CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 41/TT/2020

Coram:

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

Date of Order: 16.12.2021

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing up of transmission tariff of the 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 of **Combined Asset** comprising of **Asset-1:** LILO of one circuit of Tuticorin JV-Madurai 400 kV (Quad) Line at Tuticorin Pooling Station along with new 765 kV Pooling Station at Tuticorin (initially charged at 400 kV) including 1x80 MVAR, 400 kV Bus Reactor at Tuticorin Pooling Station and **Asset-2:** LILO of 2nd circuit of Tuticorin JV-Madurai 400 kV (Quad) Line at Tuticorin Pooling Station under Transmission System associated with Common System associated with Coastal Energen Private Limited and Ind-Bharat Power (Madras) Limited LTOA Generation Projects in Tuticorin Area-Part-A in Southern Region.

And in the matter of:

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

Versus

1. Karnataka Power Transmission Corporation Limited,
   Kaveri Bhavan,
   Bangalore-560009.

2. Transmission Corporation of Andhra Pradesh Limited,
   Vidyut Soudha,
   Hyderabad-500082.

3. Kerala State Electricity Board,
   Vaidyuthi Bhavanam, Pattom,
   Thiruvananthapuram-695004.

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

Chennai-600002.

5. Electricity Department,
Government of Pondicherry,
Pondicherry-605001.

6. Eastern Power Distribution Company of Andhra Pradesh Limited,
P&T Colony, Seethmmadhara,
Vishakhapatnam, Andhra Pradesh.

7. Southern Power Distribution Company of Andhra Pradesh Limited,
Srinivasasa Kalyana Mandapam Backside, Tiruchanoor Road,
Kesavayana Gunta,
Chittoor District, Tirupati-517501 (Andhra Pradesh).

8. Central Power Distribution Company of Andhra Pradesh Limited,
Corporate Office, Mint Compound,
Hyderabad-500063 (Telangana).

9. Northern Power Distribution Company of Andhra Pradesh Limited,
Opp. NIT Petrol Pump, Chaitanyapuri, Kazipet,
Warangal-506004 (Telangana).

10. Bangalore Electricity Supply Company Limited,
Corporate Office, K.R. Circle,
Bangalore-560001 (Karnataka).

11. Gulbarga Electricity Supply Company Limited,
Station Main Road, Gulburga,
Karnataka.

12. Hubli Electricity Supply Company Limited,
Navanagar, PB Road, Hubli,
Karnataka.

13. MESCOM Corporate Office,
Paradigm Plaza, AB Shetty Circle,
Mangalore-575001 (Karnataka).

14. Chamundeswari Electricity Supply Corporation Limited,
927, L J Avenue, Ground Floor, New Kantharaj URS Road,
Saraswatipuram,
Mysore-570009 (Karnataka).

15. Electricity Department,
Government of Goa, Vidyuti Bhawan,
Panaji, Goa-403001.

16. Transmission Corporation of Telangana Limited,
Vidhyut Sudha, Khairatabad,
Telangana-500082.

17. Tamil Nadu Transmission Corporation,
NPKRR Maaligai, 800, Anna Salai
Chennai-600002.

18. Coastal Energen Private Limited,
5th Floor, Buhari Towers No. 4, Moores Road,
Chennai-600006 (Tamil Nadu).

19. Ind-Bharath Power (Madras) Limited,
Pit no. 30-A, Road no-1, Film Nagar,
Hyderabad-500003 (Telangana). **…..Respondent(s)**

For Petitioner : Shri S. S. Raju, PGCIL
Shri B. Dash, PGCIL
Shri A. K. Verma, PGCIL
Shri V. P. Rastogi, PGCIL

For Respondents : Shri B. Vinodh Kanna, Advocate, TANGEDCO
Shri R. Srinivasan, TANGEDCO
Ms. R. Ramalakshmi, TANGEDCO

ORDER

The Petitioner, Power Grid Corporation of India Limited, has filed the instant petition 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 transmission tariff for the period from 1.4.2019 to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of the following transmission assets forming part of **Combined Asset** under Transmission System associated with Common System associated with Coastal Energen Private Limited and Ind-Bharat Power (Madras) Limited LTOA Generation Projects in Tuticorin Area-Part-A in Southern Region (hereinafter referred to as “the transmission system”):

Asset-1: LILO of one circuit of Tuticorin JV-Madurai 400 kV (Quad) Line at Tuticorin Pooling Station along with new 765 kV Pooling Station at Tuticorin (initially charged at 400 kV) including 1x80 MVAR, 400 kV Bus Reactor at Tuticorin Pooling Station; and

Asset-2: LILO of 2nd circuit of Tuticorin JV-Madurai 400 kV (Quad) Line at Tuticorin 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 and also projected to be incurred 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 petitioner to claim the Initial spares project as a whole.

8) 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.

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

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

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

3. **Backdrop of the case**

a) The Petitioner was entrusted with the implementation of the transmission system with its scope discussed and agreed in 29th and 30th SCM of Southern Region Constituents held on 27.8.2009 and 13.4.2010 respectively. The Investment Approval (I.A.) for the transmission system was accorded by the Board of Directors (BOD) of the Petitioner company vide Memorandum Ref. No. C/CP/LTA-Tuticorin Part-A dated 12.12.2011 (in its 263rd meeting held on 5.12.2011) at an estimated cost of ₹9044.00 lakh, including IDC of ₹402.00 lakh (based on 3rd Quarter, 2011 price level) with the scope of work as follows:

Transmission Lines
LILO of both circuits of Tuticorin JV-Madurai 400 kV D/C (Quad) line at Tuticorin Pooling Station

Sub-stations
Establishment of 765 kV Pooling Station in Tuticorin (initially charged at 400 kV) including 1x80 MVAR, 400 kV Bus Reactor

b) The provisional transmission tariff of LILO of both circuits of Tuticorin JV-Madurai 400 kV D/C (Quad) line at Tuticorin Pooling Station along with new 765 kV Pooling Station at Tuticorin (initially charged at 400 kV) including 1x80 MVAR, 400 kV Bus Reactor***** for the period from anticipated COD (15.9.2014) to 31.3.2019 was allowed by the Commission vide order dated 19.9.2014 in Petition No. 127/TT/2014.

** As nomenclatured in order dated 19.9.2014*

c) The Revised Cost Estimate (RCE) of the transmission system was accorded approval by BOD of the Petitioner company vide Memorandum Ref. No. C/CP/RCE-SR dated 23.2.2015 (in its 309th meeting held on 29.1.2015) at an estimated cost of ₹10320.00 lakh, including IDC of ₹769.00 lakh (based on August 2014 Price Level) with the revised/ modified scope of work as follows:

Transmission Lines
LILO of both circuits of Tuticorin JV-Madurai 400 kV D/C (Quad) line at Tuticorin Pooling Station

Sub-stations
Establishment of 400 kV Pooling Station in Tuticorin including 1x80 MVAR, 400 kV Bus Reactor

d) The transmission system was scheduled to be commissioned within 28 months from the date of I.A. of BOD. Therefore, the scheduled COD was 11.4.2014 against which Asset-1 and Asset-2 were commissioned on 4.1.2015 and 8.1.2015 respectively with a time over-run of 08 months, 23 days and 08 months, 27 days respectively.

e) The transmission tariff of Asset-1 and Asset-2 for the period from their respective COD to 31.3.2019 was allowed vide order dated 29.7.2016 in Petition No. 127/TT/2014. The time over-run in the commissioning of the transmission assets was not condoned by the Commission vide this order with the direction to come up with reasons for time over-run along with documentary proof at the time of truing up showing that there was tendering and re-tendering in respect of the transmission assets.

f) On the limited aspect of allowing the recovery of tariff of Asset-1 and Asset-2 as per PoC billing mechanism and direction as to the encashment of bank guarantees of Ind-Bharat Power (Madras) Limited (IBPL) and accordingly compensate in the transmission charges, a Review Petition No. 61/RP/2016 was filed by the Petitioner against order dated 29.7.2016 in Petition No. 127/TT/2014 which was disposed by the Commission vide order dated 29.6.2017.

g) The entire scope of work covered under the transmission system is complete and is covered in the instant petition.

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

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers. Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO), Respondent No. 4, has filed its reply vide affidavit dated 12.5.2021 and has raised the

issues of time over-run, restriction of IDC and IEDC, additional Return on Equity (RoE), excess Initial Spares and sharing of transmission charges. The Petitioner vide affidavit dated 25.5.2021 filed rejoinder to TANGEDCO's reply. The issues raised by TANGEDCO and the clarifications given by the Petitioner are considered in the relevant portions of this order.

6. This order is issued considering the submissions made by the Petitioner in the petition vide affidavit dated 5.11.2019, the Petitioner's affidavit dated 23.7.2020 filed in response to technical validation letter, TANGEDCO's reply filed affidavit dated 12.5.2021 and the Petitioner's rejoinder filed vide affidavit dated 25.5.2021.

7. The hearing in this matter was held on 18.5.2021 through video conference and the order was reserved. Having heard the learned counsel for TANGEDCO, representatives of the Petitioner and after perusal of the materials on record, we proceed to dispose of the petition.

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

8. The details of the trued-up transmission charges as claimed by the Petitioner in respect of the transmission assets for the 2014-19 tariff period are as follows:

(₹ in lakh)

Particulars	2014-15 (Pro-rata 87 days)	2015-16	2016-17	2017-18	2018-19
Asset-1					
Depreciation	65.72	295.12	311.24	333.17	350.22
Interest on Loan	107.36	450.49	438.66	422.46	406.57
Return on Equity	97.55	434.87	456.32	483.37	505.01
O&M Expenses	43.69	189.41	195.70	202.21	208.89
Interest on Working Capital	8.64	37.64	38.58	39.69	40.58
Total	**322.96**	**1407.53**	**1440.50**	**1480.90**	**1511.27**

(₹ in lakh)

Particulars	2014-15 (Pro-rata 83 days)	2015-16	2016-17	2017-18	2018-19
Asset-2					
Depreciation	11.26	52.71	55.61	55.61	55.61
Interest on Loan	14.72	63.93	60.89	53.05	47.52
Return on Equity	12.77	60.27	63.73	63.73	63.90
O&M Expenses	27.97	127.11	131.33	135.70	140.18
Interest on Working Capital	2.44	11.09	11.40	11.47	11.59
Total	**69.16**	**315.11**	**322.96**	**319.56**	**318.80**

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

(₹ in lakh)

Particulars	2014-15 (Pro-rata 87 days)	2015-16	2016-17	2017-18	2018-19
Asset-1					
WC for O&M Expenses (O&M Expenses for 1 month)	15.28	15.78	16.31	16.85	17.41
WC for Maintenance Spares (15% of O&M Expenses)	27.50	28.41	29.36	30.33	31.33
WC for Receivables (Equivalent to 2 months of annual fixed cost/ annual transmission charges)	225.83	234.59	240.08	246.82	251.88
Total Working Capital	**268.61**	**278.78**	**285.75**	**294.00**	**300.62**
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	**8.64**	**37.64**	**38.58**	**39.69**	**40.58**

(₹ in lakh)

Particulars	2014-15 (Pro-rata 83 days)	2015-16	2016-17	2017-18	2018-19
Asset-2					
WC for O&M Expenses (O&M Expenses for 1 month)	10.25	10.59	10.94	11.31	11.68
WC for Maintenance Spares (15% of O&M Expenses)	18.45	19.07	19.70	20.36	21.03
WC for Receivables (Equivalent to 2 months of annual fixed cost/ annual transmission charges)	50.69	52.52	53.83	53.26	53.13
Total Working Capital	79.39	82.18	84.47	84.93	85.84

Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	**2.44**	**11.09**	**11.40**	**11.47**	**11.59**

Capital Cost

10. The capital cost of the transmission system has been calculated in accordance with Regulation 9(3) of the 2014 Tariff Regulations.

