

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 413/TT/2020**

**Coram:**

**Shri P. K. Pujari, Chairperson  
Shri I. S. Jha, Member  
Shri Arun Goyal, Member  
Shri P. K. Singh, Member**

**Date of Order: 27.04.2022**

**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 the 2001-04, 2004-09 and 2009-14 tariff periods and truing up of transmission tariff of the 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for (a) 220 kV D/C Kayamkulam–Edmon Transmission Line and, (b) 220 kV D/C Kayamkulam–Pallom Transmission Line with associated bays under Kayamkulam Transmission System in Southern Region.

**And in the matter of:**

Power Grid Corporation of India Limited,  
“Saudamini”, Plot No. 2,  
Sector 29, Gurgaon-122001  
(Haryana).

**....Petitioner**

**Vs**

1. Karnataka Power Transmission Corporation Limited,  
Kaveri Bhavan,  
Bangalore – 560009.
2. Transmission Corporation of Andhra Pradesh Limited,  
Vidyut Soudha,  
Hyderabad – 500082.
3. Kerala State Electricity Board,  
Vaidyuthi Bhavanam, Pattom,  
Thiruvananthapuram – 695004.
4. Tamil Nadu Generation and Distribution Corporation Limited,  
(Formerly Tamil Nadu Electricity Board -TNEB),  
NPKRR Maaligai, 800, Anna Salai,  
Chennai – 600002.



5. Electricity Department,  
Government of Pondicherry,  
Pondicherry – 605001.
6. Eastern Power Distribution Company of Andhra Pradesh Limited,  
P&T Colony, Seethmmadhara, Vishakhapatnam,  
Andhra Pradesh.
7. Southern Power Distribution Company of Andhra Pradesh Limited,  
Srinivasasa Kalyana Mandapam Backside,  
Tiruchanoor, Road, Kesavayana Gunta,  
Tirupati – 517501, Chittoor District, Andhra Pradesh.
8. Southern Power Distribution Company of Telangana Limited,  
Corporate Office, Mint Compound,  
Hyderabad – 500063, Telangana.
9. Northern Power Distribution Company of Telangana Limited,  
Opp. NIT Petrol Pump, Chaitanyapuri, Kazipet,  
Warangal – 506004, Telangana.
10. Bangalore Electricity Supply Company Limited,  
Corporate Office, K. R. Circle,  
Bangalore – 560001, Karnataka.
11. Gulbarga Electricity Supply Company Limited,  
Station Main Road, Gulbarga,  
Karnataka.
12. Hubli Electricity Supply Company Limited,  
Navanagar, PB Road, Hubli,  
Karnataka.
13. MESCOM Corporate Office,  
Paradigm Plaza, AB Shetty Circle,  
Mangalore – 575001, Karnataka.
14. Chamundeswari Electricity Supply Corporation Limited,  
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 Limited,  
Vidhyut Sudha, Khairatabad,  
Hyderabad – 500082.



17. Tamil Nadu Transmission Corporation  
NPKRR Maaligai, 800, Anna Salai  
Chennai – 600 002.

.....Respondent(s)

**For Petitioner** : Ms. Swapna Seshadri, Advocate, PGCIL  
Shri Aditya H. Dubey, Advocate, PGCIL  
Shri S. S. Raju, PGCIL  
Shri D.K. Biswal, PGCIL  
Shri Ved Prakash Rastogi, PGCIL  
Shri A.K. Verma, PGCIL

**For Respondents** : Shri S. Vallinayagam, Advocate, TANGEDCO  
Dr. R. Kathiravan, TANGEDCO  
Ms. R. Ramalakshmi, TANGEDCO  
Shri R. Srinivasan, TANGEDCO  
Shri P.V. Dinesh, Advocate, KSEB  
Shri Ashwini Kumar Singh, Advocate, KSEB  
Shri Bineesh K., Advocate, KSEB

### **ORDER**

The Petitioner, Power Grid Corporation of India Limited, a deemed transmission licensee, has filed the instant petition for revision of transmission tariff of the 2001-04, 2004-09 and 2009-14 tariff periods, for truing up of transmission tariff of the 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 tariff 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 220 kV D/C Kayamkulam-Edmon Transmission Line and 220 kV D/C Kayamkulam-Pallom Transmission Line with associated bays (hereinafter referred to as the “transmission asset/ combined asset”) under Kayamkulam Transmission System (hereinafter referred to as the “transmission system”) in the Southern Region.



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

*“1) Approve the revised Transmission Tariff for 2001-04, 2004-09 and 2009-14 block 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) A. 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.*

*B. Further it is submitted that deferred tax liability before 01.04.2009 shall be recoverable from the beneficiaries or long-term customers / DIC as the case may be, as and when the same is materialized as per regulation 49 of 2014 and regulation 67 of 2019 tariff regulation. The Petitioner may be allowed to recover the deferred tax liability materialised directly without making any application before the commission as provided in the regulation.*

*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 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.*

*7) Allow the Petitioner to claim the capital spares at the end of tariff block as per actual.*

*8) 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.”*

## **Background**

3. The brief facts of the case are as follows:



a) Investment Approval for the transmission system was accorded by the Central Government vide letter dated 6.2.1996 at an estimated cost of ₹8300.00 lakh. Subsequently, Revised Cost Estimate of ₹20441.00 lakh, including IDC of ₹2736.00 lakh was approved for the transmission system by Ministry of Power vide its letter dated 3.9.1998.

b) The approved scope of work covered under transmission system and the dates of commercial operation (“COD”) of the elements covered under the transmission system are as follows:

<b>Sl. No.</b>	<b>Asset Nomenclature</b>	<b>Name of the transmission line</b>	<b>Date of Commercial Operation</b>
1.	Asset – a	220 kV D/C Kayamkulam – Edmon Transmission Line	1.11.1998
2.	Asset – b	220 kV D/C Kayamkulam – Pallom Transmission Line with associated bays	1.12.1999

c) The transmission tariff in respect of the transmission assets for the period from 1.4.2001 to 31.3.2004 was approved vide order dated 30.6.2003 in Petition No.52/2002 and it was revised vide order dated 8.2.2008 in Petition No. 52/2002.

d) The annual transmission charges in respect of the transmission assets for the period from 1.4.2004 to 31.3.2009 was approved vide order dated 9.5.2006 in Petition No.74/2004. The same was further revised on 16.4.2008 in terms of judgement dated 4.10.2006 of the Appellate Tribunal for Electricity (the APTEL) in Appeal No. 135 of 2005 and other related regarding non-consideration of notional equity on account of Foreign Exchange Rate Variation (FERV) for computation of Return on Equity (RoE). Subsequently, vide order dated 17.6.2008 in Petition No. 53/2007, the Commission approved the transfer of ownership of switchyard associated with Rajiv Gandhi Cycle Power Project at Kayamkulam to NTPC and due to decapitalisation of the capital cost, the transmission charges for the year 2007-08 and 2008-09 were revised.

e) The transmission tariff of the transmission assets for 2009-14 period was allowed vide order dated 11.10.2010 in Petition No. 132/2010. Transmission tariff of the transmission assets for 2009-14 period was trued-up and tariff for the period from 1.4.2014 to 31.3.2019 was determined vide order dated 9.11.2015 in Petition No. 166/TT/2014.



f) 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 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 cases. The Petitioner has also sought consequential revision of tariff allowed for 2009-14 tariff period, truing up of tariff of 2014-19 tariff period and determination of tariff for 2019-24 tariff period in respect of the transmission asset.

g) The 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 decision 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 interest on loan	In view of the order of the 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. 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.

h) The 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 decision 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. 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 No.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.

i) 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.

j) Based on the APTEL's judgments dated 22.1.2007 and 13.6.2007, the Petitioner had sought re-determination of tariff of its transmission assets for the tariff periods 2001-04 and 2004-09 tariff periods vide 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 Civil Appeals by the Hon'ble Supreme Court.





k) The Hon'ble Supreme Court vide its judgement dated 10.4.2018, dismissed the said Civil Appeals filed against the APTEL's said judgments. Thus, the order of the judgements of APTEL has attained finality.

l) 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 trueing up petition for the 2014-19 tariff period.

m) The instant petition was heard on 26.10.2021 and in view of the 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 the distribution licensees, transmission utilities and power departments, who are procuring transmission services from the Petitioner and are mainly beneficiaries of the 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 objections have been received from the general public in response to the aforesaid notices published in the newspapers. Kerala State Electricity Board (KSEB), Respondent No. 3 has filed its reply vide affidavit dated 22.10.2021 and has raised the issues of proof for filing of Income Tax, Additional Capital Expenditure (ACE), security expenses and bilateral billing. In response, the Petitioner has filed a rejoinder vide affidavit dated 8.12.2021. Tamil Nadu Generation & Distribution Corporation Limited (TANGEDCO), Respondent No. 4 has filed its reply vide affidavit dated 22.10.2021 and has raised issues of





retrospective revision of tariff, burden upon consumers and sharing of transmission charges. In response, the Petitioner has filed a rejoinder vide affidavit dated 8.12.2021.

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

6. The APTEL, while dealing with the issue of computation of IoL, vide judgment 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 judgment dated 14.11.2006 in Appeal Nos. 94 and 96 of 2005. The APTEL vide 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 order for the period 1.4.1998 to 31.3.2001. In view of the above, the interest allowed for the 2001-04 and 2004-09 tariff period is revised on the basis of the normative debt repayment methodology.

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

7. The APTEL vide judgment dated 13.6.2007 in Appeal No. 139/2006 and others held that additional capitalisation after the date of commercial operation should also be considered for computation of maintenance spares. In view of the above, the maintenance spares to be considered for computation of working capital for the 2001-04 and 2004-09 period are also required to be revised taking into consideration the ACE after the date of commercial operation.

**Re: Depreciation**

8. As regards depreciation, the 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 the APTEL, the outstanding loan allowed for the transmission asset for the 2004-09 tariff period is revised in the instant order.

