

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 6/TT/2022

Coram:

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

Date of order: 22.11.2023

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing-up of the transmission tariff of 2014-19 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for **Asset-1:** Replacement of 3x167 MVA, 400/220 kV ICTs with 1X500 MVA ICT at Somanhalli Sub-station, **Asset-2:** Replacement of 4x167 MVA, 400/220 kV ICTs with 1X500 MVA ICT at Somanhalli Sub-station, **Asset-3:** Replacement of 1x50 MVAr Bus reactor with 1x125 MVAr Bus reactor at 400/220 kV Narendra Sub-station, **Asset-4:** 01 Nos. 500 MVA, 765/400 kV Regional Spare ICTs at Thiruvalam Sub-station and **Asset-5:** 01 Nos. 500 MVA, 765/400 kV Regional Spare ICTs at Raichur Sub-station under System Strengthening-XXIII” in Southern Region.

And in the Matter of:

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

.....Petitioner

Versus

1. Karnataka Power Transmission Corporation Limited,
Kaveri Bhavan, Bangalore-560009.
2. Transmission Corporation of Andhra Pradesh Limited,
Vidyut Soudha, Gunadala, Eluru Road,
Vijayawada-520004.
3. Kerala State Electricity Board,
Vaidyuthi Bhavanam, Pattom,
Thiruvananthapuram-695004.
4. Tamil Nadu Generation and Distribution Corporation Limited,
(Formerly Tamil Nadu Electricity Board -TNEB),
NPKRR Maaligai, 800, Anna Salai,
Chennai-600002.



5. Electricity Department,
Government of Pondicherry, Pondicherry-605001.
6. Eastern Power Distribution Company of Andhra Pradesh Limited,
P&T Colony, Seethmmadhara,
Vishakhapatnam, Andhra Pradesh.
7. Southern Power Distribution Company of Andhra Pradesh Limited,
D.No: 19-13-65/A, Srinivasapuram, Corporate Office,
Tiruchanoor Road, Tirupati-517503,
Chittoor District, Andhra Pradesh.
8. Southern Power Distribution Company of Telangana Limited,
6-1-50, Corporate Office, Mint Compound,
Hyderabad-500063, Telangana.
9. Northern Power Distribution Company of Telangana Limited,
H.No 2-5-3 1/2, Vidyut Bhawan, Corporate Office,
Nakkal Gutta, Hanamkonda,
Warangal-506001, Telangana.
10. Bangalore Electricity Supply Company Limited,
Corporate Office, K.R.Circle,
Bangalore-560001, Karanataka.
11. Gulbarga Electricity Supply Company Limited,
Station Main Road, Gulburga, Karnataka.
12. Hubli Electricity Supply Company Limited,
Navanagar, PB Road, Hubli, Karnataka.
13. MESCOM Corporate Office,
Paradigm Plaza, AB Shetty Circle,
Mangalore-575001, Karnataka.
14. Chamundeswari Electricity Supply Corporation Limited,
927,L J Avenue, Ground Floor, New Kantharaj Urs Road,
Saraswatipuram, Mysore- 570009, Karnataka.
15. Electricity Department,
Government of Goa,
Vidyuti Bhawan, Panaji, Goa-403001.
16. Transmission Corporation of Telangana Limited,
Vidhyut Sudha, Khairatabad,
Hyderabad-500082.
17. Tamil Nadu Transmission Corporation,
NPKRR Maaligai, 800, Anna Salai,
Chennai-600002.



18. Tamil Nadu Generation and Distribution Corporation Limited,
(Formerly Tamilnadu Electricity Board -TNEB),
NPKRR Maaligai, 800, Anna Salai,
Chennai-600002.

.....Respondent(s)

For Petitioner : Shri S.S. Raju, PGCIL
Shri D.K. Biswal, PGCIL
Shri Zafrul Hasan, PGCIL

For Respondents : None

ORDER

Power Grid Corporation of India Limited (PGCIL) has filed the instant petition for truing up of the transmission tariff from COD to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and for determination of tariff under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) of the period from 1.4.2019 to 31.3.2024 in respect of following under “System Strengthening-XXIII” (hereinafter referred to as the “transmission scheme”) in Southern Region:

Asset-1: Replacement of 3x167 MVA, 400/220 kV ICTs with 1X500 MVA ICT at Somanhalli Sub-station.

Asset-2: Replacement of 4x167 MVA, 400/220 kV ICTs with 1X500 MVA ICT at Somanhalli Sub-station.

Asset-3: Replacement of 1x50 MVAr Bus reactor with 1x125 MVAr Bus reactor at 400/220 kV Narendra Sub-station.

Asset-4: 01 number 500 MVA, 765/400 kV Regional Spare ICTs at Thiruvalam Sub-station.

Asset-5: 01 number 500 MVA, 765/400 kV Regional Spare ICTs at Raichur Sub-station assets (hereinafter referred to as the “transmission assets/combined asset”).



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

“1) 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 9.1 and 10.0 above.

2) Approve the Completion cost and additional capitalization incurred during 2014-19 and allow the projected additional capitalization during 2019-24.

3) Allow the depreciation on the claim of IT equipment in the current true up petition as Bifurcation of Substation cost.

4) 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 9.1 and 10.0 above for respective block.

5) 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.

6) Allow the petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.

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

8) Allow the Petitioner to claim the overall security expenses and consequential IOWC on that security expenses separately.

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

10) Allow the initial spares as claimed in the instant petition on project level basis.

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

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

Background of the case

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



(a) The Investment Approval (IA) for the transmission project was accorded by Board of Directors of the Petitioner in 309th meeting held on 29.1.2015 vide Memorandum No. C/CP/SRSS-XXIII, dated 3.2.2015 with an estimated cost of ₹20328 lakh including IDC of ₹1246 lakh based on October, 2014 price level.

(b) The Board of Directors of the Petitioner have accorded approval for the Revised Cost Estimate (RCE) for the transmission project vide Memorandum No. C/CP/PA-1617-03-0X-RCE-012, dated 31.3.2017 with an estimated cost of ₹26003 lakh including IDC of ₹1330 lakh based on August, 2016 price level.

(c) The scope of the transmission scheme was discussed and agreed in the 35th & 36th SCM of Southern Region Constituents held on 4.1.2013 and 4.9.2013 respectively. This was ratified by SRPC in the 21st, 22nd and 23rd SRPC meetings held on 2.2.2013, 18.5.2013 and 26.10.2013 respectively. The Petitioner has been entrusted with the implementation of “System Strengthening-XXIII in Southern Region”.

(d) The scope of the transmission scheme per Investment Approval is as follows:

Sub-station

a. Extension of 400/220 kV Sub-station at Madurai

- i. Provision of 400/220 kV, 1x 500 MVA transformer
- ii. 1 number 400 kV transformer bay for 1x 500 MVA transformer
- iii. 1 number 230 kV transformer bay for 1x 500 MVA transformer

b. Extension of 400/220 kV Sub-station at Somanhalli

- i. Replacement of 7X 167 MVA, 400/220 kV ICTs with 2 X 500 MVA ICTs (the replaced ICTs will be maintained as a regional spare).

c. Procurement of 2 numbers 500 MVA, 765/400 kV Regional spare ICTs



Reactive Compensation

a. Bus Reactors (400 kV)

- i. 1x125 MVAR 400 kV Bus reactor at Gooty, Hassan, Khammam, Trivandrum, Nellore (existing), Narendra (New) and Nagarjunasagar Sub-station.
- ii. 2X63 MVAR bus reactors at Yelahanka Sub-station.
- iii. Replacement of 1x50 MVAR bus Reactor with 1X125 MVAR bus reactor at 400/220 kV Narendra Sub-station (The replaced bus reactor will be maintained as a regional spare).

b. Line Reactors (400 kV)

- i. 1X63 MVAR Switchable line reactors at Nellore pooling station on each circuit of Nellore Pooling Station-Gooty 400 kV Quad D/C line.

(e) The scope of work under the transmission scheme is completed and separate petitions have been filed in respect of the remaining transmission assets. The details of the transmission assets covered in various petitions are as follows:

Assets	COD	Petition No.
Asset-1: 1x125 MVAR 400 kV Bus Reactor at Hassan along with associated bays and equipment.	18.12.2016	The tariff for 2014-19 period was claimed in Petition No. 78/TT/2020. The tariff for 2014-19 period was trued up and tariff for the 2019-24 tariff period was claimed in Petition No. 58/TT/2017
Asset-2: 400/220 kV, 1x500 MVA transformer at Madurai Sub-station along with associated bays and equipment.	31.12.2016	
Asset-3: 1x125 MVAR 400 kV Bus Reactor at Trivandrum along with associated bays and equipment.	26.1.2017	
Asset-4: 1x125 MVAR 400 kV Bus Reactor at Narendra (New) along with associated bays and equipment.	30.12.2016	
Asset-5: 1x125 MVAR 400 kV Bus Reactor at Gooty, Khammam, Nellore (existing) & Nagarjunasagar along with associated bays and equipment and 1x63 MVAR Switchable Line Reactors at Nellore Pooling Station on each Ckt of Nellore pooling station-Gooty 400 kV Quad D/C Line.	28.3.2017	
Asset-1: Replacement of 3x167 MVA, 400/220 kV ICTs with 1x500 MVA ICT at Somanhalli Sub-station	16.3.2017	Covered in the instant petition. The tariff for these transmission assets for the 2014-19 period was initially claimed in Petition No. 58/TT/2017, wherein their nomenclature was "Asset-V(a),
Asset-2: Replacement of 4x167 MVA, 400/220 kV ICTs with 1x500 MVA ICT at	31.3.2017	



