

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 243/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: 21.01.2022

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 2001-04, 2004-09 and 2009-14 periods and truing-up of transmission tariff of 2014-19 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 in respect of assets under Transmission System associated with NLC Stage-I” 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 – 600002.

.....Respondent(s)

For Petitioner : 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

ORDER

The instant petition has been filed by the Petitioner, Power Grid Corporation of India Limited, a deemed transmission licensee, for revision of transmission tariff of 2001-04, 2004-09 and 2009-14 tariff periods; for truing up of transmission tariff of 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 assets under NLC Stage-I Transmission System (hereinafter referred to as “the transmission asset”) in the Southern Region.



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

"1) Approve the revised Transmission Tariff for 2001-04 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 allow 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 adjust the cumulative depreciation by taking into account the depreciation recovered in tariff by the decapitalized asset during its useful life and to recover the unrecovered depreciation in case of Asset-I separately on account of de-capitalization.

7) Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 10.5 above.

8) Allow the petitioner to claim the capital spares at the end of tariff block as per actual.

9) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.

and pass such other relief as Hon'ble Commission deems fit and appropriate under the circumstances of the case and in the interest of justice."



Background of the Case

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

a) The techno-economic clearance in respect of the transmission asset was accorded by the Central Electricity Authority at an estimated cost of ₹7784 lakh.

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

Sl. No.	Name of the transmission line	COD
1.	400 kV S/C Neyveli-Salem Transmission Line	7.5.1988
2.	400 kV S/C Neyveli-Madras Transmission Line	17.7.1987
3.	220 kV Neyveli-Pondicherry Transmission Line	12.4.1987

c) The entire scope of the work is covered in the instant petition.

d) The transmission tariff in respect of the transmission asset for the period from 1.4.2001 to 31.3.2004 was approved vide order dated 30.6.2003 in Petition No. 45/2002 and it was revised vide order dated 8.6.2004 in Petition No. 45/2002.

e) The transmission tariff in respect of the transmission asset for the period from 1.4.2004 to 31.3.2009 was approved vide order dated 23.11.2005 in Petition No.134/2004 and it was revised vide order dated 24.1.2008 in Petition No. 134/2004. The transmission tariff in respect of the transmission asset was further revised for the period 2008-09 on account of Additional Capital Expenditure (“ACE”) and de-capitalization vide order dated 18.10.2010 in Petition No. 55/2010.

f) The transmission tariff of the transmission asset for 2009-14 period was allowed vide order dated 13.5.2011 in Petition No. 92/2009. Transmission tariff of the transmission asset 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 29.1.2016 in Petition No. 204/TT/2014.



g) The Petitioner has sought revision of transmission tariff approved for 2001-04 and 2004-09 tariff periods on account of change in Interest on Loan (“IoL”) and Interest on Working Capital (“IWC”) to the extent of revision in IoL and in Maintenance Spares in terms of the judgments of the Appellate Tribunal for Electricity (“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.

h) 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 the APTEL and its decisions are as given in the following table:

Sl. No.	Issue	APTEL’s decisions/ directions
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. The Commission is required to recalculate the loan outstanding as on 31.3.2004 based on loan repayment on normative basis.
3(a)	O&M Expenses: Inadequate provision of employee costs as part of O&M Expenses due to variation in salary and wages	The Commission’s view upheld.
3(b)	O&M Expenses: Non-inclusion of incentives and ex-gratia payment to employees	The Commission’s view upheld.
4	Cost of spares for calculation of working capital	The Commission’s view upheld.

i) The APTEL in its judgment dated 13.6.2007 in Appeal No. 139 of 2006 and batch cases pertaining to generating stations of NTPC had considered 9



(nine) issues. The issues considered and the decisions of the APTEL are given in the following table:

Sl. No.	Issue	APTEL's decisions/ directions
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	The Commission to consider the issue afresh.
III	Treating depreciation available as deemed repayment of loan	The Commission to make a fresh computation of outstanding loan.
IV	Admissibility of depreciation up to 90%	The Commission to consider the issue afresh.
V	Cost of Maintenance Spares	The Commission to consider the issue afresh.
VI	Impact of de-capitalisation of the assets on cumulative repayment of Loan	The cumulative repayment of the loan proportionate to the assets decapitalized required to be reduced. The Commission to act accordingly.
VII	Non-consideration of normative transit loss for coal import.	The 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. The 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. The Commission shall re-compute the interest accordingly.

j) 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.

k) Based on the APTEL's judgments dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters and 13.6.2007 in Appeal No. 139 of 2007 and batch cases, the Petitioner had sought revision of tariff of its transmission assets for 2001-04 and 2004-09 tariff periods in Petition No. 121/2007. The



Commission after taking into consideration the pendency of Appeals before the Hon'ble Supreme Court adjourned the said petition *sine die* and directed that the same be revived after the disposal of Civil Appeals by the Hon'ble Supreme Court.

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

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

n) The instant petition was heard on 3.8.2021 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 have been indicated.

4. The Respondents are the distribution licensees, transmission utilities and power departments which 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 also been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers. Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO), Respondent No. 4, has filed its reply vide affidavit dated 25.8.2021



and has raised issues of retrospective revision of tariff, unrecovered depreciation and Sharing of Transmission Charges. In response, the Petitioner has filed rejoinder vide affidavit dated 7.9.2021.

Re: Interest on Loan (“IoL”)

6. The APTEL while dealing with the issue of computation of IoL, in 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 its judgment dated 14.11.2006 had set aside the Commission’s methodology of computation of loan on the actual repayment basis or normative repayment whichever is higher and held that the Commission is required to adopt normative debt repayment methodology for working out IoL liability order for the period 1.4.1998 to 31.3.2001. In view of the above, the interest allowed for 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 batch matters held that additional capitalisation after COD 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 2001-04 and 2004-09 period are also required to be revised taking into consideration the ACE after COD.

Re: Depreciation

8. As regards depreciation, the APTEL in its judgement dated 13.6.2007 in Appeal No. 139 of 2006 and batch cases 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 in respect of the transmission asset for 2001-04 and 2004-09 tariff periods is revised in the instant order.

9. The revision of transmission tariff allowed for 2001-04 and 2004-09 tariff periods necessitates the revision of transmission tariff allowed for 2009-14 tariff period which is also being done in the present order. The implementation of the directions of the APTEL vide judgments 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 in the case of Petitioner was kept pending awaiting the outcome of the Civil Appeals filed before the Hon'ble Supreme Court. Taking into consideration the facts of the case and keeping in view the interest of the consumers, we are of the view that the beneficiaries should not be burdened with the carrying cost for the difference in the tariff allowed earlier and allowed in the instant order for 2001-04, 2004-09 and 2009-14 tariff periods. Therefore, we direct that the Petitioner will neither claim nor pay any carrying cost from or to the beneficiaries for the difference, if any, in the tariff allowed earlier and the tariff being allowed in the instant order. Further, the said difference in tariff shall be recovered/ paid over a period of six months from the date of issue of this order.

10. The hearing in this matter was held on 3.8.2021 through video conference and order was reserved.

11. Having heard the representatives of the Petitioner, learned counsel for TANGEDCO and after perusal of the material on record, we proceed to dispose of the petition.



12. This order is issued considering the submissions made by the Petitioner in the petition vide affidavits dated 16.1.2020, 1.7.2021 and 30.7.2021, TANGEDCO's reply filed vide affidavit dated 25.8.2021 and the Petitioner's rejoinder affidavit dated 7.9.2021.

13. We have noticed that TANGEDCO is raising the same issue of retrospective revision of tariff in other petitions as well despite clear findings of the Commission. The contentions of TANGEDCO with regard to retrospective revision of tariff have been rejected by the Commission in various petitions including vide order dated 8.11.2021 in Petition No. 141/TT/2020. As TANGEDCO has not challenged the findings of the Commission, hence the same have attained finality. Accordingly, the issue of retrospective revision of tariff as raised by TANGEDCO in the present petition is rejected.

