

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 82/TT/2020

Coram:

Shri P. K. Pujari, Chairperson

Shri I. S. Jha, Member

Shri Arun Goyal, Member

Date of Order: 02.02.2021

In the Matter of:

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999 and truing up of transmission tariff of the 2014-19 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2014 and determination of transmission tariff for the 2019-24 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2019 for the Combined Asset consisting of Asset-I(A): LILO of Neelamangala-Somanhalli 400 kV D/C Line at Bidadi; Asset-I(B): 1X63 MVAR Bus Reactor at Bidadi; Asset-II(A): 1X500 MVA ICTs with associated bays and equipments and downstream network at Bidadi GIS Sub-station; Asset-II(B): 1X500 MVA ICTs with associated bays and equipments and downstream network at Bidadi GIS Sub-station under System Strengthening-X in Southern Region.

And in the Matter of:

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

.....Petitioner

Vs

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



Order in Petition No. 82/TT/2020

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



14. Chamundeswari Electricity Supply Corporation Ltd.,
927, L J Avenue, Ground Floor, New Kantharaj Urs Road,
Saraswaturam, Mysore-570009, Karnataka.
15. Electricity Department,
Government of Goa,
Vidyuti Bhawan, Panaji, Goa-403001.
16. Transmission Corporation of Telangana Ltd.,
Vidhyut Sudha, Khairatabad,
Hyderabad, 500082.
17. Tamil Nadu Transmission Corporation,
NPKRR Maaligai, 800, Anna Salai,
Chennai-600002.

.....Respondent(s)

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

For Respondent: Shri S. Vallinayagam, Advocate, TANGEDCO

ORDER

The instant petition has been filed by Power Grid Corporation of India Ltd. (hereinafter referred to as “the Petitioner”), a deemed transmission licensee, for truing up of tariff of the period from 1.4.2014 to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and for determination of tariff 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 assets (hereinafter collectively referred to as “the Combined Asset”) under System Strengthening-X in Southern Region (hereinafter referred to as “the transmission project”) :



Order in Petition No. 82/TT/2020

Asset-I(A): LILO of Neelamangala-Somanhalli 400 kV D/C Line at Bidadi;

Asset-I(B): 1X63 MVAR Bus Reactor at Bidadi;

Asset-II(A): 1X500 MVA ICTs with associated bays and equipment and downstream network at Bidadi GIS Sub-station; and

Asset-II(B): 1X500 MVA ICTs with associated bays and equipment and downstream network at Bidadi GIS Sub-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.

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 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.

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



9) Allow the petitioner Initial Spares for the project as a whole.

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.”

Background

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

a) The Investment Approval (IA) for the transmission project was accorded by the Board of Directors of the Petitioner Company on 10.12.2009 at an estimated capital cost of ₹27661 lakh including an IDC of ₹1853 lakh (based on 3rd Quarter 2009 price level). The scope of work under the transmission project broadly includes:

Transmission Line:

i. LILO of both circuits of Neelamangala-Somanhalli 400 kV D/C Transmission Line at Bidadi 400 kV GIS Sub-station-25 km.

Sub-station:

i. Establishment of new 400/220 kV GIS Sub-station at Bidadi with 2X500 MVA 400/220 kV transformers.

b) The complete scope of the transmission project as per IA is covered in the instant petition.

c) The date of commercial operation (COD) of the transmission assets are as under:

Asset nomenclature in order dated 29.2.2016 in Petition No.	Asset Description	SCOD	COD	Time over-run	Time over-run condoned
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504/TT/2014					
Asset-I(A)	LILO of Neelamangala-Somanhalli 400 kV D/C Line at Bidadi	1.5.2012	1.4.2012	Nil	-
Asset-I(B)	1X63 MVAR Bus Reactor at Bidadi	1.5.2012	1.6.2012	1 month	Nil
Asset-II(A)	1X500 MVA ICTs with associated bays and equipment and downstream network at Bidadi GIS Sub-station	1.5.2012	1.4.2012	Nil	-
Asset-II(B)	1X500 MVA ICTs with associated bays and equipment and downstream network at Bidadi GIS Sub-station	1.5.2012	1.4.2013	11 months	Nil

d) The Commission *vide* order dated 29.2.2016 in Petition No. 504/TT/2014 trued up the tariff of the 2009-14 tariff period and tariff was allowed for the Combined Asset for the 2014-19 tariff period. AFC (annual fixed charges) allowed for the transmission assets *vide* order dated 29.2.2016 and the trued up transmission tariff claimed by the Petitioner are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Fixed Charges (AFC) approved <i>vide</i> order dated 29.2.2016 in Petition No. 504/TT/2014	3899.12	3975.73	3919.56	3864.30	3810.11
Claimed based on instant truing up Petition	3867.64	3946.44	3893.87	3829.03	3771.41

4. The Respondents are distribution licensees and Power Departments which are procuring transmission services from the Petitioner and are mainly beneficiaries of the Southern Region.

