

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 326/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: 21.09.2021

In the Matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and revision of transmission tariff of 2001-04, 2004-09 and 2009-14 tariff periods and truing up of transmission tariff of 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for assets under Korba-Budhipadar Transmission System in Western Region.

And in the Matter of:

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

.....Petitioner

Vs.

1. Madhya Pradesh Power Management Company Limited,
Shakti Bhawan, Rampur, Jabalpur - 482 008.
2. Madhya Pradesh Power Transmission Company Limited,
Shakti Bhawan, Rampur, Jabalpur - 482 008.
3. Madhya Pradesh Audyogik Kendra,
Vikas Nigam (Indore) Limited,
3/54, Press Complex, Agra-Bombay Road, Indore - 452 008.
4. Maharashtra State Electricity Distribution Company Limited,
Hongkong Bank Building, 3rd Floor, M.G. Road, Fort, Mumbai - 400 001.
5. Maharashtra State Electricity Transmission Company Limited,
Prakashganga, 6th Floor, Plot No. C-19, E-Block,



Bandra Kurla Complex, Bandra (East) Mumbai - 400 051.

6. Gujarat Urja Vikas Nigam Limited,
Sardar Patel Vidyut Bhawan,
Race Course Road, Vadodara - 390 007.
7. Gujarat Energy Transmission Corporation Limited,
Sardar Patel Vidyut Bhawan,
Race Course Road, Vadodara – 390 007.
8. Electricity Department,
Government of Goa, Vidyut Bhawan, Panaji,
Near Mandvi Hotel, Goa - 403 001.
9. Electricity Department,
Administration of Daman & Diu, Daman - 396 210.
10. Electricity Department,
Administration of Dadra Nagar Haveli, U.T., Silvassa - 396 230.
11. Chhattisgarh State Electricity Board,
P.O. Sunder Nagar, Dangania, Raipur,
Chhattisgarh - 492 013.
12. Chhattisgarh State Power Transmission Company Limited,
Office of The Executive Director (C&P),
State Load Dispatch Building, Dangania, Raipur - 492 013.
13. Chhattisgarh State Power Distribution Company Limited,
P.O. Sunder Nagar, Dangania, Raipur,
Chhattisgarh.

...Respondent(s)

For Petitioner : Shri S.S. Raju, PGCIL
Shri A.K. Verma, PGCIL
Shri D.K Biswal, PGCIL
Shri Ved Prakash Rastogi, PGCIL

For Respondents : None

ORDER

The instant petition has been filed by Power Grid Corporation of India Limited, for revision of transmission tariff of 2001-04, 2004-09 and 2009-14 periods; 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 the Korba-Budhipadar Transmission System (hereinafter referred to as the “transmission asset”) in Western Region.

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

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

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

3) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulation 2014 and tariff regulation’ 2019 as per para 9.0 and 10.0 above for respective block.

Further it is submitted that deferred tax liability before 01.04.2009 shall be recoverable from the beneficiaries or long-term customers / DIC, as and when the same is materialized as per Regulation 49 of 2014 and Regulation 67 of 2019 tariff regulation. The petitioner may be allowed to recover the deferred tax liability materialized 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 bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the respondents.



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

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

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

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

Background

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

(a) In-principle approval for implementation of 220 kV S/C Korba-Budhipadar transmission system, to transmit surplus power from Eastern Region to Western Region was accorded by the Central Electricity Authority vide its letter dated 24.7.1997. The Board of Directors of the Petitioner Company in its 67th meeting held on 17.9.1997 accorded the Investment Approval (IA) for the transmission system for ₹3064 lakh including IDC of ₹84 lakh. The approval for revised cost estimate of ₹3553 lakh was subsequently accorded by the Board of Directors in its 101st meeting held on 22.2.2000.

(b) The scope of the work covered under the transmission asset is as follows:

- i. Korba- Budhipadar 220 kV S/C line
- ii. Extension of 220 kV existing sub-station at Budhipadar
- iii. Extension of 220/132 kV existing sub-station at Korba

(c) The entire scope of work is covered in the instant petition. The details with regard to the transmission asset are as follows:

(₹ in lakh)

COD	Apportioned Approved Cost FR	RCE Approved Cost
1.9.1999	3064.00	3553.00



(d) The transmission tariff from 1.4.2001 to 31.3.2004 was determined vide order dated 18.7.2003 in Petition No. 49/2002. The tariff was revised on account of FERV adjustment vide order dated 17.1.2008 in Petition No. 49/2002.

(e) The tariff in respect of the transmission asset from 1.4.2004 to 31.3.2009 was determined vide order dated 16.3.2006 in Petition No. 69/2004 and further revised on account of FERV adjustment vide order dated 29.4.2008 in Petition No. 69/2004.

(f) The transmission tariff for the transmission asset from 1.4.2009 to 31.3.2014 was determined vide order dated 15.9.2010 in Petition No. 07/2010. Further, the tariff for the 2009-14 period was trued up and tariff for the period from 1.4.2014 to 31.3.2019 was determined vide order dated 7.10.2015 in Petition No. 162/TT/2014.