Somanhalli Sub-station		Asset-V(b), Asset-VI, Asset-XIII and Asset-XII"). However, the Commission vide order dated 5.7.2018 excluded the instant transmission assets from the said petition and directed the Petitioner to file a separate petition. Accordingly, the Petitioner has filed Petition No. 505/TT/2020 claiming tariff for 2014-19 period. The tariff for these two assets for the 2019-24 period is claimed in Petition No. 253/TT/2021 as per the 2019 Tariff Regulations.
Asset-3: Replacement of 1x50MVAR Bus reactor with 1x125 MVAR Bus reactor at 400/220 kV Narendra Sub-station	25.1.2017	
Asset-4: 01 Number 500 MVA, 765/400 kV Regional Spare ICTs at Thiruvallam Sub-station	28.3.2017	
Asset-5: 01 Number 500 MVA, 765/400 kV Regional Spare ICTs at Raichur Sub-station	6.2.2019	
1x63 MVAR 400 kV Bus Reactor-I along with associated bays and equipment at Yelahanka GIS	2.1.2020	
1x63 MVAR 400 kV Bus Reactor-II along with associated bays and equipment at Yelahanka GIS	13.1.2020	

(f) The transmission assets were scheduled to be put into commercial within 30 months from the date of I.A. which is 29.1.2015. Accordingly, the transmission project was scheduled to be put into commercial operation by 29.7.2017. The details of scheduled commercial operation date (SCOD), date of commercial operation (COD) and time over-run are as follows:

Assets	SCOD	COD	Time over-run	Condoned / not condoned
Asset-1	29.7.2017	16.3.2017	-	-
Asset-2		31.3.2017	-	-
Asset-3		25.1.2017	-	-
Asset-4		28.3.2017	-	-
Asset-5		6.2.2019	557 days	Not condoned

(g) The transmission tariff for Assets-1 to 5 from COD to 31.3.2019 was determined by the Commission vide order dated 6.2.2021 in Petition No. 505/TT/2020.

(h) The Commission vide order dated 6.2.2021 in Petition No. 505/TT/2020 held as follows:

“14. We have considered the submissions of the Petitioner. It is observed that the Petitioner has replaced 4X167 MVA ICT-I and 3X167 MVA ICT-II with 1X 500 MVA ICT-1 (Asset-1) and 1X500 MVA ICT-II (Asset-2) respectively at Somanhalli Substation. The petitioner has submitted that the replaced ICTS are approved as Regional Spares and therefore de-capitalisation is not applicable for these ICTs. The replaced assets have already completed useful life of 25 years as on the date of replacement i.e. 16.3.2017 (COD of Asset-1) and 31.3.2017 (COD of Asset-2). APTEL in judgement dated 25.4.2016 in Appeal No. 98 of 2015 has held that there is no provision in the Regulations for retaining and allowing tariff for the assets

which have completed their useful life and not in use. The relevant portion of APTEL's judgement dated 25.4.2016 is as follows:

"17. It is to be noted that all the three Assets i.e. three of 1x50 MVA transformers have completed their useful life of 25 years and their capital costs were included by the Central Commission for tariff determination upto 31.03.2014 vide its Order dated 06.08.2013 in Petition No. 331/2010. Cost of new assets i.e. 3x160 MVA transformers replacing 3x50 MVA transformers has been allowed to be capitalized and as such, the replaced assets have to be de-capitalised by reducing the net value of replaced assets from the capital cost of new assets.

18. The Appellant has argued that when the transformers are used as spare transformers, it cannot be said that they are not in use and therefore, its claim for retention of capital cost of the replaced 3x50 MVA transformers with the consent of the beneficiaries does not violate the Regulations of the Central Commission as these replaced assets are to be considered as 'asset in use'. This submission of the Appellant does not have any merit in light of the fact that these 3x50 MVA transformers stand replaced and till the time they are requisitioned by any beneficiary State, they would remain as spare transformers and hence, it could be treated as spare transformers but 'asset not in use'. This Tribunal in its earlier judgment dated 08.05.2014 in Appeal No. 173/2013 (NTPC Ltd. Vs. Central Electricity Regulatory Commission & Ors.) and judgment dated 01.05.2015 in Appeal No. 97/2013 (NTPC Ltd. Vs. Central Electricity Regulatory Commission & Ors.) disallowed capitalization of spare/additional transformers. In judgment dated 01.05.2015, this Tribunal observed that unless there is a specific provision in the Regulations permitting capitalization of the cost of spare assets, such assets cannot be included in the capital base.

19. Since there is no provision in the statutory Regulations of the Central Commission in support of the Appellant's claim to permit retention of replaced assets not in use, in the capital cost of the new assets, we are of the considered view that the Appellant's claim in this regard is untenable. We are in agreement with the findings of the Central Commission in this regard in its Impugned Order dated 06.01.2015. As such, both these issues are decided against the Appellant"

15. We note that, for the replaced assets, the Petitioner has already filed Petition No. 154/TT/2020 for true up of tariff for 2014-19 period and determination of tariff for 2019-24 period. The tariff with respect to replaced ICTs i.e. 4X167 MVA ICT-I and 3X167 MVA ICT-II at Somanhalli Sub-station and De-capitalisation of the issues will be dealt in Petition No. 154/TT/2020."

(i) The Commission vide order dated 11.7.2022 in Petition No. 154/TT/2020 held as follows:

"31. The Petitioner vide affidavit dated 7.10.2021 has submitted that the Commission vide order dated 6.2.2021 in Petition No. 505/TT/2020 considered the APTEL judgement dated 25.4.2016 in Appeal No. 98 of 2015 regarding allowing tariff for the assets which have completed their useful life and are not in use. In Petition No. 505/TT/2020, 3X167 MVA ICT at Somanahalli has been replaced by 1X500 MVA ICT at Somanahalli. Accordingly, the replaced 3X167 MVA ICT at Somanahalli Sub-station covered in the instant petition is now decapitalized from actual date of removal i.e. 1.3.2017."



(j) The Commission vide order dated 9.1.2023 in Petition No. 473/TT/2020 held as follows:

“26. The Petitioner has submitted that 4x167 MVA ICTs at Somanahalli Sub-station have completed their useful life of 25 years and the Petitioner has replaced 4x167 MVA ICTs at Somanahalli with 500 MVA ICT and replaced ICTs are de-capitalised on 1.3.2017. We have further considered that 4X167 MVA ICTs at Somanahalli Substation covered in the instant petition have completed their useful life and are decapitalized from the original date of removal i.e. 1.3.2017.....”

As per the above decision of the Commission, the de-capitalisation of both the ICTs, i.e. 3x167 MVA, 400/220 kV ICT and 4X167 MVA, 400/220 kV ICTs at Somanahalli Sub-station is approved as 1.3.2017.

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

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or objections have been received from the general public in response to the aforesaid notices published in the newspapers. None of the respondent(s) filed any reply in the Petition.

6. This order is issued considering the submissions in the petition, the Petitioner's affidavits dated 31.3.2022 and 30.9.2022. The hearing in this matter was held on 14.9.2022 and the order in the matter was reserved.

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



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

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

(₹ in lakh)

Asset-1			
Particulars	2016-17 (Pro-rata for 16 days)	2017-18	2018-19
Depreciation	3.89	100.68	113.30
Interest on Loan	3.86	96.03	100.38
Return on Equity	4.35	112.72	127.19
Interest on working capital	0.26	6.75	7.43
O&M Expenses	0.00	0.00	0.00
Total	12.36	316.18	348.30

(₹ in lakh)

Asset-2			
Particulars	2016-17 (Pro-rata for 1 day)	2017-18	2018-19
Depreciation	0.19	82.65	97.28
Interest on Loan	0.19	80.67	88.22
Return on Equity	0.21	92.54	109.21
Interest on working capital	0.01	5.58	6.42
O&M Expenses	0.00	0.00	0.00
Total	0.60	261.44	301.13

(₹ in lakh)

Asset-3			
Particulars	2016-17 (Pro-rata for 66 days)	2017-18	2018-19
Depreciation	5.90	38.36	41.37
Interest on Loan	6.72	39.42	38.48
Return on Equity	6.60	42.95	46.44
Interest on working capital	0.42	2.63	2.75
O&M Expenses	0.00	0.00	0.00
Total	19.64	123.36	129.04

(₹ in lakh)

Asset-4				Asset-5
Particulars	2016-17 (Pro-rata for 4 days)	2017-18	2018-19	2018-19 (Pro-rata for 54 days)
Depreciation	0.47	50.76	62.02	7.38
Interest on Loan	0.46	48.82	56.31	1.16
Return on Equity	0.53	56.83	69.62	8.28
Interest on working capital	0.03	3.41	4.10	0.35
O&M Expenses	0.00	0.00	0.00	0.00
Total	1.50	159.82	192.05	17.17



9. The details of the Interest on Working Capital (IWC) claimed by the Petitioner are as follows:

(₹ in lakh)

Asset-1			
Particulars	2016-17 (Pro-rata for 16 days)	2017-18	2018-19
O&M Expenses	0.00	0.00	0.00
Maintenance Spares	0.00	0.00	0.00
Receivables	47.01	52.70	58.05
Total	47.01	52.70	58.05
Rate of Interest (in %)	12.80	12.80	12.80
Interest on Working Capital	0.26	6.75	7.43

(₹ in lakh)

Asset-2			
Particulars	2016-17 (Pro-rata for 1 day)	2017-18	2018-19
O&M Expenses	0.00	0.00	0.00
Maintenance Spares	0.00	0.00	0.00
Receivables	36.67	43.57	50.19
Total	36.67	43.57	50.19
Rate of Interest (in %)	12.80	12.80	12.80
Interest on Working Capital	0.01	5.58	6.42

(₹ in lakh)

Asset-3			
Particulars	2016-17 (Pro-rata for 66 days)	2017-18	2018-19
O&M Expenses	0.00	0.00	0.00
Maintenance Spares	0.00	0.00	0.00
Receivables	18.10	20.56	21.51
Total	18.10	20.56	21.51
Rate of Interest (in %)	12.80	12.80	12.80
Interest on Working Capital	0.42	2.63	2.75

(₹ in lakh)