5. The Petitioner has served the petition on the Respondents and notice of this petition has been published in newspapers in accordance with Section 64 of the



Order in Petition No. 82/TT/2020

Electricity Act, 2003. No suggestions or objections have been received from the general public in response to the aforesaid notices published in the newspapers by the Petitioner. General Notice dated 12.3.2020 directing the beneficiaries/ Respondents to file reply in the matter was also published on the Commission's website. Tamil Nadu Generation and Distribution Corporation Ltd. (TANGEDCO), Respondent No. 4, has filed its reply along with an undertaking dated 16.7.2020 to file hard copy of counter-affidavit and other documents after lifting of the lockdown. TANGEDCO has, however, filed affidavit dated 27.8.2020. TANGEDCO has raised the issues of additional capital expenditure (ACE) beyond the cut-off date and revision of Initial Spares. The Petitioner *vide* affidavit dated 27.7.2020 has filed rejoinder to the reply of TANGEDCO. The issues raised by TANGEDCO and the clarifications given by the Petitioner are considered in the relevant paragraphs of this order.

6. This order is issued considering the submissions made in the Petition, Petitioner's affidavits dated 29.10.2019, 12.3.2020, and 30.6.2020; TANGEDCO's reply along with an undertaking dated 16.7.2020 and Petitioner's rejoinder to the reply of TANGEDCO filed *vide* affidavit dated 27.7.2020.

7. The hearing in this matter was held on 24.6.2020 and 10.8.2020 through video conference and the order was reserved.

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



Truing Up of Annual Fixed Charges of the 2014-19 Tariff Period

9. The Petitioner has claimed the following trued-up tariff for the Combined Asset for the 2014-19 tariff period, as per the revised Tariff Forms submitted *vide* affidavit dated 30.6.2020:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	888.79	919.75	922.97	923.43	923.43
Interest on Loan	1041.38	1009.02	925.11	834.52	748.13
Return on Equity	1115.98	1170.01	1174.10	1174.92	1178.02
Interest on Working Capital	109.45	111.97	111.56	110.89	110.42
O&M Expenses	712.04	735.69	760.13	785.27	811.41
Total	3867.64	3946.44	3893.87	3829.03	3771.41

10. The Petitioner has claimed the following trued-up Interest on Working Capital (IWC) for the Combined Asset for the period from 1.4.2014 to 31.3.2019 as per the revised Tariff Forms submitted *vide* affidavit dated 30.6.2020:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	59.34	61.31	63.34	65.44	67.62
Maintenance Spares	106.81	110.35	114.02	117.79	121.71
Receivables	644.61	657.74	648.98	638.17	628.57
Total Working Capital	810.76	829.40	826.34	821.40	817.90
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	109.45	111.97	111.56	110.89	110.42

Effective Date of Commercial Operation (E-COD)

11. The Petitioner has stated that the E-COD of the Combined Asset is considered as 1.6.2012. However, based on the capital cost admitted as on 31.3.2014 and actual dates of commercial operation of the individual assets, E-COD has been approved as under:



Asset	Admitted Capital Cost as on 31.3.2014 (₹ in lakh)	COD	No. of days from COD of Asset from COD of Project	Weight of cost (%)	Weighted days
I(A)	10483.03	1.4.2012	365	57.79	210.93
I(B)	408.86	1.6.2012	304	2.25	6.85
II(A)	5654.42	1.4.2012	365	31.17	113.77
II(B)	1594.00	1.4.2013	0	8.79	0.00
Total	18140.31			100.00	331.55
Effective COD (latest COD less weighted days)					4.5.2012

Weighted Average Life (WAL) of the transmission assets

12. WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2014 and their respective life as specified in the 2014 Tariff Regulations. Accordingly, WAL of the transmission assets put into commercial operation during the 2009-14 period has been worked out as 26 years as shown under:

Particulars	Life (in years) (A)	Trued-up Capital Cost as on 31.3.2014 (₹ in lakh) (B)	Weighted Cost (₹ in lakh) (C)=(A)x(B)	Weighted Average Life of Asset (in years) (D) = (C)/(B)
Land – Freehold	0	0	0.00	26.30 years (rounded off to 26 years)
Land – Leasehold	0	0	0.00	
Building Civil Works & Colony	25	1,098.36	27,459.09	
Transmission Line	35	2,773.90	97,086.50	
Sub Station	25	11,806.63	2,95,165.72	
PLCC	15	226.13	3,391.91	
IT Equipment (Incl. Software)*	6	235.29	1,411.74	
Total		16,140.31[#]	4,24,514.96	

* IT Equipment has been considered as a part of sub-station in the 2014-19 tariff period as discussed in para 48 of this order.

Total capital cost admitted as on 31.3.2014 is ₹18140.31 lakh and includes cost of land of ₹2000 lakh which is not considered for weighted average life of the assets.



Initial Spares

13. Regulation 8 of the 2009 Tariff Regulations as amended vide the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (Third Amendment) Regulations, 2012 provides that Initial Spares shall be capitalized as a percentage of the original project cost, subject to the following ceiling norms:

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

14. The Initial Spares claimed by the Petitioner are as under:

(₹ in lakh)

Asset	Sub-station	Estimated Completion Cost (A)	Initial Spares claimed by Petitioner (B)	Ceiling (%) (C)	Initial Spares worked out (as claimed by Petitioner)	Excess Initial Spares E=B-D
					$D = [(A-B)*C / (100-C)]$	
I(A)	GIS	9379.55	468.41	3.50	323.20	145.21
I(B)		516.38	25.33	3.50	17.81	7.52
II(A)		5769.03	288.39	3.50	198.78	89.61
II(B)		1619.00	0.00	3.50	58.72	-58.72
Total		17283.96	782.13	3.50	598.51	183.62

15. TANGEDCO has submitted that as per affidavit of the Petitioner dated 28.5.2012 in Petition No. 65/TT/2012, it included the cost of Initial Spares of Asset-II(B) in the cost of Asset-II(A) and the Commission had restricted the Initial Spares based on individual element-wise cost in the true up order of the 2009-14 period. TANGEDCO has further submitted that the Petitioner is trying to re-open the matter of Initial Spares of Asset-II(A) which has already been approved by the Commission.