9. The revision of transmission tariff allowed for the 2001-04 and 2004-09 tariff period necessitates the revision of transmission tariff allowed for the 2009-14 tariff period, which is also being done in the present order. The implementation of the directions of the APTEL vide 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 the 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 and affidavits dated 23.7.2021 and, Respondents reply and the Petitioner's rejoinders.

11. The hearing in this matter was held on 26.10.2021 through video conference and the order was reserved.



12. Having heard the representatives of the Petitioner and the counsel for TANGEDCO and KSEB and having perused the material on record, we proceed to dispose of the petition.

13. It has been placed before us that TANGEDCO has been raising the same issue(s) in other petitions as well despite clear findings of the Commission rejecting the contentions of TANGEDCO. The contentions of TANGEDCO have been rejected by the Commission in other petitions including Petition No. 141/TT/2020. As TANGEDCO has not challenged the findings, the same have attained finality. In view of these, the plea(s) raised by TANGEDCO are rejected. The issues which are specific to the instant petition and not dealt by the Commission earlier are considered in the relevant paragraphs of this order.

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

**2001-04 Tariff Period**

14. The Commission vide order dated 30.6.2003 and 8.2.2008 in Petition No. 52/2002 had approved transmission charges for the transmission assets from 1.4.2001 to 31.3.2004. The transmission charges approved for the 2001-04 period vide order dated 30.6.2003 and 8.2.2008 in Petition No. 52/2002 are as follows:

	(₹ in lakh)		
Asset - a	2001-02	2002-03	2003-04
Depreciation	387.62	387.62	387.62
Return on Equity	244.26	244.26	244.26
O&M Expenses	145.23	153.95	163.18
Advance against Depreciation	60.51	86.95	539.75
Interest on Loan	803.85	745.93	665.93
Interest on Working Capital	44.17	44.45	52.69
<b>Total</b>	<b>1685.64</b>	<b>1663.16</b>	<b>2053.44</b>

(₹ in lakh)			
<b>Asset - b</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04</b>
Depreciation	241.39	241.39	241.39
Return on Equity	187.15	187.15	187.15
O&M Expenses	114.02	120.86	128.11
Advance against Depreciation	0.00	0.00	315.14
Interest on Loan	592.86	567.68	532.84
Interest on Working Capital	27.45	27.41	33.36
<b>Total</b>	<b>1162.87</b>	<b>1144.49</b>	<b>1438.00</b>

15. The Petitioner has claimed the following revised transmission charges for the transmission assets for the 2001-04 period in this petition:

(₹ in lakh)			
<b>Asset - a</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04</b>
Depreciation	387.62	387.62	387.62
Return on Equity	244.26	244.26	244.26
O&M Expenses	145.23	153.95	163.18
Advance against Depreciation	47.71	77.80	539.76
Interest on Loan	804.89	747.67	665.94
Interest on Working Capital	43.94	44.21	52.69
<b>Total</b>	<b>1673.65</b>	<b>1655.61</b>	<b>2053.45</b>

(₹ in lakh)			
<b>Asset - b</b>	<b>2001-02</b>	<b>2002-03</b>	<b>2003-04</b>
Depreciation	241.39	241.39	241.39
Return on Equity	187.15	187.15	187.15
O&M Expenses	114.02	120.86	128.11
Advance against Depreciation	0.00	0.00	320.99
Interest on Loan	593.52	572.82	538.33
Interest on Working Capital	27.46	27.42	33.38
<b>Total</b>	<b>1163.54</b>	<b>1149.64</b>	<b>1449.35</b>

16. We have considered the Petitioner's claim. The tariff is revised for the transmission assets on the basis of the following:

- a) Admitted capital cost of ₹12655.13 lakh for Asset-a and ₹7848.04 lakh for Asset-b as on 1.4.2001 for the transmission asset considering the impact on account of FERV.
- b) Impact of additional capitalization for the years 2001-04 in respect of Asset-b is considered in 2004-09 tariff period;
- c) Weighted Average Rate of Interest on actual loan adopted from order dated 30.6.2003 and 8.2.2008 in Petition No.52/2002; and



d) Weighted Average Rate of Depreciation, Rate of Interest for Working Capital and O&M Expenses as per order dated 30.6.2003 and 8.2.2008 in Petition No.52/2002.

17. In view of the above, the revised transmission charges allowed for the transmission assets for the 2001-04 tariff period are as follows:

(₹ in lakh)			
Asset – a	2001-02	2002-03	2003-04
Depreciation	387.61	387.61	387.61
Return on Equity	244.26	244.26	244.26
O&M Expenses	145.23	153.95	163.18
Advance against Depreciation	47.72	77.81	539.76
Interest on Loan	804.89	747.67	665.94
Interest on Working Capital	43.94	44.31	52.69
<b>Total</b>	<b>1673.65</b>	<b>1655.61</b>	<b>2053.44</b>

(₹ in lakh)			
Asset – b	2001-02	2002-03	2003-04
Depreciation	241.39	241.39	241.39
Return on Equity	187.15	187.15	187.15
O&M Expenses	114.02	120.86	128.11
Advance against Depreciation	0.00	0.00	315.14
Interest on Loan	585.33	565.59	518.36
Interest on Working Capital	27.31	27.38	33.09
<b>Total</b>	<b>1155.21</b>	<b>1142.37</b>	<b>1423.24</b>

18. The Annual Fixed Charges (AFC) allowed for the 2001-04 tariff period vide order dated 30.6.2003 and 8.2.2008 in Petition No. 52/2002, the revised AFC claimed in the instant petition and AFC allowed in the instant order are as follows:

(₹ in lakh)			
Asset – a	2001-02	2002-03	2003-04
AFC approved vide order dated 30.6.2003 and 8.2.2008 in Petition No. 52/2002	1685.64	1663.16	2053.44
AFC claimed by the Petitioner in the instant petition	1673.66	1655.62	2053.44
AFC revised in the instant order	1673.66	1655.62	2053.44

(₹ in lakh)			
Asset – b	2001-02	2002-03	2003-04
AFC approved vide order dated 30.6.2003 and 8.2.2008 in Petition No. 52/2002	1162.87	1144.49	1438.00
AFC claimed by the Petitioner in the instant petition	1163.54	1149.64	1449.35
AFC revised in the instant order	1155.21	1142.37	1423.24



### **2004-09 Tariff Period**

19. The Commission approved transmission charges for the period from 1.4.2004 to 31.3.2009 vide order dated 9.5.2006 and 16.4.2008 in Petition No. 74/2004. Further, the transmission tariff was revised for the year 2007-08 and 2008-09 on account of de-capitalization due to transfer of switchyard to NTPC (with effect from 1.9.2007) vide order dated 17.6.2008 in Petition No. 53/2007.

The transmission charges approved for 2004-09 period are as follows:

(₹ in lakh)						
<b>Asset – a</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>1.4.2007 to 31.8.2007</b>	<b>1.9.2007 to 31.3.2008</b>	<b>2008-09</b>
Depreciation	405.57	405.57	405.57	168.99	119.48	204.81
Return on Equity	213.73	213.73	213.73	89.05	72.41	124.13
O&M Expenses	147.89	153.82	160.06	69.29	60.11	107.30
Advance against Depreciation	0.00	304.63	683.74	301.67	0.00	0.00
Interest on Loan	610.20	521.98	431.65	150.22	109.68	149.93
Interest on Working Capital	41.14	46.01	52.21	32.48	17.56	22.52
<b>Total</b>	<b>1418.54</b>	<b>1645.74</b>	<b>1946.96</b>	<b>811.70</b>	<b>379.23</b>	<b>608.69</b>

(₹ in lakh)						
<b>Asset – b</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>1.4.2007 to 31.8.2007</b>	<b>1.9.2007 to 31.3.2008</b>	<b>2008-09</b>
Depreciation	256.80	256.80	256.80	107.00	85.52	146.60
Return on Equity	200.10	200.10	200.10	83.38	72.66	124.57
O&M Expenses	133.82	139.18	144.80	62.70	50.88	90.80
Advance against Depreciation	0.00	269.65	417.83	181.35	0.00	0.00
Interest on Loan	422.74	366.84	310.03	111.25	87.77	124.03
Interest on Working Capital	27.58	31.96	34.26	20.16	11.97	15.99
<b>Total</b>	<b>1041.04</b>	<b>1264.53</b>	<b>1363.83</b>	<b>565.85</b>	<b>308.81</b>	<b>501.99</b>

20. The Petitioner has claimed the following revised transmission charges for the transmission assets for the 2004-09 period in this petition:



(₹ in lakh)

Asset – a	2004-05	2005-06	2006-07	1.4.2007 to 31.8.2007	1.9.2007 to 31.3.2008	2008-09
Depreciation	405.57	405.57	405.57	168.99	119.48	204.81
Return on Equity	213.73	213.73	213.73	89.05	72.41	124.13
O&M Expenses	147.89	153.82	160.06	69.29	60.11	107.30
Advance against Depreciation	0.00	326.48	683.76	301.68	105.64	362.95
Interest on Loan	610.21	521.99	431.66	150.22	110.27	151.66
Interest on Working Capital	42.34	47.66	53.56	33.86	20.22	38.47
<b>Total</b>	<b>1419.74</b>	<b>1669.25</b>	<b>1948.33</b>	<b>813.09</b>	<b>488.13</b>	<b>989.32</b>

(₹ in lakh)

Asset – b	2004-05	2005-06	2006-07	1.4.2007 to 31.8.2007	1.9.2007 to 31.3.2008	2008-09
Depreciation	256.80	256.80	256.80	107.00	85.52	146.60
Return on Equity	200.10	200.10	200.10	83.38	72.66	124.57
O&M Expenses	133.82	139.18	144.80	62.70	50.88	90.80
Advance against Depreciation	0.00	273.94	416.30	180.70	86.60	245.66
Interest on Loan	421.78	366.01	309.33	111.00	87.98	124.98
Interest on Working Capital	29.29	33.86	36.16	22.14	14.74	27.38
<b>Total</b>	<b>1041.79</b>	<b>1269.89</b>	<b>1363.49</b>	<b>566.92</b>	<b>398.38</b>	<b>759.99</b>

21. We have considered the Petitioner's claim. The tariff is revised for the transmission assets on the basis of the following:

- a) Admitted capital cost of ₹13240.94 lakh for Asset – a and ₹8368.71 lakh for Asset – b as on 1.4.2004 for the transmission asset considering the impact on account of FERV.
- b) Net ACE ₹259.61 lakh for asset – b and on account of FERV ₹585.82 lakh for Asset – a and ₹261.05 lakh for Asset – b for 2001-04 has been approved vide order dated 16.4.2008 in Petition No. 74/2004.
- c) Weighted Average Rate of Interest on actual loan adopted from order dated 9.5.2006 and 16.4.2008 in Petition No. 74/2004 and order dated 17.6.2008 in Petition No. 53/2007; and





d) Weighted Average Rate of Depreciation, Rate of Interest for Working Capital and O&M Expenses as per order dated 9.5.2006 and 16.4.2008 in Petition No. 74/2004 and order dated 17.6.2008 in Petition No. 53/2007.