Asset-4				Asset-5
Particulars	2016-17 (Pro-rata for 4 days)	2017-18	2018-19	2018-19 (Pro-rata for 54 days)
O&M Expenses	0.00	0.00	0.00	0.00
Maintenance Spares	0.00	0.00	0.00	0.00
Receivables	22.78	26.64	32.01	19.34
Total	22.78	26.64	32.01	19.34
Rate of Interest (in %)	12.80	12.80	12.80	12.20
Interest on Working Capital	0.03	3.41	4.10	0.35



Capital Cost

10. The Commission vide order dated 6.2.2021 in Petition No. 505/TT/2020 has approved the following capital cost as on COD and ACE up to 31.3.2019 for the transmission assets:

Assets	FR apporportioned approved cost	Apportioned approved cost as per RCE	Capital cost allowed as on COD	ACE			Total capital cost as on 31.3.2019
				2016-17	2017-18	2018-19	
Asset-1	1941.86	2573.66	1667.48	24.50	429.48	48.66	2170.12
Asset-2	1941.86	2435.52	1294.26	0.00	541.84	11.67	1847.77
Asset-3	947.13	1234.19	544.98	145.24	72.57	41.52	804.31
Asset-4	1699.22	1715.53	816.31	0.00	290.02	136.54	1242.87
Asset-5	1699.21	1658.77	909.67	0.00	0.00	49.88	959.55

11. The Petitioner in the instant true-up petition has claimed the capital cost as on COD and ACE incurred for Asset-1, Asset-2, Asset-3, Asset-4 and Asset-5 and submitted Auditor's Certificates in support of the same. The details of the capital cost claimed are as follows:

Assets	FR apporportioned approved cost	Apportioned approved cost as per RCE	Capital cost allowed as on COD	ACE			Total capital cost as on 31.3.2019
				2016-17	2017-18	2018-19	
Asset-1	1941.86	2573.66	1685.60	24.50	411.37	48.66	2170.13
Asset-2	1941.86	2435.52	1331.33	0.00	505.28	11.67	1848.28
Asset-3	947.13	1234.19	546.64	145.24	70.91	41.52	804.31
Asset-4	1699.22	1715.53	830.12	0.00	276.71	136.54	1243.37
Asset-5	1699.21	1658.77	921.66	0.00	0.00	49.88	971.54

Capital Cost

12. The total capital cost including ACE as on 31.3.2019 in respect of the transmission is ₹7037.63 lakh and the RCE approved cost is ₹9617.67 lakh. Hence, the completion cost as on 31.3.2019 in respect of the transmission assets is within the RCE apportioned approved RCE cost.



Time over-run

13. As per the IA, the transmission assets were scheduled to be put under commercial operation by 29.7.2017. Thus, there is time over-run of 557 days in case of Asset-5. The Commission did not condone the time over-run of 557 days in case of Asset-5 in order 6.2.2021 in Petition No. 505/TT/2020.

Interest During Construction (IDC) and Incidental Expenditure During Construction (IEDC)

14. The Petitioner has claimed Interest During Construction (IDC) for the transmission assets and has submitted the Auditor's Certificates in support of the same. The Petitioner has also submitted computation of IDC along with the year-wise details of the IDC discharged.

15. The allowable IDC has been worked out considering the information submitted by the Petitioner for the individual assets separately on cash basis. The loan details submitted in Form-9C for the 2014-19 tariff period and the IDC computation sheet have been considered for the purpose of IDC calculation on cash and accrued basis. The undischarged IDC as on COD has been considered as ACE during the year in which it has been discharged.

16. Accordingly, based on the information furnished by the Petitioner, IDC considered for Assets- 1 to 5, are as follows:

Assets	IDC as per Auditor's Certificate	IDC admissible	IDC disallowed due to computational difference/ time over-run not condoned	IDC discharged as on COD	IDC undischarged as on COD	(₹ in lakh) IDC discharge during
						2017-18
	A	B	C=A-B	D	E=B-D	
Asset-1	28.08	28.07	0.01	9.95	18.12	18.12
Asset-2	52.74	52.23	0.51	15.67	36.56	36.56
Asset-3	5.34	5.34	0.00	3.68	1.66	1.66



Asset-4	22.62	22.44	0.18	8.81	13.64	13.64
Asset-5	0.45	0.00	0.45	0.00	0.00	0.00

17. The IEDC allowed for Assets-1 to 5 are as follows:

(₹ in lakh)			
Assets	IEDC claimed	IEDC disallowed due to time over-run not condoned	IEDC allowed as on COD
Asset-1	63.72	0.00	63.72
Asset-2	56.69	0.00	56.69
Asset-3	22.76	0.00	22.76
Asset-4	38.78	0.00	38.78
Asset-5	4.87	1.85	3.02

Initial Spares

18. Regulation 13(d) of the 2014 Tariff Regulations provides that Initial Spares shall be capitalized as a percentage of plant and machinery cost up to cut-off date, subject to the following ceiling norms:

“(d) Transmission system

- (i) Transmission line – 1.00%*
- (ii) Transmission Sub-station (Green Field) – 4.00%*
- (iii) Transmission Sub-station (Brown Field) – 6.00%*
- (iv) Series Compensation devices and HVDC Station – 4.00%*
- (v) Gas Insulated Sub-station (GIS) – 5.00%*
- (vi) Communication system – 3.5%*

.....”

19. The Petitioner in the instant petition has claimed the following initial spares and also submitted the details of the discharge of initial spares:

Sub-station:

Assets	Plant & machinery cost up to cut-off date (excluding IDC and IEDC (₹ in lakh)	Initial spares claimed (₹ in lakh)	Norm (in %)	Discharge of Initial Spares (₹ in lakh)			
				As on COD	2016-17	2017-18	2019-20
Asset-1	2090.91	62.65	6	44.93	0.00	17.72	0.00
Asset-2	1854.34	0	6	0.00	0.00	0.00	0.00
Asset-3	776.21	40.35	6	12.92	27.43	0.00	0.00
Asset-4	1221.61	71.22	6	22.41	0.00	48.81	0.00
Asset-5	1225.94	74.04	6	66.64	0.00	0.00	7.40

20. We have considered the submissions of the Petitioner. Some of the transmission assets covered in the instant petition were put into commercial



operation in the 2014 tariff period and few of them in the 2019 tariff period. As per the APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017, the Initial Spares are to be allowed initially on the basis of the asset wise cost and later as per the norms under the applicable tariff regulations on the basis of total project cost. The relevant portion of the APTEL's judgement dated 14.9.2019 is as follows:

"8.13The Central Commission to have a prudence check on the initial spares, being restricted based on the individual asset wise cost initially, but subsequently ought to have allowed as per the ceiling limits on the overall project cost basis during the true-up."

21. In the instant case, the total project cost will be arrived at only when the Petitioner combines all the transmission assets under the transmission system, which is possible only at the time of true-up of the tariff of the 2019-24 tariff period. Accordingly, the Initial Spares will be allowed on the basis of the total project cost at the time of true-up of the tariff of the transmission assets of the 2019-24 tariff period. It is observed that the Initial Spares claimed for the Asset-5 is higher than the 6% norm under the 2014 Tariff Regulations. Therefore, the Initial spares for Asset-5 is restricted to the norm of 6% as provided in Regulation 13(d) of the 2014 Tariff Regulations. The Petitioner has not claimed any initial spares for Asset-2. Accordingly, the details of the Initial Spares allowed in respect of the transmission assets for the 2014-19 tariff period are as follows:

Assets	Plant & machinery cost up to cut-off date (excluding IDC and IEDC) (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Ceiling limit (in %)	Initial Spares allowable (₹ in lakh)	Initial Spares allowed (₹ in lakh)	Excess Initial spares (₹ in lakh)
Sub-station						
Asset-1	2090.91	62.65	6	129.46	62.65	0.00
Asset-2	1854.34	0	6	118.36	0.00	0.00
Asset-3	776.21	40.35	6	46.97	40.35	0.00
Asset-4	1221.61	71.22	6	73.43	71.22	0.00
Asset-5	1225.94	74.04	6	73.53	73.53	0.51

Capital Cost allowed as on COD

22. Accordingly, the capital cost allowed in respect of the transmission assets as on COD is as follows:

(₹ in lakh)

Assets	Capital cost claimed in Auditor's Certificate as on COD (A)	Less: IDC disallowed due to computational difference / Time over-run not condoned (B)	Less: Un-discharged IDC as on COD (C)	Less: IEDC disallowed due to computational difference / time over-run not condoned (D)	Capital cost allowed as on COD (D) = (A-B-C-D)
Asset-1	1685.60	0.01	18.12	0.00	1667.47
Asset-2	1331.33	0.51	36.56	0.00	1294.26
Asset-3	546.64	0.00	1.66	0.00	544.98
Asset-4	830.12	0.18	13.64	0.00	816.31
Asset-5	921.66	0.45	0.00	1.85	919.36

Additional Capital Expenditure (ACE)

23. The Petitioner has claimed the following ACE in respect of the transmission assets:

(₹ in lakh)

Assets	ACE		
	2016-17	2017-18	2018-19
Asset-1	24.50	411.37	48.66
Asset-2	0.00	505.28	11.67
Asset-3	145.24	70.91	41.52
Asset-4	0.00	276.71	136.54
Asset-5	0.00	0.00	49.88

24. The Petitioner has submitted that ACE has been claimed under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations and the same is within the cut-off date. The Petitioner has submitted Auditor's Certificates in support of the same. The Petitioner vide affidavit dated 31.3.2022 has also submitted the liability flow statement. The details are as follows:

(₹ in lakh)

Asset-1							
Agency	Particulars	Discharge (Regulation 14(1)(i))			Unexecuted Work (Regulation 14(1)(ii))		
		2016-17	2017-18	2018-19	2016-17	2017-18	2018-19
CG Power and Industrial Solutions	Sub-station	24.50	286.18	4.73	0.00	125.19	43.93



Total		24.50	286.18	4.73	0.00	125.19	43.93
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(₹ in lakh)

