

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No.77/TT/2020

Coram:

**Shri P.K. Pujari, Chairperson
Shri I.S. Jha, Member**

Date of Order : 16.08.2020

In the Matter of:

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing-up of transmission tariff of 2014-19 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for transmission assets under Common System associated with ISGS projects in Krishnapatnam area of Andhra Pradesh in the Southern Region.

And in the Matter of:

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

.....Petitioner

Versus

1. Karnataka Power Transmission Corporation Ltd., (KPTCL),
KaveriBhavan, Bangalore – 560 009.
2. Transmission Corporation of Andhra Pradesh Ltd., (APTRANSCO),
Vidyut Soudha, Hyderabad– 500082.
3. Kerala State Electricity Board (KSEB),
Vaidyuthi Bhavanam,
Pattom, Thiruvananthapuram – 695 004.
4. Tamil Nadu Generation and Distribution Corporation Ltd.
(Formerly Tamil Nadu Electricity Board -TNEB)
NPKRR Maaligai, 800, Anna Salai, Chennai – 600 002.
5. Electricity Department,
Government of Pondicherry, Pondicherry – 605001.
6. Eastern Power Distribution Company of Andhra Pradesh Ltd.,
(APEPDCL) APEPDCL, P&T Colony,
Seethmmadhara, Vishakhapatnam, Andhra Pradesh.



7. Southern Power Distribution Company of Andhra Pradesh Ltd.,(APSPDCL)
Srinivasasa Kalyana Mandapam Backside,
Tiruchanoor Road, KesavayanaGunta, TIRUPATI-517 501,
Chittoor District, Andhra Pradesh.
8. Southern Power Distribution Company of Telangana Ltd.,(TSSPDCL)
6-1-50, Corporate Office, Mint Compound,
Hyderabad – 500 063, Telangana.
9. Northern Power Distribution Company of Telangana Ltd.,(TSNPDCL)
H.No 2-5-3 1/2, Vidyut Bhawan, Corporate Office,
Nakkal Gutta, Hanamkonda,
Warangal – 506 001, Telangana.
10. Bangalore Electricity Supply Company Ltd., (BESCOM),
Corporate Office, K.R.Circle,
Bangalore – 560 001, Karanataka.
11. Gulbarga Electricity Supply Company Ltd., (GESCOM)
Station Main Road, Gulbarga, Karnataka.
12. Hubli Electricity Supply Company Ltd., (HESCOM)
Navanagar, PB Road, HUBLI, Karnataka.
13. MESCOM Corporate Office,
Paradigm Plaza, AB Shetty Circle,
Mangalore– 575 001, Karnataka.
14. Chamundeswari Electricity Supply Corporation Ltd., (CESC)
927,L J Avenue,
Ground Floor, New Kantharaj Urs Road,
Saraswatipuram, Mysore– 570 009, Karnataka.
15. Electricity Department,
Government of Goa,
Vidyuti Bhawan, Panaji, Goa-403001.
16. Transmission Corporation of Telangana Limited,
Vidhyut Sudha, Khairatabad,
Hyderabad, 500082.
17. Tamil Nadu Transmission Corporation
NPKRR Maaligai, 800, Anna Salai
Chennai – 600 002

...Respondent(s)

Parties present:

For Petitioner: Shri S.S. Raju, PGCIL
Shri Zafrul Hasan, PGCIL
Shri Anshul Garg, PGCIL
Shri V.K. Singh, PGCIL



For Respondents: None

ORDER

The present petition has been filed by Power Grid Corporation of India Limited (hereinafter referred to as “the Petitioner”), a deemed transmission licensee, for truing up of tariff of the period from 1.4.2014/ COD to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and for determination of tariff for the period from 1.4.2019 to 31.3.2024 under Regulation 8 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of **Asset-I:**(A) LILO of 400 kV Simhapuri and Meenakshi–Nellore D/C Quad line and (B) Associated bays and Common Systems at Nellore Pooling Station; **Asset-II:** (A) 1500 MVA, 765/400 ICT2 and 240 MVAr reactor alongwith associated bays at 765/400 kV Nellore pooling Station and (B) 1500 MVA, 765/400 ICT3 and 240 MVAr reactor alongwith associated bays at 765/400 kV Nellore Pooling Station; **Asset-III:**(A) Kurnool-Raichur 2nd 765 kV S/C line, (B) Extension of Kurnool 765/400 kV Sub-Station and (C) Extension of Raichur 765/400 kV Sub-station; **Asset-IV:**(A) Nellore Pooling Station-Kurnool 765 kV D/C Line along with associated bays at 765 kV Nellore Pooling Station and Kurnool Sub-station and (B) 240 MVAr, 765 kV line reactor at Nellore end of one circuit and at Kurnool end both circuits of Nellore-Kurnool 765 kV Line (hereinafter collectively referred to as “the transmission assets/ Combined Asset”) under “Common System associated with ISGS projects in Krishnapatnam area of Andhra Pradesh” in the Southern Region (hereinafter referred to as “the transmission project”).

2. The Petitioner has made the following prayers:-



“i.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 10.2 and 11.0 above

ii.Approve the completion cost and additional capitalization incurred during 2014-19, also allow the projected additional capitalization during 2019-24.

iii.Allow the Petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulations 2014 and Tariff Regulations 2019as per para 10.2 and 11.0 above for respective block.

iv.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.

v.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.

vi.Allow the additional RoE of 0.5 % during 2014-19 period as per para 5.5. above.

vii.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.

viii.Allow the Petitioner to recover FERV on the foreign loans deployed as provided under clause 68 of the Tariff Regulations,2019.

ix.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 11.6 above.

x.Allow the Petitioner to claim the capital spares at the end of tariff block as per actual.

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

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

Background

3. The brief facts of the case are as under:-

a) The Investment Approval for the transmission project was accorded by the Board of Directors of the Petitioner Company, vide Memorandum Ref No. C/CP/ISGS Krishnapatnam dated 4.8.2011 at an estimated cost of ₹163734 lakh



including IDC of ₹10228 lakh based on 1st quarter, 2011 price level. The scope of work covered under “Common System associated with ISGS projects in Krishnapatnam area of Andhra Pradesh in Southern Region” is as under:-

Transmission lines:

- i. LILO of both circuits of SEPL/MEPL-Nellore 400 kV D/C Quad line at Nellore Pooling Station;
- ii. Nellore Pooling Station-Kurnool 765 kV D/C line;
- iii. Kurnool-Raichur 2nd 765 kV S/C line;

Sub-stations:

- i. Establishment of new 2x1500 MVA, 765/400 kV Sub-station at Nellore;
- ii. Extension of Kurnool 765/400 kV Sub-station;
- iii. Extension of Raichur 765/400 kV Sub-station;

Reactive Compensation:

- i. 1x240 MVAR, 765 kV bus reactor at new 765/400 kV Nellore Sub-station;
- ii. 240 MVAR, 765 kV line reactors at each end of both circuits of Nellore-Kurnool 765 kV.

b) The details of commercial operation of the assets covered in the instant petition are as under:-

Asset	Earlier covered in Petition No.	Asset nomenclature in previous order	COD	Time over-run	Time over-run condoned
Asset-I	224/TT/2013 and 417/TT/2014	N/A	1.4.2013	None	N/A
Asset-II	182/TT/2016	37/TT/2014	1.2.2014	None	N/A
		37/TT/2014	1.3.2014	None	N/A
Asset-III	161/TT/2015	N/A	21.6.2014	None	N/A
Asset-IV	245/TT/2014	N/A	1.11.2014	3 months	3 months



c) The transmission tariff for Asset-I for the period from COD, i.e. 1.4.2013 to 31.3.2014 was allowed vide order dated 4.3.2014 in Petition No.224/TT/2013 and transmission tariff for the 2014-19 tariff period was determined vide order dated 23.2.2016 in Petition No. 417/TT/2014. The Commission vide order dated 22.1.2016 in Petition No.37/TT/2014 allowed transmission tariff from COD to 31.3.2014 and vide order dated 10.7.2017 in Petition No. 182/TT/2016 allowed transmission tariff for the 2014-19 tariff period for Asset-II. The Commission vide order dated 30.12.2015 in Petition No. 161/TT/2015 allowed transmission tariff for Asset-III from its COD to 31.3.2019. The Commission vide order dated 29.12.2016 in Petition No. 245/TT/2014 determined transmission tariff for Asset-IV from its COD to 31.3.2019. The transmission tariff (AFC) allowed by the Commission and trued up transmission tariff claimed by the Petitioner for the transmission assets is given below:-

(₹ in lakh)

Asset	Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	AFC approved	1935.48	2045.58	2103.37	2069.22	2035.61
	AFC claimed based on truing up	2029.86	2136.92	2094.97	2048.05	2013.84
Asset-II	AFC approved	3330.48	3620.33	3580.34	3518.73	3454.63
	AFC claimed based on truing up	3337.99	3636.76	3593.48	3526.30	3463.67
Asset-III	AFC approved	2531.75	3305.59	3294.64	3222.65	3147.14
	AFC claimed based on truing up	2564.23	3303.24	3292.85	3268.39	3195.72
Asset-IV	AFC approved	9241.00	22867.56	23046.17	22728.28	22109.61
	AFC claimed based on truing up	9180.41	22680.82	22427.39	21891.89	21412.79

4. The Petitioner vide affidavit dated 25.2.2020 submitted revised forms for the 2019-24 tariff period due to an error in computation of depreciation in the Forms submitted alongwith the petition.

5. The Respondents are distribution licensees, electricity boards and power departments, who are procuring transmission service from the Petitioner, mainly beneficiaries of the Southern Region.



6. The Petitioner has served the petition on the Respondents and notice of this application has also been published in the newspaper in accordance with Section 64 of the Electricity Act, 2003. No comments/objections have been received from the public in response to the notice in the newspaper. None of the Respondents have filed any reply to the petition.

7. The hearing in this matter was held on 26.2.2020 and the order was reserved.

8. This order is issued considering the submissions made by the Petitioner in the petition and its affidavits dated 25.2.2020 and 17.3.2020. Having heard the representatives of the Petitioner and perused the material on record, we proceed to dispose of the petition.