22. In view of the above, the revised transmission charges approved for the transmission assets for the 2004-09 tariff period are as follows:

(₹ in lakh)						
Asset – a	2004-05	2005-06	2006-07	1.4.2007 to 31.8.2007	1.9.2007 to 31.3.2008	2008-09
Depreciation	405.57	405.57	405.57	168.99	119.20	204.82
Return on Equity	213.73	213.73	213.73	89.05	72.41	124.13
O&M Expenses	147.89	153.82	160.06	69.29	60.11	107.30
Advance against Depreciation	0.00	326.48	683.76	301.68	0.00	0.00
Interest on Loan	610.21	521.99	431.66	150.22	109.39	149.51
Interest on Working Capital	42.34	47.66	53.56	33.81	18.38	32.12
<b>Total</b>	<b>1419.74</b>	<b>1669.25</b>	<b>1948.33</b>	<b>813.04</b>	<b>379.77</b>	<b>617.87</b>

(₹ in lakh)						
Asset – b	2004-05	2005-06	2006-07	1.4.2007 to 31.8.2007	1.9.2007 to 31.3.2008	2008-09
Depreciation	256.80	256.80	256.80	107.00	85.52	146.60
Return on Equity	200.10	200.10	200.10	83.38	72.66	124.57
O&M Expenses	133.82	139.18	144.80	62.70	50.88	90.80
Advance against Depreciation	0.00	264.32	418.64	181.70	0.00	0.00
Interest on Loan	423.24	367.28	310.40	111.75	93.58	133.10
Interest on Working Capital	29.32	33.71	36.22	22.14	13.34	23.25
<b>Total</b>	<b>1043.29</b>	<b>1261.39</b>	<b>1366.97</b>	<b>568.67</b>	<b>315.99</b>	<b>518.32</b>

23. The Annual Fixed Charges (AFC) allowed for 2004-09 tariff period vide order dated 9.5.2006 and 16.4.2008 in Petition No. 74/2004 and order dated 17.6.2008 in Petition No. 53/2007, the revised AFC claimed in the instant petition and revised AFC approved in the instant order are as follows:

(₹ in lakh)

Asset – a	2004-05	2005-06	2006-07	1.4.2007 to 31.8.2007	1.9.2007 to 31.3.2008	2008-09
AFC approved vide order dated 9.5.2006 and 16.4.2008 in Petition No. 74/2004 and order dated 17.6.2008 in Petition No. 53/2007	1418.54	1645.74	1946.96	811.70	379.23	608.69
AFC claimed by the Petitioner in the instant petition	1419.74	1669.25	1948.33	813.09	488.13	989.32
AFC revised in the instant order	1419.74	1669.25	1948.33	813.04	379.77	617.87

(₹ in lakh)

Asset – b	2004-05	2005-06	2006-07	1.4.2007 to 31.8.2007	1.9.2007 to 31.3.2008	2008-09
AFC approved vide order dated 9.5.2006 and 16.4.2008 in Petition No. 74/2004 and order dated 17.6.2008 in Petition No. 53/2007	1041.04	1264.53	1363.83	565.85	308.81	501.99
AFC claimed by the Petitioner in the instant petition	1041.79	1269.89	1363.49	566.92	398.38	759.99
AFC revised in the instant order	1043.29	1261.39	1366.97	568.67	315.99	518.32

24. The variation in tariff approved for the year 2007-08 and 2008-09 in the instant petition vis-à-vis tariff claimed by the Petitioner is due to difference in cumulative depreciation as claimed by the Petitioner on account of de-capitalisation of the switchyard transferred to NTPC in the year 2007-08. The cumulative depreciation on account of de-capitalisation of the switchyard transferred to NTPC in the year 2007-08 is considered as per the order dated 17.6.2008 in Petition No. 53/2007.

### **2009-14 Tariff Period**

25. The Commission vide order dated 11.10.2010 in Petition No.132/2010 had combined both the assets with notional COD as 1.12.1999 and had allowed the



tariff for the combined asset for the 2009-14 period. Further, the Commission vide order dated 9.11.2015 in Petition No.166/TT/2014 had trued-up the tariff allowed for the 2009-14 period and the same is as follows:

(₹ in lakh)					
<b>Combined Asset</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Depreciation	678.64	678.64	678.64	83.32	83.32
Interest on Loan	291.42	240.50	186.72	149.51	135.26
Return on Equity	331.72	343.87	344.21	344.21	348.35
Interest on Working Capital	37.55	37.34	36.86	24.34	24.83
O&M Expenses	208.27	220.18	232.83	246.10	260.15
<b>Total</b>	<b>1547.60</b>	<b>1520.53</b>	<b>1479.26</b>	<b>847.48</b>	<b>851.92</b>

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

(₹ in lakh)					
<b>Combined Asset</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>
Depreciation	678.64	678.64	678.64	83.32	83.32
Interest on Loan	294.60	243.79	190.15	152.91	138.51
Return on Equity	331.72	343.87	344.21	344.21	348.35
Interest on Working Capital	37.62	37.41	36.93	24.41	24.90
O&M Expenses	208.27	220.18	232.83	246.10	260.15
<b>Total</b>	<b>1550.85</b>	<b>1523.88</b>	<b>1482.76</b>	<b>850.95</b>	<b>855.23</b>

27. We have considered the Petitioner's claim. The tariff is revised for the combined asset on the basis of the following:

- a) Admitted capital cost of ₹12899.71 lakh for combined asset as on 1.4.2009;
- b) No ACE for the combined asset had been approved vide order dated 9.11.2015 in Petition No. 166/TT/2014.
- c) Weighted Average Rate of Interest on actual loan adopted from order dated 9.11.2015 in Petition No. 166/TT/2014; and
- d) Weighted Average Rate of Depreciation, Rate of Interest for Working Capital and O&M Expenses as per order dated 9.11.2015 in Petition No. 166/TT/2014.

28. In view of the above, the revised transmission charges approved for the combined asset for the 2009-14 tariff period are as follows:



(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	678.64	678.64	678.64	83.52	83.52
Interest on Loan	300.75	250.16	196.79	159.49	144.77
Return on equity	331.72	343.87	344.21	344.21	348.35
Interest on Working Capital	37.74	37.54	37.07	24.55	25.03
O & M Expenses	208.27	220.18	232.83	246.10	260.15
<b>Total</b>	<b>1557.13</b>	<b>1530.39</b>	<b>1489.54</b>	<b>857.87</b>	<b>861.82</b>

29. The Annual Fixed Charges (AFC) allowed for 2009-14 tariff period vide order dated 9.11.2015 in Petition No.166/TT/2014, the revised AFC claimed in the instant petition and revised AFC approved in the instant order are as follows:

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
AFC approved vide order dated 9.11.2015 in Petition No. 166/TT/2014	1547.60	1520.53	1479.26	847.48	851.92
AFC claimed by the Petitioner in the instant petition	1550.85	1523.88	1482.76	850.95	855.23
Revised AFC approved in the instant order	1557.13	1530.39	1489.54	857.87	861.82

### **TRUING-UP OF ANNUAL FIXED CHARGES FOR THE 2014-19 TARIFF PERIOD**

30. The details of the trued-up transmission charges claimed by the Petitioner in respect of the combined asset are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	111.46	118.94	122.66	124.41	130.81
Interest on Loan	156.28	145.61	130.48	111.67	98.47
Return on Equity	354.81	365.87	370.27	372.19	368.26
Interest on Working Capital	27.49	28.11	28.40	28.52	28.76
O&M Expenses	238.23	246.17	254.36	262.74	196.94
<b>Total</b>	<b>888.27</b>	<b>904.70</b>	<b>906.17</b>	<b>899.53</b>	<b>823.24</b>

31. The details of trued-up IWC claimed by the Petitioner in respect of the combined asset are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	19.85	20.51	21.20	21.90	22.63
Maintenance Spares	35.73	36.93	38.15	39.41	40.73



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Receivables	148.05	150.78	151.03	149.93	149.64
<b>Total</b>	<b>203.63</b>	<b>208.22</b>	<b>210.38</b>	<b>211.24</b>	<b>213.00</b>
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>27.49</b>	<b>28.11</b>	<b>28.40</b>	<b>28.52</b>	<b>28.76</b>

### Capital Cost as on 1.4.2014

32. The capital cost of the combined asset has been calculated in accordance with Regulations 9(3) and 9(6) of the 2014 Tariff Regulations. The Commission vide order dated 9.11.2015 in Petition No. 166/TT/2014 admitted the capital cost of ₹12899.71 lakh as on 31.3.2014 for the combined asset.