16. TANGEDCO has submitted that the Commission *vide* order dated 21.4.2016 in Petition No. 53/TT/2015 had restricted the excess Initial Spares based on element-wise capital cost and the same was re-affirmed in order dated 7.9.2016 in Petition No. 35/RP/2016. TANGEDCO has further submitted that the Commission in the aforementioned order had relied on the judgement of the Appellate Tribunal for Electricity (APTEL) dated 28.11.2013 in Appeal No. 165 of 2012, wherein the Commission's policy of considering the apportioned cost of the individual assets for computation of tariff was upheld. In light of the above, TANGEDCO has submitted that judgement of APTEL dated 14.9.2019 in Appeal No. 74 of 2017 is contradictory to its earlier judgement in Appeal No. 165 of 2012 and has requested that the excess Initial Spares may be restricted based on the capital cost of individual asset. In response, the Petitioner *vide* affidavit dated 30.6.2020 has submitted that APTEL *vide* judgement dated 14.9.2019 in Appeal No. 74 of 2017 has allowed the computation of Initial Spares based on overall cost of the project after considering the facts/ orders issued by it in its various previous judgements and the Petitioner requested to allow the Initial Spares as claimed.

17. We have considered the submissions of the Petitioner and TANGEDCO. As per APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017, the Initial Spares are to be allowed as a percentage of the project cost as a whole as on the cut-off date. It is also observed that the Petitioner has considered the capital cost including additional capital expenditure during the 2014-19 period instead of considering the capital cost as on cut-off date.



18. Regulation 3(29) of the 2009 Tariff Regulations defines “original project cost” as under:

“3. Definitions ...

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

19. All the assets covered in the transmission project have achieved COD during 2009-14 period and are GIS sub-stations. Regulation 8(iv) of the 2009 Tariff Regulations specifies the norms for the Initial Spares for the transmission systems as under:

“(iv) Transmission system

(a) Transmission line - 0.75%

(b) Transmission Sub-station - 2.5%

(c) Series Compensation devices and HVDC Station - 3.5%

(d) Gas Insulated Sub-station (GIS) - 3.5%”

20. The transmission assets have been put into commercial operation during the 2009-14 tariff period and the norms as per Regulation 8(iv) of the 2009 Tariff Regulations for Initial Spares for the Gas Insulated Sub-station (GIS) is 3.5%. The capital cost as on cut-off date and the claim of Initial Spares as given in the Auditor Certificate is considered for computation of allowable Initial Spares. The Initial Spares allowed for the Combined Asset are as follows:

Asset	Type	Capital Cost as on cut-off date (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Ceiling	Initial Spares allowable (₹ in lakh)	Initial Spares allowed in previous order	Excess Initial Spares (₹ in lakh)	Initial Spares now allowed
		A	B	C	$D=(A-B) * C / (100 - C)$	E	F=B-D	G=D
I(A)	GIS Sub-	9241.04	468.41	3.50%	318.18	320.66	186.00	596.13



I(B)	station	526.41	25.33	3.50%	18.17	17.81		
II(A)		5769.03	288.39	3.50%	198.78	198.78		
II(B)		1681.72	0.00	3.50%	61.00	0.00		
	Total	17218.20	782.13		596.13	537.25	186.00	596.13

21. The Commission vide order dated 29.2.2016 in Petition No. 504/TT/2014, allowed ₹537.25 lakh as Initial Spares whereas pursuant to application of APTEL judgment dated 14.9.2019 in Appeal No. 74 of 2017, the Initial Spares now allowed in this order are ₹596.13 lakh. Hence, the incremental Initial Spares of ₹58.88 lakh are added to the capital cost as on 1.4.2014.

Capital Cost

22. The capital cost of the Combined Asset has been calculated in accordance with Regulation 9(1) of the 2014 Tariff Regulations. The Petitioner has submitted the capital cost after re-calculating and adjusting the excess Initial Spares of ₹183.62 lakh for the capital cost as on 31.3.2014 for the Combined Asset. The details of the capital cost claimed by the Petitioner are as follows:

(₹ in lakh)

Capital Cost claimed as on 1.4.2014 after IDC and IEDC deduction (A)	Excess Initial Spares disallowed (B)	Capital Cost claimed as on 1.4.2014 (C) = (A-B)
18385.19	183.62	18201.57

23. The capital cost considered as on 1.4.2014 after adjustment of Initial Spares is as under:



(₹ in lakh)

Capital Cost admitted as on 31.3.2014 <i>vide</i> order dated 29.2.2016 in Petition no. 504/TT/2014 (A)	Adjustment of Initial Spares (B)	Capital Cost considered as on 1.4.2014 after Initial Spares adjustment (C=A+B)
18140.31	58.88	18199.19

Additional Capital Expenditure (ACE)

