

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 515/TT/2019

Coram:

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

Date of Order: 31.1.2021

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 the 2014-19 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 of **Asset-1**: 2 nos. of 400 kV bays at Khammam (existing) Sub-station and 2 nos. of 400 kV bays at Nagarjunasagar Sub-station, **Asset-2**: LILO of Gazuwaka-Vijayawada 400 kV S/C line at Vemagiri Pooling-station along with associated bays, **Asset-3**: Establishment of 765/400 kV GIS Pooling-station at Vemagiri with 1x1500 MVA 765/400 kV Transformers, 2 nos. of 240 MVAR 765 kV and 1 no. of 80 MVAR 400 kV Bus Reactors at Vemagiri and 2nos. of 765 kV bays along with 1 no. of 240 MVAR switchable line reactor each at Vemagiri & Srikakulam Pooling-station each for both circuits of Srikakulam Pooling-station-Vemagiri Pooling-station 765 kV D/C line, **Asset-4**: 1x1500 MVA, 765/400 kV ICT-II along with associated bays and Equipment at Vemagiri Pooling-station under "Transmission system associated with Sub-station works Associated with System Strengthening in Southern Region for Import of Power from Eastern Region" in Southern Region.

And in the matter of:

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

....Petitioner

Vs

1. Karnataka Power Transmission Corporation Ltd.,
Kaveri Bhavan, Bangalore-560009.
2. Transmission Corporation of Andhra Pradesh Ltd.,
Vidyut Soudha, Hyderabad-500082.



3. Kerala State Electricity Board,
Vaidyuthi Bhavanam,
Pattom, Thiruvananthapuram-695004.
4. Tamil Nadu Generation and Distribution Corporation Ltd.,
(Formerly Tamil Nadu Electricity Board -TNEB).
NPKRR Maaligai, 800, Anna Salai, Chennai-600002.
5. Electricity Department,
Government of Pondicherry, Pondicherry-605001.
6. Eastern Power Distribution Company of Andhra Pradesh Ltd.,
APEPDCL, P&T Colony,
Seethmmadhara, Vishakhapatnam,
Andhra Pradesh
7. Southern Power Distribution Company of Andhra Pradesh Ltd.,
Tiruchanoor Road, Kesavayana Gunta, Tirupati-517501,
Chittoor District, Andhra Pradesh.
8. Central Power Distribution Company of Andhra Pradesh Ltd.,
Corporate Office, Mint Compound,
Hyderabad-500063.
9. Northern Power Distribution Company of Andhra Pradesh Ltd.,
Opp. NIT Petrol Pump, Chaitanyapuri, Kazipet,
Warangal-506004.
10. Bangalore Electricity Supply Company Ltd.,
Corporate Office, K. R. Circle,
Bangalore-560001.
11. Gulbarga Electricity Supply Company Ltd.,
Station Main Road, Gulbarga, Karnataka.
12. Hubli Electricity Supply Company Ltd.,
Navanagar, PB Road, Hubli, Karnataka.
13. MESCOM Corporate Office,
Paradigm Plaza, AB Shetty Circle,
Mangalore-575001, Karnataka.
14. Chamundeswari Electricity Supply Corporation Ltd.,
927, L J Avenue,
Ground Floor, New Kantharaj Urs Road,
Saraswatipuram, Mysore-570009,
Karnataka.
15. Electricity Department,
Government of Goa,



Vidyuti Bhawan, Panaji-403001.

16. Transmission Corporation of Telangana Ltd.,
Vidhyut Sudha, Khairatabad,
Hyderabad-500082.
17. Tamil Nadu Transmission Corporation,
NPKRR Maaligai, 800, Anna Salai,
Chennai-600002.
18. Vizag Transmission Ltd.,
Powergrid Corporation of India Ltd.,
Saudamini, Plot No-2 Sector-29,
Gurgaon-12200.

.... Respondents

For Petitioner : Shri S.S. Raju, PGCIL

For Respondents : Shri S. Vallinayagam, Advocate, TANGEDCO

ORDER

The instant petition has been filed by Power Grid Corporation of India Ltd. (hereinafter referred to as “the Petitioner”), a deemed transmission licensee, for truing up of transmission tariff of the 2014-19 tariff period 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 from 1.4.2019 to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of the following assets (hereinafter collectively referred to as “the transmission assets/ Combined Asset”) under “Transmission system associated with Sub-station works Associated with System Strengthening in Southern Region for Import of Power from Eastern Region” in Southern Region (hereinafter referred to as “the transmission system”):

Asset-1: 2 nos. of 400 kV bays at Khammam (existing) Sub-station and 2 nos. of 400 kV bays at Nagarjunasagar Sub-station;



Asset-2: LILO of Gazuwaka -Vijayawada 400 kV S/C line at Vemagiri Pooling-station along with associated bays;

Asset-3: Establishment of 765/400 kV GIS Pooling-station at Vemagiri with 1x1500 MVA 765/400 kV Transformers, 2 nos. of 240 MVAR 765 kV and 1 no. of 80 MVAR 400 kV Bus Reactors at Vemagiri and 2 nos. of 765 kV bays along with 1 no. of 240 MVAR switchable line reactor each at Vemagiri & Srikakulam Pooling-station each for both circuits of Srikakulam Pooling-station-Vemagiri Pooling-station 765 kV D/C line; and

Asset-4: 1x1500 MVA, 765/400 kV ICT-II along with associated bays and Equipment at Vemagiri Pooling-station

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

"1) Approve the trued-up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 10.2 and 11.0 above.

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

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

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

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

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

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

8) Allow the Initial spares claimed as project as a whole.

9) 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.



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

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

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

Background

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

a) The Investment Approval (IA) and expenditure sanction for the transmission system was accorded by the Board of Directors of the Petitioner on 11.11.2014 vide Memorandum No. C/CP/Import ER to SR dated 18.11.2014 with an estimated cost of ₹97242.00 lakh including an IDC of ₹5972.00 lakh based on August, 2014 price level. The Board of Directors of the Petitioner have accorded approval for Revised Cost Estimates (RCE) vide Memorandum No. C/CP/PA167-09-0P-RCE004 dated 21.9.2016 with an estimated cost of ₹116930 lakh including IDC of ₹8145 lakh based on February, 2016 price level.

b) The scope of the transmission system in Southern Region is as under:

Transmission Line:

i. LILO of Gazuwaka-Vijayawada 400 kV S/C line at Vemagiri Pooling station.

Sub-station:

i. Establishment of 765/400 kV GIS Pooling station at Vemagiri with 2x 1500 MVA 765/400 kV transformers.

ii. 2 nos. 765 kV bays each at Vemagiri Pooling station and Srikakulam Pooling station for terminating Srikakulam PP- Vemagiri-II Pooling station 765 kV D/C line being implemented under tariff based competitive bidding.

iii. 2 nos 400 kV bays at Khammam (existing) and Nagarjunasagar for terminating Khammam-Nagarjunasagar 400 kV D/C line being implemented under tariff based competitive bidding.

Reactive Compensation

i. 2 nos 240 MVAR, 765 kV Bus reactors at Vemagiri Pooling-station.

ii. 1 no 80 MVAR, 400 kV Bus reactor at Vemagiri Pooling-station.



iii.1 no 240 MVAR switchable line reactor at Vemagiri PS and Srikakulam PS
each for both circuits of Srikakulam PP-Vemagiri-II PS 765 kV D/C line

c) The transmission tariff of Asset-1 from COD to 31.3.2019 was determined vide order dated 23.5.2016 in Petition No. 270/TT/2015 and the transmission tariff for Assets-2, 3 and 4 was determined from COD to 31.3.2019 vide order dated 19.7.2018 in Petition No. 45/TT/2017.

d) The details of commercial operation of the assets covered in the instant petition are as follows:

Assets	SCOD	COD	Time Over-run	Nomenclature in Previous Orders
Asset-1	11.11.2017	4.1.2016	-	Asset-I in order dated 23.5.2016 in Petition No. 270/TT/2015
Asset-2		1.2.2017		Asset-I (A) (a) in order dated 19.7.2018 in Petition No. 45/TT/2017
Asset-3		1.2.2017		Asset-I (A) (b) in order dated 19.7.2018 in Petition No. 45/TT/2017
Asset-4		31.3.2017		Asset-I (B) in order dated 19.7.2018 in Petition No. 45/TT/2017

4. The complete scope of the work as per Investment Approval is covered in the instant petition.

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

6. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has also been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments/ objections have been received from the general public in response to the aforesaid notice published in the newspapers by the Petitioner. Tamil Nadu Generation and Distribution Company Ltd.



(TANGECO) i.e. Respondent No. 4, filed soft copy of its reply dated 17.7.2020. Learned counsel for TANGEDCO gave an undertaking with above reply dated 17.7.2020 that hard copy of the reply shall be filed after lifting of the lockdown by the State Government and Central Government. Accordingly, TANGEDCO has filed its reply vide affidavit dated 27.8.2020 and has raised issues like cost of assets not under use, restriction of IDC, IEDC, Initial Spares and additional RoE. The Petitioner vide affidavit dated 21.7.2020 has filed its rejoinder to the reply filed by TANGEDCO.

7. The hearing in this matter was held on 24.6.2020 through video conference and the order was reserved.

8. This order is issued considering the submissions made by the Petitioner in the petition dated 5.11.2019, Petitioner's vide affidavits dated 3.2.2020, 12.3.2020 and 13.7.2020, reply filed by TANGEDCO vide affidavit dated 27.8.2020 and the Petitioner's rejoinder filed vide affidavit dated 21.7.2020.

9. 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 OF THE 2014-19 TARIFF PERIOD

10. The details of the trued up transmission charges claimed by the Petitioner in respect of transmission assets are as under:

(₹ in lakh)

Particulars	Asset-1				Asset-2		
	2015-16 (Pro-rata for 88 days)	2016-17	2017-18	2018-19	2016-17 (Pro-rata for 59 days)	2017-18	2018-19
Depreciation	11.47	83.10	109.39	109.39	30.00	201.82	218.06
Interest on Loan	12.57	88.75	109.80	100.90	30.98	199.15	198.84
Return on Equity	12.80	95.76	126.60	126.95	33.39	224.55	243.26
Interest on working capital	4.16	20.38	22.66	22.95	3.11	20.35	21.33



Particulars	Asset-1				Asset-2		
	2015-16 (Pro-rata for 88 days)	2016-17	2017-18	2018-19	2016-17 (Pro-rata for 59 days)	2017-18	2018-19
O & M Expenses	59.92	257.48	266.04	274.84	20.08	128.34	132.60
Total	100.92	545.47	634.49	635.03	117.56	774.21	814.09

(₹ in lakh)

Particulars	Asset-3			Asset-4		
	2016-17 (Pro-rata for 59 days)	2017-18	2018-19	2016-17 Pro-rata for 1 day)	2017-18	2018-19
Depreciation	594.58	4141.91	4451.65	0.55	231.03	275.16
Interest on Loan	683.64	4493.03	4451.93	0.59	235.37	259.64
Return on Equity	711.87	4829.77	5227.54	0.63	267.01	318.86
Interest on working capital	52.69	353.04	369.54	0.06	23.83	26.71
O & M Expenses	178.00	1137.89	1175.66	0.40	149.95	154.93
Total	2220.78	14955.64	15676.32	2.23	907.19	1035.30

11. The details of trued up IWC claimed by the Petitioner in respect of transmission assets are as under:

(₹ in lakh)

Particulars	Asset-1				Asset-2		
	2015-16 (Pro-rata for 88 days)	2016-17	2017-18	2018-19	2016-17 (Pro-rata for 59 days)	2017-18	2018-19
O & M Expenses	20.77	21.46	22.17	22.90	10.35	10.70	11.05
Maintenance Spares	37.38	38.62	39.91	41.23	18.63	19.25	19.89
Receivables	69.95	90.91	105.75	105.84	121.21	129.04	135.68
Total	128.10	150.99	167.83	169.97	150.19	158.99	166.62
Rate of Interest (%)	13.50	13.50	13.50	13.50	12.80	12.80	12.80
Interest on Working Capital	4.16	20.38	22.66	22.95	3.11	20.35	21.33

(₹ in lakh)

Particulars	Asset-3			Asset-4		
	2016-17 (Pro-rata for 59 days)	2017-18	2018-19	2016-17 (Pro-rata for 1 day)	2017-18	2018-19
O & M Expenses	91.78	94.82	97.97	12.10	12.50	12.91



Maintenance Spares	165.20	170.68	176.35	21.77	22.49	23.24
Receivables	2289.82	2492.61	2612.72	135.48	151.20	172.55
Total	2546.80	2758.11	2887.04	169.35	186.19	208.70
Rate of Interest (%)	12.80	12.80	12.80	12.80	12.80	12.80
Interest on Working Capital	52.69	353.04	369.54	0.06	23.83	26.71

Capital Cost

12. The Commission vide order dated 23.5.2016 in Petition No. 270/TT/2015 approved the capital cost of ₹702.52 lakh for Asset-1 and vide order dated 19.7.2018 in Petition No. 45/TT/2017 has approved the capital cost of ₹3487.42 lakh, ₹69862.30 lakh and ₹3780.73 lakh for Assets-2, 3 and 4 respectively as on COD for determination of tariff of the 2014-19 period.