11. The details of the capital cost as on COD, as on 31.3.2019 and projected Additional Capital Expenditure (ACE) for 2014-19 period in respect of the transmission assets as admitted by the Commission vide order dated 29.7.2016 in Petition No. 127/TT/2014 for determination of tariff for the 2014-19 period are tabulated as follows:

(₹ in lakh)

Asset	Admitted Capital Cost (as on COD)	ACE					Admitted Capital Cost (as on 31.3.2019)
		2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-1	6140.68*	400.74	1131.51	290.45	0.00	0.00	7963.38
Asset-2	890.05**	11.8	109.38	0.00	0.00	0.00	1011.23

* IDC and IEDC dis-allowed of ₹187.77 lakh and ₹422.40 lakh respectively
**IDC and IEDC dis-allowed of ₹33.10 lakh and ₹30.10 lakh respectively

12. Based on the Auditor's Certificate dated 30.7.2019, the details of the apportioned approved cost as per FR and RCE, capital cost as on COD, as on 31.3.2019 (including actual ACE during the 2014-19 period) as submitted by the Petitioner in this petition are as follows:

(₹ in lakh)

Asset	Apportioned Approved Cost (as per FR)	Apportioned Approved Cost (as per RCE)	Capital Cost (as on COD)	ACE					Capital Cost (as on 31.3.2019)
				2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-1	9044.00	8858.00	6750.85	400.74	402.11	331.24	583.88	102.53	8571.35
Asset-2		1462.00	956.92	11.8	109.38	0.00	0.00	0.00	1078.10

Time over-run

13. The transmission system was scheduled to be commissioned within 28 months from the date of I.A. of BOD. Therefore, the scheduled COD was 11.4.2014 against which Asset-1 and Asset-2 were commissioned on 4.1.2015 and 8.1.2015 respectively with a time over-run of 08 months, 23 days and 08 months, 27 days respectively.

14. The time over-run in the commissioning of the transmission assets was not condoned by the Commission vide order dated 29.7.2016 in Petition No. 127/TT/2014 with the direction to come up with reasons for time over-run along with documentary proof at the time of truing up showing that there was tendering and re-tendering in respect of the transmission assets.

15. Further, taking into consideration the findings and directions of the Commission given in order dated 29.7.2016 with respect to time over-run, the Petitioner in the instant petition has submitted as follows:

a) The delay was mainly due to delay in award of turnkey package consisting of LILO of 400 kV D/C Tuticorin JV to Madurai at Tuticorin pooling station and establishment of 765/400 kV Tuticorin pooling station which was initially awarded on 17.1.2012 through 'Domestic Competitive Bidding' under Single Stage Single Envelope (SSSE) Bidding Procedure, immediately after I.A. (accorded in December 2011).

b) Subsequently, M/s Siemens Limited (SIEMENS) was awarded the contract, which did not start the work even after lot of follow up. As SIEMENS neither signed the Contract Agreements nor submitted the Contract Performance Guarantees (CPGs) within the specified time frame, the award on SIEMENS was annulled and the bid security submitted by it, amounting to ₹101.91 lakh was encashed in May 2012 and credit of which was given in IEDC.

c) After the annulment of the said bidding process in May 2012, fresh bids for the subject package were invited. However, by this time, the Petitioner had completely switched over to Single Stage Two Envelope (SSTE) Bidding Procedure as per the Central Vigilance Commission (CVC) guidelines. Accordingly, IFB (Invitation for Bids) for the subject package was published on 12.6.2012. Further, under SSTE Bidding Procedure, the Second Envelope (i.e. the price part of the bid) is opened only in case of such bidders whose bids are found responsive to the specified requirements and who are assessed to have the requisite capability and capacity to execute the contract in the event of award. In line with the provisions of the biding documents and the extant policy and procedure, determination of substantial responsiveness of bids received as well as the assessment of capability and capacity of all the bidders, is to be carried out at the First Envelope stage itself, whereas, under SSSE Bidding Procedure, this exercise is largely limited to 2 to 4 shortlisted bidders, and to only the lowest evaluated bidder in respect of capacity and capability analysis/ assessment.

d) The SSTE Bidding Procedure involves opening of the Second Envelope by inviting the responsive bidders and allowing them sufficient time to attend the bid opening of Second Envelope, which also adds to the time taken under SSSE Bidding Procedure. Further, in the instant case, assessment of capability and capacity of two of the bidders/ JV partner were involved, which took considerable time subsequent to which, the award was placed on 25.3.2013 and competition schedule was compressed of 18 months.

e) The annulment of bidding process and re-starting the bidding process afresh under SSTE Bidding Procedure had caused an unavoidable initial delay of 15 months and work could be physically started after March 2013. Extracts of the minutes of the 49th meeting (dated 29.5.2012) of Committee of Directors on Award of contracts and document detailing the list of parties where assessment was required causing the delay has been submitted as documentary proofs to show that there was tendering and re-tendering involved in this case.

f) Detailed reasons for the annulment of bidding process and starting the bidding process afresh under SSTE Bidding Procedure as per CVC Guidelines which caused the unavoidable delay was submitted before the Commission and the same have been taken on record in order dated 29.7.2016.

g) Several ROW issues and court cases were faced during the construction at various locations since February 2014 and the matter was taken up at various levels in State Government and best efforts were made to complete the LILO Line. The chronology of events with respect to ROW for foundation of LILO Line associated with the transmission system in this petition is as follows:

Sl. No.	Date	Details
1	February 2014 to March 2014	Letter received form Mrs. Papa @ Pappamal objecting for the foundation works at Loc. AP2T and a reply is furnished stating the details of survey and the necessity for the line
2	15.4.2014	Letter to Tahsildar/ Ettayapuram intimating that out of 16 foundations, 10 foundations have been completedfBond/ in progress and landowners at 4 foundations are objecting and requested for support
	10.4.2014	Private notice received from advocates regarding filing of WP (MD) no. 6004

		of 2014 at Madurai Bench of Madras High Court by Mrs. Papa @ Pappamal
3	10.5.2014	Letter to Tahsildar/ Ettayapuram and Sub-Inspector of Polie/ Ettayapuram intimating that out of 16 foundations, 10 foundations have been completed/in progress and landowners at 4 foundations are objecting and requested for support stating a case is filed
4	15.5.2014	Letter to Inspector of Police regarding the objection of landowners while carrying out foundation at AP2T
5	19.5.2014	Reply to District Collector explaining the details based on the letter from District Collector/ Tuticorin
6	23.5.2014	Letter to Inspector of Police/ Ettayapuram requesting for support to carry out the works
7	27.5.2014	Letter to District Collector/ Tuticorin requesting for support carry out the works
8	30.5.2014	Tahsildar/ Ettayapuram convened a peace committee meeting and the landowners did not attend
9	2.6.2014	Tahsildar/ Ettayapuram convened a peace committee meeting and the landowners did not attend
10	5.6.2014	Copy of letter of Tahsildar/ Ettayapuram to District Collector/ Tuticorin after convening a peace committee meeting
11	13.6.2014	Letter received from T. Chandrabose H/o Mrs. Papa @ Pappamal requesting for one month's time
12	16.6.2014	Letter to District Collector/ Tuticorin requesting for protection to carry out the works since the 10 days' time asked by the landowners is elapsed
13	16.6.2014	Letter from District Collector/ Tuticorin to District Superintend of Police asking to provide protection to carry out the works
14	17.6.2014	Letter to Inspector of Police/ Ettayapuram and Tahsildar/Ettayapuram requesting for protection as directed by District Collector/Tuticorin
15	21.6.2014	Letter to Inspector of Police/ Ettayapuram requesting for protection as directed by District Collector/ Tuticorin
16	24.7.2014	Letter to Inspector of Police/ Ettayapuram requesting for protection as directed by District Collector/Tuticorin
17	1.8.2014	Letter to Inspector of Police/ Ettayapuram requesting for protection for 2 locations
18	15.10.2014	Letter to District Collector/ Tuticorin with a copy of Court Order wrt WP (MD) 6004 in which the court has ordered directing the Petitioner to approach the DC/Tuticorin
19	24.10.2014	Enquiry at Collectorate, Tuticorin
20	14.11.2014	Enquiry at Collectorate, Tuticorin
21	15.11.2014	Site inspection by District Collector/ Tuticorin
22	19.11.2014	Enquiry at Collectorate, Tuticorin
23	3.12.2014	Order by District Collector to provide the necessary compensation for the damages and to commence the work
24	4.12.2014	Letter to Superintendent of Police/ Tuticorin, Deputy Superintendent of Police/ Vilathikulam and Tahsildar/ Ettayapuram requesting for support for work
25	10.12.2014	Letter to Tahsildar/ Ettayapuram requesting for intervention in resolving the issue as the Police officials required the same
26	12.12.2014	Tahsildar/ Ettayapuram convened a peace committee meeting
27	16.12.2014	Letter to Tahsildar/ Ettayapuram intimating that RoW is resolved after meeting the landowners

16. In light of the foregoing, the Petitioner has submitted that the time over-run in this case was beyond the control of the Petitioner and has requested to condone the delay.

17. In response, TANGEDCO vide affidavit dated 12.5.2021 has filed counter statement with submissions as follows:

a) The Petitioner has stated that the cause for delay was mainly due to delay in tendering and re-tendering of contracts. The delay on account of the contract or bidding is not covered under uncontrollable factors. Despite the Petitioner furnishing the documentary proof for the time over-run, the reason stated totally comes under controllable factors as per Regulation 12(1)(c) of the 2014 Tariff Regulations.

b) With regards to the award details and ROW issues furnished by the Petitioner, the chronology of events exhibits the shiftless and unprofessional approach of the Petitioner in executing the transmission system. RoW issues have been raised after scheduled COD.

c) In view of above, since the reason provided by the Petitioner is unjustifiable and extraneous, the delay may not be condoned.

18. In response, the Petitioner vide affidavit dated 25.5.2021 has submitted that the details of time over-run have already been submitted in this petition and further the Petitioner has re-submitted the submissions/ prayer with respect to time over-run (as already made in this petition).

19. We have considered the submissions of the Petitioner and TANGEDCO. As per the Petitioner’s submission, the time over-run of 08 months, 23 days and 08 months, 27 days in the commissioning of Asset-1 and Asset-2 respectively was due to late award of the package, annulment and rebidding and ROW issues.

20. Based on the documents available on record, as submitted by the Petitioner related to tendering and re-tendering of the turnkey package with respect to the transmission system, we observe that post-bid discussions were held with SIEMENS from 6.12.2011 to 19.12.2011 and Notification of Awards for the Supply and Service Contracts were issued to SIEMENS on 17.1.2012. Further, reminder letters dated 16.3.2012 and 23.3.2012 were issued to SIEMENS to sign the Contract Documents and submit the Corporate Performance Guarantees (CPGs). However, SIEMENS vide letter dated 2.4.2012 requested for compensation in view of increase in Excise Duty,

CVD and Service Tax in the recent budget for all the bought out finished goods and services, to be included in the contract price. The Petitioner vide letter dated 12.4.2012, has submitted that the claim of SIEMENS for compensation 'in all bought-out finished goods and services' was not tenable as per the contract and could not be entertained. The bid validity of SIEMENS was up to 31.5.2012 and since SIEMENS neither signed the Contract Documents nor submitted CPG within the prescribed timelines, the award of SIEMENS was annulled and the bid security amounting to ₹101.91 lakh was encashed in May 2012. Further, we observe that during the re-tendering process initiated on 12.6.2012 based on SSTE Bidding Procedure, 04 bidders qualified for the package and award of the package to L1 bidder was executed in March 2012. There was delay in awarding said package after the re-tendering process on account of the need for post-bid clarifications and detailed assessment of the some of the bidders.