24. The Commission *vide* order dated 29.2.2016 in Petition No. 504/TT/2014 had approved the transmission tariff for the Combined Asset for the 2014-19 period based on the admitted capital cost as on 31.3.2014 and had allowed ACE of ₹1602.71 lakh for the Combined Asset during 2014-19 towards balance and retention payments. The details of capital cost approved *vide* order dated 29.2.2016 in Petition No. 504/TT/2014 are as follows:

(₹ in lakh)

Asset	FR Approved Apportioned Capital Cost	Admitted Capital Cost as on 1.4.2014 after IDC and IEDC and Initial Spares deductions	Admitted ACE in 2014-15	Total admitted Capital Cost as on 31.3.2019
I(A)	15551.00	10483.03	1452.71	11935.74
I(B)	611.00	408.86	100.00	508.86
II(A)	9753.00	5654.42	25.00	5679.42
II(B)	1746.00	1594.00	25.00	1619.00
Total	27661.00	18140.31	1602.71	19743.02

25. The Petitioner has claimed following ACE based on the actual expenditure:

(₹ in lakh)

Asset	ACE			
	2014-15	2015-16	2016-17	Total
I(A)	1384.16	110.93	27.58	1522.67



Asset	ACE			
	2014-15	2015-16	2016-17	Total
I(B)	100.00	-	-	100.00
II(A)	25.00	-	-	25.00
II(B)	25.00	-	-	25.00
Combined Asset	1534.16	110.93	27.58	1672.67

The Petitioner has submitted that ACE during the 2014-15 period is on account of un-discharged 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 and is claimed under Regulation 14(1)(i) and (ii) of the 2014 Tariff Regulations. ACE during the 2015-16 period is on account of liabilities payment for the work executed with in cut-off date and claimed under Regulation 14(3)(v) of the 2014 Tariff Regulations.

26. The Petitioner *vide* affidavit dated 12.3.2020 has submitted that ACE of ₹1452.71 lakh approved by the Commission for Asset-I(A) was based on projections and ACE of ₹1522.67 lakh is claimed on the basis of actual payments made after submission of invoices and are in accordance with provisions of contract.

27. The cut-off date for Asset-I(A) is 31.3.2015. The Petitioner has claimed ACE of ₹110.93 lakh during 2015-16 and ₹27.58 lakh during 2016-17. The Petitioner has provided asset-wise details of ACE incurred after the cut-off date which are as under:

a. Asset-I(A): LILO of Neelamangala-Somanhalli 400 kV D/C Line at Bidadi.

Sl. No.	Year	Party(ies)	(₹ in lakh)
1	2015-16	Hyosung Corporation	31.79
2	2015-16	Larsen & Turbo Ltd.	60.68
3	2015-16	KBR Infra	18.46



Total			110.93
Sl. No.	Year	Parties	(₹ in lakh)
1	2016-17	KBR Infra	27.58
Total			27.58

28. TANGEDCO has submitted that the Petitioner has claimed ACE beyond the cut-off date of 31.3.2015 and has not furnished any reason or justification for deferring the work for two years beyond COD or for retaining the payment beyond the cut-off date whereas the regulation specifically requires valid reasons for claiming ACE beyond the cut-off date.

29. The Petitioner has submitted that ACE claimed in case of Asset-I(A) after cut-off date is on account of un-discharged liability for works executed prior to cut-off date and that the payments were made after submission of invoice and reconciliation in accordance with provisions of contract.

30. We have considered the submissions made by the Petitioner and TANGEDCO. ACE claimed by the Petitioner has been allowed under Regulations 14(1)(i) and (ii) of the 2014 Tariff Regulations and ACE claimed after cut-off date consists of payments made to Hyosung Corporation, Larsen & Turbo Ltd. and KBR Infra. Hence, the same is allowed under Regulation 14(3)(v) of the 2014 Tariff Regulations as it is towards balance and retention payments and balance work deferred for execution. ACE allowed from 1.4.2014 to 31.3.2019 in respect of the transmission assets is as under:

(₹ in lakh)				
Asset	2014-15	2015-16	2016-17	Total ACE
I(A)	1384.16	110.93	27.58	1522.67
I(B)	100.00	-	-	100.00
II(A)	25.00	-	-	25.00



Asset	2014-15	2015-16	2016-17	Total ACE
II(B)	25.00	-	-	25.00
Total	1534.16	110.93	27.58	1672.67

31. Accordingly, the capital cost considered for the 2014-19 period is as under:

(₹ in lakh)

Admitted Capital Cost as on 1.4.2014	ACE	Total Capital Cost as on 31.3.2019
	2014-19	
18199.19	1672.67	19871.86

Debt-Equity ratio

32. The Petitioner has claimed debt-equity ratio of 70:30 as on 31.3.2014. Debt-equity ratio of 70:30 is considered for capital cost as provided in Regulation 19 of the 2014 Tariff Regulations. The Debt-equity ratio of 70:30 has been considered for ACE allowed during the 2014-19 tariff period in accordance with Regulation 19(3) of the 2014 Tariff Regulations.