14. The issues which are specific to the instant petition and not dealt by the Commission earlier, they have been considered in the relevant paragraphs of this order.

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

2001-04 Tariff Period

15. The Commission vide orders dated 30.6.2003 and 8.6.2004 in Petition No. 45/2002 had approved transmission charges in respect of the transmission asset from 1.4.2001 to 31.3.2004. The transmission charges approved for 2001-04 tariff period vide orders dated 30.6.2003 and 8.6.2004 in Petition No. 45/2002 are as follows:



(₹ in lakh)			
Particulars	2001-02	2002-03	2003-04
Depreciation	231.32	231.32	101.23
Return on Equity	384.89	384.89	384.89
O&M Expenses	244.79	259.48	275.05
Advance against Depreciation	0.00	0.00	0.00
Interest on Loan	43.54	9.26	0.00
Interest on Working Capital	31.82	32.28	30.77
Total	936.36	917.23	791.94

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

(₹ in lakh)			
Particulars	2001-02	2002-03	2003-04
Depreciation	231.32	231.32	101.23
Return on Equity	384.89	384.89	384.89
O&M Expenses	244.79	259.48	275.05
Advance against Depreciation	0.00	0.00	0.00
Interest on Loan	43.54	9.26	0.00
Interest on Working Capital	31.82	32.28	30.76
Total	936.36	917.23	791.93

17. We have considered the Petitioner's claim. The tariff is revised in respect of the transmission asset on the basis of the following:

- a) Admitted capital cost of ₹7994.16 lakh as on 1.4.2001 in respect of the transmission asset.
- b) Weighted Average Rate of Interest ("WAROI") on actual loan adopted vide orders dated 30.6.2003 and 8.6.2004 in Petition No.45/2002; and
- c) Weighted Average Rate of Depreciation ("WAROD"), Rate of Interest for Working Capital and O&M Expenses as per orders dated 30.6.2003 and 8.6.2004 in Petition No. 45/2002.

18. In view of above, the revised transmission charges allowed in respect of the transmission asset for 2001-04 period are as follows:



Particulars	(₹ in lakh)		
	2001-02	2002-03	2003-04
Depreciation	231.32	231.32	101.23
Return on Equity	384.89	384.89	384.89
O&M Expenses	244.79	259.48	275.05
Advance against Depreciation	0.00	0.00	0.00
Interest on Loan	43.53	9.26	0.00
Interest on Working Capital	31.82	32.29	30.76
Total	936.35	917.24	791.94

19. The Annual Fixed Charges (“AFC”) allowed for 2001-04 tariff period vide orders dated 30.6.2003 and 8.6.2004 in Petition No. 45/2002, the revised AFC claimed in the instant petition and AFC allowed in the instant order are as follows:

Particulars	(₹ in lakh)		
	2001-02	2002-03	2003-04
AFC approved vide orders dated 30.6.2003 and 8.6.2004 in Petition No. 45/2002.	936.36	917.23	791.94
AFC claimed by the Petitioner in the instant petition.	936.35	917.23	791.93
AFC allowed in the instant order.	936.35	917.24	791.94

2004-09 Tariff Period

20. The Commission approved transmission charges for the period from 1.4.2004 to 31.3.2009 vide orders dated 23.11.2005 and 24.1.2008 in Petition No. 134/2004. The transmission tariff was further revised for 2008-09 on account of ACE and de-capitalization vide order dated 18.10.2010 in Petition No. 55/2010. The approved transmission charges for 2004-09 period are as follows:

Particulars	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	90.91	90.91	90.91	90.91	118.78
Return on Equity	559.59	559.59	559.59	559.59	563.44
O&M Expenses	151.59	157.63	164.17	170.37	177.53
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.44
Interest on Working Capital	36.41	37.84	39.35	40.94	43.20
Total	838.51	845.97	854.03	861.82	903.40

21. The Petitioner has claimed the following revised transmission charges in respect of the transmission asset for 2004-09 period in the instant petition:



(₹ in lakh)					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	90.91	90.91	90.91	90.91	118.78
Return on Equity	559.59	559.59	559.59	559.59	563.44
O&M Expenses	151.59	157.63	164.17	170.37	177.53
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	5.90
Interest on Working Capital	36.41	37.84	39.35	40.94	43.29
Total	838.50	845.97	854.02	861.81	908.95

22. We have considered the Petitioner's claim. The tariff is revised in respect of the transmission asset on the basis of the following:

a) Admitted capital cost of ₹7994.16 lakh as on 1.4.2004 in respect of the transmission asset.

b) Net ACE of ₹183.34 lakh for 2008-09 period in respect of the transmission asset has been approved vide order dated 18.10.2020 in Petition No. 55/2010.

c) WAROI on actual loan is adopted vide orders dated 23.11.2005 and 24.1.2008 in Petition No. 134/2004 and vide order dated 18.10.2010 in Petition No. 55/2010; and

d) WAROD, Rate of Interest for Working Capital and O&M Expenses as per orders dated 23.11.2005 and 24.1.2008 in Petition No. 134/2004 and vide order dated 18.10.2010 in Petition No. 55/2010.

23. In view of above, the revised transmission charges allowed in respect of the transmission asset for 2004-09 tariff period are as follows:

(₹ in lakh)					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	90.91	90.91	90.91	90.91	118.78
Return on Equity	559.59	559.59	559.59	559.59	563.44
O&M Expenses	151.59	157.63	164.17	170.37	177.53
Advance against Depreciation	0.00	0.00	0.00	0.00	0.00
Interest on Loan	0.00	0.00	0.00	0.00	0.44
Interest on Working Capital	36.41	37.84	39.36	40.94	43.20
Total	838.51	845.97	854.03	861.82	903.39



24. AFC allowed for 2004-09 tariff period vide orders dated 23.11.2005 and 24.1.2008 in Petition No. 134/2004 and vide order dated 18.10.2010 in Petition No. 55/2010, the revised AFC claimed in the instant petition and AFC allowed in the instant order are as follows:

Particulars	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
AFC approved vide orders dated 23.11.2005 and 24.1.2008 in Petition No. 134/2004 and vide order dated 18.10.2010 in Petition No. 55/2010.	838.50	845.97	854.02	861.81	903.39
AFC claimed by the Petitioner in the instant petition.	838.50	845.97	854.02	861.81	908.95
AFC allowed in the instant order.	838.51	845.97	854.03	861.82	903.39

2009-14 Tariff Period

25. The Commission vide order dated 13.5.2011 in Petition No. 92/2009 approved the tariff in respect of the transmission asset for 2009-14 period and vide order dated 29.1.2016 in Petition No. 204/TT/2014 trued up the tariff allowed for 2009-14 period and the same is as follows:

Particulars	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	129.01	131.20	131.20	131.20	141.64
Interest on Loan	0.44	0.00	0.00	0.00	0.00
Return on Equity	757.75	786.95	787.72	787.72	801.29
Interest on Working Capital	30.69	32.02	32.78	33.57	34.89
O&M Expenses	243.85	257.62	272.50	288.17	304.57
Total	1161.74	1207.79	1224.20	1240.65	1282.39

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

Particulars	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	129.01	131.20	131.20	131.20	141.64
Interest on Loan	7.28	1.38	0.00	0.00	0.00
Return on Equity	757.75	786.95	787.72	787.72	801.29
Interest on Working Capital	30.83	32.05	32.78	33.57	34.89
O&M Expenses	243.85	257.62	272.50	288.17	304.57
Total	1168.73	1209.20	1224.20	1240.66	1282.39



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

a) Admitted capital cost of ₹8177.50 lakh for transmission asset as on 1.4.2009;

b) ACE of ₹43.82 lakh for 2009-10 period and ACE of ₹139.22 lakh for 2013-14 period in respect of the transmission asset was approved vide order dated 29.1.2016 in Petition No. 204/TT/2014.

c) WAROI on actual loan adopted vide order dated 29.1.2016 in Petition No. 204/TT/2004, and

d) WAROD, Rate of Interest for Working Capital and O&M Expenses as per order dated 29.1.2016 in Petition No. 204/TT/2014.