21. TANGEDCO has submitted that delay due to tendering and re-tendering of contracts totally comes under 'Controllable Factors' as per Regulation 12(1)(c) of 2014 Tariff Regulations, which is as follows:

> ***"12. Controllable and Uncontrollable factors:*** *The following shall be considered as controllable and uncontrollable factors leading to cost escalation impacting Contract Prices, IDC and IEDC of the project:*
>
> *(1) The "**controllable factors**" shall include but shall not be limited to the following:*
> *…..*
> *(c) Delay in execution of the project on account of contractor, supplier or agency of the generating company or transmission licensee."*

22. In view of the information as filed by the Petitioner, we observe that the delay on account of re-tendering of the package associated with the transmission system comes under 'Controllable Factors' as per Regulation 12(1)(c) of the 2014 Tariff Regulations since the same involves delay on account of contractor, supplier or agency of the Petitioner. Further, we observe that the CVC guidelines dated

11.12.2012 only states about transparency in works/ purchase/ consultancy contracts awarded on nomination basis but nothing about SSSE and SSTE. Therefore, the time over-run on account of tendering and re-tendering of the turnkey package with respect to the transmission system is not beyond the control of the Petitioner and the same is not condoned.

23. We also note that the Petitioner has claimed that time over-run is also on account of ROW issues. However, we note that in Petition No. 127/TT/2014, the Petitioner had not raised this issue and had claimed that the delay was only on account of late award of package, annulment and rebidding. Since the Petitioner had not submitted any documents to substantiate its claim for time over-run on account of late award of package, annulment and rebidding, the Commission vide order dated 29.7.2016 granted liberty to the Petitioner to submit details on that count to ascertain if the reasons attributed for time over-run were within or beyond control of the Petitioner. The relevant portion or order dated 29.7.2016 is extracted as under:

> *"21. We have considered the submissions of the petitioner and the respondent. The original schedule for the project start date is 12.12.2011 and completion date is 11.4.2014. However, work started in case of Asset-1 and Asset-2 on 26.3.13 and 400 kV Tuticorin New Sub-station on 16.12.2011 and finally completed on 4.1.2015 and 8.1.2015 respectively, i.e. the original schedule of project was planned to be completed within 28 months as per investment approval but actual completion took 37 months. Therefore, there is delay of 8 months and 23 days in case of Asset-1 and 8 months and 27 days in case of Asset-2. As per the petitioner's submission, the time over-run of about 9 months in commissioning of the instant assets is due to the late award of the package, annulment and rebidding. The annulment of bidding process and again starting the bidding process afresh under SSTE bidding procedure has caused an initial delay of 15 months and work could be started after March, 2013. However, the petitioner has not submitted any documents to substantiate its claim and to show that there was tendering and retendering in the case of instant assets. It is not possible for us to come to the conclusion whether the reasons attributed by the petitioner for time over-run are within or beyond the control of the petitioner on the basis of the documents available on record. Accordingly, the time over-run in case of the instant assets is not condoned. However, the petitioner is directed come up with the reasons for time over-run alongwith documentary proof at the time of truing up."*

24. In this Petition, the Petitioner has submitted chronology of events with respect to ROW issues for foundation of LILO Line associated with the transmission system

though there was no such submission in Petition No. 127/TT/2014. In our view, claim of delay on account of ROW issues is an afterthought and also, no such liberty was granted to the Petitioner to claim time over-run on this count vide order dated 29.7.2016 in Petition No. 127/TT/2014. Therefore, submissions of the Petitioner that time over-run was also on account of ROW issues cannot be considered in this petition. Even otherwise, on a perusal of the submissions of the Petitioner, there is no clarity as regards the exact time period attributable to the overall delay in the commissioning of the transmission system due to ROW issues.

25. In view of the foregoing observations, the time over-run of 08 months 23 days, and 08 months and 27 days in the commissioning of Asset-1 and Asset-2 respectively as claimed by the Petitioner is not condoned.

Cost over-run

26. We observe that against the apportioned approved capital cost with respect to RCE of the transmission assets covered in the instant petition as already mentioned, the capital cost as on 31.3.2019 including ACE is within the RCE apportioned approved capital cost. Therefore, there is no cost over-run.

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

27. Based on Auditor's Certificates dated 30.7.2019, the details of IDC, IDC discharged up to COD, during 2014-15 and 2015-16 in respect of the transmission assets as submitted by the Petitioner in this petition are as follows:

(₹ in lakh)

Asset	IDC as per Auditor's Certificates	IDC discharged up to COD	IDC discharged during 2014-15	IDC discharged during 2015-16
Asset-1	647.16	647.16	0.00	0.00
Asset-2	33.10	23.60	0.67	8.83

28. Based on Auditor's Certificates dated 30.7.2019, the details of IEDC, IEDC discharged up to COD in respect of the transmission assets as submitted by the Petitioner in this petition are as follows:

(₹ in lakh)

Asset	IEDC claimed as per Auditor's Certificates	IEDC discharged up to COD
Asset-1	908.16	908.16
Asset-2	31.36	31.36

29. With respect to infusion date of Bond XXXIV and mismatch of loan in Form 12 B, the observations of the Commission made in order dated 29.7.2016 in Petition No. 127/TT/2014 has been submitted by the Petitioner. Further, in general, land acquisition for sub-stations is initiated well before I.A. On the same lines, for Tuticorin Sub-station, the payment was made for land acquisition based on the assessment of State Government authority before I.A. Thus, there has been infusion of Bond XXXIV on 21.10.2010, i.e., before I.A. itself.

30. The Petitioner has submitted that total IDC as per Auditor's Certificates has been bifurcated into IDC discharged up to COD and IDC discharged subsequently. The statement showing IDC discharged up to COD consists of loans with respect to IDC discharged during subsequent years, which have been considered in tariff forms as part of ACE. Further, the loan considered in Form 9C and 12B with respect to COD cost (including ACE for accrual IDC) shall match with total of loans shown in statement showing IDC discharged up to COD.

31. The Petitioner has submitted that as per Auditor's Certificates, out of total claimed IDC, some IDC has been discharged up to COD and the remaining amount has been discharged during 2014-15, 2015-16. The same has been considered as part of ACE for 2014-15, 2015-16 in respect of Asset-2 and, therefore, for the purpose of tariff calculation, the corresponding loan has been reduced from loan as on COD

and added in loan as part of ACE. Accordingly, the cash IDC statement was made after the consideration of the total loan as on COD (including ACE loan for cash IDC).

32. The Petitioner has submitted that accrued IDC in respect of Asset-2 to be discharged during 2014-15 and 2015-16 has not been included in ACE for the respective year as per Auditor's Certificates and in respect of Asset-1, total IDC has been discharged up to COD. Further, the entire IEDC amount mentioned in Auditor's Certificates is on cash basis and is paid up to COD.

33. The Petitioner has prayed to:

a) Adjust ₹101.91 lakh in IEDC on account of forfeiting bid security from dis-allowed IEDC rather than IEDC up to scheduled COD, in case delay is not condoned.
b) Allow claimed IDC as per cash IDC statement (as submitted).
c) Consider the date of infusion of Bond XXXIV as 21.10.2010, for the purpose of calculation of IDC.

34. TANGEDCO has submitted that as per the provisos under Regulation 11(A)(2) and 11(B)(2) of the 2014 Tariff Regulations, IDC and IEDC corresponding to the delayed period can be allowed only if the delay is due to uncontrollable factors. The delay on account of the contract is not covered under uncontrollable factors. Hence, in line with the Commission's order dated 29.7.2016 in Petition No. 127/TT/2014, IDC of ₹187.77 lakh and IEDC of ₹422.40 lakh in respect of Asset-1 and also IDC of ₹33.10 lakh and IEDC of ₹30.04 lakh in respect of Asset-2 should be disallowed towards IDC and IEDC for the time over-run period which was not condoned by the Commission.

35. TANGEDCO has also submitted the observations of the Commission regarding IDC in order dated 29.7.2016 in Petition No. 127/TT/2014, based on which the Petitioner had submitted that land acquisition for sub-stations was initiated well before I.A. based on the assessment of State Government Authority. However, no

documentary proof evidencing infusion of debt fund before I.A. was produced. Hence, date of I.A. may be considered as the date of infusion for calculating IDC.

36. In response, the Petitioner vide affidavit dated 25.5.2021, has submitted that the bid security amount has been proportionately reduced from IEDC of the transmission assets and the same is visible in Form 12A. Also, in general, land acquisition for sub-stations was initiated well before I.A. On the same lines, for Tuticorin Sub-station, the payment was made for land acquisition based on the assessment of State Government authority and order of Hon'ble High Court of Madras dated 30.9.2011 in W.P. No. 14739 of 2011 i.e. before I.A. Thus, there has been infusion of Bond XXXIV on 21.10.2010 i.e. before the date of I.A. itself.

37. We have considered the submissions of the Petitioner and TANGEDCO. The time over-run of 08 months, 24 days in case of Asset-1 and 08 months, 28 days in case of Asset-2 has not been condoned. Accordingly, IDC is worked out based on the details given in the IDC statement. Further, the loan amount as on COD has been mentioned in Form 6 and Form 9C. IDC has been allowed only from the date of I.A.

38. The IDC claimed and considered as on COD and summary of discharge of IDC are as follows:

(₹ in lakh)

Asset	IDC as per Auditor's Certificates	IDC disallowed due to time over-run	IDC allowed	IDC discharged up to COD	IDC discharged during 2014-15	IDC discharged during 2015-16
	1	2	3=2-1	4	5	6
Asset-1	647.16	195.75	451.41	447.53	3.87	0.00
Asset-2	33.10	33.10	0.00	0.00	0.00	0.00

39. We observe that IEDC claimed above has been arrived at after reducing an amount of ₹101.91 lakh recovered from contractor. As the respective time over-run in case of the transmission assets has not been condoned, there is dis-allowance of IEDC. Accordingly, details of IEDC allowed are as follows:

(₹ in lakh)

Asset	IEDC as per Auditor's Certificates (A)	IEDC disallowed due to time over-run not condoned (B)	IEDC Allowed (A-B)
Asset-1	908.16	217.50	690.66
Asset-2	31.36	7.60	23.76

40. With regard to the prayer of the Petitioner to adjust ₹101.91 lakh in IEDC on account of forfeiting bid security from dis-allowed IEDC, in case delay is not condoned, we find it prudent to consider the principles laid down by the Appellate Tribunal for Electricity in its judgment dated 27.4.2011 in Appeal No. 72/2010 for dealing with the issue of time over-run in execution of projects, which are as follows:

> *"7.4. The delay in execution of a generating project could occur due to following reasons:*
>
> *i) due to factors entirely attributable to the generating company, e.g., imprudence in selecting the contractors/suppliers and in executing contractual agreements including terms and conditions of the contracts, delay in award of contracts, delay in providing inputs like making land available to the contractors, delay in payments to contractors/suppliers as per the terms of contract, mismanagement of finances, slackness in project management like improper co-ordination between the various contractors, etc.*
> *ii) due to factors beyond the control of the generating company e.g. delay caused due to force majeure like natural calamity or any other reasons which clearly establish, beyond any doubt, that there has been no imprudence on the part of the generating company in executing the project.*
> *iii) situation not covered by (i) & (ii) above.*
>
> *In our opinion in the first case the entire cost due to time over run has to be borne by the generating company. However, the Liquidated Damages (LDs) and insurance proceeds on account of delay, if any, received by the generating company could be retained by the generating company. In the second case the generating company could be given benefit of the additional cost incurred due to time over-run. However, the consumers should get full benefit of the LDs recovered from the contractors/suppliers of the generating company and the insurance proceeds, if any, to reduce the capital cost. In the third case the additional cost due to time overrun including the LDs and insurance proceeds could be shared between the generating company and the consumer. It would also be prudent to consider the delay with respect to some benchmarks rather than depending on the provisions of the contract between the generating company and its contractors/suppliers. If the time schedule is taken as per the terms of the contract, this may result in imprudent time schedule not in accordance with good industry practices."*

41. Applying the said principles, in this case, we observe that when the time over-run is attributable to the project developer (the Petitioner, in this case) or its contractors, the cost of the time over-run, i.e. IDC and IEDC has to be borne by the project developer and liquidated damages, if any, recovered can be retained by the

project developer. In the instant case, the time over-run in respect of the transmission assets has not been condoned. Further, the Petitioner has recovered an amount of ₹101.91 lakh after encashment of bid security submitted by its contractor. Though as per Board approval dated 5.12.2011 and RCE dated 23.2.2015, the adjustment of Rs.101.91 lakh in IEDC is not apparent, however the same is indicated in Form 12A of Asset-1. Due to the time over-run, an amount of ₹225.10 lakh (₹217.50+₹7.60) has been disallowed in respect of Asset-1 and Asset-2 which is more than the amount recovered by the Petitioner from its contractor. Accordingly, IEDC for the period of time over-run not condoned in respect of Asset-1 and Asset-2 is not capitalised and amount of ₹101.91 lakh recovered by the Petitioner is allowed to be adjusted. IEDC disallowed in respect of Asset-1 and Asset-2 is deducted from the capital cost as on COD and amount of ₹101.91 lakh (to the extent of IEDC disallowed) is added to the capital cost.

Initial Spares

42. Regulation 13(d) of the 2014 Tariff Regulations provides as follows:

> *"**13. Initial Spares:** Initial Spares shall be capitalised as a percentage of Plant and Machinery cost up to cut-off date, subject to following ceiling norms:*
>
> *…..*
>
> *(d) Transmission system*
> *(i) Transmission line - 1.00%*
> *(ii) Transmission Sub-station (Green Field) - 4.00%*
> *(iii) Transmission Sub-station (Brown Field) - 6.00%*
> *(iv) Series Compensation devices and HVDC Station – 4.00%*
> *(v) Gas Insulated Sub-station - 5.00%*
> *(vi) Communication system - 3.5%."*

43. The Petitioner has submitted that Initial Spares for Sub-station (Brown Field) head for the transmission assets are marginally above the ceiling norms as per Regulation 13 of the 2014 Tariff Regulations for individual transmission assets (forming part of the transmission system) but within the overall ceiling norm of the transmission system. Further, since the transmission system is considered as a whole,

the Petitioner has prayed to allow the Initial Spares as per the APTEL's judgment dated 14.9.2019 in Appeal No. 74 of 2017. Accordingly, the details of the Initial Spares as claimed by the Petitioner in this petition are as follows:

(₹ in lakh)

Asset	**Particulars**	**Total Plant & Machinery Cost (Excluding IDC, IEDC, Land Cost and Cost of Civil Works)**	**Initial Spares claimed**	**Ceiling (in %)**	**Initial Spares worked out**
Asset-1	Sub-station (Brownfield)	3260.45	130.20	6.00	199.80
Asset-2	Sub-station (Brownfield)	445.21	30.44	6.00	26.48
Total		**3705.66**	**160.64**	**6.00**	**226.28**

44. TANGEDCO has submitted that the Petitioner has claimed excess Initial Spares amounting to ₹3.92 lakh in respect of Asset-2 as per afore-mentioned judgment of the APTEL. TANGEDCO has contended that the judgement of APTEL is not applicable in the instant case. Additionally, TANGEDCO has repeated its submissions regarding excess Initial Spares (that has been made in several other petitions, including Petition No. 208/TT/2020, disposed by the Commission vide order dated 27.9.2021) and the same not being reproduced here for the sake of brevity.

45. In response, the Petitioner vide affidavit dated 25.5.2021 has submitted that since the Initial Spares are within the overall limit after considering the transmission system as a whole, the Petitioner has prayed that the Initial Spares claimed may be allowed.

46. We have considered the submissions of the Petitioner and TANGEDCO's submissions. The APTEL in its judgment dated 14.9.2019 had observed that the Commission, for the purpose of prudence check, may restrict the Initial Spares to the cost of the individual asset initially and later at the time of truing up, allow Initial Spares as per the ceiling on the overall project cost. The relevant portion of the said judgment is extracted as follows:

> *"18.13. ……… We do not agree with this methodology of restricting initial spares asset / element wise as adopted by the Central Commission. The Central Commission to*

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

47. In the instant petition, the transmission assets under the transmission system have been put into commercial operation during the 2014-19 tariff period and have been combined in the 2019-24 tariff period. The overall project cost is arrived at only while determination of the transmission tariff in the 2019-24 tariff period. Accordingly, the Initial Spares are allowed on the basis of the individual capital cost of the transmission assets in the 2014-19 tariff period and on the basis of the overall project cost in the 2019-24 tariff period.

48. Initial Spares for the transmission assets are allowed as per respective percentage of the Plant and Machinery Cost as on the cut-off date on individual basis. The Initial Spares allowed for the transmission assets are as follows:

Asset	Particulars	Plant and Machinery cost (excluding IDC/IEDC, Land cost & Cost of Civil Works) up to cut-off date (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Ceiling (in %)	Initial Spares allowable (₹ in lakh)	Initial Spares allowed (₹ in lakh)
		A	B	C	D=(A-B)*C/(100-C)	
Asset-1	Sub-station (Brownfield)	3260.45	130.20	6.00%	199.80	130.20
Asset-2	Sub-station (Brownfield)	445.21	30.44	6.00%	26.47	26.47

49. Since the Petitioner's claim of Initial Spares is within the ceiling for Asset-1, the Initial Spares have been allowed as claimed by the Petitioner. For Asset-2, there is excess Initial Spares of ₹3.97 lakh and that has been deducted from the capital cost as on COD.

<u>Capital Cost as on COD</u>

50. Accordingly, the details of the capital cost approved as on COD after adjustment of IDC, IEDC and Initial Spares are as follows:

(₹ in lakh)

Asset	Capital Cost claimed (as on COD) (A)	IDC disallowed due to time over-run (B)	IDC undischarged (as on COD) (C)	IEDC disallowed due to tme over-run (D)	Adjustment for amount recovered from Contractor (on account of time over-run not condoned) (E)	Excess Initial Spares disallowed (F)	Capital Cost allowed (as on COD) (F) = (A-B-C-D+E-F)
Asset-1	6750.85	195.75	3.87	217.50	101.91	0.00	6435.63
Asset-2	956.92	33.10	-	7.60	0.00	3.97	912.26

Additional Capital Expenditure

51. The Commission vide order dated 29.7.2016 in Petition No. 127/TT/2014 had allowed projected ACE of ₹1822.70 lakh for Asset-1 and ₹121.18 lakh for Asset-2 during the 2014-19 tariff period.

52. The Petitioner vide Auditor's Certificates dated 30.7.2019 has claimed the actual ACE in respect of the transmission assets during the 2014-19 tariff period as follows:

(₹ in lakh)

Asset	ACE during the 2014-19 tariff period				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-1	400.74	402.11	331.24	583.88	102.53
Asset-2	11.80	109.38	0.00	0.00	0.00

53. The Petitioner has submitted that ACE incurred in respect of the transmission assets is on account of any un-discharged liability towards final payment/ withheld payment due to contractual exigencies for works executed within the cut-off date and work unexecuted within the cut-off date. Further, ACE during 2014-18 has been claimed under Regulation 14(1)(i) and 14(1)(ii) of the 2014 Tariff Regulations and ACE during 2018-19 has been claimed under Regulation 14(2)(iv) of the 2014 Tariff Regulations and is towards the liability payment towards final payment/ withheld payment due to contractual exigencies for works executed within the cut-off date and payment made after cut-off date.

54. The Petitioner vide affidavit dated 23.7.2020 has submitted justification for ACE claimed of ₹102.53 lakh in case of Asset-1 during 2018-19 and the same is on account of undischarged liability for works executed prior to the cut-off date and has been claimed under Regulation 14 (2)(iv) of the 2014 Tariff Regulations. Further, the payments were made after submission of invoice and after reconciliation in accordance with contractual clause as per provisions of contract.

55. We have considered the submissions of the Petitioner. ACE claimed has been allowed under Regulations 14(1)(i), 14(1)(ii) and 14(2)(iv) of the 2014 Tariff Regulations. Accordingly, the details of ACE allowed along with IDC discharged are as follows:

(₹ in lakh)

Asset	ACE allowed during the 2014-19 tariff period						
	2014-15	2014-15 (IDC discharged)	Total for 2014-15	2015-16	2016-17	2017-18	2018-19
Asset-1	400.74	3.87	404.61	402.11	331.24	583.88	102.53
Asset-2	11.80	0.00	11.80	109.38	0.00	0.00	0.00

56. In view of the above, the details of the allowed capital cost as on COD, as on 31.3.2019 and ACE during the 2014-19 tariff period in respect of the transmission assets are as follows:

(₹ in lakh)

Asset	Capital Cost as on COD	ACE allowed during the 2014-19 period					Capital Cost as on 31.3.2019
		2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-1	6435.63	404.61	402.11	331.24	583.88	102.53	8260.00
Asset-2	912.26	11.80	109.38	0.00	0.00	0.00	1033.44

Debt-Equity Ratio

57. The Petitioner has claimed debt-equity ratio of 70:30 as on COD. Debt-Equity ratio has been considered in accordance with Regulation 19 of the 2014 Tariff Regulations. The details of the debt-equity as on COD and 31.3.2019 in respect of the transmission assets considered for the purpose of truing up of tariff for the 2014-19 period is as follows:

Funding	Capital Cost (as on COD) (₹ in lakh)	(in %)	Capital Cost as (on 31.3.2019) (₹ in lakh)	(in %)
Asset-1				
Debt	4504.94	70.00	5782.00	70.00
Equity	1930.69	30.00	2478.00	30.00
Total	**6435.63**	**100.00**	**8260.00**	**100.00**
Asset-2				
Debt	638.58	70.00	723.41	70.00
Equity	273.68	30.00	310.03	30.00
Total	**912.26**	**100.00**	**1033.44**	**100.00**

Depreciation

58. The Petitioner's claim towards depreciation in this petition was found higher than the depreciation allowed for Asset-1 vide order dated 29.7.2016 in Petition No. 127/TT/2014. The Petitioner has neither given any justification for claiming higher depreciation than that was allowed earlier nor made any specific prayer for allowing higher depreciation in this petition. It is observed that in Petition No. 127/TT/2014, the Petitioner had claimed IT equipment as part of sub-station despite there being a clear provision in the 2014 Tariff Regulations for higher depreciation for IT equipment. However, in this Petition, to claim higher depreciation, the Petitioner has segregated the IT equipment from sub-station. A similar issue had come up in Petition No. 19/TT/2020 which was dealt by the Commission vide order dated 9.5.2020.