Truing up of Annual Fixed Charges for the 2014-19 tariff period

9. The Petitioner has submitted the information as required under the 2014 Tariff Regulations for truing up of annual fixed charges for 2014-19 period. AFC claimed for 2014-19 tariff period based on truing up is as under:-

(₹ in lakh)					
Particulars	2014-15 (pro-rata)*	2015-16	2016-17	2017-18	2018-19
Asset-I					
Depreciation	424.98	467.91	467.91	467.91	467.91
Interest on Loan	643.27	646.10	596.62	541.64	496.93
Return on Equity	658.92	709.29	708.94	708.94	710.82
Interest on Working Capital	53.52	56.19	55.52	54.74	54.26
O & M Expenses	249.17	257.43	265.98	274.82	283.92
Total	2029.86	2136.92	2094.97	2048.05	2013.84
Asset-II					
Depreciation	873.60	980.84	987.57	987.57	987.57
Interest on Loan	884.01	927.81	855.33	772.91	691.31
Return on Equity	1,032.56	1,157.89	1,165.10	1,165.10	1,168.19
Interest on Working Capital	89.54	96.74	96.26	95.26	94.38
O & M Expenses	458.28	473.48	489.22	505.46	522.22
Total	3337.99	3636.76	3593.48	3526.30	3463.67
Asset-III					



(₹ in lakh)

Particulars	2014-15 (pro-rata)*	2015-16	2016-17	2017-18	2018-19
Depreciation	741.26	970.59	989.01	1,004.19	1,004.19
Interest on Loan	719.02	879.65	821.93	756.43	673.26
Return on Equity	853.12	1,122.12	1,142.84	1,160.39	1,163.47
Interest on Working Capital	63.59	82.16	82.18	81.90	80.54
O & M Expenses	187.24	248.72	256.89	265.48	274.26
Total	2564.23	3303.24	3292.85	3268.39	3195.72
Asset-IV					
Depreciation	2664.54	6700.46	6805.31	6838.51	6869.85
Interest on Loan	2954.13	7000.41	6506.19	5887.00	5305.08
Return on Equity	3074.13	7767.80	7886.24	7924.61	7981.96
Interest on Working Capital	215.14	531.75	526.76	515.45	505.43
O & M Expenses	272.47	680.40	702.88	726.32	750.47
Total	9180.41	22680.82	22427.38	21891.89	21412.79

*The AFC parameters for Assets-III and IV are considered on pro-rata basis as on their COD i.e. 21.6.2014 and 1.11.2014 respectively.

10. IWC claimed by the Petitioner is as under:

(₹ in lakh)

Particulars	2014-15 (pro-rata)*	2015-16	2016-17	2017-18	2018-19
Interest on Working Capital					
Asset-I					
O & M Expenses	20.76	21.45	22.17	22.90	23.66
Maintenance Spares	37.38	38.61	39.90	41.22	42.59
Receivables	338.31	356.15	349.16	341.34	335.64
Total Working Capital	396.45	416.21	411.23	405.46	401.89
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	53.52	56.19	55.52	54.74	54.26
Asset-II					
O & M Expenses	38.19	39.46	40.77	42.12	43.52
Maintenance Spares	68.74	71.02	73.38	75.82	78.33
Receivables	556.33	606.13	598.91	587.72	577.28
Total Working Capital	663.26	716.61	713.06	705.66	699.13
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	89.54	96.74	96.26	95.26	94.38
Asset-III					
O & M Expenses	20.05	20.73	21.41	22.12	22.86
Maintenance Spares	36.10	37.31	38.53	39.82	41.14
Receivables	549.26	550.54	548.81	544.73	532.62
Total Working Capital	605.41	608.58	608.75	606.67	596.62
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	81.73	82.16	82.18	81.90	80.54



(₹ in lakh)

Particulars	2014-15 (pro-rata)*	2015-16	2016-17	2017-18	2018-19
Interest on Working Capital (pro-rata)	63.59	82.16	82.18	81.90	80.54
Asset-IV					
O & M Expenses	54.89	56.70	58.57	60.53	62.54
Maintenance Spares	98.79	102.06	105.43	108.95	112.57
Receivables	3698.51	3780.14	3737.90	3648.65	3568.80
Total Working Capital	3852.19	3938.90	3901.90	3818.13	3743.91
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	520.05	531.75	526.76	515.45	505.43
Interest on Working Capital (pro-rata)	215.14	531.75	526.76	515.45	505.43

*The IWC for Asset-III and Asset-IV is considered on pro-rata basis as on their COD i.e. 21.6.2014 and 1.11.2014 respectively.

Capital Cost

13. The capital cost of the existing project has been calculated in accordance with Regulation 9(3) and (6) of the 2014 Tariff Regulations.

14. The Commission vide order dated 23.2.2016 in Petition No. 417/TT/2014 for Asset-I, order dated 10.7.2017 in Petition No. 182/TT/2016 for Asset-II, order dated 30.12.2015 in Petition No. 161/TT/2015 for Asset-III and order dated 29.12.2016 in Petition No. 245/TT/2014 for Asset-IV allowed capital cost as on 1.4.2014/COD and projected additional capital expenditure for determination of tariff for 2014-19 period, which is summarised as under:-

(₹ in lakh)

Assets	Admitted Capital Cost as on 1.4.2014/COD	Projected ACE					Total Capital Cost as on 31.3.2019
		2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-I	10066.78	540.17	1003.17	-	-	-	11610.12
Asset-II	15142.59*	3695.26	247.14	-	-	-	19084.99
Asset-III	17757.91**	560.73	696.97	-	-	-	19015.61
Asset-IV	118837.30#	6876.17	5328.85	3282.45	-	-	134324.77
TOTAL	161804.58	11672.33	7276.13	3282.45	0.00	0.00	184035.49



*After deduction of accrued IDC of ₹131.79 lakh to be discharged during 2014-15.
 **After deduction of accrued IDC of ₹418.02 lakh to be discharged during 2014-15 and ₹9.57 lakh to be discharged during 2015-16 and undischarged Initial Spares amounting to ₹5.86 lakh to be discharged during 2014-15.
 #Cost allowed after deduction of accrued IDC of ₹1433.26 lakh to be discharged during 2014-15 and ₹1125.39 lakh to be discharged during 2015-16.

15. The Petitioner has claimed the following capital cost as on 31.3.2019:-

Asset	Apportioned Approved Capital Cost (RCE)	Admitted Capital Cost as on 1.4.2104/COD	Additional Capital Expenditure					Capital Cost as on 31.3.2019
			2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-I	11617.60	10066.78	1550.82	0.00	0.00	0.00	0.00	11617.60
Asset-II	19092.71	15142.59	3563.47	254.86	0.00	0.00	0.00	19092.71
Asset-III	19015.61	17763.77	136.85	112.15	575.25	0.00	0.00	19015.62
Asset-IV	136213.08	118832.05	5442.91	1919.00	962.67	294.81	892.35	130902.44

16. We have examined the submissions of Petitioner. It is observed that the estimated completion cost as on 31.3.2019 including additional capitalization is within RCE apportioned approved capital cost. Therefore, there is no cost over-run in case of the instant assets.

Interest During Construction (IDC) And Incidental Expense During Construction (IEDC)

17. There is no time over-run in case of Assets-I, II and III while time over-run of 3 months in case of Asset-IV was condoned. The Petitioner has claimed IDC for the instant assets and has submitted the statement showing IDC claim, discharge of IDC liability as on COD and thereafter as under:-

Asset	IDC as per Auditor's Certificate	IDC Discharged upto COD	IDC discharged during 2014-15	IDC discharged during 2015-16	Undischarged IDC upto COD/1.4.2014
Asset-I	325.00	325.00	0	0	0
Asset-II	636.72	504.92	131.79	0	131.79
Asset-III	1269.47	841.88	418.02	9.57	427.59
Asset-IV	10108.88	7550.23*	1433.26	1125.39	2558.65
Total	12340.07	9222.03	1983.07	1134.96	3118.03

*The IDC discharge statement submitted by the Petitioner incorrectly shows the total IDC discharged as ₹11179.2 lakh i.e. an excess amount of ₹1070.32 lakh from the total IDC of ₹10108.88 lakh as mentioned in the Auditor's Certificate. As the Commission verified the undischarged IDC of ₹2558.65 lakh as on COD in order dated 29.12.2016 in Petition No. 245/TT/2014, the IDC discharged upto COD is considered as ₹7550.23 (₹10108.88-₹2558.65) lakh.



18. The allowable IDC has been worked out considering the information submitted by the Petitioner for the individual assets separately on cash basis. The loan details submitted in respective forms and the IDC computation sheets were also considered for the purpose of IDC calculation on cash and accrued basis. The undischarged IDC as on COD has been considered as Additional Capital Expenditure (ACE) during the year in which it has been discharged. Accordingly, IDC allowed are as under:-

(₹ in lakh)

Asset	IDC claimed as per Auditor Certificate	IDC Admissible	IDC Discharged upto COD	Undischarged IDC upto COD/1.4.2014	IDC discharged during 2014-15	IDC discharged during 2015-16
Asset-I	325.00	325.00	325.00	0	0	0
Asset-II	636.72	636.72	504.92	131.79	131.79	0
Asset-III	1269.47	1269.47	841.88	427.59	418.02	9.57
Asset-IV	10108.88	10108.88	7550.23	2558.65	1433.26	1125.39

19. The Petitioner has claimed IEDC for the instant assets as given in the table below. The Petitioner has claimed IEDC as on COD, which is within the percentage of hard cost as indicated in the abstract cost estimate. Further, the Petitioner has submitted that the entire IEDC claimed in Auditor's Certificate is on cash basis and is paid up to COD of the assets. Hence, the entire amount of IEDC has been allowed. Accordingly, IEDC details considered for the purpose of tariff are as under:-

(₹ in lakh)

Asset	IEDC claimed as per certificate	IEDC allowed as on COD
Asset-I	17.00	17.00
Asset-II	78.75	78.75
Asset-III	76.61	76.61
Asset-IV	572.38	572.38
Total	744.74	744.74



Initial Spares

20. The Petitioner has claimed the Initial Spares for transmission line and sub-station taking into consideration the judgement of the Appellate Tribunal for Electricity (APTEL) dated 14.9.2019 in Appeal No.74 of 2017. The Petitioner has further submitted that the cost of Initial Spares is within the ceiling limit specified in Regulation 13 of the 2014 Tariff Regulations.