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

Particulars	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	129.01	131.20	131.20	131.20	141.64
Interest on Loan	0.44	0.00	0.00	0.00	0.00
Return on equity	757.75	786.95	787.72	787.72	801.29
Interest on Working Capital	30.69	32.02	32.78	33.57	34.89
O & M Expenses	243.85	257.62	272.50	288.17	304.57
Total	1161.74	1207.79	1224.20	1240.66	1282.38

29. AFC allowed for 2009-14 tariff period vide order dated 29.1.2016 in Petition No. 204/TT/2014, the revised AFC claimed in the instant petition and AFC allowed in the instant order are as follows:

Particulars	(₹ in lakh)				
	2009-10	2010-11	2011-12	2012-13	2013-14
AFC approved vide order dated 29.1.2016 in Petition No. 204/TT/2014.	1161.74	1207.79	1224.20	1240.65	1282.39
AFC claimed by the Petitioner in the instant petition.	1168.73	1209.20	1224.20	1240.66	1282.39
AFC allowed in the instant order.	1161.74	1207.79	1224.20	1240.66	1282.38



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

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	170.37	203.34	205.65	207.23	207.19
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	810.03	817.38	816.75	816.96	819.15
Interest on Working Capital	37.89	39.30	39.92	40.49	41.11
O&M Expenses	277.52	286.96	296.54	306.25	316.44
Total	1295.81	1346.98	1358.86	1370.93	1383.89

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	23.13	23.91	24.71	25.52	26.37
Maintenance Spares	41.63	43.04	44.48	45.94	47.47
Receivables	215.92	224.14	226.48	228.49	230.65
Total	280.68	291.09	295.67	299.95	304.49
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	37.89	39.30	39.92	40.49	41.11

Capital Cost as on 1.4.2014

32. The capital cost of the transmission asset has been calculated in accordance with Regulations 9(3) and 9(6) of the 2014 Tariff Regulations. The Commission vide order dated 29.1.2016 in Petition No. 204/TT/2014 admitted the capital cost of ₹8360.54 lakh as on 31.3.2014 for the transmission asset.

33. The Petitioner projected ACE of ₹316.80 lakh for 2014-15 and de-capitalisation of ₹70.77 lakh for 2014-15 at the time of determination of tariff for 2014-19 period and the same was allowed. Accordingly, capital cost considered vide order dated 29.1.2016 in Petition No. 204/TT/2014 for tariff computation is as follows:



Capital cost admitted as on 31.3.2014	ACE during 2014-19		Total cost as on 31.3.2019
	ACE/ De-capitalisation	2014-15	
8360.54	ACE	316.80	8606.57
	De-capitalisation	70.77	
	Net ACE	246.03	

34. The Petitioner vide Auditor's Certificate dated 25.12.2019 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 transmission asset are 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	
	ACE	De-capitalisation	ACE	De-capitalisation	ACE	
8360.54	162.16	15.08	78.70	55.68	6.85	8537.49

36. The capital cost allowed by the Commission as on 1.4.2014 vide order dated 29.1.2016 in Petition No. 204/TT/2014 in respect of the transmission 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 and de-capitalisation during 2014-19 tariff period as claimed by the Petitioner in respect of the transmission asset are as follows:

ACE and De-capitalisation (as per Auditor's Certificate)				
2014-15		2015-16		2016-17
ACE	De-capitalisation	ACE	De-capitalisation	ACE
162.16	15.08	78.70	55.68	6.85



38. The Commission vide order dated 29.1.2016 in Petition No. 204/TT/2014 held as follows:

“54. The net capital cost of the transmission asset including additional capitalisation and de-capitalisation during 2014-19 works out to ₹246.03 lakh. The Commission has considered the petitioner’s submission and as the additional capitalisation proposed is mainly towards the replacement of old equipment due to obsolescence of technology, the Commission allows the additional capitalisation of ₹316.80 lakh and de-capitalisation of ₹70.77 lakh for 2014-15 as claimed by the petitioner in accordance with Clause 3(ix) of Regulation 14 of the 2014 Tariff Regulations. The additional capitalisation for tariff period 2014-19 shall be finally approved after the detailed scrutiny of additional capitalisation in true up petition.”

39. The Petitioner has submitted that the Commission vide order dated 29.1.2016 in Petition No. 204/TT/2014 has approved net ACE of ₹246.03 lakh on account of replacement of problematic/ defective equipment which are completing 25 years of service during 2014-19 tariff period for efficient and secure operation of the transmission system. As against the approved net ACE of ₹246.03 lakh, the actual net ACE claimed by the Petitioner in the instant petition is ₹176.95 lakh for 2014-19 tariff period. The Petitioner has claimed ACE for 2014-19 tariff period under Regulation 14(3)(vii) and Regulation 14(3)(ix) of the 2014 Tariff Regulations. The details submitted as per Form-10B are as follows:

Year of decapitalisation	Work/ Equipment proposed to be decapitalised	Year of capitalisation of asset/ equipment being decapitalised	Original book value of the asset being decapitalised (₹ in lakh)	Cumulative depreciation corresponding to decapitalisation (₹ in lakh)	Cumulative repayment of loan corresponding to decapitalisation (₹ in lakh)
2014-15	Sub-station Equipment	1987-88	15.08	13.26	7.54
2015-16	Sub-station Equipment	1987-88	55.68	47.96	27.84

40. We have considered the submissions of the Petitioner. ACE claimed is towards replacement of problematic/ defective equipment and the same is allowed under Regulation 14(3)(vii) and Regulation 14(3)(ix) of the 2014 Tariff Regulations. The total capital cost allowed as on 31.3.2019 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	
	ACE	De-Capitalisation	ACE	De-Capitalisation	ACE	
8360.54	162.16	15.08	78.70	55.68	6.85	8537.49

Debt-Equity Ratio

41. The Petitioner has claimed debt-equity ratio as on 31.3.2014 approved by the Commission vide order dated 29.1.2016 in Petition No. 204/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	4253.54	50.88
Equity	4107.00	49.12
Total	8360.54	100.00

42. 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.

43. 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 tariff for 2014-19 tariff period is as follows:

Debt-Equity for Capital Cost as on 1.4.2014

Particulars	Amount (₹ in lakh)	(in %)
Debt	4253.54	50.88
Equity	4107.00	49.12
Total	8360.54	100.00



Debt-Equity for ACE and De-capitalisation during 2014-19

Particulars	ACE		De-capitalisation		ACE		De-capitalisation	
	2014-15	(in %)	2014-15	(in %)*	2015-16	(in %)	2015-16	(in %)*
Debt	113.51	70.00	7.54	50.00	55.09	70.00	27.84	50.00
Equity	48.65	30.00	7.54	50.00	23.61	30.00	27.84	50.00
Total	162.16	100.00	15.08	100.00	78.70	100.00	55.68	100.00

Particulars	ACE	
	2016-17	(in %)
Debt	4.80	70.00
Equity	2.06	30.00
Total	6.85	100.00

**as per the Form 10B submitted by the Petitioner*

Debt-Equity for Capital Cost as on 31.3.2019

Particulars	Amount (₹ in lakh)	(in %)
Debt	4391.56*	51.44
Equity	4145.93**	48.56
Total	8537.49	100.00

