

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 12/TT/2022

Coram:

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

Date of Order: 14.11.2022

In the matter of:

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and revision of transmission tariff of 2004-09 and 2009-14 tariff periods and truing-up of transmission tariff of the 2014-19 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 in respect of Combined Asset: (I) LILO of Korba-Raipur at Sipat, (II) 765 kV Sipat-Seoni Ckt-I & 765/400 kV ICT-I at Seoni and LILO of 400 kV Bhilai-Satpura line along with bay equipment at Seoni (III) 400/220 kV ICT-I along with two 220 kV line bays at Seoni (IV) Ckt-II of 400 kV Nagda-Dehgam Line, (V) Ckt-I of Nagda-Dehgam Line, (VI) 400 kV D/C Seoni-Khandwa T/L alongwith associated bays, 80 MVAR Bus Reactor, 765/400 kV ICT-II at Seoni S/S, LILO of Sardar-Sarovar-Nagda Line & 315MVA, 400/220 kV ICT-I at Rajgarh, (VII) 765 kV Sipat-Seoni Ckt-II and (VIII) 315 MVA, 400/220 kV ICT-II at Seoni Sub-station, ICT-I at Rajgarh and (IX) 315 MVA, 400/220 kV ICT-II at Rajgarh under "Sipat-I 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
State Load Despacth Building,
Dangania, Raipur – 492 013.
13. Chhattisgarh State Power Distribution Company Limited
P.O. Sunder Nagar, Dangania, Raipur
Chhattisgarh-492 01.

...Respondents

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

For Respondents : Shri Anindya Khare, MPPMCL



ORDER

The Petitioner, Power Grid Corporation of India Limited, a deemed transmission licensee has filed the instant petition for revision of transmission tariff of 2004-09 and 2009-14 tariff periods, truing-up of the transmission tariff of the period from 1.4.2014 to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (herein referred to as the “the 2014 Tariff Regulations”) and 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 (herein after referred to as “the 2019 Tariff Regulations”) in respect of the following assets under “Sipat-I Transmission System” in Western Region (hereinafter referred to as the “the transmission project”):

Asset-I: LILO of Korba-Raipur at Sipat;

Asset-II: 765 kV Sipat-Seoni Ckt-I & 765/400 kV ICT-I at Seoni and LILO of 400 kV Bhilai-Satpura line along with bay equipment at Seoni;

Asset-III: 400/220 kV ICT-I along with two 220 kV line bays at Seoni;

Asset-IV: Ckt-II of 400 kV Nagda-Dehgam Line;

Asset-V: Ckt-I of Nagda-Dehgam Line;

Asset-VI: 400 kV D/C Seoni-Khandwa T/L alongwith associated bays, 80 MVAR Bus Reactor, 765/400 kV ICT-II at Seoni S/S, LILO of Sardar-Sarovar-Nagda Line & 315MVA, 400/220kV ICT-I at Rajgarh;

Asset-VII: 765 kV Sipat-Seoni Ckt-II;

Asset-VIII: 315 MVA, 400/220 kV ICT-II at Seoni S/S, ICT-I at Rajgarh and

Asset-IX: 315 MVA, 400/220 kV ICT-II at Rajgarh (hereinafter referred to as “transmission assets”).



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

“1) Approve the revised 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) a) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 9 and 10 above for respective block.

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

4) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 70 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure (if any) in relation to the filing of petition.

5) Allow the petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the beneficiaries 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 beneficiaries.

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 beneficiaries, 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 the Hon'ble Commission deems fit and appropriate under the circumstances of the case and in the interest of justice”



Backdrop of the case

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

- a) The Investment Approval (IA) for the transmission system was accorded by Ministry of Power vide its letter no. 12/4/2021-PG dated 10.12.2003 at an estimated cost of ₹167298 lakh including IDC of ₹12323 lakh. Subsequently, Ministry of Power, vide its letter No. 12/1/2007-PG dated 5.3.2008 accorded approval for revised cost estimate of ₹233114 lakh including IDC of ₹16072 lakh (4th quarter, 2006 price level).
- b) Further, Board of Director of the Petitioner's company have accorded approval for Revised Cost Estimate-II (RCE-II) of transmission system associated with Sipat Stage-I STPP (3X660 MW) in its 270th meeting held on 26.3.2012 at an estimated cost of ₹227501 lakh including IDC of ₹18222 lakh (3rd quarter, 2011 Price level).
- c) The scope of the transmission project is as follows:

Asset	Name of the Asset	Actual COD
Asset-I	LILO of Korba-Raipur 400 kV S/C line	1.5.2006
Asset-II	765 kV Sipat-Seoni Ckt 1 along with associated bays, 765/400 kV ICT-I at Seoni and LILO of 400 kV Bhilai-Satpura line along with bay equipment	1.11.2007
Asset-III	400/220 kV ICT at Seoni along with two 220 kV line bays	1.12.2007
Asset-IV	Ckt II of 400 kV D/C Nagada-Dehgam Line	1.1.2008
Asset-V	Ckt 1 of 400 kV D/C Nagada-Dehgam Line	1.2.2008
Asset-VI	400 kV D/C Seoni-Khandwa TL, 80 MVAR Bus reactor, 765/400 kV ICT II at Seoni S/S, LILO of Sarda-Sarovar-Nagda Line	1.4.2008
Asset-VII	765 kV Sipat-Seoni Ckt II	1.5.2008
Combined Assets Part-I	Notional COD :1.5.2008	
Asset-VIII	315 MVA 400/220 kV ICT II at Seoni S/S, 315 MVA 400/220 kV ICT I	1.4.2008
Asset-IX	315 MVA ICT II	1.4.2009
Combined Assets Part-II	Notional COD :1.4.2009	

- d) The Commission approved the transmission charges in respect of Asset-I for 2004-09 tariff period vide order dated 23.1.2009 in Petition No. 42/2008 and subsequently revised on account of Additional Capital Expenditure



(ACE) incurred during 2007-08 and 2008-09 periods vide order dated 17.6.2009 in Petition No. 42/2009, vide order dated 10.5.2010 in Petition No. 3/2010 respectively.

- e) The Commission vide order dated 22.7.2009 in Petition No. 2/2009 approved the tariff of Asset-II to Asset-V for 2004-09 tariff period and was revised on account of ACE incurred during 2008-09 vide order dated 10.5.2010 in Petition No. 3/2010.
- f) Further, Commission vide order dated 1.6.2010 in Petition No.165/2009 has approved the tariff of Asset-VI to Asset-VIII for 2004-09 tariff period.
- g) The Commission vide order dated 27.4.2011 in Petition No. 270/2010 approved the tariff in respect of the Combined Asset Part-I (comprising of Asset-I to Asset-VII) and Combined Asset Part-II (comprising of Asset-VIII and Asset-IX) for 2009-14 tariff period and subsequently vide order dated 28.1.2016 in Petition No. 552/TT/2014 trued-up the tariff allowed for 2009-14 tariff period and determined the tariff for 2014-19 Tariff period.
- h) The Commission vide order dated 9.9.2016 in Petition No. 148/TT/2016 has approved the revised transmission trued-up tariff of 2009-14 tariff period and redetermination of tariff of 2014-19 Tariff period of Combined Asset Part-II based on RCE-II.
- i) The Petitioner has sought revision of transmission tariff approved in respect of the transmission assets for 2004-09 tariff period on account of change in Interest on Loan (“IoL”) and Interest on Working Capital (“IWC”) to the extent of revision in IoL and in Maintenance Spares in terms of the judgments of the Appellate Tribunal for Electricity (“the APTEL”) dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters and dated 13.6.2007 in Appeal No. 139 of 2006 and batch cases. The Petitioner has also sought consequential revision in respect of the transmission assets of tariff allowed for 2009-14 tariff period, truing up of tariff of 2014-19 tariff period and determination of tariff in respect of ‘Combined Asset’ of 2019-24 tariff period.



4. The Respondents are distribution licensees, power departments and transmission licensees, 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 of this application has also been published in the newspapers in accordance with Section 64 of the Electricity Act 2003. No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers by the Petitioner. MPPMCL, Respondent No. 1, has filed its reply vide affidavit dated 18.2.2022 and has raised issues of prudence check before revision of tariff, grossing up of Return on Equity (RoE) during 2014-19 tariff period and the effect of GST. The Petitioner vide affidavit dated 9.3.2022 has filed rejoinder to the reply of MPPMCL.