33. The details of debt-equity ratio in respect of the Combined Asset as on 1.4.2014 and as on 31.3.2019 are as under:

Funding	Capital Cost as on 1.4.2014 (₹ in lakh)	(%)	ACE 2014-19 (₹ in lakh)	(%)	Capital Cost as on 31.3.2019 (₹ in lakh)	(%)
Debt	12739.43	70.00	1170.87	70.00	13910.30	70.00
Equity	5459.76	30.00	501.80	30.00	5961.56	30.00
Total	18199.19	100.00	1672.67	100.00	19871.86	100.00

Interest on Loan (IoL)

34. The Petitioner has claimed the weighted average rate of IoL based on its actual loan portfolio and rate of interest.



35. Accordingly, IoL has been calculated based on actual interest rate submitted by the Petitioner, in accordance with Regulation 26 of the 2014 Tariff Regulations. IoL allowed in respect of the Combined Asset is as under:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	12739.43	13813.34	13890.99	13910.30	13910.30
Cumulative Repayments upto Previous Year	1516.78	2381.38	3276.94	4175.71	5074.94
Net Loan-Opening	11222.65	11431.97	10614.06	9734.59	8835.36
Additions	1073.91	77.65	19.31	0.00	0.00
Repayment during the year	864.60	895.56	898.77	899.23	899.23
Net Loan-Closing	11431.97	10614.06	9734.59	8835.36	7936.13
Average Loan	11327.31	11023.01	10174.32	9284.97	8385.74
Weighted Average Rate of Interest on Loan (%)	9.2020	9.1826	9.1454	9.0689	9.0369
Interest on Loan	1042.34	1012.20	930.49	842.04	757.81

36. Accordingly, IoL approved *vide* order dated 29.2.2016 in Petition No. 504/TT/2014, claimed by the Petitioner in the instant petition and true up IoL allowed for the 2014-19 tariff period is shown in the table under:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 29.2.2016 in Petition No. 504/TT/2014	1040.05	1011.68	929.51	847.39	765.37
Claimed by the Petitioner in the instant petition	1041.38	1009.02	925.11	834.52	748.13
Allowed after true-up in this order	1042.34	1012.20	930.49	842.04	757.81

Return on Equity (RoE)

37. The Petitioner has claimed RoE for the Combined Asset in accordance with 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 following effective tax rates for the 2014-19 tariff period:

Year	Claimed effective tax (in %)	Grossed up RoE (Base Rate/1-t) (in %)
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

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

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

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

Year	Notified MAT rates (inclusive of surcharge & cess)	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
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”

39. The same MAT rates as considered in order dated 27.4.2020 in Petition No. 274/TT/2019 are considered for the purpose of grossing up of rate of RoE for truing-up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations. Accordingly, the grossed up RoE rate is as follows:

Year	Notified MAT rates (inclusive of surcharge & cess) (in %)	Base rate of RoE (in %)	Grossed up RoE [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

40. The Petitioner has claimed RoE for the 2014-19 tariff period after grossing up the RoE of 15.50% with Effective Tax rates (based on MAT rates) each year as per the above said Regulation. RoE is trued up on the basis of the MAT rate applicable for the respective years and is allowed as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	5459.76	5920.00	5953.28	5961.56	5961.56
Additions	460.25	33.28	8.27	0.00	0.00
Closing Equity	5920.00	5953.28	5961.56	5961.56	5961.56
Average Equity	5689.88	5936.64	5957.42	5961.56	5961.56
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (%)	19.610	19.705	19.705	19.705	19.758
Return on Equity	1115.81	1169.84	1173.94	1174.75	1177.85



41. The details of RoE approved *vide* order dated 29.2.2016 in Petition No. 504/TT/2014, claimed by the Petitioner in the instant petition and trued up RoE allowed for the 2014-19 tariff period is as under:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 29.2.2016 in Petition No. 504/TT/2014	1114.34	1161.48	1161.48	1161.48	1161.48
Claimed by the Petitioner in the instant petition	1115.98	1170.01	1174.10	1174.92	1178.02
Allowed after true-up in this order	1115.81	1169.84	1173.94	1174.75	1177.85

Depreciation

42. The Petitioner's claim towards depreciation in this petition was found to be higher than the depreciation allowed for the transmission assets in order dated 29.2.2016 in Petition No. 504/TT/2014. The Petitioner has neither given any justification for claiming higher depreciation than that was allowed earlier in order dated 29.2.2016 nor made any specific prayer for allowing higher depreciation in this petition. Similar issue had come up in Petition No. 19/TT/2020 wherein the Commission *vide* order dated 9.5.2020 decided as follows:

"31. We have considered the submissions of the Petitioner. The instant assets were put into commercial operation during the 2009-14 period and the tariff from the respective CODs to 31.3.2014 was allowed vide orders dated 30.8.2012 and 9.5.2013 in Petition No.343/2010 and Petition No. 147/TT/2011 respectively. Further, the tariff of the 2009-14 period was trued up and tariff for the 2014-19 period was allowed vide order dated 25.2.2016 in Petition No.10/TT/2015. The Petitioner did not claim any capital expenditure towards "IT Equipment" in the above said three petitions where tariff for the instant assets for the 2009-14 period was allowed, tariff of the 2009-14 period was trued up and tariff for 2014-19 period was allowed even though there was a clear provision in the 2009 Tariff Regulations and 2014 Tariff Regulations providing depreciation @15% for IT Equipment. Having failed to make a claim as per the 2009 Tariff Regulations(the period during which COD of assets was achieved), the Petitioner has now, at the time of truing up of the tariff allowed for the 2014-19 period has apportioned a part of the capital expenditure to "IT Equipment". The Petitioner has adopted similar methodology not only