Asset-2							
Agency	Particulars	Discharge (Regulation 14(1)(i))			Unexecuted Work (Regulation 14(1)(ii))		
		2016-17	2017-18	2018-19	2016-17	2017-18	2018-19
CG Power and Industrial Solutions	Sub-station	0.00	375.03	0.42	0.00	130.25	11.25
Total		0.00	375.03	0.42	0.00	130.25	11.25

(₹ in lakh)

Asset-3							
Agency	Particulars	Discharge (Regulation 14(1)(i))			Unexecuted Work (Regulation 14(1)(ii))		
		2016-17	2017-18	2018-19	2016-17	2017-18	2018-19
CG Power and Industrial Solutions	Sub-station	145.24	64.82	40.78	0.00	6.09	0.74
Total		145.24	64.82	40.78	0.00	6.09	0.74

(₹ in lakh)

Asset-4							
Agency	Particulars	Discharge (Regulation 14(1)(i))			Unexecuted Work (Regulation 14(1)(ii))		
		2016-17	2017-18	2018-19	2016-17	2017-18	2018-19
GE T&D India Limited	Sub-station	0.00	229.99	136.27	0.00	46.72	0.27
Total		0.00	229.99	136.27	0.00	46.72	0.27

(₹ in lakh)

Asset-5							
Agency	Particulars	Discharge (Regulation 14(1)(i))			Unexecuted Work (Regulation 14(1)(ii))		
		2016-17	2017-18	2018-19	2016-17	2017-18	2018-19
GE T&D India Limited	Sub-station	0.00	0.00	49.88	0.00	0.00	0.00
Total		0.00	0.00	49.88	0.00	0.00	0.00

25. We have considered the submissions of Petitioner. The undischarged IDC and IEDC as on COD have been allowed as ACE during the year of discharge. ACE claimed by the Petitioner has been allowed under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations, which pertain to un-discharged liabilities and unexecuted work. Accordingly, ACE allowed for the 2014-19 tariff period are as follows:

(₹ in lakh)

Asset-1			
Particulars	ACE		
	2016-17	2017-18	2018-19
ACE allowed under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations	24.50	411.37	48.66



Add: IDC discharge	0.00	18.12	0.00
Less: Excess Initial Spares disallowed	0.00	0.00	0.00
Total	24.50	429.49	48.66

(₹ in lakh)

Asset-2			
Particulars	ACE		
	2016-17	2017-18	2018-19
ACE allowed under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations	0.00	505.28	11.67
Add: IDC discharge	0.00	36.56	0.00
Less: Excess Initial Spares disallowed	0.00	0.00	0.00
Total	0.00	541.84	11.67

(₹ in lakh)

Asset-3			
Particulars	ACE		
	2016-17	2017-18	2018-19
ACE allowed under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations	145.24	70.91	41.52
Add: IDC discharge	0.00	1.66	0.00
Less: Excess Initial Spares disallowed	0.00	0.00	0.00
Total	145.24	72.57	41.52

(₹ in lakh)

Asset-4			
Particulars	ACE		
	2016-17	2017-18	2018-19
ACE allowed under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations	0.00	276.71	136.54
Add: IDC discharge	0.00	13.64	0.00
Less: Excess Initial Spares disallowed	0.00	0.00	0.00
Total	0.00	290.35	136.54

(₹ in lakh)

Asset-5			
Particulars	ACE		
	2016-17	2017-18	2018-19
ACE allowed under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations	0.00	0.00	49.88
Add: IDC discharge	0.00	0.00	0.00
Less: Excess Initial Spares disallowed	0.00	0.00	0.00
Total	0.00	0.00	49.88

26. The capital cost allowed as on 31.3.2019 after inclusion of ACE in respect of the transmission assets is as follows:

(₹ in lakh)

Assets	Capital cost allowed as on COD	ACE			Total Capital Cost as on 31.3 2019
		2016-17	2017-18	2018-19	
Asset-1	1667.47	24.50	429.49	48.66	2170.12
Asset-2	1294.26	0.00	541.84	11.67	1847.77
Asset-3	544.98	145.24	72.57	41.52	804.31



Asset-4	816.31	0.00	290.35	136.54	1243.20
Asset-5	919.36	0.00	0.00	49.88	969.24

Debt-Equity Ratio

27. The Petitioner has considered Debt-Equity ratio of 70:30 as on COD and for ACE. Debt-Equity ratio of 70:30 has been considered as provided under Regulation 19 of the 2014 Tariff Regulations. The same has been summarised as follows:

Asset-1	Amount as on COD (₹ in lakh)	(in %)	Amount as on 31.3.2019 (₹ in lakh)	(in %)
Debt	1167.23	70.00	1519.09	70.00
Equity	500.24	30.00	651.04	30.00
Total	1667.47	100.00	2170.12	100.00
Asset-2	Amount as on COD (₹ in lakh)	(in %)	Amount as on 31.3.2019 (₹ in lakh)	(in %)
Debt	905.98	70.00	1293.45	70.00
Equity	388.28	30.00	554.32	30.00
Total	1294.26	100.00	1847.77	100.00
Asset-3	Amount as on COD (₹ in lakh)	(in %)	Amount as on 31.3.2019 (₹ in lakh)	(in %)
Debt	381.49	70.00	563.02	70.00
Equity	163.49	30.00	241.29	30.00
Total	544.98	100.00	804.31	100.00
Asset-4	Amount as on COD (₹ in lakh)	(in %)	Amount as on 31.3.2019 (₹ in lakh)	(in %)
Debt	571.41	70.00	870.25	70.00
Equity	244.89	30.00	372.95	30.00
Total	816.31	100.00	1243.20	100.00
Asset-5	Amount as on COD (₹ in lakh)	(in %)	Amount as on 31.3.2019 (₹ in lakh)	(in %)
Debt	643.55	70.00	678.47	70.00
Equity	275.81	30.00	290.77	30.00
Total	919.36	100.00	969.24	100.00

Depreciation

28. 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 specified in the 2014 Tariff Regulations and depreciation allowed for the 2014-19 tariff period is as follows:



(₹ in lakh)

Asset-1				
	Particulars	2016-17 (Pro-rata for 16 days)	2017-18	2018-19
A	Opening Gross Block	1667.47	1691.97	2121.46
B	ACE	24.50	429.49	48.66
C	Closing Gross Block (A+B)	1691.97	2121.46	2170.12
D	Average Gross Block (A+C)/2	1679.72	1906.72	2145.79
E	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28
F	Depreciable Value	1511.75	1716.05	1931.21
G	Combined Depreciation during the year (D*E)	3.89	100.67	113.30
H	Cumulative depreciation at the end of the year	3.89	104.56	217.86
I	Remaining Depreciable Value at the end of the year	1507.86	1611.48	1713.35

(₹ in lakh)

Asset-2				
	Particulars	2016-17 (Pro-rata for 1 day)	2017-18	2018-19
A	Opening Gross Block	1294.26	1294.26	1836.10
B	ACE	0.00	541.84	11.67
C	Closing Gross Block (A+B)	1294.26	1836.10	1847.77
D	Average Gross Block (A+C)/2	1294.26	1565.18	1841.94
E	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28
F	Depreciable Value	1164.83	1408.66	1657.74
G	Combined Depreciation during the year (D*E)	0.19	82.64	97.25
H	Cumulative depreciation at the end of the year	0.19	82.83	180.08
I	Remaining Depreciable Value at the end of the year	1164.65	1325.83	1477.66

(₹ in lakh)

Asset-3				
	Particulars	2016-17 (Pro-rata for 66 days)	2017-18	2018-19
A	Opening Gross Block	544.98	690.22	762.79
B	ACE	145.24	72.57	41.52
C	Closing Gross Block (A+B)	690.22	762.79	804.31
D	Average Gross Block (A+C)/2	617.60	726.51	783.55
E	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28
F	Depreciable Value	555.84	653.85	705.20
G	Combined Depreciation during the year (D*E)	5.90	38.36	41.37
H	Cumulative depreciation at the end of the year	5.90	44.26	85.63
I	Remaining Depreciable Value at the end of the year	549.94	609.60	619.57

(₹ in lakh)

Asset-4					Asset-5
	Particulars	2016-17 (Pro-rata for 4 days)	2017-18	2018-19	2018-19 (Pro-rata for 54 days)
A	Opening Gross Block	816.31	816.31	1106.66	919.36
B	ACE	0.00	290.35	136.54	49.88
C	Closing Gross Block (A+B)	816.31	1106.66	1243.20	969.24
D	Average Gross Block (A+C)/2	816.31	961.48	1174.93	944.30



E	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28
F	Depreciable Value	734.68	865.33	1057.43	849.87
G	Combined Depreciation during the year (D*E)	0.47	50.77	62.04	7.38
H	Cumulative depreciation at the end of the year	0.47	51.24	113.27	7.38
I	Remaining Depreciable Value at the end of the year	734.20	814.09	944.16	842.50

29. The details of depreciation allowed for the transmission assets in the previous order, claimed by the Petitioner in the instant petition and allowed after true-up in the instant order are as follows:

		(₹ in lakh)		
Assets	Particulars	2016-17	2017-18	2018-19
Asset-1	Allowed vide order dated 6.2.2021 in Petition No. 505/TT/2020	3.89	100.67	113.30
	Claimed by the Petitioner in the instant petition	3.89	100.68	113.30
	Approved after true-up in this order	3.89	100.67	113.30
Asset-2	Allowed vide order dated 6.2.2021 in Petition No. 505/TT/2020	0.19	82.64	97.25
	Claimed by the Petitioner in the instant petition	0.19	82.65	97.28
	Approved after true-up in this order	0.19	82.64	97.25
Asset-3	Allowed vide order dated 6.2.2021 in Petition No. 505/TT/2020	5.90	38.36	41.37
	Claimed by the Petitioner in the instant petition	5.90	38.36	41.37
	Approved after true-up in this order	5.90	38.36	41.37
Asset-4	Allowed vide order dated 6.2.2021 in Petition No. 505/TT/2020	0.47	50.76	62.02
	Claimed by the Petitioner in the instant petition	0.47	50.77	62.05
	Approved after true-up in this order	0.47	50.77	62.04
Asset-5	Allowed vide order dated 6.2.2021 in Petition No. 505/TT/2020	0.00	0.00	7.30
	Claimed by the Petitioner in the instant petition	0.00	0.00	7.38
	Approved after true-up in this order	0.00	0.00	7.38