6. MPPMCL has submitted that the tariff allowed for the transmission assets earlier may be revised only after due prudence check. In response, the Petitioner has reiterated the submissions made by in the petition.

7. We have considered the submissions of the Petitioner and MPPMCL regarding the revision of tariff of 2001-04, 2004-09 and 2009-14 tariff periods. APTEL vide judgment dated 22.1.2007 in Appeal No. 81 of 2005 and batch matters observed that IoL for the period from 1.4.1998 to 31.3.2001 shall be computed only on normative loan repayment as per its judgment dated 14.11.2006 in Appeal No. 94 of 2005 and Appeal No. 96 of 2005. APTEL vide its judgment dated 14.11.2006 had set aside the Commission's methodology of computation of loan on actual repayment basis or normative repayment whichever is higher and held that the Commission is required to adopt normative debt repayment methodology for



working out IoL liability order for the period from 1.4.1998 to 31.3.2001. APTEL vide judgment dated 13.6.2007 in Appeal No. 139/2006 and batch matters further held that Additional Capital Expenditure (ACE) after COD should also be considered for computation of maintenance spares. Further, APTEL in 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. In view of above directions of APTEL, the outstanding loan allowed for the transmission assets for 2004-09 tariff period is revised in the instant order. The Commission and certain interested parties filed Civil Appeals against the APTEL's judgments before the Hon'ble Supreme Court in 2007. Based on the APTEL's judgments dated 22.1.2007 and 13.6.2007, the Petitioner had sought revision of tariff of its transmission assets for 2001-04 and 2004-09 tariff periods in Petition No.121/2007. The Commission taking into consideration the pendency of Appeals before the Hon'ble Supreme Court adjourned the said petition *sine die* and directed that the same be revived after the disposal of Civil Appeals by the Hon'ble Supreme Court.

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



9. On the basis of the above directions in order dated 18.1.2019 in Petition No. 121/2007, PGCIL sought revision of the tariff allowed earlier for the 2001-04 and 2004-09, 2009-14 tariff periods in all applicable cases and the consequent revision of tariff of 2014-19 tariff period. The Commission has revised the tariff of the 2001-04 and 2004-09 tariff periods allowed earlier for the transmission assets of the Petitioner on the basis of the APTEL's judgement at the stage of truing up of the 2014-19 tariff and determination of tariff of the 2019-24 tariff period in some of the petitions filed by the Petitioner.

10. In a similar case, the Petitioner filed Petition No.288/TT/2019 for revision of transmission tariff for 2001-04, 2004-09, 2009-14 tariff periods, truing-up of transmission tariff of 2014-19 tariff period and determination of transmission tariff for 2019-24 tariff period for LILO of 400 kV S/C Chamera-1 Kishenpur transmission line at Chamera-II under transmission system associated with Chamera HEP Stage-II Transmission System in Northern Region. BRPL objected to the re-opening of the tariff of the transmission assets where final tariff has already been determined, on the ground that no appeal was filed by Petitioner against them and as such the orders of the Commission passed therein have attained finality. The objections of BRPL were rejected by the Commission vide order dated 6.11.2019 and tariff of 2001-04, 2004-09 and 2009-14 tariff periods earlier allowed for LILO of 400 kV S/C Chamera-1 Kishenpur transmission line at Chamera-II under transmission system associated with Chamera HEP Stage-II Transmission System in Northern Region was revised by the Commission vide order dated 31.7.2020. BRPL and BYPL filed Appeal No.212 of 2020 & IA No.1683 of 2022 and Appeal No.335 of 2022 & IA No.1580 of 2020 respectively against the Commission's orders



dated 6.11.2019 and 31.7.2020 in Petition No.288/TT/2019 before APTEL. APTEL vide judgement dated 17.10.2022 in the abovesaid Appeals has set aside the Commission's interim dated 6.11.2019 and the final order dated 31.7.2020 in Petition No.288/TT/2019 filed by PGCIL. The relevant portion of the APTEL's judgement dated 17.10.2022 is as follows:

“25. For the foregoing reasons, we find that the objections taken by the appellants to the maintainability of the petition (no. 288/TT/2019), in the case involving them, were wrongly rejected by the Central Commission by Order dated 6.11.2019. We hold to the contrary and, thus, set aside and vacate the said order. Resultantly, the subsequent proceedings in same matter taken out before the Central Commission are found to be impermissible rendering the final Order dated 31.07.2020 non est. The same is also consequently set aside.

26. The appeals are allowed in above terms. The pending applications are rendered infructuous and stand disposed of accordingly.”

11. In view of the above referred APTEL's judgement dated 17.10.2022 in Appeal No.212 of 2020 & IA No.1683 of 2022 and Appeal No.335 of 2022 & IA No.1580 of 2020, the Petitioner's prayer for revision of revision of transmission tariff of 2004-09 and 2009-14 tariff periods of the transmission assets is not allowed.

12. It is further observed that MPPMCL has raised the issue of RoE and MAT rates in other petitions as well. The Commission has already rejected the contentions of MPPMCL other petitions including Petition No. 322/TT/2020. As MPPMCL has not challenged the findings, the same have attained finality. In view of this, the pleas raised by MPPMCL are rejected. Further, MPPMCL's submissions regarding RoE and MAT, Petitioner's clarifications thereto and the Commission's findings on the said issues have not been repeated herein for the sake of brevity.

13. This order is issued considering the submissions made by the Petitioner in the petition, affidavits dated 5.12.2019 and 18.2.2022.



14. The hearing in this matter was held on 1.8.2022 through video conference and the order was reserved. Having heard the representatives of the parties and after perusal of the materials on record, we proceed to dispose of the petition.

Truing-up of Annual Fixed Charges for the 2014-19 Tariff Period

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

(₹ in lakh)

Combined Assets Part-I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	11569.17	11569.17	11569.17	11569.17	11569.17
Interest on Loan	5499.93	4806.59	4237.67	3567.35	2937.37
Return on equity	12958.00	13017.42	13010.82	13010.82	13045.81
O&M Expenses	2618.16	2705.74	2794.81	2888.09	2983.77
Interest on Working Capital	835.80	826.04	817.72	807.44	799.03
Total	33481.06	32924.96	32430.19	31842.87	31335.15

(₹ in lakh)

Combined Assets Part-II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	330.66	330.66	330.66	330.66	330.66
Interest on Loan	198.71	173.61	150.41	125.74	101.63
Return on equity	370.55	372.24	372.06	372.06	373.06
O&M Expenses	560.79	579.39	598.65	618.48	639.01
Interest on Working Capital	51.69	52.18	52.71	53.24	53.84
Total	1512.40	1508.08	1504.49	1500.18	1498.20

16. The details of trued-up Interest on Working Capital (IWC) claimed by the Petitioner in respect of the transmission assets are as follows:

(₹ in lakh)

Combined Assets Part-I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M expenses	218.18	225.48	232.90	240.67	248.65
Maintenance Spares	392.72	405.86	419.22	433.21	447.57
Receivables	5580.18	5487.49	5405.03	5307.14	5222.53
Total	6191.08	6118.83	6057.15	5981.02	5918.75
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	835.80	826.04	817.72	807.44	799.03

(₹ in lakh)

Combined Assets Part-II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M expenses	46.73	48.28	49.89	51.54	53.25



Maintenance Spares	84.12	86.91	89.80	92.77	95.85
Receivables	252.07	251.35	250.75	250.03	249.70
Total	382.92	386.54	390.44	394.34	398.80
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	51.69	52.18	52.71	53.24	53.84

Capital Cost as on 1.4.2014

17. Capital cost of the transmission assets has been calculated in accordance with Regulations 9(3) of the 2014 Tariff Regulations.

18. The Commission vide order dated 28.1.2016 in Petition No. 552/TT/2014 allowed the transmission tariff in respect of the transmission assets for 2014-19 period based on admitted capital cost of ₹220117.21 lakh for Combined Assets Part-I and vide order dated 9.9.2016 in Petition No. 148/TT/2016 ₹6302.17 lakh for Combined Assets Part-II as on 31.3.2014 has been considered as on 1.4.2014 for working out the trued-up tariff in respect of the transmission assets for 2014-19 tariff period.