**Debt as on 1.4.2014 plus debt considered for ACE minus adjustment made in debt on de-capitalisation.*

*** Equity as on 1.4.2014 plus equity considered for ACE minus adjustment made in equity on de-capitalisation.*

Depreciation

44. 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 and trued up depreciation allowed in respect of the transmission asset for 2014-19 tariff period is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	8360.54	8507.62	8530.64	8537.49	8537.49
ACE during 2014-19	162.16	78.70	6.85	0.00	0.00
De-capitalisation	15.08	55.68	0.00	0.00	0.00
Closing Gross Block	8507.62	8530.64	8537.49	8537.49	8537.49
Average Gross Block	8434.08	8519.13	8534.07	8537.49	8537.49
Weighted Average Rate of Depreciation (in %)	1.98	2.23	2.46	2.48	2.48
Balance useful life of the asset at the beginning of the year (Year)	5.00	4.00	3.00	2.00	1.00
Lapsed life at the beginning of the year (Year)	27.00	28.00	29.00	30.00	31.00
Aggregated Depreciable Value	7435.87	7512.42	7525.86	7528.94	7528.94
Depreciation during the year	167.41	189.86	210.32	211.87	211.87



Cumulative Depreciation at the end of the year	6752.99	6894.88	7105.21	7317.07	7528.94
Remaining Aggregate Depreciable Value at the end of the year	669.63	569.57	420.65	211.87	0.00

45. The details of depreciation allowed *vide* order dated 29.1.2016 in Petition No. 204/TT/2014, as claimed by Petitioner in the instant petition and trued-up depreciation allowed in respect of the transmission asset in the instant order are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated 29.1.2016 in Petition No. 204/TT/2014.	176.31	203.99	203.99	203.99	203.99
Claimed by the Petitioner in the instant petition.	170.37	203.34	205.65	207.23	207.19
Allowed after true-up in this order.	167.41	189.86	210.32	211.87	211.87

46. The Petitioner has claimed ₹0.32 lakh for the year 2014-15 and ₹2.15 lakh for the year 2015-16 separately towards unrecovered depreciation in respect of the transmission asset on account of de-capitalisation.

47. TANGEDCO has submitted that Regulation 14(4) of the 2014 Tariff Regulations prohibits recovery of the remaining value of the asset which is being de-capitalised from the gross block. TANGEDCO has further submitted that the Petitioner, on one hand, removes de-capitalised asset cost from the gross block and on the other hand, it attempts to recover the unrecovered cost. TANGEDCO has submitted that there is no provision in the 2014 Tariff Regulations to burden the beneficiaries with recovery or adjustment of the unrecovered depreciation after replacement of the asset with new one and adding the cost of the asset to the gross block.

48. In response, the Petitioner has submitted that the assets undergoing replacement have not been fully depreciated. However, taking into consideration the



condition of the equipment and the non-availability of spare parts, it was prudent to replace such old and obsolete equipment in order to maintain grid reliability and security. The Petitioner has further submitted that unrecovered depreciation has been allowed by the Commission for Micro-wave ULDC scheme. Therefore, depreciation claimed may be allowed by the Commission and anything received over and above the limit, the same shall be passed on to the beneficiaries.

49. We have considered the submissions of the Petitioner and TANGEDCO. As per the 2014 Tariff Regulations, there is no provision to recover the unrecovered depreciation on account of de-capitalisation. Therefore, we are not inclined to allow unrecovered depreciation ₹0.32 lakh for the year 2014-15 and ₹2.15 lakh for the year 2015-16 separately as claimed by the Petitioner.

Interest on Loan (“IoL”)

50. The Petitioner has not claimed IoL for 2014-19 tariff period as the entire loan has been repaid. Accordingly, IoL has not been allowed for 2014-19 tariff period.

Return on Equity (“RoE”)

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

Year	Claimed effective tax rate (in %)	Grossed up RoE (in %) [(Base Rate)/(1-t)]
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



52. 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 for the Petitioner which are as follows:

Year	Notified MAT rates (in %) (inclusive of surcharge & cess)	Effective Tax (in %)
2014-15	20.961	20.961
2015-16	21.342	21.342
2016-17	21.342	21.342
2017-18	21.342	21.342
2018-19	21.549	21.549

53. MAT rates considered vide order dated 27.4.2020 in Petition No. 274/TT/2019 are considered for the purpose of grossing up of rate of RoE for truing up of the tariff of 2014-19 period in terms of the provisions of the 2014 Tariff Regulations which are as follows:

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

54. Accordingly, the trued up RoE allowed in respect of the transmission asset is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	4107.00	4148.11	4143.88	4145.93	4145.93
Addition due to ACE	48.65	23.61	2.06	0.00	0.00
De-Capitalisation	7.54	27.84	0.00	0.00	0.00
Closing Equity	4148.11	4143.88	4145.93	4145.93	4145.93
Average Equity	4127.55	4145.99	4144.91	4145.93	4145.93
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT rate for the respective financial year (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax) (in %)	19.610	19.705	19.705	19.705	19.758
Return on Equity (Pre-tax)	809.41	816.97	816.75	816.96	819.15



55. The details of RoE allowed in respect of the transmission asset vide order dated 29.1.2016 in Petition No. 204/TT/2014, as claimed by the Petitioner in the instant petition and true-up RoE allowed in the instant order are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 29.1.2016 in Petition No. 204/TT/2014.	812.62	819.86	819.86	819.86	819.86
Claimed by the Petitioner in the instant petition.	810.03	817.38	816.75	816.96	819.15
Allowed after true-up in this order.	809.41	816.97	816.75	816.96	819.15

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

56. O&M Expenses claimed by the Petitioner are within the norms specified under the 2014 Tariff Regulations. O&M Expenses approved in respect of the transmission asset for 2014-19 tariff period are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station Bays (Numbers)					
400 kV: Sriperumbudur:Neyveli	1	1	1	1	1
400 kV: Salem: Neyveli-1	1	1	1	1	1
Norm (₹ lakh/bay)					
400 kV Bay (AIS)	60.30	62.30	64.37	66.51	68.71
Total Sub-station O&M Expenses (A)	120.60	124.60	128.74	133.02	137.42
Transmission Lines (km)					
Neyveli-Salem-1	174.949	174.949	174.949	174.949	174.949
Neyveli-Madras	181.845	181.845	181.845	181.845	181.845
Neyveli-Pondy	63.232	63.232	63.232	63.232	63.232
Norm (₹ lakh/km)					
S/C (Twin/Triple Conductor)	0.404	0.418	0.432	0.446	0.461
S/C (Single Conductor)	0.202	0.209	0.216	0.223	0.230
Total Transmission Line O&M Expenses (B)	156.92	162.36	167.79	173.23	179.03
Total O&M Expenses (C)=(A+B)	277.52	286.96	296.53	306.25	316.45

57. The details of O&M Expenses allowed in respect of the transmission asset vide order dated 29.1.2016 in Petition No. 204/TT/2014, as claimed by the 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 vide order dated 29.1.2016 in Petition No. 204/TT/2014.	277.52	286.96	296.53	306.25	316.45
Claimed by the Petitioner in the instant petition.	277.52	286.96	296.54	306.25	316.44
Allowed after true-up in this order .	277.52	286.96	296.53	306.25	316.45

Interest on Working Capital (“IWC”)

58. The Petitioner has claimed IWC as per Regulation 28(1)(c) of the 2014 Tariff Regulations. The trued-up IWC allowed in respect of the transmission asset for 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 one Month)	23.13	23.91	24.71	25.52	26.37
Working Capital for Maintenance Spares (15% of O&M Expenses)	41.63	43.04	44.48	45.94	47.47
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	215.36	222.13	227.27	229.28	231.45
Total Working Capital	280.11	289.09	296.46	300.74	305.28
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	37.82	39.03	40.02	40.60	41.21

