3) of the 2019 Tariff Regulations. RoE allowed for the transmission asset for 2019-24 tariff period is as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	5786.52	5786.52	5786.52	5786.52	5786.52
Additions	0.00	0.00	0.00	0.00	0.00
Closing Equity	5786.52	5786.52	5786.52	5786.52	5786.52
Average Equity	5786.52	5786.52	5786.52	5786.52	5786.52
Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
<b>Return on Equity</b>	<b>1086.82</b>	<b>1086.82</b>	<b>1086.82</b>	<b>1086.82</b>	<b>1086.82</b>

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

67. The O&M Expenses claimed by the Petitioner for the transmission asset for 2019-24 tariff period are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
529.64 kms D/C Twin Conductor Transmission Line	466.62	483.03	499.98	517.46	535.46
8 numbers of 400 kV Bays	257.20	266.24	275.60	285.28	295.28
PLCC (2% of ₹172.09 lakh)	3.44	3.44	3.44	3.44	3.44
<b>Total</b>	<b>727.26</b>	<b>752.71</b>	<b>779.02</b>	<b>806.18</b>	<b>834.18</b>

68. Regulations 35(3)(a) and 35(4) of the 2019 Tariff Regulations provide as follows:

**“35 Operation and Maintenance Expenses (3) Transmission system: (a) The following normative operation and maintenance expenses shall be admissible for the transmission system:**

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Norms for sub-station Bays (₹ Lakh per bay)</b>					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
<b>Norms for Transformers (₹ Lakh per MVA)</b>					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282



132 kV and below	0.245	0.254	0.263	0.272	0.282
<b>Norms for AC and HVDC lines (₹ Lakh per km)</b>					
Single Circuit (Bundled Conductor with six or more	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple	1.544	1.598	1.654	1.713	1.773
<b>Norms for HVDC stations</b>					
HVDC Back-to-Back stations (Rs Lakh per 500	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole	2,563	2,653	2,746	2,842	2,942

Provided that the O&M expenses for the GIS bays shall be allowed as worked out by multiplying 0.70 of the O&M expenses of the normative O&M expenses for bays;

Provided further that:

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;
- ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;
- iii. the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);
- iv. the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ±800 kV,



*Bishwanath-Agra HVDC bi-pole scheme;*

*v. the O&M expenses of  $\pm 800$  kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for  $\pm 800$  kV, Bishwanath-Agra HVDC bi-pole scheme; and*

*vi. the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three year*

*(b) The total allowable operation and maintenance expenses for the transmission system shall be calculated by multiplying the number of sub-station bays, transformer capacity of the transformer (in MVA) and km of line length with the applicable norms for the operation and maintenance expenses per bay, per MVA and per km respectively.*

*(c) The Security Expenses and Capital Spares for transmission system shall be allowed separately after prudence check:*

*Provided that the transmission licensee shall submit the assessment of the security requirement and estimated security expenses, the details of year-wise actual capital spares consumed at the time of truing up with appropriate justification.”*

**“(4) Communication system:** *The operation and maintenance expenses for the communication system shall be worked out at 2.0% of the original project cost related to such communication system. The transmission licensee shall submit the actual operation and maintenance expenses for truing up.”*

69. We have considered the submission of the Petitioner. The Petitioner has claimed O&M Expenses separately for PLCC under Regulation 35(4) of the 2019 Tariff Regulations @2% of its original project cost in the instant petition. The Petitioner has made similar claim in other petitions as well. Though PLCC is a communication system, it has been considered as part of the sub-station in the 2014 Tariff Regulations and the 2019 Tariff Regulations and the norms for sub-station have been specified accordingly. Accordingly, the Commission *vide* order dated 24.1.2021 in Petition No. 126/TT/2020 has already concluded that no separate O&M Expenses can be allowed for PLCC under Regulation 35(4) of the 2019 Tariff Regulations even though PLCC is a communication system. Therefore, the Petitioner’s claim for separate O&M Expenses for PLCC @2% is not allowed.