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

20. Accordingly, capital cost considered for truing up of tariff for 2014-19 tariff period in respect of the transmission assets is as follows:

(₹ in lakh)				
Assets	Apportioned Approved Capital Cost as per RCE-II	Capital Cost allowed as on 1.4.2014	ACE during 2014-19 period	Capital Cost allowed as on 31.3.2019
Combined Assets Part-I	221198.58	220117.21	0.00	220117.21
Combined Assets Part-II	6302.17	6302.17	0.00	6302.17
Total	227500.75	226419.38	0.00	226419.38

Debt-Equity Ratio

21. The debt-equity ratio has been allowed in accordance with Regulation 19(3) of the 2014 Tariff Regulations. As per Regulation 19(3) of the 2014 Tariff Regulations, the debt: equity ratio allowed by the Commission for determination of



tariff for the period ending on 31.3.2014 shall be considered. Accordingly, debt-equity ratio considered earlier for the purpose of determination of tariff of 2014-19 tariff period has been considered for the purpose of truing up of tariff of the transmission asset for 2014-19 tariff period. The details of the debt-equity ratio as on 1.4.2014 and 31.3.2019 in respect of the transmission asset are as follows:

Combined Assets Part- I	As on 1.4.2014		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	154089.21	70.00	154089.21	70.00
Equity	66028.00	30.00	66028.00	30.00
Total	220117.21	100.00	220117.21	100.00
Combined Assets Part- II	As on 1.4.2014		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	4414.04	70.04	4414.04	70.04
Equity	1888.13	29.96	1888.13	29.96
Total	6302.17	100.00	6302.17	100.00

Depreciation

22. The depreciation has been allowed as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations. Depreciation has been allowed considering capital expenditure as on 1.4.2014 and approved ACE during the 2014-19 tariff period. The Gross Block during the 2014-19 tariff period has been depreciated at weighted average rate of depreciation (WAROD). WAROD at Annexure-I has been worked out after taking into account the depreciation rates of assets as prescribed in the 2014 Tariff Regulations and trued-up depreciation allowed for the transmission assets for the 2014-19 tariff period are as follows:

		(₹ in lakh)				
	Combined Assets Part-I	2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Gross Block	220117.21	220117.21	220117.21	220117.21	220117.21
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	220117.21	220117.21	220117.21	220117.21	220117.21
D	Average Gross Block (A+C)/2	220117.21	220117.21	220117.21	220117.21	220117.21
E	Free hold Land	260.37	260.37	260.37	260.37	260.37
F	Average Gross Block (90%	219856.84	219856.84	219856.84	219856.84	219856.84



	Combined Assets Part-I	2014-15	2015-16	2016-17	2017-18	2018-19
	depreciable assets)					
G	Depreciable value (F*90%)	197871.16	197871.16	197871.16	197871.16	197871.16
H	Weighted Average Rate of Depreciation (WAROD) (in %)	5.26	5.26	5.26	5.26	5.26
I	Elapsed useful life at the beginning of the year (Year)	5.00	6.00	7.00	8.00	9.00
I	Balance useful life at the beginning of the year (Year)	29.00	28.00	27.00	26.00	25.00
J	Depreciation during the year (D*H)	11569.17	11569.17	11569.17	11569.17	11569.17
L	Aggregate Cumulative Depreciation at the end of the year	75307.96	86877.13	98446.30	110015.47	121584.64
M	Remaining Aggregate Depreciable Value at the end of the year(G-L)	122563.20	110994.03	99424.86	87855.69	76286.52

(₹ in lakh)

	Combined Assets Part-II	2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Gross Block	6302.17	6302.17	6302.17	6302.17	6302.17
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	6302.17	6302.17	6302.17	6302.17	6302.17
D	Average Gross Block (A+C)/2	6302.17	6302.17	6302.17	6302.17	6302.17
E	Free hold Land	4.58	4.58	4.58	4.58	4.58
F	Average Gross Block (90% depreciable assets)	6297.59	6297.59	6297.59	6297.59	6297.59
G	Depreciable value (F*90%)	5667.83	5667.83	5667.83	5667.83	5667.83
H	Weighted Average Rate of Depreciation (WAROD) (in %)	5.25%	5.25%	5.25%	5.25%	5.25%
I	Elapsed useful life at the beginning of the year (Year)	5.00	6.00	7.00	8.00	9.00
I	Balance useful life at the beginning of the year (Year)	20.00	19.00	18.00	17.00	16.00
J	Depreciation during the year (D*H)	330.66	330.66	330.66	330.66	330.66
L	Aggregate Cumulative Depreciation at the end of the year	2123.30	2453.96	2784.62	3115.28	3445.94
M	Remaining Aggregate Depreciable Value at the end of the year(G-L)	3544.53	3213.87	2883.21	2552.55	2221.89

23. The details of depreciation approved vide order dated 28.1.2016 in Petition No. 552/TT/2014 for Combined Assets Part-I and vide order dated 9.9.2016 in Petition No. 148/TT/2016 for Combined Assets Part-II, claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:



(₹ in lakh)

Asset	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Assets Part-I	Allowed vide order dated 28.1.2016 in Petition No. 552/TT/2014	11569.18	11569.18	11569.18	11569.18	11569.18
	As claimed by the Petitioner in the instant petition	11569.17	11569.17	11569.17	11569.17	11569.17
	Approved after truing up in this order	11569.17	11569.17	11569.17	11569.17	11569.17
Combined Assets Part-II	Allowed vide order dated 9.9.2016 in Petition No. 148/TT/2016	330.67	330.67	330.67	330.67	330.67
	As claimed by the Petitioner in the instant petition	330.66	330.66	330.66	330.66	330.66
	Approved after truing up in this order	330.66	330.66	330.66	330.66	330.66

Interest on Loan (IoL)

24. The Petitioner has prayed for change in interest rates prevailing as on 1.4.2019 for respective loans. The change in interest rate is due to floating rate of interest applicable for the project to be claimed/ adjusted over a period of 5 years directly from the beneficiaries. We have considered the submissions of the Petitioner and accordingly calculated IoL based on actual interest rate in accordance with Regulation 26 of the 2014 Tariff Regulations. The IoL has been worked out as detailed below:

- (i) Gross amount of loan, repayment of loan and weighted average rate of interest on actual loan have been considered as per the petition.
- (ii) The repayment for the tariff period 2014-19 has been considered to be equal to the depreciation allowed for that period.

25. The details of IoL calculated in respect of the transmission assets are as follows:

(₹ in lakh)

	Combined Assets Part-I	2014-15	2015-16	2016-17	2017-18	2018-19
A	Gross Normative Loan	154089.21	154089.21	154089.21	154089.21	154089.21
B	Cumulative Repayments up to Previous Year	66396.97	77966.14	89535.31	101104.48	112673.65
C	Net Loan-Opening (A-B)	87692.24	76123.07	64553.90	52984.73	41415.56
D	Addition due to Additional	0.00	0.00	0.00	0.00	0.00



	Capitalization					
E	Repayment during the year	11569.17	11569.17	11569.17	11569.17	11569.17
F	Net Loan-Closing (C+D-E)	76123.07	64553.90	52984.73	41415.56	29846.39
G	Average Loan (A+F)/2	81907.65	70338.48	58769.31	47200.14	35630.97
H	Weighted Average Rate of Interest on Loan (%)	6.4214	6.4883	6.7790	7.0027	7.4603
I	Interest on Loan (GxH)	5259.65	4563.75	3983.98	3305.28	2658.17

(₹ in lakh)

	Combined Assets Part-II	2014-15	2015-16	2016-17	2017-18	2018-19
A	Gross Normative Loan	4414.04	4414.04	4414.04	4414.04	4414.04
B	Cumulative Repayments up to Previous Year	1841.42	2172.08	2502.74	2833.40	3164.06
C	Net Loan-Opening (A-B)	2572.62	2241.96	1911.30	1580.64	1249.98
D	Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
E	Repayment during the year	330.66	330.66	330.66	330.66	330.66
F	Net Loan-Closing (C+D-E)	2241.96	1911.30	1580.64	1249.98	919.32
G	Average Loan (A+F)/2	2407.29	2076.63	1745.97	1415.31	1084.65
H	Weighted Average Rate of Interest on Loan (%)	7.8517	7.8910	8.0456	8.1716	8.4125
I	Interest on Loan (GxH)	189.01	163.87	140.47	115.65	91.25