13. The Commission vide order dated 23.5.2016 in Petition No. 270/TT/2015 had restricted the estimated completion cost of Asset-1 to the Apportioned FR cost of ₹1899.94 lakh. The Commission in para 17 of the above order observed as under:

“17. The Commission has considered the petitioner’s and respondent’s submissions. We are of the view that, estimated completion cost is to be restricted to the approved apportioned FR cost in the absence of RCE. However, the petitioner is given the liberty to submit the RCE of the project at the time of truing up.”

14. The petitioner has submitted the approved RCE for Asset-1 in the instant true-up petition. The Commission vide order dated 19.7.2018 in Petition No. 45/TT/2017 had admitted the RCE for Assets-2, 3 and 4. The Petitioner vide Auditor’s Certificate dated 30.7.2019 has submitted the capital cost incurred up to COD, ACE up to 31.3.2019 and estimated ACE during the period from 1.4.2019 to 31.3.2020. The details of approved apportioned capital cost, capital cost as on COD, ACE incurred up to 31.3.2019 as claimed by the Petitioner for transmission assets are as under:

(₹ in lakh)

Assets	FR Apportioned Approved	RCE Apportioned Approved	Capital cost as on COD*	Additional Capitalisation (claimed)*				Total completion cost as on
				2015-16	2016-17	2017-18	2018-19	



	Capital cost	Capital cost						31.3.2019 (claimed)
Asset-1	1899.94	2465.44	715.39	395.54	1030.75	-	-	2141.68
Asset-2	3763.53	5628.59	3601.21	-	13.00	482.54	14.64	4111.39
Asset-3	84880.46	102284.39	71473.30	-	8205.42	7780.76	3241.44	90701.02
Asset-4	6698.17	6551.58	3944.84	-	0.00	1025.68	481.86	5452.38
Total	97242.10	116930.00	79734.74	395.54	9249.17	9289.08	3737.94	102406.47

**The capital cost figures shown in the table are as claimed by the Petitioner in the instant petition on accrual basis*

15. TANGEDCO in its reply has submitted that the Petitioner has included the cost of the following three assets not put to beneficial use, into the capital cost for truing up:

- a) 800 kV GIS Auxiliary bus module for spare transformer-2 Nos
- b) 800 kV GIS Auxiliary bus module for spare line and reactor-2 Nos.
- c) 400 kV GIS Auxiliary bus module for spare transformer-1 No.

16. TANGEDCO has submitted that assets which are not put into beneficial use cannot form part of the capital cost as per the Regulation 9(6) of the 2014 Tariff Regulations. In support of its contentions, it has further relied on Commission's order dated 22.8.2016 in Petition No. 416/TT/2014 and judgment of the Appellate Tribunal for Electricity (APTEL) dated 18.1.2018 in Appeal Nos. 198 of 2015 and 06 of 2016. It further submitted that in Petition No. 45/TT/2017, filed by the Petitioner for approval of transmission tariff for 2014-19 tariff period for the transmission assets, the Commission failed to consider the provisions under Regulation 9(6) of the 2014 Tariff Regulations and did not give any observation/ justification against the contention of TANGEDCO. The Petitioner cannot rely on the order dated 19.7.2018 in Petition No. 45/TT/2017 because APTEL vide judgment dated 18.1.2018 in Appeal No. 198 of 2015 and Appeal No. 6 of 2016 [PGCIL vs CERC & Ors] referring to its own judgment in Appeal No. 123 of 2011 dated 2.7.2012 held that the completeness/ intended use of the transmission system should be viewed in its entirety. The order passed by the

Commission in Petition No. 45/TT/2017 has to be read in view of the above mentioned APTEL judgments as the wrong committed in Petition No. 45/TT/2017 cannot be allowed to be perpetuated.

17. In response, the Petitioner in its rejoinder has submitted that the Gas Insulated Switchgear (GIS) at Maheshwaram is of one and a half breaker scheme. Unlike in Air Insulated Switchgear (AIS), the GIS modules for the complete diameter have to be installed to comply with one and half breaker scheme for connectivity with both the main buses 1 and 2. In case of GIS, even though the construction is modular, it does not mean that it can be charged module-wise in an installation. GIS being of compact design, the area requirement of GIS is very less as compared to AIS. However, the compact design has its own unique problems. As in the instant case, if only the bus connected with diameter, which is presently utilized for power flow, was charged and the remaining part of bus was not going to be charged, necessary end pieces would be required to insulate it from the other part which is difficult to plan for each instance. Each additional end piece would in turn require additional space, thereby increasing the land requirement and adversely impacting the benefits of GIS.

18. The Petitioner has further submitted that in case GIS is planned bay-wise, it would increase the requirement of end piece, extension piece etc. leading to adverse impact of the cost, in addition to the fact that whenever additional buses or bays are to be connected, the required HV Test would need to be done which would unnecessarily expose the existing GIS to harsh HV test. Each GIS equipment can only be exposed to HV test for a limited number of times. It would not be practical to carry out HV test every time a bay was added. Repeated opening for extension would increase the vulnerability of GIS and exposure to faults which may be caused due to



ingress of dust, moisture etc. In addition, each extension and HV test would require the shut-down of complete station which may not be practical each time.

19. The Petitioner has further submitted that the said 5 nos. of auxiliary bus are a part of GIS module. The Auxiliary bus module is an integral part of the Gas Insulated Sub-station and the same shall be used for all the parts of the ICT/ switching reactor installed and charged along with main bus-I and II in totality for sub-station. Every feeder in sub-station requires auxiliary supply for operation and future feeders shall be connected as and when they come. Accordingly, the cost of these bays is included in the cost of transmission assets. The Petitioner has submitted that it has not claimed the O&M Expenses for these bays in the petition. The Petitioner has also submitted that the issues pertaining to inclusion of auxiliary bus modules in cost of transmission assets have already been dealt with by the Commission vide order dated 19.7.2018 in Petition No. 45/TT/2017 which was issued after considering APTEL judgment dated 18.1.2018 in Appeal No 198 of 2015 and judgement dated 2.7.2012 in Appeal No 123 of 2011. TANGEDCO, having failed to file a review or an appeal against the said order, cannot now seek a modification in the instant petition.

20. We have considered the submissions of the Petitioner and TANGEDCO. TANGEDCO has contended that the cost of the 800 kV GIS Auxiliary bus bar module for spare transformer, for spare line and reactor and 400 kV SF6 GIS auxiliary bus bar module for spare transformer are not put to beneficial use. Therefore, these items may not be included under capital cost. On the other hand, the Petitioner has submitted that the GIS modules for the complete diameter have to be installed to comply with one and a half breaker scheme for connecting the main buses 1 and 2. Further, if the bus connected with diameter which is utilized for power flow is charged

and remaining part of bus is not to be charged, necessary end pieces shall be required to insulate it from other part which is difficult to plan for each instance.

21. We are of the view that GIS sub-station is a compact design in nature and if GIS is planned bay-wise it would increase the cost and repeated opening for extension of GIS module will increase the vulnerability of GIS for exposure to faults. Contention of TANGEDCO that these are assets not put to use is incorrect since these are put to use as spares as intended. In a similar case, the Commission in order dated 24.1.2021 in Petition No.136/TT/2020 held that “spare ICTs”, which have the approval of the RPC as ‘to be in use as a spare’. The relevant portion of the order dated 24.1.2021 is extracted hereunder:

22. BRPL’s second contention is that as per Regulation 7(1) of the 2009 Tariff Regulations and Regulation 9(6)(a) of the 2014 Tariff Regulations, the transmission assets which are spares and ‘not-in-use’ should not be granted tariff. BRPL has emphasized that the instant spare ICTs are ‘not-in-use’ and hence they should be removed from the capital cost and should not be serviced. In our view, this submission of BRPL is misconceived. It is pertinent to mention that these spare ICTs were discussed and agreed in the 14th NRPC meeting held on 19.9.2009 and in the 28th SCM of Northern Region held on 23.2.2010. Accordingly, these assets have been planned, approved and executed as “spare ICTs”. In our view, any asset that is set-up or developed as a standalone spare asset is expected to serve the intended purpose i.e. ‘to be in use as a spare’ and cannot be categorized as assets ‘not in use’ and should be serviced. In this background, we are not inclined to accept the contention of BRPL.”

22. Further, in our view, judgement of APTEL referred to by TANGEDCO is not applicable in the instant matter since those were in context of assets that were not put to use. Therefore, the cost of 800 kV GIS Auxiliary bus bar module for future extension such as spare transformer, spare line and reactor and 400 kV SF6 GIS auxiliary bus bar module for spare transformer needs to be considered in the capital cost. However, the Petitioner is directed to submit the utilization of these auxiliary bus bar module for spare transformer and reactors at the time of truing up of the tariff for the 2019-24 period.

Cost Over-run

23. The capital cost of the Asset-I was restricted to the FR cost in order dated 23.5.2016 in Petition No.270/TT/2015. The Petitioner has submitted approved RCE for Asset-I and the estimated completion cost including ACE is within RCE cost. Hence, there is no cost over-run in case of Asset-I.

24. The completion cost including the Additional Capital Expenditure in respect of the Asset-2, 3 and 4 is within the RCE approved apportioned capital cost. Therefore, there is no cost over-run in respect of the Assets-2, 3 and 4.

Time Over-run

25. As per IA, the transmission assets were scheduled to be executed within 36 months of the investment approval i.e. by 11.11.2017, against which Assets-1, 2 3 and 4 were put into commercial operation on 4.1.2016, 1.2.2017, 1.2.2017 and 31.3.2017 respectively. Therefore, there is no time over-run in any of the transmission assets.

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

26. The Petitioner has claimed Interest During Construction (IDC) for the transmission assets and has submitted the Auditor's Certificates in support of the same. The Petitioner has submitted the statement showing IDC claim, discharge of IDC liability as on COD and thereafter as under:

(₹ in lakh)



Assets	Total IDC as per Auditor Certificate	IDC discharged up to COD	IDC discharged during 2016-17	IDC discharged during 2017-18
Asset-1	12.87	0.00	12.87	0.00
Asset-2	143.24	29.45	0.00	113.79
Asset-3	3298.90	1687.90	50.14	1560.86
Asset-4	217.40	53.29	0.00	164.11

27. TANGEDCO has submitted that IDC and IEDC claimed by the Petitioner should be restricted based on the cost of three assets which need to be excluded. We have considered the submissions of the Petitioner and TANGEDCO. As we have already decided that the Auxiliary items cannot be excluded from the transmission assets and, therefore, the cost of those items also cannot be excluded.

28. The allowable IDC has been approved by considering the information submitted by the Petitioner for the individual assets separately on cash basis. The loan details submitted in Form-9C for 2014-19 tariff period and the IDC computation sheet have been considered for the purpose of IDC calculation on cash and accrual basis. The un-discharged IDC as on COD has been considered as Additional Capital Expenditure (ACE) during the year in which it has been discharged.

29. Accordingly, based on the information furnished by the Petitioner, IDC considered is summarized as under:-

(₹ in lakh)

Assets	IDC as per Auditor's Certificate	IDC Admissible	Computational difference in IDC	IDC Dis-charged as on COD	IDC Un-discharged as on COD	IDC Dis-charged in ACE	
						2016-17	2017-18
A	B	C	D=B-C	E	F=C-E	G	
Asset-1	12.87	12.68	0.19	0.00	12.68	12.68	0.00
Asset-2	143.24	141.52	1.72	29.45	112.08	0.00	112.08
Asset-3	3298.90	3298.63	0.78	1678.88	1610.75	50.14	1560.61
Asset-4	217.40	216.97	0.43	53.29	163.68	0.00	163.68

30. The Petitioner has also claimed IEDC of ₹39.77 lakh, ₹52.43 lakh, ₹1047.63 lakh and ₹76.75 lakh for Assets-1, 2, 3 and 4 respectively and has submitted



Auditor's certificate dated 30.7.2019 in support of the same. The Petitioner has also submitted that the entire IEDC has been discharged as on COD in respect of the transmission assets.

