

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 547/TT/2020

Coram:

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

Date of Order: 20.10.2021

In the matter of:

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 for trueing up of transmission tariff of the 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff for the 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for Combined Asset comprising of **Asset-A:** 400 kV, 125 MVAR Bus Reactor at Gorakhpur, **Asset-B:** 400 kV, 125 MVAR Bus Reactor at Allahabad, **Asset-C:** 400 kV, 125 MVAR Bus Reactor at Manipuri, **Asset-D:** 400 kV, 125 MVAR Bus Reactor at Kankroli, **Asset-E:** 400 kV, 125 MVAR Bus Reactor-I at Vindhyachal, **Asset-F:** 125 MVAR Bus Reactor-II at Vindhyachal, **Asset-G:** Extension of 400/220 kV Jalandhar (POWERGRID), **Asset-H:** Extension of 400/220 kV Amritsar (POWERGRID) Sub-station 400 kV, 80 MVAR Bus-Reactor, **Asset-I:** Extension of 400/220 kV Hissar (POWERGRID) Sub-station 400 kV, 125 MVAR Bus Reactor, **Asset-J:** Extension of 400/220 kV Nalagarh (POWERGRID) Sub-station 400 kV, 125 MVAR Bus-Reactor under the scheme "Provision of Bus Reactors in the Northern Region".

And in the matter of:

Power Grid Corporation of India Limited
SAUDAMINI, Plot No-2,
Sector-29, Gurgaon-122 001 (Haryana).

.....Petitioner

Versus

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited,
Vidyut Bhawan, Vidyut Marg,
Jaipur-302005 (Rajasthan).
2. Ajmer Vidyut Vitran Nigam Limited,



132kV, GSS RVPNL Sub-Station Building,
Caligiri Road, Malviya Nagar,
Jaipur-302017 (Rajasthan).

3. Jaipur Vidyut Vitran Nigam Limited,
132kV, GSS RVPNL Sub-Station Building,
Caligiri Road, Malviya Nagar,
Jaipur-302017 (Rajasthan).
4. Jodhpur Vidyut Vitran Nigam Limited,
132kV, GSS RVPNL Sub-Station Building,
Caligiri Road, Malviya Nagar,
Jaipur-302017 (Rajasthan).
5. Himachal Pradesh State Electricity Board,
Vidyut Bhawan, Kumar House Complex Building II,
Shimla-171004 (Himachal Pradesh).
6. Punjab State Electricity Board,
Thermal Shed Tia,
Near 22 Phatak, Patiala-147001 (Punjab).
7. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-6,
Panchkula-134109 (Haryana).
8. Power Development Department,
Govt. of Jammu & Kashmir,
Mini Secretariat, Jammu.
9. Uttar Pradesh Power Corporation Limited,
(Formerly Uttar Pradesh State Electricity Board)
Shakti Bhawan, 14, Ashok Marg,
Lucknow-226001 (Uttar Pradesh).
10. Delhi Transco Limited,
Shakti Sadan, Kotla Road,
New Delhi-110002.
11. BSES Yamuna Power Limited,
B-Block, Shakti Kiran Building,
(Near Karkardooma Court),



Karkardooma 2nd Floor,
New Delhi-110092.

12. BSES Rajdhani Power Limited,
BSES Bhawan, Nehru Place,
New Delhi-110019.
13. North Delhi Power Limited,
Power Trading & Load Dispatch group,
Cennet Building, Adjacent to 66/11 kV Pitampura-3,
Grid Building, Near PP Jewellers,
Pitampura, New Delhi-110034.
14. Chandigarh Administration,
Sector- 9, Chandigarh.
15. Uttarakhand Power Corporation Limited,
Urja Bhawan, Kanwali Road,
Dehradun (Uttarakhand).
16. North Central Railway,
Allahabad (Uttar Pradesh).
17. New Delhi Municipal Council,
Palika Kendra, Sansad Marg
New Delhi- 110002.

...Respondent(s)

For Petitioner: Shri S. S. Raju, PGCIL
Shri D.K. Biswal, PGCIL
Shri V. P. Rastogi, PGCIL
Shri Amit Yadav, PGCIL

For Respondents: None

ORDER

The Petitioner, Power Grid Corporation of India Limited, a deemed transmission licensee, has filed the instant petition for truing up of transmission tariff of the period from 1.4.2014 to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (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”) for the 2019-24 tariff period in respect of the following transmission assets under the scheme “Provision of Bus Reactors in the Northern Region” (hereinafter referred to as “the transmission project”):

Asset-A: 400 kV, 125 MVAR Bus Reactor at **Gorakhpur**;

Asset-B: 400 kV, 125 MVAR Bus Reactor at **Allahabad**;

Asset-C: 400 kV, 125 MVAR Bus Reactor at **Manipuri**;

Asset-D: 400 kV, 125 MVAR Bus Reactor at **Kankroli**;

Asset-E: 400 kV, 125 MVAR Bus Reactor-I at **Vindhyachal**;

Asset-F: 125 MVAR Bus Reactor-II at **Vindhyachal**;

Asset-G: Extension of 400/220 kV **Jalandhar** (POWERGRID);

Asset-H: Extension of 400/220 kV **Amritsar** (POWERGRID) Sub-station 400 kV, 80 MVAR Bus-Reactor;

Asset-I: Extension of 400/220 kV **Hissar** (POWERGRID) Sub-station 400 kV, 125 MVAR Bus Reactor; and

Asset-J: Extension of 400/220 kV **Nalagarh** (POWERGRID) Sub-station 400 kV, 125 MVAR Bus-Reactor.

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

- “1) Approve the Additional Capital expenditure incurred during 2014-19 tariff block as per para 6.3 and the Additional Capital expenditure incurred during 2019-24 tariff block as per para 7.3.*
- 2) Approve the trued up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 6.4 and 7.4.*
- 3) Allow the Petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before Hon’ble Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019.*
- 4) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 70 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure (if any) in relation*



to the filing of petition.

- 5) *Allow the Petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the beneficiaries in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.*
- 6) *Allow the Petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the beneficiaries.*
- 7) *Allow the Petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 7.11 above.*
- 8) *Allow the Petitioner to claim the capital spares at the end of tariff block as per actual.*
- 9) *Allow the Petitioner to bill and recover GST on Transmission Charges separately from the beneficiaries, if GST on transmission is withdrawn from negative list at any time in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.*

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

Background

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

a) The investment approval (IA) of the transmission project was accorded by the Board of the Directors of the Petitioner Company *vide* Letter No. C/CP/BUSREACTORS in NR dated 15.12.2010 at an estimated cost of ₹9003 lakh, including IDC of ₹391 lakh (based on 3rd Quarter, 2010 price level). The transmission project was scheduled to be commissioned within 20 months from the date of IA. Therefore, the scheduled date of commissioning of the transmission assets was 1.9.2012 (i.e. first day of next month when 20 months gets completed).

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



Sub-stations:

- (i) Extension of 400/220 kV Gorakhpur (POWERGRID) Sub-station-1 No. 400 kV, 125 MVAR bus reactor;
- (ii) Extension of 400/220 kV Allahabad (POWERGRID) Sub-station-1 No. 400 kV, 125 MVAR bus reactor;
- (iii) Extension of 400/220 kV Mainpuri (POWERGRID) Sub-station-1 No. 400 kV, 125 MVAR bus reactor;
- (iv) Extension of 400/220 kV Hissar (POWERGRID) Sub-station-1 No. 400 kV, 125 MVAR bus reactor;
- (v) Extension of 400/220 kV Jalandhar (POWERGRID) Sub-station-1 No. 400 kV, 125 MVAR bus reactor;
- (vi) Extension of 400/220 kV Amritsar (POWERGRID) Substation-1 No. 400 kV, 80 MVAR bus reactor;
- (vii) Extension of 400/220 kV Kankroli (POWERGRID) Substation-1 No. 400 kV, 125 MVAR bus reactor;
- (viii) Extension of 400/220 kV Nalagarh (POWERGRID) Substation-1 No. 400 kV, 125 MVAR bus reactor; and
- (ix) Extension of 400/220 kV Vindhyachal (NR Bus) (POWERGRID) Substation-2 No. 400 kV, 125 MVAR bus reactor.

c) The complete scope of the work as per I.A. is covered in the instant petition.

d) The Commercial Operation Date (COD) as approved *vide* order dated 2.12.2013 in Petition No. 102/TT/2012 and order dated 7.8.2015 in Petition No. 31/TT/2013 for the transmission assets along with the details of time over-run are as follows:

Assets		COD	Time over-run	Condonation of time over-run
Asset-I	Asset-A	1.2.2013	5 months	Not Condoned (order dated 7.8.2015 in Petition No. 31/TT/2013)
	Asset-B	1.11.2012	2 months	
	Asset-C	1.1.2013	4 months	
	Asset-D	1.11.2012	2 months	
	Asset-E	1.4.2013	7 months	
	Asset-F	1.6.2013	9 months	
Asset-II	Asset-G	1.4.2012	None	No time over-run (order dated 2.12.2013 in Petition No. 102/TT/2012)
	Asset-H	1.4.2012	None	
	Asset-I	1.5.2012	None	
	Asset-J	1.5.2012	None	



e) Asset-A, Asset-B, Asset-C, Asset-D, Asset-E and Asset-F are collectively referred to as “Asset-I” and Asset-G, Asset-H, Asset-I and Asset-J are collectively referred to as “Asset-II”.

f) The transmission tariff of the 2009-14 period in respect of Asset-A, Asset-B, Asset-C, Asset-D, Asset-E and Asset-F was determined *vide* order dated 7.8.2015 in Petition No. 31/TT/2013 wherein the Commission had not condoned the time over-run in respect of these assets.

g) The transmission tariff of the 2009-14 period in respect of Asset-A, Asset-B, Asset-C, Asset-D, Asset-E and Asset-F trued-up *vide* order dated 11.7.2017 in Petition No. 181/TT/2016. In the same order, these assets were combined as Asset-I and the transmission tariff of the 2014-19 period was determined.

h) The transmission tariff of the 2009-14 period in respect of Asset-G, Asset-H, Asset-I and Asset-J was determined *vide* order dated 2.12.2013 in Petition No. 102/TT/2012 and was trued-up *vide* order dated 29.2.2016 in Petition No. 505/TT/2014. Asset-G, Asset-H, Asset-I and Asset-J are combined as Asset-II with notional COD as 1.5.2012 and the transmission tariff of the 2014-19 period was determined *vide* order dated 29.2.2016 in Petition No. 505/TT/2014.

