

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 133/TT/2020

Coram:

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

Date of order: 28.10.2021

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and revision of transmission tariff of 2001-04, 2004-09 and 2009-14 periods and truing up of transmission tariff of 2014-19 tariff 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 for LILO of one circuit of existing Neyveli-Trichy 400 kV D/C line at Neyveli TPS-I Expansion Transmission System associated with "Neyveli TS-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

Versus

1. Karnataka Power Transmission Corporation Limited,
Kaveri Bhavan, Bangalore – 560 009.
2. Transmission Corporation of Andhra Pradesh Limited,
Vidyut Soudha, Hyderabad – 500 082.
3. Kerala State Electricity Board,
Vaidyuthi Bhavanam.
Pattom, Thiruvananthapuram – 695 004.
4. Tamil Nadu Generation and Distribution Corporation Limited,
(Formerly Tamil Nadu Electricity Board -TNEB),
NPKRR Maaligai, 800, Anna Salai,



Chennai – 600 002.

5. Electricity Department,
Government of Pondicherry,
Pondicherry – 605 001.
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 - 517 501,
Chittoor District, Andhra Pradesh.
8. Southern Power Distribution Company of Telangana Limited,
6-1-50, Corporate Office, Mint Compound,
Hyderabad – 500 063, Telangana.
9. Northern Power Distribution Company of Telangana Limited,
H.No. 2-5-3 1/2 , Vidyut Bhawan, Corporate office, Nakkal Gupta,
Hanamkonda, Warangal – 506 001,
Telangana.
10. Bangalore Electricity Supply Company Limited,
Corporate Office, K.R.Circle,
Bangalore – 560 001, 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 – 575 001,
Karnataka.
14. Chamundeswari Electricity Supply Corporation Limited,
927, L J Avenue, Ground Floor,
New Kantharaj Urs Road, Saraswatipuram,



Mysore – 570 009, Karnataka.

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

16. Transmission Corporation of Telangana Limited,
Vidhyut Sudha, Khairatabad,
Hyderabad - 500 082

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

...Respondent(s)

For Petitioner : Shri S.S. Raju, PGCIL
Shri D.K. Biswal, PGCIL
Shri Ved Prakash Rastogi, PGCIL
Shri Amit Yadav, PGCIL

For Respondents : Shri S. Vallinayagam, Advocate, TANGEDCO
Ms. R. Ramalakshmi, TANGEDCO
Ms. Siva Preetha Sankari, TANGEDCO

ORDER

The instant petition has been filed by Power Grid Corporation of India Limited, a deemed transmission licensee, for revision of transmission tariff of 2001-04, 2004-09 and 2009-14 periods and trueing up of transmission tariff for the period from 1.4.2014 to 31.3.2019 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 for the period from 1.4.2019 to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “ the 2019 Tariff Regulations”) in respect of LILO of one circuit of existing Neyveli-Trichy 400 kV D/C line at Neyveli TPS-I Expansion switchyard transmission system (hereinafter referred to as “the transmission asset”) associated with “Neyveli TS-I” in Southern Region.



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

“1) Approve the revised Transmission Tariff for 2001-04, 2004-09 block and transmission tariff for 2009-14 block for the assets covered under this petition, as per para 8 above.

2) Approve the trued up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 9 and 10 above.

3a) 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 amounting to ₹ 40.60 lakh in case of Asset-1 separately on account of de-capitalization.

7) Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the respondents.

8) 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.

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

10) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate in future. Further, any taxes including GST and duties including cess etc. imposed by any



statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.

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

Background

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

(a) The Investment Approval (IA) in respect of the transmission asset was accorded by the Board of Directors of the Petitioner Company as per Memorandum dated 29.2.2000 at an estimated cost of ₹1114.00 lakh based on 2nd Quarter 1999 price, including IDC of ₹52.00 lakh. The details of commercial operation (COD) of the transmission asset is as follows:

Asset Name	COD
LILO of one circuit of existing Neyveli-Trichy 400 kV D/C line at Neyveli TPS-I Expansion Transmission system associated with Neyveli TS-I.	1.2.2002

(b) The transmission asset is the only element under the transmission scheme.

(c) The transmission tariff in respect of the transmission asset was approved for the period from COD to 31.3.2004 vide order dated 21.2.2005 in Petition No. 57/2002.

(d) The transmission tariff for the period from 1.4.2004 to 31.3.2009 in respect of the transmission asset was approved vide order dated 17.1.2006 in Petition No. 36/2005.

(e) The transmission tariff for the period from 1.4.2009 to 31.3.2014 in respect of the transmission asset was approved vide order dated 1.12.2010 in Petition No. 150/2010. The tariff 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 6.11.2015 in Petition No. 144/TT/2014.

(f) The Petitioner has sought revision of transmission tariff allowed for 2001-04 and 2004-09 tariff periods on account of change in Interest on Loan



(IoL) and Interest on Working Capital (IWC) to the extent of revision in IoL and in Maintenance Spares in terms of the judgments of the Appellate Tribunal for Electricity (APTEL) dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters and 13.6.2007 in Appeal No. 139 of 2006 and batch cases. The Petitioner has sought consequential revision of transmission tariff allowed for 2009-14 tariff period, truing up of tariff of 2014-19 tariff period and determination of transmission tariff for 2019-24 tariff period for the transmission assets.