70. The O&M Expenses allowed for the transmission asset is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
8 numbers 400 kV Sub-station bays	257.20	266.24	275.60	285.28	295.28
529.64 km D/C Twin/Triple Conductor Transmission Line	466.61	483.03	499.98	517.46	535.47
<b>Total O&amp;M Expenses allowed</b>	<b>723.81</b>	<b>749.27</b>	<b>775.58</b>	<b>802.74</b>	<b>830.75</b>

**Interest on Working Capital (IWC)**

71. Regulations 34(1)(c), 34(3), 34(4) and Regulation 3(7) of the 2019 Tariff Regulations specify as follows:

**“34. Interest on Working Capital**

(1)...

**(c) For Hydro Generating Station (including Pumped Storage Hydro Generating Station) and Transmission System:**

- i. Receivables equivalent to 45 days of fixed cost;
- ii. Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and
- iii. Operation and maintenance expenses, including security expenses for one month”

(3)Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1st April of the year during the tariff period 2019-24 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later:

Provided that in case of truing-up, the rate of interest on working capital shall be considered at bank rate as on 1st April of each of the financial year during the tariff period 2019-24.”

“(4) Interest on working capital shall be payable on normative basis notwithstanding that the generating company or the transmission licensee has not taken loan for working capital from any outside agency.”

“3.Definitions ...

(7) ‘Bank Rate’ means the one-year marginal cost of lending rate (MCLR) of the State Bank of India issued from time to time plus 350 basis points;”

72. The Petitioner has submitted that it has computed IWC for the 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner



has considered the rate of IWC as 12.05%. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. Rate of Interest (RoI) considered is 12.05% (SBI 1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21 whereas, RoI from 2021-22 onwards has been considered as 10.50% (SBI 1 year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points). The components of the working capital and interest allowed thereon is as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses (O&M Expenses for 1 month)	60.32	62.44	64.63	66.89	69.23
Maintenance Spares (15% of O&M Expenses)	108.57	112.39	116.34	120.41	124.61
Receivables (Equivalent to 45 days of annual transmission cost)	350.70	349.35	347.17	345.58	343.15
<b>Total Working Capital</b>	<b>519.59</b>	<b>524.18</b>	<b>528.14</b>	<b>532.88</b>	<b>536.99</b>
Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
<b>Interest on Working Capital</b>	<b>62.61</b>	<b>58.97</b>	<b>55.45</b>	<b>55.95</b>	<b>56.38</b>

### **Annual Fixed Charges of 2019-24 Tariff Period**

73. The transmission charges allowed for the transmission asset for 2019-24 tariff period are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	469.65	469.65	469.65	469.65	469.65
Interest on Loan	509.46	468.93	428.39	387.86	347.33
Return on Equity	1086.82	1086.82	1086.82	1086.82	1086.82
Interest on Working Capital	62.61	58.97	55.45	55.95	56.38
O&M Expenses	723.81	749.27	775.58	802.74	830.75
<b>Total</b>	<b>2852.36</b>	<b>2833.65</b>	<b>2815.91</b>	<b>2803.03</b>	<b>2790.94</b>





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

74. The Petitioner has claimed reimbursement of fee paid by it for filing the Petition and publication expenses. The Petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with Regulation 70(1) of the 2019 Tariff Regulations.

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

75. The Petitioner has claimed for reimbursement of licence fee in accordance with Regulation 70(4) of the 2019 Tariff Regulations for 2019-24 tariff period. The Petitioner also claimed recovery of RLDC fee and charges in accordance with Regulations 70(3) of the 2019 Tariff Regulations for 2019-24 tariff period. The Petitioner's prayer to claim Licence Fee & RLDC Fees and Charges is allowed.

### **Goods and Services Tax**

76. The Petitioner has submitted that if GST is levied at any rate and at any point of time in future on charges of transmission of electricity, the same shall be borne and additionally paid by the Respondent(s) to the Petitioner and the same shall be charged and billed separately by the Petitioner. Further additional taxes, if any, are to be paid by the Petitioner on account of demand from Government/ Statutory authorities, the same may be allowed to be recovered from the beneficiaries.