59. The details of IWC allowed in respect of the transmission asset vide order dated 29.1.2016 in Petition No. 204/TT/2014, as claimed by Petitioner in the instant petition and trued-up IWC allowed in the instant order are as follows:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 29.1.2016 in Petition No. 204/TT/2014.	38.09	39.42	39.95	40.49	41.05
Claimed by the Petitioner in the instant petition.	37.89	39.30	39.92	40.49	41.11
Allowed after true-up in this order.	37.82	39.03	40.02	40.60	41.21



Approved Annual Fixed Charges for 2014-19 Tariff Period

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

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	167.41	189.86	210.32	211.87	211.87
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	809.41	816.97	816.75	816.96	819.15
O&M Expenses	277.52	286.96	296.53	306.25	316.45
Interest on Working Capital	37.82	39.03	40.02	40.60	41.21
Total	1292.15	1332.81	1363.63	1375.67	1388.68

61. The details of Annual Transmission Charges allowed in respect of the transmission asset vide order dated 29.1.2016 in Petition No. 204/TT/2014, as claimed by the Petitioner in the instant petition and approved after truing-up in the instant order are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 29.1.2016 in Petition No. 204/TT/2014.	1304.54	1350.23	1360.33	1370.59	1381.35
Claimed by the Petitioner in the instant petition.	1295.81	1346.98	1358.86	1370.93	1383.89
Allowed after truing -up in this order.	1292.15	1332.81	1363.63	1375.67	1388.68

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD

62. The Petitioner has claimed the following transmission charges in respect of the transmission asset for 2019-24 tariff period:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	0.04	18.67	211.45	391.01	421.42
Interest on Loan	0.01	3.83	24.56	29.03	8.28
Return on Equity	778.70	782.62	799.04	812.31	813.05
Interest on Working Capital	23.06	23.90	27.71	31.16	31.72
O&M Expenses	260.34	269.53	278.92	288.69	298.96
Total	1062.15	1098.55	1341.68	1552.20	1573.43

63. The details of IWC claimed by the Petitioner in respect of the transmission asset for 2019-24 tariff period are as follows:



	(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M expenses	21.70	22.46	23.24	24.06	24.91
Maintenance Spares	39.05	40.43	41.84	43.30	44.84
Receivables	130.59	135.44	164.88	191.23	193.45
Total	191.34	198.33	229.96	258.59	263.20
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	23.06	23.90	27.71	31.16	31.72

Capital Cost

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

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

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

- (a) *The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- (b) *Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*
- (c) *Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*
- (d) *Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*
- (e) *Capitalised initial spares subject to the ceiling rates in accordance with these regulations;*
- (f) *Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;*
- (g) *Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;*
- (h) *Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;*
- (i) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (j) *Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;*
- (k) *Capital expenditure on account of biomass handling equipment and facilities, for co-firing;*
- (l) *Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;*
- (m) *Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;*



- (n) *Expenditure on account of change in law and force majeure events; and*
 - (o) *Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*
- (3) *The Capital cost of an existing project shall include the following:*
- (a) *Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;*
 - (b) *Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;*
 - (c) *Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;*
 - (d) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
 - (e) *Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal 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-capitalization of the concerned assets.

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



- (d) *Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and*
- (e) *Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment.”*

65. The admitted capital cost of ₹8537.49 lakh as on 31.3.2019 in respect of the transmission 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”)

66. Regulation 24 and Regulation 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 assets, the additional capitalization shall be worked out after adjusting the gross fixed assets and cumulative depreciation of the assets replaced on account of de-capitalization.

(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 assets deployed under the original scope of the existing project after cut-off date, the additional capitalization 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 assets 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.”*

67. The Petitioner vide Auditor's Certificate dated 25.12.2019 has projected net ACE of ₹829.26 lakh in respect of the transmission asset after making adjustment of de-capitalisation during 2019-24 tariff period.

68. The Petitioner has submitted that projected ACE during 2019-24 period is for replacement of some of the components/ equipment in the system which have deteriorated due to ageing and may affect the stability and reliability of the Grid in case of sudden failure and are covered under Regulation 25(2) of the 2019 Tariff Regulations. The Petitioner has further submitted that none of the Respondents have objected to the replacement of components/ equipment and as such they may be allowed as claimed. The Petitioner vide Auditor's Certificate dated 25.12.2019 has submitted ACE/ de-capitalization proposed during 2019-24 period as follows:



Particulars	(₹ in lakh)	
	Amount Sub-station	
Proposed ACE in 2019-20	0.41	
Proposed ACE in 2020-21	155.20	
Proposed ACE in 2021-22	867.16	
Proposed ACE in 2022-23	135.66	
Proposed De-capitalisation in 2020-21	9.99	
Proposed De-capitalisation in 2021-22	253.55	
Proposed De-capitalisation in 2022-23	65.62	
NET ACE	829.26	

69. The Petitioner vide affidavit dated 1.7.2021 has submitted that useful life of the transmission asset has been completed on 31.3.2019. Since ACE has been claimed during 2019-24 tariff period on account of replacement of old and obsolete equipment, life of the transmission asset has been extended by 5 years w.e.f. 1.4.2019. The Petitioner has submitted that some problematic equipment like surge arrestor, isolators and CVT are proposed for replacement to ensure system reliability. In addition to the equipment proposed to be replaced, there are many other equipment/ materials like other CT, CB, CVT, earthing system, tower and gantry structures, cables, which play a very important role in operation of any Sub-station. The equipment are replaced based on conditional monitoring. However, balance of the system remains under service for which replacement may be required in near future. The Petitioner has further submitted that the gross block of old equipment, being proposed to be replaced in the instant petition is hardly 10% of the total gross block of the project. However, other equipment of the transmission asset remain the same as commissioned with original project. As only some of the equipment are proposed to be replaced, it is difficult to determine the life extension of entire project including old equipment. The Petitioner has submitted that new equipment can definitely run for more than five years but considering the combination of equipment in which majority of items are old and may require replacement in future, the same



cannot be assessed at this stage. The Petitioner has further submitted that the equipment replaced were in deteriorated condition and that their maintenance is no longer provided by the OEM due to advancement in technology and new design equipment are being used in the transmission system. The Petitioner has further submitted that old and obsolete equipment are prone to safety risk for O&M staff also and, therefore, planned to replace under ACE.

70. The Petitioner vide affidavit dated 30.7.2021 has submitted the details of ACE and de-capitalisation proposed in 2019-24 period which are as follows:

(₹ in lakh)

Sl. No.	Work Description	Unit	Qty	Total Estimate Cost	ACE (as per Auditor's Certificate)				De-capitalization (as per Auditor's Certificate)			
					2020-21	2021-22	2022-23	Total ACE	2020-21	2021-22	2022-23	Total De-cap
1	Replacement of 400 kV old and obsolete BHEL make 400 kV CTs including support structure and MBs at Sriperumbudur & Salem Sub-station			240.45		240.45		240.45		86.46		86.46
a	Sriperumbudur Sub-station	Nos	13	120.22		120.22				38.62		
b	Salem Sub-station	Nos	13	120.22		120.22				47.84		
2	Replacement of old and obsolete "HBB" 400 kV CVTs including support structure and MBs at Sriperumbudur Sub-station	Nos	10	51.62			51.62	51.62			14.57	14.57
3	Replacement of old and obsolete "S&S" make "HCB" type 400 kV isolators (Double earth switch type) at Sriperumbudur & Salem Sub-station			93.76		93.76		93.76		29.11		29.11
a	Sriperumbudur Sub-station	Set	3	46.88		46.88				15.13		
b	Salem Sub-station	Set	3	46.88		46.88				13.99		
4	Replacement of old and obsolete "S&S" make "HCB" type 400 kV isolators (Single earth switch type)			269.96		269.96		269.96		131.01		131.01