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

5. The Petitioner has served the petition on the Respondents and notice of this petition was published in the newspaper in accordance with Section 64 of the Electricity Act, 2003. No comments/ objections have been received from the general public in response to the aforesaid notice published in the newspaper by the Petitioner. None of the respondents has filed any reply in instant petition.



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

7. This order is issued considering the submissions made by the Petitioner in the petition *vide* affidavit dated 22.1.2020 and affidavit dated 15.2.2021 filed in response to technical validation letter.

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

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

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

Asset-I

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	211.84	214.52	215.86	217.04	218.80
Interest on Loan	218.72	202.53	184.33	165.83	147.92
Return on Equity	229.58	233.64	235.02	236.34	238.95
O&M Expenses	361.80	373.80	386.22	399.06	412.26
Interest on Working Capital	35.18	35.63	35.96	36.30	36.72
Total	1057.12	1060.12	1057.39	1054.57	1054.65

Asset –II

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	143.95	149.69	149.69	149.69	149.69
Interest on Loan	150.12	142.14	127.26	111.79	97.92
Return on Equity	160.51	167.68	167.59	167.59	168.04
O&M Expenses	241.20	249.20	257.48	266.04	274.84
Interest on Working Capital	23.79	24.34	24.46	24.57	24.75
Total	719.57	733.05	726.48	719.68	715.24



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

Asset-I

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	30.15	31.15	32.19	33.26	34.36
Maintenance Spares	54.27	56.07	57.93	59.86	61.84
Receivables	176.19	176.69	176.23	175.76	175.78
Total Working Capital	260.61	263.91	266.35	268.88	271.98
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	35.18	35.63	35.96	36.30	36.72

Asset-II

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	20.10	20.77	21.46	22.17	22.90
Maintenance Spares	36.18	37.38	38.62	39.91	41.23
Receivables	119.93	122.18	121.08	119.95	119.21
Total Working Capital	176.21	180.33	181.16	182.03	183.34
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	23.79	24.34	24.46	24.57	24.75

Effective Date of Commercial Operation (E-COD)

11. The Petitioner has claimed E-COD of the Asset-I as 1.2.2013. Based on the trued-up admitted capital cost as on 31.3.2019 and actual COD of all the transmission assets, E-COD for Asset-I has been worked out as follows:

Assets	Capital Cost (as on 31.3.2014) (₹ in lakh)	COD	Number of days from last COD	Weightage of Cost (in %)	Weighted days	Effective COD (latest COD – weighted days)
Asset-A	582.37	1.2.2013	120	15.10	18.12	30.1.2013
Asset-B	583.08	1.11.2012	212	15.12	32.05	
Asset-C	723.76	1.1.2013	151	18.77	28.34	
Asset-D	585.47	1.11.2012	212	15.18	32.18	
Asset-E	671.88	1.4.2013	61	17.42	10.63	
Asset-F	709.93	1.6.2013	0	18.41	0.00	
Total	3856.48			100.00	121.33	



12. E-COD is used to determine the lapsed life of the project as a whole which works out as 1 (one) year as on 1.4.2014 (i.e. the number of completed years as on 1.4.2014 from E-COD).

13. For Asset-II, the Commission *vide* order dated 29.2.2016 in Petition No. 505/TT/2014 had approved notional COD of 1.5.2012. The Petitioner has claimed the notional COD of 1.5.2012 for Asset-II and the same has been considered.

Capital Cost

14. The Commission *vide* order dated 11.7.2017 in Petition No. 181/TT/2016 allowed capital cost as on 1.4.2014 of ₹3857.18 lakh for Asset-I and projected ACE of ₹532.25 lakh for the 2014-19 period. The Commission *vide* order dated 29.2.2016 in Petition No.505/TT/2014 allowed capital cost of ₹2617.54 lakh for Asset-II and projected ACE of ₹296.33 lakh during 2014-15. The details of the capital cost as allowed by the Commission in the said orders are as follows:

(₹ in lakh)

Asset	Capital Cost allowed (as on 1.4.2014)	ACE (2014-15)	ACE (2015-16)	ACE (2016-17)	Capital Cost allowed (as on 31.3.2019)
Asset-I	3857.18	77.93	22.61	431.71	4389.43
Asset-II	2617.54	296.33	0.00	0.00	2913.87

15. The Petitioner in the instant true up petition has claimed actual expenditure up to 31.3.2014 and actual ACE during the 2014-19 period after deducting the excess Initial Spares as follows:

(₹ in lakh)

Assets	Apportioned approved Capital Cost	Capital Cost (as on 31.3.2014)	ACE Claimed					Total Capital Cost (as on 31.3.2019)
			2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-I	5383.19	3860.49	77.96	23.74	26.82	17.89	48.72	4055.62
Asset-II	4404.39	2617.54	217.51	0.00	0.00	0.00	0.00	2835.05

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Total	9787.58	6478.03	295.47	23.74	26.82	17.89	48.72	6890.67
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Initial Spares

16. The transmission assets under the transmission project were commissioned during the 2009-14 tariff period. Regulation 8 of the 2009 Tariff Regulations provides that Initial Spares shall be capitalized as a percentage of the original project cost, subject to the following ceiling norms:

“(iv) *Transmission System*

(a) *Transmission line: 0.75%*

(b) *Transmission sub-station: 2.50%*

(c) *Series Compensation devices and HVDC Station: 3.50%*”

17. The Petitioner has submitted that the APTEL vide judgement dated 14.9.2019 in Appeal No. 74 of 2017 has directed that the calculation of initial spares, pertaining to the 2009-14 tariff period shall be based on total project cost and not on the basis of cost of individual assets. Accordingly, in the instant true up petition, the Petitioner has claimed the Initial Spares for sub-stations taking into consideration the judgement of the APTEL dated 14.9.2019 in Appeal No.74 of 2017. The Initial Spares claimed by the Petitioner are as under:

(₹ in lakh)

Asset	Capital Cost* (A)	Initial Spares claimed by Petitioner (B)	Ceiling Limit (in %) (C)	Initial Spares worked out (as claimed by Petitioner)	Excess Initial Spares E=B-D	
				$D = \frac{[(A-B)*C]}{100-C}$		
Asset-I	Asset-A	660.35	43.02	2.50	15.83	27.19
	Asset-B	622.44	52.54	2.50	14.61	37.93
	Asset-C	768.59	52.54	2.50	18.36	34.18
	Asset-D	623.92	52.01	2.50	14.66	37.35
	Asset-E	788.80	27.95	2.50	19.51	8.44
	Asset-F	801.68	27.95	2.50	19.84	8.11
Asset-II	Asset-G	896.62	20.14	2.50	22.47	-2.33
	Asset-H	606.19	15.01	2.50	15.16	-0.15
	Asset-I	694.08	17.24	2.50	17.35	-0.11
	Asset-J	673.64	16.74	2.50	16.84	-0.10



18. The Petitioner has submitted that the discharge of Initial Spares has been considered on cash basis in the Auditor Certificates. The discharge statement of Initial Spares as submitted by the Petitioner is as follows:

(₹ in lakh)

Asset	Actual Initial Spares Discharge							Total
	Up to 31.3.2014	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	
Asset-A	21.63	19.04	0.00	0.00	0.00	2.35	0.00	43.02
Asset-B	40.20	0.00	12.34	0.00	0.00	0.00	0.00	52.54
Asset-C	16.82	0.00	1.78	17.15	0.00	0.00	16.79	52.54
Asset-D	49.62	0.00	2.39	0.00	0.00	0.00	0.00	52.01
Asset-E	13.83	0.00	1.72	12.40	0.00	0.00	0.00	27.95
Asset-F	13.83	0.00	1.72	10.98	1.42	0.00	0.00	27.95

19. The Petitioner has submitted that there is no restriction of Initial Spares in Asset-G, Asset-H, Asset-I and Asset-J. The Petitioner has further submitted that the Initial Spares unclaimed in these four assets are adjusted in Asset-A and initial spares deduction to be done in respect of Asset-A, Asset-B, Asset-C, Asset-D, Asset-E and Asset-F.

20. We have considered the submissions of the Petitioner. The APTEL in its judgement dated 14.9.2019 in Appeal No. 74 of 2017 observed that the Commission for the purpose of prudence check may restrict the initial spares to the cost of the individual asset and later at the time of truing up allow initial spares as per the ceiling on the overall project cost. The relevant portion of the said judgement is extracted as follows:

“18.13. We do not agree with this methodology of restricting initial spares asset / element wise as adopted by the Central Commission. The 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. As per the APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017, Initial Spares are to be allowed as percentage of the project cost as a whole as on the cut-off date. Although the transmission assets were put into commercial operation during 2009-14 period, the Petitioner has not combined all the assets in 2014-19 tariff period and the same has been done only in the 2019-24 period. Thus, the overall project cost of the assets is arrived at when all the transmission assets are combined by the Petitioner while claiming the tariff for the 2019-24 tariff period. Therefore, the Initial Spares are allowed on the basis of the cost of the individual assets in the 2014-19 tariff period. Accordingly, the Initial Spares are allowed for individual assets for the 2014-19 tariff period.

22. It is also observed that the Petitioner has considered the capital cost including ACE during the 2014-19 period and the 2019-24 period instead of considering the capital cost as on cut-off date.

23. Regulation 3(29) of the 2009 Tariff Regulations defines "original project cost" as under:

"3. Definitions ...

(29) 'original project cost' means the capital expenditure incurred by the generating company or the transmission licensee, as the case may be, within the original scope of the project up to the cut-off date as admitted by the Commission;"

24. In order to determine the capital cost as on cut-off date for calculating the allowable Initial Spares, the excess Initial Spares deducted *vide* order dated 11.7.2017 in Petition No. 181/TT/2016 is added back as follows:



(₹ in lakh)

Asset		Capital Cost (as on cut-off date as per Auditor Certificate)	Excess Initial Spares disallowed (vide order dated 11.7.2017 in Petition No. 181/TT/2016)	Capital Cost (as on cut-off date)
		A	B	C=A+B
Asset-I	Asset-A	602.63	6.65	609.28
	Asset-B	583.17	25.53	608.70
	Asset-D	585.67	34.78	620.45

25. All the transmission assets covered in the transmission project have achieved COD during the 2009-14 period. The Petitioner claimed tariff for the transmission assets in two separate petitions both in 2009-14 tariff period and 2014-19 tariff period. The Petitioner did not file a consolidated petition in the 2014-19 tariff period as required under proviso (i) of Regulation 6(1) of the 2014 Tariff Regulations, even though all the assets were put into commercial operation in the 2009-14 tariff period. Accordingly, in terms of Regulation 8(iv) of the 2009 Tariff Regulations, initial spares are allowed as a percentage of the capital cost of the individual transmission assets upto cut-off date @ 2.5%. applicable for brown filed sub-stations. Accordingly, the initial spares for the 2014-19 tariff period allowed individual asset wise for the 2014-19 tariff period.