31. The IEDC claimed is within the estimated IEDC as indicated in the Abstract Cost Estimate, in respect of the transmission assets. Hence, the IEDC claimed by the Petitioner has been allowed.

Initial Spares

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

*“(d) Transmission System
Transmission line: 1.00%
Transmission sub-station (Green Field): 4.00%
Transmission sub-station (Brown Field): 6.00%
GIS Sub-station: 5.00%
Communication System: 3.5%”*

33. The Petitioner has claimed the following Initial Spares for the transmission assets and prayed to revise the Initial Spares allowed earlier in light of the judgement of APTEL dated 14.9.2019 in Appeal No.74 of 2017:

Assets	Plant & Machinery Cost up to cut-off date (excluding IDC and IEDC) (A) (₹ in lakh)	Initial Spares Claimed (B) (₹ in lakh)	Ceiling Limit (C) (in %)
Sub-station (GIS)			
Asset-1	1622.20	95.20	5.0
Asset-3	74859.99	3797.46	5.0
Asset-4	5158.23	166.50	5.0
Total	81640.42	4059.16	
Transmission Line			
Asset-2	4055.25	14.81	1.0

34. The Petitioner vide affidavit dated 13.7.2020 has submitted that the cost of Sub-station, IT equipment and PLCC (excluding IDC, IEDC, Land Cost and Cost of



Civil Works) has been considered for the purpose of claiming the Initial Spares as below:

Particulars	Total Cost as on 31.03.2019 as per Auditor Certificate	IDC & IEDC in Capital Cost	Net Cost as on 31.03.2019	Cost Considered for Initial Spares
a	b	C	d = b - c	e
Building and Civil Works	478.60	11.76	466.84	
Transmission Line	0.00	0.00	0.00	
Sub-Station	1507.24	37.05	1470.19	1622.20
PLCC/ Communication System	110.26	2.71	107.55	
I. T Equipment including software	45.58	1.12	44.46	
Total	2141.68	52.64	2089.04	1622.20

35. TANGEDCO in its reply has submitted that Regulation 13 of the 2014 Tariff Regulations clearly specifies that Initial Spares shall be capitalised as a percentage of the Plant and Machinery cost up to cut-off date, subject to the ceiling limit. The Petitioner has submitted that the Initial Spares for transmission line and sub-station (GIS) head for assets covered under the instant petition are marginally above the ceiling limit for individual asset but within the overall ceiling of the project for sub-station (GIS) as per Regulation 13 of Tariff Regulation 2014 and the same may be allowed as per APTEL judgement dated 14.9.2019 in Appeal No. 74 of 2017. TANGEDCO has submitted that the claim of the Initial Spares above the individual ceiling may be rejected. It has further submitted that the Commission vide order dated 21.4.2016 in Petition No. 53/TT/2015 has restricted the excess Initial Spares based on element-wise capital cost of the project. In order to support its contention, it also relied on the Commission's order dated 7.9.2016 in Petition No. 35/RP/2016. It further submitted that the order dated 14.9.2019 of the APTEL is *per incuriam* and is required to be read or clarified by a larger bench of Appellate Tribunal.



36. In response, the Petitioner vide its rejoinder dated 21.7.2020 has submitted that its claim is as per Regulation 13 of the 2014 Tariff Regulations and once the project has been executed, then, at the time of truing up, the plant and machinery cost corresponding to the transmission project shall form the basis for computation of the Initial Spares. Further, the issue is already settled in APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017.

37. We have considered the submissions of the Petitioner and of TANGEDCO. With regard to the submission of TANGEDCO regarding the judgment in Appeal No. 74 of 2017 being *per incuriam*, we would like to state that this Commission is bound by the orders of the APTEL. APTEL vide its judgement dated 14.9.2019 in Appeal No. 74 of 2017 observed that the Commission for the purpose of prudence check may restrict the Initial Spares to the cost of the individual asset and later at the time of truing up allow Initial Spares as per the ceiling limits on the overall project cost. The relevant portion of the said judgement is extracted here under:

"18.13. We do not agree with this methodology of restricting initial spares asset / element wise as adopted by the Central Commission. The Central Commission to have a prudence check on the initial spares, being restricted based on the individual asset wise cost initially, but subsequently ought to have allowed as per the ceiling limits on the overall project cost basis during the true- up."

38. As per APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017, the Initial Spares are to be allowed as per the ceiling limits on the overall project cost. In the instant case, the transmission assets were put into commercial operation during the 2014-19 tariff period and, accordingly, the norms specified for the Initial Spares in the 2014 Tariff Regulations are applicable for computation of the allowable Initial Spares asset/ element wise. In the present case, though the transmission assets were put into commercial operation during the 2014-19 tariff period, the overall project cost of the assets is arrived at only when all the transmission assets are combined



while claiming the tariff for the 2019-24 tariff period. Therefore, the Initial Spares are allowed on the basis of the cost of the individual assets in the 2014-19 tariff period and the Initial Spares are allowed on the basis of the overall project cost in the 2019-24 period when the transmission assets are combined and the overall project cost is arrived at. Accordingly, the details of Initial Spares allowed for the 2014-19 tariff period are as under:

Assets	Plant & Machinery cost up to cut-off date (excluding IDC and IEDC) (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Norms as per the 2014 Tariff Regulations (in %)	Initial Spares as per the norms of the 2014 Tariff Regulations (₹ in lakh)	Initial Spares allowed (₹ in lakh)
Sub-station (GIS)					
Asset-1	1474.37	95.20	5.0	72.59	72.59
Asset-3	74593.33	3797.46	5.0	3726.10	3726.10
Asset-4	4861.20	166.50	5.0	247.09	166.50
Transmission Line					
Asset-2	3605.65	14.81	1.0	36.27	14.81

Capital cost as on COD

39. Accordingly, the capital cost allowed as on COD is summarized as under:

Assets	Capital cost as on COD as per Auditor Certificate	Less: IDC as on COD due to		Excess Initial Spares	Capital cost considered as on COD
		Computational difference	Un-discharged		
		1	2		
Asset-1	715.39	0.19	12.68	22.61	679.91
Asset-2	3601.21	1.72	112.08	0.00	3487.42
Asset-3	71473.30	9.27	1610.75	71.36	69781.92
Asset-4	3944.84	0.43	163.68	0.00	3780.73

Additional Capital Expenditure (ACE)

40. The Petitioner has claimed the following ACE for the assets covered in the instant petition and has submitted the Auditor's Certificates in support of the same:

Assets	2015-16	2016-17		2017-18		2018-19
	ACE Claimed	ACE claimed	IDC Discharged	ACE claimed	IDC	ACE claimed



	vide Auditor's certificate	vide Auditor's certificate	(claimed)	vide Auditor's certificate	Discharged (claimed)	vide Auditor's certificate
Asset-1	395.54	1030.75	12.87	0.00	0.00	0.00
Asset-2	0.00	13.00	0.00	482.54	113.79	14.64
Asset-3	0.00	8205.42	50.14	7780.86	1560.86	3241.44
Asset-4	0.00	0.00	0.00	1025.68	164.11	481.86

41. The Petitioner vide affidavit dated 5.11.2019 has submitted that ACE incurred for the transmission assets is on account of balance and retention payments due to undischarged liability towards final payment/withheld payment due to contractual exigencies for works executed within the cut-off date. ACE for all the assets covered in the instant petition for the years 2015-16, 2016-17, 2017-18 and 2018-19 has been claimed under Regulation 14(1)(i) (un-discharged liabilities) and Regulation 14(1)(ii) (unexecuted works) of the 2014 Tariff Regulations.

42. The Petitioner has also submitted that ACE upto 31.3.2019 has been considered in the Auditor's certificate as per actuals, whereas the ACE claimed for the period from 1.4.2019 to 31.3.2020 is on estimated basis and may vary due to final claim/ reconciliation at the time of contract closing. The details for balance and retention payments incurred after cut-off date are as under:

(₹ in lakh)

Assets	Party Name	Particulars	Original Liability as on COD	Discharge			
				2015-16	2016-17	2017-18	2018-19
Asset-1	McNally Bharat Engineering	Building & Civil Works	156.85	156.85	0.00	0.00	0.00
	McNally Bharat Engineering	Sub-station	876.81	238.69	638.12	0.00	0.00
Asset-2	KPTL	Transmission Line	23.83	0.00	0.00	23.83	0.00
	EMC	Sub-station	305.71	0.00	13.00	292.71	0.00
Asset-3	EMC	Sub-station	997.20	0.00	0.00	393.74	603.46
	NHVS	Sub-station	6962.80	0.00	1518.00	2948.36	2224.68
	GE T&D	Sub-station	3892.33	0.00	3303.33	589.00	0.00
	CGIL	Sub-station	3877.76	0.00	3384.09	394.00	99.67
Asset-4	GE T&D	Sub-station	1507.54	0.00	0.00	1025.68	481.86



43. The cut-off date for Asset-1 is 31.3.2019 and that for Assets-2, 3 and 4 is 31.3.2020. It is observed that the total estimated completion cost including ACE from 2015-16 to 2018-19 period for Assets 1, 2, 3 and 4 is within the RCE approved apportioned cost.

44. The actual audited ACE claimed by the Petitioner up to 31.3.2019 is within the cut-off date. Therefore, the same has been considered for computation of total capital cost as on 31.3.2019. The un-discharged IDC as on COD has been allowed as ACE in its respective year of discharge. ACE claimed for the period 2015-16 to 2017-18 is allowed under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations. Accordingly, ACE allowed for the transmission assets is as follows:

(₹ in lakh)

Assets	2015-16	2016-17		2017-18		2018-19
	ACE Claimed vide Auditor's certificate	ACE claimed vide Auditor's certificate	IDC Discharged	ACE claimed vide Auditor's certificate	IDC Discharged	ACE claimed vide Auditor's certificate
Asset-1	395.54	1030.75	12.68	0.00	0.00	0.00
Asset-2	0.00	13.00	0.00	482.54	112.08	14.64
Asset-3	0.00	8205.42	50.14	7780.86	1560.61	3241.44
Asset-4	0.00	0.00	0.00	1025.68	163.68	481.86

Capital Cost for the tariff period 2014-19

45. Accordingly, the capital cost as on COD, ACE for the 2014-19 period and capital cost as on 31.3.2019 considered for the truing up of the tariff for the 2014-19 period, are as under:

(₹ in lakh)

Assets	Capital cost as on COD on cash basis	Additional Capital Expenditure(ACE) incurred				Total Capital cost as on 31.3.2019
		2015-16	2016-17	2017-18	2018-19	
Asset-1	679.91	395.54	1043.43	0.00	0.00	2118.87
Asset-2	3487.42	0.00	13.00	594.62	14.64	4109.67

Asset-3	69781.92	0.00	8255.55	9341.47	3241.44	90620.39
Asset-4	3780.73	0.00	0.00	1189.36	481.86	5451.95

Debt-Equity Ratio

46. The Petitioner has claimed debt-equity ratio of 70:30 as on COD and for Additional Capital Expenditure post-COD. For ACE in 2016-17 in Asset-3, the Petitioner has claimed debt-equity ratio of 83.24:16.76 as per Form 6. The details of the debt-equity ratio considered for capital cost as on COD and ACE during 2014-19 period as provided under Regulation 19 of the 2014 Tariff Regulations are summarised as follows:

Asset-1	As on COD		As on 31.3.2019	
	Amount (₹ in lakh)	(%)	Amount (₹ in lakh)	(%)
Debt	475.94	70.00	1483.22	70.00
Equity	203.97	30.00	635.65	30.00
Total	679.91	100.00	2118.87	100.00

Asset-2	As on COD		As on 31.3.2019	
	Amount (₹ in lakh)	(%)	Amount (₹ in lakh)	(%)
Debt	2441.19	70.00	2876.78	70.00
Equity	1046.23	30.00	1232.89	30.00
Total	3487.42	100.00	4109.67	100.00

Asset-3	As on COD		As on 31.3.2019	
	Amount (₹ in lakh)	(%)	Amount (₹ in lakh)	(%)
Debt	48847.35	70.00	64526.88	71.21
Equity	20934.57	30.00	26093.50	28.79
Total	69781.92	100.00	90620.39	100.00

Asset-4	As on COD		As on 31.3.2019	
	Amount (₹ in lakh)	(%)	Amount (₹ in lakh)	(%)
Debt	2646.51	70.00	3816.37	70.00
Equity	1134.22	30.00	1635.59	30.00
Total	3780.73	100.00	5451.95	100.00

Interest on Loan (IoL)



47. The Petitioner has claimed IoL based on actual interest rates for each year during the 2014-19 period. The Petitioner has submitted that the weighted average rate of IoL has been considered on the basis of the rates prevailing as on 1.4.2014 and has prayed to consider floating rate of interest applicable during 2014-19 period, if any, during the truing up of tariff.