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

Sl. No.	Issue	APTEL's decision/direction
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 APTEL dated 14.11.2016 in Appeal Nos. 94 and 96 of 2005 and order dated 24.1.2007 passed in Appeal Nos. 81 to 87, 89 to 93 of 2005, computation of loan has to be based on loan repayment on normative basis. The Commission is required to recalculate the loan outstanding as on 31.3.2004 based on loan repayment on normative basis
3(a)	O&M Expenses: Inadequate provision of employee costs as part of O&M Expenses due to variation in salary and wages	Commission's view upheld
3(b)	O&M Expenses: Non-inclusion of incentives and ex-gratia payment to employees	Commission's view upheld
4	Cost of spares for calculation of working capital	Commission's view upheld

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



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

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

(j) Based on APTEL's judgments dated 22.1.2007 in Appeal No. 81/2005 and batch matters and dated 13.6.2007 in Appeal No. 139/2006 and batch cases, the Petitioner had sought re-determination of tariff of its transmission assets of 2001-04 and 2004-09 tariff periods vide Petition No. 121/2007. The Commission after taking into consideration the pendency of Appeals before the Hon'ble Supreme Court adjourned the said petition *sine die* and directed that the



same be revived after the disposal of Civil Appeals by the Hon'ble Supreme Court.

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

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

(m) The instant petition was heard on 9.7.2021 and in view of APTEL's judgments dated 22.1.2007 and 13.6.2007 and the order of Hon'ble Supreme Court dated 10.4.2018, tariff is being revised. Although, period-wise transmission tariff is being re-worked based on the Tariff Regulations applicable for the respective tariff periods and suitable assumptions have been made at certain places and applied, which are indicated.

4. The Respondents are transmission utilities, distribution licensees and power departments who are procuring transmission services from the Petitioner, mainly beneficiaries of the Southern Region.

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or 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 i.e. Respondent No. 4, has filed its reply vide affidavit dated 8.7.2021 and has raised issues of



decapitalisation of the transmission asset, retrospective revision of tariff, depreciation and sharing of transmission charges. The issues raised by TANGEDCO have been considered in the relevant portions of this order.

Re: Interest on Loan (IoL)

6. APTEL while dealing with the issue of computation of IoL, in judgment dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters 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 No. 94 of 2005 and Appeal No. 96 of 2005. APTEL vide its judgment dated 14.11.2006 in Appeal No. 94 of 2005 and Appeal No. 96 of 2005 had set aside the Commission's methodology of computation of loan on the actual repayment basis or normative repayment whichever is higher and held that the Commission is required to adopt normative debt repayment methodology for working out IoL liability for the period 1.4.1998 to 31.3.2001. In view of the above, the interest allowed for 2001-04 and 2004-09 period is revised on the basis of the normative debt repayment methodology.

Re: Additional Capital Expenditure (ACE)

7. APTEL vide judgment dated 13.6.2007 in Appeal No. 139/2006 and batch matters held that ACE 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 periods are also required to be revised taking into consideration ACE after the date of commercial operation.

Re: Depreciation

8. As regards depreciation, APTEL in its judgment dated 13.6.2007 in Appeal No. 139 of 2006 and batch matters observed that depreciation is an expense and it cannot



be deployed for deemed repayment of loan and accordingly directed the Commission to compute the outstanding loan afresh. In view of the above directions of APTEL, the outstanding loan allowed for the transmission asset for 2001-04 and 2004-09 period is revised in the instant order.

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

10. The hearing in this matter was held on 9.7.2021 through video conference and order was reserved.

11. This order is issued considering the submissions made by the Petitioner in the petition vide affidavit dated 2.1.2020 and affidavit dated 1.7.2021 and reply filed by TANGEDCO affidavit dated 8.7.2021.



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

13. TANGEDCO relying on the judgment of the Hon'ble Supreme Court in *U.P. Power Corporation Ltd. v. NTPC Ltd.* reported in (2009) 6 SCC 235 has submitted that tariff of an earlier period cannot be passed on to the current consumers. It was further submitted that APTEL in its judgment dated 13.6.2007 in Appeal No. 139 of 2007 and batch matters and dated 22.1.2007 in Appeal No. 81 of 2005 and batch cases did not make any observations regarding retrospective revision of tariff and the said judgments are applicable only for 2004-09 tariff period. TANGEDCO has also submitted that the Petitioner has misled the Commission by stating that APTEL has allowed revision of tariff of 2001-04, 2004-09 and 2009-14 tariff periods. The Petitioner cannot be allowed to take advantage of the judgments of APTEL issued in favour of NTPC. It was further contended by TANGEDCO that the order dated 18.1.2019 in Petition No. 121/2007 passed by the Commission is per incuriam the judgment of the Hon'ble Supreme Court of India in the matter of U.P. Power Corporation Ltd. (Supra) in as much as Article 141 of the Constitution of India mandates that the law declared by the Hon'ble Supreme Court shall be binding on all courts within the territory of India. TANGEDCO submitted that there is no provision in any of the Tariff Regulations permitting revision of tariff for the 2001-04, 2004-09 and 2009-14 tariff periods.

14. In response, the representative of the Petitioner in the course of hearing on 9.7.2021 submitted that revision of tariff has been claimed as per the judgments of APTEL dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters and dated 13.6.2007 in Appeal No. 139 of 2006 and batch cases as well as order of the



Commission dated 18.1.2019 in Petition No. 121/2007. The order of the Commission in Petition No. 121/2007 was passed in 2019 only because Appeals against the said judgments of APTEL dated 22.1.2007 and 13.6.2007 were pending before the Hon'ble Supreme Court. The representative of the Petitioner prayed that as there was no delay on the part of the Petitioner in claiming the revised tariff, the same may be allowed.