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

43. In line with above order of the Commission, the depreciation is allowed @5.28% for the IT Equipment as part of the sub-station up to 31.3.2019 while truing up the capital expenditure for the 2014-19 period. During the 2019-24 tariff period, the IT Equipment has been considered separately and depreciation has been allowed @15% for the balance depreciable value of IT Equipment in accordance with Regulation 33 of the 2019 Tariff Regulations. The Gross Block during the 2014-19 tariff period has been depreciated at weighted average rate of depreciation (WAROD) (as placed in Annexure-I to this order). WAROD has been worked out after taking into account the depreciation rates of assets as specified in the 2014 Tariff Regulations and depreciation allowed for the Combined Asset for the 2014-19 tariff period is as under:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	18199.19	19733.35	19844.28	19871.86	19871.86
Additional Capitalisation	1534.16	110.93	27.58	0.00	0.00
Closing Gross Block	19733.35	19844.28	19871.86	19871.86	19871.86



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Average Gross Block	18966.27	19788.81	19858.07	19871.86	19871.86
Freehold Land	2000.00	2000.00	2000.00	2000.00	2000.00
Weighted average rate of Depreciation (WAROD) (%)	4.56	4.53	4.53	4.53	4.53
Balance useful life of the asset	25	24	23	22	21
Elapsed life of the asset	1	2	3	4	5
Aggregate Depreciable Value	15269.64	16009.93	16072.26	16084.67	16084.67
Combined Depreciation during the year	864.60	895.56	898.77	899.23	899.23
Aggregate Cumulative Depreciation	2381.38	3276.94	4175.71	5074.94	5974.17
Remaining Aggregate Depreciable Value	12888.26	12732.99	11896.55	11009.73	10110.50

44. The details of the depreciation approved *vide* order dated 29.2.2016 in Petition No.504/TT/2014, claimed by the Petitioner in the instant petition and trueed up depreciation allowed in the instant order for the 2014-19 tariff period is shown in the table under:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 29.2.2016 in Petition No. 504/TT/2014	863.04	892.81	892.81	892.81	892.81
Claimed by the Petitioner in the instant petition	888.79	919.75	922.97	923.43	923.43
Allowed after true-up in this order	864.60	895.56	898.77	899.23	899.23

Operation & Maintenance Expenses (O&M Expenses)

45. Regulation 29(3) of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. The O&M Expenses claimed by the Petitioner for the Combined Asset are as under:

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses					



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses					
400 kV bays at Bidadi Gas Insulated Sub-station					
No. of bays	7	7	7	7	7
Norms (₹ lakh/Bay)	51.54	53.25	55.02	56.84	58.73
220 kV bays at Bidadi Gas Insulated Sub-station					
No. of bays	8	8	8	8	8
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.1
Transmission line for LILO of Neelamangala-Somanhalli at Bidadi					
Double Circuit (Twin & Triple Conductor)					
Km of line	7.19	7.19	7.19	7.19	7.19
Norms (₹ Lakh per km)	0.707	0.731	0.755	0.78	0.806
Multi Circuit (Twin & Triple Conductor)					
Km of line	6.858	6.858	6.858	6.858	6.858
Norms (₹ Lakh per km)	1.24	1.282	1.324	1.368	1.413
Total O&M Expenses (₹ in lakh)	712.04	735.69	760.13	785.27	811.41

46. We have considered the submission of the Petitioner. The O&M Expenses are allowed for the Combined Asset as per Regulation 29(4) of the 2014 Tariff Regulations and are as under:

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses					
400 kV bays at Gas Insulated Sub-station					
No. of bays	7	7	7	7	7
Norms (₹ lakh/Bay)	51.54	53.25	55.02	56.84	58.73
220 kV bays at Gas Insulated Sub-station					
No. of bays	8	8	8	8	8
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.1
Transmission line					
Double Circuit (Twin & Triple Conductor)					
Km of line	7.19	7.19	7.19	7.19	7.19
Norms (₹ lakh per km)	0.707	0.731	0.755	0.78	0.806
Multi Circuit (Twin & Triple Conductor)					
Km of line	6.858	6.858	6.858	6.858	6.858
Norms (₹ lakh per km)	1.24	1.282	1.324	1.368	1.413



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses					
Total O&M Expenses (₹ in lakh)	712.05	735.68	760.13	785.27	811.40

47. The O&M Expenses were allowed as per norms applicable for Conventional Sub-stations in the order dated 29.2.2016 in Petition No. 504/TT/2014 whereas the assets are Gas Insulated Sub-stations. Accordingly, the details of the O&M Expenses approved vide order dated 29.2.2016 in Petition No. 504/TT/2014, claimed by the Petitioner in the instant petition and true up O&M Expenses allowed in the instant order is as under:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 29.2.2016 in Petition No. 504/TT/2014	769.71	795.25	821.68	848.93	877.09
Claimed by the Petitioner in the instant petition	712.04	735.69	760.13	785.27	811.41
Allowed after true-up in this order	712.05	735.68	760.13	785.27	811.40

Interest on Working Capital (IWC)