33. The Petitioner has not projected any ACE for the 2014-19 tariff period at the time of determination of tariff for 2014-19 period. Accordingly, the capital cost considered vide order dated 9.11.2015 in Petition No. 166/TT/2014 for tariff computation is as follows:

(₹ in lakh)			
Capital Cost admitted (as on 31.3.2014)	ACE during 2014-19 ACE/ De-capitalisation 2014-19		Total Capital Cost (as on 31.3.2019)
	12899.71	0.00	

34. The Petitioner Vide Auditor Certificate dated 24.6.2021 has submitted capital cost as on 31.3.2014 as well as ACE and de-capitalisation up to 31.3.2024 in respect of the transmission asset.

35. The details of the capital cost as on 1.4.2014, ACE and de-capitalisation incurred up to 31.3.2019 as claimed by the Petitioner in respect of the combined asset are as follows:

(₹ in lakh)							
Capital Cost (as on 1.4.2014)	ACE and De-capitalisation (as per Auditor's Certificate)						Total Capital Cost (as on 31.3.2019)
	2014-15	2015-16	2016-17	2017-18	2018-19		
	ACE				ACE	De-capitalisation	
12899.71	219.11	96.86	51.78	14.16	-	318.93	12962.68



36. The capital cost allowed by the Commission as on 1.4.2014 vide order dated 9.11.2015 in Petition No.166/TT/2014 for the combined asset has been considered as opening capital cost as on 1.4.2014 for truing up of tariff, in accordance with Regulation 9(3) of the 2014 Tariff Regulations.

**Additional Capital Expenditure (ACE)**

37. The details of ACE during 2014-19 tariff period as claimed by the Petitioner in respect of the combined asset is as follows:

(₹ in lakh)

ACE (as per Auditor's Certificate)				
2014-15	2015-16	2016-17	2017-18	Total ACE
219.11	96.86	51.78	14.16	381.91

38. The Petitioner has submitted that the total Additional Capital Expenditure for the combined asset is ₹381.91 lakh and it is on account of land compensation paid as per Court Orders and due to removal of rubber trees, and the same is claimed under Regulation 14(3)(i) of the 2014 Tariff Regulations.

39. KSEB has contended that the Petitioner has failed to submit supporting documents regarding the amount of compensation paid along with court orders.

40. In response, the Petitioner has submitted that the relevant court orders have already been submitted along with the additional information filed vide affidavit dated 23.7.2021.

41. We have considered the submissions of the Petitioner and KSEB. The Petitioner has submitted the details of land compensation paid as per Court order and compensation paid on account of rubber trees. Accordingly, the ACE of

₹381.91 lakh for 2014-19 tariff period is allowed under Regulation 14(3)(i) of the 2014 Tariff Regulations

### **Decapitalisation**

42. The Petitioner has submitted that 2 number of bays at Edamon in respect to Kayamkulam-Edamon D/C line taken over by KSEB, so the 2 number of bays at Edamon Sub-station is de-capitalised and the details of de-capitalisation as submitted by the Petitioner in respect of the combined asset are as follows:

(₹ in lakh)				
<b>De-capitalisation (as per Auditor's Certificate)</b>				
<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
-	-	-	-	318.93

43. The Petitioner has submitted that AIS type bays which were installed in KSEB, Respondent No. 3, Edamon Sub-station and are in service since 1.11.1998. The Petitioner has submitted that KSEB has replaced the above AIS bay equipment with hybrid GIS equipment on 22.6.2018 and 1.7.2018. It is also submitted that an MoU has been signed between the Petitioner and KSEB for O&M of these bays and as per the MoU, the original gross block value for these bays was ₹318.92 lakh.

44. The Petitioner has also submitted that as per Clause No. 18.10 of the Minutes of the 34<sup>th</sup> Meeting of South Regional Power Committee (SRPC) held on 11.8.2018, it is clarified that the Petitioner would not require to pay the O&M Charges to KSEB.

45. The Petitioner has submitted that 2 number of 220 kV bays at Edamon Sub-station has been de-capitalized during 2018-19. Vide letter dated 3.11.2020 issued by KSEB, the gross block considered by KSEB for the subject asset is





₹168.75 lakh and the total depreciation recovered till 22.6.2018 is ₹121.17 lakh. However, as per MoU made for O&M of these bays between KSEB and Petitioner, the original gross block value of these assets is ₹318.92 lakh.

46. In the present Petition the depreciation recovered in tariff till 31.3.2018 is ₹9903.91 lakh on a gross block of ₹13222.96 lakh (after reducing the land cost). Further, depreciation recovered during 2018-19 for the gross block of ₹13222.96 lakh is ₹124.81 lakh. The pro-rata depreciation recovered by the decapitalised asset for a gross block of ₹318.92 lakh (as per MoU between Petitioner and KSEB) is ₹238.87 lakh up to 31.3.2018. The depreciation recovered for the decapitalised asset during 2018-19 is ₹3.01 lakh and hence pro-rata depreciation recovered by the decapitalised asset till 21.6.2018 is ₹0.67 lakh. Hence, total depreciation recovered by the decapitalised asset till 21.6.2018 is ₹239.54 lakh (₹238.87+₹0.67 lakh) leading to a net block of ₹79.39 lakh as per Tariff Regulations. Considering the salvage value of 10% of decapitalised asset of ₹31.89 lakh, the remaining depreciation of the de-capitalised asset is ₹47.49 lakh.

47. The Petitioner also submitted that in this regard, a letter was sent to KSEB on 8.4.2021, wherein KSEB was requested to re-calculate the depreciated cost of the asset being decapitalised and to reimburse the balance amount of ₹ 79.39 lakh to Petitioner.

48. KSEB has informed the Petitioner that it has filed a petition before the KSERC for taking over of the bays at Edamon and the value of the assets proposed to be taken over. However, it is submitted that the KSERC has no



jurisdiction over the said asset and the exclusive jurisdiction over the said assets is of Central Commission as per Section 79(1)(c) of the Electricity Act, 2003.

49. The Petitioner has submitted that the bays at Edamon are part of ISTS network and that the tariff of the instant asset has been determined by the Commission as per tariff orders issued from time to time. Accordingly, depreciated value of this combined asset is computed based on the depreciation rates approved by the Commission for the asset since COD as per Tariff orders issued.

50. We have considered the submissions of the Petitioner. The Petitioner has decapitalised the 2 number of 220 kV bays at Edamon Sub-station and the actual date of de-capitalisation is considered as 22.6.2018. With respect to the issue of un-recovered depreciation value of the asset, both Petitioner and KSEB may settle mutually as per the MoU signed between the Petitioner and KSEB. Accordingly, the total capital cost allowed as on 31.3.2019 including de-capitalisation is as follows:

Capital Cost (as on 1.4.2014)	ACE and De-capitalisation (as per Auditor's Certificate)						Total Capital Cost (as on 31.3.2019)
	2014-15	2015-16	2016-17	2017-18	2018-19		
	ACE				ACE	De-capitalisation	
12899.71	219.11	96.86	51.78	14.16	-	318.93	12962.68

### **Debt-Equity Ratio**

51. The Petitioner has claimed debt-equity ratio as on 31.3.2014 approved by the Commission vide order dated 9.11.2015 in Petition No.166/TT/2014 and the same has been considered as opening debt-equity ratio as on 1.4.2014 as provided under Regulation 19(3) of the 2014 Tariff Regulations. The details of the same are as follows:



Particulars	Amount (₹ in lakh)	(in %)
Debt	11123.32	86.23
Equity	1776.39	13.77
<b>Total</b>	<b>12899.71</b>	<b>100.00</b>

52. The debt-equity ratio of 70:30 has been considered for ACE allowed during 2014-19 tariff period in accordance with Regulation 19(5) of the 2014 Tariff Regulations. The de-capitalisation of the asset in the instant case is carried out in the debt-equity ratio as claimed by the Petitioner in Form 10B.

53. The details of debt-equity as on 1.4.2014 and 31.3.2019 in respect of the transmission asset considered for the purpose of truing of tariff for 2014-19 tariff period is as follows:

Funding	Capital Cost (as on 1.4.2014) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2019) (₹ in lakh)	(in %)
Debt	11123.32	86.23	11125.96	85.83
Equity	1776.39	13.77	1836.72	14.17
<b>Total</b>	<b>12899.71</b>	<b>100.00</b>	<b>12962.68</b>	<b>100.00</b>

### Depreciation

54. The transmission asset has already completed 12 years before 1.4.2014. Accordingly, depreciation has been calculated based on the remaining depreciable value to be recovered over the balance useful life, as mentioned in Annexure 1 and accordingly, trued-up depreciation allowed for 2014-19 tariff period is as follows:

		(₹ in lakh)				
	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Gross Block	12899.70	13118.81	13215.67	13267.45	13281.61
B	Addition during the year 2014-19	219.11	96.86	51.78	14.16	-
C	De-capitalisation	-	-	-	-	(318.93)
D	Closing Gross Block (A+B)	13118.81	13215.67	13267.45	13281.61	12962.68
E	Average Gross Block [(A+D)/2]	13009.26	13167.24	13241.56	13274.53	13122.15
F	Freehold Land	58.65	58.65	58.65	58.65	58.65
G	Depreciable value[(E-F)*90%]	11655.54	11797.73	11864.62	11894.29	11757.15
H	Weighted average rate of Depreciation (WAROD) (in %)	0.68	0.73	0.75	0.76	0.71



	<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
I	Lapsed useful life at the beginning of the year (Year)	14	15	16	17	18
J	Balance useful life at the beginning of the year (Year)	20	19	18	17	16
K	Cumulative Depreciation at the beginning of the year	9886.61	9975.06	10070.99	10170.63	10272.02
L	Remaining Aggregate Depreciable Value at the beginning of the year (G-K)	1768.93	1822.67	1793.63	1723.66	1485.12
M	<b>Depreciation during the year (L/J)</b>	<b>88.45</b>	<b>95.93</b>	<b>99.65</b>	<b>101.39</b>	<b>92.82</b>
N	Cumulative Depreciation at the end of the year (K+M)	9975.06	10070.99	10170.63	10272.02	10125.30
O	Remaining Aggregate Depreciable Value at the end of the year (G-N)	1680.49	1726.74	1693.99	1622.27	1392.30