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

REVISION OF TRANSMISSION CHARGES ALLOWED FOR 2001-04, 2004-09 AND 2009-14 TARIFF PERIODS

2001-04 Tariff Period

16. The Commission vide order dated 21.2.2005 in Petition No. 57/2002 approved the transmission charges in respect of the transmission asset from COD to 31.3.2004. The transmission charges approved for 2001-04 period vide order dated 21.2.2005 in Petition No. 57/2002 are as follows:



(₹ in lakh)

Particulars	2001-02 (Pro-rata for 2 months)	2002-03	2003-04
Depreciation	3.83	22.96	22.96
Return on Equity	2.70	16.20	16.20
O&M Expenses	1.85	11.75	12.45
Advance against Depreciation	0.00	0.00	0.00
Interest on Loan	10.86	82.53	81.53
Interest on Working Capital	0.57	3.78	3.84
Total	19.80	137.23	136.99

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

(₹ in lakh)

Particulars	2001-02 (Pro rata for 2 months)	2002-03	2003-04
Depreciation	3.83	22.96	22.96
Return on Equity	2.70	24.22	25.36
O&M Expenses	1.85	11.75	12.45
Advance against Depreciation	0.00	0.00	0.00
Interest on Loan	10.86	82.53	81.53
Interest on Working Capital	0.57	4.06	4.16
Total	19.81	145.52	146.46

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

- a) Admitted capital cost of ₹893.27 lakh as on COD;
- b) Weighted Average Rate of Interest on actual loan adopted from order dated 21.2.2005 in Petition No.57/2002; and
- c) Weighted Average Rate of Depreciation, Rate of Interest for Working Capital and O&M Expenses as per order dated 21.2.2005 in Petition No. 57/2002.

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



(₹ in lakh)

Particulars	2001-02 (Pro rata for 2 months)	2002-03	2003-04
Depreciation	3.83	22.96	22.96
Return on Equity	2.70	16.20*	16.20*
O&M Expenses	1.85	11.75	12.45
Advance against Depreciation	0.00	0.00	0.00
Interest on Loan	10.86	82.53	81.53
Interest on Working Capital	0.57	3.85	3.93
Total	19.81	137.28	137.06

* In addition to above, Return on equity of ₹8.02 lakh and ₹9.16 lakh has been allowed in 2002-03 and 2003-04 respectively as per order dated 17.1.2006 in Petition No.36/2005 on account of additional equity of ₹50.13 lakh and ₹57.27 lakh for the year 2002-03 and 2003-04 respectively.

20. Annual Fixed Charges (AFC) allowed for 2001-04 tariff period vide order dated 21.2.2005 in Petition No. 57/2002, the revised AFC claimed in the instant petition and AFC allowed in the instant order are as follows:

(₹ in lakh)

Particulars	2001-02 (Pro-rata for 2 months)	2002-03	2003-04
AFC approved vide order dated 21.2.2005 in Petition No. 57/2002	19.80	137.23	136.99
AFC claimed by the Petitioner in the instant petition	19.81	145.52	146.46
AFC allowed in the instant order	19.81	137.28*	137.06*

* Return on equity of ₹8.02 lakh and ₹9.16 lakh has been allowed in 2002-03 and 2003-04 respectively as per order dated 17.1.2006 in Petition No.36/2005 on account of additional equity of ₹50.13 lakh and ₹57.27 lakh for the year 2002-03 and 2003-04 respectively.

2004-09 Tariff Period

21. The Commission approved transmission charges for the period from 1.4.2004 to 31.3.2009 vide order dated 17.1.2006 in Petition No. 36/2005 in respect of the transmission asset. The transmission charges approved for 2004-09 period vide order dated 17.1.2006 in Petition No. 36/2005 are as follows:



(₹ in lakh)

Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	24.61	24.61	24.61	24.61	24.61
Return on Equity	23.19	23.19	23.19	23.19	23.19
O&M Expenses	5.00	5.20	5.42	5.62	5.86
Advance against Depreciation	0.00	34.31	43.62	43.62	43.62
Interest on Loan	77.22	70.96	63.89	56.82	49.74
Interest on Working Capital	3.36	3.92	4.03	3.98	3.94
Total	133.39	162.20	164.76	157.85	150.97

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

(₹ in lakh)

Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	24.61	24.61	24.61	24.61	24.61
Return on Equity	23.19	23.19	23.19	23.19	23.19
O&M Expenses	5.00	5.20	5.42	5.62	5.86
Advance against Depreciation	0.00	34.31	43.62	43.62	43.62
Interest on Loan	77.23	70.95	63.90	56.81	49.74
Interest on Working Capital	3.49	4.06	4.18	4.14	4.11
Total	133.53	162.31	164.92	157.99	151.13

23. We have considered the Petitioner's claim. The tariff is allowed for the transmission asset on the basis of the following:

- Admitted capital cost of ₹957.67 lakh as on 1.4.2004;
- ACE of ₹64.40 lakh for 2001-04 period as approved vide order dated 17.1.2006 in Petition No. 36/2005;
- Weighted Average Rate of Interest on actual loan adopted from order dated 17.1.2006 in Petition No. 36/2005; and
- Weighted Average Rate of Depreciation, Rate of Interest for Working Capital and O&M Expenses as per order dated 17.1.2006 in Petition No. 36/2005.



24. In view of the 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	24.61	24.61	24.61	24.61	24.61
Return on Equity	23.19	23.19	23.19	23.19	23.19
O&M Expenses	5.00	5.20	5.42	5.62	5.86
Advance against Depreciation	0.00	34.32	43.62	43.62	43.62
Interest on Loan	77.23	70.95	63.90	56.81	49.74
Interest on Working Capital	3.44	4.00	4.12	4.08	4.04
Total	133.48	162.27	164.86	157.93	151.07

25. AFC allowed for 2004-09 tariff period vide order dated 17.1.2006 in Petition No. 36/2005, the revised AFC claimed in the instant petition and AFC allowed in the instant order are as follows:

(₹ in lakh)					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
AFC approved vide order dated 17.1.2006 in Petition No. 36/2005	133.39	162.20	164.76	157.85	150.97
AFC claimed by the Petitioner in the instant petition	133.53	162.31	164.92	157.99	151.13
AFC allowed in the instant order	133.48	162.27	164.86	157.93	151.07

2009-14 Tariff Period

26. The Commission vide order dated 1.12.2010 in Petition No. 150/2010 approved the tariff in respect of the transmission asset for 2009-14 period and vide order dated 6.11.2015 in Petition No. 144/TT/2014 trued up the tariff allowed for 2009-14 period and the same is as follows:

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	50.56	50.56	50.56	50.56	50.56
Return on Equity	30.94	32.07	32.10	32.10	32.49
O&M Expenses	6.90	7.30	7.72	8.16	8.62
Interest on Loan	44.21	39.50	35.79	30.09	24.34
Interest on Working Capital	2.97	2.91	2.85	2.76	2.67
Total	135.58	132.35	129.03	123.67	118.69



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

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	50.56	50.56	50.56	50.56	50.56
Return on Equity	30.94	32.07	32.10	32.10	32.49
O&M Expenses	6.90	7.30	7.72	8.16	8.62
Interest on Loan	44.21	39.50	35.79	30.09	24.35
Interest on Working Capital	2.97	2.91	2.85	2.76	2.67
Total	135.58	132.34	129.02	123.67	118.69

28. We have considered the Petitioner's claim. The tariff is allowed for the transmission asset on the basis of the following:

- a) Admitted capital cost of ₹957.67 lakh as on 1.4.2009;
- b) Weighted Average Rate of Interest on actual loan derived/adopted from order dated 6.11.2015 in Petition No. 144/TT/2014; and
- c) Weighted Average Rate of Depreciation as per order 6.11.2015 in Petition No. 144/TT/2014.

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

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
Depreciation	50.56	50.56	50.56	50.56	50.56
Interest on Loan	44.21	39.50	35.79	30.09	24.34
Return on equity	30.94	32.07	32.10	32.10	32.49
Interest on Working Capital	2.97	2.91	2.85	2.76	2.67
O&M Expenses	6.90	7.30	7.72	8.16	8.62
Total	135.58	132.35	129.03	123.68	118.69

30. Annual Fixed Charges (AFC) allowed for 2009-14 tariff period vide order dated 6.11.2015 in Petition No. 144/TT/2014, the revised AFC claimed in the instant petition and AFC allowed in the instant order are as follows:

(₹ in lakh)					
Particulars	2009-10	2010-11	2011-12	2012-13	2013-14
AFC approved vide order dated 6.11.2015 in Petition No.	135.58	132.35	129.03	123.67	118.69



144/TT/2014					
AFC claimed by the Petitioner in the instant petition	135.58	132.34	129.02	123.67	118.69
AFC allowed in the instant order	135.58	132.35	129.03	123.68	118.69

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

31. The details of the trued-up transmission charges claimed by the Petitioner are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	11.79	13.01	9.80	9.80	9.80
Interest on Loan	20.87	17.58	13.89	12.93	11.97
Return on equity	32.51	30.11	27.54	27.54	27.61
O&M Expenses	7.79	8.05	8.31	8.59	8.88
Interest on Working Capital	1.93	1.84	1.64	1.63	1.63
Total	74.89	70.59	61.18	60.49	59.89

32. The details of the trued-up Interest on Working Capital (IWC) claimed by the Petitioner are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	0.65	0.67	0.69	0.72	0.74
Maintenance Spares	1.17	1.21	1.25	1.29	1.33
Receivables	12.48	11.77	10.20	10.08	9.98
Total Working Capital	14.30	13.65	12.14	12.09	12.05
Rate of Interest on Working Capital (%)	13.50	13.50	13.50	13.50	13.50
Interest of working capital	1.93	1.84	1.64	1.63	1.63

Capital Cost as on 1.4.2014

33. 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 6.11.2015 in Petition No. 144/TT/2014 approved the transmission tariff in respect of the transmission asset for 2014-19 period based on admitted capital cost of ₹957.67 lakh as on 1.4.2014.



34. Accordingly, the capital cost of ₹957.67 lakh in respect of the transmission asset has been considered for the purpose of truing up of the tariff for 2014-19 tariff period.

35. The Petitioner has not claimed any ACE for the transmission asset during 2014-19 tariff period.

Decapitalisation

36. The Petitioner has submitted that re-conductoring of the transmission asset has been done w.e.f. 9.11.2015 for strengthening of Neyveli TS-II-TS-I expansion link with higher capacity conductor under the transmission system associated with contingency plan for evacuation of power from IL&FS (2x600 MW) covered in Petition No. 51/TT/2015 as approved in SRPC. Accordingly, the gross block has been de-capitalized from the transmission asset in 2015-16 and tariff has been calculated. De-capitalization details submitted by the Petitioner are as follows:

Asset	(₹ in lakh)	
	De-cap	
	2015-16	
LILO of one circuit of existing Neyveli-Trichy 400 kV D/C line at Neyveli TPS-I Expansion Switchyard Transmission System.	-149.89	

37. TANGEDCO has submitted that the Commission vide order dated 20.7.2016 in Petition No. 51/TT/2015 approved the transmission tariff for 2014-19 period in respect of Asset-1 therein (LILO of 2nd second of Neyveli-Trichy 400 kV D/C line at Negapattinam Pooling Station along with associated bays) with COD as 29.9.2015 and Asset-2 therein (Strengthening of Neyveli TS-II-TS-I expansion link with higher capacity conductor) with COD as 9.11.2015. The Commission in its order in Petition No. 51/TT/2015 in respect of Asset-2 therein, while granting tariff, approved recovery



of 30% of the completion cost of the new asset with a direction to submit the details of de-capitalization during truing up. TANGEDCO has further submitted that the Petitioner has not furnished the details of the de-capitalised asset even at the time of truing-up in Petition No. 514/TT/2019 (tariff that was granted in Petition No. 51/TT/2015) and stated that the de-capitalised asset value has been deducted in the gross block of the old asset. This shows non-compliance by the Petitioner of the Commission's order in Petition No. 51/TT/2015. TANGEDCO has submitted that the Petitioner has purposefully included de-capitalization of the asset connected with the assets covered in Petition No. 51/TT/2015 (and trued-up in Petition No. 514/TT/2019) in the present petition and that the same is not permissible and is violative of various orders of the Commission and Tariff Regulations.

38. In response, the Petitioner in the course of hearing the matter on 9.7.2021 submitted that de-capitalisation has been done as per the existing Regulations and as per the discussions held during the meetings of RPC.