(g) The transmission tariff was allowed for 2014-19 tariff period vide order dated 7.10.2015 in Petition No. 162/TT/2014 and the transmission tariff based on truing up claimed by the Petitioner in the instant petition is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 7.10.2015 in Petition No. 162/TT/2014	245.49	248.33	251.21	254.14	257.14
Claimed by the Petitioner in the instant petition	245.60	249.04	251.86	254.79	258.15

(h) The Petitioner has sought revision of transmission tariff approved for 2001-04 and 2004-09 tariff periods on account of change in Interest on Loan (IoL) and Interest on Working Capital (IWC) to the extent of revision in IoL and in Maintenance Spares in terms of the judgments of Appellate Tribunal for Electricity (“APTEL”) dated 22.1.2007 in Appeal No. 81/2005 and batch matters and dated 13.6.2007 in Appeal No. 139/2006 and batch matters. 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 for the transmission asset for Korba-Budhipadar Transmission System in Western Region.



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

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

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

Sl. No.	Issue	APTEL's decision/direction
I	Computation of outstanding loan at the beginning of the tariff period i.e. 1.4.2004	The Commission is required to recalculate the loan outstanding as on 31.3.2004 based on loan repayment on normative basis.
II	Consequence of refinance of loan	Commission to consider the issue afresh
III	Treating depreciation available as deemed repayment of loan	Commission to make a fresh computation of outstanding loan



IV	Admissibility of depreciation up to 90%	Commission to consider the issue afresh
V	Cost of Maintenance Spares	Commission to consider the issue afresh
VI	Impact of de-capitalization 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 Appeals No.135 to 140 of 2005. Commission to act accordingly.
IX	Computation of interest on loan in Singrauli Station	Net loan closing at the end of a year is reflected as net loan opening on the first day of the next year. Commission shall re-compute the interest accordingly.

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

(l) Based on APTEL's judgments dated 22.1.2007 in Appeal No. 81/2005 and batch matters and dated 13.6.2007 in Appeal No. 139 of 2007 and batch matters, the Petitioner had sought revision of tariff of its transmission assets for 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 the Civil Appeals by the Hon'ble Supreme Court.

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



(n) Consequent to the Hon'ble Supreme Court's order dated 10.4.2018 in 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 petitions for 2014-19 tariff period in respect of concerned transmission assets.

(o) The instant petition was heard on 3.8.2021 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, transmission 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 at certain places, if required, are being applied which are indicated.

(p) The transmission asset was put under commercial operation on 1.9.1999. The tariff in respect of the transmission asset during 2001-04, 2004-09 and 2009-14 periods was worked out based on the admitted capital cost of the transmission asset as on COD and Additional Capital Expenditure (ACE) during the respective periods. Accordingly, considering the admitted capital cost as on COD, tariff is being revised for 2001-04, 2004-09 and 2009-14 tariff periods in terms of APTEL's judgement dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters and judgment dated 13.6.2007 in Appeal No. 139 of 2006 and batch matters. The details of admitted capital cost as on COD and ACE admitted in respect of the transmission asset are as follows:

SI. No.	Asset	Admitted Expenditure up to COD	(₹ In lakh)	
			Decapitalisation due to FERV 2001-04	Admitted Capital Cost as on 31.3.2004
1.	Assets under Korba-Budhipadar Transmission System	3012.57	8.82	3003.76

4. The Respondents are transmission utilities, distribution licensees and power departments who are procuring transmission services from the Petitioner, mainly beneficiaries of the Western 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. Madhya Pradesh Power Management Company Ltd. (MPPMCL), Respondent No. 1, has filed its reply vide affidavit dated 5.6.2020. MPPMCL has raised issues like revision of tariff, income tax rate for grossing up of RoE, additional capitalization and decapitalization for 2019-24 period. The Petitioner has filed its rejoinder to the reply of MPPMCL vide affidavit dated 8.6.2021. The issues raised by MPPMCL and the clarifications given by the Petitioner are considered in the relevant paragraphs of this order.

Re: Interest on Loan (IoL)

6. APTEL while dealing with the issue of computation of IoL, vide judgement 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 judgement dated 14.11.2006 in Appeal No. 94 of 2005 and Appeal No. 96 of 2005. APTEL vide its judgement 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 the IoL liability for the period from 1.4.1998 to 31.3.2001. In view of above, the interest allowed for 2001-04 and 2004-09 tariff periods is revised on the basis of the normative debt repayment methodology.



Re: Additional Capital Expenditure (ACE)

7. APTEL *vide* its judgement dated 13.6.2007 in Appeal No. 139 of 2006 and batch matters held that ACE after commercial operation date (COD) should also be considered for computation of maintenance spares. In view of above, the maintenance spares to be considered for computation of working capital for the 2001-04 and 2004-09 periods are also required to be revised taking into consideration ACE after COD.

Re: Depreciation

8. As regards depreciation, APTEL *vide* its judgement 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.

9. In view of the above directions of APTEL, the outstanding loan allowed for the transmission asset for the 2001-04 and 2004-09 tariff periods is revised in the instant order.

10. The revision of transmission tariff allowed for 2001-04 and 2004-09 tariff periods necessitates the revision of tariff allowed for 2009-14 period which is also being done in the instant order. The implementation of the directions of APTEL in judgement dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters and judgment dated 13.6.2007 in Appeal No. 139 of 2006 and batch matters was kept pending in case of the Petitioner awaiting the outcome of the Civil Appeals filed before the Hon'ble Supreme Court. Taking into consideration the facts of the case and keeping in view the interest of the consumers, we are of the view that the beneficiaries should not be burdened with the carrying cost for the difference in the



tariff allowed earlier and allowed in the instant order for 2001-04, 2004-09 and 2009-14 tariff periods. Therefore, we direct that the Petitioner will neither claim nor pay any carrying cost from or to the beneficiaries for the difference, if any, in the tariff allowed earlier and the 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.