48. We have considered the submissions made by the Petitioner. It is observed that the SBI loan with respect to transmission assets in the instant petition have been deployed with floating interest rates. Accordingly, factoring the impact of floating rate of interest, IoL has been worked out based on actual interest rate, in accordance with Regulation 26 of the 2014 Tariff Regulations.

49. The IoL has been worked out as detailed below:

- (i) Gross amount of loan, repayment of instalments 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.

50. The details of IoL approved for the transmission assets is as follows:

Particulars	(₹ in lakh)						
	Asset-1				Asset-2		
	2015-16 (Pro-rata for 88 days)	2016-17	2017-18	2018-19	2016-17 (Pro-rata for 59 days)	2017-18	2018-19
Gross Normative Loan	475.94	752.82	1483.22	1483.22	2441.19	2450.29	2866.53
Cumulative Repayments up to Previous Year	0.00	10.15	87.65	191.40	0.00	30.01	231.78
Net Loan-Opening	475.94	742.67	1395.57	1291.82	2441.19	2420.29	2634.75
Addition due to Additional Capitalization	276.88	730.40	0.00	0.00	9.10	416.24	10.25
Repayment during	10.15	77.50	103.75	103.75	30.01	201.78	217.97



the year							
Net Loan-Closing	742.67	1395.57	1291.82	1188.07	2420.29	2634.75	2427.04
Average Loan	609.30	1069.12	1343.69	1239.94	2430.74	2527.52	2530.89
Weighted Average Rate of Interest on Loan (%)	8.375	8.210	8.134	8.134	7.883	7.877	7.853
Interest on Loan	12.27	87.78	109.29	100.85	30.98	199.10	198.76

(₹ in lakh)

Particulars	Asset-3			Asset-4		
	2016-17 (Pro-rata for 59 days)	2017-18	2018-19	2016-17 (Pro-rata for 1 day)	2017-18	2018-19
Gross Normative Loan	48847.35	55718.84	62257.87	2646.51	2646.51	3479.06
Cumulative Repayments up to Previous Year	0.00	588.88	4695.15	0.00	0.55	231.57
Net Loan-Opening	48847.35	55129.96	57562.73	2646.51	2645.96	3247.50
Addition due to Additional Capitalization	6871.49	6539.03	2269.01	0.00	832.55	337.30
Repayment during the year	588.88	4106.27	4415.63	0.55	231.02	275.14
Net Loan-Closing	55129.96	57562.73	55416.11	2645.96	3247.50	3309.66
Average Loan	51988.66	56346.34	56489.42	2646.24	2946.73	3278.58
Weighted Average Rate of Interest on Loan (%)	8.127%	7.969%	7.881%	8.096	7.987	7.919
Interest on Loan	682.93	4490.27	4452.15	0.59	235.36	259.62

51. The details of IoL allowed vide order dated 23.5.2016 in Petition No. 270/TT/2015 for Asset-1 and order dated 19.7.2018 in Petition No. 45/TT/2017 for Assets-2, 3 and 4, IoL claimed by Petitioner in the instant petition and trued-up IoL allowed in the instant order are as under:

(₹ in lakh)

Particulars	Asset-1				Asset-2		
	2015-16 (Pro-rata for 88 days)	2016-17	2017-18	2018-19	2016-17 (Pro-rata for 59 days)	2017-18	2018-19
Allowed in earlier orders	14.73	92.57	100.00	92.18	32.05	215.14	216.75
Claimed by the Petitioner in the instant petition	12.57	88.75	109.80	100.90	30.98	199.15	198.84
Allowed after true-up in this	12.27	87.78	109.29	100.85	30.98	199.10	198.76



order							
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(₹ in lakh)

Particulars	Asset-3			Asset-4		
	2016-17 (Pro-rata for 59 days)	2017-18	2018-19	2016-17 (Pro-rata for 1 day)	2017-18	2018-19
Allowed vide order dated 19.7.2018 in Petition No. 45/TT/2017	669.25	4644.20	4787.31	0.59	238.45	264.02
Claimed by the Petitioner in the instant petition	683.64	4493.03	4451.93	0.59	235.37	259.64
Allowed after true-up in this order	682.93	4490.27	4452.15	0.59	235.36	259.62

Return on Equity (RoE)

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

Year	Claimed effective tax (%)	Grossed up RoE [Base Rate/(1-t)] (%)
2014-15	21.018	19.624
2015-16	21.382	19.624
2016-17	21.338	19.715
2017-18	21.337	19.704
2018-19	21.549	19.704

53. We have considered the submissions of the Petitioner. The Commission vide order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the effective tax rate based on the notified MAT rates for the Petitioner. 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) (in %)	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

”

54. The MAT rates considered above 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 tariff period in terms of the provisions of the 2014 Tariff Regulations.

Year	Notified MAT rates (inclusive of surcharge & cess) (in %)	Base rate of RoE (in %)	Grossed up RoE (Base Rate/1-t) (in %)
2014-15	20.961	15.50	19.610
2015-16	21.342	15.50	19.705
2016-17	21.342	15.50	19.705
2017-18	21.342	15.50	19.705
2018-19	21.549	15.50	19.758

Additional RoE

55. The Petitioner has claimed additional RoE for Assets-3 and 4. The Commission vide order dated 19.7.2018 in Petition No. 45/TT/2017 had allowed additional RoE for Assets-3 and 4.

56. TANGEDCO vide affidavit dated 27.8.2020 has submitted that Asset-3 comprises of 2 Nos. of 800 kV GIS Auxiliary bus module for spare transformer and 1 No. of 400 kV GIS Auxiliary bus module for spare transformer. As these 3 elements are redundant, the cost of these items be excluded from the capital cost in line with the directions of APTEL. It has prayed to restrict the RoE based on the restricted capital cost excluding the cost of the three redundant elements.

57. The Petitioner vide affidavit dated 21.7.2020 has submitted that the issue of Additional RoE has already been dealt by this Commission in the order dated 19.7.2018 in Petition No. 45/TT/2017 and the present case is also squarely covered by the said order.

58. We have considered the submissions of the Petitioner and of TANGEDCO. As observed by the Commission in order dated 19.7.2018 in Petition No. 45/TT/2017, all elements such as GIS Sub-station, transformers, Bus reactors, Line reactors and associated bays qualify for grant of additional RoE. Accordingly, additional RoE has been allowed for Assets-3 and 4.

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

(₹ in lakh)

Particulars	Asset-1				Asset-2		
	2015-16 (Pro-rata for 88 days)	2016-17	2017-18	2018-19	2016-17 (Pro-rata for 59 days)	2017-18	2018-19
Opening Equity	203.97	322.63	635.65	635.65	1046.23	1050.13	1228.50
Addition due to Additional Capitalization	118.66	313.02	0.00	0.00	3.90	178.38	4.39
Closing Equity	322.63	635.65	635.65	635.65	1050.13	1228.50	1232.89
Average Equity	263.30	479.14	635.65	635.65	1048.18	1139.31	1230.70
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500	15.500	15.500



Tax Rate applicable (%)	21.342	21.342	21.342	21.549	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax)	19.705	19.705	19.705	19.758	19.705	19.705	19.758
Return on Equity (Pre-tax)	12.47	94.42	125.26	125.59	33.39	224.50	243.16

(₹ in lakh)

Particulars	Asset-3			Asset-4		
	2016-17 (Pro-rata for 59 days)	2017-18	2018-19	2016-17 (Pro-rata of 1 day)	2017-18	2018-19
Opening Equity	20934.57	22318.63	25121.07	1134.22	1134.22	1491.03
Addition due to Additional Capitalization	1384.06	2802.44	972.43	0.00	356.81	144.56
Closing Equity	22318.63	25121.07	26093.50	1134.22	1491.03	1635.59
Average Equity	21626.60	23719.85	25607.29	1134.22	1312.62	1563.31
Return on Equity (Base Rate) (%)	16.000	16.000	16.000	16.000	16.000	16.000
Tax Rate applicable (%)	21.342	21.342	21.549	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax)	20.341	20.341	20.395	20.341	20.341	20.395
Return on Equity (Pre-tax)	711.08	4824.85	5222.61	0.63	267.00	318.84

60. The details of RoE allowed vide order dated 23.5.2016 in Petition No. 270/TT/2015 for Asset-1 and order dated 19.7.2018 in Petition No. 45/TT/2017 for Assets-2, 3 and 4, RoE claimed by Petitioner in the instant petition and trued-up RoE allowed in the instant order are as under:

(₹ in lakh)

Particulars	Asset-1				Asset-2		
	2015-16 (Pro-rata for 88 days)	2016-17	2017-18	2018-19	2016-17 (Pro-rata for 59 days)	2017-18	2018-19
Allowed in earlier orders	14.86	97.02	111.75	111.75	34.39	241.42	262.49
As claimed by the Petitioner in the instant petition	12.80	95.76	126.60	126.95	33.39	224.55	243.26
Allowed after true-up in this order	12.47	94.42	125.26	125.59	33.39	224.50	243.16



(₹ in lakh)

Particulars	Asset-3			Asset-4		
	2016-17 (Pro-rata for 59 days)	2017-18	2018-19	2016-17 (Pro-rata for 1 day)	2017-18	2018-19
Allowed vide order dated 19.7.2018 in Petition No. 45/TT/2017	719.63	5193.41	5725.58	0.63	265.73	315.20
Claimed by the Petitioner in the instant petition	711.87	4829.77	5227.54	0.63	267.01	318.86
Allowed after true-up in this order	711.08	4824.85	5222.61	0.63	267.00	318.84

Depreciation

61. The Petitioner's claim towards depreciation in this petition was found to be higher than the depreciation allowed for Asset-1 in order dated 23.5.2016 in Petition No. 270/TT/2015 and for Asset-3 in order dated 19.7.2018 in Petition No. 45/TT/2017. The Petitioner has neither given any justification for claiming higher depreciation than that was allowed earlier in order nor made any specific prayer for allowing higher depreciation in this petition.

62. The tariff from COD to 31.3.2019 was determined vide order dated 23.5.2016 in Petition 270/TT/2015 for Asset-1 and vide order dated 19.7.2018 in Petition No. 45/TT/2017 for Assets 2, 3 and 4. It is observed that the Petitioner did not claim any capital expenditure towards "IT Equipment" in the above said two petitions where tariff for the transmission assets for the 2014-19 period was determined even though there was a clear provision in the 2014 Tariff Regulations providing depreciation @15% for IT Equipment. 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" @ of 15% at the time of truing up of the tariff for 2014-19 tariff period.



63. Subsequently, it was identified that in Petition Nos. 270/TT/2015 and 45/TT/2017 during tariff determination of the transmission assets for 2014-19 tariff period, Petitioner submitted capital cost of IT equipment in Sub-station cost and therefore depreciation for IT equipment was allowed @5.28% of corresponding capital cost.

64. 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 up to 31.3.2019, admitted by the Commission after prudence check. We are of the view that scope of truing up exercise is restricted to truing up of the capital expenditure already admitted and apportionment or reapportionment of the capital expenditure cannot be allowed at the time of truing up. Therefore, we are not inclined to consider the Petitioner’s prayer for apportionment of capital expenditure towards IT Equipment and allowing depreciation @ 15% from 1.4.2014 onwards. Accordingly, the depreciation @ 5.28% has been considered for IT Equipment as part of the substation up to 31.3.2019 while truing up the capital expenditure for the 2014-19 period. During the 2019-24 tariff period, the IT Equipment has been considered separately and depreciation has been allowed @ 15% for the balance depreciable value of IT Equipment in accordance with Regulation 33 read with Sr. No. (p) of the Appendix-I (Depreciation Schedule) of the 2019 Tariff Regulations.”