55. The details of depreciation allowed vide order dated 9.11.2015 in Petition No.166/TT/2014 for the combined asset, depreciation claimed by Petitioner in the instant petition and trued-up depreciation approved in the instant order 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>
Allowed in order dated 9.11.2015 in Petition No.166/TT/2014	83.32	83.32	83.32	83.32	83.32
Claimed by the Petitioner in the instant petition	111.46	118.94	122.66	124.41	124.81
Approved after true-up in this order	88.45	95.93	99.65	101.39	92.82

### **Interest on Loan (“IoL”)**

56. The Petitioner has claimed the Weighted Average Rate of IoL based on its actual loan portfolio and rate of interest. IOL is calculated based on actual interest rate, in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of IOL allowed in respect of the transmission asset 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>
A Gross Normative Loan	11123.32	11276.70	11344.50	11380.75	11390.67
B Cumulative Repayments up to Previous Year	9542.33	9630.78	9726.71	9826.35	9927.74
C Net Loan-Opening (A-B)	1580.99	1645.92	1617.80	1554.40	1462.93



	<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
D	Addition due to ACE	153.38	67.80	36.25	9.91	(264.68)
E	Repayment during the year	88.45	95.93	99.65	101.39	336.86
F	Adjustment of cumulative repayment pertaining to the decapitalised asset	0.00	0.00	0.00	0.00	244.04
G	Net Loan-Closing (C+D-E+F)	1645.92	1617.80	1554.39	1462.92	1105.43
H	Average Loan [(C+G)/2]	1613.46	1631.86	1586.09	1508.66	1284.18
I	Weighted Average Rate of Interest on Loan (%)	10.201	9.534	8.946	8.222	8.037
<b>J</b>	<b>Interest on Loan (H*I)</b>	<b>164.60</b>	<b>155.57</b>	<b>141.90</b>	<b>124.05</b>	<b>103.21</b>

57. The details of IOL approved vide order dated 9.11.2015 in Petition No. 166/TT/2014 for the combined asset, depreciation claimed by Petitioner in the instant petition and true-up depreciation approved in the instant order 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>
Allowed in order dated 9.11.2015 in Petition No.166/TT/2014	127.83	120.40	112.96	105.53	98.10
Claimed by the Petitioner in the instant petition	156.28	145.61	130.48	111.67	99.54
Approved after true-up in this order	<b>164.60</b>	<b>155.57</b>	<b>141.90</b>	<b>124.05</b>	<b>103.21</b>

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

58. The Petitioner has claimed RoE for the combined asset in terms of Regulations 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that they are liable to pay income tax at MAT rates and has claimed the following effective tax rates for the 2014-19 tariff period:

<b>Year</b>	<b>Claimed effective tax (in %)</b>	<b>Grossed-up RoE (in %) [(Base Rate)/(1-t)]</b>
2014-15	21.018	19.624
2015-16	21.382	19.624
2016-17	21.338	19.715
2017-18	21.337	19.704
2018-19	21.549	19.704



59. KSEB has submitted that the Petitioner has claimed Effective Tax percentage in arriving out the grossed-up RoE rate for 2014-15 and 2015-16 based on Assessment Orders issued by the income tax authorities for the purpose of grossing up of RoE rate. The effective rate of tax considered for 2016-17 and 2017-18 are based on the income tax returns filed for the purpose of grossing up of RoE rate of respective years. Further, for 2018-19, pending filing of ITR, effective tax rate is calculated based on the applicable MAT rate (i.e. MAT 18.50% + Surcharge 12.00% + Cess 4%), for the purpose of grossing up of rate of RoE. However, the Petitioner has not furnished any proof of tax paid for 2014-15, 2015-16, 2016-17 and 2017-18.

60. In response, the Petitioner has submitted that the grossing up has been done as per Regulation 25 of the 2014 Tariff Regulations and so far the Petitioner has been granted trued-up tariff of the 2014-19 tariff period by the Commission vide orders dated 18.4.2020 in Petition No. 247/TT/2019, 27.4.2020 in Petition No. 274/TT/2019, 23.4.2020 in Petition No. 245/TT/2019 and 16.4.2020 in Petition No. 307/TT/2019 wherein effective tax rate based on notified MAT rates have been considered for the purpose of grossing up of RoE. The Petitioner has further enclosed assessment order for 2017-18 and also submitted that assessment for 2018-19 has not yet been completed.

61. We have considered the submissions of the Petitioner and KSEB. The Commission *vide* order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the effective tax rate based on the notified MAT rates. . The following MAT rates considered in Petition No. 274/TT/2019 are considered in the instant



petition for the purpose of grossing up of rate of RoE for truing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations:

Year	Notified MAT rates (in %) (inclusive of surcharge & cess)	Base rate of RoE (in %)	Grossed-up RoE (in %) [(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

62. Accordingly, the RoE approved for the combined asset is as follows:

	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	1776.39	1842.12	1871.18	1886.71	1890.95
B	Addition due to ACE	65.73	29.06	15.53	4.24	-
C	De-Capitalisation	-	-	-	-	(54.22)
D	Closing Equity (A+B)	1842.12	1871.18	1886.71	1890.95	1836.73
E	Average Equity [(A+D)/2]	1809.26	1856.65	1878.94	1888.83	1863.84
F	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
G	Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
H	Applicable RoE Rate (in %)	19.610	19.705	19.705	19.705	19.758
I	<b>Return on Equity for the year (E*F)</b>	<b>354.79</b>	<b>365.85</b>	<b>370.25</b>	<b>372.19</b>	<b>368.26</b>

63. The details of RoE allowed vide order dated 9.11.2015 in Petition No. 166/TT/2014 for the combined asset, RoE claimed by Petitioner in the instant petition and trued-up RoE approved in the instant order are as follows:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed in order dated 9.11.2015 in Petition No.166/TT/2014	348.35	348.35	348.35	348.35	348.35
Claimed by the Petitioner in the instant petition	354.81	365.87	370.27	372.19	368.26
Approved after true-up in this order	354.79	365.85	370.25	372.19	368.26

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

64. The O&M Expenses claimed by the Petitioner are within the norms specified under the 2014 Tariff Regulations. It is observed that the Petitioner has de-capitalised 2 number of 220 kV Bays at Edamon in respect of Kayamkulam-





Edamon D/C line and the date of de-capitalisation considered as 22.6.2018. Accordingly O&M of 2 number of 220 kV bays at Edmon is allowed upto 22.6.2018 only. The O&M Expenses approved for the transmission asset for the 2014-19 tariff period are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Sub-station Bays (Numbers)</b>					
Edmon I and II Bays at kayamkulam	2	2	2	2	2
Pallom I and Pallom II Bays and Kayamkulam	2	2	2	2	2
<b>Norm (₹ lakh/bay)</b>					
220 kV Bay (AIS)	42.21	43.61	45.06	46.55	48.10
<b>Total Sub-station O&amp;M (A)</b>	<b>168.84</b>	<b>174.44</b>	<b>180.24</b>	<b>186.20</b>	<b>117.81</b>
<b>Transmission Lines (Kms)</b>					
220 kV D/C Kayamkulam - Edmon T/L	78.000	78.000	78.000	78.000	78.000
220 kV D/C Kayamkulam Pallom T/L	47.000	47.000	47.000	47.000	47.000
<b>Norm (₹ lakh/km)</b>					
D/C (Twin/Triple Conductor)	0.71	0.73	0.76	0.78	0.81
D/C (Single Conductor)	0.30	0.31	0.32	0.33	0.35
<b>Total Transmission Line O&amp;M (B)</b>	<b>69.39</b>	<b>71.73</b>	<b>74.12</b>	<b>76.54</b>	<b>79.13</b>
<b>Total O&amp;M Expenses (C)=(A+B)</b>	<b>238.23</b>	<b>246.17</b>	<b>254.36</b>	<b>262.74</b>	<b>196.94</b>

65. The details of O&M Expenses allowed vide order dated 9.11.2015 in Petition No.166/TT/2014 for the combined asset, O&M Expenses claimed by Petitioner in the instant petition and trued-up O&M Expenses allowed in the instant order are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed in order dated 9.11.2015 in Petition No.166/TT/2014	238.23	246.17	254.36	262.74	271.53
Claimed by the Petitioner in the instant petition	238.23	246.17	254.36	262.74	271.53
Approved after true-up in this order	238.23	246.17	254.36	262.74	196.94

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



66. The Petitioner has claimed IWC as per Regulation 28(1)(c) of the 2014 Tariff Regulations. The components of the working capital and the Petitioner's entitlement to interest thereon are discussed as follows:

**a) Working Capital for Maintenance spares:**

Regulation 28 of the 2014 Tariff Regulations provides for working capital towards maintenance spares @ 15% per annum of the O&M Expenses. The value of maintenance spares has accordingly been worked out as follows:

**b) Working Capital for O & M Expenses:**

Operation and maintenance expenses have been considered for one month as a component of working capital. The Petitioner has claimed O&M Expenses for 1 month of the respective year as claimed in the petition. This has been considered in the working capital

**c) Working Capital for Receivables:**

Receivables as a component of working capital will be equivalent to two months fixed cost. The Petitioner has claimed the receivables on the basis of 2 months annual transmission charges. In the tariff being allowed, receivables have been worked out on the basis of 2 months transmission charges

**d) Rate of interest on working capital:**

As per Proviso 3 of Regulation 28 of the 2014 Tariff Regulation, SBI Base rate 10.00% as on 1.4.2014 plus 350 Bps i.e. 13.50% has been considered for the asset, as the rate of interest on working capital.