Sl. No.	Work Description	Unit	Qty	Total Estimate Cost	ACE (as per Auditor's Certificate)				De-capitalization (as per Auditor's Certificate)				
					2020-21	2021-22	2022-23	Total ACE	2020-21	2021-22	2022-23	Total De-cap	
	at Sriperumbudur & Salem Sub-station.												
a	Sriperumbudur Sub-station	Set	10	134.98		134.98				68.07			
b	Salem Sub-station	Set	10	134.98		134.98				62.94			
5	Replacement of old and obsolete "Elpro" make gapped type 390 kV Surge arrestors at Sriperumbudur & Salem Sub-station			45.15			45.15	45.15				40.26	40.26
a	Sriperumbudur Sub-station	Nos	7	22.58			22.58					26.60	
b	Salem Sub-station	Nos	7	22.58			22.58					13.66	
6	Replacement of old and obsolete station illumination system (switchyard lighting, office lighting & outdoor equipment lighting system with energy efficient lighting system including cables at Sriperumbudur Sub-station	Set	2	102.13	102.13			102.13	1.50				1.50
7	Replacement of old and obsolete High Impedance "static" type 400 kV Bus Bar-I & II protection relays at Sriperumbudur & Salem Sub-station			262.99		262.99		262.99		6.97			6.97
a	Sriperumbudur Sub-station	Set	1	131.49		131.49				3.49			
b	Salem Sub-station	Set	1	131.49		131.49				3.49			
8	Replacement of old & obsolete Electro mechanical type/Static type reactor protection relays			53.07	53.07			53.07	8.49				8.49
a	Sriperumbudur Sub-station	Set	2	26.53	26.53				4.24				
b	Salem Sub-station	Set	2	26.53	26.53				4.24				
9	Replacement of old & obsolete Electro mechanical type line auto reclosure relays and master trip relays			38.89			38.89	38.89				10.79	10.79
a	Sriperumbudur Sub-station			19.44			19.44					5.39	



Sl. No.	Work Description	Unit	Qty	Total Estimate Cost	ACE (as per Auditor's Certificate)				De-capitalization (as per Auditor's Certificate)			
					2020-21	2021-22	2022-23	Total ACE	2020-21	2021-22	2022-23	Total De-cap
b	Salem Sub-station			19.44			19.44				5.39	
	Grand Total			1158.01	155.20	867.15	135.66	1158.01	9.99	253.55	65.62	329.16

71. We have considered the submissions of the Petitioner. The proposed ACE is towards replacement of surge arrestor, Isolators and CVT. These items are of critical nature and their failure may affect the stability and reliability of the grid. As such, the replacement of these obsolete equipment and consequent ACE is approved, subject to true-up on actual basis. However, it is observed that the Petitioner has not submitted the OEM certificate in respect of the Sub-station equipment which is sought to be replaced during 2019-24 tariff period. The Petitioner is directed to submit OEM Certificate in respect of the Sub-station equipment which is sought to be replaced and actual cost details of the replaced equipment and cost details of the new equipment sub-station wise at the time of truing up. The details of ACE allowed in respect of the transmission asset are as follows:

(₹ in lakh)

Sl. No.	Work Description	Unit	Qty	Total Estimate Cost	ACE (as per Auditor's Certificate)				De-capitalization (as per Auditor's Certificate)			
					2020-21	2021-22	2022-23	Total ACE	2020-21	2021-22	2022-23	Total De-cap
1	Replacement of 400 kV old and obsolete BHEL make 400 kV CTs including support structure and MBs at Sriperumbudur & Salem Sub-station.			240.45		240.45		240.45		86.46		86.46
a	Sriperumbudur Sub-station	Nos	13	120.22		120.22				38.62		
b	Salem Sub-station.	Nos	13	120.22		120.22				47.84		
2	Replacement of old and obsolete "HBB" 400kV CVTs including support structure and MBs at Sriperumbudur Sub-station.	Nos	10	51.62			51.62	51.62			14.57	14.57



Sl. No.	Work Description	Unit	Qty	Total Estimate Cost	ACE (as per Auditor's Certificate)				De-capitalization (as per Auditor's Certificate)			
					2020-21	2021-22	2022-23	Total ACE	2020-21	2021-22	2022-23	Total De-cap
3	Replacement of old and obsolete "S&S" make "HCB" type 400 kV isolators (Double earth switch type) at Sriperumbudur & Salem Sub-station.			93.76		93.76		93.76		29.11		29.11
a	Sriperumbudur Sub-station.	Set	3	46.88		46.88				15.13		
b	Salem Sub-station.	Set	3	46.88		46.88				13.99		
4	Replacement of old and obsolete "S&S" make "HCB" type 400 kV isolators (Single earth switch type) at Sriperumbudur & Salem Sub-station.			269.96		269.96		269.96		131.01		131.01
a	Sriperumbudur Sub-station	Set	10	134.98		134.98				68.07		
b	Salem Sub-station	Set	10	134.98		134.98				62.94		
5	Replacement of old and obsolete "Elpro" make gapped type 390 kV Surge arrestors at Sriperumbudur & Salem Sub-station			45.15			45.15	45.15			40.26	40.26
a	Sriperumbudur Sub-station	Nos	7	22.58			22.58				26.60	
b	Salem Sub-station	Nos	7	22.58			22.58				13.66	
6	Replacement of old and obsolete High Impedance "static" type 400 kV Bus Bar-I & II protection relays at Sriperumbudur & Salem Sub-station			262.99		262.99		262.99		6.97		6.97
a	Sriperumbudur Sub-station	Set	1	131.49		131.49				3.49		
b	Salem Sub-station	Set	1	131.49		131.49				3.49		
7	Replacement of			53.07	53.07			53.07	8.49			8.49



Sl. No.	Work Description	Unit	Qty	Total Estimate Cost	ACE (as per Auditor's Certificate)				De-capitalization (as per Auditor's Certificate)			
					2020-21	2021-22	2022-23	Total ACE	2020-21	2021-22	2022-23	Total De-cap
	old & obsolete Electro mechanical type/Static type reactor protection relays											
a	Sriperumbudur Sub-station	Set	2	26.53	26.53				4.24			
b	Salem Sub-station	Set	2	26.53	26.53				4.24			
8	Replacement of old & obsolete Electro-mechanical type line auto reclosure relays and master trip relays			38.89			38.89	38.89			10.79	10.79
a	Sriperumbudur Sub-station			19.44			19.44				5.39	
b	Salem Sub-station			19.44			19.44				5.39	
	Grand Total			1055.88	53.07	867.15	135.66	1055.88	8.49	253.55	65.62	327.66

72. ACE and de-capitalisation allowed in respect of the transmission asset for 2019-24 tariff period is as follows:

(₹ in lakh)					
Sl. No.	Particulars	2019-20	2020-21	2021-22	2022-23
(1)	ACE	0.41	53.07	867.16	135.66
(2)	Decapitalization	0.00	8.49	253.55	65.62
(3)	Net ACE (1)-(2)	0.41	44.58	613.60	70.04

73. Accordingly, capital cost of the transmission asset as on 31.3.2024 is approved as follows:

(₹ in lakh)					
Capital cost allowed as on 1.4.2019	ACE				Capital cost as on 31.3.2024
	2019-20	2020-21	2021-22	2022-23	
8537.49	0.41	44.58	613.60	70.04	9266.13

Adjustments to Equity

74. COD of the transmission asset is 21.4.1987. Debt-equity ratio as on COD is 50:50. The Weighted Average Life ("WAL") of the transmission asset is determined as



32 years. Thus, the transmission asset has completed its useful life as on 31.3.2019. First proviso to Regulation 18(3) of the 2019 Tariff Regulations provides that in case of a transmission system including communication system which has completed its useful life on or after 1.4.2019, and if the actual equity actually deployed as on 1.4.2019 is more than 30% of the capital cost, then the equity shall be restricted to 30% of the total equity deployed. Regulation 18(3) of the 2019 Tariff Regulations is extracted as follows:

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

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

75. Debt-equity ratio as on 31.3.2019 is 50:50 i.e., the equity deployed is more than 30%. Therefore, as per the first proviso of Regulation 18(3) of the 2019 Tariff Regulations, equity from 1.4.2019 onwards has been restricted to 30%. The loan has already been repaid prior to 1.4.2019. Accordingly, the capital cost allowed for 2019-24 tariff period in respect of the transmission asset is as follows:

Particulars	(₹ in lakh)
	Amount
Closing equity as on 31.3.2019* (a)	4145.93
Equity in excess of 30% (b)	1584.69
Equity admissible as on 1.4.2019** (a)-(b)	2561.25

*Represents 48.56% of Gross Block of ₹8537.49 lakh

**Represents 30% of Gross Block of ₹8537.49 lakh

Debt-Equity Ratio

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

“18. Debt-Equity Ratio: 1) *For new projects, the debt-equity ratio of 70:30 as on date of commercial operation shall be considered. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:*



Provided that:

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

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

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

(3). In case of the generating station and the transmission 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.”