39. We have considered the submissions of the Petitioner and TANGEDCO. The Petitioner has carried out re-conductoring w.e.f. 9.11.2015 of existing Neyveli-Trichy 400 kV D/C line at Neyveli TPS-I Expansion switchyard and accordingly de-capitalisation is done from 9.11.2015. Therefore, the capital cost allowed for 2014-19 tariff period is as follows:

(₹ in lakh)		
Capital Cost as on 1.4.2014	De-capitalization during 2014-19 period	Capital Cost as on 31.3.2019
957.67	-149.89	807.78

40. The Petitioner has adjusted cumulative depreciation by taking into account the depreciation recovered in tariff by the decapitalized asset during its useful life and



prayed to allow to recover unrecovered depreciation amounting to ₹ 40.60 lakh in case of the transmission asset separately on account of de-capitalization. The details of depreciation recovered from decapitalized asset are as follows:

(₹ in lakh)				
Asset	Gross Block of decapitalized asset (A)	Year of decapitalization	Cumulative depreciation recovered(B)	Unrecovered depreciation (0.9*A-B)
LIFO of one circuit of existing Neyveli-Trichy 400 kV D/C line at Neyveli TPS-I Expansion Switchyard Transmission System.	149.8 9	2015-16	94.31	40.60

41. We have considered the submission of the petitioner. It is observed that there is no specific provision for recovering unrecovered depreciation in the 2014 Tariff Regulations. Accordingly, we are not inclined to allow the un-recovered depreciation claimed by the Petitioner.

Debt-Equity Ratio

42. Debt-equity ratio has been allowed in accordance with Regulation 19(3) of the 2014 Tariff Regulations. As per Regulation 19(3) of the 2014 Tariff Regulations, debt-equity ratio allowed by the Commission for determination of tariff for the period ending on 31.3.2014 shall be considered. Accordingly, the admitted debt-equity ratio of 82.70:17.30 for the period ending on 31.3.2014 has been considered as opening debt-equity ratio as on 1.4.2014 for the purpose of truing up of tariff of 2014-19 period in respect of the transmission asset. The details of debt-equity ratio of the transmission asset as on 1.4.2014 and 31.3.2019 are as follows:



Funding	Capital cost as on 1.4.2014 (₹ in lakh)	(in %)	Total cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	792.00	82.70	668.04	82.70
Equity	165.67	17.30	139.74	17.30
Total	957.67	100.00	807.78	100.00

Depreciation

43. The Petitioner has claimed depreciation considering the capital expenditure of ₹957.67 lakh as on 1.4.2014 and de-capitalization of ₹149.89 lakh in respect of re-conductoring for Strengthening of Neyveli TS-II-TS-I expansion link with higher capacity conductor under the transmission system associated with contingency plan for evacuation of power from IL&FS (2x600MW) during the 2015-16 tariff period.

44. TANGEDCO has submitted that the Petitioner is trying to recover the unrecovered depreciation with regard to the decapitalized asset which is not supported by the provisions of the Tariff Regulations.

45. In response, the Petitioner has submitted that de-capitalization was done on account of discussions in RPC and as such the unrecovered depreciation is being claimed.

46. We have considered the submission of the Petitioner and TANGEDCO. The depreciation has been allowed as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations. The transmission asset has already completed 12 years of life as on 31.3.2014. The remaining depreciable value of ₹ 271.11 lakh has been spread across the balance useful life of 23 years in accordance with Regulation 27(5) of the 2014 Tariff Regulations. The Gross Block during 2014-19 tariff period with regard to the transmission asset has been depreciated at Weighted Average Rate of Depreciation (WAROD). WAROD has been worked out after taking into account the



depreciation rates of assets as prescribed in the 2014 Tariff Regulations and depreciation allowed during 2014-19 period in respect of the transmission asset is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	957.67	957.67	807.78	807.78	807.78
ACE	0.00	-149.89	0.00	0.00	0.00
Closing Gross Block	957.67	807.78	807.78	807.78	807.78
Average Gross Block	957.67	882.73	807.78	807.78	807.78
Weighted average Rate of Depreciation (%)	1.16	1.16	1.16	1.16	1.16
Balance useful life (Year) (at the beginning of the year)	23.00	22.00	21.00	20.00	19.00
Aggregate Depreciable Value	861.90	794.45	727.00	727.00	727.00
Depreciation during the year	11.79	13.01	9.80	9.80	9.80
Cumulative Aggregate Depreciation	602.58	521.28	531.08	540.87	550.67
Remaining Aggregate Depreciable Value	259.32	205.71	195.93	186.13	176.33

47. The details of depreciation approved vide order dated 6.11.2015 in Petition No.144/TT/2014, as claimed in the instant petition and trued up depreciation allowed in respect of the transmission asset is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 6.11.2015 in Petition No. 144/TT/2014	11.79	11.79	11.79	11.79	11.79
Claimed by the Petitioner in the instant petition	11.79	13.01	9.80	9.80	9.80
Allowed after true-up in this order	11.79	13.01	9.80	9.80	9.80

Interest on Loan (“IoL”)

48. IoL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. The Petitioner has claimed IoL based on actual interest rates for each year during 2014-19 period. The Petitioner has considered the weighted average rate



of IoL on the basis of prevailing rates as on 1.4.2014 for respective loans and has prayed to consider the floating rate of interest applicable during 2014-19 period, if any, during the truing-up of tariff.

49. We have considered the submissions of the Petitioner and accordingly IoL has been considered based on the actual interest rate, in accordance with Regulation 26 of the 2014 Tariff Regulations.