Assets	Asset Type	Estimated Completion Cost (A) (₹ in lakh)	Initial Spares claimed (B) (₹ in lakh)	Ceiling limit (%) (C)	Initial Spares worked out	Excess Initial Spares E = B-D (₹ in lakh)
					$D = \frac{(A-B)*C}{(100-C)}$ (₹ in lakh)	
Sub-station						
Asset-I	Sub-station	9140.29	227.50	2.5	228.53	-1.03
Asset-II	Sub-station	8523.51	240.20	2.5	212.39	27.81
	Sub-station	8222.09	220.20	2.5	205.18	15.02
Asset-IV	Sub-station	10296.09	181.30	6.0	645.62	-464.32
Total	Sub-station	36181.98	869.20		1291.72	-422.52
Transmission Line						
Asset-I	Transmission Line	2469.82	18.28	0.75	18.53	-0.25
Asset-III	Transmission Line	15723.06	152.00	1.0	157.28	-5.28
Asset-IV	Transmission Line	108275.14	1068.75	1.0	1082.89	-14.14
Total	Transmission Line	126468.02	1239.03		1258.70	-19.67

21. Initial Spares are worked out as per APTEL's directions in judgement dated 14.9.2019 in Appeal No. 74 of 2017. As per this judgement, the Initial Spares are to be allowed as a percentage of the project cost as a whole as on the cut-off date. The Regulation 3(29) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as the "2009 Tariff Regulations") and Regulation 3(43) of the 2014 Tariff Regulations define "original project cost" as under:-



“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;”

22. Assets-I and II were put into commercial operation during 2009-14 tariff period and Assets-III and IV during 2014-19 tariff period. Accordingly, for the purpose of Initial Spares, the 2009 Tariff Regulations are applicable for Assets-I and II whereas the 2014 Tariff Regulations are applicable for Assets-III and IV. The Regulation 8(iv) of the 2009 Tariff Regulations provide the norms for the Initial Spares for the transmission systems as under:-

- “(iv) Transmission system (a) Transmission line - 0.75%
 (b) Transmission Sub-station - 2.5%
 (c) Series Compensation devices and HVDC Station - 3.5%
 (d) Gas Insulated Sub-station (GIS) - 3.5%”

23. The Initial Spares allowed for the transmission assets with COD during the tariff period 2009-14 are worked out as under:-

Assets	Asset type	Capital Cost as on cut-off date (A) (₹ in lakh)	Initial Spares claimed (B) (₹ in lakh)	Ceiling limit (%) (C)	Initial Spares worked out	Excess Initial Spares	Initial Spares allowed (₹ in lakh)
					$D = \frac{[(A-B)*C]}{(100-C)}$ (₹ in lakh)	$E = D-B$ (₹ in lakh)	
Sub-station							
Asset-I	Sub-station	9151.38	227.50	2.50%	228.82	-	227.50
Asset-II	Sub-station	9665.28	240.20	2.50%	241.67	-	240.20
	Sub-station	9427.43	220.20	2.50%	236.08	-	220.20
Total	Sub-station	28244.09	687.90	2.50%	706.57	-	687.90
Transmission Line							
Asset-I	Transmission Line	2466.22	18.28	0.75%	18.50	-	18.28
Total	Transmission Line	2466.22	18.28	0.75%	18.50	-	18.28

24. Regulation 13 of the 2014 Tariff Regulations provide the norms for the Initial Spares for the transmission systems as under:-

- “(d) Transmission system



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

25. The Initial Spares allowed for the transmission assets with COD during the tariff period 2014-19 are worked out as under:-

Assets	Asset type	Capital Cost as on cut-off date (A) (₹ in lakh)	Initial Spares claimed (B) (₹ in lakh)	Ceiling limit (%) (C)	Initial Spares worked out	Excess Initial Spares	Initial Spares allowed (₹ in lakh)
					$D = [(A-B)*C / (100-C)]$ (₹ in lakh)	$E = D-B$ (₹ in lakh)	
Sub-station							
Asset-IV	Sub-station	10296.09	181.30	4.00%	421.45	-	181.30
Total	Sub-station	10296.09	181.30	4.00%	421.45	-	181.30
Transmission Line							
Asset-III	Transmission Line	15723.06	152.00	1.00%	157.28	-	152.00
Asset-IV	Transmission Line	108275.14	1068.75	1.00%	1082.89	-	1068.75
Total	Transmission Line	123998.20	1220.75	1.00%	1240.18	-	1220.75

26. The Petitioner has submitted the Auditor’s Certificate certifying the capital cost and ACE claimed. The Initial Spares claimed by Petitioner is within the ceiling limit as provided in the 2009 Tariff Regulations for Asset-I and II and the 2014 Tariff Regulations for Asset-III and IV and is, therefore, allowed. Accordingly, the revised capital cost claimed by the Petitioner as per the Auditor’s Certificate has been considered for computation of tariff for the 2014-19 period.

Capital Cost as on 1.4.2014/COD

27. The details of the capital cost allowed for the instant assets as on 1.4.2014/COD are as under:-

(₹ in lakh)			
Asset	Capital Cost claimed as on 1.4.2014/COD (A)	Un-discharged IDC (B)	Capital Cost allowed as on COD (E) = (A-B)



Asset	Capital Cost claimed as on 1.4.2014/COD (A)	Un-discharged IDC (B)	Capital Cost allowed as on COD (E) = (A-B)
Asset-I	10066.78	0	10066.78
Asset-II	15274.38	131.79	15142.59
Asset-III	18191.36	427.59	17763.77
Asset-IV	121390.7	2558.65	118832.05
Total	164923.22	3118.03	161805.19

Additional Capital Expenditure (“ACE”)

28. The Petitioner has claimed the following ACE on actual basis in respect of the instant assets and submitted the Auditor’s Certificates in support of the same:-

(₹ in lakh)

Assets	ACE claimed as per Auditor’s Certificate					Regulation
	2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-I	1550.82	-	-	-	-	14(1)(i) & 14(1)(ii)
Asset-II	3695.26	254.86	-	-	-	14(1)(i)
Asset-III	554.88	121.72	575.25	-	-	14(1)(i)& 14(1)(ii)
Asset-IV	6876.17	3044.39	962.67	294.81	892.35	14(1)(i), 14(1)(ii) &14(2)(iv)
Total	12677.13	3420.97	1537.92	294.81	892.35	

29. The Petitioner has submitted that ACE incurred for the transmission assets is on account of undischarged liability towards final payment or withheld payment due to contractual exigencies for works executed within the cut-off date. In response to the Commission’s query in respect of additional capitalisation claimed for Asset-IV after the cut-off date, the Petitioner vide affidavit dated 25.2.2020 has submitted that the same was claimed inadvertently under Regulation 14(3)(v) of the 2014 Tariff Regulations and such additional capitalisation falls under 14(2)(iv) of the 2014 Tariff Regulations. Regulation 14(1) of the 2014 Tariff Regulations provides for allowing ACE within the original scope of work and upto the cut-off date. The Regulation 14(2)



of the 2014 Tariff Regulations provides for allowing ACE for work within the original scope of work but incurred after the cut-off date.

30. The Petitioner vide affidavit dated 17.3.2020 has further submitted that the projected ACE for Asset-IV after the cut-off date (₹294.81 lakh in 2017-18 and ₹892.35 lakh in 2018-19) is mainly towards works in respect of foundation protection for transmission lines, roads, drains, township, cable trench cover, service room of control room building other than main control room, landscaping works etc. which were executed prior to the cut-off date. For transmission lines, there are some compensation payments which are cleared by the district authorities after the lines have achieved commercial operation. For sub-stations, the final amendments to the work which involve some new items and therefore have negotiable rates could not be completed till COD and hence it is not possible to freeze the liability of all the works by COD.

31. The Petitioner has submitted that during true up which happens after 1-5 years, most of the final amendments are issued, payments and material reconciliation is completed, final payments are released and contracts are closed. Thereafter, the actual status of payments is reconciled and value of works beyond the cut-off date (i.e. value of unexecuted work) and the actual liability as on the date of COD are exactly known. The Petitioner vide affidavit dated 25.2.2020 has submitted package-wise break-up of the works for which payments were discharged after the cut-off date.

32. It is observed that ACE claimed after the cut-off date is towards the balance and retention payment for the works executed before the cut-off date which is reconciled and settled at the time of closure of the contracts, which happens to be after the cut-off date. Therefore, ACE claimed by the Petitioner is allowed. The details



of the capital cost and ACE approved for the instant transmission assets are as under-
:

(₹ in lakh)

Assets	Admitted Capital Cost as on 1.4.2014/ COD	Additional Capitalisation approved by the Commission					Total Capital Cost as on 31.3.2019
		2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-I	10066.78	1550.82	-	-	-	-	11617.60
Asset-II	15142.59	3695.26	254.86	-	-	-	19092.71
Asset-III	17763.77	554.87	121.72	575.25	-	-	19015.61
Asset-IV	118832.05	6876.17	3044.39	962.67	294.81	892.35	130902.44
Total	161805.19	12677.12	3420.97	1537.92	294.81	892.35	180628.36

Debt-Equity ratio

33. The debt-equity ratio has been considered in accordance with Regulation 19(1), (3) and (5) of the 2014 Tariff Regulations. The debt and equity allowed for individual assets for determination of tariff for the period ending on 31.3.2014 has been combined and considered for deciding opening debt and equity of the project as on 1.4.2014. The debt-equity ratio of 70:30 has been considered for ACE allowed during 2014-19 in accordance to Regulation 19(3) of the 2014 Tariff Regulations.