65. In line with the above order of the Commission, WAROD has been worked out after taking into account the depreciation rate of assets as prescribed in the 2014 Tariff Regulations and the trued-up depreciation allowed is as under:

(₹ in lakh)

Particulars	Asset-1				Asset-2		
	2015-16 (Pro-rata 88 days)	2016-17	2017-18	2018-19	2016-17 (Pro-rata for 59 days)	2017-18	2018-19
Opening Gross Block	679.91	1075.45	2118.87	2118.87	3487.42	3500.42	4095.03
Additional Capitalisation	395.54	1043.43	0.00	0.00	13.00	594.62	14.64
Closing Gross Block	1075.45	2118.87	2118.87	2118.87	3500.42	4095.03	4109.67
Average Gross Block	877.68	1597.16	2118.87	2118.87	3493.92	3797.73	4102.35
Weighted Average Rate of Depreciation (%)	4.81	4.85	4.90	4.90	5.31	5.31	5.31
Balance useful life of the Asset	23	23	22	21	34	34	33
Elapsed life at the beginning of the year	0	0	1	2	0	0	1
Aggregated Depreciable Value	789.91	1437.44	1906.99	1906.99	3144.53	3417.95	3692.12
Depreciation During the Year	10.15	77.50	103.75	103.75	30.01	201.78	217.97
Aggregate Cumulative Depreciation	10.15	87.65	191.40	295.15	30.01	231.78	449.75
Remaining Aggregate Depreciable Value	779.76	1349.79	1715.58	1611.83	3114.52	3186.17	3242.37

(₹ in lakh)

Particulars	Asset-3			Asset-4		
	2016-17 (Pro-rata for 59 days)	2017-18	2018-19	2016-17 (Pro-rata for 1 day)	2017-18	2018-19
Opening Gross Block	69781.92	78037.47	87378.95	3780.73	3780.73	4970.09
Additional Capitalisation	8255.55	9341.47	3241.44	0.00	1189.36	481.86



Closing Gross Block	78037.47	87378.95	90620.39	3780.73	4970.09	5451.95
Average Gross Block	73909.69	82708.21	88999.67	3780.73	4375.41	5211.02
Weighted Average Rate of Depreciation (%)	4.93	4.96	4.96	5.28	5.28	5.28
Balance useful life of the Asset	24	24	23	25	25	24
Elapsed life at the beginning of the year	0	0	1	0	0	1
Aggregated Depreciable Value	64705.23	72623.90	78286.21	3402.66	3937.87	4689.92
Depreciation During the Year	588.88	4106.27	4415.63	0.55	231.02	275.14
Aggregate Cumulative Depreciation	588.88	4695.15	9110.77	0.55	231.57	506.71
Remaining Aggregate Depreciable Value	64116.35	67928.75	69175.43	3402.11	3706.30	4183.21

66. The details of depreciation allowed vide order dated 23.5.2016 in Petition No. 270/TT/2015 for Asset-1 and order dated 19.7.2018 in Petition No. 45/TT/2017 for Assets-2, 3 and 4, depreciation claimed by Petitioner in the instant petition and true-up depreciation allowed in the instant order are as under:

(₹ in lakh)

Particulars	Asset-1				Asset-2		
	2015-16 (Pro-rata for 88 days)	2016-17	2017-18	2018-19	2016-17 (Pro-rata for 59 days)	2017-18	2018-19
Allowed in earlier orders	12.35	80.70	93.05	93.05	31.06	217.94	236.92
Claimed by the Petitioner in the instant petition	11.47	83.10	109.39	109.39	30.00	201.82	218.06
Allowed after true-up in this order	10.15	77.50	103.75	103.75	30.01	201.78	217.97

(₹ in lakh)

Particulars	Asset-3			Asset-4		
	2016-17 (Pro-rata for 59 days)	2017-18	2018-19	2016-17 (Pro-rata for 1 day)	2017-18	2018-19
Allowed vide order dated 19.7.2018 in Petition No. 45/TT/2017	581.54	4202.97	4637.61	0.55	231.03	274.05
Claimed by the Petitioner in the instant petition	594.58	4141.91	4451.65	0.55	231.03	275.16
Allowed after true-up	588.88	4106.27	4415.63	0.55	231.02	275.14



Operation & Maintenance Expenses (O&M Expenses)

67. The details of the O&M Expenses claimed by the Petitioner for transmission assets and allowed under Regulation 29(3) of the 2014 Tariff Regulations for purpose of tariff are as under:

(₹ in lakh)

Asset-1				
Particulars	2015-16 (Pro-rata for 88 days)	2016-17	2017-18	2018-19
Sub-station Bays				
400 kV Bays (AIS) at Nagarjunasagar Sub-station-Nos.	2	2	2	2
400 kV Bays (AIS) at Khamman Sub-station-Nos.	2	2	2	2
Norm (₹ lakh/bay)				
400 kV Sub-station Bays (AIS)	62.300	64.370	66.510	68.710
Total Sub-station O&M Expenses	249.20	257.48	266.04	274.84
Total O&M Expenses				
	59.92	257.48	266.04	274.84

(₹ in lakh)

Asset-2			
Particulars	2016-17 (Pro-rata for 59 days)	2017-18	2018-19
Sub-station Bays			
400 kV Bays (GIS) at Vemagiri Pooling Station-Nos.	2	2	2
Norm (₹ lakh/bay)			
400 kV Sub-station Bays (GIS)	55.020	56.840	58.730
Total Sub-station O&M Expenses	110.04	113.68	117.46
AC & HVDC Lines			
LILO of 400 kV S/C Vijayawada-Gazuwaka line(km)	18.79	18.79	18.79
Norm (₹ lakh/km)			
400 kV D/C Twin conductor	0.7550	0.7800	0.8060
Total Transmission Line O&M Expenses	14.19	14.66	15.14
Total O&M Expenses			
	20.08	128.34	132.60

(₹ in lakh)

Asset-3



Particulars	2016-17 (Pro-rata for 59 days)	2017-18	2018-19
Sub-station Bays			
765 kV Srikakulam Line Bays at Vemagiri (GIS) – Nos.	2	2	2
765 kV Switchable Line Reactor Bay at Vemagiri (GIS) – Nos.	2	2	2
765 kV Bays for 240 MVAR Bus Reactor I and II at Vemagiri (GIS) – Nos.	2	2	2
765 kV Bay for ICT-I at Vemagiri (GIS) – Nos.	1	1	1
765 kV Line Bays at Srikakulam (GIS) – Nos.	2	2	2
765 kV Bays for 240 MVAR Switchable Line Reactor at Srikakulam (GIS) – Nos.	2	2	2
400 kV Bay for 80 MVAR Bus Reactor at Vemagiri (GIS) –Nos	1	1	1
400 kV Bay for ICT-I at Vemagiri (GIS) – Nos.	1	1	1
Norm (₹ lakh/bay)			
765 kV Sub-station Bays (GIS)	90.120	93.110	96.200
400 kV Sub-station Bays (GIS)	55.020	56.840	58.730
Total Sub-station O&M Expenses	1101.36	1137.89	1175.66
Total O&M Expenses	178.03	1137.89	1175.66

(₹ in lakh)

Asset-4			
Particulars	2016-17 (Pro-rata for 1 day)	2017-18	2018-19
Sub-station Bays			
765 kV Bay for ICT-II at Vemagiri (GIS) – Nos.	1	1	1
400 kV Bay for ICT-II at Vemagiri (GIS) -Nos.	1	1	1
Norm (₹ lakh/bay)			
765 kV Sub-station Bays (GIS)	90.120	93.110	96.200
400 kV Sub-station Bays (GIS)	55.020	56.840	58.730
Total Sub-station O&M Expenses	145.14	149.95	154.93
Total O&M Expenses	0.40	149.95	154.93

68. The details of O&M Expenses allowed earlier vide order dated 23.5.2016 in Petition No. 270/TT/2015 for Asset-1 and order dated 19.7.2018 in Petition No. 45/TT/2017 for Assets-2, 3 and 4, O&M Expenses claimed by Petitioner in the instant petition and trued-up O&M Expenses allowed in the instant order are as under:

(₹ in lakh)



Particulars	Asset-1				Asset-2		
	2015-16 (Pro-rata for 88 days)	2016-17	2017-18	2018-19	2016-17 (Pro-rata for 59 days)	2017-18	2018-19
Allowed in earlier Orders	59.92	257.48	266.04	274.84	20.41	128.34	132.60
Claimed by the Petitioner in the instant petition	59.92	257.48	266.04	274.84	20.08	128.34	132.60
Allowed after true-up in this order	59.92	257.48	266.04	274.84	20.08	128.34	132.60

(₹ in lakh)

Particulars	Asset-3			Asset-4		
	2016-17 (Pro-rata for 59 days)	2017-18	2018-19	2016-17 (Pro-rata for 1 day)	2017-18	2018-19
Allowed vide order dated 19.7.2018 in Petition No. 45/TT/2017	178.02	1137.89	1175.66	0.39	149.95	154.93
Claimed by the Petitioner in the instant petition	178.00	1137.89	1175.66	0.40	149.95	154.93
Allowed after true-up in this order	178.03	1137.89	1175.66	0.40	149.95	154.93

Interest on Working Capital (IWC)

69. The Petitioner is entitled to claim IWC as per Regulation 28(1)(c) of the 2014

Tariff Regulations as under:

i. Maintenance spares:

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

ii. O & M Expenses:

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

iii. Receivables:



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

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

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

70. IWC allowed for the transmission Asset-1 is as under:

(₹ in lakh)

Particulars	Asset-1			
	2015-16 (Pro-rata for 88 days)	2016-17	2017-18	2018-19
O & M Expenses	20.77	21.46	22.17	22.90
Maintenance Spares	37.38	38.62	39.91	41.23
Receivables	68.57	89.56	104.47	104.64
Total	126.72	149.64	166.55	168.77
Rate of Interest on working capital (%)	13.50	13.50	13.50	13.50
Interest on Working Capital	4.11	20.20	22.48	22.78

71. The details of IWC approved vide order dated 23.5.2016 in Petition No. 270/TT/2015, trued up IWC claimed by the Petitioner in the instant petition and trued up IWC allowed in the instant order is shown in the table below:

(₹ in lakh)

Particulars	Asset-1			
	2015-16 (Pro-rata for 59 days)	2016-17	2017-18	2018-19
Approved vide order dated 23.5.2016 in Petition No. 270/TT/2015	4.28	20.45	21.71	22.02
Claimed by the Petitioner in the instant petition	4.16	20.38	22.66	22.95
Allowed after true-up in this order	4.11	20.20	22.48	22.78

72. IWC allowed for the transmission Asset-2 is as under:

(₹ in lakh)



Asset-2			
Particulars	2016-17 (Pro-rata for 59 days)	2017-18	2018-19
O & M Expenses	10.35	10.69	11.05
Maintenance Spares	18.63	19.25	19.89
Receivables	121.21	129.01	135.64
Total	150.19	158.95	166.58
Rate of Interest on working capital (%)	12.80	12.80	12.80
Interest on Working Capital	3.11	20.35	21.32

73. The details of IWC approved vide order dated 19.7.2018 in Petition No. 45/TT/2017, trued up IWC claimed by the Petitioner in the instant petition and trued up IWC allowed in the instant order is shown in the table below:

(₹ in lakh)

Asset-2			
Particulars	2016-17 (Pro-rata for 59 days)	2017-18	2018-19
Approved vide order dated 19.7.2018 in Petition No. 45/TT/2017	3.18	21.42	22.55
Claimed by the Petitioner in the instant petition.	3.11	20.35	21.33
Allowed after true-up in this order	3.11	20.35	21.32

74. IWC allowed for the transmission Asset-3 is as under:

(₹ in lakh)

Asset-3			
Particulars	2016-17 (Pro-rata for 59 days)	2017-18	2018-19
O & M Expenses	91.78	94.82	97.97
Maintenance Spares	165.20	170.68	176.35
Receivables	2282.24	2485.23	2605.78
Total	2539.22	2750.74	2880.10
Rate of Interest on working capital (%)	12.80	12.80	12.80
Interest on Working Capital	52.54	352.09	368.65

75. The details of IWC approved vide order dated 19.7.2018 in Petition No. 45/TT/2017, trued up IWC claimed by the Petitioner in the instant petition and trued up IWC allowed in the instant order is shown in the table below:

(₹ in lakh)



Asset-3			
Particulars	2016-17 (Pro-rata for 59 days)	2017-18	2018-19
Approved vide order dated 19.7.2018 in Petition No. 45/TT/2017	52.27	365.59	391.76
Claimed by the Petitioner in the instant petition	52.69	353.04	369.54
Allowed after true-up in this order	52.54	352.09	368.65

76. IWC allowed for the transmission Asset-4 is as under:

(₹ in lakh)

Asset-4			
Particulars	2016-17 (Pro-rata for 1 day)	2017-18	2018-19
O & M Expenses	12.10	12.50	12.91
Maintenance Spares	21.77	22.49	23.24
Receivables	135.23	151.19	172.54
Total	169.09	186.18	208.69
Rate of Interest on working capital (%)	12.80	12.80	12.80
Interest on Working Capital	0.06	23.83	26.71

77. The details of IWC approved vide order dated 19.7.2018 in Petition No. 45/TT/2017, tried up IWC claimed by the Petitioner and tried up IWC allowed in the instant order is shown in the table below:

(₹ in lakh)