50. The details of the trued-up IoL allowed for the transmission asset are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	792.00	792.00	668.04	668.04	668.04
Cumulative Repayments up to Previous Year	590.79	602.58	521.28	531.08	540.87
Net Loan-Opening	201.21	189.42	146.76	136.96	127.17
Addition due to ACE	0.00	-123.96	0.00	0.00	0.00
Repayment during the year	11.79	13.01	9.80	9.80	9.80
Adjustment of cumulative repayment pertaining to the decapitalised asset	0.00	94.31	0.00	0.00	0.00
Net Loan-Closing	189.42	146.76	136.96	127.17	117.37
Average Loan	195.31	168.09	141.86	132.07	122.27
Weighted Average Rate of Interest on Loan (%)	10.680	10.461	9.793	9.793	9.793
Interest on Loan	20.87	17.58	13.89	12.93	11.97

51. The details of IoL approved vide order dated 6.11.2015 in Petition No. 144/TT/2014, as claimed by the Petitioner in the instant petition and trued up in the instant order are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 6.11.2015 in Petition No. 144/TT/2014	20.87	19.20	16.82	15.66	14.51
Claimed by the Petitioner in the instant petition	20.87	17.58	13.89	12.93	11.97
Allowed after true-up in this order	20.87	17.58	13.89	12.93	11.97



Return on Equity (“RoE”)

52. 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 following effective tax rates for 2014-19 tariff period:

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

53. We have considered the submissions of the Petitioner. 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 and the same is 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

54. The same MAT rates as 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 trueing up of tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations, which is as follows:

Year	Notified MAT rates (in %) (inclusive of surcharge & cess)	Base rate of RoE (in %)	Grossed up RoE [(Base Rate)/(1-t)] (in %)
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



55. Accordingly, RoE allowed in respect of the transmission asset is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	165.67	165.67	139.74	139.74	139.74
Addition due to ACE	0.00	-25.93	0.00	0.00	0.00
Closing Equity	165.67	139.74	139.74	139.74	139.74
Average Equity	165.67	152.71	139.74	139.74	139.74
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (%)	20.961	21.342	21.342	21.342	21.549
Applicable ROE Rate (%)	19.610	19.705	19.705	19.705	19.758
Return on Equity for the year	32.49	30.09	27.54	27.54	27.61

56. The details of RoE approved vide order dated 6.11.2015 in Petition No. 144/TT/2014, as claimed in the instant petition and trued up RoE allowed in respect of the transmission asset is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 6.11.2015 in Petition No. 144/TT/2014	32.49	32.49	32.49	32.49	32.49
Claimed by the Petitioner in the instant petition	32.51	30.11	27.54	27.54	27.61
Allowed after true-up in this order	32.49	30.09	27.54	27.54	27.61

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

57. O&M Expenses as claimed by the Petitioner are within the norms specified under the 2014 Tariff Regulations. The allowable O&M Expenses are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
AC Lines					
LILO of one circuit of Neyveli-Trichy 400 kV D/C line at Neyveli TS-I Expansion Switchyard	11.012	11.012	11.012	11.012	11.012
Norm (₹ lakh/km)					
Double Circuit (Twin/ Triple Conductor)	0.707	0.731	0.755	0.780	0.806
Total Transmission Line	7.79	8.05	8.31	8.59	8.88
Total O&M Expenses	7.79	8.05	8.31	8.59	8.88



58. The details of O&M Expenses approved vide order dated 6.11.2015 in Petition No. 144/TT/2014, as claimed in the instant petition and true up O&M Expenses allowed in respect of the transmission asset are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 6.11.2015 in Petition No. 144/TT/2014	7.79	8.05	8.31	8.59	8.88
As claimed by the Petitioner in the instant petition	7.79	8.05	8.31	8.59	8.88
Allowed after true-up in this order	7.79	8.05	8.31	8.59	8.88

Interest on Working Capital (“IWC”)

59. The Petitioner is entitled to IWC as per Regulation 28 of the 2014 Tariff Regulations. IWC allowed in respect of the transmission asset is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one Month)	0.65	0.67	0.69	0.72	0.74
Working Capital for Maintenance Spares (15% of O&M)	1.17	1.21	1.25	1.29	1.33
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	12.48	11.76	10.20	10.08	9.98
Total Working Capital	14.29	13.64	12.14	12.09	12.05
Rate of Interest on Working Capital (%)	13.50	13.50	13.50	13.50	13.50
Interest of working capital	1.93	1.84	1.64	1.63	1.63

60. Accordingly, IWC approved vide order dated 6.11.2015 in Petition No. 144/TT/2014, IWC claimed in the instant petition and true up IWC allowed in respect of the transmission asset is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 6.11.2015 in Petition No. 144/TT/2014	1.93	1.91	1.87	1.85	1.84
Claimed by the Petitioner in the instant petition	1.93	1.84	1.64	1.63	1.63



Allowed after true-up in this order	1.93	1.84	1.64	1.63	1.63
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Approved Annual Fixed Charges for 2014-19 Tariff Period

61. Accordingly, AFC allowed after truing up 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
Depreciation	11.79	13.01	9.80	9.80	9.80
Interest on Loan	20.87	17.58	13.89	12.93	11.97
Return on Equity	32.49	30.09	27.54	27.54	27.61
O&M Expenses	7.79	8.05	8.31	8.59	8.88
Interest on Working Capital	1.93	1.84	1.64	1.63	1.63
Total	74.86	70.57	61.18	60.49	59.88

62. The details of AFC approved vide order dated 6.11.2015 in Petition No. 144/TT/2014, as claimed in the instant petition and trued up AFC allowed in respect of the transmission asset are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed earlier in order dated 6.11.2015 in Petition No. 144/TT/2014	74.86	73.43	71.27	70.38	69.51
Claimed by the Petitioner in the instant petition	74.89	70.59	61.18	60.49	59.89
Allowed after true-up in this order	74.86	70.57	61.18	60.49	59.88

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD

63. 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	9.80	9.80	9.80	9.80	9.80
Interest on Loan	11.01	10.06	9.10	8.14	7.18
Return on equity	26.25	26.25	26.25	26.25	26.25
O&M Expenses	9.70	10.04	10.40	10.76	11.13
Interest on Working Capital	1.13	1.13	1.14	1.14	1.14
Total	57.89	57.28	56.69	56.09	55.50



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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	0.81	0.84	0.87	0.90	0.93
Maintenance Spares	1.46	1.51	1.56	1.61	1.67
Receivables	7.12	7.06	6.99	6.91	6.82
Total Working Capital	9.39	9.41	9.42	9.42	9.42
Rate of Interest on Working Capital (%)	12.05	12.05	12.05	12.05	12.05
Interest of working capital	1.13	1.13	1.14	1.14	1.14

Capital Cost

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

“(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 asset 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 up to the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;

(k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;



(l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;
(m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;
(n) Expenditure on account of change in law and force majeure events; and
(o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

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

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

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

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

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

(a) The asset forming part of the project, but not in use, as declared in the tariff petition;
(b) De-capitalised Asset after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:

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

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



- (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.”