48. IWC for the 2014-19 tariff period has been worked out for the Combined Asset as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and allowed as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	59.34	61.31	63.34	65.44	67.62
Maintenance Spares	106.81	110.35	114.02	117.79	121.71
Receivables	640.62	654.13	645.74	635.30	626.06
Total Working Capital	806.76	825.79	823.10	818.53	815.39
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	108.91	111.48	111.12	110.50	110.08



49. The details of IWC approved vide order dated 29.2.2016 in Petition No. 504/TT/2014, IWC claimed by the Petitioner in the instant petition and trued up IWC allowed for the instant order for the 2014-19 tariff period is as under:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 29.2.2016 in Petition No. 504/TT/2014	111.98	114.50	114.07	113.69	113.36
Claimed by the Petitioner in the instant petition	109.45	111.97	111.56	110.89	110.42
Allowed after true-up in this order	108.91	111.48	111.12	110.50	110.08

Approved Annual Fixed Charges for the 2014-19 Tariff Period

50. The trued up annual fixed charges for the transmission assets for the 2014-19 tariff period are summarised as under:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	864.60	895.56	898.77	899.23	899.23
Interest on Loan	1042.34	1012.20	930.49	842.04	757.81
Return on Equity	1115.81	1169.84	1173.94	1174.75	1177.85
Interest on Working Capital	108.91	111.48	111.12	110.50	110.08
O&M Expenses	712.05	735.68	760.13	785.27	811.40
Total	3843.71	3924.77	3874.44	3811.80	3756.37

51. The Annual Fixed Charges approved vide order dated 29.2.2016 in Petition No.504/TT/2014, claimed by the Petitioner in the instant petition and AFC approved after truing up in the instant order for the Combined Asset is as under:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 29.2.2016 in Petition No. 504/TT/2014	3899.12	3975.73	3919.56	3864.30	3810.11
Claimed by the Petitioner in the instant petition	3867.64	3946.44	3893.87	3829.03	3771.41
Allowed after true-up in this order	3843.71	3924.77	3874.44	3811.80	3756.37



Determination of Annual Fixed Charges for the 2019-24 Tariff Period

52. As per the revised Tariff Forms submitted vide affidavit dated 30.6.2020, the transmission charges claimed by the Petitioner for the Combined Asset for the 2019-24 tariff period:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	923.43	890.10	888.55	888.55	888.55
Interest on Loan	665.57	583.49	502.97	422.56	341.70
Return on Equity	1119.83	1119.83	1119.83	1119.83	1119.83
Interest on Working Capital	69.63	69.06	68.86	68.75	68.48
O&M Expenses	663.03	686.57	710.48	735.71	760.50
Total	3441.49	3349.05	3290.69	3235.40	3179.06

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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses	55.25	57.21	59.21	61.31	63.38
Maintenance Spares	99.45	102.99	106.57	110.36	114.08
Receivables	423.13	412.90	405.70	398.89	390.87
Total Working Capital	577.83	573.10	571.48	570.56	568.33
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	69.63	69.06	68.86	68.75	68.48

Capital Cost as on 1.4.2019

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

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

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

- (a) *The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- (b) *Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in*



- excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;
- (c) Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;
 - (d) Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;
 - (e) Capitalised initial spares subject to the ceiling rates in accordance with these regulations;
 - (f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;
 - (g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;
 - (h) Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;
 - (i) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
 - (j) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;
 - (k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;
 - (l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;
 - (m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;
 - (n) Expenditure on account of change in law and force majeure events; and
 - (o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

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

- (a) *Capital cost admitted by the Commission prior to 1.4.2019 duly 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."*

55. The Petitioner has claimed a capital cost of ₹19874.24 lakh as on 31.3.2019 for the Combined Asset. However, the capital cost of ₹19871.86 lakh as on 31.3.2019 has been worked out for the Combined Asset and the same has been considered as the opening capital cost as on 1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.



Additional Capital Expenditure (ACE)

56. The Petitioner has not claimed any ACE during the 2019-24 tariff period. Accordingly, the capital cost as on 31.3.2024 for the Combined Asset is considered as under:

(₹ in lakh)		
Capital Cost as on 31.3.2019	Projected ACE 2019-24	Total Capital Cost as on 31.3.2024
19871.86	0.00	19871.86

Debt-Equity ratio

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

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

Provided that:

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

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.”

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

Particulars	Capital Cost as on 1.4.2019 (₹ in lakh)	%	ACE 2019-24 (₹ in lakh)	%	Capital Cost as on 31.3.2024 (₹ in lakh)	%
Debt	13910.30	70.00	0.00	70.00	13910.30	70.00
Equity	5961.56	30.00	0.00	30.00	5961.56	30.00
Total	19871.86	100.00	0.00	100.00	19871.86	100.00

Return on Equity (RoE)

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

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

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

Provided that return on equity in respect of additional capitalization after cut-off



date beyond the original scope shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system

Provided further that:

- i. In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC;
- ii. in case of existing generating station, as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC, rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;
- iii. in case of a thermal generating station, with effect from 1.4.2020:
 - a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;
 - b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:

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

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

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

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

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



paying Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess.