26. The claim of Initial Spares is considered as per Auditor Certificate dated 30.7.2019 submitted by the Petitioner. The Initial Spares allowed for the transmission assets are as follows:

(₹ in lakh)

Asset		Capital Cost (as on cut-off date)	Total Initial Spares claimed	Initial Spares upto cut-off date	Ceiling Limit (in %)	Initial Spares allowable	Excess Initial Spares	Initial Spares now allowed
		A	B	C	D	$E=(A-C) * D/(100-D)$	F=B-E	G
Asset-I	Asset-A	609.28	43.02	40.67	2.50%	14.58	28.44	14.58

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	Asset-B	608.70	52.54	40.20	2.50%	14.58	37.96	14.58
	Asset-C	732.99	52.54	18.60	2.50%	18.32	34.22	18.32
	Asset-D	620.45	52.01	49.62	2.50%	14.64	37.37	14.64
	Asset-E	717.30	27.95	15.55	2.50%	17.99	9.96	17.99
	Asset-F	755.32	27.95	15.55	2.50%	18.97	8.98	18.97
Asset-II	Asset-G	896.62	20.14	20.14	2.50%	22.47	-2.33	20.14
	Asset-H	570.71	15.01	15.01	2.50%	14.25	0.76	14.25
	Asset-I	694.08	17.24	17.24	2.50%	17.35	-0.11	17.24
	Asset-J	673.64	16.74	16.74	2.50%	16.84	-0.10	16.74
Total		6879.09	325.14	249.32		169.99	155.15	169.99

27. The Initial Spares claimed by the Petitioner are within the permissible limit for Asset-G, Asset-I and Asset-J. For Asset-A, Asset-B, Asset-C, Asset-D, Asset-E and Asset-F, the excess Initial Spares are disallowed as per the actual Initial Spares discharge statement as submitted by the Petitioner on LIFO basis. The Petitioner has not submitted the actual Initial Spares discharge statement for Asset-H. Accordingly, the excess Initial Spares are disallowed from the capital cost as on 1.4.2014 in respect of Asset-H.

28. Based on the excess Initial Spares calculated and the actual Initial Spares discharged, as submitted by the Petitioner, the Initial Spares now disallowed for the transmission assets are as follows:

(₹ in lakh)

Asset	Year Wise Initial Spare Deduction							
	upto 31.3.2014	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Asset-A	0.40	19.04	0.00	0.00	0.00	2.35	0.00	21.79
Asset-B	0.09	0.00	12.34	0.00	0.00	0.00	0.00	12.43
Asset-C	0.00	0.00	0.28	17.15	0.00	0.00	16.79	34.22
Asset-D	0.20	0.00	2.39	0.00	0.00	0.00	0.00	2.59
Asset-E	0.00	0.00	0.00	9.96	0.00	0.00	0.00	9.96
Asset-F	0.00	0.00	0.00	7.56	1.42	0.00	0.00	8.98
Asset-G	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asset-H	0.76	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asset-I	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asset-J	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.46	19.04	15.01	34.67	1.42	2.35	16.79	90.74



Initial Spares claimed, allowed as per Regulation , disallowed over the years

(₹ in lakh)

Asset	Total Initial Spares Claimed by the Petitioner	Allowable Initial Spares as per regulation A	Excess Initial Spares Disallowed				Actual Initial Spares allowed Total	
			2009-14	2014-19	2019-24	Total		
			B	C	D	E=(B+C+D)	F	
Asset-I	Asset-A	43.02	14.58	6.65	21.79	0.00	28.44	14.58
	Asset-B	52.54	14.58	25.53	12.43	0.00	37.96	14.58
	Asset-C	52.54	18.32	0.00	17.43	16.79*	34.22	18.32
	Asset-D	52.01	14.64	34.78	2.59	0.00	37.37	14.64
	Asset-E	27.95	17.99	0.00	9.96	0.00	9.96	17.99
	Asset-F	27.95	18.97	0.00	8.98	0.00	8.98	18.97
	Total	256.01	99.07	66.96	73.18	16.79	156.94	99.07
Asset-II	Asset-G	20.14	22.47	0.00	0.00	0.00	0.00	20.14
	Asset-H	15.01	14.25	0.00	0.76	0.00	0.76	14.25
	Asset-I	17.24	17.35	0.00	0.00	0.00	0.00	17.24
	Asset-J	16.74	16.84	0.00	0.00	0.00	0.00	16.74
	Total	69.13	70.92	66.96	0.76	0.00	0.76	68.37
Combined Asset (Asset-I and Asset-II)		325.14	169.99	66.96	73.95	14.28**	157.70	169.99**

*Initial Spares deducted as per actual discharge in 2019-20

**Additional Initial Spares of ₹2.55 lakh is allowed as on 1.4.2019 (₹16.79 lakh - ₹2.55 lakh = ₹14.28 lakh)

Capital Cost as on 1.4.2014

29. The Capital cost as on 1.4.2014 as per Auditor Certificate claimed by the petitioner was allowed after deducting the excess Initial Spares of ₹6.65 lakh, ₹25.53 lakh and ₹34.78 lakh for Asset-A, Asset-B and Asset-D respectively, vide order dated 11.7.2017 in Petition No. 181/TT/2016 which was for True up of 2009-14 and tariff determination of 2014-19. The initial spares disallowed in the referred order was computed on the basis of actual cost upto COD and projected cost upto cutoff date. Now since the petitioner has submitted actual ACE for the period 2014-19 , therefore there is a change in the initial spares allowed amount and consequent Capital cost as



on 01.04.2014. The details of the capital cost now approved as on the 1.4.2014 are as follows:

(₹ in lakh)

Asset		Capital Cost claimed (as on 1.4.2014) (A)	Excess Initial Spares disallowed (as on 1.4.2014) (B)	Capital Cost allowed (as on 1.4.2014) (C) = (A-B)
Asset-I	Asset-A	582.77	0.40	582.37
	Asset-B	583.17	0.09	583.08
	Asset-C	723.76	0.00	723.76
	Asset-D	585.67	0.20	585.47
	Asset-E	671.88	0.00	671.88
	Asset-F	709.93	0.00	709.93
Total for Asset-I		3857.18	0.70	3856.48
Asset-II	Asset-G	830.16	0.00	830.16
	Asset-H	536.80	0.76	536.04
	Asset-I	635.44	0.00	635.44
	Asset-J	615.14	0.00	615.14
Total for Asset-II		2617.54	0.76	2616.78

Additional Capital Expenditure (ACE)

30. The Commission had allowed ACE for Asset-I for the 2014-19 tariff period *vide* order dated 11.7.2017 in Petition No. 181/TT/2016 on account of undischarged liabilities falling under clause 14(3)(vi) of the 2014 Tariff Regulations. The Commission had allowed ACE for Asset-II for the 2014-19 tariff period *vide* order dated 29.2.2016 in Petition No. 505/TT/2014 on account of undischarged liabilities falling under clause 14(1)(i) of the 2014 Tariff Regulations.

31. The details of ACE allowed by the Commission for Asset-I and Asset-II are as follows:

(₹ in lakh)

Asset	ACE*		
	2014-15	2015-16	2016-17



Asset-I	77.93	22.61	431.71
Asset-II	296.33	0.00	0.00

**after deduction of excess initial spares*

32. Against this, the Petitioner has claimed ACE for Asset-I and Asset-II upto the cut-off date in accordance with Regulation 14(1)(i) and after cut-off date in accordance with Regulation 14(3)(i) of the 2014 Tariff Regulations.

33. The details of ACE claimed by the Petitioner for Asset-I and Asset-II are as follows:

(₹ in lakh)

Asset	Particulars	ACE Claimed by the Petitioner				
		2014-15	2015-16	2016-17	2017-18	2018-19
Asset-A	Expenditure as per Auditor Certificate	19.86	0.00	0.00	0.00	51.07
	Less: Excess Initial Spares	19.04	0.00	0.00	0.00	2.35
	Total ACE claimed	0.82	0.00	0.00	0.00	48.72
Asset-B	Expenditure as per Auditor Certificate	0.00	12.34	1.4	0.00	0.00
	Less: Excess Initial Spares	0.00	12.34	0.00	0.00	0.00
	Total ACE claimed	0.00	0.00	1.40	0.00	0.00
Asset-C	Expenditure as per Auditor Certificate	0.00	9.23	17.15	0.00	0.00
	Less: Excess Initial Spares	0.00	0.24	17.15	0.00	0.00
	Total ACE claimed	0.00	8.99	0.00	0.00	0.00
Asset-D	Expenditure as per Auditor Certificate	0.00	3.47	0.00	0.00	0.00
	Less: Excess Initial Spares	0.00	2.39	0.00	0.00	0.00
	Total ACE claimed	0.00	1.08	0.00	0.00	0.00
Asset-E	Expenditure as per Auditor Certificate	38.57	6.85	29.57	12.93	0.00
	Less: Excess Initial Spares	0.00	0.00	8.44	0.00	0.00
	Total ACE claimed	38.57	6.85	21.13	12.93	0.00
Asset-F	Expenditure as per Auditor Certificate	38.57	6.82	10.98	6.38	0.00
	Less: Excess Initial Spares	0.00	0.00	6.69	1.42	0.00



	Total ACE claimed	38.57	6.82	4.29	4.96	0.00
	Total ACE claimed for Asset-I	77.96	23.74	26.82	17.89	48.72
Asset-G	Expenditure as per Auditor Certificate	66.46	0.00	0.00	0.00	0.00
Asset-H	Expenditure as per Auditor Certificate	33.91	0.00	0.00	0.00	0.00
Asset-I	Expenditure as per Auditor Certificate	58.64	0.00	0.00	0.00	0.00
Asset-J	Expenditure as per Auditor Certificate	58.50	0.00	0.00	0.00	0.00
	Total ACE claimed for Asset-II	217.51	0.00	0.00	0.00	0.00

34. The Petitioner *vide* affidavit dated 15.2.2021 has submitted the package wise breakup of ACE incurred during the 2014-19 tariff period as follows:

(₹ in lakh)