66. The capital cost of ₹807.78 lakh has been considered by the Commission in respect of the transmission asset as on 31.3.2019. Therefore, capital cost of ₹807.78 lakh as on 31.3.2019 has been considered as the opening capital cost as on 1.4.2019 for the purpose of determination of transmission tariff for 2019-24 period in accordance with Regulation 19 of the 2019 Tariff Regulations.

67. The Petitioner has not claimed any ACE for 2019-24 tariff period in respect of the transmission assets in the instant petition.

Debt-Equity Ratio

68. Regulation 18 of the 2019 Tariff Regulations provide as follows:

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

Provided that:

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

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

(2) The generating company or the transmission licensee, as the case may be, shall submit the resolution of the Board of the company or approval of the competent



authority in other cases regarding infusion of funds from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.

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

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

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

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

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this Regulation.”

69. Debt-equity ratio for 2019-24 period is allowed as per Regulation 18(3) of the 2019 Tariff Regulations. The details of debt-equity ratio considered for the purpose of tariff for 2019-24 tariff period are as follows:

Funding	Capital cost as on 1.4.2019 (₹ in lakh)	(in %)	Total cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	668.04	82.70	668.04	82.70
Equity	139.74	17.30	139.74	17.30
Total	807.78	100.00	807.78	100.00

Depreciation

70. 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 system or element thereof including communication system. In case of the tariff of all the units of a generating station or all elements of a transmission system including



communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units:

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

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

(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 asset 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 asset 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 system:

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

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

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

71. We have considered the submissions of the Petitioner. The weighted average rate of depreciation (WAROD) has been worked out after taking into account the depreciation rates specified in the 2019 Tariff Regulations. Depreciation has been worked out considering the admitted capital expenditure of ₹807.78 as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The transmission asset has already completed 12 years of life as on 31.3.2014. The remaining depreciable value of ₹271.11 lakh has been spread across the balance useful life of 23 years in accordance with Regulation 33(5) of the 2019 Tariff Regulations. Depreciation allowed 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
Opening Gross Block	807.78	807.78	807.78	807.78	807.78
Addition during 2019-24 due to projected ACE	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	807.78	807.78	807.78	807.78	807.78
Average Gross Block	807.78	807.78	807.78	807.78	807.78
Balance useful life at the beginning of the year (Year)	18.00	17.00	16.00	15.00	14.00
Depreciable Value	176.33	166.54	156.74	146.94	137.15
Rate of Depreciation (%)	1.21	1.21	1.21	1.21	1.21
Depreciation during the year	9.80	9.80	9.80	9.80	9.80
Cumulative Aggregate Depreciation at the end of the year	560.47	570.26	580.06	589.85	599.65
Remaining Aggregate Depreciable Value at the end of the year	166.54	156.74	146.94	137.15	127.35



Interest on Loan (“IoL”)

72. 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 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.

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

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

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

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

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



73. The weighted average rate of IoL has been considered on the basis of the rates prevailing as on 1.4.2019. The Petitioner has prayed that the change in interest rate due to floating rates of interest applicable, if any, during 2019-24 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up. In view of above, IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed 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
Gross Normative Loan	668.04	668.04	668.04	668.04	668.04
Cumulative Repayments up to Previous Year	550.67	560.47	570.26	580.06	589.85
Net Loan-Opening	117.37	107.57	97.78	87.98	78.19
Addition due to ACE	0.00	0.00	0.00	0.00	0.00
Repayment during the year	9.80	9.80	9.80	9.80	9.80
Net Loan-Closing	107.57	97.78	87.98	78.19	68.39
Average Loan	112.47	102.68	92.88	83.08	73.29
Weighted Average Rate of Interest on Loan (%)	9.794	9.794	9.794	9.794	9.794
Interest on Loan	11.02	10.06	9.10	8.14	7.18

Return on Equity (“RoE”)

74. Regulations 30 and Regulation 31 of the 2019 Tariff Regulations specify as follows:

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

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

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



Provided further that:

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

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

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

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

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

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

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

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

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

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



Illustration-

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

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.”

75. The Petitioner has submitted that MAT rate is applicable to the Petitioner's Company. Accordingly, the 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 under Regulation 30 of the 2019 Tariff Regulations is as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	139.74	139.74	139.74	139.74	139.74
Additions	0.00	0.00	0.00	0.00	0.00
Closing Equity	139.74	139.74	139.74	139.74	139.74
Average Equity	139.74	139.74	139.74	139.74	139.74
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
MAT Rate for respective year (%)	17.47	17.47	17.47	17.47	17.47
Rate of Return on Equity (%)	18.78	18.78	18.78	18.78	18.78
Return on Equity	26.25	26.25	26.25	26.25	26.25



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

76. Regulation 35(3)(a) and Regulation 35(4) of the 2019 Tariff Regulations specify the norms for O&M Expenses for the transmission system and the same are 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
<i>Norms for sub-station Bays (₹ Lakh per bay)</i>					
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
<i>Norms for Transformers (₹ Lakh per MVA)</i>					
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
<i>Norms for AC and HVDC lines (₹ Lakh per km)</i>					
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
<i>Norms for HVDC stations</i>					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ 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 MW)	1,696	1,756	1,817	1,881	1,947