Asset-4			
Particulars	2016-17 (Pro-rata for 1 day)	2017-18	2018-19
Approved vide order dated 19.7.2018 in Petition No. 45/TT/2017	0.06	23.87	26.71
Claimed by the Petitioner in the instant petition	0.06	23.83	26.71
Allowed after true-up in this order	0.06	23.83	26.71

Approved Annual Fixed Charges for the 2014-19 Tariff Period

78. Accordingly, the annual fixed charges in respect of Asset-1 after truing up for the 2014-19 tariff period are as under:

(₹ in lakh)

Asset-1				
Particulars	2015-16	2016-17	2017-18	2018-19



	(Pro-rata for 88 days)			
Depreciation	10.15	77.50	103.75	103.75
Interest on Loan	12.27	87.78	109.29	100.85
Return on Equity	12.47	94.42	125.26	125.59
Int. on Working Capital	4.11	20.20	22.48	22.78
Op. and Maintenance	59.92	257.48	266.04	274.84
Total	98.92	537.38	626.82	627.82

79. The annual fixed charges in respect of Asset-1 as approved vide order dated 23.5.2016 in Petition No. 270/TT/2015, trued up annual fixed charges claimed by the Petitioner in the instant petition and trued up annual fixed charges allowed vide this order in respect of Asset-1 is shown in the table below:

(₹ in lakh)

Asset-1				
Particulars	2015-16 (Pro-rata for 88 days)	2016-17	2017-18	2018-19
Allowed earlier vide order dated 23.5.2016 in Petition No. 270/TT/2015	106.13	548.21	592.56	593.85
As claimed by the Petitioner in the instant petition	100.92	545.47	634.49	635.03
Allowed after True-up in this order	98.92	537.38	626.82	627.82

80. The annual fixed charges in respect of Asset-2 after truing up for the 2014-19 tariff period are as under:

(₹ in lakh)

Asset-2			
Particulars	2016-17 (Pro-rata for 59 days)	2017-18	2018-19
Depreciation	30.01	201.78	217.97
Interest on Loan	30.98	199.10	198.76
Return on Equity	33.39	224.50	243.16
Interest on Working Capital	3.11	20.35	21.32
Op. and Maintenance	20.08	128.34	132.60
Total	117.55	774.06	813.81

81. The annual fixed charges in respect of Asset-2 as approved vide order dated 19.7.2018 in Petition No. 45/TT/2017, trued-up annual fixed charges claimed by the Petitioner in the instant petition and trued up annual fixed charges allowed in the instant order in respect of Asset-2 is shown in the table below:

(₹ in lakh)



Asset-2			
Particulars	2016-17 (Pro-rata for 59 days)	2017-18	2018-19
Allowed earlier vide order dated 19.7.2018 in Petition No. 45/TT/2017	120.76	824.26	871.30
As claimed by the Petitioner	117.56	774.21	814.09
Allowed after Truing Up	117.55	774.06	813.81

82. The annual fixed charges in respect of Asset-3 after truing up for the 2014-19 tariff period are as under:

(₹ in lakh)

Asset-3			
Particulars	2016-17 (Pro-rata for 59 days)	2017-18	2018-19
Depreciation	588.88	4106.27	4415.63
Interest on Loan	682.93	4490.27	4452.15
Return on Equity	711.08	4824.85	5222.61
Interest on Working Capital	52.54	352.09	368.65
Op. and Maintenance	178.03	1137.89	1175.66
Total	2213.46	14911.37	15634.69

83. The annual fixed charges in respect of Asset-3 approved vide order dated 19.7.2018 in Petition No. 45/TT/2017, annual fixed charges claimed by the Petitioner in the instant petition and annual fixed charges trued-up in respect of transmission Asset-3 is shown in the table as follows:

(₹ in lakh)

Asset-3			
Particulars	2016-17 (Pro-rata for 59 days)	2017-18	2018-19
Allowed earlier vide order dated 19.7.2018 in Petition No. 45/TT/2017	2200.72	15544.05	16717.92
Claimed by the Petitioner in the instant petition	2220.78	14955.64	15676.32
Allowed after True Up in this order	2213.46	14911.37	15634.69

84. The annual fixed charges in respect of Asset-4 after truing up for the 2014-19 tariff period are as under:

(₹ in lakh)

Asset-4			
Particulars	2016-17 (Pro-rata for 1 day)	2017-18	2018-19
Depreciation	0.55	231.02	275.14



Asset-4			
Particulars	2016-17 (Pro-rata for 1 day)	2017-18	2018-19
Interest on Loan	0.59	235.36	259.62
Return on Equity	0.63	267.00	318.84
Interest on Working Capital	0.06	23.83	26.71
Op. and Maintenance	0.40	149.95	154.93
Total	2.22	907.16	1035.24

85. The annual fixed charges in respect of Asset-4 approved vide order dated 19.7.2018 in Petition No. 45/TT/2017, annual fixed charges claimed by the Petitioner in the instant petition and trued up annual fixed charges allowed vide this order in respect of Asset-4 is shown in the table below:

(₹ in lakh)

Asset-4			
Particulars	2016-17 (Pro-rata for 1 day)	2017-18	2018-19
Allowed earlier vide order dated 19.7.2018 in Petition No. 45/TT/2017	2.22	909.03	1034.91
Claimed by the Petitioner in the instant petition	2.23	907.19	1035.30
Allowed after true-up in this order	2.22	907.16	1035.24

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

86. The Petitioner has submitted the tariff forms combining the Assets-1, 2, 3 and 4, wherein the COD has been achieved prior to 1.4.2019, as a single asset. Accordingly, as per proviso (i) of Regulation 8(1) of the 2019 Tariff Regulations, single tariff for the Combined Asset has been worked out for the 2019-24 tariff period.

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

(₹ in lakh)

Combined Asset					
Particulars	2019-20	2020-21	201-22	2022-23	2023-24
Depreciation	5180.00	5208.35	5208.35	5208.35	5208.35
Interest on Loan	4703.66	4318.00	3896.82	3474.81	3054.55
Return on Equity	5826.01	5860.24	5860.24	5860.24	5860.24
Interest on Working Capital	329.51	328.59	325.60	322.77	319.30
Operation and	2140.11	2213.54	2290.60	2371.55	2453.29



Maintenance					
Total	18179.29	17928.72	17581.61	17237.72	16895.73

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

(₹ in lakh)					
Combined Asset					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M expenses	178.34	184.46	190.88	197.63	204.44
Maintenance Spares	321.02	332.03	343.59	355.73	367.99
Receivables	2235.16	2210.39	2167.60	2125.20	2077.34
Total	2734.52	2726.88	2702.07	2678.56	2649.77
Rate of Interest	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	329.51	328.59	325.60	322.77	319.30

Effective Date of Commercial Operation (E-COD)

89. The Petitioner has claimed E-COD of the Combined Asset as 27.1.2017. Based on the trued up admitted capital cost and actual COD of all the assets, E-COD has been worked out as follows:

Computation of Effective COD						
Asset	Actual COD	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Weight of the cost (%)	No. of Days from last COD	Weighted Days	Effective COD (Latest COD – Total weighted Days)
Asset-1	4.1.2016	2118.87	2.07	452	9.36	27.1.2017
Asset-2	1.2.2017	4109.67	4.02	58	2.33	
Asset-3	1.2.2017	90620.39	88.58	58	51.38	
Asset-4	31.3.2017	5451.95	5.33	0	0.00	
Total		102300.88	100.00		63.00	

90. E-COD is used to determine the lapsed life of the project as a whole, which works out as two (2) years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD).

Weighted Average Life (WAL)

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



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

93. WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2019 and their respective life as stipulated in the 2019 Tariff Regulations. The element-wise life as defined in the 2009 Tariff Regulations or the 2014 Tariff Regulations prevailing at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in the 2019 Tariff Regulations has been considered for determination of WAL. Accordingly, WAL of the Combined Asset has been worked out as 25 years as follows:

Admitted Capital Cost as on 31.3.2019				
Particulars	Combined Cost as on 31.3.2019 (₹ in lakh) (a)	Life as per 2019 Regulation (Years) (b)	Weighted Cost (₹ in lakh) (c) = (a) x (b)	Weighted Average Life of Asset (in years) (d) = (c)/(a)
Leasehold Land	0.00	25	0.00	
Building & Other Civil Works	108732.76	25	271818.89	
Transmission Line	3839.93	35	134397.54	
Sub-Station	84653.50	25	2116337.52	
PLCC	522.53	15	7837.93	
IT Equipment and Software	397.18	7	2647.87	
Total	100294.14		2533039.76	25.26 Years (Rounded off to 25 years)

94. WAL as on 1.4.2019 as determined above is applicable prospectively (i.e. for 2019-24 tariff period onwards) and no retrospective adjustment of depreciation in previous tariff period is required to be done. As discussed at para 85 and para 86 above⁹³, the Effective COD of the assets is 27.1.2017 and the lapsed life of the

project as a whole, works out as two (2) years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from Effective COD). Accordingly, WAL has been used to determine the remaining useful life as on 31.3.2019 to be 23 years.

Capital Cost

95. Regulation 19 of the 2019 Tariff Regulations provide 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 trued up by excluding liability, if any, as on 1.4.2019;*
 - (b) *Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;*
 - (c) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
 - (d) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
 - (e) *Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and*
 - (f) *Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.”*

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

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

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

- (a) *The 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.”*



96. The Petitioner has claimed the capital cost of the individual assets which has been added to arrive at the capital cost claimed during 2019-24 period for Combined Asset as per the following details:

(₹ in lakh)

Assets	FR Apportioned Approved Cost	RCE Apportioned Approved Cost	Capital Cost claimed as on 31.3.2019	Additional Capitalisation Claimed	Estimated Completion Cost
				2019-20	
Asset-1	1899.94	2465.44	2141.68	0.00	2141.68
Asset-2	3763.53	5628.59	4111.39	397.66	4509.05
Asset-3	84880.46	102284.39	90701.02	817.31	91518.33
Asset-4	6698.17	6551.58	5452.38	0.00	5452.38
Total	97242.10	116930.00	102406.47	1214.97	103621.44

97. Against the overall apportioned approved capital cost (as per RCE) of ₹116930 lakh, the estimated claimed completion cost including ACE is ₹103621 lakh. The individual cost of each asset is also within the respective RCE apportioned cost. Therefore, there is no cost over-run as per RCE cost.

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

(₹ in lakh)

Element	Asset-1	Asset-2	Asset-3	Asset-4	Combined Asset
Freehold Land	0.00	0.00	2014.99	0.00	2014.99
Building & Other Civil Works	478.56	0.00	10394.20	0.00	10872.76
Transmission Line	0.00	3839.93	0.00	0.00	3839.93
Sub-Station Equipment	1484.50	139.94	77577.11	5451.95	84653.50
PLCC	110.25	129.80	282.48	0.00	522.53
Leasehold Land	0.00	0.00	0.00	0.00	0.00
IT Equipment and Software	45.57	0.00	351.61	0.00	397.18
Total	2118.87	4109.67	90620.39	5451.95	102300.88

Initial Spares



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

Asset	Plant & Machinery cost up to cut-off date (excluding IDC and IEDC) (₹ in lakh)	Initial Spares Claimed (₹ in lakh)	Norms as per the 2014 Tariff Regulations (%)	Initial Spares allowable as per APTEL judgement dated (₹ in lakh)	Initial Spares allowed in 2014-19 (₹ in lakh)	Additional Initial Spares allowed in 2019-24 (₹ in lakh)
Sub-station (GIS)						
Asset-1	1474.37	95.2	5	4,045.78	72.59	80.59
Asset-3	74593.33	3797.46			3,726.10	
Asset-4	4861.20	166.5			166.50	
Total	80928.90	4059.16			3,965.19	
Transmission Line						
Asset-2	3605.65	14.81	1	36.27	14.81	0.00

100. Accordingly, Initial Spares of ₹80.59 lakh against sub-station are being allowed as part of the combined capital cost as on 1.4.2019 in accordance with APTEL's judgement dated 14.9.2019 in Appeal 74 of 2017.

101. Capital cost as on 1.4.2019 is worked out as under:

Combined Capital Cost as on 31.3.2019	Additional Spares allowed as per APTEL judgment dated 14.9.2019	Combined Capital Cost as on 1.4.2019
102300.88	80.59	102381.47

102. The trued-up capital cost of ₹102381.47 lakh for the Combined Asset is considered as admitted capital cost as on 1.4.2019 for working out tariff for 2019-24 tariff period.