77. TANGEDCO has submitted that the transmission charges are exempted from the levy of GST and even if GST is levied in future, the same should not be allowed retrospectively. TANGEDCO has further submitted that the Hon'ble High Court of Gujarat in the judgment dated 19.12.2018 in the Special Civil Appeal No. 5343 of 2018 in the matter of Torrent Power Ltd. vs. Union of India has quashed the clarification with



regard to levy of GST issued in para 4(1) of the impugned Circular No.34/8/2018-GST dated 1.3.2018 by the Government of India as ultra vires the provisions of the GST Laws as well as the notifications issued thereunder and made the rule absolute. TANGEDCO has submitted that the Commission may direct the Petitioner to restrain from including the paragraph relating to GST in all the petitions.

78. In response, PGCIL submitted that under CGST Act, 2017 implemented w.e.f. 1.7.2017, the Government of India has exempted the charges of transmission of electricity vide notification no. 12/2017-Central Tax (Rate) dated 28.6.2017 at Serial No. 25 under the heading 9969 "Transmission or distribution of electricity by an electric transmission or distribution utility" by giving applicable GST rate as NIL. Hence, the transmission charges claimed in the instant petition is exclusive of GST. Further, if GST is levied at any rate and at any point of time in future on charges of transmission of electricity, the same shall be borne and additionally paid by the Respondent(s) to the Petitioner and the same shall be charged and billed separately by the Petitioner. Further, additional taxes, if any, are to be paid by the Petitioner on account of demand from Government/ Statutory authorities, the same may be allowed to be recovered from the beneficiaries.

79. We have considered the submissions of the Petitioner and TANGEDCO. Since GST is not levied on transmission service at present, we are of the view that the Petitioner's prayer is premature.

### **Security Expenses**

80. The Petitioner has submitted that security expenses for the transmission asset are not claimed in the instant petition and it would file a separate petition for claiming



the overall security expenses and the consequential IWC. The Petitioner has requested to consider the actual security expenses incurred during 2018-19 for claiming estimated security expenses for 2019-20 which shall be subject to true up at the end of the year based on the actuals. The Petitioner has submitted that similar petition for security expenses for 2020-21, 2021-22, 2022-23 and 2023-24 shall be filed on a yearly basis on the basis of the actual expenses of previous year subject to true up at the end of the year on actual expenses. The Petitioner has submitted that the difference, if any, between the estimated security expenses and actual security expenses as per the audited accounts may be allowed to be recovered from the beneficiaries on a yearly basis.

81. We have considered the submissions of the Petitioner. We are of the view that the Petitioner should claim security expenses for all the transmission asset in one petition. It is observed that the Petitioner has already filed the Petition No. 260/MP/2020 claiming consolidated security expenses on projected basis for the 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19. Therefore, security expenses will be dealt with in Petition No. 260/MP/2020 in accordance with the applicable provisions of the 2019 Tariff Regulations.

### **Capital Spares**

82. The Petitioner has claimed reimbursement of capital spares at the end of tariff period. The Petitioner's claim, if any, shall be dealt with in accordance with the provisions of the 2019 Tariff Regulations.

### **Sharing of Transmission Charges**

83. TANGEDCO has submitted that the trued-up capital cost for 2014-19 tariff period has to be shared among the beneficiaries as per the 2010 Sharing Regulations.



However, the 2020 Sharing Regulations was notified on 4.5.2020 and came into force w.e.f. 1.11.2020. Hence, Annual Transmission Charges (ATC) for the period from 31.3.2019 to 31.10.2020 have to be shared based on the 2010 Sharing Regulations and from 1.11.2020 based on the 2020 Sharing Regulations. Under this circumstance, it is essential to segregate the additional cost and tariff liability up to 31.10.2020 and from 1.11.2020 so as to allocate the charges based on the 2010 Sharing Regulations and the 2020 Sharing Regulations respectively. Hence, it has requested that the Commission may issue suitable directions to allocate ATC up to 31.10.2020 as per the 2010 Sharing Regulations and ATC from 1.11.2020 as per the 2020 Sharing Regulations.