Interest on Loan (IoL)

30. The Petitioner has claimed the Weighted Average Rate of IoL based on its actual loan portfolio and rate of interest. Accordingly, IoL is calculated based on actual interest rate, in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of IoL allowed are as follows:



(₹ in lakh)

Asset-1				
	Particulars	2016-17 (Pro-rata for 16 days)	2017-18	2018-19
A	Opening Normative Loan	1167.23	1184.38	1485.02
B	Cumulative Repayments up to Previous Year	0.00	3.89	104.56
C	Net Loan-Opening (A-B)	1167.23	1180.49	1380.46
D	Addition due to ACE	17.15	300.64	34.06
E	Repayment during the year	3.89	100.67	113.30
F	Net Loan-Closing (C+D-E)	1180.49	1380.46	1301.23
G	Average Loan (C+F)/2	1173.86	1280.48	1340.84
H	Weighted Average Rate of Interest on Loan (in %)	7.50	7.50	7.49
I	Interest on Loan (G*H)	3.86	96.03	100.38

(₹ in lakh)

Asset-2				
	Particulars	2016-17 (Pro-rata for 1 day)	2017-18	2018-19
A	Opening Normative Loan	905.98	905.98	1285.28
B	Cumulative Repayments up to Previous Year	0.00	0.19	82.83
C	Net Loan-Opening (A-B)	905.98	905.79	1202.45
D	Addition due to ACE	0.00	379.30	8.17
E	Repayment during the year	0.19	82.64	97.25
F	Net Loan-Closing (C+D-E)	905.79	1202.45	1113.37
G	Average Loan (C+F)/2	905.89	1054.12	1157.91
H	Weighted Average Rate of Interest on Loan (in %)	7.68	7.65	7.62
I	Interest on Loan (G*H)	0.19	80.66	88.19

(₹ in lakh)

Asset-3				
	Particulars	2016-17 (Pro-rata for 66 days)	2017-18	2018-19
A	Opening Normative Loan	381.49	483.16	533.96
B	Cumulative Repayments up to Previous Year	0.00	5.90	44.26
C	Net Loan-Opening (A-B)	381.49	477.26	489.70
D	Addition due to ACE	101.67	50.80	29.06
E	Repayment during the year	5.90	38.36	41.37
F	Net Loan-Closing (C+D-E)	477.26	489.70	477.39
G	Average Loan (C+F)/2	429.37	483.48	483.55
H	Weighted Average Rate of Interest on Loan (in %)	8.65	8.15	7.96
I	Interest on Loan (G*H)	6.72	39.42	38.48

(₹ in lakh)

Asset-4					Asset-5
	Particulars	2016-17 (Pro-rata for 4 days)	2017-18	2018-19	2018-19 (Pro-rata for 54 day)
A	Opening Normative Loan	571.41	571.41	774.67	643.55
B	Cumulative Repayments up to Previous Year	0.00	0.47	51.24	0.00
C	Net Loan-Opening (A-B)	571.41	570.94	723.43	643.55
D	Addition due to ACE	0.00	203.25	95.58	34.92



E	Repayment during the year	0.47	50.77	62.04	7.38
F	Net Loan-Closing (C+D-E)	570.94	723.43	756.97	671.10
G	Average Loan (C+F)/2	571.18	647.18	740.20	657.33
H	Weighted Average Rate of Interest on Loan (in %)	7.42	7.55	7.61	1.19
I	Interest on Loan (G*H)	0.46	48.83	56.32	1.16

31. The details of interest on loan allowed for the transmission assets in the previous order, claimed by the Petitioner in the instant petition and allowed after true-up in the instant order are as follows:

(₹ in lakh)				
Assets	Particulars	2016-17	2017-18	2018-19
Asset-1	Allowed vide order dated 6.2.2021 in Petition No. 505/TT/2020	3.86	96.03	100.38
	Claimed by the Petitioner in the instant petition	3.86	96.03	100.38
	Approved after true-up in this order	3.86	96.03	100.38
Asset-2	Allowed vide order dated 6.2.2021 in Petition No. 505/TT/2020	0.19	80.66	88.20
	Claimed by the Petitioner in the instant petition	0.19	80.67	88.22
	Approved after true-up in this order	0.19	80.66	88.19
Asset-3	Allowed vide order dated 6.2.2021 in Petition No. 505/TT/2020	6.61	39.43	38.48
	Claimed by the Petitioner in the instant petition	6.72	39.42	38.48
	Approved after true-up in this order	6.72	39.42	38.48
Asset-4	Allowed vide order dated 6.2.2021 in Petition No. 505/TT/2020	0.46	48.82	56.31
	Claimed by the Petitioner in the instant petition	0.46	48.84	56.33
	Approved after true-up in this order	0.46	48.83	56.32
Asset-5	Allowed vide order dated 6.2.2021 in Petition No. 505/TT/2020	0.00	0.00	1.14
	Claimed by the Petitioner in the instant petition	0.00	0.00	1.16
	Approved after true-up in this order	0.00	0.00	1.16

Return on Equity (RoE)

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

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



Year	Claimed effective tax rate (in %)	Grossed up RoE [(Base Rate)/(1-t)] (in %)
2018-19	21.549	19.758

33. The Commission in 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 as follows:

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

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

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

35. The Petitioner has claimed RoE for the 2014-19 tariff period after grossing up the RoE @15.50% with Effective Tax rates (based on MAT rates) each year as per the above said Regulation. RoE is trueed-up on the basis of MAT rates applicable in the respective years and is approved for the transmission system for the 2014-19 tariff period which is as follows:

(₹ in lakh)				
Asset-1				
	Particulars	2016-17 (Pro-rata for 16 days)	2017-18	2018-19
A	Opening Equity	500.24	507.59	636.44
B	Addition due to ACE	7.35	128.85	14.60



C	Closing Equity(A+B)	507.59	636.44	651.04
D	Average Equity(A+C)/2	503.92	572.02	643.74
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500
F	Tax Rate applicable (in %)	21.342	21.342	21.549
G	Applicable ROE Rate (in %)	19.706	19.706	19.758
H	Return on Equity for the year(D*G)	4.35	112.72	127.19

(₹ in lakh)

Asset-2				
	Particulars	2016-17 (Pro-rata for 1 day)	2017-18	2018-19
A	Opening Equity	388.28	388.28	550.82
B	Addition due to ACE	0.00	162.54	3.50
C	Closing Equity(A+B)	388.28	550.82	554.32
D	Average Equity(A+C)/2	388.28	469.55	552.57
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500
F	Tax Rate applicable (in %)	21.342	21.342	21.549
G	Applicable ROE Rate (in %)	19.705	19.705	19.758
H	Return on Equity for the year(D*G)	0.21	92.52	109.18

(₹ in lakh)

Asset-3				
	Particulars	2016-17 (Pro-rata for 66 days)	2017-18	2018-19
A	Opening Equity	163.49	207.06	228.83
B	Addition due to ACE	43.57	21.77	12.46
C	Closing Equity(A+B)	207.06	228.83	241.29
D	Average Equity(A+C)/2	185.28	217.95	235.06
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500
F	Tax Rate applicable (in %)	21.342	21.342	21.549
G	Applicable ROE Rate (in %)	19.705	19.705	19.758
H	Return on Equity for the year(D*G)	6.60	42.95	46.44

(₹ in lakh)

Asset-4					Asset-5
	Particulars	2016-17 (Pro-rata for 4 days)	2017-18	2018-19	2018-19 (Pro-rata for 54 days)
A	Opening Equity	244.89	244.89	331.99	275.81
B	Addition due to ACE	0.00	87.10	40.96	14.96
C	Closing Equity(A+B)	244.89	331.99	372.95	290.77
D	Average Equity(A+C)/2	244.89	288.44	352.47	283.29
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	21.342	21.342	21.549	21.549
G	Applicable ROE Rate (in %)	19.705	19.705	19.758	19.758
H	Return on Equity for the year(D*G)	0.53	56.84	69.64	8.28

36. The details of RoE allowed for the transmission assets in the previous order, claimed by the Petitioner in the instant Petition and allowed after true-up in the instant order are as follows:



(₹ in lakh)

Assets	Particulars	2016-17	2017-18	2018-19
Asset-1	Allowed vide order dated 6.2.2021 in Petition No. 505/TT/2020	4.35	112.72	127.19
	Claimed by the Petitioner in the instant petition	4.35	112.72	127.19
	Approved after true-up in this order	4.35	112.72	127.19
Asset-2	Allowed vide order dated 6.2.2021 in Petition No. 505/TT/2020	0.21	92.53	109.18
	Claimed by the Petitioner in the instant petition	0.21	92.54	109.21
	Approved after true-up in this order	0.21	92.52	109.18
Asset-3	Allowed vide order dated 6.2.2021 in Petition No. 505/TT/2020	6.60	42.95	46.44
	Claimed by the Petitioner in the instant petition	6.60	42.95	46.44
	Approved after true-up in this order	6.60	42.95	46.44
Asset-4	Allowed vide order dated 6.2.2021 in Petition No. 505/TT/2020	0.53	56.83	69.62
	Claimed by the Petitioner in the instant petition	0.53	56.85	69.65
	Approved after true-up in this order	0.53	56.84	69.64
Asset-5	Allowed vide order dated 6.2.2021 in Petition No. 505/TT/2020	0.00	0.00	8.20
	Claimed by the Petitioner in the instant petition	0.00	0.00	8.28
	Approved after true-up in this order	0.00	0.00	8.28

Operation & Maintenance Expenses (O&M Expenses)

37. The Petitioner has not claimed O&M Expenses for Assets-1 to 5. Accordingly, O&M Expenses is not allowed.

Interest on Working Capital (IWC)

38. IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and the trued-up IWC allowed for the transmission assets are as follows:

(₹ in lakh)

Asset-1				
	Particulars	2016-17 (Pro-rata for 16 days)	2017-18	2018-19
A	Working Capital for O&M Expenses (O&M Expenses for 1 Month)	0.00	0.00	0.00
B	Working Capital for Maintenance Spares (15% of O&M)	0.00	0.00	0.00
C	Working Capital for Receivables (Equivalent to 2 months of annual transmission charges)	47.00	52.70	58.05
D	Total Working Capital (A+B+C)	47.00	52.70	58.05
E	Rate of Interest on working capital (in %)	12.80	12.80	12.80
F	Interest of working capital (D*E)	0.26	6.75	7.43



(₹ in lakh)

Asset-2				
	Particulars	2016-17 (Pro-rata for 1 day)	2017-18	2018-19
A	Working Capital for O&M Expenses (O&M Expenses for 1 Month)	0.00	0.00	0.00
B	Working Capital for Maintenance Spares (15% of O&M)	0.00	0.00	0.00
C	Working Capital for Receivables (Equivalent to 2 months of annual transmission charges)	36.51	43.57	50.17
D	Total Working Capital (A+B+C)	36.51	43.57	50.17
E	Rate of Interest on working capital (in %)	12.80	12.80	12.80
F	Interest of working capital (D*E)	0.01	5.58	6.42

(₹ in lakh)

Asset-3				
	Particulars	2016-17 (Pro-rata for 66 days)	2017-18	2018-19
A	Working Capital for O&M Expenses (O&M Expenses for 1 Month)	0.00	0.00	0.00
B	Working Capital for Maintenance Spares (15% of O&M)	0.00	0.00	0.00
C	Working Capital for Receivables (Equivalent to 2 months of annual transmission charges)	18.10	20.56	21.51
D	Total Working Capital (A+B+C)	18.10	20.56	21.51
E	Rate of Interest on working capital (in %)	12.80	12.80	12.80
F	Interest of working capital (D*E)	0.42	2.63	2.75

(₹ in lakh)

Asset-4					Asset-5
	Particulars	2016-17 (Pro-rata for 4 days)	2017-18	2018-19	2018-19 (Pro-rata for 54 days)
A	Working Capital for O&M Expenses (O&M Expenses for 1 Month)	0.00	0.00	0.00	0.00
B	Working Capital for Maintenance Spares (15% of O&M)	0.00	0.00	0.00	0.00
C	Working Capital for Receivables (Equivalent to 2 months of annual transmission charges)	22.78	26.64	32.02	19.34
D	Total Working Capital (A+B+C)	22.78	26.64	32.02	19.34
E	Rate of Interest on working capital (in %)	12.80	12.80	12.80	12.20
F	Interest of working capital (D*E)	0.03	3.41	4.10	0.35

39. The details of IWC allowed for the transmission assets in the previous order, claimed by the Petitioner in the instant Petition and allowed after true-up in the instant order are as follows:

(₹ in lakh)

Assets	Particulars	2016-17	2017-18	2018-19
Asset-1	Allowed vide order dated 6.2.2021 in Petition No. 505/TT/2020	0.26	6.74	7.43
	Claimed by the Petitioner in the instant petition	0.26	6.75	7.43



Assets	Particulars	2016-17	2017-18	2018-19
	Approved after true-up in this order	0.26	6.75	7.43
Asset-2	Allowed vide order dated 6.2.2021 in Petition No. 505/TT/2020	0.01	5.58	6.42
	Claimed by the Petitioner in the instant petition	0.01	5.58	6.42
	Approved after true-up in this order	0.01	5.58	6.42
Asset-3	Allowed vide order dated 6.2.2021 in Petition No. 505/TT/2020	0.42	2.63	2.75
	Claimed by the Petitioner in the instant petition	0.42	2.63	2.75
	Approved after true-up in this order	0.42	2.63	2.75
Asset-4	Allowed vide order dated 6.2.2021 in Petition No. 505/TT/2020	0.03	3.41	4.10
	Claimed by the Petitioner in the instant petition	0.03	3.41	4.10
	Approved after true-up in this order	0.03	3.41	4.10
Asset-5	Allowed vide order dated 6.2.2021 in Petition No. 505/TT/2020	0.00	0.00	0.35
	Claimed by the Petitioner in the instant petition	0.00	0.00	0.35
	Approved after true-up in this order	0.00	0.00	0.35

Approved Annual Fixed Charges for the 2014-19 Tariff Period

40. The trued-up AFC allowed for the transmission assets for the 2014-19 tariff period are as follows:

(₹ in lakh)

Asset-1				
	Particulars	2016-17 (Pro-rata for 16 days)	2017-18	2018-19
A	Depreciation	3.89	100.67	113.30
B	Interest on Loan	3.86	96.03	100.38
C	Return on Equity	4.35	112.72	127.19
D	O&M Expenses	0.00	0.00	0.00
E	Interest on Working Capital	0.26	6.75	7.43
F	Total	12.36	316.17	348.30

(₹ in lakh)

Asset-2				
	Particulars	2016-17 (Pro-rata for 1 day)	2017-18	2018-19
A	Depreciation	0.19	82.64	97.25
B	Interest on Loan	0.19	80.66	88.19
C	Return on Equity	0.21	92.52	109.18
D	O&M Expenses	0.00	0.00	0.00
E	Interest on Working Capital	0.01	5.58	6.42
F	Total	0.60	261.40	301.04

(₹ in lakh)

Asset-3				
	Particulars	2016-17 (Pro-rata for 66 days)	2017-18	2018-19
A	Depreciation	5.90	38.36	41.37
B	Interest on Loan	6.72	39.42	38.48
C	Return on Equity	6.60	42.95	46.44
D	O&M Expenses	0.00	0.00	0.00
E	Interest on Working Capital	0.42	2.63	2.75
F	Total	19.64	123.36	129.04

(₹ in lakh)

Asset-4					Asset-5
	Particulars	2016-17 (Pro-rata for 4 days)	2017-18	2018-19	2018-19 (Pro-rata for 54 days)
A	Depreciation	0.47	50.77	62.04	7.38
B	Interest on Loan	0.46	48.83	56.32	1.16
C	Return on Equity	0.53	56.84	69.64	8.28
D	O&M Expenses	0.00	0.00	0.00	0.00
E	Interest on Working Capital	0.03	3.41	4.10	0.35
F	Total	1.49	159.85	192.10	17.17

41. Accordingly, the Annual Transmission Charges approved in the previous order, claimed by the Petitioner in the instant petition and allowed after true-up in the instant order are as follows:

(₹ in lakh)

Assets	Particulars	2016-17	2017-18	2018-19
Asset-1	Allowed vide order dated 6.2.2021 in Petition No. 505/TT/2020	12.36	316.17	348.30
	Claimed by the Petitioner in the instant petition	12.36	316.18	348.30
	Approved after true-up in this order	12.36	316.17	348.30
Asset-2	Allowed vide order dated 6.2.2021 in Petition No. 505/TT/2020	0.60	261.40	301.05
	Claimed by the Petitioner in the instant petition	0.60	261.44	301.13
	Approved after true-up in this order	0.60	261.40	301.04
Asset-3	Allowed vide order dated 6.2.2021 in Petition No. 505/TT/2020	19.52	123.36	129.05
	Claimed by the Petitioner in the instant petition	19.64	123.36	129.04
	Approved after true-up in this order	19.64	123.36	129.04
Asset-4	Allowed vide order dated 6.2.2021 in Petition No. 505/TT/2020	1.50	159.82	192.05
	Claimed by the Petitioner in the instant petition	1.49	159.87	192.13
	Approved after true-up in this order	1.49	159.85	192.10
Asset-5	Allowed vide order dated 6.2.2021 in Petition No. 505/TT/2020	0.00	0.00	16.99
	Claimed by the Petitioner in the instant petition	0.00	0.00	17.17
	Approved after true-up in this order	0.00	0.00	17.17



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

42. The details of the transmission charges claimed by the Petitioner for the combined asset for the 2019-24 tariff period in this petition are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	381.05	392.33	394.06	394.06	394.06
Interest on Loan	285.88	269.63	240.58	209.09	181.49
Return on Equity	406.64	418.68	420.52	420.52	420.52
Interest on Working Capital	31.75	32.48	32.66	32.80	32.89
O&M Expenses	358.00	371.00	384.00	398.00	411.00
Total	1463.32	1484.12	1471.82	1454.47	1439.96

43. The details of IWC claimed by the Petitioner for the combined asset for the 2019-24 period in this petition are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	29.83	30.92	32.00	33.17	34.25
Maintenance Spares	53.70	55.65	57.60	59.70	61.65
Receivables	179.92	182.97	181.46	179.32	177.04
Total Working Capital	263.45	269.54	271.06	272.19	272.94
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	31.75	32.48	32.66	32.80	32.89

Effective Date of Commercial Operation (E-COD)

44. 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 E-COD					
Asset	Actual COD	Admitted capital cost as on 31.3.2019 (₹ in lakh)	Weight of the cost (in %)	No. of days from last COD	Total weighted days
Asset-1	16.3.2017	2170.12	30.85	692.00	213.48
Asset-2	31.3.2017	1847.77	26.27	677.00	177.83
Asset-3	25.1.2017	804.31	11.43	742.00	84.84
Asset-4	28.3.2017	1243.20	17.67	680.00	120.17
Asset-5	6.2.2019	969.24	13.78	0.00	0.00
Total		7034.64	100.00		596.31
Effective COD (Latest COD-Total weighted Days) 20.6.2017					

45. The E-COD is used to determine the lapsed life of the project as a whole, which works out as (1) one 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)

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

47. 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 at the time of actual COD of the 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 25 years as follows:

Admitted capital cost as on 31.3.2019				
Particulars	Combined asset cost (₹ in lakh) (1)	Life in years (2)	Weighted cost (3)=(1) x (2)	Weighted avg. life of asset (in years) (4)=(3)/(1)
Sub-station	7034.64	25	175866.09	
Total	7034.64		175866.09	25 years

48. WAL as on 1.4.2019 as determined above is applicable prospectively (i.e. for 2019-24 tariff period onwards) and no retrospective adjustment of depreciation in previous tariff period is required to be done. As discussed, the Effective COD of the assets is 20.6.2017 and the lapsed life of the project as a whole, works out as one (1) year 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 24 years.