Additional Capital Expenditure (ACE)



103. Regulation 24 of the 2019 Tariff Regulations provides as under:-

“24. Additional Capitalization within the original scope and up to the cut-off date

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

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

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

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

104. The Petitioner has claimed projected ACE for 2019-24 period and has submitted Auditor’s certificates in support of the same. The Petitioner has submitted that ACE claimed for the period 1.4.2019 to 31.3.2020 is on estimated basis and may vary due to final claim/ reconciliation at the time of contract closing. The details of the projected ACE in respect of the transmission assets are as under:

Assets	Projected ACE 2019-24
	2019-20
Asset-1	0.00
Asset-2	397.66
Asset-3	817.31
Asset-4	0.00
Total	1214.97

105. It is observed that the entire projected ACE claimed during the 2019-24 period falls within the cut-off date in the instant petition. The ACE allowed is summarized below which is subject to true-up:



(₹ in lakh)

Particulars	Regulation	Combined Asset
		2019-20
ACE to the extent of Balance & Retention Payments & work deferred for execution before cut-off date	Regulation 24 (1)(a) and Regulation 24(1)(b) of 2019 Tariff Regulations	1214.97

Capital cost for the tariff period 2019-24

106. Accordingly, the capital cost of the Combined Asset, considered for the 2019-24 tariff period, subject to truing up, is as follows:

(₹ in lakh)

Capital Cost allowed as on 1.4.2019	ACE allowed for the year 2019-20	Total Estimated Completion Cost up to 31.3.2024
102381.47	1214.97	103596.44

Debt-Equity Ratio

107. 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:

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

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



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

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

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

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

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

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

108. The details of the debt-equity considered for the purpose of tariff of the 2019-24 tariff period for the Combined Asset is as under:

Combined Assets	Capital Cost as on 1.4.2019 (₹ in lakh)	(%)	Total Capital Cost as on 31.3.2024 (₹ in lakh)	(%)
Debt	72760.53	71.07	73611.01	71.06
Equity	29620.95	28.93	29985.44	28.94
Total	102381.47	100.00	103596.44	100.00

Return on Equity (RoE)

109. Regulations 30 and Regulation 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:

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

Where “t” is the effective tax rate in accordance with clause (1) of this Regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata



basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), "t" shall be considered as MAT rate including surcharge and cess.

Illustration-

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

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

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

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

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

110. The Petitioner has submitted that MAT rate is applicable to the Petitioner's Company. Accordingly, the MAT rate applicable during the 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. Accordingly, the RoE allowed for the transmission assets under Regulation 30 of the 2019 Tariff Regulations is as under:

(₹ in lakh)

Combined Asset					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	29620.95	29985.44	29985.44	29985.44	29985.44
Addition due to Additional Capitalization	364.49	0.00	0.00	0.00	0.00



Closing Equity	29985.44	29985.44	29985.44	29985.44	29985.44
Average Equity	29803.19	29985.44	29985.44	29985.44	29985.44
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (%)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (Pre-tax)	18.782	18.782	18.782	18.782	18.782
Return on Equity (Pre-tax)	5597.64	5631.86	5631.86	5631.86	5631.86

Interest on Loan (IoL)

111. 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 up to the date of de-capitalisation of such asset.

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

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

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

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

(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”.



112. 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 be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up. Therefore, IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed for the Combined Asset is as under:

(₹ in lakh)

Combined Asset					
Particular	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	72760.53	73611.01	73611.01	73611.01	73611.01
Cumulative Repayments up to Previous Year	10362.38	15523.25	20712.47	25901.68	31090.90
Net Loan-Opening	62398.14	58087.76	52898.54	47709.32	42520.11
Addition due to Additional Capitalization	850.48	0.00	0.00	0.00	0.00
Repayment during the year	5160.86	5189.22	5189.22	5189.22	5189.22
Net Loan-Closing	58087.76	52898.54	47709.32	42520.11	37330.89
Average Loan	60242.95	55493.15	50303.93	45114.72	39925.50
Weighted Average Rate of Interest on Loan (%)	7.757%	7.744%	7.729%	7.708%	7.690%
Interest on Loan	4672.93	4297.26	3887.91	3477.41	3070.18

Depreciation

113. Regulations 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 of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.



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

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

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

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

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

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

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

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

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

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

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

114. The IT equipment has been considered as a part of the Gross Block and depreciated using weighted average rate of depreciation (WAROD). The weighted average rate of depreciation (WAROD) has been worked out (refer Annexure-2) after taking into account the depreciation rates of IT and non-IT assets as prescribed in the



2019 Tariff Regulations. The salvage value of IT equipment has been considered nil, i.e. IT asset has been considered as 100 per cent depreciable. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The depreciation allowed for the transmission assets is as follows:

(₹ in lakh)

Combined Asset					
Particulars	2019-20	2020-21	201-22	2022-23	2023-24
Opening Gross Block	102381.47	103596.44	103596.44	103596.44	103596.44
Addition during 2019-24 due to Projected Additional Capitalisation	1214.97	0.00	0.00	0.00	0.00
Closing Gross Block	103596.44	103596.44	103596.44	103596.44	103596.44
Average Gross Block	102988.96	103596.44	103596.44	103596.44	103596.44
Weighted Average Rate of Depreciation (WAROD) (%)	5.01%	5.01%	5.01%	5.01%	5.01%
Balance useful life of the asset	23.26	22.26	21.26	20.26	19.26
Elapsed Life at the beginning of the year	2.00	3.00	4.00	5.00	6.00
Aggregate Depreciable Value	90916.29	91463.03	91463.03	91463.03	91463.03
Depreciation during the year	5160.86	5189.22	5189.22	5189.22	5189.22
Cumulative Depreciation up to previous year	10362.38	15523.25	20712.47	25901.68	31090.90
Aggregate Cumulative Depreciation	15523.25	20712.47	25901.68	31090.90	36280.12
Remaining Depreciable Value	75393.04	70750.56	65561.35	60372.13	55182.91

Operation & Maintenance Expenses (O&M Expenses)

115. Regulations 35(3)(a) and (4) of the 2019 Tariff Regulations provide as under:

“35 (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
Norms for AC and HVDC lines (₹ Lakh per km)					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-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.”

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

(₹ in lakh)

Combined Asset					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station Bays					
400 kV Bays at Nagarjunasagar (AIS) – Nos.	2	2	2	2	2
400 kV Bays at Khammam (AIS) – Nos.	2	2	2	2	2
Total 400 kV (AIS) Bays	4	4	4	4	4
765 kV Srikakulam Line Bays at Vemagiri (GIS) – Nos.	2	2	2	2	2
765 kV Bays for Switchable Line Reactor at Vemagiri (GIS) – Nos.	2	2	2	2	2
765 kV Bays for Bus Reactor I & II at Vemagiri (GIS) – Nos.	2	2	2	2	2
765 kV Bays for ICT-I at Vemagiri (GIS) – Nos.	1	1	1	1	1
765 kV Vemagiri line Bays at Srikakulam (GIS) – Nos.	2	2	2	2	2
765 kV Bays for Switchable	2	2	2	2	2



Line Reactor at Srikakulam (GIS) – Nos.					
765 kV Bay for ICT-II at Vemagiri (GIS) – Nos	1	1	1	1	1
Total 765 kV (GIS) Bays	12	12	12	12	12
400 kV Bay for Bus Reactor at Vemagiri (GIS) – Nos.	1	1	1	1	1
400 kV Bays for ICT-I & II at Vemagiri (GIS) – Nos.	2	2	2	2	2
400 kV Bays for Vijayawada and Gazuwaka at Vemagiri (GIS) – Nos.	2	2	2	2	2
Total 400 kV(GIS) Bays	5	5	5	5	5
Norm (₹ lakh/bay)					
400 kV Bay (AIS)	32.150	33.280	34.450	35.660	36.910
765 kV Bay (GIS)	31.507	32.620	33.761	34.951	36.176
400 kV Bay (GIS)	22.505	23.296	24.115	24.962	25.837
Total Sub-station Bays	619.21	641.04	663.51	686.86	710.94
Transformers					
765 kV ICT-I at Vemagiri (MVA)	1500	1500	1500	1500	1500
765 kV ICT-II at Vemagiri (MVA)	1500	1500	1500	1500	1500
Total 765 kV Transformers (MVA)	3000	3000	3000	3000	3000
Norm (₹ lakh/ MVA)					
765 kV	0.491	0.508	0.526	0.545	0.564
Total Transformers	1473.00	1524.00	1578.00	1635.00	1692.00
AC & HVDC Lines					
LILO of 400 kV S/C Vijayawada-Gazuwaka Line (km)	18.79	18.79	18.79	18.79	18.79
Norm (₹ lakh/ km)					
D/C Twin Conductor	0.881	0.912	0.944	0.977	1.011
Total Transmission Line	16.55	17.14	17.74	18.36	19.00
Communication System					
PLCC – Capital Cost (₹ lakh)	522.49	522.49	522.49	522.49	522.49
Norm (%)					
PLCC	2	2	2	2	2
Total Communication System	31.35	31.35	31.35	31.35	31.35
Total O&M Expenses	2140.11	2213.54	2290.60	2371.55	2453.29

117. The Petitioner has claimed O&M Expenses separately for the PLCC under Regulation 35(4) of the 2019 @2% of its original project cost in the instant petition and the Petitioner has made similar claim in other petitions as well. Though PLCC is a communication system, it has been considered as part of the sub-station in the 2014



and 2019 Tariff Regulations and the norms for sub-station has been specified accordingly. Accordingly, the Commission vide order dated 24.1.2021 in Petition No.126/TT/2020 has already concluded that no separate O&M Expenses can be allowed for PLCC under Regulation 35(4) of the 2019 Tariff Regulations even though PLCC is a communication system. Therefore, the Petitioner's claim for separate O&M Expenses for PLCC @2% is not allowed. The relevant portions of the order dated 24.1.2021 in Petition No.126/TT/2020 are extracted hereunder.

"103. Thus, although PLCC equipment is a communication system, it has been considered as a part of sub-station, as it is used both for protection and communication. Therefore, we are of the considered view that rightly, it was not considered for separate O&M Expenses while framing norms of O&M for 2019-24 tariff period. While specifying norms for bays and transformers, O&M Expenses for PLCC have been included within norms for O&M Expenses for sub-station. Norms of O&M Expenses @2% of the capital cost in terms of Regulation 35(4) of the 2019 Tariff Regulations have been specified for communication system such as PMU, RMU, OPGW etc. and not for PLCC equipment."

"105. In our view, granting of O&M Expenses for PLCC equipment @2% of its capital cost under Regulation 35(4) of the 2014 Tariff Regulations under the communication system head would tantamount to granting O&M Expenses twice for PLCC equipment as PLCC equipment has already been considered as part of the sub-station. Therefore, the Petitioner's prayer for grant of O&M Expenses for the PLCC equipment @2% of its capital cost under Regulation 35(4) of the 2014 Tariff Regulations is rejected.

106. The principle adopted in this petition that PLCC is part of sub-station and accordingly no separate O&M Expenses is admissible for PLCC equipment in the 2019-24 tariff period under Regulation 35(4) of the 2019 Tariff Regulations shall be applicable in case of all petitions where similar claim is made by the Petitioner. As already mentioned, the Commission, however, on the basis of the claim made by the Petitioner has inadvertently allowed O&M Expenses for PLCC equipment @2% of its original project cost, which is applicable for other "communication system", for 2019-24 period in 31 petitions given in Annexure-3 of this order. Therefore, the decision in this order shall also be applicable to all the petitions given in Annexure-3. Therefore, PGCIL is directed to bring this decision to the notice of all the stakeholders in the 31 petitions given in Annexure-3 and also make revised claim of O&M Expenses for PLCC as part of the sub-station at the time of truing up of the tariff allowed for 2019-24 period in respective petitions."

Therefore, the Petitioner's claim for separate O&M Expenses for PLCC @2% is not allowed.