Year	Party	Head	Amount	Balance and retention payment/deferred work
Asset-A				
2014-15	M/s BHEL and Payment to Various Sub Vendor on a/c of M/s GET POWER Pvt Ltd	Sub-station	19.86	Work deferred for Execution as per clause 14(1)(ii) of 2014 Tariff Regulations
2018-19	M/s BHEL and Payment to Various Sub Vendor on a/c of M/s GET POWER Pvt Ltd	Sub-station	51.07	Balance and Retention payment as per clause 14(3)(v) of 2014 Tariff Regulations
Asset-B				
2015-16	M/s CGL	Sub-station	12.34	Balance and Retention payment as per clause 14(3)(v) of 2014 Tariff Regulations
2016-17	M/s CGL	Sub-station	1.40	Balance and Retention payment as per clause 14(3)(v) of 2014 Tariff Regulations
Asset-C				
2015-16	M/s CGL	Sub-station	9.23	Balance and Retention payment as per clause 14(1)(i) of 2014 Tariff Regulations
2016-17	M/s CGL	Sub-station	17.15	Balance and Retention payment as per clause 14(3)(v) of 2014 Tariff Regulations
Asset-D				
2015-16	M/s. Crompton Greaves Ltd.	Sub-station	3.47	Balance and Retention payment as per clause 14(3)(v) of 2014 Tariff



				Regulations
Asset-E				
2014-15	M/s CGL	Sub-station	38.57	Work Deferred for Execution as per clause 14(1)(ii) of 2014 Tariff Regulations
2015-16	M/s CGL	Sub-station	6.85	Balance and Retention payment as per clause 14(1)(i) of 2014 Tariff Regulations
2016-17	Various Sub Vendor on a/c of balance work of GET POWER Pvt Ltd	Sub-station	29.57	Balance and Retention payment as per clause 14(3)(v) of 2014 Tariff Regulations
2017-18	Various Sub Vendor on a/c of balance work of GET POWER Pvt Ltd	Sub-station	12.93	Balance and Retention payment as per clause 14(3)(v) of 2014 Tariff Regulations
Asset-F				
2014-15	M/s CGL	Sub-station	38.57	Work Deferred for Execution as per clause 14(1)(ii) of 2014 Tariff Regulations
2015-16	M/s CGL	Sub-station	6.82	Balance and Retention payment as per clause 14(1)(i) of 2014 Tariff Regulations
2016-17	Various Sub Vendor on a/c of balance work of GET POWER Pvt Ltd	Sub-station	10.98	Balance and Retention payment as per clause 14(3)(v) of 2014 Tariff Regulations
2017-18	Various Sub Vendor on a/c of balance work of GET POWER Pvt Ltd	Sub-station	6.38	Balance and Retention payment as per clause 14(3)(v) of 2014 Tariff Regulations
Asset-G				
2014-15	M/s. PSC ENGINEERS (P) LIMITED	Sub-station	65.20	Balance and Retention payment as per clause 14(1)(i) of 2014 Tariff Regulations
			1.26	Work Deferred for Execution as per clause 14(1)(ii) of 2014 Tariff Regulations
Asset-H				
2014-15	M/s. PSC ENGINEERS (P) LIMITED	Sub-station	6.68	Balance and Retention payment as per clause 14(1)(i) of 2014 Tariff Regulations
			27.23	Work Deferred for Execution as per clause



				14(1)(ii) of 2014 Tariff Regulations
Asset-I				
2014-15	M/s. PSC ENGINEERS (P) LIMITED	Sub-station	49.91	Balance and Retention payment as per clause 14(1)(i) of 2014 Tariff Regulations
			8.73	Work Deferred for Execution as per clause 14(1)(ii) of 2014 Tariff Regulations
Asset-J				
2014-15	M/s. PSC ENGINEERS (P) LIMITED	Sub-station	48.31	Balance and Retention payment as per clause 14(1)(i) of 2014 Tariff Regulations
			10.19	Balance and Retention payment as per clause 14(1)(i) of 2014 Tariff Regulations

35. The Petitioner has submitted that the Commission *vide* order dated 11.7.2017 in Petition No. 181/TT/2016 had disallowed IDC and IEDC to the tune of ₹11.43 lakh, ₹1.40 lakh, ₹2.62 lakh, ₹2.49 lakh, ₹6.59 lakh and ₹21.76 lakh for Asset-A, Asset-B, Asset-C, Asset-D, Asset-E and Asset-F respectively on account of time over-run and reduced it from the capital cost. Subsequently, an amount of ₹13.66 lakh, ₹1.64 lakh, ₹0.55 lakh, ₹1.91 lakh for Asset-A, Asset-B, Asset-C and Asset-E respectively was recovered as Liquidated Damages (LD) from the executing agency(ies)/ contractor(s) and reduced from capital cost as per accounting procedures. The Petitioner has submitted that LD recovered to the extent of disallowed IDC and IEDC is added back as ACE as mentioned in the Auditor's Certificates submitted by the Petitioner. The Petitioner has submitted that LD towards time over-run has been levied on contractor(s) amounting to ₹13.66 lakh for Asset-A which has been reduced from the ACE for 2018-19 and amounting to ₹1.64 lakh for Asset-B, ₹0.55 lakh for Asset-C, ₹1.91 lakh for Asset-E which have been reduced from the ACE for 2016-17. The



Petitioner has further submitted that in order to allow it to retain LD to the extent of IDC and IEDC disallowed on account of time over-run, ACE has been restored to the extent of disallowed IDC and IEDC of ₹11.43 lakh for Asset-A for 2018-19 and ₹1.40 lakh for Asset-B, ₹0.55 lakh for Asset-C and ₹1.91 lakh for Asset-E for 2016-17.

36. We have considered the submissions of the Petitioner. The APTEL in judgement dated 27.4.2011 in Appeal No. 72/2010 has laid down the following principles for dealing with the issue of time over-run in execution of projects.

“7.4. The delay in execution of a generating project could occur due to following reasons:

i) due to factors entirely attributable to the generating company, e.g., imprudence in selecting the contractors/suppliers and in executing contractual agreements including terms and conditions of the contracts, delay in award of contracts, delay in providing inputs like making land available to the contractors, delay in payments to contractors/suppliers as per the terms of contract, mismanagement of finances, slackness in project management like improper co-ordination between the various contractors, etc.

ii) due to factors beyond the control of the generating company e.g. delay caused due to force majeure like natural calamity or any other reasons which clearly establish, beyond any doubt, that there has been no imprudence on the part of the generating company in executing the project.

iii) situation not covered by (i) & (ii) above.

In our opinion in the first case the entire cost due to time over run has to be borne by the generating company. However, the Liquidated Damages (LDs) and insurance proceeds on account of delay, if any, received by the generating company could be retained by the generating company. In the second case the generating company could be given benefit of the additional cost incurred due to time over-run. However, the consumers should get full benefit of the LDs recovered from the contractors/suppliers of the generating company and the insurance proceeds, if any, to reduce the capital cost. In the third case the additional cost due to time overrun including the LDs and insurance proceeds could be shared between the generating company and the consumer. It would also be prudent to consider the delay with respect to some benchmarks rather than depending on the provisions of the contract between the generating company and its contractors/suppliers. If the time schedule is taken as per the terms of the contract, this may result in imprudent time schedule not in accordance with good industry practices.”

37. In terms of the above judgement of the APTEL, when the time over-run is attributable to the project developer (in the instant case, PGCIL), or its contractors, the cost of the time over-run, i.e. IDC and IEDC has to be borne by the project developer



and LD, if any, recovered can be retained by the Petitioner. In the instant case, the time over-run in case of Asset-A, Asset-B, Asset-C, Asset-D, Asset-E and Asset-F was not condoned. Accordingly, IDC and IEDC for the period of time over-run not condoned is not capitalised and LD recovered by the Petitioner can be retained by the Petitioner. The petitioner has recovered excess amount of LD and the excess amount of LD recovered is reduced from the capital cost..

38. The details of asset-wise adjustments made on account of initial spares and LD recovered, as per the Auditor's Certificate are as under:

(₹ in lakh)

Asset	Capital cost claimed (as on 31.3.2014)	IDC and IEDC disallowed vide order dated	Excess Initial Spares disallowed in order dated	Capital Cost admitted as on 31.3.2014 after IDC and IEDC and Initial Spares adjustment	Adjustment in Capital Cost on account of LD		
					LD recovered	LD allowed to be retained upto IDC and IEDC disallowed earlier	Excess LD recovered reduced from Capital cost
Order dated 11.7.2017 in Petition No. 181/TT/2016					Instant petition		
	1	2	3	4=(1-2-3)	5	6	7=(5-6)
Asset-A	600.85	11.43	6.65	582.77	13.66*	11.43*	2.23
Asset-B	610.10	1.40	25.53	583.17	1.64**	1.40**	0.24
Asset-C	726.38	2.62	0.00	723.76	0.55**	0.55**	0.00
Asset-D	622.94	2.49	34.78	585.67	0.00	0.00	0.00
Asset-E	678.47	6.59	0.00	671.88	1.91**	1.91**	0.00
Asset-F	731.69	21.76	0.00	709.93	0.00	0.00	0.00
Total	3970.43	46.29	66.96	3857.18	19.67	17.20	2.47
*In the year 2018-19, **In the year 2016-17							

39. ACE claimed by the Petitioner for Asset-A, Asset-B, Asset-C, Asset-D, Asset-E, Asset-F, Asset-G, Asset-H, Asset-I and Asset-J till the cut-off date i.e. 31.3.2016,



31.3.2015, 31.3.2016, 31.3.2015, 31.3.2016, 31.3.2016, 31.3.2015, 31.3.2015, 31.3.2015 and 31.3.2015 respectively, has been allowed under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations. ACE claimed by the Petitioner for the transmission assets after the cut-off date has been allowed under regulation 14(3)(v) of the 2014 Tariff Regulations, as it is towards balance and retention payments due to undischarged liability for works executed within the cut-off date. The un-discharged Initial Spares as on 1.4.2014 has been allowed as ACE during the year of its discharge. ACE allowed from 1.4.2014 to 31.3.2019 in respect of the transmission assets is as follows:

(₹ in lakh)