Capital Cost

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

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

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

(a) *The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*

(b) *Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*

(c) *Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*

(d) *Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*

(e) *Capitalised initial spares subject to the ceiling rates in accordance with these regulations;*

(f) *Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;*

(g) *Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;*

(h) *Adjustment of revenue earned by the transmission licensee by using the asset before the date of commercial operation;*

(i) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*

(j) *Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;*

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

(l) *Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;*

(m) *Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;*

(n) *Expenditure on account of change in law and force majeure events; and*

(o) *Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*

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

(a) *Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;*

(b) *Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;*

(c) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*



- (d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
- (e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and
- (f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.”

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

- (a) cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and
- (b) cost of the developer’s 10% contribution towards Rajiv Gandhi GrameenVidyutikaranYojana (RGGVY) and DeendayalUpadhyaya Gram JyotiYojana (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. “

50. 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 the combined asset as on 1.4.2019 and it is as follows:



						(₹ in lakh)
Elements	Asset-1	Asset-2	Asset-3	Asset-4	Asset-5	Capital cost for combined asset as on 31.3.2019
Sub-station	2170.12	1847.77	804.31	1243.20	969.24	7034.64
Total	2170.12	1847.77	804.31	1243.20	969.24	7034.64

51. The trued-up capital cost of ₹7034.64 lakh for combined asset is considered as admitted capital cost as on 31.3.2019 for working out tariff for 2019-24 tariff period.

Additional Capital Expenditure

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

“24. Additional Capitalisation within the original scope and upto the cut-off date

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

(a) Undischarged liabilities recognized to be payable at a future date;

(b) Works deferred for execution;

(c) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23 of these regulations;

(d) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority or order or decree of any court of law;

(e) Change in law or compliance of any existing law; and

(f) Force Majeure events:

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

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

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

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

(a) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;

(b) Change in law or compliance of any existing law;

(c) Deferred works relating to ash pond or ash handling system in the original scope of work;



- (d) Liability for works executed prior to the cut-off date;
(e) Force Majeure events;
(f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and
(g) Raising of ash dyke as a part of ash disposal system

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

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

53. The Petitioner has claimed ACE of ₹362.17 lakh in the year 2019-20 and ₹65.26 lakh in the year 2020-21 for the combined asset. The Petitioner vide affidavit dated 31.3.2022 has submitted the liability flow statement. The details are as follows:

(₹ in lakh)

Asset-1					
Agency	Particulars	Discharge (Regulation 24(1)(a))		Unexecuted Work (Regulation 24(1)(b))	
		2019-20	2020-21	2019-20	2020-21
CG Power and Industrial Solutions	Sub-station	2.23	0.00	0.00	0.00
Siemens Limited	Sub-station	0.00	0.00	10.35	0.00
Total		2.23	0.00	10.35	0.00

(₹ in lakh)

Asset-2					
Agency	Particulars	Discharge (Regulation 24(1)(a))		Unexecuted Work (Regulation 24(1)(b))	
		2019-20	2020-21	2019-20	2020-21
CG Power and Industrial Solutions	Sub-station	21.40	0.00	1.42	0.00
Siemens Limited	Sub-station	0.00	0.00	15.82	0.00
Mehru Electricals and Mechanical En	Sub-station	0.00	0.00	42.21	0.00
Oblum Elecctrical Industries	Sub-station	0.00	0.00	34.65	0.00
Total		21.40	0.00	94.10	0.00

(₹ in lakh)

Asset-4					
Agency	Particulars	Discharge (Regulation 24(1)(a))		Unexecuted Work (Regulation 24(1)(b))	
		2019-20	2020-21	2019-20	2020-21
GE T&D India Limited	Sub-station	39.64	0.00	0.00	0.00
Total		39.64	0.00	0.00	0.00



(₹ in lakh)

Asset-5					
Agency	Particulars	Discharge (Regulation 24(1)(a))		Unexecuted Work (Regulation 24(1)(b))	
		2019-20	2020-21	2019-20	2020-21
GE T&D India Limited	Sub-station	285.40	21.86	(92.79)	43.40
Total		285.40	21.86	(92.79)*	43.40

* Out of the total amount of ₹92.79 lakh, ₹67.93 lakh reduced on account of recovery of LD and ₹24.86 lakh is reduced due to negative PV Recovery.

54. We have considered the submissions of the Petitioner. The ACE claimed by the Petitioner in case of Assets-1, Assets-2 and Assets-4 is towards undischarged liability upto cut-off date is allowed under Regulation 24(1)(a) of the 2019 Tariff Regulations and unexecuted work completed before COD and claimed after cut-off date is allowed under Regulation 24(1)(b) of the 2019 Tariff Regulations.

55. In case of Asset-5, the amount of ₹67.93 lakh is reduced from the capital cost on account of recovery of LD and ₹24.86 lakh is reduced from the capital cost due to negative PV Recovery. The ACE claimed by the Petitioner towards undischarged liability upto cut-off date is allowed under Regulation 24(1)(a) of the 2019 Tariff Regulations and unexecuted work completed before the COD and claimed after cut-off date is allowed under Regulation 24(1)(b) of the 2019 Tariff Regulations.

56. The details of the ACE allowed in respect of the combined asset are as follows:

(₹ in lakh)

Particulars	ACE	
	2019-20	2020-21
ACE allowed under Regulation 24(1)(a) and Regulation 24(1)(b) of the 2019 Tariff Regulations	362.17	65.26
Less: Excess initial spares disallowed	0.51	0.00
Total	361.66	65.26

Capital cost for the 2019-24 tariff period

(₹ in lakh)

Combined Asset			
Combined Capital cost as on 1.4.2019	ACE		Combined Capital cost as on 31.3.2024
	2019-20	2020-21	
7034.64	361.66	65.26	7461.56



Debt-Equity Ratio

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

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

Provided that:

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

(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.”

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

Particulars	Capital cost as on 1.4.2019 (₹ in lakh)	(in %)	Capital cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	4924.27	70.00	5223.12	70.00
Equity	2110.37	30.00	2238.44	30.00
Total	7034.64	100.00	7461.56	100.00

Depreciation

59. Regulation 33 of the 2019 Tariff Regulations provides as follows:

"33. Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element thereof including communication system. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units:

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

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

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

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

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

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



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

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

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

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

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

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

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

(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.”

60. We have considered the submissions of the Petitioner. The IT equipment has been considered as part of the Gross Block and depreciated using Weighted Average Rate of Depreciation (WAROD). WAROD at Annexure-II has been worked out taking into account the depreciation rates of IT and non-IT assets as prescribed in the 2019 Tariff Regulations. The salvage value of IT equipment has been considered nil, i.e. IT asset has been considered as 100% depreciable. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The depreciation allowed in respect of the combined asset is as follows:

(₹ in lakh)

	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	7034.64	7396.30	7461.56	7461.56	7461.56
B	ACE	361.66	65.26	0.00	0.00	0.00
C	Closing Gross Block (A+B)	7396.30	7461.56	7461.56	7461.56	7461.56
D	Average Gross Block (A+C)/2	7215.47	7428.93	7461.56	7461.56	7461.56
E	Depreciable Value	6493.93	6686.04	6715.41	6715.41	6715.41
F	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28
G	Remaining life at the beginning of the year (Year)	24.00	23.00	22.00	21.00	20.00
H	Elapsed life at the beginning of the year (Year)	1.00	2.00	3.00	4.00	5.00
K	Depreciation during the year (D*F)	380.98	392.25	393.97	393.97	393.97
M	Cumulative Depreciation at the end of the year	985.20	1377.45	1771.42	2165.39	2559.36
N	Remaining depreciable value at the end of the year	5508.73	5308.59	4943.99	4550.02	4156.05

Interest on Loan (IoL)

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

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

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



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

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

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

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

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

(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”.

62. 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 as follows:

(₹ in lakh)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Gross Normative Loan	4924.27	5177.44	5223.12	5223.12	5223.12
B	Cumulative Repayments upto Previous Year	604.22	985.20	1377.45	1771.42	2165.39
C	Net Loan-Opening (A-B)	4320.05	4192.24	3845.67	3451.70	3057.73
D	Addition due to ACE	253.16	45.68	0.00	0.00	0.00



	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
E	Repayment during the year	380.98	392.25	393.97	393.97	393.97
F	Net Loan-Closing (C+D-E)	4192.24	3845.67	3451.70	3057.73	2663.76
G	Average Loan (C+F)/2	4256.15	4018.96	3648.69	3254.72	2860.75
H	Weighted Average Rate of Interest on Loan (in %)	6.81	6.81	6.70	6.54	6.48
I	Interest on Loan (G*H)	289.86	273.61	244.49	212.91	185.28

Return on Equity (RoE)

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

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

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

Provided that return on equity in respect of additional capitalization after 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 rates 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 follows:

Rate of pre-tax return on equity = Base rate / (1-t)

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

Illustration-

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

Rate of return on equity = 15.50/ (1-0.2155) = 19.758%

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

(a) Estimated Gross Income from generation or transmission business for FY 2019-20 is Rs 1,000 crore;

(b) Estimated Advance Tax for the year on above is Rs 240 crore;

(c) Effective Tax Rate for the year 2019-20 = Rs 240 Crore/Rs 1000 Crore = 24%;

(d) Rate of return on equity = 15.50/ (1-0.24) = 20.395%

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



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

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

(₹ in lakh)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	2110.37	2218.87	2238.44	2238.44	2238.44
B	Additions due to ACE	108.50	19.58	0.00	0.00	0.00
C	Closing Equity (A+B)	2218.87	2238.44	2238.44	2238.44	2238.44
D	Average Equity (A+C)/2	2164.62	2228.66	2238.44	2238.44	2238.44
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782



H	Return on Equity (D*G)	406.56	418.59	420.42	420.42	420.42
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Operation & Maintenance Expenses (O&M Expenses)

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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
2 number of 500 MVA ICTS at Somehalli Sub-station	358.00	371.00	384.00	398.00	411.00

67. The norms specified under Regulation 35(3)(a) of the 2019 Tariff Regulations are as follows:

“35. Operation and Maintenance Expenses:

...