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

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

13. This order is issued considering the submissions made in the petition vide affidavits dated 14.1.2020 and 8.4.2021, reply filed by MPPMCL vide affidavit dated 5.6.2020 and rejoinder to the reply of MPPMCL filed by the Petitioner vide affidavit dated 8.6.2021.

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

2001-04 Tariff Period

14. The Commission vide order dated 18.7.2003 in Petition No. 49/2002 approved the transmission charges and thereafter revised the tariff vide order dated 17.1.2008 in Petition No. 49/2002 in respect of the transmission asset for 2001-04 period.

15. The transmission charges approved for 2001-04 period vide order dated 17.1.2008 in Petition No. 49/2002 are as follows:



(₹ in lakh)			
Particulars	2001-02	2002-03	2003-04
Depreciation	81.63	81.63	81.63
Return on Equity	105.91	105.91	105.91
O&M Expenses	69.00	73.14	77.52
Advance against Depreciation	0.00	0.00	114.26
Interest on Loan	285.17	285.17	265.22
Interest on Working Capital	15.12	15.47	17.69
Total	556.83	561.32	662.23

16. 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	2002-03	2003-04
Depreciation	81.63	81.63	81.63
Return on Equity	105.91	105.91	105.91
O&M Expenses	69.00	73.14	77.52
Advance against Depreciation	0.00	0.00	114.26
Interest on Loan	285.30	285.30	265.19
Interest on Working Capital	15.12	15.48	17.69
Total	556.97	561.46	662.20

17. The Petitioner has claimed that the transmission tariff for 2001-04 period was approved by the Commission vide order dated 17.1.2008 in Petition No.49/2002. No ACE was claimed by the Petitioner during 2001-04 tariff period.

18. We have considered the submissions of the Petitioner and perused the order dated 17.1.2008 in Petition No. 49/2002. The tariff allowed in respect of the transmission asset on the basis of the following:

- a) Admitted capital cost of ₹ 3012.57 lakh as on COD of the transmission asset;
- b) Weighted Average Rate of Interest on actual loan, Weighted Average, Rate of Depreciation, Rate of Interest for Working Capital and O&M Expenses as per order dated 17.1.2008 in Petition No. 49/2002.



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	2002-03	2003-04
Depreciation	81.63	81.63	81.63
Return on Equity	105.91	105.91	105.91
O&M Expenses	69.00	73.14	77.52
Advance against Depreciation	0.00	0.00	114.26
Interest on Loan	285.30	285.30	265.18
Interest on Working Capital	15.12	15.48	17.69
Total	556.96	561.46	662.19

20. The Annual Fixed Charges (AFC) allowed for 2001-04 tariff period vide order dated 17.1.2008 in Petition No. 49/2002, revised AFC claimed in the instant petition and AFC allowed in the instant order are as follows:

(₹ in lakh)			
Particulars	2001-02	2002-03	2003-04
AFC approved vide order dated 17.1.2008 in Petition No.49/2002	556.83	561.32	662.23
AFC claimed by the Petitioner in the instant petition	556.97	561.46	662.20
AFC allowed in the instant order	556.96	561.46	662.19

2004-09 Tariff Period

21. The Commission vide order dated 16.3.2006 in Petition No. 69/2004 approved the transmission charges in respect of the transmission asset for 2004-09 period and further revised the same on account of FERV adjustment vide order dated 29.4.2008 in Petition No. 69/2004. The Petitioner has claimed tariff based on capital cost of ₹3003.76 lakh after accounting for de-capitalization of ₹8.82 lakh on account of FERV. The transmission charges approved for 2004-09 period vide order dated 29.4.2008 in Petition No. 69/2004 are as follows:

(₹ in lakh)					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	81.39	81.39	81.39	81.39	81.39
Return on Equity	92.67	92.67	92.67	92.67	92.67



O&M Expenses	69.89	72.67	75.68	78.55	81.84
Advance against Depreciation	0.00	152.79	152.79	152.79	113.33
Interest on Loan	175.29	141.18	107.06	72.95	47.96
Interest on Working Capital	11.98	14.36	14.11	13.87	13.13
Total	431.23	555.07	523.71	492.22	430.33

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

Particulars	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	81.39	81.39	81.39	81.39	81.39
Return on Equity	92.67	92.67	92.67	92.67	92.67
O&M Expenses	69.89	72.67	75.68	78.55	81.84
Advance against Depreciation	0.00	152.79	152.79	152.79	113.31
Interest on Loan	175.16	141.05	106.94	72.84	47.86
Interest on Working Capital	11.98	14.36	14.11	13.87	13.12
Total	431.09	554.94	523.58	492.10	430.20

23. 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 ₹3003.76 lakh as on 1.4.2004 for transmission asset;
- b) Weighted Average Rate of Interest on actual loan adopted from order dated 29.4.2008 in Petition No. 69/2004; and
- c) Weighted Average Rate of Depreciation, Rate of Interest for Working Capital and O&M Expenses as per order dated 29.4.2008 in Petition No. 69/2004.