Asset	Particulars	ACE approved				
		2014-15	2015-16	2016-17	2017-18	2018-19
Asset-A	Expenditure as per Auditor Certificate	19.86	0.00	0.00	0.00	51.07
	Less: Excess Initial Spares	19.04	0.00	0.00	0.00	2.35
	Total ACE allowed	0.82	0.00	0.00	0.00	48.72
Asset-B	Expenditure as per Auditor Certificate	0.00	12.34	1.40	0.00	0.00
	Less: Excess Initial Spares	0.00	12.34	0.00	0.00	0.00
	Total ACE allowed	0.00	0.00	1.40	0.00	0.00
Asset-C	Expenditure as per Auditor Certificate	0.00	9.23	17.15	0.00	0.00
	Less: Excess Initial Spares	0.00	0.28	17.15	0.00	0.00
	Total ACE allowed	0.00	8.95	0.00	0.00	0.00
Asset-D	Expenditure as per Auditor Certificate	0.00	3.47	0.00	0.00	0.00
	Less: Excess Initial Spares	0.00	2.39	0.00	0.00	0.00
	Total ACE allowed	0.00	1.08	0.00	0.00	0.00
Asset-E	Expenditure as per Auditor Certificate	38.57	6.85	29.57	12.93	0.00
	Less: Excess Initial Spares	0.00	0.00	9.96	0.00	0.00
	Total ACE allowed	38.57	6.85	19.61	12.93	0.00
Asset-F	Expenditure as per Auditor Certificate	38.57	6.82	10.98	6.38	0.00



	Less: Excess Initial Spares	0.00	0.00	7.56	1.42	0.00
	Total ACE allowed	38.57	6.82	3.42	4.96	0.00
Total ACE allowed for Asset-I		77.96	23.70	24.43	17.89	48.72
Asset-G	Expenditure as per Auditor Certificate	66.46	0.00	0.00	0.00	0.00
Asset-H	Expenditure as per Auditor Certificate	33.91	0.00	0.00	0.00	0.00
Asset-I	Expenditure as per Auditor Certificate	58.64	0.00	0.00	0.00	0.00
Asset-J	Expenditure as per Auditor Certificate	58.50	0.00	0.00	0.00	0.00
Total ACE allowed for Asset-II		217.51	0.00	0.00	0.00	0.00

40. Accordingly, the capital cost considered for the 2014-19 tariff period is as follows:

(₹ in lakh)								
Assets	Apportioned Approved Capital Cost	Capital Cost (as on 31.3.2014)	ACE allowed					Capital Cost (as on 31.3.2019)
			2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-I	5383.19	3856.48	77.96	23.70	24.43	17.89	48.72	4049.18
Asset-II	4404.39	2616.78	217.51	0.00	0.00	0.00	0.00	2834.29

Debt-Equity ratio

41. The Petitioner has claimed debt-equity ratio of 70:30 as on 1.4.2014. The debt-equity ratio has been considered in accordance with Regulations 19(3) of the 2014 Tariff Regulations. Accordingly, the debt-equity allowed for individual assets for determination of tariff for the period ending 31.3.2014 has been considered as opening debt-equity of the project as on 1.4.2014. The details of the debt-equity in respect of Asset-I and Asset-II as on 1.4.2014 and as on 31.3.2019 are as follows:



Asset-I

(₹ in lakh)

Funding	Capital Cost (as on 1.4.2014) (₹ in lakh)	(in %)	ACE (2014-19) (₹ in lakh)	(in %)	Total Capital Cost (as on 31.3.2019) (₹ in lakh)	(in %)
Debt	2699.54	70.00	134.89	70.00	2834.43	70.00
Equity	1156.95	30.00	57.81	30.00	1214.75	30.00
Total	3856.48	100.00	192.70	100.00	4049.18	100.00

Asset-II

(₹ in lakh)

Funding	Capital Cost (as on 1.4.2014) (₹ in lakh)	(in %)	ACE (2014-19) (₹ in lakh)	(in %)	Total Capital Cost (as on 31.3.2019) (₹ in lakh)	(in %)
Debt	1831.75	70.00	152.26	70.00	1984.01	70.00
Equity	785.03	30.00	65.25	30.00	850.28	30.00
Total	2616.78	100.00	217.51	100.00	2834.29	100.00

Depreciation

42. The Petitioner's claim towards depreciation in respect of Asset-I was found to be higher than the depreciation allowed for the transmission asset in order dated 11.7.2017 in Petition No. 181/TT/2016. The Petitioner has neither given any justification for claiming higher depreciation than that allowed earlier in order dated 11.7.2017 in Petition No. 181/TT/2016 nor made any specific prayer for allowing higher depreciation in this petition. The Petitioner has claimed separate and higher depreciation for IT equipment that form part of the sub-station. Similar issue had come up in Petition No. 19/TT/2020, wherein the Commission vide order dated 9.5.2020 held as follows:

"31. We have considered the submissions of the Petitioner. The instant assets were put into commercial operation during the 2009-14 period and the tariff from the respective CODs to 31.3.2014 was allowed vide orders dated 30.8.2012 and 9.5.2013 in Petition No.343/2010 and Petition No. 147/TT/2011 respectively. Further, the tariff of the 2009-14 period was trued up and tariff for the 2014-19 period was allowed vide order dated 25.2.2016 in Petition No.10/TT/2015. The Petitioner did not claim any capital expenditure towards "IT Equipment" in the above said three petitions where tariff for the instant assets for the 2009-14 period was allowed, tariff of the 2009-14 period was trued



up and tariff for 2014-19 period was allowed even though there was a clear provision in the 2009 Tariff Regulations and 2014 Tariff Regulations providing depreciation @15% for IT Equipment. Having failed to make a claim as per the 2009 Tariff Regulations (the period during which COD of assets was achieved), the Petitioner has now, at the time of truing up of the tariff allowed for the 2014-19 period has apportioned a part of the capital expenditure to "IT Equipment". The Petitioner has adopted similar methodology not only in this but in some of the other petitions listed along with the instant petition on 26.2.2020. It is observed that the Petitioner has for the first time apportioned a part of the capital expenditure towards IT Equipment and has claimed depreciation under the head "IT Equipment" @15% at the time of truing up of the tariff of 2014-19 period. Regulation 8(1) of the 2014 Tariff Regulations provides for truing up of the capital expenditure including the additional capital expenditure, incurred up to 31.3.2019, admitted by the Commission after prudence check. We are of the view that scope of truing up exercise is restricted to truing up of the capital expenditure already admitted and apportionment or reapportionment of the capital expenditure cannot be allowed at the time of truing up. Therefore, we are not inclined to consider the Petitioner's prayer for apportionment of capital expenditure towards IT Equipment and allowing depreciation @ 15% from 1.4.2014 onwards. Accordingly, the depreciation @ 5.28% has been considered for IT Equipment as part of the sub-station up to 31.3.2019 while truing up the capital expenditure for the 2014-19 period. During the 2019-24 tariff period, the IT Equipment has been considered separately and depreciation has been allowed @ 15% for the balance depreciable value of IT Equipment in accordance with Regulation 33 read with Sr. No. (p) of the Appendix-I (Depreciation Schedule) of the 2019 Tariff Regulations."

43. In line with the above decision, the depreciation @ 5.28% has been considered for IT Equipment as part of the sub-station up to 31.3.2019 while truing up the capital expenditure for the 2014-19 period for Asset-I. The Gross Block during the tariff period 2014-19 has been depreciated at Weighted Average Rate of Depreciation (WAROD) WAROD at Annexure-I and Annexure-II in respect of Asset-I and Asset-II respectively has been worked out after taking into account the depreciation rates of asset as specified in the 2014 Tariff Regulations. The following tables show asset-wise trued-up depreciation allowed in the instant petition:

Asset-I

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	3856.48	3934.44	3958.14	3982.57	4000.46
ACE	77.96	23.70	24.43	17.89	48.72
Closing Gross Block	3934.44	3958.14	3982.57	4000.46	4049.18
Average Gross Block	3895.46	3946.29	3970.36	3991.52	4024.82
Weighted average rate of	5.28	5.28	5.28	5.28	5.28



Depreciation (WAROD) (in %)					
Balance useful life of the asset	24	23	22	21	20
Lapsed life	1	2	3	4	5
Aggregate Depreciable Value	3505.92	3551.66	3573.32	3592.37	3622.34
Combined Depreciation during the year	205.68	208.36	209.63	210.75	212.51
Aggregate Cumulative depreciation at the end of the year	425.09	633.45	843.09	1053.84	1266.35
Remaining Aggregate Depreciable Value at the end of the year	3080.83	2918.21	2730.23	2538.52	2355.99

Asset-II

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	2616.78	2834.29	2834.29	2834.29	2834.29
ACE	217.51	0.00	0.00	0.00	0.00
Closing Gross Block	2834.29	2834.29	2834.29	2834.29	2834.29
Average Gross Block	2725.53	2834.29	2834.29	2834.29	2834.29
Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28
Balance useful life of the asset	24	23	22	21	20
Lapsed life	1	2	3	4	5
Depreciable Value	2452.98	2550.86	2550.86	2550.86	2550.86
Depreciation during the year	143.91	149.65	149.65	149.65	149.65
Cumulative depreciation at the end of the year	363.75	513.40	663.05	812.70	962.35
Remaining Depreciable Value at the end of the year	2089.23	2037.46	1887.81	1738.16	1588.51

44. The details of depreciation allowed *vide* order dated 11.7.2017 in Petition No. 181/TT/2016 in respect of Asset-I and *vide* order dated 29.2.2016 in Petition No. 505/TT/2014 in respect of Asset-II, depreciation claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

Asset-I

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated	205.72	208.37	220.36	231.76	231.76



11.7.2017 in Petition No. 181/TT/2016					
Claimed by the Petitioner in the instant petition	211.84	214.52	215.86	217.04	218.80
Approved after true-up in this order	205.68	208.36	209.63	210.75	212.51

Asset-II

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 29.2.2016 in Petition No. 505/TT/2014	146.03	153.85	153.85	153.85	153.85
Claimed by the Petitioner in the instant petition	143.95	149.69	149.69	149.69	149.69
Approved after true-up in this order	143.91	149.65	149.65	149.65	149.65

Interest on Loan (IoL)

45. The Petitioner has claimed the weighted average rate of IoL based on its actual loan portfolio and rate of interest. We have considered the submissions of the Petitioner. IoL has been calculated based on actual interest rate submitted by the Petitioner in accordance with Regulation 26 of the 2014 Tariff Regulations. The trued-up IoL allowed in respect of the transmission assets is as follows:

Asset-I

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	2699.54	2754.11	2770.70	2787.80	2800.32
Cumulative Repayments up to Previous Year	219.41	425.09	633.45	843.09	1053.84
Net Loan-Opening	2480.13	2329.02	2137.24	1944.71	1746.48
Additions due to ACE	54.57	16.59	17.10	12.52	34.10
Repayment during the year	205.68	208.36	209.63	210.75	212.51
Net Loan-Closing	2329.02	2137.24	1944.71	1746.48	1568.08
Average Loan	2404.57	2233.13	2040.98	1845.60	1657.28
Weighted Average Rate of Interest on Loan (in %)	9.0971	9.0955	9.0838	9.0696	9.0536
Interest on Loan	218.75	203.12	185.40	167.39	150.04