67. The trued-up IWC approved for the combined asset for the 2014-19 tariff period is as follows:



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for 1 Month)	19.85	20.51	21.20	21.89	16.41
Working Capital for Maintenance Spares (15% of O&M)	35.73	36.93	38.15	39.41	29.54
Working Capital for Receivables (Equivalent to 2 months of annual transmission charges)	145.54	148.56	149.05	148.11	130.85
<b>Total Working Capital</b>	201.12	206.00	208.40	209.41	176.80
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
<b>Interest of working capital</b>	27.15	27.81	28.13	28.27	23.87

68. The details of IWC allowed vide order dated 9.11.2015 in Petition No. 166/TT/2014 for the combined asset, IWC claimed by Petitioner in the instant petition and trued-up IWC approved in the instant order are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed in order dated 9.11.2015 in Petition No.166/TT/2014	26.04	26.31	26.59	26.88	27.19
Claimed by the Petitioner in the instant petition	27.49	28.11	28.40	28.52	28.75
Approved after true-up in this order	27.15	27.81	28.13	28.27	23.87

### **Approved Annual Fixed Charges for the 2014-19 Tariff Period**

69. Accordingly, the annual transmission charges approved after truing up for the 2014-19 tariff period are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	88.45	95.93	99.65	101.39	92.82
Interest on Loan	164.60	155.57	141.90	124.05	103.21
Return on Equity	354.79	365.85	370.25	372.19	368.26
Interest on Working Capital	27.15	27.81	28.13	28.27	23.87
O&M Expenses	238.23	246.17	254.36	262.74	196.94
<b>Total</b>	<b>873.22</b>	<b>891.34</b>	<b>894.28</b>	<b>888.64</b>	<b>785.10</b>

70. The details of Annual Transmission Charges allowed vide order dated 9.11.2015 in Petition No.166/TT/2014 for the combined asset, claimed by



Petitioner in the instant petition and approved after true-up in the instant order are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed in order dated 9.11.2015 in Petition No.166/TT/2014	823.78	824.55	825.59	826.83	828.50
Claimed by the Petitioner in the instant petition	888.27	904.70	906.17	899.53	823.24
Approved after true-up in this order	<b>873.22</b>	<b>891.34</b>	<b>894.28</b>	<b>888.64</b>	<b>785.10</b>

### **DETERMINATION OF ANNUAL FIXED CHARGES FOR THE 2019-24 TARIFF PERIOD**

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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	123.33	125.84	140.59	164.20	178.13
Interest on Loan	89.94	81.19	82.13	87.30	82.95
Return on Equity	346.95	349.13	361.16	378.88	388.49
Interest on Working Capital	14.15	14.33	14.95	15.87	16.34
Operation and Maintenance	131.46	136.12	140.86	145.82	150.89
<b>Total</b>	<b>705.83</b>	<b>706.61</b>	<b>739.69</b>	<b>792.07</b>	<b>816.80</b>

72. The details of the IWC claimed by the Petitioner are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M expenses	10.96	11.34	11.74	12.15	12.57
Maintenance Spares	19.72	20.42	21.13	21.87	22.63
Receivables	86.78	87.12	91.19	97.65	100.43
<b>Total</b>	<b>117.46</b>	<b>118.88</b>	<b>124.06</b>	<b>131.67</b>	<b>135.63</b>
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>14.15</b>	<b>14.33</b>	<b>14.95</b>	<b>15.87</b>	<b>16.34</b>

### **Capital Cost**

73. Regulations 19 of the 2019 Tariff Regulations provide 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 capitalisation 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 utilisation 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 capitalisation and de-capitalisation for the respective year of tariff as determined in accordance with these regulations;*
  - (c) *Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;*
  - (d) *Capital expenditure on account of ash disposal and utilisation including handling and transportation facility;*
  - (e) *Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto 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 de-capitalised 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-capitalisation 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."*

74. The admitted capital cost of ₹12962.68 lakh as on 31.3.2019 for the combined asset has been considered as opening capital cost as on 1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.





## **Additional Capital Expenditure (ACE)**

75. Regulations 24 and 25 of the 2019 Tariff Regulations provide as follows:

*“24. Additional Capitalization within the original scope and up to the cut-off date*

*(1) The Additional Capital Expenditure in respect of a new project or an existing project incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:*

- (a) Undischarged liabilities recognized to be payable at a future date;*
- (b) Works deferred for execution;*
- (c) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23 of these regulations;*
- (d) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority or order or decree of any court of law;*
- (e) Change in law or compliance of any existing law; and*
- (f) Force Majeure events:*

*Provided that in case of any replacement of the Asset, the additional capitalisation shall be worked out after adjusting the gross fixed Asset and cumulative depreciation of the Asset replaced on account of de-capitalisation.*

*(2) The generating company or the transmission licensee, as the case may be shall submit the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution.”*

*25. Additional Capitalisation within the original scope and after the cut-off date:*

*(1) The additional capital expenditure incurred or projected to be incurred in respect of an existing project or a new project on the following counts within the original scope of work and after the cut-off date may be admitted by the Commission, subject to prudence check:*

- (a) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;*
- (b) Change in law or compliance of any existing law;*
- (c) Deferred works relating to ash pond or ash handling system in the original scope of work;*
- (d) Liability for works executed prior to the cut-off date;*
- (e) Force Majeure events;*
- (f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and*
- (g) Raising of ash dyke as a part of ash disposal system.*

*(2) In case of replacement of Asset deployed under the original scope of the existing project after cut-off date, the additional capitalisation may be admitted by the Commission, after making necessary adjustments in the gross fixed Asset and the cumulative depreciation, subject to prudence check on the following grounds:*





- (a) The useful life of the Asset is not commensurate with the useful life of the project and such Asset have been fully depreciated in accordance with the provisions of these regulations;
- (b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;
- (c) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and
- (d) The replacement of such asset or equipment has otherwise been allowed by the Commission.

76. Initially, the Petitioner did not project any ACE during the 2019-24 period. The Petitioner vide affidavit dated 23.7.2021 and vide Auditor's Certificate dated 25.12.2019 has projected net ACE of ₹838.43 lakh in respect of the combined asset on account of proposed compensation to be paid during the 2019-24 tariff period.

77. The Petitioner has further submitted that initially at the time of filing the petition, ACE was not proposed for 2019-24 block. However, considering the compensation paid during the 2014-19 block and court cases pending regarding enhancement in compensation, additional ACE is proposed during 2019-24 block on account of additional compensation likely to be paid as per court orders yet to be received. The Petitioner vide Auditor Certificate dated 24.6.2021 has submitted the cost details for ACE/ de-capitalisation proposed during 2019-24 is as follows:

(₹ in lakh)	
Particulars	Amount
Proposed ACE in 2019-20	70.00
Proposed ACE in 2020-21	7.49
Proposed ACE in 2021-22	419.51
Proposed ACE in 2022-23	209.31
Proposed ACE in 2023-24	132.12
<b>Net Additional Capital Expenditure</b>	<b>838.43</b>

78. We have gone through the submission of the Petitioner and have allowed the projected additional capital expenditure on account of additional compensation likely to be paid as per court orders is allowed as per Regulation



25(1)(a) of the 2019 Tariff Regulations. The Petitioner is directed to submit the actual compensation details at the time of truing-up. Accordingly, the capital cost allowed for the 2019-24 tariff period is as follows:

(₹ in lakh)		
Capital Cost allowed (as on 1.4.2019)	Projected ACE allowed during 2019-24	Estimated Capital Cost allowed (as on 31.3.2024)
12962.68	838.43	13801.11

### **Debt-Equity Ratio**

79. 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 utilisation 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 project including communication, project 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 project including communication, project 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 project including communication project 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.

(6) Any expenditure incurred for the emission control system during the tariff period as may be admitted by the Commission as additional capital expenditure for determination of supplementary tariff, shall be serviced in the manner specified in clause (1) of this Regulation.”

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

<b>Funding</b>	<b>Capital Cost (as on 1.4.2019) (₹ in lakh)</b>	<b>(in %)</b>	<b>Capital Cost (as on 31.3.2024) (₹ in lakh)</b>	<b>(in %)</b>
Debt	11125.96	85.83	11712.87	84.87
Equity	1836.72	14.17	2088.24	15.13
<b>Total</b>	<b>12962.68</b>	<b>100.00</b>	<b>13801.11</b>	<b>100.00</b>

### **Depreciation**

81. Regulations 33 of the 2019 Tariff Regulations provides 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 project or element thereof including communication project. In case of the tariff of all the units of a generating station or all elements of a transmission project including communication project 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 project 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 project, 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 project, weighted average life for



*the generating station of the transmission project 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.*

*(3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:*

*Provided that the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable;*

*Provided further that in case of hydro generating stations, the salvage value shall be as provided in the agreement, if any, signed by the developers with the State Government for development of the generating station:*

*Provided also that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff:*

*Provided also that any depreciation disallowed on account of lower availability of the generating station or unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life or the extended life.*

*(4) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.*

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

*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 Asset.”*

*(6) In case of the existing projects, the balance depreciable value as on 1.4.2019 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2019 from the gross depreciable value of the assets.*

*(7) The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure five years before the completion of useful life of the project along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure.*

*(8) In case of de-capitalization of assets in respect of generating station or unit thereof or transmission system or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the de-capitalized asset during its useful services.*



(9) Where the emission control system is implemented within the original scope of the generating station and the date of commercial operation of the generating station or unit thereof and the date of operation of the emission control system are the same, depreciation of the generating station or unit thereof including the emission control system shall be computed in accordance with Clauses (1) to (8) of this Regulation.

(10) Depreciation of the emission control system of an existing or a new generating station or unit thereof where the date of operation of the emission control system is subsequent to the date of commercial operation of the generating station or unit thereof, shall be computed annually from the date of operation of such emission control system based on straight line method, with salvage value of 10%, over a period of-

a) twenty five years, in case the generating station or unit thereof is in operation for fifteen years or less as on the date of operation of the emission control system; or

b) balance useful life of the generating station or unit thereof plus fifteen years, in case the generating station or unit thereof is in operation for more than fifteen years as on the date of operation of the emission control system; or

c) ten years or a period mutually agreed by the generating company and the beneficiaries, whichever is higher, in case the generating station or unit thereof has completed its useful life.”