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:

Particulars	(₹ in lakh)				
	2004-05	2005-06	2006-07	2007-08	2008-09
Depreciation	81.39	81.39	81.39	81.39	81.39
Interest on Loan	175.16	141.05	106.94	72.84	47.86
Return on Equity	92.67	92.67	92.67	92.67	92.67
Advance against Depreciation	0.00	152.79	152.79	152.79	113.31



Interest on Working Capital	11.98	14.36	14.11	13.87	13.12
O&M Expenses	69.89	72.67	75.68	78.55	81.84
Total	431.10	554.94	523.58	492.11	430.20

25. Annual Fixed Charges (AFC) allowed for 2004-09 tariff period vide order dated 29.4.2008 in Petition No. 69/2004, 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 29.4.2008 in Petition No. 69/2004	430.78	555.18	523.72	492.15	430.05
AFC claimed by the Petitioner in the instant petition	431.09	554.94	523.58	492.10	430.20
AFC allowed in the instant order	431.10	554.94	523.58	492.11	430.20

2009-14 Tariff Period

26. The Commission vide order dated 15.9.2010 in Petition No. 7/2010 with I.A. No. 16/2010 approved the tariff in respect of the transmission asset for 2009-14 period and vide order dated 7.10.2015 in Petition No. 162/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	159.06	159.06	159.06	28.28	28.28
Interest on Loan	36.10	23.02	11.37	2.64	0.38
Return on Equity	123.61	128.14	128.26	128.26	129.81
Interest on Working capital	10.13	10.15	10.12	7.44	7.66
O&M Expenses	69.62	73.56	77.80	82.35	87.04
Total	398.51	393.92	386.60	248.96	253.16

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	159.06	159.06	159.06	28.28	28.28
Interest on Loan	35.99	22.92	11.25	2.55	0.36
Return on Equity	123.61	128.14	128.26	128.26	129.81



Interest on Working capital	10.12	10.14	10.11	7.43	7.66
O&M Expenses	69.62	73.56	77.80	82.35	87.04
Total	398.41	393.82	386.49	248.87	253.15

28. 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 ₹3003.76 lakh for the transmission asset as on 1.4.2009;
- b) No ACE during 2009-14 period;
- c) Weighted Average Rate of Interest on actual loan derived/adopted from order dated 7.10.2015 in Petition No. 162/TT/2014; and
- d) Weighted Average Rate of Depreciation as per order dated 7.10.2015 in Petition No. 162/TT/2014.

29. In view of the above, the revised transmission charges 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
Depreciation	159.06	159.06	159.06	28.28	28.28
Interest on Loan	35.99	22.92	11.25	2.55	0.36
Return on equity	123.61	128.14	128.26	128.26	129.81
Interest on Working Capital	10.12	10.14	10.11	7.43	7.66
O&M Expenses	69.62	73.56	77.80	82.35	87.04
Total	398.40	393.81	386.49	248.87	253.14

30. Annual Fixed Charges (AFC) allowed for 2009-14 tariff period vide order dated 7.10.2015 in Petition No. 162/TT/2014, 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 7.10.2015 in Petition No. 162/TT/2014	398.51	393.92	386.60	248.96	253.16
AFC claimed by the Petitioner in the instant petition	398.41	393.82	386.49	248.87	253.15
AFC allowed in the instant order	398.40	393.81	386.49	248.87	253.14



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:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	28.28	28.28	28.28	28.28	28.28
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on equity	129.91	130.50	130.44	130.44	130.79
Interest on Working Capital	8.03	8.19	8.34	8.49	8.66
O&M Expenses	79.38	82.07	84.80	87.58	90.42
Total	245.60	249.04	251.86	254.79	258.15

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

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M expenses	6.62	6.84	7.07	7.30	7.54
Maintenance Spares	11.91	12.31	12.72	13.14	13.56
Receivables	40.93	41.51	41.98	42.47	43.03
Total	59.46	60.66	61.77	62.91	64.13
Rate of Interest (%)	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	8.03	8.19	8.34	8.49	8.66

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 Regulation 9(6) of the 2014 Tariff Regulations. The Commission vide order dated 7.10.2015 in Petition No. 162/TT/2014 approved the transmission tariff in respect of the transmission asset for 2014-19 period based on admitted capital cost of ₹3003.76 lakh as on 31.3.2014 and the same has been considered for working out the trued up tariff for 2014-19 tariff period.

34. The Petitioner has not claimed any ACE during 2014-19 tariff period.



Capital Cost considered for true up of tariff for 2014-19 period

35. The capital cost considered for truing up of tariff for 2014-19 tariff period is as follows:

(₹ in lakh)		
Capital Cost as on 1.4.2014	ACE during 2014-19 Period	Capital Cost as on 31.3.2019
3003.76	0.00	300.76

Debt-Equity Ratio

36. 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 77.96:22.04 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 the 2014-19 period in respect of the transmission asset. The details of debt-equity ratio in respect of the transmission asset as on 1.4.2014 and 31.3.2019 are as follows:

Particulars	Capital cost as on 1.4.2014 (₹ in lakh)	(in %)	Total cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	2341.82	77.96%	2341.82	77.96%
Equity	661.94	22.04%	661.94	22.04%
Total	3003.76	100.00%	3003.76	100.00%

Depreciation

37. The Petitioner has claimed depreciation considering capital expenditure of ₹3003.76 lakh as on 1.4.2014 in respect of the transmission asset. The Petitioner has not claimed any depreciation towards "IT Equipment" in the present petition.