84. In response, the Petitioner has submitted that the instant petition is filed for truing up of transmission tariff of 2014-19 tariff period and determination of transmission tariff of 2019-24 tariff period for transmission asset covered under subject petition. After the truing up and determination of transmission tariff, sharing of transmission charges for 2014-19 and 2019-24 tariff periods upto 31.10.2020 shall be done as per the 2010 Sharing Regulations and thereafter from 1.11.2020 onwards shall be shared under the 2020 Sharing Regulations. Tariff determination and Sharing of transmission charges are two independent activities and they cannot be inter-linked. After the determination of tariff of the asset by the Commission, the aspects of ATC bifurcation raised by TANGEDCO shall be taken care by the Petitioner at the time of billing.

85. We have considered the submissions of the Petitioner and TANGEDCO. During the tariff periods 2004-09 and 2009-14 (up to 30.6.2011), the transmission charges for inter-State transmission systems were being shared in accordance with the Tariff



Regulations for the respective tariff periods. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems was governed by the 2010 Sharing Regulations and with effect from 1.11.2020 (after repeal of the 2010 Sharing Regulations), sharing of transmission charges is governed by the 2020 Sharing Regulations. Accordingly, the liabilities of the DICs for arrears of transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of respective Tariff Regulations and shall be recovered from the concerned DICs through Bill 2 under Regulation 15(2)(b) of the 2020 Sharing Regulations. For subsequent period, the billing, collection and disbursement of the transmission charges approved in this order shall be governed by the provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

86. To summarise:

- a) The revised AFC approved for the transmission asset for 2001-04 and 2004-09 tariff periods are as follows:

Particulars	(₹ in lakh)						
	2002-03 (Pro-rata 1 month)	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
AFC	433.80	5189.75	4986.06	4886.05	5988.59	6012.75	5805.58

- b) The consequential revision of AFC allowed for the transmission asset of 2009-14 tariff period are:

Particulars	(₹ in lakh)				
	2009-10	2010-11	2012-13	2013-14	2014-15
AFC	5485.15	5410.72	5327.05	5187.90	5062.02

- c) The trued-up AFC allowed for the transmission asset of 2014-19 tariff period are:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
AFC	4798.12	3316.92	3270.71	3248.51	3243.25



d) The trued-up AFC allowed for the transmission asset of 2019-24 tariff period are:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	2852.36	2833.65	2815.91	2803.03	2790.94

87. Annexure-I given hereinafter forms part of the order.

88. This order disposes of Petition No. 1/TT/2020 in terms of the above discussions and findings.

**sd/-**  
**(Pravas Kumar Singh)**  
**Member**

**sd/-**  
**(I. S. Jha)**  
**Member**

**sd/-**  
**(P. K. Pujari)**  
**Chairperson**



## Annexure-I

2014-19 Particulars	Admitted Capital Cost as on 1.4.2014	ACE 2014-19	Admitted Capital Cost as on 31.3.2019	Rate of Depreciation as per Regulations	Annual Depreciations as per Regulations					
					2014-15	2015-16	2016-17	2017-18	2018-19	
Land - Freehold	12.72	0.00	12.72	0.00	0.00	Spreading				
Building Civil Works & Colony	371.06	0.00	371.06	0.03	12.39					
Transmission Line	29481.03	0.00	29481.03	0.05	1556.60					
Sub Station	4557.26	0.00	4557.26	0.05	240.62					
PLCC	172.09	0.00	172.09	0.06	10.89					
<b>Total</b>	34594.16	0.00	34594.16		1820.51	469.65	469.65	469.65	469.65	
<b>Average Gross Block</b>					34594.16	34594.16	34594.16	34594.16	34594.16	
<b>Weighted Average Rate of Depreciation</b>					5.26%	1.36%	1.36%	1.36%	1.36%	