34. The details of the debt-equity ratio as on 1.4.2014 and on 31.3.2019 for the transmission assets is considered for the purpose of computation of tariff for the 2014-19 tariff period is as under:-

Funding	Capital cost as on 1.4.2014 (₹ in lakh)	(%)	Capital cost as on 31.3.2019 (₹ in lakh)	(%)
Asset-I				
Debt	7046.75	70.00	8132.32	70.00
Equity	3020.03	30.00	3485.28	30.00
Total	10066.78	100.00	11617.60	100.00
Asset-II				
Debt	10599.81	70.00	13364.90	70.00
Equity	4542.78	30.00	5727.81	30.00
Total	15142.59	100.00	19092.71	100.00
Asset-III				
Debt	12434.64	70.00	13310.93	70.00
Equity	5329.13	30.00	5704.68	30.00



Funding	Capital cost as on 1.4.2014 (₹ in lakh)	(%)	Capital cost as on 31.3.2019 (₹ in lakh)	(%)
Total	17763.77	100.00	19015.61	100.00
Asset-IV				
Debt	83182.44	70.00	91631.71	70.00
Equity	35649.62	30.00	39270.73	30.00
Total	118832.05	100.00	130902.44	100.00

Interest on Loan (IoL)

35. The Petitioner has claimed the weighted average rate of IoL based on its actual loan portfolio and rate of interest. Accordingly, IoL has been calculated based on actual interest rate submitted by the Petitioner, in accordance with the Regulation 26 of the 2014 Tariff Regulations. IoL allowed is as under:-

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

36. The details of IoL allowed are as follows:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I					
Gross Normative Loan	7046.75	8132.32	8132.32	8132.32	8132.32
Cumulative Repayments up to Previous Year	360.62	783.55	1247.32	1711.10	2174.88
Net Loan-Opening	6686.13	7348.77	6885.00	6421.22	5957.44
Additions	1085.57	0.00	0.00	0.00	0.00
Repayment during the year	422.93	463.78	463.78	463.78	463.78
Net Loan-Closing	7348.77	6885.00	6421.22	5957.44	5493.66
Average Loan	7017.45	7116.89	6653.11	6189.33	5725.55
Weighted Average Rate of Interest on Loan (%)	9.1680	9.0834	8.9786	8.7687	8.7042
Interest on Loan	643.36	646.45	597.35	542.72	498.36
Asset-II					
Gross Normative Loan	10599.81	13186.50	13364.90	13364.90	13364.90
Cumulative Repayments up to Previous Year	97.80	965.24	1933.72	2908.93	3884.14
Net Loan-Opening	10502.01	12221.25	11431.17	10455.97	9480.76



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Additions	2586.68	178.40	0.00	0.00	0.00
Repayment during the year	867.44	968.48	975.21	975.21	975.21
Net Loan-Closing	12221.25	11431.17	10455.97	9480.76	8505.55
Average Loan	11361.63	11826.21	10943.57	9968.36	8993.15
Weighted Average Rate of Interest on Loan (%)	7.7828	7.8536	7.8335	7.7826	7.7295
Interest on Loan	884.25	928.78	857.27	775.80	695.13
Asset-III					
Gross Normative Loan	12434.64	12823.05	12908.25	13310.93	13310.93
Cumulative Repayments up to Previous Year	0.00	737.05	1702.17	2685.70	3684.41
Net Loan-Opening	12434.64	12086.00	11206.08	10625.23	9626.52
Additions	388.41	85.20	402.68	0.00	0.00
Repayment during the year	737.05	965.13	983.52	998.71	998.71
Net Loan-Closing	12086.00	11206.08	10625.23	9626.52	8627.81
Average Loan	12260.32	11646.04	10915.65	10125.87	9127.16
Weighted Average Rate of Interest on Loan (%)	7.5385	7.5577	7.5384	7.4834	7.3953
Interest on Loan	719.14*	880.17	822.87	757.76	674.98
Asset-IV					
Gross Normative Loan	83182.44	87995.75	90126.83	90800.70	91007.06
Cumulative Repayments up to Previous Year	0.00	2661.60	9354.88	16152.97	22984.27
Net Loan-Opening	83182.44	85334.15	80771.95	74647.72	68022.80
Additions	4813.32	2131.07	673.87	206.37	624.65
Repayment during the year	2661.60	6693.27	6798.10	6831.29	6862.63
Net Loan-Closing	85334.15	80771.95	74647.72	68022.80	61784.81
Average Loan	84258.29	83053.05	77709.84	71335.26	64903.80
Weighted Average Rate of Interest on Loan (%)	8.4750	8.4294	8.3739	8.2550	8.1772
Interest on Loan	2954.18*	7000.88	6507.31	5888.70	5307.34

*on pro-rata basis

37. Interest on loan earlier approved (vide different orders for the four assets) while allowing tariff for 2014-19 tariff period, IoL claimed by the Petitioner in this petition and that allowed in the instant order after true up are as under:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I					
Approved vide order dated 23.2.2016 in Petition No. 417/TT/2014	610.63	621.93	612.65	570.15	527.91



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner	643.27	646.10	596.62	541.64	496.93
Allowed after true-up in this order	643.36	646.45	597.35	542.72	498.36
Asset-II					
Approved vide order dated 10.7.2017 in Petition No. 182/TT/2016	884.28	931.38	862.03	785.06	705.11
Claimed by the Petitioner	884.01	927.81	855.33	772.91	691.31
Allowed after true-up in this order	884.25	928.78	857.27	775.80	695.13
Asset-III					
Approved vide order dated 30.12.2015 in Petition No. 161/TT/2015	719.03	896.15	838.13	758.90	676.02
Claimed by the Petitioner	719.02	879.65	821.93	756.43	673.26
Allowed after true-up in this order	719.14	880.17	822.87	757.76	674.98
Asset-IV					
Approved vide order dated 29.12.2016 in Petition No. 245/TT/2014	2975.17	7101.09	6764.64	6243.40	5613.74
Claimed by the Petitioner	2954.13	7000.41	6506.19	5887.00	5305.08
Allowed after true-up in this order	2954.18	7000.88	6507.31	5888.70	5307.34

38. The difference in IoL approved in the previous orders and IoL allowed after true-up for Assets-I and II is on account of higher ACE approved and change in the weighted average rate of interest which is computed based on actual loan portfolio and rate of interest. The difference in IoL approved in the previous order and IoL allowed after true-up for Asset-III is on account of change in the weighted average rate of interest which is computed based on actual loan portfolio and rate of interest. The difference in IoL approved in the previous order and IoL allowed after true-up for Asset-IV is on account of lower ACE approved and change in the weighted average rate of interest which is computed based on actual loan portfolio and rate of interest.



Return on Equity (RoE)

39. The Petitioner is entitled to RoE for the instant 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. The Petitioner has also claimed additional RoE of 0.5% for the transmission assets since the subject transmission assets/ project were put into commercial operation within the timeline specified in the Tariff Regulations for grant of additional RoE of 0.5%. The effective tax rate claimed by the Petitioner and grossed up RoE claimed by the Petitioner considering base rate of RoE 16% is as under:-

Year	Claimed effective tax rate (in %)	Grossed up RoE (Base Rate/1-t) (in %)
2014-15	21.018	20.258
2015-16	21.382	20.352
2016-17	21.338	20.340
2017-18	21.337	20.340
2018-19	21.549	20.395

2. The Commission vide order dated 27.4.2020 in Petition No. 274/TT/2019 arrived at the effective tax rate based on the notified MAT rates for the Petitioner. The relevant portion of the order dated 27.4.2020 is as under:-

“26. We are conscious that the entities covered under MAT regime are paying Income Tax as per MAT rate notified for respective financial year under IT Act, 1961, which is levied on the book profit of the entity computed as per the Section 115JB of the IT Act, 1961. The Section 115JB(2) defines book profit as net profit in the statement of Profit & Loss prepared in accordance with Schedule-III of the Companies Act, 2013, subject to some additions and deductions as mentioned in the IT Act, 1961. Since the Petitioner has been paying income tax on income computed under Section 115JB of the IT Act, 1961 as per the MAT rates of the respective financial year, the notified MAT rate for respective financial year shall be considered as effective tax rate for the purpose of grossing up of RoE for truing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations. Interest imposed on any additional income tax demand as per the Assessment Order of the Income Tax authorities shall be considered on actual payment. However, penalty (for default on the part of the Assessee) if any imposed shall not be taken into account for the purpose of grossing up of rate of return on equity. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long term transmission customers/ DICs as the case may be on year to year basis.



27. Accordingly, following effective tax rates based on notified MAT rates are considered for the purpose of grossing up of rate of return on equity:

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

”

40. The same MAT rates as considered in order dated 27.04.2020 in Petition No. 274/TT/2019 are considered for the purpose of grossing up of rate of RoE for truing up of the tariff of the 2014-19 period in terms of the provisions of the 2014 Tariff Regulations.

Year	Notified MAT rates (inclusive of surcharge & cess) (in %)	Base rate of RoE (in %)	Grossed up RoE (Base Rate/1-t) (in %)	Base rate of RoE including additional RoE (in %)	Grossed up RoE (Base Rate including additional RoE/1-t) (in %)
2014-15	20.961	15.50	19.611	16.00	20.243
2015-16	21.342	15.50	19.705	16.00	20.341
2016-17	21.342	15.50	19.705	16.00	20.341
2017-18	21.342	15.50	19.705	16.00	20.341
2018-19	21.549	15.50	19.758	16.00	20.395

41. Additional RoE of 0.5% was allowed for Assets-I, II and IV for completing them within the timeline specified in the applicable Tariff Regulations.

42. The Petitioner claimed additional RoE of 0.5% for Asset-III in Petition No.161/TT/2015 for having achieved its COD within the timeline specified in the 2014 Tariff Regulations. However, the Commission vide order dated 30.12.2015 in Petition



No. 161/TT/2015 disallowed the additional RoE as the Petitioner did not submit the certificate from the RPC/NPC as mandated under Regulation 24(2)(iii) of the 2014 Tariff Regulations. The relevant extracts of the order dated 30.12.2015 in Petition No. 161/TT/2015 is reproduced hereunder:-

“24. Regulation 24(2)(iii) of the 2014 Tariff Regulations mandates the Petitioner to submit a certificate from Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid. The Petitioner has not submitted such certificate.

25. Therefore it is not evident from the submissions that the transmission asset will benefit the system operation in the Southern Region and therefore we have not considered the submissions made by the Petitioner and have accordingly not allowed additional RoE of 0.5% in accordance with proviso (iii) to Regulation 24(2) of 2014 Tariff Regulations.”

43. In the instant petition, the Petitioner has claimed additional RoE of 0.5% in respect of Asset-III. In response to the query with regard to the above issue, the Petitioner vide affidavit dated 24.12.2019 has submitted that as per Regulation 24(2)(iii) of the 2014 Tariff Regulations, the only condition is that the project should be completed within the timelines specified in the Regulations and in the instant project, all the elements of the project were put into commercial operation within the timeframe specified in the Tariff Regulations. The Petitioner has further submitted that the same is also consistent with the principle laid down by APTEL in the judgement dated 10.5.2012 in Appeal No. 155 of 2011. Therefore, certification from Regional Power Committee/ National Power Committee is required if only a particular element of the transmission project is completed within the specified timeline. The Petitioner has further submitted that in the instant case, the entire project was put into commercial operation within the specified timeline and hence qualifies for additional RoE according to the Petitioner.

44. We have considered the submissions of the Petitioner. Asset-III is a 765 kV S/C transmission line and the qualifying timeline specified in the 2014 Tariff Regulations for grant of additional RoE of 0.5% is 36 months. The Investment Approval of the instant project was accorded on 4.8.2011 and Asset-III was put into commercial operation on 21.6.2014 and accordingly it was completed within the qualifying time limit of 36 months. However, the Petitioner has not submitted the RPC/NPC certificate stating that early completion of Asset-III has benefitted the regional/national grid as required under Regulation 24(2)(iii) of the 2014 Tariff Regulations, which provides as under:-

“(iii) additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid.”