82. 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 system has already completed 12 years of life as on 31.3.2012. Therefore, the remaining depreciable value of ₹1837.39 lakh as on 31.3.2012 has been spread across the balance useful life of 19 years in accordance with Regulation 33(5) of the 2019 Tariff Regulations. WAROD at Annexure-II has been worked out after considering the depreciation rates as specified in the 2019 Tariff Regulations. The depreciation allowed for the transmission system for the 2019-24 tariff period is as follows:

		(₹ in lakh)				
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	12962.68	13032.68	13040.17	13459.68	13668.99
B	Addition during the year 2014-19	70.00	7.49	419.51	209.31	132.12
C	Closing Gross Block (A+B)	13032.68	13040.17	13459.68	13668.99	13801.11
D	Average Gross Block [(A+C)/2]	12997.68	13036.43	13249.93	13564.34	13735.05
E	Freehold Land	58.65	58.65	58.65	58.65	58.65
F	Depreciable value(D-E)*90%	11645.13	11680.00	11872.15	12155.12	12308.76
G	Weighted average rate of	0.780	0.796	0.895	1.048	1.137



	<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
	Depreciation (WAROD) (in %)					
H	Lapsed useful life at the beginning of the year (Year)	19.00	20.00	21.00	22.00	23.00
I	Balance useful life at the beginning of the year (Year)	15.00	14.00	13.00	12.00	11.00
J	Cumulative Depreciation at the beginning of the year	10125.30	10226.63	10330.44	10449.03	10591.21
K	Remaining Aggregate Depreciable Value at the beginning of the year (F-J)	1519.82	1453.37	1541.71	1706.08	1717.55
L	<b>Depreciation during the year (K/I)</b>	<b>101.32</b>	<b>103.81</b>	<b>118.59</b>	<b>142.17</b>	<b>156.14</b>
M	Cumulative Depreciation at the end of the year (J+L)	10226.63	10330.44	10449.03	10591.21	10747.35
N	Remaining Aggregate Depreciable Value at the end of the year (F-M)	1418.50	1349.56	1423.12	1563.91	1561.41

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

83. 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-capitalisation of Asset, 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 up to 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 project, 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.*





(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.

(5a) The rate of interest on loan for installation of emission control system shall be the weighted average rate of interest of actual loan portfolio of the emission control system or in the absence of actual loan portfolio, the weighted average rate of interest of the generating company 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”.

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

		(₹ in lakh)				
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Gross Normative Loan	11125.96	11174.96	11180.21	11473.87	11620.39
B	Cumulative Repayments up to Previous Year	10020.56	10121.89	10225.70	10344.29	10486.47
C	Net Loan-Opening (A-B)	1105.40	1053.08	954.51	1129.57	1133.92
D	Addition due to ACE	49.00	5.24	293.66	146.52	92.48
E	Repayment during the year	101.32	103.81	118.59	142.17	156.14
F	Net Loan-Closing (C+D-E)	1053.08	954.51	1129.57	1133.92	1070.26
G	Average Loan [(C+F)/2]	1079.24	1003.79	1042.04	1131.75	1102.09
H	Weighted Average Rate of Interest on Loan (%)	8.087	8.001	7.967	7.946	7.923
I	<b>Interest on Loan (G*H)</b>	<b>87.27</b>	<b>80.31</b>	<b>83.02</b>	<b>89.93</b>	<b>87.32</b>



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

85. Regulations 30 and 31 of the 2019 Tariff Regulations provide 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 project including communication project 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 cutoff date beyond the original scope, excluding additional capitalization on account of emission control system, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%.*

*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 project 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 project up to load dispatch centre or protection project 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.*

*(3) The return on equity in respect of additional capitalization on account of emission control system shall be computed at the base rate of one year marginal cost of lending rate (MCLR) of the State Bank of India as on 1<sup>st</sup> April of the year in which the date of operation (Ode) occurs plus 350 basis point, subject to ceiling of 14%.”*





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."*



86. The Petitioner has submitted that it is liable to pay Income Tax at MAT rate specified under the Taxation laws (Amendment) Ordinance 2019. Further, RoE has been calculated @18.782% after grossing up RoE with MAT rate of 17.472% (Base Rate 15% + Surcharge 12% + Cess 4%) based on the formula given in Regulation 31(2) of the 2019 Tariff Regulations for 2019-24 tariff period. As per Regulation 31(3) of the 2019 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 2019-24 tariff period on actual gross income. However, if any penalty arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the Petitioner. Any under-recovery or over-recovery of grossed-up rate on RoE after truing up shall be recovered or refunded to beneficiaries or the long term customers on yearly basis. The Petitioner has further submitted that any adjustment due to additional tax demand including interest duly adjusted for any refund of tax including interest received from IT authorities shall be recoverable/adjustable during 2019-24 tariff period on yearly basis on receipt of Income Tax assessment order.

87. We have considered the submissions of the Petitioner. MAT rate applicable in 2019-20 has been considered for the purpose of RoE, which will be trued-up with actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. RoE allowed for the transmission system for the 2019-24 tariff period is as follows:



(₹ in lakh)

	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	1836.72	1857.72	1859.97	1985.82	2048.61
B	Addition due to ACE	21.00	2.25	125.85	62.79	39.64
C	Closing Equity (A+B)	1857.72	1859.97	1985.82	2048.61	2088.24
D	Average Equity [(A+C)/2]	1847.22	1858.84	1922.89	2017.21	2068.42
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	17.472	17.472	17.472	17.472	17.472
G	Applicable RoE Rate (in %)	18.782	18.782	18.782	18.782	18.782
H	<b>Return on Equity for the year (D*G)</b>	<b>346.94</b>	<b>349.13</b>	<b>361.16</b>	<b>378.87</b>	<b>388.49</b>

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

88. Regulation 35(3) of the 2019 Tariff Regulations specifies the norms for O&M Expenses for the transmission project as:

“(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 (Rs 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 (Rs 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 (Rs Lakh per km)</b>					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor)	2.319	2.401	2.485	2.572	2.662



<i>with four or more sub-conductor)</i>					
<b>Multi Circuit (Twin &amp; Triple Conductor)</b>	1.544	1.598	1.654	1.713	1.773
<b>Norms for HVDC stations</b>					
<b>HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)</b>	834	864	894	925	958
<b>Gazuwaka HVDC Back-to-Back station (Rs. Lakh per 500 MW)</b>	1,666	1,725	1,785	1,848	1,913
<b>500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)</b>	2,252	2,331	2,413	2,498	2,586
<b>±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)</b>	2,468	2,555	2,645	2,738	2,834
<b>±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)</b>	1,696	1,756	1,817	1,881	1,947
<b>±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)</b>	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;*

*(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.”*

89. The O&M Expenses claimed by the Petitioner for the combined asset are as follows:



(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Sub-station Bays (Numbers)</b>					
Pallom I and II Bays and kayamkulam	2	2	2	2	2
<b>Norm (₹ lakh/bay)</b>					
400 kV Bay	22.51	23.30	24.12	24.96	25.84
<b>Total Sub-station O&amp;M (A)</b>	<b>45.02</b>	<b>46.60</b>	<b>48.24</b>	<b>49.92</b>	<b>51.68</b>
<b>Transmission Lines (km)</b>					
220 kV D/C Kayamkulam Edmon T/L	78.000	78.000	78.000	78.000	78.000
220 kV D/C Kayamkulam Pallom T/L	47.000	47.000	47.000	47.000	47.000
<b>Norm (₹ lakh/km)</b>					
D/C (Twin/Triple Conductor)	0.881	0.912	0.944	0.977	1.011
D/C (Single Conductor)	0.377	0.391	0.404	0.419	0.433
<b>Total Transmission Line O&amp;M (B)</b>	<b>86.44</b>	<b>89.52</b>	<b>92.62</b>	<b>95.90</b>	<b>99.21</b>
<b>Communication System</b>					
PLCC (₹ in lakh)	0.00	0.00	0.00	0.00	0.00
<b>Norms (in %)</b>	2.00	2.00	2.00	2.00	2.00
<b>Total Communication System</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Total O&amp;M Expenses (C)=(A+B)</b>	<b>131.46</b>	<b>136.12</b>	<b>140.86</b>	<b>145.82</b>	<b>150.89</b>

90. The Petitioner has not claimed any expense towards communication system. The O&M Expenses allowed for the combined asset covered in the instant petition are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Sub-station Bays (Numbers)</b>					
Pallom I and II Bays and kayamkulam	2	2	2	2	2
<b>Norm (₹ lakh/bay)</b>					
400 kV Bay (AIS)	22.51	23.30	24.12	24.96	25.84
<b>Total Sub-station O&amp;M (A)</b>	<b>45.02</b>	<b>46.60</b>	<b>48.24</b>	<b>49.92</b>	<b>51.68</b>
<b>Transmission Lines (km)</b>					
220 kV D/C Kayamkulam Edmon T/L	78.000	78.000	78.000	78.000	78.000
220 kV D/C Kayamkulam Pallom T/L	47.000	47.000	47.000	47.000	47.000
<b>Norm (₹ lakh/km)</b>					
D/C (Twin/Triple Conductor)	0.881	0.912	0.944	0.977	1.011
D/C (Single Conductor)	0.377	0.391	0.404	0.419	0.433
<b>Total Transmission Line O&amp;M (B)</b>	<b>86.44</b>	<b>89.52</b>	<b>92.62</b>	<b>95.90</b>	<b>99.21</b>
<b>Total O&amp;M Expenses (C)=(A+B)</b>	<b>131.46</b>	<b>136.12</b>	<b>140.86</b>	<b>145.82</b>	<b>150.89</b>



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

91. Regulation 34(1)(c), Regulation 34(3) and Regulation 34(4) and Regulation 3(7) of the 2019 Tariff Regulations provide as under:

*“34. Interest on Working Capital: (1) The working capital shall cover:*

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

*(i) Receivables equivalent to 45 days of annual 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 project including communication project or element thereof, as the case may be, is declared under commercial operation, whichever is later:*

*Provided that in case of triung-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. **Definition** - In these regulations, unless the context otherwise requires: -*

*(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;”*

92. The Petitioner has submitted that it has computed the 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%. The IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of IWC considered is 12.05% (SBI 1year 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 and 10.50% (SBI 1-year



MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) for 2021-24.