59. In terms of the order dated 9.5.2020 in Petition No. 19/TT/2020, depreciation has been considered for IT equipment @5.28% as part of the sub-station up to 31.3.2019 while truing up the capital expenditure for the 2014-19 period. However, for the 2019-24 tariff period, IT equipment has been considered separately and depreciation has been allowed @15% for balance depreciable value of IT equipment in accordance with Regulation 33 of the 2019 Tariff Regulations.

60. The Gross Block during the 2014-19 period has been depreciated at Weighted Average Rate of Depreciation (WAROD). WAROD at Annexure-I has been worked out taking into consideration the depreciation rates of assets as specified in the 2014

Tariff Regulations and trued-up depreciation allowed in respect of the transmission assets during the 2014-19 tariff period are as follows:

(₹ in lakh)

Particulars	2014-15 (Pro-rata 87 days)	2015-16	2016-17	2017-18	2018-19
Asset-1					
Opening Gross Block	6435.63	6840.24	7242.35	7573.59	8157.47
ACE	404.61	402.11	331.24	583.88	102.53
Closing Gross Block	6840.24	7242.35	7573.59	8157.47	8260.00
Average Gross Block	6637.94	7041.30	7407.97	7865.53	8208.74
Freehold Land	1492.37	1492.37	1492.37	1492.37	1492.37
Weighted average rate of Depreciation (WAROD) (in %)	3.74	3.79	3.81	3.86	3.89
Balance useful life of the asset (Year)	25	25	24	23	22
Lapsed life at the beginning of the year (Year)	0	0	1	2	3
Depreciable Value	4631.01	4994.04	5324.04	5735.85	6044.73
Depreciation during the year	**59.22**	**267.00**	**282.52**	**303.43**	**319.63**
Cumulative Depreciation at the end of the year	59.22	326.22	608.75	912.17	1231.80
Remaining Depreciable Value at the end of the year	4571.79	4667.81	4715.30	4823.68	4812.93

(₹ in lakh)

Particulars	2014-15 (Pro-rata 83 days)	2015-16	2016-17	2017-18	2018-19
Asset-2					
Opening Gross Block	912.26	924.06	1033.44	1033.44	1033.44
ACE	11.80	109.38	0.00	0.00	0.00
Closing Gross Block	924.06	1033.44	1033.44	1033.44	1033.44
Average Gross Block	918.16	978.75	1033.44	1033.44	1033.44
Weighted average rate of Depreciation (WAROD) (in %)	5.20	5.17	5.16	5.16	5.16
Balance useful life of the asset (Year)	29	29	28	27	26
Lapsed life at the beginning of the year (Year)	0	0	1	2	3
Depreciable Value	826.34	880.87	930.10	930.10	930.10
Depreciation during the year	**10.85**	**50.61**	**53.29**	**53.29**	**53.29**
Cumulative Depreciation at the end of the year	10.85	61.46	114.75	168.04	221.32
Remaining Depreciable Value at the end of the year	815.49	819.41	815.35	762.06	708.77

61. Depreciation in respect of the transmission assets as allowed vide order dated 29.7.2016 in Petition No. 127/TT/2014, claimed by the Petitioner in the instant petition and trued-up depreciation in the instant order is as follows:

(₹ in lakh)

Particulars	2014-15 (Pro-rata 87 days)	2015-16	2016-17	2017-18	2018-19
Asset-1					
Allowed vide order dated 29.7.2016 in Petition No. 127/TT/2014	55.80	269.07	300.83	306.97	306.97
Claimed by the Petitioner in the instant petition	65.72	295.12	311.24	333.17	350.22
Approved after true-up in this order	59.22	267.00	282.52	303.43	319.63

(₹ in lakh)

Particulars	2014-15 (Pro-rata 83 days)	2015-16	2016-17	2017-18	2018-19
Asset-2					
Allowed vide order dated 29.7.2016 in Petition No. 127/TT/2014	10.59	49.46	52.14	52.14	52.14
Claimed by the Petitioner in the instant petition	11.26	52.71	55.61	55.61	55.61
Approved after true-up in this order	10.85	50.61	53.29	53.29	53.29

Interest on Loan (IoL)

62. The Petitioner has claimed Weighted Average Rate of Interest (WAROI) on loan based on its actual loan portfolio and rate of interest. Accordingly, IoL has been calculated based on actual interest rates in accordance with Regulation 26 of the 2014 Tariff Regulations. The trued-up IoL allowed in respect of the transmission assets for the 2014-19 tariff period is as follows:

(₹ in lakh)

Particulars	2014-15 (Pro-rata 87 days)	2015-16	2016-17	2017-18	2018-19
Asset-1					
Gross Normative Loan	4504.94	4788.17	5069.65	5301.52	5710.23
Cumulative Repayments up to Previous Year	0.00	59.22	326.22	608.75	912.17
Net Loan-Opening	4504.94	4728.95	4743.42	4692.77	4798.06

Additions	283.23	281.48	231.87	408.72	71.77
Repayment during the year	59.22	267.00	282.52	303.43	319.63
Net Loan-Closing	4728.95	4743.42	4692.77	4798.06	4550.20
Average Loan	4616.95	4736.19	4718.10	4745.41	4674.13
Weighted Average Rate of Interest on Loan (in %)	9.3194	9.1310	8.9761	8.6477	8.4989
Interest on Loan	**102.56**	**432.46**	**423.50**	**410.37**	**397.25**

(₹ in lakh)

Particulars	2014-15 (Pro-rata 83 days)	2015-16	2016-17	2017-18	2018-19
Asset-2					
Gross Normative Loan	638.58	646.84	723.41	723.41	723.41
Cumulative Repayments up to Previous Year	0.00	10.85	61.46	114.75	168.04
Net Loan-Opening	638.58	635.99	661.95	608.66	555.37
Additions	8.26	76.57	0.00	0.00	0.00
Repayment during the year	10.85	50.61	53.29	53.29	53.29
Net Loan-Closing	635.99	661.95	608.66	555.37	502.08
Average Loan	637.29	648.97	635.30	582.01	528.73
Weighted Average Rate of Interest on Loan (in %)	9.7813	9.4619	9.1848	8.7356	8.6137
Interest on Loan	**14.17**	**61.40**	**58.35**	**50.84**	**45.54**

63. IoL in respect of the transmission assets as allowed vide order dated 29.7.2016 in Petition No. 127/TT/2014, claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

(₹ in lakh)

Particulars	2014-15 (Pro-rata 87 days)	2015-16	2016-17	2017-18	2018-19
Asset-1					
Allowed vide order dated 29.7.2016 in Petition No. 127/TT/2014	97.97	444.45	463.79	443.90	414.30
Claimed by the Petitioner in the instant petition	107.36	450.49	438.66	422.46	406.57
Approved after true-up in this order	102.56	432.46	423.50	410.37	397.25

(₹ in lakh)

Particulars	2014-15 (Pro-rata 83 days)	2015-16	2016-17	2017-18	2018-19
Asset-2					
Allowed vide order dated 29.7.2016 in Petition No.	13.83	61.98	60.75	55.66	50.57

127/TT/2014					
Claimed by the Petitioner in the instant petition	14.72	63.93	60.89	53.05	47.52
Approved after true-up in this order	14.17	61.40	58.35	50.84	45.54

Return on Equity (RoE)

64. The Petitioner has claimed RoE in respect of the transmission assets in terms of Regulations 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that it is liable to pay income tax at Minimum Alternate Tax (MAT) rates and has claimed the effective tax rates for the 2014-19 tariff period as follows:

Year	Claimed effective tax rate (in %)	Grossed-up RoE (in %) [(Base Rate)/(1-t)]
2014-15	21.018	19.624
2015-16	21.382	19.715
2016-17	21.338	19.704
2017-18	21.337	19.704
2018-19	21.549	19.757

65. The Commission in order dated 27.4.2020 in Petition No. 274/TT/2019 had arrived at the effective tax rates for the Petitioner based on the notified MAT rates for the Petitioner which are as follows:

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

66. MAT rates considered in order dated 27.4.2020 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, have been considered in the instant case which are as follows:

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

67. The Petitioner has claimed RoE for the 2014-19 period after grossing up RoE @15.50% with Effective Tax rates (based on MAT rates) each year as per Regulation 25(3) of the 2014 Tariff Regulations. RoE is trued-up on the basis of the MAT rates applicable in the respective years and is allowed in respect of the transmission assets for the 2014-19 tariff period as follows:

(₹ in lakh)

Particulars	**2014-15 (Pro-rata 87 days)**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Asset-1					
Opening Equity	1930.69	2052.07	2172.71	2272.08	2447.24
Additions	121.38	120.63	99.37	175.16	30.76
Closing Equity	2052.07	2172.71	2272.08	2447.24	2478.00
Average Equity	1991.38	2112.39	2222.39	2359.66	2462.62
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
Return on Equity	**93.08**	**416.25**	**437.92**	**464.97**	**486.56**

(₹ in lakh)

Particulars	**2014-15 (Pro-rata 83 days)**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Asset-2					
Opening Equity	273.68	277.22	310.03	310.03	310.03
Additions	3.54	32.81	0.00	0.00	0.00
Closing Equity	277.22	310.03	310.03	310.03	310.03
Average Equity	275.45	293.62	310.03	310.03	310.03
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
Return on Equity	**12.28**	**57.86**	**61.09**	**61.09**	**61.26**

68. RoE in respect of the transmission assets as allowed vide order dated 29.7.2016 in Petition No. 127/TT/2014, claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

(₹ in lakh)

Particulars	2014-15 (Pro-rata 87 days)	2015-16	2016-17	2017-18	2018-19
Asset-1					
Allowed vide order dated 29.7.2016 in Petition No. 127/TT/2014	88.92	418.11	459.94	468.48	468.48
Claimed by the Petitioner in the instant petition	97.55	434.87	456.32	483.37	505.01
Approved after true-up in this order	93.08	416.25	437.92	464.97	486.56

(₹ in lakh)

Particulars	2014-15 (Pro-rata 83 days)	2015-16	2016-17	2017-18	2018-19
Asset-2					
Allowed vide order dated 29.7.2016 in Petition No. 127/TT/2014	11.99	56.27	59.49	59.49	59.49
Claimed by the Petitioner in the instant petition	12.77	60.27	63.73	63.73	63.90
Approved after true-up in this order	12.28	57.86	61.09	61.09	61.26

Operation & Maintenance Expenses (O&M Expenses)

69. The total O&M Expenses as claimed by the Petitioner in respect of the transmission assets for the 2014-19 period are as follows:

(₹ in lakh)

Asset	2014-15 (Pro-rata)	2015-16	2016-17	2017-18	2018-19
Asset-1	43.69	189.41	195.70	202.21	208.89
Asset-2	27.97	127.11	131.33	135.70	140.18

70. The O&M Expenses claimed in respect of the various elements covered under the transmission assets are as per the norms specified in the 2014 Tariff Regulations and are allowed as follows:

(₹ in lakh)

Particulars	2014-15 (Pro-rata 87 days)	2015-16	2016-17	2017-18	2018-19
Asset-1					
Transmission Line (LILO of one ckt. of Tuticorin JV-Madurai 400 kV D/C quad Line at Tuticorin PS					
D/C Twin Conductor (kms)	2.285	2.285	2.285	2.285	2.285
Norms (₹ lakh/km)	1.062	1.097	1.133	1.171	1.21
400 kV bays (Tuticorin-Madurai, Tuticorin)					
400 kV bays	3	3	3	3	3
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	**43.70**	**189.41**	**195.70**	**202.21**	**208.89**