77. The transmission asset has completed its useful life during 2018-19 i.e. as on 31.3.2019 and de-capitalisation of the elements of transmission asset is proposed after completion of useful life. In accordance with Regulation 18 of the 2019 Tariff Regulations, ACE for 2019-24 period is allowed in the ratio of 70:30. As decided above, the equity from 2019-20 onwards is restricted to 30%. The details of the debt-equity considered in respect of the transmission asset for the purpose of computation of tariff for 2019-24 tariff period is as follows:

Debt-Equity for Gross Capital Cost as on 1.4.2019

Particulars	Amount (₹ in lakh) (A)	(in %)
Debt	4391.56	51.44
Equity	2561.25	30.00
Total	6952.80	81.44

Debt-Equity for ACE and De-capitalisation during 2019-24

Particulars	ACE (B)		ACE (C)		De-capitalization (D)	
	2019-20	(in %)	2020-21	(in %)	2020-21	(in %)
Debt	0.29	70.00	37.15	70.00	5.94	70.00
Equity	0.12	30.00	15.92	30.00	2.55	30.00
Total	0.41	100.00	53.07	100.00	8.49	100.00

Particulars	ACE (E)		De-capitalization (F)		ACE (G)		De-capitalization (H)	
	2021-22	(in %)	2021-22	(in %)	2022-23	(in %)	2022-23	(in %)
Debt	607.01	70.00	177.49	70.00	94.96	70.00	45.93	70.00
Equity	260.15	30.00	76.07	30.00	40.70	30.00	19.69	30.00
Total	867.16	100.00	253.55	100.00	135.66	100.00	65.62	100.00

Debt-Equity for Gross Capital Cost as on 31.3.2024

Particulars	Amount (₹ in lakh) (I)=(A)+(B)+(C)-(D)+(E)-(F)+(G)-(H)
Debt	4901.60
Equity	2779.84
Total	7681.43

Depreciation

78. Regulation 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 upto 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 decapitalized 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 or*
- 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.”*

79. The transmission asset has already completed its useful life before 1.4.2019. Accordingly, no depreciation is allowed on the existing transmission asset. As discussed above, the Petitioner has proposed life extension for the transmission asset by five years. However, no basis has been provided for life extension of only five years. Hence, depreciation for ACE (new additions) claimed for 2019-20 onwards is allowed at normative rate of depreciation as specified in the 2019 Tariff



Regulations. Depreciation allowed in respect of the transmission asset for 2019-24 period is as follows:

(₹ in lakh)					
Existing Assets	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	8537.49	8537.49	8529.00	8275.45	8209.83
Addition during the year 2019-24 due to projected ACE	0.00	0.00	0.00	0.00	0.00
De-capitalisation	0.00	8.49	253.55	65.62	0.00
Closing Gross Block	8537.49	8529.00	8275.45	8209.83	8209.83
Average Gross Block	8537.49	8533.25	8402.23	8242.64	8209.83
Weighted average rate of Depreciation (WAROD) (in %)					
Balance useful life at the beginning of the year (Year)					
Lapsed life at the beginning of the year (Year)					
Depreciable Value	7528.94	7521.30	7300.75	7469.88	7528.94
Cumulative Depreciation at the beginning of the year	7528.94	7528.94	7528.94	7528.94	7528.94
Depreciation adjustment on account of de-capitalisation	0.00	7.64	228.20	59.06	0.00
Net cumulative depreciation after de-capitalisation	7528.94	7521.30	7300.75	7469.88	7528.94
Remaining depreciable value at the beginning of the year					
Depreciation during the year					

(₹ in lakh)					
New Additions	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	0.00	0.41	53.48	920.64	1056.30
Addition during the year	0.41	53.07	867.16	135.66	0.00
Closing Gross Block	0.41	53.48	920.64	1056.30	1056.30
Average Gross Block	0.21	26.95	487.06	988.47	1056.30
WAROD	5.28	5.28	5.28	5.28	5.28
Depreciable Value	0.18	24.25	438.35	889.62	950.67
Cumulative Depreciation at the beginning of the year	0.00	0.01	1.43	27.15	79.34
Depreciation	0.01	1.42	25.72	52.19	55.77
Cumulative Depreciation at the end of the year	0.01	1.43	27.15	79.34	135.11
Remaining Depreciation at the end of the year	0.17	22.82	411.20	810.28	815.56

80. TANGEDCO has submitted that there is no provision in the Regulation to burden the beneficiaries with recovery or adjustment of the unrecovered depreciation after replacement of the asset with new one and adding the cost of the asset to the gross block.



81. In response, the Petitioner has submitted that the assets undergoing replacement are not fully depreciated. However, taking into consideration the condition of the equipment and non-availability of spare parts, it was only prudent to replace such old and obsolete equipment in order to maintain grid reliability and security. Therefore, depreciation claimed may be allowed and anything received over and above the limit shall be passed on to the beneficiaries.

82. We have considered the submissions of the Petitioner and TANGEDCO. As per the 2019 Tariff Regulations, there is no provision to recover unrecovered depreciation on account of decapitalisation. Therefore, we are not inclined to allow the ₹4.34 lakh for the year 2021-22 and ₹1.10 lakh for the year 2022-23 separately as claimed by the Petitioner.

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-capitalization 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. Gross normative loan has already been repaid prior to 1.4.2019 and, therefore, IoL has been considered on ACE (new additions). The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2019. The Petitioner has prayed that change in interest rate due to floating rate of interest applicable, if any, during 2019-24 tariff period may be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of truing up. Therefore, IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed in respect of the transmission asset is as follows:

	(₹ in lakh)				
Existing Assets	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	4391.56	4391.56	4386.57	4259.79	4226.98
Cumulative Repayments up to Previous Year	4391.56	4391.56	4386.57	4259.79	4226.98
Net Loan-Opening	0.00	0.00	0.00	0.00	0.00



Addition due to ACE	0.00	0.00	0.00	0.00	0.00
Adjustment of gross loan pertaining to de-capitalised asset	0.00	4.99	126.78	32.81	0.00
Repayment during the year					
Adjustment of cumulative repayment pertaining to de-capitalised asset	0.00	4.99	126.78	32.81	0.00
Net Loan-Closing	0.00	0.00	0.00	0.00	0.00
Average Loan	0.00	0.00	0.00	0.00	0.00
Weighted Average Rate of Interest on Loan (in %)					
Interest on Loan					

(₹ in lakh)

New Additions	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	0.00	0.29	37.44	644.45	739.41
Cumulative Repayments up to Previous Year	0.00	0.01	1.43	27.15	79.34
Net Loan-Opening	0.00	0.28	36.00	617.30	660.07
Addition due to ACE	0.29	37.15	607.01	94.96	0.00
Repayment during the year	0.01	1.42	25.72	52.19	55.77
Net Loan-Closing	0.28	36.00	617.30	660.07	604.30
Average Loan	0.14	18.14	326.65	638.68	632.18
Weighted Average Rate of Interest on Loan (in %)	8.51	8.46	8.46	8.47	8.48
Interest on Loan	0.01	1.53	27.65	54.12	53.62