45. Therefore, we are not inclined to reconsider decision of the Commission to grant additional RoE of 0.5% for Asset-III. The matter was already decided vide order dated 30.12.2015 in Petition No. 161/TT/2015 and it is incorrect on part of the Petitioner to re-agitate the same issue.

46. With regard to additional RoE for Asset-III, the Petitioner has further contended that as the whole project is completed within the timelines specified in the Tariff Regulations, Asset-III is also eligible for additional RoE of 0.5% as per the APTEL's judgement dated 10.5.2012 in Appeal No. 155 of 2011. We note that the said judgement of APTEL is based on the 2009 Tariff Regulations where there was no provision for grant of additional RoE of 0.5% for early commissioning of individual assets or elements in a project. We are of the view that the said judgement is not applicable to the instant Asset-III as it was put into into commercial during the 2014-19 period and the same is covered under provisions of the 2014 Tariff Regulations. We have considered base rate of RoE as 15.50%. Additional RoE is allowed for Assets-I,



II and IV and no additional RoE is allowed for Asset-III. The RoE for Assets-III and IV is considered on pro-rata basis as their COD is 21.6.2014 and 1.11.2014. The RoE is trued up on the basis of the MAT rate applicable in the respective years and is allowed as under:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I					
Opening Equity	3020.03	3485.28	3485.28	3485.28	3485.28
Additions	465.25	0.00	0.00	0.00	0.00
Closing Equity	3485.28	3485.28	3485.28	3485.28	3485.28
Average Equity	3252.66	3485.28	3485.28	3485.28	3485.28
Return on Equity (Base Rate) (%)	16.000	16.000	16.000	16.000	16.000
MAT Rate for respective year (%)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (%)	20.243	20.341	20.341	20.341	20.395
Return on Equity	658.44	708.95	708.95	708.95	710.82
Asset-II					
Opening Equity	4542.78	5651.36	5727.81	5727.81	5727.81
Additions	1108.58	76.46	0.00	0.00	0.00
Closing Equity	5651.36	5727.81	5727.81	5727.81	5727.81
Average Equity	5097.07	5689.58	5727.81	5727.81	5727.81
Return on Equity (Base Rate) (%)	16.000	16.000	16.000	16.000	16.000
MAT Rate for respective year (%)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (%)	20.243	20.341	20.341	20.341	20.395
Return on Equity	1031.80	1157.33	1165.10	1165.10	1168.18
Asset-III					
Opening Equity	5329.13	5495.59	5532.11	5704.68	5704.68
Additions	166.46	36.52	172.58	0.00	0.00
Closing Equity	5495.59	5532.11	5704.68	5704.68	5704.68
Average Equity	5412.36	5513.85	5618.40	5704.68	5704.68
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (%)	19.610	19.705	19.705	19.705	19.758
Return on Equity	825.85*	1086.53	1107.13	1124.13	1127.10
Asset-IV					
Opening Equity	35649.62	37712.47	38625.78	38914.58	39003.03
Additions	2062.85	913.32	288.80	88.44	267.71
Closing Equity	37712.47	38625.78	38914.58	39003.03	39270.73
Average Equity	36681.04	38169.12	38770.18	38958.81	39136.88
Return on Equity (Base Rate) (%)	16.000	16.000	16.000	16.000	16.000
MAT Rate for respective year (%)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (%)	20.243	20.341	20.341	20.341	20.395



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	3071.86*	7764.03	7886.29	7924.66	7981.91

*On pro-rata basis

47. Return on equity earlier approved (vide different orders for the four assets) while allowing tariff for 2014-19 tariff period, RoE claimed by the Petitioner in this petition and that allowed in the instant order after true up are as under:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I					
Approved vide order dated 23.2.2016 in Petition No. 417/TT/2014	627.75	674.61	705.07	705.07	705.07
Claimed by the Petitioner	658.92	709.29	708.94	708.94	710.82
Allowed after true-up in this order	658.44	708.95	708.95	708.95	710.82
Asset-II					
Approved vide order dated 10.7.2017 in Petition No. 182/TT/2016	1031.80	1151.51	1159.01	1159.01	1159.01
Claimed by the Petitioner	1032.56	1157.89	1165.10	1165.10	1168.19
Allowed after true-up in this order	1031.80	1157.33	1165.10	1165.10	1168.18
Asset-III					
Approved vide order dated 30.12.2015 in Petition No. 161/TT/2015	825.69	1098.19	1118.69	1118.69	1118.69
Claimed by the Petitioner	853.12	1122.12	1142.84	1160.39	1163.47
Allowed after true-up in this order	825.85	1086.53	1107.13	1124.13	1127.10
Asset-IV					
Approved vide order dated 29.12.2016 in Petition No. 245/TT/2014	3094.03	7796.26	8057.74	8157.41	8157.41
Claimed by the Petitioner	3074.13	7767.80	7886.24	7924.61	7981.96
Allowed after true-up in this order	3071.86	7764.03	7886.29	7924.66	7981.91

48. The difference in RoE approved in previous order and RoE allowed after true-up for Assets-I and II is due to increase in equity on account of higher ACE approved



and change in the applicable MAT rate for the purpose of grossing up of base rate of RoE. The difference in RoE approved in the previous order and RoE allowed after true-up for Asset-III is due to change in the applicable MAT rate for the purpose of grossing up of base rate of RoE. The difference in RoE approved in the previous order and RoE allowed after true-up for Asset-IV is due to decrease in equity on account of lower ACE approved and change in the applicable MAT rate for the purpose of grossing up of base rate of RoE.

Depreciation

49. The Petitioner's claim towards depreciation in this petition was found to be higher than the depreciation allowed vide order dated 23.2.2016 for Asset-I, order dated 10.7.2017 for Asset-II, order dated 30.12.2015 for Asset-III and order dated 29.12.2016 for Asset-IV. The Petitioner was directed to submit the reasons for the same.

50. In response, the Petitioner vide affidavit dated 25.2.2020 has submitted as under:-

"....., it is submitted that the depreciation @ 15 % on account of IT equipment has been provided under Appendix-II of the Tariff Regulations, 2014. Further, clause 3 of the Regulation 27 of Tariff Regulations 2014 provides NIL salvage value for IT equipment. Similar provisions have been provided in Tariff Regulations, 2019.

It is submitted that during the truing up for 2009-14 block in petition 417/TT/2014 and capital cost of IT equipment was included in the substation cost inadvertently and therefore depreciation for IT equipment was allowed based on substation rate of depreciation i.e. 5.28% by the Hon'ble Commission. Accordingly, in order to avoid the revision of transmission tariff pertaining to 2009-14 block, depreciation of IT equipment upto 31.03.2014 has been considered @ 5.28% of corresponding capital cost in line with earlier approved order.

*...
Depreciation on account of IT equipment w.e.f 01.04.2014 has been claimed @15% based on the above provisions in the Tariff Regulation..."*

51. The Petitioner has submitted that during the truing up of the tariff of the 2009-14 period, the capital cost of the IT equipment was considered as part of the sub-



station cost inadvertently and to avoid revision of tariff of the 2009-14 block, it requested to consider depreciation of IT Equipment upto 31.3.2014 as 5.28%. The Petitioner has further submitted that the depreciation rate for IT Equipment in the 2014 Tariff Regulations and in the 2019 Tariff Regulations is 15% and the salvage value for IT Equipment is NIL.

52. We have considered the submissions of the Petitioner. Similar issue had come up in Petition No. 19/TT/2020 wherein the Commission vide order dated 9.5.2020 decided as under:

“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 upto 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 upto 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.”

53.



54. In line with the above decision, the depreciation has been worked out as per the methodology provided in the Regulation 27 of the 2014 Tariff Regulations. The depreciation for Assets-III and IV is considered on pro-rata basis as on their COD as on 21.6.2014 and 1.11.2014 respectively. The depreciation allowed is as under:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I					
Opening Gross Block	10066.78	11617.60	11617.60	11617.60	11617.60
Additional Capitalisation	1550.82	0.00	0.00	0.00	0.00
Closing Gross Block	11617.60	11617.60	11617.60	11617.60	11617.60
Average Gross Block	10842.19	11617.60	11617.60	11617.60	11617.60
Average Gross Block (90% depreciable assets)	10820.99	11575.19	11575.19	11575.19	11575.19
Average Gross Block (100% depreciable assets)	21.21	42.41	42.41	42.41	42.41
Freehold Land	2149.14	2154.68	2154.68	2154.68	2154.68
Rate of Depreciation (%)	3.90	3.99	3.99	3.99	3.99
Balance useful life of the asset	27	26	25	24	23
Elapsed life	1	2	3	4	5
Depreciable Value (excluding IT equipment and software) - 90%	7804.67	8478.46	8478.46	8478.46	8478.46
Depreciable value of IT equipment and software - 100%	21.21	42.41	42.41	42.41	42.41
Depreciation during the year	422.93	463.78	463.78	463.78	463.78
Cumulative Depreciation upto PY	360.62	783.55	1247.32	1711.10	2174.88
Total Cumulative Depreciation	783.55	1247.32	1711.10	2174.88	2638.66
Remaining Depreciable Value Total	7042.32	7273.55	6809.77	6345.99	5882.21
Asset-II					
Opening Gross Block	15142.59	18837.85	19092.71	19092.71	19092.71
Additional Capitalisation	3695.26	254.86	0.00	0.00	0.00
Closing Gross Block	18837.85	19092.71	19092.71	19092.71	19092.71
Average Gross Block	16990.22	18965.28	19092.71	19092.71	19092.71
Average Gross Block (90% depreciable assets)	16926.61	18838.06	18965.49	18965.49	18965.49
Average Gross Block (100% depreciable assets)	63.61	127.22	127.22	127.22	127.22
Freehold Land	0.00	0.00	0.00	0.00	0.00
Rate of Depreciation (%)	5.11	5.11	5.11	5.11	5.11
Balance useful life of the asset	25	24	23	22	21