118. The O&M Expenses allowed for the 2019-24 tariff period for the Combined Assets are as under:



(₹ in lakh)

Combined Asset					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station Bays					
400 kV Bays at Nagarjunasagar (AIS) – Nos.	2	2	2	2	2
400 kV Bays at Khammam (AIS) – Nos.	2	2	2	2	2
Total 400 kV (AIS) Bays	4	4	4	4	4
765 kV Srikakulam Line Bays at Vemagiri (GIS) – Nos.	2	2	2	2	2
765 kV Bays for Switchable Line Reactor at Vemagiri (GIS) – Nos.	2	2	2	2	2
765 kV Bays for Bus Reactor I & II at Vemagiri (GIS) – Nos.	2	2	2	2	2
765 kV Bays for ICT-I at Vemagiri (GIS) – Nos.	1	1	1	1	1
765 kV Vemagiri line Bays at Srikakulam (GIS) – Nos.	2	2	2	2	2
765 kV Bays for Switchable Line Reactor at Srikakulam (GIS) – Nos.	2	2	2	2	2
765 kV Bay for ICT-II at Vemagiri (GIS) – Nos	1	1	1	1	1
Total 765 kV (GIS) Bays	12	12	12	12	12
400 kV Bay for Bus Reactor at Vemagiri (GIS) – Nos.	1	1	1	1	1
400 kV Bays for ICT-I & II at Vemagiri (GIS) – Nos.	2	2	2	2	2
400 kV Bays for Vijayawada and Gazuwaka at Vemagiri (GIS) – Nos.	2	2	2	2	2
Total 400 kV(GIS) Bays	5	5	5	5	5
Norm (₹ lakh/bay)					
400 kV Bay (AIS)	32.150	33.280	34.450	35.660	36.910
765 kV Bay (GIS)	31.507	32.620	33.761	34.951	36.176
400 kV Bay (GIS)	22.505	23.296	24.115	24.962	25.837
Total Sub-station Bays	619.21	641.04	663.51	686.86	710.94
Transformers					
765 kV ICT-I at Vemagiri (MVA)	1500	1500	1500	1500	1500
765 kV ICT-II at Vemagiri (MVA)	1500	1500	1500	1500	1500
Total 765 kV Transformers (MVA)	3000	3000	3000	3000	3000
Norm (₹ lakh/ MVA)					
765 kV	0.491	0.508	0.526	0.545	0.564
Total Transformers	1473.00	1524.00	1578.00	1635.00	1692.00
AC & HVDC Lines					
LILO of 400 kV S/C	18.79	18.79	18.79	18.79	18.79



Vijayawada-Gazuwaka Line (km)					
Norm (₹ lakh/ km)					
D/C Twin Conductor	0.881	0.912	0.944	0.977	1.011
Total Transmission Line	16.55	17.14	17.74	18.36	19.00
Total O&M Expenses	2108.76	2182.18	2259.24	2340.22	2421.93

Interest on Working Capital (IWC)

119. Regulations 34 and Regulation 3(7) of the 2019 Tariff Regulations specifies as under:

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

(a) For Coal-based/lignite-fired thermal generating stations:

- (i) *Cost of coal or lignite and limestone towards stock, if applicable, for 10 days for pit-head generating stations and 20 days for non-pit-head generating stations for generation corresponding to the normative annual plant availability factor or the maximum coal/lignite stock storage capacity whichever is lower;*
- (ii) *Advance payment for 30 days towards cost of coal or lignite and limestone for generation corresponding to the normative annual plant availability factor;*
- (iii) *Cost of secondary fuel oil for two months for generation corresponding to the normative annual plant availability factor, and in case of use of more than one secondary fuel oil, cost of fuel oil stock for the main secondary fuel oil;*
- (iv) *Maintenance spares @ 20% of operation and maintenance expenses including water charges and security expenses;*
- (v) *Receivables equivalent to 45 days of capacity charge and energy charge for sale of electricity calculated on the normative annual plant availability factor; and*
- (vi) *Operation and maintenance expenses, including water charges and security expenses, for one month.*

(b) For Open-cycle Gas Turbine/Combined Cycle thermal generating stations:

- (i) *Fuel cost for 30 days corresponding to the normative annual plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel;*
- (ii) *Liquid fuel stock for 15 days corresponding to the normative annual plant availability factor, and in case of use of more than one liquid fuel, cost of main liquid fuel duly taking into account mode of operation of the generating stations of gas fuel and liquid fuel;*
- (iii) *Maintenance spares @ 30% of operation and maintenance expenses including water charges and security expenses;*
- (iv) *Receivables equivalent to 45 days of capacity charge and energy charge for sale of electricity calculated on normative plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel; and*
- (v) *Operation and maintenance expenses, including water charges and security expenses, for one month.*



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

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

(2) The cost of fuel in cases covered under sub-clauses (a) and (b) of clause (1) of this Regulation shall be based on the landed fuel cost (taking into account normative transit and handling losses in terms of Regulation 39 of these regulations) by the generating station and gross calorific value of the fuel as per actual weighted average for the third quarter of preceding financial year in case of each financial year for which tariff is to be determined:

Provided that in case of new generating station, the cost of fuel for the first financial year shall be considered based on landed fuel cost (taking into account normative transit and handling losses in terms of Regulation 39 of these regulations) and gross calorific value of the fuel as per actual weighted average for three months, as used for infirm power, preceding date of commercial operation for which tariff is to be determined.

(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. - In these regulations, unless the context otherwise requires:-

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

120. The Petitioner has submitted that it has computed the IWC for 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. The IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of IWC considered is 12.05% (SBI 1year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20 and 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus



350 basis points) for 2020-24. The components of the working capital and interest allowed thereon for the Combined Asset is as follows:

(₹ in lakh)

Combined Asset					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses	175.73	181.85	188.27	195.02	201.83
Maintenance Spares	316.31	327.33	338.89	351.03	363.29
Receivables	2196.41	2170.10	2128.81	2087.88	2041.78
Total	2688.46	2679.28	2655.97	2633.93	2606.90
Rate of Interest (%)	12.05	11.25	11.25	11.25	11.25
Interest on working capital	323.96	301.42	298.80	296.32	293.28

Annual Fixed Charges for the 2019-24 Tariff Period

121. The various components of the annual fixed charges for the Combined Asset for the tariff period 2019-24 are summarized below:

(₹ in lakh)

Combined Asset					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	5160.86	5189.22	5189.22	5189.22	5189.22
Interest on Loan	4672.93	4297.26	3887.91	3477.41	3070.18
Return on Equity	5597.64	5631.86	5631.86	5631.86	5631.86
Interest on Working Capital	323.96	301.42	298.80	296.32	293.28
Operation and Maintenance	2108.76	2182.18	2259.24	2340.22	2421.93
Total	17864.15	17601.94	17267.03	16935.03	16606.47

Filing Fee and Publication Expenses

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

123. The Petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 70(4) of the 2019 Tariff Regulations for the 2019-24 tariff period. The



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

Goods and Services Tax

124. The Petitioner has sought to recover GST on transmission charges separately from the Respondents, if at any time GST on transmission is withdrawn from negative list in future. We have considered the submission of the Petitioner. GST is not levied on transmission service at present and we are of the view that Petitioner's prayer is premature.

Security Expenses

125. The Petitioner has submitted that security expenses for the transmission assets are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential Interest on Working Capital. 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 yearly basis.



126. 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. It is observed 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

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

Sharing of Transmission Charges

128. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 or the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020, as applicable, as provided in Regulation 43 of the 2014 Tariff Regulations for the 2014-19 tariff period and Regulation 57 of the 2019 Tariff Regulations for the 2019-24 tariff period.

129. To summarise, the trued-up Annual Fixed Charges allowed for the transmission assets for the 2014-19 tariff period are as under:

	(₹ in lakh)			
Annual Fixed Charges	2015-16	2016-17	2017-18	2018-19
Asset-1	98.92	537.38	626.82	627.82
Asset-2	0.00	117.55	774.06	813.81
Asset-3	0.00	2213.46	14911.37	15634.69



Annual Fixed Charges	2015-16	2016-17	2017-18	2018-19
Asset-4	0.00	2.22	907.16	1035.24

The Annual Fixed Charges allowed for the Combined Asset for the 2019-24 tariff period are as under:

	(₹ in lakh)				
Combined Asset	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Fixed Charges	17864.15	17601.94	17267.03	16935.03	16606.47

130. This order disposes of Petition No. 515/TT/2019.

**Sd/
(Arun Goyal)
Member**

**Sd/
(I. S. Jha)
Member**

**Sd/
(P. K. Pujari)
Chairperson**



Petition No. 515/TT/2019
 Period: 2014-19 True-up

Annexure-1

Asset	2014-19	Admitted Capital Cost as on COD (₹ in lakh)	Additional Capitalization (₹ in lakh)				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations (₹ in lakh)			
	Capital Expenditure as on COD		2015-16	2016-17	2017-18	2018-19			2015-16	2016-17	2017-18	2018-19
Asset-1	Building	157.52	156.85	164.19	0.00	0.00	478.56	3.34	7.88	13.24	15.98	15.98
	Sub Station	445.86	216.22	822.42	0.00	0.00	1484.50	5.28	29.25	56.67	78.38	78.38
	PLCC	31.77	22.47	56.01	0.00	0.00	110.25	6.33	2.72	5.21	6.98	6.98
	IT Equipment and software	44.76	0.00	0.00	0.00	0.00	45.57	5.28	2.36	2.38	2.41	2.41
	TOTAL	679.91	395.54	1043.43	0.00	0.00	2118.87		42.22	77.50	103.75	103.75
Average Gross Block (₹ in lakh)									877.68	1597.16	2118.87	2118.87
Weighted Average Rate of Depreciation (WAROD) (%)									4.81	4.85	4.90	4.90

Asset	2014-19	Admitted Capital Cost as on COD (₹ in lakh)	Additional Capitalization (₹ in lakh)			Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations (₹ in lakh)		
	Capital Expenditure as on COD		2016-17	2017-18	2018-19			2016-17	2017-18	2018-19
Asset-2	Transmission Line	3291.63	0.00	533.66	14.64	3839.93	5.28	173.80	187.89	202.36
	Sub Station	86.53	13.00	40.42	0.00	139.94	5.28	4.91	6.32	7.39
	PLCC	109.26	0.00	20.54	0.00	129.80	6.33	6.92	7.57	8.22
	TOTAL	3487.42	13.00	594.62	14.64	4109.67		185.63	201.78	217.97
Average Gross Block (₹ in lakh)								3493.92	3797.73	4102.35
Weighted Average Rate of Depreciation (WAROD) (%)								5.31	5.31	5.31



Asset	2014-19	Admitted Capital Cost as on COD (₹ in lakh)	Additional Capitalization (₹ in lakh)			Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations (₹ in lakh)		
	Capital Expenditure as on COD		2016-17	2017-18	2018-19			2016-17	2017-18	2018-19
Asset-3	Land	2014.99	0.00	0.00	0.00	2041.99	0.00	0.00	0.00	0.00
	Building	7986.30	5.90	183.72	2218.27	9285.06	3.34	266.84	270.01	310.12
	Sub Station	59244.39	8249.26	9060.29	1023.17	77577.11	5.28	3345.88	3802.86	4069.06
	PLCC	192.77	0.14	89.57	0.00	282.48	6.33	12.21	15.05	17.88
	IT Equipment and software	343.46	0.25	7.90	0.00	351.61	5.28	18.14	18.36	18.57
	TOTAL	69781.92	8255.55	9341.47	3241.44	9062.39		3643.07	4106.27	4415.63
Average Gross Block (₹ in lakh)								73909.69	82708.21	88999.67
Weighted Average Rate of Depreciation (WAROD) (%)								4.93	4.96	4.96

Asset-4	2014-19	Admitted Capital Cost as on COD (₹ in lakh)	Additional Capitalization (₹ in lakh)			Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations (₹ in lakh)		
	Capital Expenditure as on COD		2016-17	2017-18	2018-19			2016-17	2017-18	2018-19
	Sub Station	3780.73	0.00	1189.36	481.86	5451.95	5.28	199.62	231.02	275.14
	TOTAL	3780.73	0.00	1189.36	481.86	5451.95		199.62	231.02	275.14
Average Gross Block (₹ in lakh)								3780.73	4375.41	5211.02
Weighted Average Rate of Depreciation (WAROD) (%)								5.28	5.28	5.28



Annexure - 2

Asset	2019-24	Combined admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected Additional Capitalization during 2019-20 (₹ in lakh)	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (%)	Annual Depreciation as per Regulations (₹ in lakh)				
	Capital Expenditure as on 1.4.2019					2019-20	2020-21	2021-22	2022-23	2023-24
Combined Asset	Freehold Land	2014.99	0.00	2014.99	0.00	0.00	0.00	0.00	0.00	0.00
	Building	10872.76	383.77	11256.53	3.34	369.56	375.97	375.97	375.97	375.97
	Transmission Line	3839.93	397.66	4237.59	5.28	213.25	223.74	223.74	223.74	223.74
	Sub Station	84734.09	433.54	85167.63	5.28	4485.41	4496.85	4496.85	4496.85	4496.85
	PLCC	522.53	0.00	522.53	6.33	33.08	33.08	33.08	33.08	33.08
	IT Equipment and software	397.18	0.00	397.18	15	59.58	59.58	59.58	59.58	59.58
	TOTAL	102381.47	1214.97	103596.44		5160.86	5189.22	5189.22	5189.22	5189.22
				Average Gross Block (₹ in lakh)		102988.96	103596.44	103596.44	103596.44	103596.44
				Weighted Average Rate of Depreciation (WAROD) (%)		5.01	5.01	5.01	5.01	5.01