26. The details of IoL allowed vide order dated 28.1.2016 in Petition No. 552/TT/2014 for Combined Assets Part-I and vide order dated 9.9.2016 in Petition No. 148/TT/2016 for Combined Assets Part-II, claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

(₹ in lakh)

Asset	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Assets Part-I	Allowed vide order dated 28.1.2016 in Petition No. 552/TT/2014	5212.65	4461.37	3726.34	3008.66	2309.61
	As claimed by the Petitioner in the instant petition	5499.93	4806.59	4237.67	3567.35	2937.37
	Approved after truing up in this order	5259.65	4563.75	3983.98	3305.28	2658.17
Combined Assets Part-II	Allowed vide order dated 9.9.2016 in Petition No. 148/TT/2016	188.31	162.35	136.70	111.37	86.35
	As claimed by the Petitioner in the instant petition	198.71	173.61	150.41	125.74	101.63
	Approved after truing up in this order	189.01	163.87	140.47	115.65	91.25



Return on Equity (RoE)

27. The Petitioner has claimed RoE for the transmission assets in terms of Regulations 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that the Income Tax Assessment has been completed and Assessment Order has been issued by the Income Tax Department in case of 2014-15 & 2015-16 and that the Income Tax Return have been filed with Income Tax Department for the years 2016-17 and 2017-18 and Income Tax Return for 2018-19 will be filed in due course of time and has claimed the following effective tax rates for the 2014-19 tariff period:

Year	Claimed effective tax (in %)	Grossed-up RoE [(Base Rate)/(1-t)] (in %)
2014-15	21.0177	19.625
2015-16	21.3819	19.716
2016-17	21.3384	19.705
2017-18	21.3371	19.704
2018-19	21.5488	19.758

28. The Petitioner has also prayed for claiming the differential tariff on account of the trued-up RoE based on effective rate calculated on completion of Income tax assessment/re-assessment for 2014-15, 2015-16, 2016-17, 2017-18 and 2018-19 on receipt of respective assessment orders, directly from the beneficiaries, on year-to-year basis as provided under the 2014 Tariff Regulations.

29. Below is the extract of Regulation 25(3) of the 2014 Tariff Regulations:

“.....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 2014-15 to 2018-19 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 transmission customers/DICs as the case may be on year to year basis.”



30. The Commission in order dated 27.4.2020 in Petition No. 274/TT/2019 held that MAT rate is applicable to the Petitioner. Accordingly, Petitioner's prayer to claim differential tariff on account of RoE based on effective rate calculated on completion of Income tax assessment/re-assessment for 2014-15, 2015-16, 2016-17, 2017-18 and 2018-19 on receipt of respective assessment, directly from the beneficiaries, on year to year basis is rejected.

31. The Commission, *vide* order dated 27.4.2020 in Petition No. 274/TT/2019, had arrived at the effective tax rate for the Petitioner based on the notified MAT rates and the same is given in the table below. The same MAT rates are considered for the purpose of grossing up of the rate of RoE for truing up of the tariff of the 2014-19 period in terms of the provisions of the 2014 Tariff Regulations.

Year	Notified MAT rates (Inclusive of surcharge & cess) (in %)	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

32. Accordingly, the RoE allowed for the transmission assets is as follows:

(₹ in lakh)						
	Combined Assets Part-I	2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	66028.00	66028.00	66028.00	66028.00	66028.00
B	Additions	0.00	0.00	0.00	0.00	0.00
C	Closing Equity (A-B)	66028.00	66028.00	66028.00	66028.00	66028.00
D	Average Equity (A+B)/2	66028.00	66028.00	66028.00	66028.00	66028.00
E	Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (%)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity	19.610	19.705	19.705	19.705	19.758
H	Return on Equity (DxG)	12948.09	13010.82	13010.82	13010.82	13045.81

(₹ in lakh)						
	Combined Assets Part-II	2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	1888.13	1888.13	1888.13	1888.13	1888.13
B	Additions	0.00	0.00	0.00	0.00	0.00



C	Closing Equity (A-B)	1888.13	1888.13	1888.13	1888.13	1888.13
D	Average Equity (A+B)/2	1888.13	1888.13	1888.13	1888.13	1888.13
E	Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (%)	20.961	21.342	21.342	21.342	21.549
G	Rate of Return on Equity	19.610	19.705	19.705	19.705	19.758
H	Return on Equity (DxG)	370.26	372.06	372.06	372.06	373.06

33. The details of RoE allowed vide order dated 28.1.2016 in Petition No. 552/TT/2014 for Combined Assets Part-I and vide order dated 9.9.2016 in Petition No. 148/TT/2016 for Combined Assets Part-II, claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

(₹ in lakh)						
Asset	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Assets Part-I	Allowed vide order dated 28.1.2016 in Petition No. 552/TT/2014	12948.39	12948.39	12948.39	12948.39	12948.39
	As claimed by the Petitioner in the instant petition	12958.00	13017.42	13010.82	13010.82	13045.81
	Approved after truing up in this order	12948.09	13010.82	13010.82	13010.82	13045.81
Combined Assets Part-II	Allowed vide order dated 9.9.2016 in Petition No. 148/TT/2016	370.27	370.27	370.27	370.27	370.27
	As claimed by the Petitioner in the instant petition	370.55	372.24	372.06	372.06	373.06
	Approved after truing up in this order	370.26	372.06	372.06	372.06	373.06

Operation & Maintenance Expenses (O&M Expenses)

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

(₹ in lakh)				
Combined Assets Part - I				
Transmission lines				
Srl. No.	Name of Line	Single Circuit / Double Circuit	No of sub-Conductors	Line Length (in km)
1	400 kV quad D/C Seoni-Khandwa transmission line	double circuit	4	351.729
2	LILO of 400 kV D/C SSP-Nagada D/C line at Rajgarh	double circuit	2	8.130
3	LILO of Korba- Raipur at Sipat	double circuit	2	4.905
4	765 kV S/C Sipat-Seoni ckt-I	single circuit	4	350.629



Combined Assets Part - I						
Transmission lines						
Srl. No.	Name of Line	Single Circuit / Double Circuit	No of sub-Conductors	Line Length (in km)		
5	765 kV S/C Sipat-Seoni ckt-II	single circuit	4	352.645		
6	LILO of 400 kV D/C Bhilai-Satpura at seoni	double circuit	2	1.503		
7	400 kV D/C Nagda Dehgam ckt-I and II	double circuit	2	331.442		
Sub-station						
Srl. No.	765 kV Sub-station bays					
1	Seoni:765 kVbays Sipat-I bay at Seoni					
2	Seoni:765 kV bay ICT-I at Seoni					
3	Seoni:1500 MVA ICT-II bay					
4	Seoni: Bus Reactor bay					
5	Seoni: Sipat bay-II					
Srl. No.	400 kV Sub-station bay					
1	Seoni: 400 V bays Bhilai bay at Seoni					
2	Seoni: 400 kV bays Satpura bay at Seoni					
3	Seoni: 400 kV bays ICT-I bay					
4	Seoni:400 kV bays ICT-I bay (315 MVA)					
5	Seoni:1500 MVA ICT-II Bay					
6	Seoni: Khandwa I bay					
7	Seoni: Khandwa IIbay					
8	Dehgam: Nagda bay-ii					
9	Dehgam: Nagda bay-i					
10	Nagda: Dehgam bay ii					
11	Nagda: Dehgam bay i					
12	Khandwa: Seoni i bay					
13	Khandwa: Seoni ii bay					
14	Rajgarh: Sardar sarovar-i					
15	Rajgarh: Sardar sarovar-ii					
16	Rajgarh: Nagda-i					
17	Rajgarh: Nagda-ii					
Srl. No.	220 kV Sub-station bay					
1	Seoni: 220 kV bays Seoni bay i					
2	Seoni: 220 kV bays Seoni bay ii					
3	Seoni: 220 kV bays ICT-I bay					
O&M Expenses						
		2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station						
765 kV						
Number of bays		5	5	5	5	5



400 kV					
Number of bays	17	17	17	17	17
220 kV					
Number of bays	3	3	3	3	3
Transmission lines					
S/C with four Conductors (km)	703.274	703.274	703.274	703.274	703.274
D/C with four Conductors (km)	351.729	351.729	351.729	351.729	351.729
D/C with two Conductors (km)	464.99	464.99	464.99	464.99	464.99
Total O&M Expense (₹ in lakh)	2618.16	2705.74	2794.81	2888.09	2983.77