38. The depreciation has been worked out as per the methodology provided in Regulation 27 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) and working of WAROD is attached as Annexure-1. The transmission asset has already completed 12 years of life as on 31.3.2014. The remaining depreciable value of ₹565.53 lakh has been spread across the balance useful life of 20 years in accordance with Regulation 27(5) of the 2014 Tariff Regulations. WAROD has been worked out after taking into account the depreciation rates of asset as prescribed in the 2014 Tariff Regulations and depreciation allowed during 2014-19 period in respect of the transmission asset as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	3003.76	3003.76	3003.76	3003.76	3003.76
ACE	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	3003.76	3003.76	3003.76	3003.76	3003.76
Average Gross Block	3003.76	3003.76	3003.76	3003.76	3003.76
Weighted average Rate of Depreciation (%)	0.94%	0.94%	0.94%	0.94%	0.94%
Balance useful life (at the beginning of the year) (Year)	20.00	19.00	18.00	17.00	16.00
Aggregate Depreciable Value	565.53	537.25	508.97	480.70	452.42
Depreciation during the year	28.28	28.28	28.28	28.28	28.28
Cumulative Aggregate Depreciation	2166.14	2194.41	2222.69	2250.96	2279.24
Remaining Aggregate Depreciable Value	537.25	508.97	480.70	452.42	424.14

39. The details of depreciation approved vide order dated 7.10.2015 in Petition No. 162/TT/2014, depreciation claimed in the instant petition and trued up depreciation allowed in respect of the transmission asset are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 7.10.2015 in Petition No. 162/TT/2014	28.28	28.28	28.28	28.28	28.28



Claimed by the Petitioner in the instant petition	28.28	28.28	28.28	28.28	28.28
Allowed after true-up in this order	28.28	28.28	28.28	28.28	28.28

Interest on Loan (IoL)

40. As the normative loan against the instant assets has already been fully repaid by the year 2013-14, Interest on normative loan during the tariff period 2014-19 is NIL.

Return on Equity (“RoE”)

41. 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

42. MPPMCL has submitted that the Petitioner has grossed-up RoE on the basis of actual taxes paid during 2016-17 and 2017-18 periods and has not placed on record the assessment orders for 2016-17 and 2017-18 periods. For 2018-19 period, the Petitioner has grossed-up RoE and has not claimed the effective tax rate based on actual taxes paid for 2018-19 period. MPPMCL has further submitted that the Petitioner’s Income Tax Assessment orders for Financial Years 2016-17, 2017-18 and 2018-19 periods have not been finalized. MPPMCL has submitted that the Petitioner has neither submitted copy of assessment orders for 2014-15 and 2015-



16 periods nor the audited accounts in respect of actual taxes paid for 2016-17 and 2017-18 periods and in the absence of these essential documents, it is not possible to scrutinize the claim of the Petitioner in a proper way.

43. In response, the Petitioner has submitted that the assessment orders for years 2014-15, 2015-16 and 2016-17 periods have been issued by the Income Tax Department and Income Tax returns for years 2017-18 and 2018-19 have been filed. The Petitioner has further submitted that the assessment orders for the years 2014-15 and 2015-16 have already been submitted in Petition No. 20/TT/2020 and a copy of the assessment order for the year 2016-17 has been filed in the instant petition along with the rejoinder.

44. We have considered the submissions of the Petitioner and MPPMCL. The Commission vide order dated 2.2.2021 in Petition No. 312/TT/2020 has already dealt with the above issue of MPPMCL observing that the Petitioner has submitted assessment orders issued by the Income Tax Department for the years 2014-15, 2015-16 and 2016-17 and Income Tax Returns have been filed by the Petitioner for the years 2017-18 and 2018-19. The Commission in the said order further observed that the Petitioner has submitted the documents as pointed out by MPPMCL. In view of our finding given in the order dated 2.2.2021 in Petition No. 312/TT/2020, no fresh consideration on this issue is required. Accordingly, the submissions of MPPMCL are rejected.

45. 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

46. 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 truing up of the tariff of 2014-19 period in terms of the provisions of the 2014 Tariff Regulations and the same 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

47. Accordingly, 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	661.94	661.94	661.94	661.94	661.94
Addition due to ACE	0.00	0.00	0.00	0.00	0.00
Closing Equity	661.94	661.94	661.94	661.94	661.94
Average Equity	661.94	661.94	661.94	661.94	661.94
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	129.81	130.43	130.43	130.43	130.79

48. The details of RoE approved vide order dated 7.10.2015 in Petition No. 162/TT/2014, RoE claimed in the instant petition and trued up RoE allowed in respect of the transmission asset are as follows:



(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 7.10.2015 in Petition No. 162/TT/2014	129.81	129.81	129.81	129.81	129.81
Claimed by the Petitioner in the instant petition	129.91	130.50	130.44	130.44	130.79
Allowed after true-up in this order	129.81	130.43	130.43	130.43	130.79

Operation & Maintenance Expenses (O&M Expenses)

49. 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
Transmission Line					
220 kV S/C single conductor (km)	184.00	184.00	184.00	184.00	184.00
Norms (₹ lakh/km)	0.20	0.21	0.22	0.22	0.23
O&M Transmission Line	37.17	38.46	39.74	41.03	42.32
Sub-station Bays					
220 kV Sub-station bays (number)	1	1	1	1	1
Norms (₹ lakh/bay)	42.21	43.61	45.06	46.55	48.10
O&M Expenses for Sub-station	42.21	43.61	45.06	46.55	48.10
Total O&M Expenses (₹ in lakh)	79.38	82.07	84.80	87.58	90.42