Return on Equity ("RoE")

85. Regulation 30 and Regulation 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 cut-off 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 1st 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:

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 MAT rate is applicable to it. As observed above, equity from 2019-20 onwards has been restricted to 30% as per first proviso to Regulation 18(3) of the 2019 Tariff Regulations. MAT rate applicable in 2019-20 has been considered for the purpose of RoE which shall be trued up with actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. RoE allowed in respect of the transmission asset is as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	2561.25	2561.37	2574.74	2758.82	2779.84
Addition due to ACE	0.12	15.92	260.15	40.70	0.00
Decrease due to de-capitalisation during the period	0.00	-2.55	-76.07	-19.69	0.00
Closing Equity	2561.37	2574.74	2758.83	2779.84	2779.84
Average Equity	2561.31	2568.06	2666.79	2769.33	2779.84
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (in %)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (Pre-tax) (in %)	18.782	18.782	18.782	18.782	18.782
Return on Equity (Pre-tax)	481.06	482.33	500.88	520.14	522.11



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

87. Regulation 35(3) and Regulation 35(4) of the 2019 Tariff Regulations specify the norms for O&M Expenses for the transmission project as follows:

“(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
Norms for sub-station Bays (Rs Lakh per bay)					
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
Norms for Transformers (Rs Lakh per MVA)					
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
Norms for AC and HVDC lines (Rs Lakh per km)					
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 with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (Rs. Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500)	1,696	1,756	1,817	1,881	1,947



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
MW)					
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	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.”

88. O&M Expenses claimed by the Petitioner in respect of the transmission asset are as follows:

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
(₹ in lakh)					
Sub-station Bays (Numbers)					
400 kV: Sriperumbudur:Neyveli	1	1	1	1	1
400 kV: Salem: Neyveli-1	1	1	1	1	1
Norm (₹ lakh/bay)					
400 kV Bay (AIS)	32.15	33.28	34.45	35.66	36.91
Total Sub-station O&M Expenses (A)	64.30	66.56	68.90	71.32	73.82
Transmission Lines km)					
Neyveli-Salem-1	174.949	174.949	174.949	174.949	174.949
Neyveli-Madras	181.845	181.845	181.845	181.845	181.845
Neyveli-Pondy	63.232	63.232	63.232	63.232	63.232
Norm (₹ lakh/km)					
S/C (Twin/Triple Conductor)	0.503	0.521	0.539	0.558	0.578
S/C (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Total Transmission Line O&M Expenses (B)	195.40	202.33	209.38	216.73	224.50
Communication System					



PLCC (₹ in lakh)	32	32	32	32	32
Norms (in %)	2	2	2	2	2
Total Communication System	0.64	0.64	0.64	0.64	0.64
Total O&M Expenses (C)=(A+B)	260.34	269.53	278.92	288.69	298.96

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

90. O&M Expenses allowed in respect of the transmission asset are as follows:

	(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station Bays (Numbers)					
400 kV: Sriperumbudur:Neyveli	1	1	1	1	1
400 kV: Salem: Neyveli-1	1	1	1	1	1
Norm (₹ lakh/bay)					
400 kV Bay (AIS)	32.15	33.28	34.45	35.66	36.91
Total Sub-station O&M Expenses (A)	64.30	66.56	68.90	71.32	73.82
Transmission Lines (km)					
Neyveli-Salem-1	174.949	174.949	174.949	174.949	174.949
Neyveli-Madras	181.845	181.845	181.845	181.845	181.845
Neyveli-Pondy	63.232	63.232	63.232	63.232	63.232
Norm (₹ lakh/km)					
S/C (Twin/Triple Conductor)	0.503	0.521	0.539	0.558	0.578
S/C (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Total Transmission Line O&M Expenses (B)	195.40	202.33	209.38	216.73	224.50
Total O&M Expenses (C)=(A+B)	259.70	268.89	278.28	288.05	298.32



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 follows:

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

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

“3. 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 IWC for 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of IWC considered is 12.05% (SBI 1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20. 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21 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 in respect of the transmission asset is 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 one month)	21.64	22.41	23.19	24.00	24.86
Working Capital for Maintenance Spares (15% of O&M Expenses)	38.96	40.33	41.74	43.21	44.75
Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	93.36	95.17	104.84	115.11	116.73
Total Working Capital	153.96	157.91	169.77	182.32	186.34
Rate of Interest of working capital (in %)	12.05	11.25	10.50	10.50	10.50
Interest of working capital	18.55	17.77	17.83	19.14	19.57

Annual Fixed Charges for 2019-24 Tariff Period

93. The computation of various components of AFC in respect of the transmission asset for 2019-24 tariff period is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	0.01	1.42	25.72	52.19	55.77
Interest on Loan	0.01	1.53	27.65	54.12	53.62
Return on Equity	481.06	482.33	500.88	520.14	522.11
O&M Expenses	259.70	268.89	278.28	288.05	298.32
Interest on Working Capital	18.55	17.77	17.83	19.14	19.57
Total	759.34	771.94	850.35	933.64	949.39

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 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 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. We have considered the submissions of the Petitioner. 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

100. 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

101. TANGEDCO has submitted that there is need to split the capital cost including ACE as well as YTC (yearly transmission charges) based on 2010 Sharing Regulations and 2020 Sharing Regulations i.e. upto 31.12.2020 and from 1.1.2021 onwards. This will give correct allocation of the transmission charges as per the 2010 Sharing Regulations and 2020 Sharing Regulations as envisaged under Regulation 43 of the 2014 Tariff Regulations and Regulation 57 of the 2019 Tariff Regulations

102. In response, the Petitioner has submitted that after truing up and determination of transmission tariff, sharing of transmission charges for 2014-19 tariff period and 2019-24 tariff period upto 31.10.2020 shall be done as per the 2010 Sharing Regulations and thereafter from 1.11.2020 onwards it shall be done as per the 2020 Sharing Regulations. The Petitioner has further submitted that tariff determination and sharing of transmission charges are two independent activities and the same cannot be inter-linked. After determination of tariff of the transmission asset, the aspect of YTC bifurcation as contended by TANGEDCO shall be taken care of by the CTU at the time of billing.



103. We have considered the submissions of the Petitioner and TANGEDCO. During 2001-04, 2004-09 and 2009-14 tariff periods (up to 30.6.2011), the transmission charges for inter-State transmission systems were being shared in accordance with the Tariff Regulations for the respective tariff period. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems was governed by the 2010 Sharing Regulations and with effect from 1.11.2020 (after repeal of the 2010 Sharing Regulations), sharing of transmission charges is governed by the 2020 Sharing Regulations. Accordingly, the liabilities of DICs for arrears of transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of respective Tariff Regulations and Sharing Regulations and shall be recovered from the concerned DICs through Bills under Regulation 15(2) (b) of the 2020 Sharing Regulations. Billing, collection and disbursement of the transmission charges for subsequent period shall be recovered in terms of provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

104. To summarise:

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

(₹ in lakh)			
Particulars	2001-02	2002-03	2003-04
AFC	936.35	917.24	791.94

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

(₹ in lakh)					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
AFC	838.51	845.97	854.03	861.82	903.39



c. The consequential revision of AFC approved in respect of the transmission asset for 2009-14 tariff period are as follows:

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
AFC	1161.74	1207.79	1224.20	1240.66	1282.38

d. Trued-up AFC allowed in respect of the transmission asset for 2014-19 tariff period are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
AFC	1292.15	1332.81	1363.63	1375.67	1388.68

e. AFC allowed in respect of the transmission asset for 2019-24 tariff period are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	759.34	771.94	850.35	933.64	949.39

105. This order disposes of Petition No. 243/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