(₹ in lakh)

Combined Assets Part - II					
Sub-station					
Srl. No.	400 kV Sub-station bay				
1	Seoni: ICT II Bay				
2	Rajgarh:ICT I Bay				
3	Rajgarh:ICT II Bay				
Srl. No.	220 kV Sub-station bay				
1	Seoni:ICT II Bay				
2	Seoni:Chindwara I Bay				
3	Seoni:Chindwara II Bay				
4	Rajgarh:ICT I Bay				
5	Rajgarh:Bhopawar I Bay				
6	Rajgarh:Bhopawar II Bay				
7	Rajgarh:Pitampur I Bay				
8	Rajgarh:Pitampur II Bay				
9	Rajgarh:ICT II Bay				
O&M Expenses					
	2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station					
400 kV					
Number of bays	3	3	3	3	3
220 kV					
Number of bays	9	9	9	9	9
Total O&M Expense (₹ in lakh)	560.79	579.39	598.65	618.48	639.01

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



Combined Assets Part - I						
Element	UoM	Norms for 2014-15	Norms for 2015-16	Norms for 2016-17	Norms for 2017-18	Norms for 2018-19
765 kV Sub-station	₹ lakh/bay	84.42	87.22	90.12	93.11	96.20
400 kV Sub-station	₹ lakh/bay	60.30	62.30	64.37	66.51	68.71
220 kV Sub-station	₹ lakh/bay	42.21	43.61	45.06	46.55	48.10
Double Circuit (Twin & Triple Conductor)	₹ lakh/km	0.707	0.731	0.755	0.780	0.806
Single Circuit (Bundled conductor with four or more sub-conductors)	₹ lakh/km	0.61	0.63	0.65	0.67	0.69
Double Circuit (Bundled conductor with four or more sub-conductors)	₹ lakh/km	1.06	1.10	1.13	1.17	1.21

Combined Assets Part - II						
Element	UoM	Norms for 2014-15	Norms for 2015-16	Norms for 2016-17	Norms for 2017-18	Norms for 2018-19
400 kV Sub-station	₹ lakh/bay	60.30	62.30	64.37	66.51	68.71
220 kV Sub-station	₹ lakh/bay	42.21	43.61	45.06	46.55	48.10

36. We have considered the submissions of the Petitioner. The O&M Expenses approved under Regulation 29(3) of the 2014 Tariff Regulations are as follows:

Combined Assets Part - I						(₹ in lakh)
	2014-15	2015-16	2016-17	2017-18	2018-19	
5 Numbers of 765 kV Sub-station bays	422.10	436.10	450.60	465.55	481.00	
17 Number of 400 kV Sub-station bays	1025.10	1059.10	1094.29	1130.67	1168.07	
3 Number of 220 kV Sub-station bays	126.63	130.83	135.18	139.65	144.30	
464.99 km D/C two Conductor transmission line	244.61	252.91	261.21	269.86	278.86	
703.274km S/C four Conductor transmission line	426.18	440.95	455.02	470.49	485.96	
351.729km D/C four Conductor transmission line	373.54	385.85	398.51	411.87	425.59	
Total O&M expense	2618.16	2705.74	2794.81	2888.10	2983.78	

Combined Assets Part - II						(₹ in lakh)
	2014-15	2015-16	2016-17	2017-18	2018-19	
3 Number of 400 kV Sub-station bays	180.90	186.90	193.11	199.53	206.13	



9 Number of 220 kV Sub-station bays	379.89	392.49	405.54	418.95	432.90
Total O&M expense	560.79	579.39	598.65	618.48	639.03

37. The details of O&M Expenses allowed vide order dated 28.1.2016 in Petition No. 552/TT/2014 for Combined Assets Part-I and vide order dated 9.9.2016 in Petition No. 148/TT/2016 for Combined Assets Part-II, as claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

		(₹ in lakh)				
Asset	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Assets Part-I	Allowed vide order dated 28.1.2016 in Petition No. 552/TT/2014	2618.16	2705.74	2794.81	2888.10	2983.78
	As claimed by the Petitioner in the instant petition	2618.16	2705.74	2794.81	2888.10	2983.78
	Approved after truing up in this order	2618.16	2705.74	2794.81	2888.10	2983.78
Combined Assets Part-II	Allowed vide order dated 9.9.2016 in Petition No. 148/TT/2016	560.79	579.39	598.65	618.48	639.03
	As claimed by the Petitioner in the instant petition	560.79	579.39	598.65	618.48	639.03
	Approved after truing up in this order	560.79	579.39	598.65	618.48	639.03

Interest on Working Capital (IWC)

38. The Petitioner is entitled to claim IWC as per Regulation 28(1)(c) of the 2014 Tariff Regulations as follows:

i. **Working Capital for Maintenance spares:**

Maintenance spares have been worked out based on 15% of Operation and Maintenance Expenses specified in Regulation 28.

ii. **Working Capital for O & M Expenses:**

O&M Expenses have been considered for one month of the allowed O&M Expenses.

iii. **Working Capital for Receivables:**

The receivables have been worked out on the basis of 2 months of annual transmission charges as worked out above.



iv. **Rate of interest on working capital:**

Rate of interest on working capital is considered on normative basis in accordance with Clause (3) of Regulation 28 of the 2014 Tariff Regulations.

39. The IWC allowed for the transmission assets is as follows:

		(₹ in lakh)				
	Combined Assets Part-I	2014-15	2015-16	2016-17	2017-18	2018-19
A	WC for O&M Expenses (1 month of O&M Expenses)	218.18	225.48	232.90	240.67	248.65
B	WC for Maintenance Spares (Maintenance Spares @15% of O&M expenses)	5537.52	5444.96	5361.78	5262.46	5174.92
C	WC for Receivables (Receivable equivalent to 2 months of fixed cost)	6148.42	6076.30	6013.90	5936.35	5871.14
D	Total Working Capital (A+B+C)	6189.40	6117.70	6057.15	5981.04	5918.74
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest on Working Capital (DxE)	830.04	820.30	811.88	801.41	792.60

		(₹ in lakh)				
	Combined Assets Part-II	2014-15	2015-16	2016-17	2017-18	2018-19
A	WC for O&M Expenses (1 month of O&M Expenses)	46.73	48.28	49.89	51.54	53.25
B	WC for Maintenance Spares (Maintenance Spares @15% of O&M expenses)	84.12	86.91	89.80	92.77	95.85
C	WC for Receivables (Receivable equivalent to 2 months of fixed cost)	250.36	249.66	249.05	248.31	247.93
D	Total Working Capital (A+B+C)	381.21	384.85	388.74	392.62	397.04
E	Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest on Working Capital (DxE)	51.46	51.95	52.48	53.00	53.60

40. The details of IWC Expenses approved vide order dated 28.1.2016 in Petition No. 552/TT/2014 for Combined Assets Part-I and vide order dated 9.9.2016 in Petition No. 148/TT/2016 for Combined Assets Part-II, as claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:



(₹ in lakh)

Asset	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Assets Part-I	Allowed vide order dated 28.1.2016 in Petition No. 552/TT/2014	828.96	816.51	804.51	793.14	782.34
	As claimed by the Petitioner in the instant petition	835.80	826.04	817.72	807.44	799.03
	Approved after truing up in this order	830.04	820.30	811.88	801.41	792.60
Combined Assets Part-II	Allowed vide order dated 9.9.2016 in Petition No. 148/TT/2016	51.45	51.88	52.35	52.86	53.42
	As claimed by the Petitioner in the instant petition	51.69	52.18	52.71	53.24	53.84
	Approved after truing up in this order	51.46	51.95	52.48	53.00	53.60

Approved Annual Fixed Charges for the 2014-19 Tariff Period

41. Accordingly, the annual fixed charges in respect of the instant transmission assets after truing-up for the 2014-19 tariff period are as follows:

(₹ in lakh)

Combined Assets Part-I					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	11569.17	11569.17	11569.17	11569.17	11569.17
Interest on Loan	5259.65	4563.75	3983.98	3305.28	2658.17
Return on Equity	12948.09	13010.82	13010.82	13010.82	13045.81
O&M Expenses	2618.16	2705.74	2794.81	2888.10	2983.78
Interest on Working Capital	830.04	820.30	811.88	801.41	792.60
Total	33225.11	32669.78	32170.66	31574.78	31049.53

(₹ in lakh)