50. The details of O&M Expenses approved vide order dated 7.10.2015 in Petition No. 162/TT/2014, O&M Expenses claimed in the instant petition and true up O&M Expenses allowed in respect of the transmission asset are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 7.10.2015 in Petition No. 162/TT/2014	79.38	82.07	84.80	87.58	90.42
Claimed by the Petitioner in the instant petition	79.38	82.07	84.80	87.58	90.42
Allowed after true-up in this order	79.38	82.07	84.80	87.58	90.42



Interest on Working Capital (IWC)

51. The Petitioner has claimed IWC as per Regulation 28 of the 2014 Tariff Regulations. IWC allowed in respect of the transmission asset is as follows:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses (O&M Expenses for one Month)	6.61	6.84	7.07	7.30	7.54
Maintenance Spares (15% of O&M Expenses)	11.91	12.31	12.72	13.14	13.56
Receivables (Equivalent to two months of annual transmission charges)	40.91	41.49	41.98	42.46	43.02
Total Working Capital	59.44	60.64	61.76	62.90	64.12
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest of working capital	8.02	8.19	8.34	8.49	8.66

52. The details of IWC approved vide order dated 7.10.2015 in Petition No. 162/TT/2014, IWC claimed in the instant petition and trued up IWC allowed in respect of the transmission asset are as follows:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 7.10.2015 in Petition No. 162/TT/2014	8.02	8.17	8.32	8.48	8.63
Claimed by the Petitioner in the instant petition	8.03	8.19	8.34	8.49	8.66
Allowed after true-up in this order	8.02	8.19	8.34	8.49	8.66

Approved Annual Fixed Charges for 2014-19 Tariff Period

53. Accordingly, Annual Fixed Charges after truing up for 2014-19 tariff period are as follows:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	28.28	28.28	28.28	28.28	28.28
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	129.81	130.43	130.43	130.43	130.79
Interest on Working Capital	8.02	8.19	8.34	8.49	8.66
O&M Expenses	79.38	82.07	84.80	87.58	90.42



Total	245.48	248.96	251.85	254.78	258.14
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54. The details of Annual Transmission Charges approved vide order dated 7.10.2015 in Petition No. 162/TT/2014, as claimed in the instant petition and trueed up Annual Transmission Charges allowed in respect of the transmission asset are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 7.10.2015 in Petition No. 162/TT/2014	245.49	248.33	251.21	254.15	257.14
Claimed by the Petitioner in the instant petition	245.60	249.04	251.86	254.79	258.15
Allowed after true-up in this order	245.48	248.96	251.85	254.78	258.14

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD

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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	28.28	28.28	32.39	37.63	32.85
Interest on Loan	0.00	0.00	0.00	0.12	0.12
Return on equity	124.33	124.33	124.40	125.30	126.13
Interest on Working Capital	5.33	5.44	5.58	5.74	5.87
O&M Expenses	69.75	72.01	74.67	77.17	79.89
Total	227.69	230.06	237.04	245.96	244.86

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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	5.81	6.00	6.22	6.43	6.66
Maintenance Spares	10.46	10.80	11.20	11.58	11.98
Receivables	27.99	28.36	28.85	29.63	30.11
Total	44.26	45.16	46.27	47.64	48.75
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
Interest	5.33	5.44	5.58	5.74	5.87



57. The tariff for the 2019-24 period is allowed as discussed in subsequent paragraphs.

Capital Cost

58. 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 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.”*



59. The capital cost of ₹3003.76 lakh has been considered by the Commission for the transmission asset as on 31.3.2019 and the same 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.

Additional Capital Expenditure (ACE)

60. 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 ACE 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 assets 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 assets 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.”

61. The Petitioner has projected net ACE of ₹17.99 lakh after adjustment of decapitalisation during 2019-24 tariff period and the same is as follows:

Capital Cost as on 1.4.2019	Net ACE projected					(₹ in lakh)
	2019-20	2020-21	2021-22	2022-23	2023-24	Capital Cost as on 31.3.2024
3003.76	0.00	0.00	(-)2.70	20.68	0.00	3021.75

62. The Petitioner has submitted that ACE proposed is for replacement of deteriorating component/equipment in the system which may affect the stability and reliability of the grid in case of sudden failures. The Petitioner has further submitted that the same is covered under Regulation 25(2) of the 2019 Tariff Regulations.

63. MPPMCL has submitted that the Petitioner has proposed cost towards ACE and de-capitalization during 2019-24 period with respect to replacement of equipments installed long back but the Petitioner has not submitted any study to



arrive at which equipment needs replacement on priority and the reasons for the same. MPPMCL has also submitted that request of the Petitioner may be admitted only after prudence check of pre- study/survey.

64. In response, the Petitioner submitted detailed justification for replacement of equipment for 2019-24 period and the same is as follows:

a) 220 kV Circuit breaker (1 set): The circuit breakers (CB) were commissioned in 1999 and are going to complete 24 years of operation during 2019-24 tariff period. The hydraulic types are obsolete and have frequent maintenance issues such as hydraulic drive/ magnetic ventil failures, air leakages, SF6 gas leakages etc.

b) Isolators (4 sets): These isolators are of horizontal centre break (HCB) type and frequent problems of misalignment are being faced. Current transfer assembly on isolator top and other major spares are now no more available due to old/ obsolete designs. Further due to rusting, many MOM boxes have got damaged and due to obsolescence of technology timely support from O&M design is not available.

c) Current transformer (3 numbers): These CT are of BHEL make dead tank type with porcelain housing and about to complete 24 years of service during the 2019-24 period. These CTs are hermetically sealed equipment and therefore major repair at site is not recommended.

d) Capacitive voltage transformer (3 numbers CVT): Due to ageing, there is leakage/ seepage from multiple points such as EMU tank, oil level glass, secondary terminal boxes. CVTs are hermetically sealed equipment and therefore major repair at site is not recommended. Further, after 25 years of operation, repairing of CVT at manufacturer works is not techno-economically viable due to change in design by manufacturer.