The components of the working capital and interest allowed thereon for the combined asset are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for 1 Month)	10.95	11.34	11.74	12.15	12.57
Working Capital for Maintenance Spares (15% of O&M)	19.72	20.42	21.13	21.87	22.63
Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	83.70	84.13	88.43	95.09	98.09
<b>Total Working Capital</b>	<b>114.38</b>	<b>115.89</b>	<b>121.30</b>	<b>129.12</b>	<b>133.30</b>
Rate of Interest of working capital (in %)	12.05	11.25	10.50	10.50	10.50
<b>Interest of working capital</b>	<b>13.78</b>	<b>13.04</b>	<b>13.65</b>	<b>14.53</b>	<b>15.00</b>

#### **Annual Fixed Charges for the 2019-24 Tariff Period**

93. The detailed computation of the various components of the annual fixed charges for the combined asset for the 2019-24 tariff period is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	101.32	103.81	118.59	142.17	156.14
Interest on Loan	87.27	80.31	83.02	89.93	87.32
Return on Equity	346.94	349.13	361.16	378.87	388.49
O&M Expenses	13.78	13.04	13.65	14.53	15.00
Interest on Working Capital	131.46	136.11	140.86	145.82	150.89
<b>Total</b>	<b>680.78</b>	<b>682.40</b>	<b>717.27</b>	<b>771.32</b>	<b>797.84</b>

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

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



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

95. The Petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 70(4) of the 2019 Tariff Regulations for the 2019-24 tariff period. The Petitioner shall also be entitled for recovery of RLDC fee and charges in accordance with Regulations 70(3) of the 2019 Tariff Regulations for the 2019-24 tariff period.

### **Goods and Services Tax**

96. 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, paid by the Petitioner on account of demand from Government/ Statutory authorities, may be allowed to be recovered from the beneficiaries.

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

### **Security Expenses**

98. The Petitioner has submitted that security expenses in respect of 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.

99. KSEB has submitted that the claim of security expenses for the 2019-24 tariff period is in violation of Regulation 35(c)(3) of the 2019 Tariff Regulations, which allows recovery only at the time of truing up.





100. In response the Petitioner has submitted that Regulation 35(c)(3) of the 2019 Tariff Regulations does not bar the recovery of security expenses and only envisages that estimated expenses are to be filed by the licensee subject to filing complete details at the time of truing up. Further, claiming security expenses at the time of determination is beneficial even to the beneficiaries as claiming security expenses at the time of truing up would make the beneficiaries liable to pay carrying cost.

101. We have considered the submissions of the Petitioner and KSEB. The Petitioner has claimed consolidated security expenses on projected basis for 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19 in Petition No. 260/MP/2020. The said petition has already been disposed of by the Commission vide order dated 3.8.2021 and approved security expenses from 1.4.2019 to 31.3.2024. Therefore, security expenses will be shared in terms of the order dated 3.8.2021 in Petition No. 260/MP/2020. Therefore, the Petitioner's prayer in the instant petition for allowing it to file a separate petition for claiming the overall security expenses and consequential IWC has become infructuous.

### **Capital Spares**

102. The Petitioner has sought 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**

103. The Petitioner has submitted that the tariff for for the 2001-04 tariff period will be recovered as per order dated 30.6.2003 in Petition No. 52/2002, for 2004-09 tariff period as per order dated 9.5.2006 in Petition No. 74/2004 and order



dated 17.6.2008 in Petition No. 53/2007 and for 2009-14 tariff period as per order dated 10.11.2015 in Petition No. 166/TT/2014.

104. The Petitioner has submitted that the transmission charges for the 2014-19 period will be recovered on monthly basis in accordance with Regulation 46 and will be borne exclusively by the KSEB and the tariff for the 2019-24 period will be recovered on monthly basis in accordance with Regulation 57 of the 2019 Tariff Regulations and will be borne exclusively by the KSEB, the sole beneficiary.

105. KSEB vide affidavit dated 22.10.2021 has submitted that since the Kayamkulam-Pallom 220 kV and Kayamkulam-Edamon 220 kV transmission lines are owned by the Petitioner and deemed to be ISTS, the transmission charges from 2011 should not have been billed to KSEB alone but recovered through PoC mechanism. KSEB has also relied on the letter dated 15.10.2020 of the CTU granting grid connectivity to 92 MW proposed floating solar PV being established at the sub-station.

106. In response, the Petitioner has submitted that KSEB has misconstrued the fact that any system owned by the CTU is a deemed ISTS as provided in Section 2(36)(iii) of the Electricity Act, 2003 with the billing and recovery of transmission charges of the said assets. It is stated that even when the system is an ISTS or deemed ISTS but being used only by one Distribution Company, the transmission charges are to be billed to that licensee alone and the transmission charges are not billed to others under the PoC regime. There are several examples such as Faridabad-Palla transmission line, which is paid only by Haryana Discom etc. The Petitioner has further submitted that the above position



would not change even after the notification of the 2020 Sharing Regulations. The instant transmission lines are only constructed and utilised by one State /discom and do not get added to the basic network to be included under the PoC mechanism.

107. KSEBL has contended that the transmission charges of Kayamkulam-Pallom 220 kV and Kayamkulam-Edamon 220 kV transmission lines should not be billed to just KSEBL and should be included in PoC mechanism from 2011. The Petitioner has submitted that the instant transmission lines are utilised only by KSEB and hence they will not be added to the basic network to be included under the PoC mechanism.

108. We are of the view that the sole beneficiary of the transmission system is KSEB and therefore, the transmission charges of the instant transmission system shall be billed bilaterally and shall not be recovered from the common pool. TANGEDCO has raised certain issues regarding sharing of transmission charges and they are not relevant in the instant case and hence they are not considered.

109. To summarise:

a. The revised transmission charges approved for the transmission assets for 2001-04 tariff period in terms of the APTEL's judgments are as follows:

Particulars	(₹ in lakh)		
	2001-02	2002-03	2003-04
Asset – a	1673.66	1655.62	2053.44
Asset – b	1155.21	1142.37	1423.24

b. The revised annual fixed charges approved in respect of the transmission assets for 2004-09 tariff period in terms of the APTEL's judgments are as follows:

(₹ in lakh)

Particulars	2004-05	2005-06	2006-07	1.4.2007 to 31.8.2007	1.9.2007 to 31.3.2008	2008-09
Asset – a	1419.74	1669.25	1948.33	813.04	379.77	617.87
Asset – b	1043.29	1261.39	1366.97	568.67	315.99	518.32

c. The consequential revision of annual fixed charges approved in respect of the combined asset for 2009-14 tariff period are as follows:

(₹ in lakh)

Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Annual Fixed Charges	1557.13	1530.39	1489.54	857.87	861.82

d. The trued-up Annual Fixed Charges approved for the combined asset for the 2014-19 tariff period are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Fixed Charges	873.22	891.34	894.28	888.64	785.10

e. The Annual Fixed Charges allowed for the combined asset for the 2019-24 tariff period are as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Fixed Charges	680.78	682.40	717.27	771.32	797.84

110. Annexure-I and Annexure-II given hereinafter form part of the order which provide details of annual depreciation during 2014-19 and 2019-24 tariff period.

111. This order disposes of Petition No. 413/TT/2020 in terms of the above discussions and findings.

sd/-  
(P. K. Singh)  
Member

sd/-  
(Arun Goyal)  
Member

sd/-  
(I.S. Jha)  
Member

sd/-  
(P. K. Pujari)  
Chairperson



## Annexure-I

	Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2014-19 (₹ in lakh)	Decapitalisation 2018-19 (₹ in lakh)	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation	Annual Depreciation as per Regulations (₹ in lakh)				
							2014-15	2015-16	2016-17	2017-18	2018-19
<b>Asset</b>	Land	58.65	0.00	0.00	58.65		Spreading				
	Building	15.24	0.00	0.00	15.24						
	Transmission Line	10943.22	381.91	0.00	11325.13						
	Sub Station	1793.80	0.00	318.93	1474.87						
	PLCC	88.79	0.00	0.00	88.79						
	<b>TOTAL</b>	<b>12899.70</b>	<b>381.91</b>	<b>318.93</b>	<b>12962.68</b>						
				<b>Average Gross Block (₹ in lakh)</b>	13009.26	13167.24	13241.56	13274.53	13122.15		
				<b>Weighted Average Rate of Depreciation (in %)</b>	0.68	0.73	0.75	0.76	0.71		



**Annexure-II**

Asset	Particulars	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE 2019-24 (₹ in lakh)	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation	Annual Depreciation as per Regulations (₹ in lakh)				
						2019-20	2020-21	2021-22	2022-23	2023-24
	Land	58.65	0.00	58.65	Spreading					
	Building	15.24	0.00	15.24						
	Transmission Line	11325.13	838.43	12163.56						
	Sub Station	1474.87	0.00	1474.87						
	PLCC	88.79	0.00	88.79						
	<b>TOTAL</b>	<b>12962.68</b>	<b>838.43</b>	<b>13801.11</b>		<b>101.32</b>	<b>103.81</b>	<b>118.59</b>	<b>142.17</b>	<b>156.14</b>
				<b>Average Gross Block (₹ in lakh)</b>		12997.68	13036.43	13249.93	13564.34	13735.05
				<b>Weighted Average Rate of Depreciation (in %)</b>		0.78	0.796	0.895	1.048	1.137