(3) Transmission system: (a) The following normative operation and maintenance expenses shall be admissible for the transmission system:

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<i>Norms for sub-station Bays (₹ Lakh per bay)</i>					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
<i>Norms for Transformers (₹ Lakh per MVA)</i>					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
<i>Norms for AC and HVDC lines (₹ Lakh per km)</i>					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<i>HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)</i>	834	864	894	925	958
<i>Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)</i>	1,666	1,725	1,785	1,848	1,913
<i>500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)</i>	2,252	2,331	2,413	2,498	2,586
<i>±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)</i>	2,468	2,555	2,645	2,738	2,834
<i>±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)</i>	1,696	1,756	1,817	1,881	1,947
<i>±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)</i>	2,563	2,653	2,746	2,842	2,942

Provided that the O&M expenses for the GIS bays shall be allowed as worked out by multiplying 0.70 of the O&M expenses of the normative O&M expenses for bays;

Provided further that:

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

(b) The total allowable operation and maintenance expenses for the transmission system shall be calculated by multiplying the number of sub-station bays, transformer capacity of the transformer (in MVA) and km of line length with the applicable norms for the operation and maintenance expenses per bay, per MVA and per km respectively.

(c) The Security Expenses and Capital Spares for transmission system shall be allowed separately after prudence check:



Provided that the transmission licensee shall submit the assessment of the security requirement and estimated security expenses, the details of year-wise actual capital spares consumed at the time of truing up with appropriate justification.”

68. We have considered the submissions of the Petitioner. The O&M Expenses allowed for the combined asset are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station ICT (MVA Capacity)					
400 kV: Somanahalli 2X500 ICTs- (1000 MVA)	1000	1000	1000	1000	1000
Norms					
400 kV	0.358	0.371	0.384	0.398	0.411
Total Sub-station	358.00	371.00	384.00	398.00	411.00
Total O&M Expenses allowed	358.00	371.00	384.00	398.00	411.00

Interest on Working Capital (IWC)

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

“34. Interest on Working Capital

(1)...

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

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

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

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

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

“3.Definitions ...

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



70. The Petitioner has submitted that it has computed IWC for the 2019-24 tariff period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest 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 from 2021-22 onwards has been considered as 10.50% (SBI 1 year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points).

71. We have considered the submissions of the Petitioner and, accordingly, IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations and the components of the working capital and interest allowed thereon for the combined asset for the 2019-24 tariff period are as follows:

(₹ in lakh)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Working Capital for O&M Expenses (O&M Expenses for one month)	29.83	30.92	32.00	33.17	34.25
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	53.70	55.65	57.60	59.70	61.65
C	Working Capital for Receivables (Equivalent to 45 days of annual fixed cost/annual transmission charges)	180.39	183.18	181.40	179.25	176.97
D	Total Working Capital (A+B+C+D)	263.93	269.75	271.00	272.11	272.87
E	Rate of Interest of working capital (in %)	12.05	11.25	10.50	10.50	10.50
F	Interest of working capital (D*E)	31.80	30.35	28.45	28.57	28.65

Annual Fixed Charges for the 2019-24 Tariff Period

72. The transmission charges approved for the combined asset for the 2019-24 tariff period are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	380.98	392.25	393.97	393.97	393.97
Interest on Loan	289.86	273.61	244.49	212.91	185.28
Return on Equity	406.56	418.59	420.42	420.42	420.42



O&M Expenses	358.00	371.00	384.00	398.00	411.00
Interest on Working Capital	31.80	30.35	28.45	28.57	28.65
Total	1467.20	1485.80	1471.33	1453.87	1439.32

Filing Fee and Publication Expenses

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

Licence Fee & RLDC Fees and Charges

74. 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.

Security Expenses

75. The Petitioner has submitted that security expenses for the transmission asset are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential IWC.

76. We have considered the above submissions of Petitioner. The Petitioner has claimed consolidated security expenses for all the transmission asset owned by it on projected basis for the 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19 in Petition No. 260/MP/2020. The 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.



Goods and Services Tax (GST)

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

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

Capital Spares

79. The Petitioner has sought reimbursement of capital spares at the end of tariff period. The Petitioner's claim, if any, will 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 provisions of the 2010 Sharing Regulations. With effect from 1.11.2020, the 2010 Sharing Regulations has been repealed and sharing of transmission charges is governed by the provisions of the 2020 Sharing Regulations. Accordingly, the billing, collection, and disbursement of transmission charges approved in this order shall be governed as per the applicable Sharing Regulations as provided in Regulation 43 of the 2014 Tariff Regulations and Regulation 57 of the 2019 Tariff Regulations.



81. To summarise:

- a) The trued-up Annual Fixed Charges allowed for the transmission asset for the 2014-19 tariff period are as follows:

(₹ in lakh)

Asset-1				Asset-2		
Particulars	2016-17	2017-18	2018-19	2016-17	2017-18	2018-19
Total	12.36	316.17	348.30	0.60	261.40	301.04

(₹ in lakh)

Asset-3				Asset-4			Asset-5
Particulars	2016-17	2017-18	2018-19	2016-17	2017-18	2018-19	2018-19
Total	19.64	123.36	129.04	1.49	159.85	192.10	17.17

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

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Fixed Charges	1467.20	1485.80	1471.33	1453.87	1439.32

82. The Annexure-I and Annexure-II to this order form part of the order.

83. This order disposes of Petition No. 6/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

Asset-1									
2014-19	Admitted Capital Cost as on COD (₹ in lakh)	ACE (₹ in lakh)			Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations		
Capital Expenditure as on COD		2016-17	2017-18	2018-19			2016-17 (₹ in lakh)	2017-18 (₹ in lakh)	2018-19 (₹ in lakh)
Sub Station	1667.47	24.50	429.49	48.66	2170.12	5.28	88.69	100.67	113.30
Total	1667.47	24.50	429.49	48.66	2170.12		88.69	100.67	113.30
Average Gross Block (₹ in lakh)							1679.72	1906.72	2145.79
Weighted Average Rate of Depreciation (in %)							5.28	5.28	5.28

Asset-2									
2014-19	Admitted Capital Cost as on COD (₹ in lakh)	ACE (₹ in lakh)			Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations		
Capital Expenditure as on COD		2016-17	2017-18	2018-19			2016-17 (₹ in lakh)	2017-18 (₹ in lakh)	2018-19 (₹ in lakh)
Sub Station	1294.26	0.00	541.84	11.67	1847.77	5.28	68.34	82.64	97.25
Total	1294.26	0.00	541.84	11.67	1847.77		68.34	82.64	97.25
Average Gross Block (₹ in lakh)							1294.26	1565.18	1841.94
Weighted Average Rate of Depreciation (in %)							5.28	5.28	5.28



Asset-3									
2014-19	Admitted Capital Cost as on COD (₹ in lakh)	ACE (₹ in lakh)			Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations		
Capital Expenditure as on COD		2016-17	2017-18	2018-19			2016-17 (₹ in lakh)	2017-18 (₹ in lakh)	2018-19 (₹ in lakh)
Sub Station	544.98	145.24	72.57	41.52	804.31	5.28	32.61	38.36	41.37
Total	544.98	145.24	72.57	41.52	804.31		32.61	38.36	41.37
Average Gross Block (₹ in lakh)							617.60	726.51	783.55
Weighted Average Rate of Depreciation (in %)							5.28	5.28	5.28

Asset-4									
2014-19	Admitted Capital Cost as on COD (₹ in lakh)	ACE (₹ in lakh)			Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations		
Capital Expenditure as on COD		2016-17	2017-18	2018-19			2016-17 (₹ in lakh)	2017-18 (₹ in lakh)	2018-19 (₹ in lakh)
Sub Station	816.31	0.00	290.35	136.54	1243.20	5.28	43.10	50.77	62.04
Total	816.31	0.00	290.35	136.54	1243.20		43.10	50.77	62.04
Average Gross Block (₹ in lakh)							816.31	961.48	1174.93
Weighted Average Rate of Depreciation (in %)							5.28	5.28	5.28



Asset-5									
2014-19	Admitted Capital Cost as on COD (₹ in lakh)	ACE (₹ in lakh)			Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations		
Capital Expenditure as on COD		2016-17	2017-18	2018-19			2016-17 (₹ in lakh)	2017-18 (₹ in lakh)	2018-19 (₹ in lakh)
Sub Station	919.36	0.00	0.00	49.88	969.24	5.28	0.00	0.00	49.86
Total	919.36	0.00	0.00	49.88	969.24		0.00	0.00	49.86
Average Gross Block (₹ in lakh)							0.00	0.00	944.30
Weighted Average Rate of Depreciation (in %)							5.28	5.28	5.28



Annexure – II

Combined Asset										
2019-24	Admitted Capital Cost as on 01.04.2019 (₹ in lakh)	ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations			2022-23 (₹ in lakh)	2023-24 (₹ in lakh)
Capital Expenditure as on COD		2019-20	2020-21			2019-20 (₹ in lakh)	2020-21 (₹ in lakh)	2021-22 (₹ in lakh)		
Sub Station	7034.64	361.66	65.26	7461.56	5.28	380.98	392.25	393.97	393.97	393.97
Total	7034.64	361.66	65.26	7461.56		380.98	392.25	393.97	393.97	393.97
Average Gross Block (₹ in lakh)						7215.47	7428.93	7461.56	7461.56	7461.56
Weighted Average Rate of Depreciation (in %)						5.28	5.28	5.28	5.28	5.28