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Elapsed life	0	1	2	3	4
Depreciable Value (excluding IT equipment and software) - 90%	15233.95	16954.25	17068.94	17068.94	17068.94
Depreciable value of IT equipment and software - 100%	63.61	127.22	127.22	127.22	127.22
Depreciation during the year	867.44	968.48	975.21	975.21	975.21
Cumulative Depreciation upto PY	97.80	965.24	1933.72	2908.93	3884.14
Total Cumulative Depreciation	965.24	1933.72	2908.93	3884.14	4859.35
Remaining Depreciable Value Total	14332.32	15147.75	14287.23	13312.02	12336.81
Asset-III					
Opening Gross Block	17763.77	18318.64	18440.36	19015.61	19015.61
Additional Capitalisation	554.87	121.72	575.25	0.00	0.00
Closing Gross Block	18318.64	18440.36	19015.61	19015.61	19015.61
Average Gross Block	18041.21	18379.50	18727.99	19015.61	19015.61
Average Gross Block (90% depreciable assets)	17985.59	18323.22	18671.70	18959.32	18959.32
Average Gross Block (100% depreciable assets)	55.61	56.28	56.29	56.29	56.29
Freehold Land	0.00	0.00	0.00	0.00	0.00
Rate of Depreciation (%)	5.25	5.25	5.25	5.25	5.25
Balance useful life of the asset	34	33	32	31	30
Elapsed life	0	1	2	3	4
Depreciable Value (excluding IT equipment and software) - 90%	16187.03	16490.90	16804.53	17063.39	17063.39
Depreciable value of IT equipment and software - 100%	55.61	56.28	56.29	56.29	56.29
Depreciation during the year	737.05*	965.13	983.52	998.71	998.71
Cumulative Depreciation upto PY	0.00	737.05	1702.17	2685.70	3684.41
Total Cumulative Depreciation	737.05	1702.17	2685.70	3684.41	4683.12
Remaining Depreciable Value Total	15505.60	14845.00	14175.12	13435.27	12436.56
Asset-IV					
Opening Gross Block	118832.05	125708.22	128752.61	129715.28	130010.09
Additional Capitalisation	6876.17	3044.39	962.67	294.81	892.35
Closing Gross Block	125708.22	128752.61	129715.28	130010.09	130902.44
Average Gross Block	122270.14	127230.42	129233.95	129862.69	130456.27
Average Gross Block (90% depreciable assets)	122197.03	127156.53	129159.72	129788.46	130382.04
Average Gross Block (100% depreciable assets)	73.10	73.89	74.23	74.23	74.23
Freehold Land	0.00	0.00	0.00	0.00	0.00



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Rate of Depreciation (%)	5.26	5.26	5.26	5.26	5.26
Balance useful life of the asset	34	33	32	31	30
Elapsed life	0	1	2	3	4
Depreciable Value (excluding IT equipment and software) - 90%	109977.33	114440.88	116243.74	116809.61	117343.83
Depreciable value of IT equipment and software - 100%	73.10	73.89	74.23	74.23	74.23
Depreciation during the year	2661.60*	6693.27	6798.10	6831.29	6862.63
Cumulative Depreciation upto PY	0.00	2661.60	9354.88	16152.97	22984.27
Total Cumulative Depreciation	2661.60	9354.88	16152.97	22984.27	29846.90
Remaining Depreciable Value Total	107388.83	105159.89	100165.00	93899.57	87571.16

*on pro-rata basis

55. Depreciation earlier approved (vide different orders for the four assets) while allowing tariff for 2014-19 tariff period, depreciation claimed by the Petitioner in this petition and that allowed in the instant order after true up are as under:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I					
Approved vide order dated 23.2.2016 in Petition No. 417/TT/2014	396.54	437.48	463.97	463.97	463.97
Claimed by the Petitioner	424.98	467.91	467.91	467.91	467.91
Allowed after true-up in this order	422.93	463.78	463.78	463.78	463.78
Asset-II					
Approved vide order dated 10.7.2017 in Petition No. 182/TT/2016	866.75	967.58	974.11	974.11	974.11
Claimed by the Petitioner	873.60	980.84	987.57	987.57	987.57
Allowed after true-up in this order	867.44	968.48	975.21	975.21	975.21
Asset-III					
Approved vide order dated 30.12.2015 in Petition No. 161/TT/2015	736.93	980.31	998.71	998.71	998.71
Claimed by the Petitioner	741.26	970.59	989.01	1004.19	1004.19
Allowed after true-up in this order	737.05	965.13	983.52	998.71	998.71



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-IV					
Approved vide order dated 29.12.2016 in Petition No. 245/TT/2014	2680.82	6753.86	6980.24	7066.89	7066.89
Claimed by the Petitioner	2664.54	6700.46	6805.31	6838.51	6869.85
Allowed after true-up in this order	2661.60	6693.27	6798.10	6831.29	6862.63

56. The difference in depreciation approved in the previous order and depreciation allowed after true-up for Assets-I and II is on account of higher ACE approved. The difference in depreciation approved in the previous order and depreciation allowed after true-up for Asset-IV is on account of lower ACE approved.

Operation & Maintenance Expenses (O&M Expenses)

57. The O&M Expenses for Assets-III and IV is considered on pro-rata basis on their COD as on 21.6.2014 and 1.11.2014 respectively. The O&M Expenses for the instant assets claimed by the Petitioner are as under:-

O&M Expenses	2014-15 (pro-rata)*	2015-16	2016-17	2017-18	2018-19
Asset-I					
400 kV Sub-station					
No. of bays	4	4	4	4	4
Norms (₹ lakh/Bay)	60.3	62.3	64.37	66.51	68.71
Transmission line					
D/C Bundled(with four or more sub-conductors) (km)	7.5	7.5	7.5	7.5	7.5
Norms (₹ lakh/km)	1.062	1.097	1.133	1.171	1.21
Total O&M Expense (₹ in lakh)	249.17	257.43	265.98	274.82	283.92
Asset-II					
765 kV Sub-station					
No. of bays	4	4	4	4	4
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.2
400 kV Sub-station					
No. of bays	2	2	2	2	2
Norms (₹ lakh/Bay)	60.3	62.3	64.37	66.51	68.71
Total O&M Expense (₹ in lakh)	458.28	473.48	489.22	505.46	522.22



O&M Expenses	2014-15 (pro-rata)*	2015-16	2016-17	2017-18	2018-19
Asset-III					
765 kV Sub-station					
No. of bays	2	2	2	2	2
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.2
Transmission line					
D/C Bundled(with four or more sub-conductors) (km)	118.472	118.472	118.472	118.472	118.472
Norms (₹ lakh/km)	1.062	1.097	1.133	1.171	1.21
Total O&M Expense (₹ in lakh)	187.23	248.72	256.89	265.48	274.26
Asset-IV					
765 kV Sub-station					
No. of bays	4	4	4	4	4
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.2
Transmission line					
D/C Bundled(with four or more sub-conductors) (km)	302.203	302.203	302.203	302.203	302.203
Norms (₹ lakh/km)	1.062	1.097	1.133	1.171	1.21
Total O&M Expense (₹ in lakh)	272.47	680.40	702.88	726.32	750.47

*The O&M Expenses for Assets-III and IV is considered on pro-rata basis on their COD as on 21.6.2014 and 1.11.2014 respectively.

58. O&M expenses earlier approved (vide different orders for the four assets) while allowing tariff for 2014-19 tariff period, O&M expenses claimed by the Petitioner in this petition and that allowed in the instant order after true up are as under:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I					
Approved vide order dated 23.2.2016 in Petition No. 417/TT/2014	249.17	257.43	265.98	274.82	283.92
Claimed by the Petitioner	249.17	257.43	265.98	274.82	283.92
Allowed after true-up in this order	249.17	257.43	265.98	274.82	283.92
Asset-II					
Approved vide order dated 10.7.2017 in Petition No. 182/TT/2016	458.28	473.48	489.22	505.46	522.22
Claimed by the Petitioner	458.28	473.48	489.22	505.46	522.22
Allowed after true-up in this order	458.28	473.48	489.22	505.46	522.22
Asset-III					
Approved vide order dated 30.12.2015 in Petition No.	187.23	248.72	256.89	265.48	274.26



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
161/TT/2015					
Claimed by the Petitioner	187.24	248.72	256.89	265.48	274.26
Allowed after true-up in this order	187.23	248.72	256.89	265.48	274.26
Asset-IV					
Approved vide order dated 29.12.2016 in Petition No. 245/TT/2014	274.42	680.40	702.88	726.32	750.47
Claimed by the Petitioner	272.47	680.40	702.88	726.32	750.47
Allowed after true-up in this order	272.47	680.40	702.88	726.32	750.47

Interest on Working Capital (IWC)

59. IWC has been worked out as per the methodology provided under Regulation 28 of the 2014 Tariff Regulations. IWC for Assets-III and IV is considered on pro-rata basis on their COD as on 21.6.2014 and 1.11.2014 respectively. Accordingly, IWC is allowed as under:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I					
O & M Expenses	20.76	21.45	22.16	22.90	23.66
Maintenance Spares	37.37	38.61	39.90	41.22	42.59
Receivables	337.89	355.45	348.58	340.82	335.18
Total Working Capital	396.03	415.52	410.64	404.95	401.42
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	53.46	56.09	55.44	54.67	54.19
Asset-II					
O & M Expenses	38.19	39.46	40.77	42.12	43.52
Maintenance Spares	68.74	71.02	73.38	75.82	78.33
Receivables	555.19	604.09	597.14	586.10	575.82
Total Working Capital	662.13	714.57	711.29	704.04	697.67
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	89.39	96.47	96.02	95.05	94.19
Asset-III					
O & M Expenses	20.05	20.73	21.41	22.12	22.86
Maintenance Spares	36.10	37.31	38.53	39.82	41.14
Receivables	542.39	543.63	541.94	537.84	525.78
Total Working Capital	598.54	601.66	601.89	599.79	589.78
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Interest on Working Capital	62.87*	81.22	81.25	80.97	79.62
Asset-IV					
O & M Expenses	54.88	56.70	58.57	60.53	62.54
Maintenance Spares	98.79	102.06	105.43	108.95	112.57
Receivables	3696.39	3778.35	3736.86	3647.72	3567.94
Total Working Capital	3850.06	3937.11	3900.87	3817.19	3743.05
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	215.02*	531.51	526.62	515.32	505.31

*On pro-rata basis

60. Interest on working capital earlier approved (vide different orders for the four assets) while allowing tariff for 2014-19 tariff period, IWC claimed by the Petitioner in this petition and that allowed in the instant order after true up are as under:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I					
Approved vide order dated 23.2.2016 in Petition No. 417/TT/2014	51.40	54.13	55.70	55.21	54.74
Claimed by the Petitioner	53.52	56.19	55.52	54.74	54.26
Allowed after true-up in this order	53.46	56.09	55.44	54.67	54.19
Asset-II					
Approved vide order dated 10.7.2017 in Petition No. 182/TT/2016	89.37	96.37	95.97	95.09	94.18
Claimed by the Petitioner	89.54	96.74	96.26	95.26	94.38
Allowed after true-up in this order	89.39	96.47	96.02	95.05	94.19
Asset-III					
Approved vide order dated 30.12.2015 in Petition No. 161/TT/2015	62.86	82.21	82.22	80.87	79.45
Claimed by the Petitioner	63.59	82.16	82.18	81.90	80.54
Allowed after true-up in this order	62.87	81.22	81.25	80.97	79.62
Asset-IV					
Approved vide order dated 29.12.2016 in Petition No. 245/TT/2014	216.57	535.95	540.68	534.27	521.11
Claimed by the Petitioner	215.14	531.75	526.76	515.45	505.43



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed after true-up in this order	215.02	531.51	526.62	515.32	505.31

61. The difference in IWC approved in the previous order and IWC allowed after true-up is on account of change in receivables and AFC approved for each of the assets.