Combined Assets Part-II					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	330.66	330.66	330.66	330.66	330.66
Interest on Loan	189.01	163.87	140.47	115.65	91.25
Return on Equity	370.26	372.06	372.06	372.06	373.06
O&M Expenses	560.79	579.39	598.65	618.48	639.03
Interest on Working Capital	51.46	51.95	52.48	53.00	53.60
Total	1502.18	1497.93	1494.32	1489.85	1487.60

42. The details of Annual Fixed Charges approved vide order dated 28.1.2016 in Petition No. 552/TT/2014 for Combined Assets Part-I and vide order dated 9.9.2016 in Petition No. 148/TT/2016 for Combined Assets Part-II, as claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:



(₹ in lakh)

Asset	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Assets Part-I	AFC allowed vide order dated 28.1.2016 in Petition No. 552/TT/2014	33177.34	32501.19	31843.23	31207.48	30593.30
	AFC claimed by the Petitioner in the instant petition	33481.06	32924.96	32430.19	31842.87	31335.15
	AFC approved in the instant order	33225.11	32669.78	32170.66	31574.78	31049.53
Combined Assets Part-II	AFC allowed vide order dated 9.9.2016 in Petition No. 148/TT/2016	1501.49	1494.56	1488.65	1483.66	1479.74
	AFC claimed by the Petitioner in the instant petition	1512.40	1508.08	1504.49	1500.18	1498.20
	AFC approved in the instant order	1502.18	1497.93	1494.32	1489.85	1487.60

Determination of Annual Fixed Charges for the 2019-24 Tariff Period

43. Combined Assets Part-I and Combined Assets Part-II have been further combined into single asset namely 'Combined Asset' during 2019-24 period by the Petitioner. The details of the transmission charges claimed by the Petitioner in respect of the 'Combined Asset' for the 2019-24 tariff period are as follows:

(₹ in lakh)

Particulars	'Combined Asset'				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	11899.85	11899.85	2605.17	2605.17	2605.17
Interest on Loan	2233.07	1409.31	893.78	647.06	391.98
Return on Equity	12756.01	12756.01	12756.01	12756.01	12756.01
Operation and Maintenance	4379.92	4532.55	4691.94	4858.05	5026.57
Interest on Working Capital	595.23	590.78	449.80	453.32	455.95
Total	31864.08	31188.50	21396.70	21319.61	21235.68

44. The details of the IWC claimed by the Petitioner claimed in respect of the 'Combined Asset' for the 2019-24 tariff period are as follows:



(₹ in lakh)

Particulars	'Combined Asset'				
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M expenses	364.99	377.71	391.00	404.84	418.88
Maintenance Spares	656.99	679.88	703.79	728.71	753.99
Receivables	3917.72	3845.16	2637.95	2628.44	2610.94
Total	4939.70	4902.75	3732.74	3761.99	3783.81
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	595.23	590.78	449.80	453.32	455.95

Effective Date of Commercial Operation (E-COD)

45. The Petitioner has claimed E-COD of the 'Combined Asset' as 10.5.2008. Accordingly, based on the trued-up admitted capital cost and actual COD of all the assets, the E-COD has been worked out as follows:

Computation of Effective COD						
Asset	Actual COD	Admitted Capital Cost as on 31.3.2019	Weight of the cost (%)	No. of Days from last COD	Weighted Days	Effective COD (Latest COD – Total weighted days)
Combined Assets Part-I	1.5.2008	220117.21	97.22	335.00	325.68	10.5.2008
Combined Assets Part-II	1.4.2009	6302.17	2.78	0.00	0.00	
Total		226419.38	100.00		325.68	

46. The E-COD is used to determine the lapsed life of the project as a whole, which works out as (10) year as on 1.4.2019 (i.e., the number of completed years as on 1.4.2019 from E-COD).

Weighted Average Life (WAL)

47. The life as defined in Regulation 33 of the 2019 Tariff Regulations has been considered for determination of Weighted Average Life.

48. The 'Combined Asset' may have multiple elements such as land, building, transmission line, Sub-station and PLCC and each element may have different span of life. Therefore, the concept of Weighted Average Life (WAL) has been used as the useful life of the project as a whole.



49. The WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2019 and their respective life as stipulated in the 2019 Tariff Regulations. The element-wise life as defined in the 2014 Tariff Regulations prevailing at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in the 2019 Tariff Regulations has been considered for determination of WAL. Accordingly, WAL of the 'Combined Asset' has been worked out as 33 years and is demonstrated as follows:

Admitted Capital Cost as on 31.3.2019				
Particulars	'Combined Asset' Cost (₹ in lakh) (1)	Life as per 2019 Regulation (Years) (2)	Weighted Cost (3)=(1)x(2)	Weighted Average Life of Asset (in years) (4)=(3)/(1)
Land	264.95	0	0	
Building	2576.55	25	64413.75	
Transmission Line	179923.92	35	6297337.20	
Sub-station Equipment	42808.25	25	1070206.25	
PLCC	845.71	15	12685.65	
Leasehold land	0.00	25	0.00	
IT equipment and software	0.00	7	0.00	
Total	226419.38		7444642.85	32.92 rounded off to 33 years

50. The WAL as on 1.4.2019 as determined above is applicable prospectively (i.e. for the 2019-24 tariff period onwards) and no retrospective adjustment of depreciation in previous tariff period is required to be done. As discussed in the preceding paragraphs, the Effective COD of the assets is 10.5.2008 and the lapsed life of the project as a whole, works out as ten (10) years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from Effective COD). Accordingly, WAL has been used to determine the remaining useful life as on 31.3.2019 to be 23 years.



Capital Cost

51. Regulations 19 of the 2019 Tariff Regulations provide as follows:

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

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

- (a) *The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- (b) *Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*
- (c) *Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*
- (d) *Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*
- (e) *Capitalised initial spares subject to the ceiling rates in accordance with these regulations;*
- (f) *Expenditure on account of additional 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.”



52. The capital cost has been dealt in accordance with Regulation 19(3) of the 2019 Tariff Regulations. The element-wise capital cost (i.e. land, building, transmission line, Sub-station and PLCC) as admitted by the Commission as on 31.3.2019 in respect of the transmission assets are clubbed together and has been considered as capital cost of 'Combined Asset' as on 1.4.2019 is as follows:

(₹ in lakh)

Element	Combined Assets Part-I	Combined Assets Part-II	Capital Cost for 'Combined Asset' as on 31.3.2019
Free hold land	260.37	4.58	264.95
Building	2465.08	111.47	2576.55
Transmission Line	179923.92	0.00	179923.92
Sub-station equipment	36652.49	6155.76	42808.25
PLCC	815.35	30.36	845.71
Leasehold land	0.00	0.00	0.00
IT equipment and software	0.00	0.00	0.00
Total	220117.21	6302.17	226419.38

53. The trued-up capital cost as on 31.3.2019 for Combined Assets Part-I and Combined Assets Part-II has been considered as capital cost as on 31.3.2019 for the 'Combined Asset' for the purpose of determination of tariff for 2019-24 tariff period.

54. The Petitioner has not claimed any ACE in 2019-24 tariff period.

Capital Cost for the 2019-24 tariff period

55. Accordingly, the capital cost of the 'Combined Asset' considered for the 2019-24 tariff period is ₹ 226419.38 lakh.

Debt-Equity Ratio

56. Regulations 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.

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



57. The details of the debt-equity considered for the purpose of tariff in respect of the 'Combined Asset' for the 2019-24 tariff period are as follows:

Combined asset	Capital Cost (as on 1.4.2019) (₹ in lakh)	(%)	Capital Cost (as on 31.3.2024) (₹ in lakh)	(%)
Debt	158503.25	70.00	158503.25	70.00
Equity	67916.13	30.00	67916.13	30.00
Total	226419.38	100.00	226419.38	100.00

Depreciation

58. 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 assets shall be considered depreciable;

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

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

Provided also that any depreciation disallowed on account of lower availability of the generating station or unit or transmission system as the case may be, shall not be



allowed to be recovered at a later stage during the useful life or the extended life.