(₹ in lakh)

Particulars	2014-15 (Pro-rata 83 days)	2015-16	2016-17	2017-18	2018-19
Asset-2					
Transmission Line (LILO of 2nd ckt. of Tuticorin JV-Madurai					
D/C Twin Conductor (kms)	2.285	2.285	2.285	2.285	2.285
Norms (₹ lakh/km)	1.062	1.097	1.133	1.171	1.21
400 kV bays (Tutocorin-Madurai, Tutocorin)					
400 kV bays	2	2	2	2	2
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
Total O&M Expenses (₹ in lakh)	**27.98**	**127.11**	**131.33**	**135.70**	**140.18**

71. O&M Expenses in respect of the transmission assets as allowed vide order dated 29.7.2016 in Petition No. 127/TT/2014, claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

(₹ in lakh)

Particulars	2014-15 (Pro-rata 87 days)	2015-16	2016-17	2017-18	2018-19
Asset-1					
Allowed vide order dated 29.7.2016 in Petition No. 127/TT/2014	43.19	189.41	194.58	201.05	207.70
Claimed by the Petitioner in the instant petition	43.69	189.41	195.70	202.21	208.89
Approved after true-up in this order	43.70	189.41	195.70	202.21	208.89

(₹ in lakh)

Particulars	2014-15 (Pro-rata 83 days)	2015-16	2016-17	2017-18	2018-19
Asset-2					
Allowed vide order dated 29.7.2016 in Petition No. 127/TT/2014	27.40	126.03	130.22	134.55	138.99
Claimed by the Petitioner in the instant petition	27.97	127.11	131.33	135.70	140.18
Approved after true-up in this order	27.98	127.11	131.33	135.70	140.18

Interest on Working Capital

72. IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and the trued-up IWC allowed in respect of the transmission assets for the 2014-19 tariff period are as follows:

(₹ in lakh)

Particulars	2014-15 (Pro-rata 87 days)	2015-16	2016-17	2017-18	2018-19
Asset-1					
Working Capital for O&M Expenses (O&M Expenses for 1 month)	15.28	15.78	16.31	16.85	17.41
Working Capital for Maintenance Spares (15% of O&M Expenses)	27.50	28.41	29.35	30.33	31.33
Working Capital for Receivables (Equivalent to 2 months of annual fixed cost/ annual transmission charges)	214.55	223.54	229.46	236.55	241.93
Total Working Capital	**257.33**	**267.74**	**275.13**	**283.73**	**290.67**
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	**8.28**	**36.14**	**37.14**	**38.30**	**39.24**

(₹ in lakh)

Particulars	2014-15 (Pro-rata 83 days)	2015-16	2016-17	2017-18	2018-19
Asset-2					
WC for O&M Expenses (O&M Expenses for 1 month)	10.25	10.59	10.94	11.31	11.68
WC for Maintenance Spares (15% of O&M Expenses)	18.45	19.07	19.70	20.35	21.03

WC for Receivables (Equivalent to 2 months of annual fixed cost/ annual transmission charges)	49.61	51.32	52.55	52.04	51.95
Total Working Capital	**78.32**	**80.98**	**83.19**	**83.70**	**84.66**
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	**2.40**	**10.93**	**11.23**	**11.30**	**11.43**

73. IWC in respect of the transmission assets as allowed vide order dated 29.7.2016 in Petition No. 127/TT/2014, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)

Particulars	2014-15 (Pro-rata 87 days)	2015-16	2016-17	2017-18	2018-19
Asset-1					
Allowed vide order dated 29.7.2016 in Petition No. 127/TT/2014	7.97	36.51	38.94	39.17	38.86
Claimed by the Petitioner in the instant petition	8.64	37.64	38.58	39.69	40.58
Approved after true-up in this order	8.28	36.14	37.14	38.30	39.24

(₹ in lakh)

Particulars	2014-15 (Pro-rata 83 days)	2015-16	2016-17	2017-18	2018-19
Asset-2					
Allowed vide order dated 29.7.2016 in Petition No. 127/TT/2014	2.35	10.82	11.16	11.28	11.41
Claimed by the Petitioner in the instant petition	2.44	11.09	11.40	11.47	11.59
Approved after true-up in this order	2.40	10.93	11.23	11.30	11.43

Approved Annual Fixed Charges for the 2014-19 Tariff Period

74. The trued-up Annual Fixed Charges (AFC) approved in respect of the transmission assets for the 2014-19 tariff period are as follows:

(₹ in lakh)

Particulars	2014-15 (Pro-rata 87 days)	2015-16	2016-17	2017-18	2018-19
Asset-1					
Depreciation	59.22	267.00	282.52	303.43	319.63
Interest on Loan	102.56	432.46	423.50	410.37	397.25
Return on Equity	93.08	416.25	437.92	464.97	486.56
O&M Expenses	43.70	189.41	195.70	202.21	208.89
Interest on Working Capital	8.28	36.14	37.14	38.30	39.24
Total	**306.84**	**1341.26**	**1376.78**	**1419.28**	**1451.58**

(₹ in lakh)

Particulars	2014-15 (Pro-rata 83 days)	2015-16	2016-17	2017-18	2018-19
Asset-2					
Depreciation	10.85	50.61	53.29	53.29	53.29
Interest on Loan	14.17	61.40	58.35	50.84	45.54
Return on Equity	12.28	57.86	61.09	61.09	61.26
O&M Expenses	27.98	127.11	131.33	135.70	140.18
Interest on Working Capital	2.40	10.93	11.23	11.30	11.43
Total	**67.69**	**307.91**	**315.29**	**312.22**	**311.70**

75. Accordingly, the Annual Transmission Charges as allowed in respect of the transmission assets vide order dated 29.7.2016 in Petition No. 127/TT/2014, claimed by the Petitioner in the instant petition and approved after truing up in the instant order are as follows:

(₹ in lakh)

Particulars	2014-15 (Pro-rata 87 days)	2015-16	2016-17	2017-18	2018-19
Asset-1					
Allowed vide order dated 29.7.2016 in Petition No. 127/TT/2014	293.85	1357.54	1458.07	1459.58	1436.31
Claimed by the Petitioner in the instant petition	322.96	1407.53	1440.50	1480.90	1511.27
Approved after true-up in this order	306.84	1341.26	1376.78	1419.28	1451.58

(₹ in lakh)

Particulars	2014-15 (Pro-rata 83 days)	2015-16	2016-17	2017-18	2018-19
Asset-2					
Allowed vide order dated 29.7.2016 in Petition No.	66.16	304.56	313.76	313.12	312.59

127/TT/2014					
Claimed by the Petitioner in the instant petition	69.16	315.11	322.96	319.56	318.80
Approved after true-up in this order	67.69	307.91	315.29	312.22	311.70

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

76. The Petitioner has combined Asset-1 and Asset-2 into Combined Asset and claimed tariff accordingly. The details of the transmission charges as claimed by the Petitioner in respect of Combined Asset for the 2019-24 tariff period are as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	407.59	407.63	403.18	383.65	383.65
Interest on Loan	424.32	388.35	353.96	320.60	287.48
Return on Equity	543.77	543.83	543.83	543.83	543.83
O&M Expenses	172.44	178.31	184.38	190.65	197.14
Interest on Working Capital	28.20	27.98	27.66	27.14	26.86
Total	**1576.32**	**1546.10**	**1513.01**	**1465.87**	**1438.96**

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

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
WC for O&M Expenses (O&M Expenses for 1 month)	14.37	14.86	15.37	15.89	16.43
WC for Maintenance Spares (15% of O&M Expenses)	25.87	26.75	27.66	28.60	29.57
WC for Receivables (Equivalent to 45 days of annual transmission charges)	193.81	190.62	186.54	180.72	176.92
Total Working Capital	**234.05**	**232.23**	**229.57**	**225.21**	**222.92**
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	**28.20**	**27.98**	**27.66**	**27.14**	**26.86**

Effective Date of Commercial Operation (E-COD)

78. The Petitioner has claimed E-COD of Combined Asset as 4.1.2015. Based on the trued-up capital cost and COD of the individual assets, E-COD has been worked out as follows:

Asset	Allowed Capital Cost (as on 31.3.2019) (₹ in lakh)	COD	Number of days from last COD	Weightage of cost (in %)	Weighted days	E-COD (Latest COD - Total Weighted Days)
Asset-1	8260.00	4.1.2015	4	88.88	3.56	**4.1.2015**
Asset-2	1033.44	8.1.2015	0	11.12	0.00	
Total	**9293.44**			**100.00**	3.56	

79. E-COD is used to determine the lapsed life of the transmission system as a whole which works out as 04 (four) 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)

80. The life as defined in Regulation 33 of the 2019 Tariff Regulations has been considered for determination of WAL.

81. 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 WAL has been used as the useful life of the transmission system as a whole.

82. WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2019 and their respective life as specified in the 2019 Tariff Regulations. Accordingly, WAL of Combined Asset has been worked out as 26 years as follows:

Particulars	Life (in years) (1)	Capital Cost (as on 31.3.2019) (₹ in lakh) (2)	Weighted Cost (₹ in lakh) (3) = (1) * (2)	Weighted Average Life of Asset (in years) (4) = (3)/(2)
Building & Civil Works	25	2065.84	51646.10	
Transmission Line	35	1055.57	36945.03	**25.65 years (rounded off to 26 years)**
Sub-Station	25	4259.32	106482.91	
PLCC	15	267.56	4013.36	
IT Equipment including software	6.67	152.78	1019.03	
Total		**7801.07**	**200106.42**	

83. 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, E-COD of Combined Asset is 4.1.2015 and the lapsed life of the transmission system as a whole works out as 04 (four) years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD). Accordingly, WAL has been used to determine the remaining useful life as on 31.3.2019 to be 22 years.

Capital Cost

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

> ***"1.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 renovation and modernisation as admitted by this Commission in accordance with these regulations;

(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 upto 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 de-capitalised 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."

85. The Petitioner has claimed capital cost of ₹9649.45 lakh as on 31.3.2019 in respect of Combined Asset. The capital cost worked out by the Commission as on 31.3.2019 is ₹9293.44 lakh and the same has been considered as the opening capital cost as on 1.4.2019 for determination of tariff for the 2019-24 tariff period in accordance with Regulation 19 of the 2019 Tariff Regulations.

<u>Initial Spares</u>

86. The transmission assets covered under the transmission system have been combined and the overall project cost is arrived at in the 2019-24 tariff period and, therefore, Initial Spares allowed during the 2019-24 tariff period are on the basis of the overall project cost as per the APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017. The Plant and Machinery cost (excluding IDC and IEDC) is considered as on cut-off date and is based on the Auditor's Certificates which is as follows:

Asset	Particulars	Plant & Machinery Cost (Excluding IDC, IEDC, Land Cost & Cost of civil Works) up to cut-off date (₹ in lakh)	Initial Spares Claimed (₹ in lakh)	Ceiling Limit (in %)	Initial Spares allowable as per the 2014 Tariff Regulations and APTEL judgment dated 14.9.2019 (₹ in lakh)	Initial Spares worked out (₹ in lakh)	Initial Spares allowed for combined Asset (₹ in lakh)
Asset-1	Sub-station (Brownfield)	3260.45	130.20	6.00	199.80	130.20	3.97
Asset-2	Sub-station (Brownfield)	445.21	30.44	6.00	26.48	26.47	
Total		**3705.66**	**160.64**		**226.28**	**156.67**	

87. In terms of the APTEL's judgment dated 14.9.2019 in Appeal No. 74 of 2017, additional Initial Spares of ₹3.97 lakh (₹160.64-₹156.67) for Combined Asset have been allowed.