Annual Fixed Charges approved for the 2014-19 tariff period

62. The detailed computation of the various components of the trued up annual fixed charges for the instant transmission assets for the tariff period 2014-19 is summarised below:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I					
Depreciation	422.93	463.78	463.78	463.78	463.78
Interest on Loan	643.36	646.45	597.35	542.72	498.36
Return on Equity	658.44	708.95	708.95	708.95	710.82
Interest on Working Capital	53.46	56.09	55.44	54.67	54.19
O & M Expenses	249.17	257.43	265.98	274.82	283.92
Total	2027.35	2132.70	2091.49	2044.93	2011.07
Asset-II					
Depreciation	867.44	968.48	975.21	975.21	975.21
Interest on Loan	884.25	928.78	857.27	775.80	695.13
Return on Equity	1031.80	1157.33	1165.10	1165.10	1168.18
Interest on Working Capital	89.39	96.47	96.02	95.05	94.19
O & M Expenses	458.28	473.48	489.22	505.46	522.22
Total	3331.16	3624.53	3582.82	3516.61	3454.92
Asset-III					
Depreciation	737.05*	965.13	983.52	998.71	998.71
Interest on Loan	719.14*	880.17	822.87	757.76	674.98
Return on Equity	825.85*	1086.53	1107.13	1124.13	1127.10
Interest on Working Capital	62.87*	81.22	81.25	80.97	79.62
O & M Expenses	187.23*	248.72	256.89	265.48	274.26
Total	2532.14*	3261.77	3251.67	3227.06	3154.68
Asset-IV					
Depreciation	2661.60*	6693.27	6798.10	6831.29	6862.63
Interest on Loan	2954.18*	7000.88	6507.31	5888.70	5307.34
Return on Equity	3071.86*	7764.03	7886.29	7924.66	7981.91
Interest on Working Capital	215.02*	531.51	526.62	515.32	505.31



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	272.47*	680.40	702.88	726.32	750.47
Total	9175.14*	22670.09	22421.19	21886.30	21407.66

*On pro-rata basis

Determination Of Annual Fixed Charges For The 2019-24 Tariff Period

63. The Petitioner has claimed combined tariff for Assets-I, II, III and IV for the 2019-24 period as the instant assets achieved COD prior to 1.4.2019. Accordingly, as per proviso (i) of Regulation 8(1) of the 2019 Tariff Regulations, single tariff for the Combined Asset has been allowed for the 2019-24 tariff period.

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

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	9360.12	9367.16	9328.48	9322.14	9322.14
Interest on Loan	6389.88	5600.32	4827.44	4273.24	3750.48
Return on Equity	10185.21	10192.73	10192.73	10192.73	10192.73
Interest on Working Capital	504.37	497.85	489.78	485.69	481.13
O&M Expenses	2624.03	2715.03	2810.53	2910.60	3011.95
Total	29063.61	28373.09	27648.96	27184.40	26758.43

65. The Petitioner has claimed the following IWC for the Combined Asset for the 2019-24 tariff period:-

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses	218.67	226.25	234.21	242.55	251.00
Maintenance Spares	393.60	407.25	421.58	436.59	451.79
Receivables	3573.4	3498.05	3408.78	3351.5	3289.97
Total Working Capital	4185.67	4131.55	4064.57	4030.64	3992.76
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	504.37	497.85	489.78	485.69	481.13

Effective Date of Commercial Operation (“E-COD”)

66. The Petitioner has stated that E-COD of the Combined Asset works out to be 14.8.2014. Based on the trued up capital cost and actual COD of the transmission



assets, the E-COD has been worked out as 14.8.2014 as claimed by the Petitioner.

The working on E-COD is as under:-

Asset	Trued-up Capital Cost as on 31.3.2019 (₹ in lakh)	COD	No. of days from COD of Asset from COD of Project	Weight of cost	Weighted days
Asset-I	11617.60	1.4.2013	579	6.43%	37.24
Asset-II	19092.71	13.2.2014	261	10.57%	27.59
Asset-III	19015.61	21.6.2014	133	10.53%	14.00
Asset-IV	130902.44	1.11.2014	0	72.47%	0
Total	180628.36			100.00%	78.83
Effective COD – 14.8.2014					

Weighted Average Life of the Project

67. The life as defined under Regulations 33 of the 2019 Tariff Regulations has been considered for determination of Weighted Average Life. The Combined Asset may have multiple elements (i.e. land, building, transmission line, sub-station and PLCC) and each element may have different span of life. Therefore, the concept of Weighted Average Life (WAL) has been used as the useful life of the project as whole.

68. The Weighted Average Life (WAL) has been determined based on the admitted capital cost of individual elements as on 31.3.2019 and their respective life as stipulated in the 2019 Tariff Regulations. The element-wise life is provided in the 2014 Tariff Regulations prevailing at the time of actual COD of the individual assets has been ignored for this purpose. The life as provided in the 2019 Tariff Regulations has been considered for determination of WAL. Accordingly, the Weighted Average Life (WAL) of the Combined Asset has been worked out as 32 years as shown below:-

Particulars	Combined Cost (₹ in lakh) (a)	Life as per 2019 Regulation (Years) (b)	Weight (a) x (b)
Land – Freehold	2154.68	0.00	0.00
Land – Leasehold	0.00	25.00	0.00



Particulars	Combined Cost (₹ in lakh) (a)	Life as per 2019 Regulation (Years) (b)	Weight (a) x (b)
Building Civil Works & Colony	5377.51	25.00	134437.75
Transmission Line	137260.80	35.00	4804128.00
Sub Station	35077.79	25.00	876944.75
PLCC	457.43	15.00	6861.45
IT Equipment (Incl. Software)	300.15	6.67	2001.00
Total	180628.36	0	5824372.95
WAL=Total Weight/ Capital cost of the project		32	

69. 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 the previous tariff period is required to be done. Accordingly, WAL has been used to determine the remaining useful life as on 31.3.2019 to be 28 years.

Capital Cost as on 1.4.2019

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

“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 combined capital cost of ₹180628.36 lakh as on 31.3.2019 for the transmission project vide Auditor's Certificate dated 30.7.2019 for Assets-I, II and III and Auditor's Certificate dated 13.8.2019 for Asset-IV. The same has been considered as the opening capital cost as on 1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

Additional Capital Expenditure ("ACE")

72. Regulations 24 and 25 of the 2019 Tariff Regulations provide as under:-

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

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

- (a) Undischarged liabilities recognized to be payable at a future date;*
- (b) Works deferred for execution;*
- (c) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23 of these regulations;*
- (d) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority or order or decree of any court of law;*
- (e) Change in law or compliance of any existing law; and*
- (f) Force Majeure events:*

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

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

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



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

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

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

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

26. Additional Capitalisation beyond the original scope

(1) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts beyond the original scope, may be admitted by the Commission, subject to prudence check:

- (a) Liabilities to meet award of arbitration or for compliance of order or directions of any statutory authority, or order or decree of any court of law;
- (b) Change in law or compliance of any existing law;
- (c) Force Majeure events;
- (d) Need for higher security and safety of the plant as advised or directed by appropriate Indian Government Instrumentality or statutory authorities responsible for national or internal security;
- (e) Deferred works relating to ash pond or ash handling system in addition to the original scope of work, on case to case basis:
Provided also that if any expenditure has been claimed under Renovation and Modernisation (R&M) or repairs and maintenance under O&M expenses, the same shall not be claimed under this Regulation;
- (f) Usage of water from sewage treatment plant in thermal generating station.

(2) In case of de-capitalisation of assets of a generating company or the transmission licensee, as the case may be, the original cost of such asset as on the date of decapitalisation shall be deducted from the value of gross fixed asset and corresponding loan as well as equity shall be deducted from



outstanding loan and the equity respectively in the year such de-capitalisation takes place with corresponding adjustments in cumulative depreciation and cumulative repayment of loan, duly taking into consideration the year in which it was capitalised.

27. Additional Capitalisation on account of Renovation and Modernisation

(1) The generating company or the transmission licensee, as the case may be, intending to undertake renovation and modernization (R&M) of the generating station or unit thereof or transmission system or element thereof for the purpose of extension of life beyond the originally recognised useful life for the purpose of tariff, shall file a petition before the Commission for approval of the proposal with a Detailed Project Report giving complete scope, justification, cost-benefit analysis, estimated life extension from a reference date, financial package, phasing of expenditure, schedule of completion, reference price level, estimated completion cost including foreign exchange component, if any, and any other information considered to be relevant by the generating company or the transmission licensee:

Provided that the generating company making the applications for renovation and modernization (R&M) shall not be eligible for Special Allowance under Regulation 28 of these regulations;

Provided further that the generating company or the transmission licensee intending to undertake renovation and modernization (R&M) shall be required to obtain the consent of the beneficiaries or the longterm customers, as the case may be, for such renovation and modernization (R&M) and submit the same along with the petition.

(2) Where the generating company or the transmission licensee, as the case may be, makes an application for approval of its proposal for renovation and modernisation (R&M), approval may be granted after due consideration of reasonableness of the proposed cost estimates, financing plan, schedule of completion, interest during construction, use of efficient technology, cost-benefit analysis, expected duration of life extension, consent of the beneficiaries or long term customers, if obtained, and such other factors as may be considered relevant by the Commission.