Asset-II**(₹ in lakh)**

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	1831.75	1984.01	1984.01	1984.01	1984.01
Cumulative Repayments up to Previous Year	219.84	363.75	513.40	663.05	812.70
Net Loan-Opening	1611.91	1620.26	1470.61	1320.96	1171.31
Additions due to ACE	152.26	0.00	0.00	0.00	0.00
Repayment during the year	143.91	149.65	149.65	149.65	149.65
Net Loan-Closing	1620.26	1470.61	1320.96	1171.31	1021.66
Average Loan	1616.08	1545.43	1395.78	1246.13	1096.48
Weighted Average Rate of Interest on Loan (in %)	9.2860	9.1946	9.1138	8.9598	8.9055
Interest on Loan	150.07	142.10	127.21	111.65	97.65

46. The details of IoL allowed *vide* order dated 11.7.2017 in Petition No. 181/TT/2016 in respect of Asset-I and *vide* order dated 29.2.2016 in Petition No. 505/TT/2014 in respect of Asset-II, IoL claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

Asset-I**(₹ in lakh)**

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated 11.7.2017 in Petition No. 181/TT/2016	218.46	202.77	197.87	191.00	169.87
Claimed by the Petitioner in the instant petition	218.72	202.53	184.33	165.83	147.92
Approved after true-up in this order	218.75	203.12	185.40	167.39	150.04

Asset-II**(₹ in lakh)**

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated 29.2.2016 in Petition No. 505/TT/2014	152.80	148.52	134.16	119.72	105.31
Claimed by the Petitioner in the instant petition	150.12	142.14	127.26	111.79	97.92
Approved after true-up in this order	150.07	142.10	127.21	111.65	97.65



Return on Equity (RoE)

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

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

48. We have considered the submissions made by the Petitioner. The Commission, vide order dated 27.4.2020 in Petition No.274/TT/2019, had arrived at the effective tax rate for the Petitioner based on the notified MAT rates and the same is as follows:

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

49. The same MAT rates as considered in the above-mentioned order in Petition No. 274/TT/2019 are considered for the purpose of grossing up of rate of RoE for truing up of the tariff of the 2014-19 period in terms of the provisions of the 2014 Tariff Regulations.

Year	Notified MAT rates (in %) (inclusive of surcharge & cess)	Base rate of RoE (in %)	Grossed-up RoE [Base Rate/(1-t)] (in %)
2014-15	20.961	15.50	19.610



2015-16	21.342	15.50	19.705
2016-17	21.342	15.50	19.705
2017-18	21.342	15.50	19.705
2018-19	21.549	15.50	19.758

50. The Petitioner has claimed RoE for 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 trued-up on the basis of MAT rates applicable in the respective years and is allowed for the transmission assets as follows:

Asset-I

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	1156.95	1180.33	1187.44	1194.77	1200.14
Additions due to ACE	23.39	7.11	7.33	5.37	14.62
Closing Equity	1180.33	1187.44	1194.77	1200.14	1214.75
Average Equity	1168.64	1183.89	1191.11	1197.46	1207.45
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
Return on Equity	229.17	233.29	234.71	235.96	238.57

Asset-II

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	785.03	850.28	850.28	850.28	850.28
Additions due to ACE	65.25	0.00	0.00	0.00	0.00
Closing Equity	850.28	850.28	850.28	850.28	850.28
Average Equity	817.66	850.28	850.28	850.28	850.28
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
Return on Equity	160.34	167.55	167.55	167.55	168.00

51. The details of RoE allowed vide order dated 11.7.2017 in Petition No. 181/TT/2016 in respect of Asset-I and vide order dated 29.2.2016 in Petition No.



505/TT/2014 in respect of Asset-II, RoE claimed by the Petitioner and trued-up in the instant order are as follows:

Asset-I

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated 11.7.2017 in Petition No. 181/TT/2016	229.21	232.17	245.53	258.23	258.23
Claimed by the Petitioner in the instant petition	229.58	233.64	235.02	236.34	238.95
Approved after true-up in this order	229.17	233.29	234.71	235.96	238.57

Asset-II

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated 29.2.2016 in Petition No. 505/TT/2014	162.71	171.43	171.43	171.43	171.43
Claimed by the Petitioner in the instant petition	160.51	167.68	167.59	167.59	168.04
Approved after true-up in this order	160.34	167.55	167.55	167.55	168.00

Operation & Maintenance Expenses (O&M Expenses)

52. The O&M Expenses claimed by the Petitioner for the transmission assets are as follows:

Asset-I

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station Bays 400 kV (Conventional)					
Manipur Bus Reactor Bay, Allahabad Bus Reactor II Bay, Kankroli Bus Reactor Bay, Gorakhpur Bus Reactor Bay, Vindhyanchal Bus Reactor bay 1 & 2	6	6	6	6	6
Norms (₹ lakh/bay)	60.30	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	361.80	373.80	386.22	399.06	412.26



Asset-II

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station Bays 400 kV (Conventional)					
Amritsar Bus Reactor Bay, Nalagarh Bus Reactor Bay, Hissar Bus Reactor Bay, Jalandhar Bus Reactor Bay	4	4	4	4	4
Norms (₹ lakh/km)	60.30	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	241.20	249.20	257.48	266.04	274.84

53. We have considered the submissions of the Petitioner. The norms for O&M Expenses specified for the elements covered under the transmission assets in terms of Regulation 29(3) of the 2014 Tariff Regulations are as follows:

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station Bays 400 kV (Conventional)					
Norms (₹ lakh/bays)	60.30	62.30	64.37	66.51	68.71

54. The O&M Expenses determined are in line with the norms specified in Regulation 29(3) of the 2014 Tariff Regulations and are allowed as follows:

Asset-I

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station Bays 400 kV (Conventional)					
Manipur Bus Reactor Bay, Allahabad Bus Reactor II Bay, Kankroli Bus Reactor Bay, Gorakhpur Bus Reactor Bay, Vindhyanchal Bus Reactor bay1 & 2	6	6	6	6	6
Norms (₹ lakh/bay)	60.30	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	361.80	373.80	386.22	399.06	412.26

Asset-II

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station Bays 400 kV (Conventional)					
Amritsar Bus Reactor Bay,	4	4	4	4	4



Nalagarh Bus Reactor Bay, Hissar Bus Reactor Bay, Jalandhar Bus Reactor Bay					
Norms (₹ lakh/km)	60.30	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	241.20	249.20	257.48	266.04	274.84

55. The details of the O&M Expenses allowed *vide* order dated 11.7.2017 in Petition No. 181/TT/2016 in respect of Asset-I and *vide* order dated 29.2.2016 in Petition No. 505/TT/2014 in respect of Asset-II, claimed by the Petitioner in the instant petition and true-up in the instant order are as follows:

Asset-I

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated 11.7.2017 in Petition No. 181/TT/2016	361.80	373.80	386.22	399.06	412.26
Claimed by the Petitioner in the instant petition	361.80	373.80	386.22	399.06	412.26
Approved after true-up in this order	361.80	373.80	386.22	399.06	412.26

Asset-II

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated 29.2.2016 in Petition No. 505/TT/2014	241.20	249.20	257.48	266.04	274.84
Claimed by the Petitioner in the instant petition	241.20	249.20	257.48	266.04	274.84
Approved after true-up in this order	241.20	249.20	257.48	266.04	274.84

Interest on Working Capital (IWC)

56. IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and is allowed for the transmission assets as follows:

Asset-I

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Interest on Working Capital					
WC for O&M Expenses (O&M Expenses for 1 month)	30.15	31.15	32.19	33.26	34.36
WC for Maintenance Spares (15% of O&M Expenses)	54.27	56.07	57.93	59.86	61.84



WC for Receivables (Equivalent to 2 months of annual fixed cost)	175.07	175.68	175.30	174.89	175.00
Total Working Capital	259.49	262.90	265.42	268.00	271.19
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	35.03	35.49	35.83	36.18	36.61

Asset-II

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Interest on Working Capital					
WC for O&M Expenses (O&M Expenses for 1 month)	20.10	20.77	21.46	22.17	22.90
WC for Maintenance Spares (15% of O&M Expenses)	36.18	37.38	38.62	39.91	41.23
WC for Receivables (Equivalent to 2 months of annual fixed cost)	119.88	122.14	121.06	119.91	119.15
Total Working Capital	176.16	180.29	181.14	181.99	183.28
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	23.78	24.34	24.45	24.57	24.74

57. The details of IWC allowed *vide* order dated 11.7.2017 in Petition No. 181/TT/2016 in respect of Asset-I and *vide* order dated 29.2.2016 in Petition No. 505/TT/2014 in respect of Asset-II, IWC claimed by the Petitioner and trued-up in the instant order are as follows:

Asset-I

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated 11.7.2017 in Petition No. 181/TT/2016	35.03	35.46	36.61	37.72	37.96
Claimed by the Petitioner in the instant petition	35.18	35.63	35.96	36.30	36.72
Approved after true-up in this order	35.03	35.49	35.83	36.18	36.61

Asset-II

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated 29.2.2016 in Petition No. 505/TT/2014	23.95	24.67	24.80	24.94	25.09
Claimed by the Petitioner in the instant petition	23.79	24.34	24.46	24.57	24.75



Approved after true-up in this order	23.78	24.34	24.45	24.57	24.74
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Approved Annual Fixed Charges for 2014-19 Tariff Period

58. The trued-up Annual Fixed Charges approved for the transmission assets for 2014-19 tariff period are as follows:

Asset-I

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	205.68	208.36	209.63	210.75	212.51
Interest on Loan	218.75	203.12	185.40	167.39	150.04
Return on Equity	229.17	233.29	234.71	235.96	238.57
O&M Expenses	361.80	373.80	386.22	399.06	412.26
Interest on Working Capital	35.03	35.49	35.83	36.18	36.61
Total	1050.43	1054.06	1051.79	1049.34	1049.99

Asset-II

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	143.91	149.65	149.65	149.65	149.65
Interest on Loan	150.07	142.10	127.21	111.65	97.65
Return on Equity	160.34	167.55	167.55	167.55	168.00
O&M Expenses	241.20	249.20	257.48	266.04	274.84
Interest on Working Capital	23.78	24.34	24.45	24.57	24.74
Total	719.30	732.83	726.34	719.46	714.88

59. Accordingly, the Annual Transmission Charges allowed *vide* order dated 11.7.2017 in Petition No. 181/TT/2016 in respect of Asset-I and *vide* order dated 29.2.2016 in Petition No. 505/TT/2014 in respect of Asset-II, claimed by the Petitioner in the instant petition and approved after truing up in the instant order are as follows:

Asset-I

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated 11.7.2017 in Petition No. 181/TT/2016	1050.22	1052.56	1086.60	1117.77	1110.08
Claimed by the Petitioner in the instant petition	1057.12	1060.12	1057.39	1054.57	1054.65
Approved after true-up in this order	1050.43	1054.06	1051.79	1049.34	1049.99



Asset-II**(₹ in lakh)**

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated 29.2.2016 in Petition No. 505/TT/2014	726.68	747.67	741.71	735.98	730.52
Claimed by the Petitioner in the instant petition	719.57	733.05	726.48	719.68	715.24
Approved after true-up in this order	719.30	732.83	726.34	719.46	714.88

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

60. The Petitioner has combined all the transmission assets covered in the transmission project into one asset, namely, Combined Asset. Accordingly, the Petitioner has claimed transmission tariff for the 2019-24 tariff period in respect of the Combined Asset in terms of Regulation 8(1) of the 2019 Tariff Regulations.