65. We have considered the submission of the Petitioner and MPPMCL. The proposed ACE is towards replacement of isolators, CTs, capacitive voltage



transformers (CVTs), control and relay panels, CB and power and control cables, due to obsolescence of technology. These items are of critical nature and their failure may affect the stability and reliability of the grid. It is observed that the Petitioner has submitted the OEM communications made in respect of equipment that are sought to be replaced in 2019-24 tariff period. As such, the replacement of these obsolete equipment and consequent ACE (and de-capitalization) is approved, subject to true-up on actual basis.

66. ACE and de-capitalisation allowed for 2019-24 tariff period is as follows:

(₹ in lakh)							
Sl. No.	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24	Total
1	ACE	0.00	0.00	17.43	53.32	0.00	70.75
2	De-capitalisation	0.00	0.00	20.12	32.64	0.00	52.76
3	Net ACE (3=1-2)	0.00	0.00	(-)2.69	20.68	0.00	17.99

Debt-Equity Ratio

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

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

Provided that:

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

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

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



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

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

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

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

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

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

68. 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:

Particulars	Capital cost as on 1.4.2019 (₹ in lakh)	(in %)	Total cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	2341.82	77.96%	2364.97	78.26%
Equity	661.94	22.04%	656.79	21.74%
Total	3003.76	100.00%	3021.75	100.00%

Depreciation

69. 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.”

70. The transmission asset has already completed more than 12 years before 1.4.2019. Accordingly, depreciation has been calculated based on the remaining depreciable value (upto 90% of existing gross block of asset) to be recovered over the balance useful life and thereafter no depreciation is allowed on existing asset. The transmission asset shall complete its useful life beyond 2019-24 tariff period. Further, the Commission vide Technical Validation letter dated 28.3.2021 directed the Petitioner to submit whether ACE claimed during 2019-24 period is for the purpose of life extension. In response, the Petitioner vide letter dated 8.4.2021, has submitted that there is no life extension in respect of the transmission asset.

71. Accordingly, depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019 over the remaining useful life of the transmission asset. Depreciation worked out is as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	3003.76	3003.76	3003.76	3001.07	3021.75
Addition during 2019-24 due to projected ACE	0.00	0.00	(-) 2.69	20.68	0.00
Closing Gross Block	3003.76	3003.76	3001.07	3021.75	3021.75
Average Gross Block	3003.76	3003.76	3002.42	3011.41	3021.75
Balance useful life at the beginning of the year (Year)	15.00	14.00	13.00	12.00	11.00



Depreciable Value	2703.38	2703.38	2702.17	2710.27	2719.58
Rate of Depreciation (%)	0.94%	0.94%	0.94%	1.00%	1.10%
Depreciation during the year	28.28	28.28	28.18	30.11	33.12
Cumulative Aggregate Depreciation	2307.52	2335.79	2348.90	2355.25	2388.37
Remaining Aggregate Depreciable Value	395.87	367.59	338.20	331.26	331.20

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. We have considered the submissions of the Petitioner. We observe that there are net add-caps during 2021-22 and 2022-23. The weighted average rates of IoL have been considered as claimed by the Petitioner. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during 2019-24 tariff period will be adjusted. The floating rate of interest, if any, shall be considered at the time of true up. Accordingly, IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed in respect of the transmission asset is as follows:

	(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	2341.82	2341.82	2341.82	2338.33	2350.21
Cumulative Repayments up to Previous Year	2341.82	2341.82	2341.82	2338.33	2343.00
Net Loan-Opening	0.00	0.00	0.00	0.00	7.21
Additions	0.00	0.00	12.20	37.32	0.00
Repayment during the year	0.00	0.00	12.20	30.11	7.21
Net Loan-Closing	0.00	0.00	0.00	7.21	0.00
Average Loan	0.00	0.00	0.00	3.60	3.60
Weighted Average Rate of Interest on Loan (%)	4.375%	4.375%	4.375%	4.376%	4.376%
Interest on Loan	0.00	0.00	0.00	0.16	0.16

Return on Equity (RoE)

74. Regulation 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, MAT rate applicable in 2019-20 period 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:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	661.94	661.94	661.94	662.74	671.54
Additions	0.00	0.00	0.80	8.80	0.00
Closing Equity	661.94	661.94	662.74	671.54	671.54
Average Equity	661.94	661.94	662.34	667.14	671.54
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	124.33	124.33	124.40	125.30	126.13

Operation & Maintenance Expenses (O&M Expenses)

76. Regulation 35(3)(a) and 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
Norms for sub-station Bays (₹ 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 (₹ 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 (₹ 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 (₹ 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- Balial 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

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:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Transmission Line					
220 kV S/C Korba-Budhipadar Ckt-III (single conductor line) (km)	184.00	184.00	184.00	184.00	184.00
Norms (₹ lakh/km)	0.25	0.26	0.27	0.28	0.29
O&M Transmission Line	46.37	47.84	49.68	51.34	53.18
Sub-station Bays					
One Number of 220 kV Sub-station bay @ korba (number)	1	1	1	1	1
Norms (₹ lakh/bay)	22.51	23.30	24.12	24.96	25.84