(3) In case of gas/ liquid fuel based open/ combined cycle thermal generating station after 25 years of operation from date of commercial operation, any ACE which has become necessary for renovation of gas turbines/steam turbine or ACE necessary due to obsolescence or non-availability of spares for efficient operation of the stations shall be allowed:

Provided that any expenditure included in the renovation and modernisation (R&M) on consumables and cost of components and spares which is generally covered in the O&M expenses during the major overhaul of gas turbine shall be suitably deducted from the expenditure to be allowed after prudence check.

(4) After completion of the renovation and modernisation (R&M), the generating company or the transmission licensee, as the case may be, shall file a petition for determination of tariff. Expenditure incurred or projected to be incurred and admitted by the Commission after prudence check, and after deducting the accumulated depreciation already recovered from the admitted project cost, shall form the basis for determination of tariff."

73. The Petitioner has claimed ACE of ₹266.99 lakh during 2019-24 period for the Combined Asset under Regulation 25(1)(d) of the 2019 Tariff Regulations. The Petitioner has claimed ACE on account of undischarged liability towards final payment/ withheld payment due to compensation for works executed within the cut-off date as under:-

(₹ in lakh)

Expenditure	Free hold Land	Building & Civil Works	Sub-station	Transmission Line	PLCC/ Communication system	IT Equip. incl. software	Total
Capital Cost as on 1.4.2019	2154.68	5377.51	35077.79	137260.80	457.43	300.15	180628.36
ACE for 2019-20	0.00	0.00	266.99	0.00	0.00	0.00	266.99
Capital Cost as on 31.3.2024	2154.68	5377.51	35344.78	137260.80	457.43	300.15	180895.35

74. The Petitioner vide affidavit dated 25.2.2020 has submitted the package-wise break-up of the works for which payments were discharged after the cut-off date. The total capital expenditure as on 31.3.2024 is within the apportioned approved cost (RCE). Therefore, ACE claimed by the Petitioner has been allowed for the purpose of determination of transmission tariff for 2019-24 period. Accordingly, the capital cost considered for the tariff period 2019-24 is as under:-

(₹ in lakh)

Asset	Capital Cost as on 1.4.2019	Admitted ACE	Total Capital Cost as on 31.3.2024
		2019-20	
Combined Asset	180628.36	266.99	180895.35

Debt-Equity ratio

75. Regulation 18 of the 2019 Tariff Regulations provides as under:-

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



Provided that:

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

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

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

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

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

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

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 as may be admitted by the Commission as ACE 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.”

76. The details of the debt-equity ratio considered for the purpose of tariff for 2019-24 period is as under:-

Particulars	Capital Cost as on 1.4.2019 (₹ in lakh)	%	Capital Cost as on 31.3.2024 (₹ in lakh)	%
Debt	126439.85	70.00	126626.75	70.00
Equity	54188.51	30.00	54268.61	30.00
Total	180628.36	100.00	180895.35	100.00



Return on Equity (“RoE”)

77. Regulations 30 and 31 of the 2019 Tariff Regulations provide as under:-

“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.

(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.”

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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	54188.51	54268.61	54268.61	54268.61	54268.61
Additions	80.10	0.00	0.00	0.00	0.00
Closing Equity	54268.61	54268.61	54268.61	54268.61	54268.61
Average Equity	54228.56	54268.61	54268.61	54268.61	54268.61
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (%)	18.782	18.782	18.782	18.782	18.782
Return on Equity	10184.94	10192.46	10192.46	10192.46	10192.46

Interest on Loan (“IoL”)

79. Regulation 32 of the 2019 Tariff Regulations provides as under:-



“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.”

80. 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 2019-24 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up. Therefore, IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed is as under:-

	(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	126439.85	126626.75	126626.75	126626.75	126626.75



(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Cumulative Repayments upto Previous Year	42028.02	51388.14	60755.30	70122.46	79489.62
Net Loan-Opening	84411.83	75238.61	65871.45	56504.29	47137.12
Additions	186.89	0.00	0.00	0.00	0.00
Repayment during the year	9360.11	9367.16	9367.16	9367.16	9367.16
Net Loan-Closing	75238.61	65871.45	56504.29	47137.12	37769.96
Average Loan	79825.22	70555.03	61187.87	51820.70	42453.54
Weighted Average Rate of Interest on Loan (%)	8.0179	7.9522	7.9039	8.2572	8.8394
Interest on Loan	6400.33	5610.69	4836.25	4278.96	3752.65

Depreciation

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

"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 or 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 therefor transmission system or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the decapitalized asset during its useful services.”

82. IT equipment has been taken as a part of the Gross Block and depreciated using weighted average rate of depreciation (WAROD). The salvage value of IT equipment has been considered as nil, i.e. IT asset has been considered as 100 percent 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 worked out for the Combined Asset is as under:-

	(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation					
Opening Gross Block	180628.36	180895.35	180895.35	180895.35	180895.35
Additional Capitalisation	266.99	0.00	0.00	0.00	0.00



(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Closing Gross Block	180895.35	180895.35	180895.35	180895.35	180895.35
Average Gross Block	180761.86	180895.35	180895.35	180895.35	180895.35
Average Gross Block (90% depreciable assets)	180461.71	180595.20	180595.20	180595.20	180595.20
Average Gross Block (100% depreciable assets)	300.15	300.15	300.15	300.15	300.15
Freehold Land	2154.68	2154.68	2154.68	2154.68	2154.68
Rate of Depreciation (%)	5.18	5.18	5.18	5.18	5.18
Balance useful life of the asset	28	27	26	25	24
Elapsed life	4	5	6	7	8
Depreciable Value (excluding IT equipment and software) - 90%	160476.32	160596.47	160596.47	160596.47	160596.47
Depreciable value of IT equipment and software - 100%	300.15	300.15	300.15	300.15	300.15
Depreciation during the year	9360.11	9367.16	9367.16	9367.16	9367.16
Cumulative Depreciation upto PY	42028.02	51388.14	60755.30	70122.46	79621.58
Total Cumulative Depreciation	51388.14	60755.30	70122.46	79489.62	88988.74
Remaining Depreciable Value Total	109388.34	100141.32	90774.16	81407.00	71907.88

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

83. Regulation 35(3)(a) of the 2019 Tariff Regulations provides as under:-

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<i>Norms for sub-station Bays (₹ Lakh per bay)</i>					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
<i>Norms for Transformers (₹ Lakh per MVA)</i>					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
<i>Norms for AC and HVDC lines (₹ Lakh per km)</i>					



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

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

Provided further that:

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;*
- ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;*
- iii. the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);*
- iv. the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ±800 kV,*



Bishwanath-Agra HVDC bi-pole scheme;

- v. *the O&M expenses of ±800 kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme; and*
- vi. *the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years.*

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

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

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

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

84. The total O&M Expenses for the Combined Asset claimed by the Petitioner are as under:-

O&M Expenses	2019-20	2020-21	2021-22	2022-23	2023-24
765 kV Conventional					
No. of bays	10	10	10	10	10
Norms (₹ lakh/Bay)	45.01	46.6	48.23	49.93	51.68
400 kV Conventional					
No. of bays	6	6	6	6	6
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
765 kV Transformer					
Transformers (MVA)	3000	3000	3000	3000	3000
Norms (₹ lakh/MVA)	0.491	0.508	0.526	0.545	0.564
Transmission line					
S/C Bundled (with four sub-conductors) (km)	118.472	118.472	118.472	118.472	118.472
Norms (₹ lakh/km)	0.755	0.781	0.809	0.837	0.867
D/C Bundled (with four or more sub-conductors) (km)	309.703	309.703	309.703	309.703	309.703
Norms (₹ lakh/km)	1.322	1.368	1.416	1.466	1.517



O&M Expenses	2019-20	2020-21	2021-22	2022-23	2023-24
PLCC	9.1486	9.1486	9.1486	9.1486	9.1486
Total O&M expense (₹ in lakh)	2624.02	2715.03	2810.53	2910.59	3011.94

The O&M Expenses claimed by the Petitioner is as per the norms specified in the 2019 Tariff Regulations and hence, they are allowed as claimed.

Interest on Working Capital (“IWC”)

85. Regulations 34(1)(c), 34(3), 34(4) and 3(7) of the 2019 Tariff Regulations provide as under:-

“34. Interest on Working Capital

(1)...

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

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

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

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

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

“3. Definitions ...

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

86. The Petitioner has submitted that it has computed interest on working capital for the 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of interest on working capital as



12.05%. The interest on working capital is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of IWC considered is 12.05% (SBI 1-year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points). The components of the working capital and interest thereon for the Combined Asset have been worked out as under:-

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	218.67	226.25	234.21	242.55	251.00
Maintenance Spares	393.60	407.25	421.58	436.59	451.79
Receivables	3574.66	3499.32	3414.69	3357.82	3295.83
Total Working Capital	4186.94	4132.82	4070.48	4036.96	3998.61
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	504.53	498.01	490.49	486.45	481.83

Annual Fixed Charges allowed for the 2019-24 tariff period

87. The transmission charges allowed for the Combined Asset for the 2019-24 tariff period are as under:-

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	9360.11	9367.16	9367.16	9367.16	9367.16
Interest on Loan	6400.33	5610.69	4836.25	4278.96	3752.65
Return on Equity	10184.94	10192.46	10192.46	10192.46	10192.46
Interest on Working Capital	504.53	498.01	490.49	486.45	481.83
O & M Expenses	2624.02	2715.03	2810.53	2910.59	3011.94
Total	29073.93	28383.34	27696.90	27235.63	26806.05

Filing Fee and the Publication Expenses

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



Licence Fee & RLDC Fees and Charges

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

Goods and Services Tax

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

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

Security Expenses

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



between the estimated security expenses and actual security expenses as the audited accounts may be allowed to be recovered from the beneficiaries on a yearly basis.

93. We have considered the submissions of the Petitioner. We have considered the submissions of the Petitioner. We are of the view that the Petitioner should claim security expenses for all the transmission assets in one petition. The Commission observes that the Petitioner has already filed the Petition No.260/MP/2020 claiming consolidated security expenses on projected basis for the 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19. Therefore, security expenses will be dealt with in Petition No. 260/MP/2020 in accordance with the applicable provisions of the 2019 Tariff Regulations.

Capital Spares

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

Sharing of Transmission Charges

95. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time as provided in Regulation 43 of 2014 Tariff Regulations for the 2014-19 tariff period and Regulation 57 of the 2019 Tariff Regulations for the 2019-24 tariff period.

96. This order disposes of Petition No. 77/TT/2020.

sd/-
(I. S. Jha)
Member

sd/-
(P. K. Pujari)
Chairperson