61. The Petitioner has claimed the following transmission charges for 2019-24 tariff period for the Combined Asset:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	372.29	368.29	365.62	365.62	365.62
Interest on Loan	217.19	186.84	153.80	121.26	88.66
Return on Equity	390.94	393.62	393.62	393.62	393.62
O&M Expenses	321.50	332.80	344.50	356.60	369.10
Interest on Working Capital	28.75	28.82	28.80	28.83	28.84
Total	1330.67	1310.37	1286.34	1265.93	1245.84

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

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	26.79	27.73	28.71	29.72	30.76
Maintenance Spares	48.23	49.92	51.68	53.49	55.37
Receivables	163.61	161.55	158.59	156.07	153.18
Total Working Capital	238.63	239.20	238.98	239.28	239.31



Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	28.75	28.82	28.80	28.83	28.84

Effective Date of Commercial Operation (E-COD)

63. The Petitioner has claimed that E-COD of the Combined Asset works out to be 10.10.2012. Based on the trued-up admitted capital cost as on 31.3.2019 and actual COD of all the transmission assets, E-COD has been worked out as follows:

Assets	Capital Cost (as on 31.3.2019) (₹ in lakh)	COD	Number of days from last COD	Weightage of Cost (%)	Weighted days	Effective COD (latest COD – weighted days)
Asset-I	4049.18	30.1.2013	0.00	58.82	0.00	9.10.2012
Asset-II	2834.29	1.5.2012	274.67	41.18	113.10	
Total	6883.47			100.00	113.10	

64. E-COD is used to determine the lapsed life of the project as a whole which works out as 6 (six) years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD).

Weighted Average Life (WAL) of the Assets

65. The life as defined in Regulation 33 of the 2019 Tariff Regulations has been considered for determination of Weighted Average Life. 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 WAL has been used as the useful life of the project as a whole.

66. WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2019 and their respective life as specified in the 2019 Tariff



Regulations. Accordingly, WAL of the transmission assets has been worked out as 25 years as shown under:

Particulars	Capital Cost (as on 31.3.2019) (₹ in lakh) (1)	Life (in years) (2)	Weighted Cost (₹ in lakh) (3) = (1)x(2)	Weighted Average Life of Asset (in years) (4) = (3)/(1)
Building & Civil Works	0.00	25.00	0.00	24.8370 (rounded off to 25 years)
Transmission Line	0.00	35.00	0.00	
Sub Station	6824.79	25.00	170619.82	
PLCC	0.00	15.00	0.00	
IT Equipment (Including Software)	61.23	6.67	408.21	
Total	6886.02		171028.03	

67. 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 above, Effective COD of the Combined Asset is 9.10.2012 and the lapsed life of the project as a whole works out as 6 years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from Effective COD). Accordingly, WAL has been used to determine the remaining useful life as on 31.3.2019 to be 19 years.

Initial Spares

68. As stated above in this order, Initial Spares are allowed for the 2014-19 period on the basis of the cost of individual assets. The assets covered in the transmission project are combined and the overall project cost is arrived at in the 2019-24 tariff period and therefore Initial Spares are allowed during the 2019-24 tariff period on the basis of the overall project cost as per the APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017.



(₹ in lakh)

Asset	Capital Cost (up to Cut-off Date)	Initial Spares (claimed)	Norms (as per 2009 Tariff Regulations) (in %)	Initial Spares allowable as per norms and APTEL judgement dated 14.9.2019	Initial Spares (allowed) in 2014-19	Additional spares (now allowed)
Com-bined Assets	6879.09	249.32	2.50	169.99	167.44	2.55

69. Thus, in terms of the APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017, additional Initial Spares of ₹2.55 lakh for Sub-station element of Combined Asset (Asset-I & II) are being allowed as part of the combined capital cost as on 1.4.2019.

Capital Cost

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

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

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

- (a) *The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- (b) *Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*
- (c) *Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*
- (d) *Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*
- (e) *Capitalised Initial Spares subject to the ceiling rates in accordance with these regulations;*
- (f) *Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;*
- (g) *Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;*



- (h) Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;*
- (i) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (j) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;*
- (k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;*
- (l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;*
- (m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;*
- (n) Expenditure on account of change in law and force majeure events; and*
- (o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*

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

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

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

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

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

- (a) The assets forming part of the project, but not in use, as declared in the tariff petition;*



(b) De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:

Provided that in case replacement of transmission asset is recommended by Regional Power Committee, such asset shall be 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 assets.

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

(d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and

(e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment.”

71. The Petitioner has claimed the capital cost of ₹6890.68 lakh as on 31.3.2019 for the Combined Asset. The capital cost of ₹6883.47 lakh was admitted for the transmission assets as on 31.3.2019. Further, as discussed in the preceding paragraphs, the incremental Initial Spares of ₹2.55 lakh are added back to the capital cost of the Combined Asset as on 31.3.2019.

72. Capital cost as on 1.4.2019 allowed after adding Initial Spares is as follows:

(₹ in lakh)

Asset	Combined Capital Cost (as on 31.3.2019)	Additional Initial Spares (allowed in terms of the APTEL's judgement dated 14.9.2019)	Combined Capital Cost (as on 1.4.2019)
Combined Asset	6883.47	2.55	6886.02

73. Accordingly, the opening capital cost of ₹6886.02 lakh as on 1.4.2019 of the Combined Asset is considered for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.



Additional Capital Expenditure (ACE)

74. Regulation 25 of the 2019 Tariff Regulations provides as follows:

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

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

- (a) *Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;*
- (b) *Change in law or compliance of any existing law;*
- (c) *Deferred works relating to ash pond or ash handling system in the original scope of work;*
- (d) *Liability for works executed prior to the cut-off date;*
- (e) *Force Majeure events;*
- (f) *Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;*
- (g) *Raising of ash dyke as a part of ash disposal system.”*

75. The Petitioner has claimed ACE of ₹95.14 lakh for the 2019-24 period, after adjusting the excess Initial Spares, under Regulations 25(1)(d) of the 2019 Tariff Regulations on account of undischarged liability towards final payment for works executed prior to the cut-off date. The same has been summarised as follows:

Asset	ACE Claimed	Less: Excess initial Spares	Net ACE claimed
Asset-A	0.00	0.00	0.00
Asset-B	0.00	0.00	0.00
Asset-C	18.45	16.79	1.66
Asset-D	0.00	0.00	0.00
Asset-E	29.00	0.00	29.00
Asset-F	29.00	0.00	29.00
Asset-G	0.00	0.00	0.00
Asset-H	35.48	0.00	35.48
Asset-I	0.00	0.00	0.00
Asset-J	0.00	0.00	0.00
Total	111.93	16.79	95.14

76. The Petitioner *vide* affidavit dated 15.2.2021 has submitted the package-wise break-up of ACE incurred during 2019-24 as follows:



(₹ in lakh)

Year	Party	Head	Amount	Balance and retention payment/deferred work
Asset-C				
2019-20	Various Sub Vendor on a/c of balance work of GET POWER Pvt Ltd	Sub-station	18.45	Balance and Retention payment as per clause 25(1)(d) of of 2014 Tariff Regulations
Asset-E				
2019-20	Various Sub Vendor on a/c of balance work of GET POWER Pvt Ltd	Sub-station	29.00	Balance and Retention payment as per clause 25(1)(d) of of 2014 Tariff Regulations
Asset-F				
2019-20	Various Sub Vendor on a/c of balance work of GET POWER Pvt Ltd	Sub-station	29.00	Balance and Retention payment as per clause 25(1)(d) of of 2014 Tariff Regulations
Asset-H				
2019-20	Various Sub Vendor on a/c of balance work of GET POWER Pvt Ltd	Sub-station	35.48	Balance and Retention payment as per clause 25(1)(d) of of 2014 Tariff Regulations

77. We have considered the submissions of the Petitioner. ACE claimed by the Petitioner has been allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations, as it is towards undischarged liabilities for works executed prior to the cut-off date. As discussed above, the excess Initial Spares discharged during the year 2019-20 are reduced from the ACE of 2019-20. The total capital expenditure as on 31.3.2024 is within the apportioned approved cost of ₹9787.58 lakh. Accordingly, ACE for 2019-20 and the capital cost as on 31.3.2024 for the transmission asset considered are as follows:

(₹ in lakh)

Capital Cost - admitted (as on 1.4.2019)	ACE (2019-20)	Capital Cost - allowed (as on 31.3.2024)
6886.02	95.14	6981.16

78. Therefore, the admitted capital cost of ₹6886.02 lakh as on 1.4.2019 and ₹6981.16 lakh as on 31.3.2024 has been considered for the purpose of determination



of transmission tariff for the 2019-24 period in accordance with Regulation 19 of the 2019 Tariff Regulations.