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

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

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

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

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

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

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

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

- a) twenty five years, in case the generating station or unit thereof is in operation for fifteen years or less as on the date of operation of the emission control system; or*
- b) balance useful life of the generating station or unit thereof plus fifteen years, in case the generating station or unit thereof is in operation for more than fifteen years as on the date of operation of the emission control system; or*
- c) ten years or a period mutually agreed by the generating company and the beneficiaries, whichever is higher, in case the generating station or unit thereof has completed its useful life.”*



59. Depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. WAROD at Annexure-II has been worked out as per the rates of depreciation specified in the 2019 Tariff Regulations. The 'Combined Asset' has already completed 12 years of life as on 31.3.2021. Therefore, the remaining depreciable value has been spread across the balance useful life in accordance with Regulation 33(5) of the 2019 Tariff Regulations. Depreciation allowed in respect of the Combined Asset is as follows:

(₹ in lakh)

'Combined Asset'						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	226419.38	226419.38	226419.38	226419.38	226419.38
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	226419.38	226419.38	226419.38	226419.38	226419.38
D	Average Gross Block (A+C)/2	226419.38	226419.38	226419.38	226419.38	226419.38
E	Freehold Land	264.95	264.95	264.95	264.95	264.95
F	Average Gross Block (90% depreciable assets)	226154.43	226154.43	226154.43	226154.43	226154.43
G	Average Gross Block (100% depreciable assets)	0.00	0.00	0.00	0.00	0.00
H	Depreciable value (excluding IT equipment and software) (F*90%)	203538.99	203538.99	203538.99	203538.99	203538.99
I	Depreciable value of IT equipment and software (E*100%)	0.00	0.00	0.00	0.00	0.00
J	Total Depreciable Value (H+I)	203538.99	203538.99	203538.99	203538.99	203538.99
K	Weighted Average Rate of Depreciation (WAROD) (in %)	5.26	5.26	1.15	1.15	1.15
L	Elapsed useful life at the beginning of the year (Year)	10.00	11.00	12.00	13.00	14.00
M	Balance useful life at the beginning of the year (Year)	23.00	22.00	21.00	20.00	19.00
N	Depreciation during the year (D*K)	11899.85	11899.85	2605.18	2605.18	2605.18
O	Aggregate Cumulative Depreciation at the end of the year	136930.43	148830.28	151435.45	154040.63	156645.81
P	Remaining Aggregate Depreciable Value at the end of the year(J-O)	66608.56	54708.71	52103.53	49498.36	46893.18



Interest on Loan (IoL)

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

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

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

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

(4) *Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.*

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

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

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

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

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

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

61. The weighted average rate of interest of IoL has been considered on the basis of the rates prevailing as on 1.4.2019. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during the 2019-24



tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true-up. In view of above, IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed in respect of the 'Combined Asset' is follows:

		(₹ in lakh)				
'Combined Asset'						
Particulars		2019-20	2020-21	2021-22	2022-23	2023-24
A	Gross Normative Loan	158503.25	158503.25	158503.25	158503.25	158503.25
B	Cumulative Repayments upto Previous Year	127737.54	139637.39	151537.24	154142.41	156747.59
C	Net Loan-Opening (A-B)	30765.71	18865.86	6966.01	4360.83	1755.66
D	Additions	0.00	0.00	0.00	0.00	0.00
E	Repayment during the year	11899.85	11899.85	2605.18	2605.18	2605.18
F	Net Loan-Closing (C+D-E)	18865.86	6966.01	4360.83	1755.66	0.00
G	Average Loan (A+F)/2	24815.78	12915.94	5663.42	3058.25	877.83
H	Weighted Average Rate of Interest on Loan (in %)	7.786	8.398	9.380	9.345	9.076
I	Interest on Loan (GxH)	1932.11	1084.68	531.21	285.81	79.68

Return on Equity (RoE)

62. Regulations 30 and 31 of the 2019 Tariff Regulations provide as follows:

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

(2) *Return on equity shall be computed at the base rate of 15.50% for thermal generating station, transmission 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 cutoff date beyond the original scope, excluding additional capitalization on 7 account of emission control system, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%.

Provided further that:

- i. In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission 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.”

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

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

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

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

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

Illustration-

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

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



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

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

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2019-24 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee, as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long term customers, as the case may be, on year to year basis.”

63. The Petitioner has submitted that MAT rate is applicable to the Petitioner's company. We have considered the submissions of the Petitioner. The MAT rate applicable in 2019-20 has been considered for the purpose of RoE, which shall be trued-up with actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. The RoE allowed under Regulation 30 of the 2019 Tariff Regulations is as follows:

(₹ in lakh)						
‘Combined Asset’						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	67916.13	67916.13	67916.13	67916.13	67916.13
B	Addition due to ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Equity (A+B)	67916.13	67916.13	67916.13	67916.13	67916.13
D	Average Equity (A+C)/2	67916.13	67916.13	67916.13	67916.13	67916.13
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	17.472	17.472	17.472	17.472	17.472
G	Applicable RoE Rate (in %)	18.782	18.782	18.782	18.782	18.782
H	Return on Equity for the year (D*G)	12756.01	12756.01	12756.01	12756.01	12756.01



Operation & Maintenance Expenses (O&M Expenses)

64. The O&M Expenses claimed by the Petitioner for the 'Combined Asset' for the 2019-24 tariff period are as follows:

O&M Expenses					
	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station					
765 kV					
Number of bays	5	5	5	5	5
O&M Expenses claimed	225.05	233.00	241.15	249.65	258.40
400 kV					
Number of bays	20	20	20	20	20
O&M Expenses claimed	643.00	665.60	689.00	713.20	738.20
220 kV					
Number of bays	12	12	12	12	12
O&M Expenses claimed	270.12	279.60	289.44	299.52	310.08
400 kV ICT					
ICTs	4X315 MVA	4X315 MVA	4X315 MVA	4X315 MVA	4X315 MVA
765 kV ICT					
ICTs	2 X1500 MVA	2 X1500 MVA	2 X1500 MVA	2 X1500 MVA	2 X1500 MVA
Transmission lines					
S/C with four Conductors (km)	703.274	703.274	703.274	703.274	703.274
D/C with four Conductors (km)	351.729	351.729	351.729	351.729	351.729
D/C with two Conductors (km)	464.99	464.99	464.99	464.99	464.99
Communication System					
PLCC (₹ in lakh)	845.71	845.71	845.71	845.71	845.71
Total O&M Expenses (₹ in lakh)	4379.92	4532.55	4691.94	4858.05	5026.57

65. Regulation 35(3)(a) of the 2019 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. The norms specified in respect of the elements covered in the transmission asset are as follows:

Element	UoM	Norms for 2019-20	Norms for 2020-21	Norms for 2021-22	Norms for 2022-23	Norms for 2023-24
765 kV Sub-station	₹ lakh/bay	45.01	46.60	48.23	49.93	51.68



Element	UoM	Norms for 2019-20	Norms for 2020-21	Norms for 2021-22	Norms for 2022-23	Norms for 2023-24
400 kV Sub-station	₹ lakh/bay	32.15	33.28	34.45	35.66	36.91
220 kV Sub-station	₹ lakh/bay	22.51	23.30	24.12	24.96	25.84
400 kV Sub-station ICT	₹ lakh/bay	0.358	0.371	0.384	0.398	0.411
765 kV Sub-station ICT	₹ lakh/bay	0.491	0.508	0.526	0.545	0.564
Double Circuit (Twin & Triple Conductor)	₹ lakh/km	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four or more sub-conductors)	₹ lakh/km	0.755	0.781	0.809	0.837	0.867
Double Circuit (Bundled conductor with four or more sub-conductors)	₹ lakh/km	1.322	1.368	1.416	1.466	1.517

66. We have considered the submissions of the Petitioner. The Petitioner has claimed O&M Expenses separately for the PLCC under Regulation 35(4) of the 2019 @2% of its original project cost in the instant petition and 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 and 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.

67. The O&M Expenses have been worked out as per the norms specified in the 2019 Tariff Regulations and the same is as follows:

'Combined Asset'	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
5 Numbers of 765 kV Sub-station bays	225.05	233.00	241.15	249.65	258.40



'Combined Asset'	2019-20	2020-21	2021-22	2022-23	2023-24
20 Number of 400 kV Sub-station bays	643.00	665.60	689.00	713.20	738.20
12 Number of 220 kV Sub-station bays	270.12	279.60	289.44	299.52	310.08
4 Numbers of 315 MVA ICTs at 400 kV Sub-station	451.08	467.46	483.84	501.48	517.86
2 Numbers of 1500 MVA ICTs at 765 kV Sub-station	1473.00	1524.00	1578.00	1635.00	1692.00
464.99 km D/C two Conductor transmission line	304.81	315.53	326.61	338.02	349.79
703.274km S/C four Conductor transmission line	530.97	549.26	568.95	588.64	609.74
351.729km D/C four Conductor transmission line	464.99	481.17	498.05	515.63	533.57
Total	4363.02	4515.62	4675.03	4841.15	5009.64

Interest on Working Capital (IWC)

68. Regulations 34(1)(c), 34(3), 34(4) and 3(7) of the 2019 Tariff Regulations provide as follows:

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

.....