O&M Sub-station	22.51	23.30	24.12	24.96	25.84
Communication system					
PLCC (₹ in lakh)	22.54	22.54	22.54	22.54	22.54
Norms (%)	1	1	1	1	1
O&M communication system	22.51	23.30	24.12	24.96	25.84
Total O&M Expenses (₹ in lakh)	69.75	72.01	74.67	77.17	79.89

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

79. O&M Expenses approved in respect of the transmission asset for 2019-24 tariff period are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Transmission Line					
220 kV S/C single conductor line(km)	184.00	184.00	184.00	184.00	184.00
Norms (₹ lakh/km)	0.25	0.26	0.27	0.28	0.29
O&M Transmission Line	46.37	47.84	49.68	51.34	53.18
Sub-station Bays					
220 kV Sub-station (number)	1	1	1	1	1
Norms (₹ lakh/bay)	22.51	23.30	24.12	24.96	25.84
O&M Sub-station	22.51	23.30	24.12	24.96	25.84
Total O&M Expenses (₹ in lakh)	68.88	71.14	73.80	76.30	79.02



Interest on Working Capital (IWC)

80. Regulations 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;”

81. 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, whereas, RoI for 2020-21 onwards has been considered as 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus



350 basis points). The components of the working capital and interest thereon allowed in respect of the transmission asset are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for one Month)	5.74	5.93	6.15	6.36	6.58
Working Capital for Maintenance Spares (15% of O&M)	10.33	10.67	11.07	11.44	11.85
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	27.88	28.21	28.55	29.24	29.98
Total Working Capital	43.95	44.81	45.77	47.04	48.42
Rate of Interest (in %)	12.05%	11.25%	11.25%	11.25%	11.25%
Interest of working capital	5.30	5.04	5.15	5.29	5.45

Annual Fixed Charges for 2019-24 Tariff Period

82. The transmission charges allowed 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
Depreciation	28.28	28.28	28.18	30.11	33.12
Interest on Loan	0.00	0.00	0.00	0.16	0.16
Return on Equity	124.33	124.33	124.40	125.30	126.13
Interest on Working Capital	5.30	5.04	5.15	5.29	5.45
O&M Expenses	68.88	71.14	73.80	76.30	79.02
Total	226.78	228.78	231.53	237.16	243.87

Filing Fee and Publication Expenses

83. 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

84. The Petitioner has prayed for reimbursement of licence fee and recovery of RLDC fees and charges. 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 Regulations 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 & billed separately by the Petitioner. Further additional taxes, if any, are to be paid by the Petitioner on account of demand from Govt./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 for the transmission asset are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential IWC.

88. 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. 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. During 2001-04, 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 systems was governed by Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2010 and 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 Regulations and shall be recovered from the concerned DICs through Bill 2 under Regulation 15(2)(b) of the 2020 Sharing Regulations. Billing, collection and disbursement of 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.

91. To summarise:

a) The revised AFC allowed in respect of the transmission asset for period from 1.4. 2001 to 31.3.2004 as per the APTEL's judgments are as follows:

(₹ in lakh)			
Particulars	2001-02	2002-03	2003-04
AFC	556.96	561.46	662.19

b) The revised AFC allowed in respect of the transmission asset for the period from 1.4.2004 to 31.3.2009 as per the APTEL's judgments are as follows:

(₹ in lakh)					
Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
AFC	431.10	554.94	523.58	492.11	430.20

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	398.40	393.81	386.49	248.87	253.14

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	245.48	248.96	251.85	254.78	258.14

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	226.78	228.78	231.53	237.16	243.87

92. Annexure-I and Annexure-II given hereinafter shall form part of the order.



93. This order disposes of Petition No. 326/TT/2020 in terms of the above discussions and findings.

sd/-
(P. K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I. S. Jha)
Member

sd/-
(P. K. Pujari)
Chairperson



Annexure-I

Asset	Particular	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations (₹ in lakh)				
					2014-15	2015-16	2016-17	2017-18	2018-19
Asset	Land	0.00	0.00	0.00					
	Building	0.00	0.00	2.17					
	Transmission Line	2697.65	2697.65	1.16					
	Sub Station	262.60	262.60	1.16					
	PLCC	43.51	43.51	0.61					
	TOTAL	3003.76	3003.76		28.28	28.28	28.28	28.28	28.28
Average Gross Block (₹ in lakh)					2703.38	2703.38	2703.38	2703.38	2703.38
Weighted Average Rate of Depreciation (%)					0.94%	0.94%	0.94%	0.94%	0.94%



Annexure-II

Asset	Particular	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations (₹ in lakh)				
					2019-20	2020-21	2021-22	2022-23	2023-24
Asset	Land	0.00	0.00	0.00					
	Building	0.00	0.00	2.17					
	Transmission Line	2697.65	2697.65	1.16					
	Sub Station	262.60	280.59	1.16					
	PLCC	43.51	43.51	0.61					
	TOTAL	3003.76	3021.75		28.28	28.28	28.18	30.11	33.12
		Average Gross Block (₹ in lakh)			3003.76	3003.76	3002.42	3011.41	3021.75
		Weighted Average Rate of Depreciation (%)			0.94%	0.94%	0.94%	1.00%	1.10%