Debt-Equity ratio

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

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

Provided that:

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

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

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

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

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

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



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

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

80. The debt-equity considered for the purpose of computation of tariff of 2019-24 tariff period in respect of the Combined Asset is as follows:

Funding	Capital Cost (as on 1.4.2019) (₹ in lakh)	(in %)	ACE (2014-19) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2024) (₹ in lakh)	(in %)
Debt	4820.21	70.00	66.60	70.00	4886.81	70.00
Equity	2065.81	30.00	28.54	30.00	2094.35	30.00
Total	6886.02	100.00	95.14	100.00	6981.16	100.00

Depreciation

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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

82. The IT equipment has been considered as a part of the Gross Block and depreciated using weighted average rate of depreciation (WAROD). WAROD at Annexure-III has been worked out after 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 per cent 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 for the Combined Asset is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	6886.02	6981.16	6981.16	6981.16	6981.16
Addition during the year due to projected ACE	95.14	0.00	0.00	0.00	0.00
Closing Gross Block	6981.16	6981.16	6981.16	6981.16	6981.16
Average Gross Block	6933.59	6981.16	6981.16	6981.16	6981.16
Weighted Average Rate of Depreciation (%)	5.37	5.37	5.37	5.37	5.37
Balance useful life at the beginning of the year (in year)	19	18	17	16	15
Elapsed Life at the beginning of the year (in year)	6	7	8	9	10
Aggregate Depreciable Value	6246.36	6289.17	6289.17	6289.17	6289.17
Combined Depreciation during the year	372.05	374.56	374.56	374.56	374.56
Aggregate Cumulative depreciation at the end of year	2600.75	2975.30	3349.86	3724.42	4098.98
Remaining Aggregate Depreciable Value at the end of year	3645.61	3313.87	2939.31	2564.75	2190.19

Interest on Loan (IoL)

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

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

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

(3) The repayment for each of the year of the tariff period 2019-24 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be



adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalisation of such asset.

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

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

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

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

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

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

84. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2019. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during the 2019-24 tariff period may be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up. IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL 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
Gross Normative Loan	4820.21	4886.81	4886.81	4886.81	4886.81
Cumulative Repayments up to Previous Year	2228.70	2600.75	2975.30	3349.86	3724.42
Net Loan-Opening	2591.51	2286.06	1911.50	1536.95	1162.39
Additions due to ACE	66.60	0.00	0.00	0.00	0.00
Repayment during the year	372.05	374.56	374.56	374.56	374.56



Net Loan-Closing	2286.06	1911.50	1536.95	1162.39	787.83
Average Loan	2438.78	2098.78	1724.22	1349.67	975.11
Weighted Average Rate of Interest on Loan (in %)	9.0097	9.0101	9.0116	9.0419	9.0897
Interest on Loan	219.73	189.10	155.38	122.04	88.63

Return on Equity (RoE)

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

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

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

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

Provided further that:

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

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

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

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

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



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

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

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

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

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

Illustration-

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

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

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

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

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



recovered or refunded to beneficiaries or the long term customers, as the case may be, on year to year basis.”

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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	2065.81	2094.35	2094.35	2094.35	2094.35
Additions due to ACE	28.54	0.00	0.00	0.00	0.00
Closing Equity	2094.35	2094.35	2094.35	2094.35	2094.35
Average Equity	2080.08	2094.35	2094.35	2094.35	2094.35
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
Return on Equity	390.68	393.36	393.36	393.36	393.36

Operation & Maintenance Expenses (O&M Expenses)

87. The O&M expenses claimed by the Petitioner for various elements included in the Combined Asset for 2019-24 tariff period are as follows:

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station Bays 400 kV (Conventional)					
Manipur Bus Reactor Bay, Allahabad Bus Reactor II Bay, Kankroli Bus Reactor Bay, Gorakhpur Bus Reactor Bay, Vindhyanchal Bus Reactor 1 & 2, Amritsar Bus Reactor Bay, Nalagarh Bus Reactor Bay, Hissar Bus Reactor Bay, Jalandhar Bus Reactor Bay	10	10	10	10	10
Norms (₹ lakh/km)	32.15	33.28	34.45	35.66	36.91
Total O&M Expenses (₹ in lakh)	321.50	332.80	344.50	356.60	369.10



88. Regulation 35(3)(a) and Regulation 33(4) of the 2019 Tariff Regulations provides 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
Norms for sub-station Bays (₹ Lakh per bay)					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
Norms for Transformers (₹ Lakh per MVA)					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
Norms for AC and HVDC lines (₹ Lakh per km)					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					



<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 year

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

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

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

(4) Communication system: *The operation and maintenance expenses for the communication system shall be worked out at 2.0% of the original project cost related to such communication system. The transmission licensee shall submit the actual operation and maintenance expenses for truing up.”*

89. The O&M Expenses have been worked out for the Combined Asset in accordance with Regulation 35(3)(a) of the 2019 Tariff Regulations and the same are as follows:

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station Bays 400 kV (Conventional)					
Manipur Bus Reactor Bay, Allahabad Bus Reactor II Bay, Kankroli Bus Reactor Bay, Gorakhpur Bus Reactor Bay, Vindhyanchal Bus Reactor 1 & 2, Amritsar Bus Reactor Bay, Nalagarh Bus Reactor Bay, Hissar Bus Reactor Bay, Jalandhar Bus Reactor Bay	10	10	10	10	10
Norms (₹ lakh/km)	32.15	33.28	34.45	35.66	36.91
Total O&M Expenses (₹ in lakh)	321.50	332.80	344.50	356.60	369.10

* The Petitioner has not claimed any O&M for PLCC under Communication system.

Interest on Working Capital (IWC)

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



“34. Interest on Working Capital

(1) *The working capital shall cover:*

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

- i. Receivables equivalent to 45 days of 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;”

91. The Petitioner has submitted that it has computed IWC for 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%.

92. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. ROI considered is 12.05% (SBI 1-year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, whereas ROI for 2020-21 onwards has been considered as 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21 and from 2021-22 onwards has been considered as 10.50% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.00% plus 350 basis



points). The components of the working capital and interest allowed thereon for the Combined Asset is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
WC for O&M Expenses (O&M Expenses for 1 month)	26.79	27.73	28.71	29.72	30.76
WC for Maintenance Spares (15% of O&M Expenses)	48.23	49.92	51.68	53.49	55.37
WC for Receivables (Equivalent to 45 days of annual transmission charges)	163.86	162.35	159.41	156.79	153.79
Total Working Capital	238.88	240.00	239.79	240.00	239.92
Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
Interest on Working Capital	28.78	27.00	25.18	25.20	25.19

Annual Fixed Charges of the 2019-24 Tariff Period

93. The transmission charges allowed in respect of 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	372.05	374.56	374.56	374.56	374.56
Interest on Loan	219.73	189.10	155.38	122.04	88.63
Return on Equity	390.68	393.36	393.36	393.36	393.36
O & M Expenses	321.50	332.80	344.50	356.60	369.10
Interest on Working Capital	28.78	27.00	25.18	25.20	25.19
Total	1332.74	1316.82	1292.98	1271.75	1250.84

Filing Fee and Publication Expenses

94. 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.



License Fee and Publication Expenses

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

Goods and Services Tax

96. The Petitioner has submitted that, if GST is levied at any rate and at any point of time in future on Charges of Transmission of Electricity, the same shall be borne and additionally paid by the respondent(s) to the Petitioner and the same shall be charged & billed separately by the Petitioner. Further additional taxes, if any, are to be paid by the Petitioner on account of demand from Govt. / Statutory authorities, the same may be allowed to be recovered from the beneficiaries.

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

Security Expenses

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

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



3.8.2021 in Petition No. 260/MP/2020 approved security expenses from 1.4.2019 to 31.3.2024. Therefore, security expenses will be shared in terms of the order dated 3.8.2021 in Petition No. 260/MP/2020. Therefore, the Petitioner's prayer in the instant petition for allowing it to file a separate petition for claiming the overall security expenses and consequential IWC has become infructuous.

Capital Spares

100. The Petitioner has sought reimbursement of capital spares at the end of tariff period. The Petitioner's claim, if any, shall be dealt with in accordance with the provisions of the 2019 Tariff Regulations.

Sharing of Transmission Charges

101. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems were governed by the provisions of the 2010 Sharing Regulations. However, with effect from 1.11.2020, sharing of transmission charges is governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2020 (in short "the 2020 Sharing Regulations"). Accordingly, the liabilities of the DICs for arrears of the transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of respective Tariff Regulations and Sharing Regulations and shall be recovered from the concerned DICs through Bill 2 under Regulation 15(2)(b) of the 2020 Sharing Regulations. Billing, collection and disbursement of transmission charges for subsequent period shall be recovered in terms of the provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.



102. To summarise:

a. The trued-up Annual Fixed Charges (AFC) approved for 2014-19 tariff period are:

Asset-I

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
AFC	1050.43	1054.06	1051.79	1049.34	1049.99

Asset-II

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
AFC	719.30	732.83	726.34	719.46	714.88

b. Annual Fixed Charges allowed in respect of the Combined Asset for 2019-24 tariff period in this order are:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	1332.74	1316.82	1292.98	1271.75	1250.84

103. Annexure-I, Annexure-II and Annexure-III given hereinafter shall form part of the order.

104. This order disposes of Petition No. 547/TT/2020 in terms of above discussions and findings.

sd/-
(P. K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I.S. Jha)
Member



Asset-I

2014-19	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2014-15	2015-16	2018-19	Total			2014-15	2015-16	2016-17	2017-18	2018-19
Sub Station	3795.27	77.96	23.70	48.72	192.70	3987.97	5.28%	202.45	205.13	206.40	207.52	209.28
IT Equipment (Incl. Software)	61.21	-	-	-	-	61.21	5.28%	3.23	3.23	3.23	3.23	3.23
Total	3856.48	77.96	23.70	48.72	192.70	4049.18		205.68	208.36	209.63	210.75	212.51
Average Gross Block (₹ in lakh)								3895.46	3946.29	3970.36	3991.52	4024.82
Weighted Average Rate of Depreciation								5.28%	5.28%	5.28%	5.28%	5.28%



Asset-II

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2014-15	Total			2014-15	2015-16	2016-17	2017-18	2018-19
Sub Station	2616.78	217.51	217.51	2834.29	5.28%	143.91	149.65	149.65	149.65	149.65
Total	2616.78	217.51	217.51	2834.29		143.91	149.65	149.65	149.65	149.65
Average Gross Block (₹ in lakh)						2725.53	2616.78	2616.78	2616.78	2616.78
Weighted Average Rate of Depreciation						5.28%	5.28%	5.28%	5.28%	5.28%



Combined Asset-I

2019-24 Capital Expenditure	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2019-20	Total			2019-20	2020-21	2021-22	2022-23	2023-24
Sub Station	6824.79	95.14	95.14	6919.93	5.28%	362.86	365.37	365.37	365.37	365.37
IT Equipment (Incl. Software)	61.23	0.00	0.00	61.23	15.00%	9.18	9.18	9.18	9.18	9.18
Total	6886.02	95.14	95.14	6981.16		372.05	374.56	374.56	374.56	374.56
Average Gross Block (₹ in lakh)						6933.59	6981.16	6981.16	6981.16	6981.16
Weighted Average Rate of Depreciation						5.37%	5.37%	5.37%	5.37%	5.37%