88. Accordingly, the capital cost as on 1.4.2019 allowed after adjusting Initial Spares is as follows:

(₹ in lakh)

Capital Cost (as on 31.3.2019)	Additional Initial Spares allowed as per the APTEL judgment dated 14.9.2019	Capital Cost (as on 1.4.2019)
9293.44	3.97	9297.41

Additional Capital Expenditure

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

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

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

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

90. The Petitioner has claimed ACE of ₹2.18 lakh during 2019-20 in respect of Combined Asset under Regulation 25(1)(d) of the 2019 Tariff Regulations and on account of any undischarged liability towards final payment/ withheld payment due to contractual exigencies for works executed within the cut-off date and payment made after cut-off date. Further, the payments are expected to be made after submission of invoice and after reconciliation in accordance with contractual clause as per provisions of contract.

91. We have considered the submissions of the Petitioner. ACE claimed by the Petitioner has been allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations as it is on account of undischarged liability for works executed prior to the cut-off date. Accordingly, the capital cost as on 31.3.2024 in respect of Combined Asset is considered as follows:

(₹ in lakh)

Admitted Capital Cost (as on 1.4.2019)	Admitted ACE	Capital Cost (as on 31.3.2024)
	2019-20	
9297.41	2.18	9299.59

Debt-Equity Ratio

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

> ***"18. Debt-Equity Ratio**: (1) For new projects, the debt-equity ratio of 70:30 as on date of commercial operation shall be considered. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:*
>
> *Provided that:*
>
> i. *where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:*
> ii. *the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*
> iii. *any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.*
>
> ***Explanation-**The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.*
>
> *(2) The generating company or the transmission licensee, as the case may be, shall submit the resolution of the Board of the company or approval of the competent authority in other cases regarding infusion of funds from internal resources in support of the utilization made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.*
>
> *(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, debt: equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2019 shall be considered:*
>
> *Provided that in case of a generating station or a transmission system including communication system which has completed its useful life as on or after 1.4.2019, if the equity actually deployed as on 1.4.2019 is more than 30% of the capital cost, equity in excess of 30%shall not be taken into account for tariff computation;*
>
> *Provided further that in case of projects owned by Damodar Valley Corporation, the debt: equity ratio shall be governed as per sub-clause (ii) of clause (2) of Regulation 72 of these regulations.*
>
> *(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2019, the Commission shall approve the debt: equity ratio in accordance with clause (1) of this Regulation.*
>
> *(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this Regulation."*

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

Funding	Capital Cost (as on 1.4.2019) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2024) (₹ in lakh)	(in %)
Debt	6508.19	70.00	6509.71	70.00
Equity	2789.22	30.00	2789.88	30.00
Total	**9297.41**	**100.00**	**9299.59**	**100.00**

Depreciation

94. Regulations 33(1), 33(2) and 33(5) of the 2019 Tariff Regulations provide as follows:

> *"**33. Depreciation:** (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system or element thereof including communication system. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units:*
>
> *Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.*
>
> *(2)The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of a transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis."*
>
> *(3)The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:*
>
> *Provided that the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable;*
>
> *Provided further that in case of hydro generating stations, the salvage value shall be as provided in the agreement, if any, signed by the developers with the State Government for development of the generating station:*
>
> *Provided also that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff:*
>
> *Provided also that any depreciation disallowed on account of lower availability of the generating station or unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life or the extended life.*

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

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

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

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

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

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

95. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. WAROD at Annexure-II has been worked out as per the rates of depreciation specified in the 2019 Tariff Regulations. The depreciation allowed in respect of Combined Asset for the 2019-24 tariff period is as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	9297.41	9299.59	9299.59	9299.59	9299.59
Projected ACE	2.18	0.00	0.00	0.00	0.00
Closing Gross Block	9299.59	9299.59	9299.59	9299.59	9299.59
Average Gross Block	9298.50	9299.59	9299.59	9299.59	9299.59
Freehold Land	1492.37	1492.37	1492.37	1492.37	1492.37
Weighted Average Rate of Depreciation (WAROD) (in %)	4.19	4.19	4.19	4.19	4.19
Balance useful life at the beginning of the year (Year)	22	21	20	19	18
Lapsed Life of the asset (Year)	4	5	6	7	8

Aggregated Depreciable Value	7040.79	7041.77	7041.77	7041.77	7041.77
Combined Depreciation during the year	**389.72**	**389.76**	**389.76**	**389.76**	**389.76**
Aggregate Cumulative Depreciation at the end of the year	1842.85	2232.61	2622.37	3012.13	3401.89
Remaining Aggregated Depreciable Value at the end of the year	5197.94	4809.16	4419.40	4029.64	3639.88

Interest on Loan

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

> ***"32. Interest on loan capital:*** *(1) The loans arrived at in the manner indicated in Regulation 18 of these regulations shall be considered as gross normative loan for calculation of interest on loan.*
>
> *(2) The normative loan outstanding as on 1.4.2019 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2019 from the gross normative loan.*
>
> *(3) The repayment for each of the year of the tariff period 2019-24 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalisation of such asset.*
>
> *(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.*
>
> *(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:*
>
> *Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered;*
>
> *Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.*
>
> *(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.*
>
> *(7) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing."*

97. WAROI on loan has been considered on the basis of rate prevailing as on 1.4.2019. The Petitioner has prayed that the change in interest rate due to floating rate

of interest applicable, if any, during the 2019-24 tariff period will 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 in respect of Combined Asset for the 2019-24 tariff period is as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	6508.19	6509.71	6509.71	6509.71	6509.71
Cumulative Repayments upto Previous Year	1453.12	1842.85	2232.61	2622.37	3012.13
Net Loan-Opening	5055.06	4666.86	4277.10	3887.34	3497.58
Additions	1.53	0.00	0.00	0.00	0.00
Repayment during the year	389.72	389.76	389.76	389.76	389.76
Net Loan-Closing	4666.86	4277.10	3887.34	3497.58	3107.82
Average Loan	4860.96	4471.98	4082.22	3692.46	3302.70
Weighted Average Rate of Interest on Loan (in %)	8.5456	8.5193	8.5229	8.5274	8.5153
Interest on Loan	**415.40**	**380.98**	**347.92**	**314.87**	**281.23**

Return on Equity

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

> ***"30. Return on Equity**: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with Regulation 18 of these regulations.*
>
> *(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating station, transmission system including communication system and run-of-river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run-of-river generating station with pondage:*
>
> *Provided that return on equity in respect of additional capitalization after cut-off date beyond the original scope 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:

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."

99. The Petitioner has submitted that MAT rate is applicable to the Petitioner's company. We have considered the submissions of the Petitioner. Accordingly, MAT rate applicable in 2019-20 has been considered for the purpose of RoE, which shall be trued-up with actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. RoE allowed in respect of Combined Asset for the 2019-24 tariff period is as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	2789.22	2789.88	2789.88	2789.88	2789.88
Additions	0.65	0.00	0.00	0.00	0.00
Closing Equity	2789.88	2789.88	2789.88	2789.88	2789.88
Average Equity	2789.55	2789.88	2789.88	2789.88	2789.88
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
Return on Equity	**523.93**	**523.99**	**523.99**	**523.99**	**523.99**

Operation & Maintenance Expenses

100. The O&M Expenses as claimed by the Petitioner for the various elements included in Combined asset for the 2019-24 period are as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
4.57 kms Double Circuit 04 Numbers of Conductor	6.04	6.26	6.48	6.70	6.94
05 Numbers of 400 kV Bays	160.75	166.40	172.25	178.30	184.55
PLCC (2% of ₹282.40 lakh)	5.65	5.65	5.65	5.65	5.65
Total O&M Expenses	**172.44**	**178.31**	**184.38**	**190.65**	**197.14**

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

> "***35. Operation and Maintenance Expenses: (3) Transmission system:*** *(a) The following normative operation and maintenance expenses shall be admissible for the transmission system:*

Particulars	***2019-20***	***2020-21***	***2021-22***	***2022-23***	***2023-24***
Norms for sub-station Bays (₹ Lakh per bay)					
765 kV	*45.01*	*46.60*	*48.23*	*49.93*	*51.68*
400 kV	*32.15*	*33.28*	*34.45*	*35.66*	*36.91*
220 kV	*22.51*	*23.30*	*24.12*	*24.96*	*25.84*
132 kV and below	*16.08*	*16.64*	*17.23*	*17.83*	*18.46*
Norms for Transformers (₹ Lakh per MVA)					
765 kV	*0.491*	*0.508*	*0.526*	*0.545*	*0.564*
400 kV	*0.358*	*0.371*	*0.384*	*0.398*	*0.411*
220 kV	*0.245*	*0.254*	*0.263*	*0.272*	*0.282*
132 kV and below	*0.245*	*0.254*	*0.263*	*0.272*	*0.282*
Norms for AC and HVDC lines (₹ Lakh per km)					
Single Circuit (Bundled Conductor with six or more sub-conductors)	*0.881*	*0.912*	*0.944*	*0.977*	*1.011*
Single Circuit (Bundled conductor with four sub-conductors)	*0.755*	*0.781*	*0.809*	*0.837*	*0.867*
Single Circuit (Twin & Triple Conductor)	*0.503*	*0.521*	*0.539*	*0.558*	*0.578*
Single Circuit (Single Conductor)	*0.252*	*0.260*	*0.270*	*0.279*	*0.289*
Double Circuit (Bundled conductor with four or more sub-	*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.

*"**35(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."*

102. We have considered the submissions of the Petitioner. The Petitioner has claimed O&M Expenses separately for PLCC under Regulation 35(4) of the 2019 Tariff Regulation @2% of its original project cost in the instant petition. 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 Tariff Regulations and the 2019 Tariff Regulations and the norms for sub-station have been specified accordingly. Accordingly, the Commission vide order dated 24.1.2021 in Petition No. 126/TT/2020 has already concluded that no separate O&M Expenses can be allowed for PLCC under Regulation 35(4) of the 2019 Tariff Regulations even though PLCC is a communication system. Therefore, the Petitioner's claim for separate O&M Expenses for PLCC @2% is not allowed.