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

(i) Receivables equivalent to 45 days of annual fixed cost;

(ii) Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and

(iii) Operation and maintenance expenses, including security expenses for one month.”

(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1st April of the year during the tariff period 2019-24 in which the generating station or a unit thereof or the transmission 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. Definition - In these regulations, unless the context otherwise requires:-



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

69. The IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of IWC considered is 12.05% (SBI 1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21 and 10.50% (SBI 1 year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) for 2021-22 and 10.50% (SBI 1 year MCLR applicable as on 1.4.2022 of 7.00% plus 350 basis points) for 2022-24. The components of the working capital and interest thereon allowed for the Combined Asset are as follows:

(₹ in lakh)

'Combined Asset'						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Working Capital for O&M Expenses (Equivalent to annualized O&M Expenses for 1 month)	363.58	376.30	389.59	403.43	417.47
B	Working Capital for Maintenance Spares (Equivalent to 15% of O&M Expenses)	654.45	677.34	701.25	726.17	751.45
C	Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	3877.99	3797.50	2583.27	2573.88	2562.58
D	Total Working Capital (A+B+C)	4896.02	4851.14	3674.11	3703.48	3731.50
E	Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
F	Interest on Working Capital (DxE)	589.97	545.75	385.78	388.87	391.81

Annual Fixed Charges for the 2019-24 Tariff Period

70. The various components of the annual fixed charges for the 'Combined Asset' for the 2019-24 tariff period is summarized as follows:

(₹ in lakh)

'Combined Asset'					
Particulars	2019-20	2020-21	201-22	2022-23	2023-24
Depreciation	11899.85	11899.85	2605.18	2605.18	2605.18
Interest on Loan	1932.11	1084.68	531.21	285.81	79.68
Return on Equity	12756.01	12756.01	12756.01	12756.01	12756.01
O&M Expenses	4363.02	4515.62	4675.03	4841.15	5009.64
Interest on Working Capital	589.97	545.75	385.78	388.87	391.81
Total	31540.96	30801.91	20953.21	20877.02	20842.32



Filing Fee and Publication Expenses

71. The Petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 70(1) of the 2019 Tariff Regulations.

72. 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.

License Fee & RLDC Fees and Charges

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

Good and Service Tax

74. 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 Respondents to the Petitioner and the same shall be charged and billed separately by the Petitioner. Further additional taxes, if any, are to be paid by the Petitioner on account of demand from Government / Statutory authorities, the same may be allowed to be recovered from the beneficiaries.

75. MPPMCL has submitted that the Petitioner's prayer for GST is premature and hence the same shall not be considered in response to which the Petitioner has reiterated its submissions.



76. We have considered the submission of the Petitioner and MPPMCL. Since, GST is not levied on transmission services at present, we are of the view that Petitioner's prayer is premature.

Security Expenses

77. The Petitioner has submitted that security expenses for the instant assets are not claimed in the instant petition, and it would file a separate petition for claiming the overall security expenses and the consequential IWC. The Petitioner has requested to consider the actual security expenses incurred during 2018-19 for claiming estimated security expenses for 2019-20 which will be subject to true up at the end of the year based on the actuals. The Petitioner has submitted that similar petition for security expenses for 2020-21, 2021-22, 2022-23 and 2023-24 will be filed on yearly basis on the basis of the actual expenses of previous year subject to true up at the end of the year on actual expenses. The Petitioner has submitted that the difference, if any, between the estimated security expenses and actual security expenses as the audited accounts may be allowed to be recovered from the beneficiaries on a yearly basis.

78. We have considered the above submissions of Petitioner. The Petitioner has claimed consolidated security expenses for all the transmission assets owned by it 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

79. 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

80. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems was governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2010 ("2010 Sharing Regulations") as provided in Regulation 43 of the 2014 Tariff Regulations.

81. With effect from 1.11.2020, sharing of transmission charges is governed by the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations. Accordingly, the liabilities of DICs for arrears of transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of respective Tariff Regulations and Sharing Regulations and shall be recovered from the concerned DICs through Bills under Regulation 15(2)(b) of the 2020 Sharing Regulations.

82. To summarise:

- a) Trued-up AFC approved for the Combined Assets Part-I and Combined Assets Part-II for the 2014-19 tariff period are as follows:

		(₹ in lakh)				
Assets		2014-15	2015-16	2016-17	2017-18	2018-19
Combined Assets Part-I	Assets	33225.11	32669.78	32170.66	31574.78	31049.53
Combined Assets Part-II	Assets	1502.18	1497.93	1494.32	1489.85	1487.60



b) Annual Fixed Charges allowed for the 'Combined Asset' for the 2019-24 tariff period in the instant order are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
'Combined Asset'	31540.96	30801.91	20953.21	20877.02	20842.32

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

84. This order disposes of Petition No. 12/TT/2022 in terms of the above discussion and findings.

sd/-
(P. K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I.S. Jha)
Member



Annexure-I

Combined Assets Part-I	Admitted Capital Cost as on 31.3.2014 (₹ in lakh)	ACE 2014-19	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations				
					2014-15	2015-16	2016-17	2017-18	2018-19
Freehold land	260.37	0.00	260.37	0.00	0.00	0.00	0.00	0.00	0.00
Building	2465.08	0.00	2465.08	3.34	82.33	82.33	82.33	82.33	82.33
Transmission line	179923.92	0.00	179923.92	5.28	9499.98	9499.98	9499.98	9499.98	9499.98
Sub Station	36652.49	0.00	36652.49	5.28	1935.25	1935.25	1935.25	1935.25	1935.25
PLCC	815.35	0.00	815.35	6.33	51.61	51.61	51.61	51.61	51.61
Total	220117.21	0.00	220117.21		11569.17	11569.17	11569.17	11569.17	11569.17
Weighted Average Rate of Depreciation (%)					5.26	5.26	5.26	5.26	5.26
Average Gross Block (₹ in lakh)					220117.21	220117.21	220117.21	220117.21	220117.21



Combined Assets Part-II	Admitted Capital Cost as on 31.3.2014 (₹ in lakh)	ACE 2014-19	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations				
					2014-15	2015-16	2016-17	2017-18	2018-19
Freehold land	4.58	0.00	4.58	0.00	0.00	0.00	0.00	0.00	0.00
Building	111.47	0.00	111.47	3.34	3.72	3.72	3.72	3.72	3.72
Transmission line	0.00	0.00	0.00	5.28	0.00	0.00	0.00	0.00	0.00
Sub Station	6155.76	0.00	6155.76	5.28	325.02	325.02	325.02	325.02	325.02
PLCC	30.36	0.00	30.36	6.33	1.92	1.92	1.92	1.92	1.92
Total	6302.17	0.00	6302.17		330.66	330.66	330.66	330.66	330.66
Weighted Average Rate of Depreciation (%)					5.25	5.25	5.25	5.25	5.25
Average Gross Block (₹ in lakh)					6302.17	6302.17	6302.17	6302.17	6302.17



Annexure-II

'Combined Asset'	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	ACE 2019-24	Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations				
					2019-20	2020-21	2021-22	2022-23	2023-24
Freehold land	264.95	0.00	264.95	0.00	0.00	0.00	Spreading over		
Building	2576.55	0.00	2576.55	3.34	86.06	86.06			
Transmission line	179923.92	0.00	179923.92	5.28	9499.98	9499.98			
Sub Station	42808.25	0.00	42808.25	5.28	2260.28	2260.28			
PLCC	845.71	0.00	845.71	6.33	53.53	53.53			
Total	226419.38	0.00	226419.38		11899.85	11899.85	2605.38	2605.38	2605.38
Weighted Average Rate of Depreciation (%)					5.26	5.26	1.15	1.15	1.15
Average Gross Block (₹ in lakh)					226419.38	226419.38	226419.38	226419.38	226419.38