± 800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942
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Provided that the O&M expenses for the GIS bays shall be allowed as worked out by multiplying 0.70 of the O&M expenses of the normative O&M expenses for bays;

Provided further that:

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;*
- ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;*
- iii. the O&M expenses of ± 500 kV Mundra-Mohindergarh HVDC bipole scheme (2000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ± 500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);*
- iv. the O&M expenses of ± 800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ± 800 kV, Bishwanath-Agra HVDC bi-pole scheme;*
- v. the O&M expenses of ± 800 kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ± 800 kV, Bishwanath-Agra HVDC bi-pole scheme; and*
- vi. the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years.*

(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.”*



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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
AC Lines					
LILO of one circuit of Neyveli-Trichy 400 kV D/C line at Neyveli TS-I Expansion Switchyard (km)	11.012	11.012	11.012	11.012	11.012
Norm (₹ lakh/km)					
Double Circuit (Twin/ Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Total Transmission Line	9.70	10.04	10.40	10.76	11.13
Total O&M Expenses	9.70	10.04	10.40	10.76	11.13

78. O&M Expenses approved 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
AC Lines					
LILO of one circuit of Neyveli-Trichy 400 kV D/C line at Neyveli TS-I Expansion Switchyard (km)	11.012	11.012	11.012	11.012	11.012
Norm (₹ lakh/km)					
Double Circuit (Twin/ Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Total Transmission Line	9.70	10.04	10.40	10.76	11.13
Total O&M Expenses	9.70	10.04	10.40	10.76	11.13

Interest on Working Capital (“IWC”)

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

**“34. Interest on Working Capital
(1)...**



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

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

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

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

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

“3.Definitions ...

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

80. 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 Interest (RoI) on working capital 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 thereon allowed in respect of the transmission asset are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses	0.81	0.84	0.87	0.90	0.93



(O&M Expenses for one Month)					
Working Capital for Maintenance Spares (15% of O&M)	1.46	1.51	1.56	1.61	1.67
Working Capital for Receivables (Equivalent to 45 months of annual transmission charges)	7.12	7.05	6.97	6.89	6.80
Total Working Capital	8.57	8.56	8.53	8.51	8.47
Rate of Interest on Working Capital(%)	12.05	11.25	10.50	10.50	10.50
Interest of working capital	1.13	1.06	0.99	0.99	0.99

Annual Fixed Charges for 2019-24 Tariff Period

81. The transmission charges allowed in respect of the transmission asset for 2019-24 period are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	9.80	9.80	9.80	9.80	9.80
Interest on Loan	11.02	10.06	9.10	8.14	7.18
Return on Equity	26.25	26.25	26.25	26.25	26.25
O&M Expenses	9.70	10.04	10.40	10.76	11.13
Interest on Working Capital	1.13	1.06	0.99	0.99	0.99
Total	57.89	57.20	56.52	55.93	55.34

Filing Fee and Publication Expenses

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

Licence Fee & RLDC Fees and Charges

83. The Petitioner has requested to allow the Petitioner to bill and recover License fee and RLDC fees and charges, separately from the Respondents in accordance with 2019 Tariff Regulations.



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

Goods and Services Tax

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

86. 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

87. 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.

88. We have considered the submissions of the Petitioner. The Petitioner has claimed consolidated security expenses for all the transmission assets owned by it on projected basis for the 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19 in Petition No. 260/MP/2020. The Commission vide order dated 3.8.2021 in Petition No. 260/MP/2020 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

89. 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

90. TANGEDCO has submitted that the trued up capital cost for 2014-2019 tariff period has to be shared among the beneficiaries as per the earlier Sharing Regulations notified in 2010. However, the new Sharing Regulations has been notified on 4.5.2020 and came into force with effect from 1.11.2020. Under these circumstances, it is essential to segregate the additional cost and tariff liability up to 31.10.2020 and from 1.11.2020 so as to allocate the charges based on the earlier Sharing Regulations of 2010 and the new Sharing Regulations of 2020.

91. We have considered the submissions of the Petitioner and TANGEDCO. During 2004-09 and 2009-14 tariff periods (upto 30.6.2011), the transmission charges for inter-State transmission systems were being shared in accordance with the Tariff Regulations for the respective tariff periods. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission system was governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2010 (2010 Sharing Regulations). With effect from 1.11.2020, sharing of



transmission charges is governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2020 (2020 Sharing Regulations). Accordingly, the liabilities of the DICs for arrears of transmission charges determined through this order shall be computed DIC wise in accordance with the provisions of respective Tariff Regulations and Sharing Regulation and shall be recovered from the concerned DICs through Bills under Regulation 15(2)(b) of the 2020 Sharing Regulations. For subsequent period, the billing, collection and disbursement of the transmission charges approved in this order shall be governed by the provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

92. To summarise:

- a) The revised AFC allowed in respect of the transmission asset for 2001-04 tariff period as per the APTEL's judgments are as follows:

Particulars	(₹ in lakh)		
	2001-02 (Pro-rata for 2 months)	2002-03	2003-04
AFC	19.81	137.28*	137.06*

** In addition to above, Return on Equity of ₹8.02 lakh and ₹9.16 lakh has been allowed in 2002-03 and 2003-04 respectively as per order dated 17.1.2006 in Petition No.36/2005 on account of additional equity of ₹50.13 lakh and ₹57.27 lakh for the year 2002-03 and 2003-04 respectively.*

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

Particulars	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
AFC	133.48	162.27	164.86	157.93	151.07

- c) The consequential revision of AFC allowed 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	135.58	132.35	129.03	123.68	118.69

d) The 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	74.86	70.57	61.18	60.49	59.88

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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	57.89	57.20	56.52	55.93	55.34

93. This order disposes of Petition No. 133/TT/2020 in terms of the above discussions and findings.

sd/-
(P.K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I.S. Jha)
Member