103. The O&M Expenses in respect of Combined Asset for the 2019-24 tariff period have been worked out as per the norms specified in the 2019 Tariff Regulations and the same are allowed as follows:

(₹ in lakh)

	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses					
42.70 kms Double Circuit 04 numbers Conductor					
Norms (₹ lakh/km)	1.322	1.368	1.416	1.466	1.517
Total	6.04	6.25	6.47	6.70	6.93
05 Numbers of 400 kV bays					
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
Total	160.75	166.40	172.25	178.30	184.55
Total O&M Expense allowed (₹ in lakh)	**166.79**	**172.65**	**178.72**	**185.00**	**191.48**

Interest on Working Capital

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

> ***"34. Interest on Working Capital:*** *(1) The working capital shall cover:*
>
> ***(c)For Hydro Generating Station (including Pumped Storage Hydro Generating Station) and Transmission System:***

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

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

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

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

"3. Definitions …

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

105. The Petitioner has submitted that it has computed IWC for the 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest considered is 12.05% (SBI 1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, for 2020-21 has been considered as 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) whereas 2021-22 onwards has been considered as 10.50% (SBI 1 year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points). The components of the working capital and interest allowed thereon in respect of Combined Asset for the 2019-24 tariff period is as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for 1 month)	13.90	14.39	14.89	15.42	15.96

Working Capital for Maintenance Spares (15% of O&M Expenses)	25.02	25.90	26.81	27.75	28.72
Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	187.27	184.02	180.46	177.13	173.28
Total Working Capital	**226.18**	**224.31**	**222.16**	**220.30**	**217.96**
Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
Interest on Working Capital	**27.26**	**25.23**	**23.33**	**23.13**	**22.89**

Annual Fixed Charges of the 2019-24 Tariff Period

106. The transmission charges allowed in respect of Combined Asset for the 2019-24 tariff period are as follows:

(₹ in lakh)

Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Depreciation	389.72	389.76	389.76	389.76	389.76
Interest on Loan	415.40	380.98	347.92	314.87	281.23
Return on Equity	523.93	523.99	523.99	523.99	523.99
O&M Expenses	166.79	172.65	178.72	185.00	191.48
Interest on Working Capital	27.26	25.23	23.33	23.13	22.89
Total	**1523.10**	**1492.62**	**1463.73**	**1436.76**	**1409.36**

Filing Fee and the Publication Expenses

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

Licence Fee & RLDC Fees and Charges

108. 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 Regulation 70(3) of the 2019 Tariff Regulations for the 2019-24 tariff period.

Goods and Services Tax

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

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

Security Expenses

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

112. We have considered the submissions of the Petitioner. The Petitioner has claimed consolidated security expenses for all the transmission assets owned by it on projected basis for the 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19 in Petition No. 260/MP/2020. The Commission vide order dated 3.8.2021 in Petition No. 260/MP/2020 approved security expenses from 1.4.2019 to 31.3.2024. Therefore, security expenses will be shared in terms of the order dated 3.8.2021 in Petition No. 260/MP/2020. Therefore, the Petitioner's prayer in the instant petition for allowing it to file a separate petition for claiming the overall security expenses and consequential IWC has become infructuous.

Capital Spares

113. 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

114. TANGEDCO in its affidavit dated 12.5.2021 has submitted as follows:

a) Objection towards sharing of transmission charges as per the PoC mechanism has been made along with request to dismiss this petition as without upstream connectivity in the Tuticorin pooling station, LILO of the lines associated with the transmission system will be redundant.

b) Appeal No. 206 of 2016 has been filed by TANGEDCO before the APTEL against the Commission's directions given to the generators, M/s. Coastal Energen Private Limited (CEPL) and IBPL vide order dated 29.7.2016 in Petition No. 127/TT/2014 pertaining to sharing of charges on 50:50 basis till commissioning of the dedicated lines, delinking the upstream connectivity.

c) Direction may be given to the Petitioner to place on record the details of recovery made from the generators as per the Commission's order dated 29.7.2016 till the commissioning of the dedicated lines and to further place on record the action taken against the defaulting generator, IBPL which has abandoned the project.

d) The 2020 Sharing Regulations were notified on 4.5.2020, which came into effect on 1.11.2020 and, hence, Yearly Transmission Charges (YTC) till 31.10.2020 should be shared as per the 2010 Sharing Regulations and from 1.11.2020, the transmission charges should be shared as per the 2020 Sharing Regulations and requested the Commission to issue suitable directions to allocate the trued-up yearly transmission charges as per both the Regulations.

115. In response, the Petitioner vide affidavit dated 25.5.2021, while quoting a part of the Commission's findings in order dated 29.7.2016 on sharing of transmission charges, has submitted that 50% transmission charges were billed on CEPL from

COD of the transmission assets to 27.10.2016 i.e. till the commissioning of dedicated transmission line up to Tuticorin Pooling Station (the same was paid by CEPL) and thereafter being billed through PoC mechanism. Also, 50% transmission charges were billed on IBPL from COD of the transmission assets to 31.12.2018 i.e. till the termination of TSA and, thereafter, being billed through PoC. Further, since IBPL has not made any payment against the bills raised as per the Commission's afore-stated findings, the outstanding dues were adjusted by enchasing bank guarantee submitted by IBPL. Afterwards, the sharing of transmission charges for the 2014-19 period and the 2019-24 period up to 31.10.2020 shall be done as per the 2010 Sharing Regulations and thereafter from 1.11.2020 onwards shall be done as per the 2020 Sharing Regulations.

116. The Petitioner has submitted that the tariff determination and sharing of transmission charges are two independent activities and same cannot be interlinked. After the determination of tariff of the assets by the Commission, the aspects of YTC bifurcation as raised by TANGEDCO shall be taken care of by CTU at the time of billing.

117. We have considered the submissions of the Petitioner and TANGEDCO. The Commission vide order dated 29.7.2016 in Petition No. 127/TT/2014 had held as follows:

> *"77. Thus, drawing analogy from above, we are of the view that CEPL and IBPL shall pay transmission charges for the instant assets till the dedicated transmission line upto the Tuticorin Pooling Station are constructed and declared under commercial operation and put to regular use by the concerned generating station. If one of the generating stations commissions the dedicated transmission line, in that case 50% of the charges of LILO will be included under PoC and the balance 50% of the transmission charges shall be borne by the generating which has not commissioned the dedicated transmission line. After both the generating stations commission the dedicated transmission lines, the billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time, as provided in Regulation 43 of the 2014 Tariff Regulations.*

78. In case of non-payment of the charges by the generators, CEPL and IBPL, the petitioner shall be entitled to claim the same by en-cashing the Bank Guarantee given by these generators.”

118. Re-emphasizing on the afore-stated findings on sharing of transmission charges, we are of the view that the transmission charges for the 2014-19 period shall be shared as per the order dated 29.7.2016. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems was governed by the 2010 Sharing Regulations and with effect from 1.11.2020 (after repeal of the 2010 Sharing Regulations), sharing of transmission charges is governed by the 2020 Sharing Regulations. Accordingly, the liabilities of DICs for arrears of transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of respective Tariff Regulations and Sharing Regulations and shall be recovered from the concerned DICs through Bills under Regulation 15(2)(b) of the 2020 Sharing Regulations. Billing, collection and disbursement of the transmission charges for subsequent period shall be recovered in terms of provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

119. We agree with the submissions of the Petitioner that tariff determination and sharing of transmission charges are two independent activities and they are not interlinked. The tariff of the transmission assets is determined in accordance with the provisions of the relevant Tariff Regulations and after the determination of tariff of the assets by the Commission, the sharing of YTC amongst DICs are worked out in terms of provisions of the relevant Sharing Regulations and bills are raised accordingly.

120. We further observe that as TANGEDCO has filed an Appeal No. 206 of 2016 against the Commission’s order dated 29.7.2016, the transmission charges in respect of the transmission assets although shall be shared as per the instant order but subject to the outcome of the said Appeal.

121. To summarise:

a) The trued-up AFC approved in respect of the transmission assets for 2014-19 period are as follows:

(₹ in lakh)

Asset	2014-15 (Pro-rata)	2015-16	2016-17	2018-19	2018-19
Asset-1	306.84	1341.26	1376.78	1419.28	1451.58
Asset-2	67.69	307.91	315.29	312.22	311.70

b) AFC allowed in respect of Combined Asset for the 2019-24 tariff period in this order are as follows:

(₹ in lakh)

2019-20	2020-21	2021-22	2022-23	2023-24
1523.10	1492.62	1463.73	1436.76	1409.36

122. Annexure-I and Annexure-II hereinafter shall form part of the order.

123. This order disposes of Petition No. 41/TT/2020 in terms of the above discussions and findings.

sd/-	sd/-	sd/-
(P. K. Singh)	**(I. S. Jha)**	**(P. K. Pujari)**
Member	**Member**	**Chairperson**

ANNEXURE-I

Asset-1

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014/ COD (₹ in lakh)	ACE (₹ in lakh)						Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2014-15	2015-16	2016-17	2017-18	2018-19	Total			2014-15	2015-16	2016-17	2017-18	2018-19
Land – Freehold	1492.37	-	-	-	-	-	-	1492.37	-	-	-	-	-	-
Building Civil Works & Colony	1244.95	127.89	158.24	240.38	99.90	102.53	728.94	1973.89	3.34%	43.72	48.50	55.15	60.84	64.22
Transmission Line	564.93	2.01	10.58	-	19.20	-	31.79	596.72	5.28%	29.88	30.21	30.49	31.00	31.51
Sub Station	2815.19	263.94	219.76	87.37	438.65	-	1009.72	3824.91	5.28%	155.61	168.38	176.49	190.37	201.96
PLCC	205.74	0.24	4.75	-	8.61	-	13.60	219.34	6.33%	13.03	13.19	13.34	13.61	13.88
IT Equipment (Incl. Software)	112.45	10.54	8.78	3.49	17.52	-	40.33	152.78	5.28%	6.22	6.73	7.05	7.60	8.07
Total	6435.63	404.61	402.11	331.24	583.88	102.53	1824.37	8260.00		248.45	267.00	282.52	303.43	319.63
								Average Gross Block (₹ in lakh)		**6637.94**	**7041.30**	**7407.97**	**7865.53**	**8208.74**
								Weighted Average Rate of Depreciation		**3.74%**	**3.79%**	**3.81%**	**3.86%**	**3.89%**

Asset-2

2014-19 / Capital Expenditure	Admitted Capital Cost as on 1.4.2014/ COD (₹ in lakh)	ACE (₹ in lakh) 2014-15	ACE 2015-16	ACE Total	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh) 2014-15	2015-16	2016-17	2017-18	2018-19
Building Civil Works & Colony	58.40	8.65	24.91	33.56	91.96	3.34%	2.09	2.66	3.07	3.07	3.07
Transmission Line	423.85	1.59	33.41	35.00	458.85	5.28%	22.42	23.35	24.23	24.23	24.23
Sub Station	387.58	1.46	45.37	46.83	434.41	5.28%	20.50	21.74	22.94	22.94	22.94
PLCC	42.43	0.10	5.69	5.79	48.22	6.33%	2.69	2.87	3.05	3.05	3.05
Total	**912.26**	**11.80**	**109.38**	**121.18**	**1033.44**		**47.71**	**50.61**	**53.29**	**53.29**	**53.29**
					Average Gross Block (₹ in lakh)		**918.16**	**978.75**	**1033.44**	**1033.44**	**1033.44**
					Weighted Average Rate of Depreciation		**5.20%**	**5.17%**	**5.16%**	**5.16%**	**5.16%**

ANNEXURE-II

2019-24	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
Capital Expenditure		**2019-20**	**Total**			**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Land - Freehold	1492.37	-	-	1492.37	-	-	-	-	-	-
Building Civil Works & Colony	2065.84	2.18	2.18	2068.02	3.34%	69.04	69.07	69.07	69.07	86.67
Transmission Line	1055.57	-	-	1055.57	5.28%	55.73	55.73	55.73	55.73	44.24
Sub Station	4263.29	-	-	4263.29	5.28%	225.10	225.10	225.10	225.10	178.68
PLCC	267.56	-	-	267.56	6.33%	16.94	16.94	16.94	16.94	11.21
IT Equipment (Incl. Software)	152.78	-	-	152.78	15.00%	22.92	22.92	22.92	22.92	22.92
Total	**9297.41**	**2.18**	**2.18**	**9299.59**		**389.72**	**389.76**	**389.76**	**389.76**	**389.76**
				Average Gross Block (₹ in lakh)		**9298.50**	**9299.59**	**9299.59**	**9299.59**	**9299.59**
				Weighted Average Rate of Depreciation		**4.19%**	**4.19%**	**4.19%**	**4.19%**	**4.19%**