Illustration-

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

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

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

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

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

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

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	5961.56	5961.56	5961.56	5961.56	5961.56
Additions	0.00	0.00	0.00	0.00	0.00
Closing Equity	5961.56	5961.56	5961.56	5961.56	5961.56
Average Equity	5961.56	5961.56	5961.56	5961.56	5961.56



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (%)	18.782	18.782	18.782	18.782	18.782
Return on Equity	1119.67	1119.67	1119.67	1119.67	1119.67

Interest on Loan (IoL)

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

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

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

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

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

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

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

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

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

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



62. We have considered the submissions of the Petitioner. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2019. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during the 2019-24 tariff period 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 for the Combined Asset is as under:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	13910.30	13910.30	13910.30	13910.30	13910.30
Cumulative Repayments upto Previous Year	5974.17	6896.27	7818.38	8740.48	9662.58
Net Loan-Opening	7936.13	7014.03	6091.92	5169.82	4247.72
Additions	0.00	0.00	0.00	0.00	0.00
Repayment during the year	922.10	922.10	922.10	922.10	922.10
Net Loan-Closing	7014.03	6091.92	5169.82	4247.72	3325.62
Average Loan	7475.08	6552.97	5630.87	4708.77	3786.67
Weighted Average Rate of Interest on Loan (%)	9.0491	9.0487	9.0478	9.0473	9.0350
Interest on Loan	676.42	592.96	509.47	426.02	342.13

Depreciation

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

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

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



(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of a transmission system, weighted average life for the generating station 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.”

64. The IT equipment has been considered as a part of the Gross Block and depreciated using weighted average rate of depreciation (WAROD) (as placed in Annexure-II to this order). WAROD has been worked out after taking into account the depreciation rates of IT and non-IT assets as prescribed in the 2019 Tariff Regulations, the salvage value of IT equipment has been considered NIL, i.e. IT asset has been considered as 100 per cent depreciable. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The depreciation allowed for the Combined Asset is as under:

Particular	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	19871.86	19871.86	19871.86	19871.86	19871.86
Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	19871.86	19871.86	19871.86	19871.86	19871.86
Average Gross Block	19871.86	19871.86	19871.86	19871.86	19871.86
Freehold Land	2000.00	2000.00	2000.00	2000.00	2000.00
Weighted average rate of Depreciation (WAROD) (%)	4.64	4.64	4.64	4.64	4.64
Balance useful life of the asset	20	19	18	17	16
Elapsed life (in years)	6	7	8	9	10
Aggregate Depreciable Value	16108.20	16108.20	16108.20	16108.20	16108.20
Combined Depreciation during the year	922.10	922.10	922.10	922.10	922.10
Aggregate Cumulative Depreciation	6896.27	7818.38	8740.48	9662.58	10584.68
Remaining Aggregate Depreciable Value	9211.93	8289.82	7367.72	6445.62	5523.52



Operation & Maintenance Expenses (O&M Expenses)

65. As per the revised Tariff Forms submitted by the Petitioner vide affidavit dated 30.6.2020, the O&M Expenses claimed by the Petitioner for the Combined Asset for the 2019-24 period are as under:

	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses					
400 kV bays at Gas Insulated Sub-station					
No. of bays	7	7	7	7	7
Norms (₹ lakh/Bay)	22.505	23.296	24.115	24.962	25.837
220 kV bays at Gas Insulated Sub-station					
No. of bays	8	8	8	8	8
Norms (₹ lakh/Bay)	15.757	16.31	16.884	17.472	18.088
Transformer(s)					
400 kV					
No. of ICTs	2	2	2	2	2
Capacity MVA	500	500	500	500	500
Norms (₹ lakh/MVA)	0.358	0.371	0.384	0.398	0.411
Transmission Line					
Double Circuit (Twin & Triple Conductor)					
Km of line	7.19	7.19	7.19	7.19	7.19
Norms (₹ lakh per km)	0.881	0.912	0.944	0.977	1.011
Multi Circuit (Twin & Triple Conductor)					
Km of line	6.858	6.858	6.858	6.858	6.858
Norms (₹ lakh per km)	1.544	1.598	1.654	1.713	1.773
PLCC					
Original Capital Cost	223.47	223.47	223.47	223.47	223.47
Norms (₹ lakh)	2% on Original Capital Cost				
Total O&M Expenses (₹ in lakh)	663.03	686.57	710.48	735.71	760.50

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

“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
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<i>Norms for sub-station Bays (₹ Lakh per bay)</i>					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
<i>Norms for Transformers (₹ Lakh per MVA)</i>					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
<i>Norms for AC and HVDC lines (₹ Lakh per km)</i>					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
<i>Norms for HVDC stations</i>					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

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

Provided further that:



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

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

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

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

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



67. We have considered the submissions of the Petitioner. The Petitioner has claimed O&M Expenses separately for the PLCC under Regulation 35(4) of the 2019 @2% of its original project cost in the instant petition. 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. The Commission vide order dated 24.1.2021 in Petition No. 126/TT/2020 has decided that no separate O&M Expenses can be allowed for PLCC under Regulation 35(4) of the 2019 Tariff Regulations. Therefore, the Petitioner's claim for separate O&M Expenses for PLCC @2% is not allowed. The relevant portions of the order dated 24.1.2021 in Petition No. 126/TT/2020 are extracted hereunder:

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

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

106. The principle adopted in this petition that PLCC is part of sub-station and accordingly no separate O&M Expenses is admissible for PLCC equipment in the 2019-24 tariff period under Regulation 35(4) of the 2019 Tariff Regulations shall be applicable in case of all petitions where similar claim is made by the Petitioner. As already mentioned, the Commission, however, on the basis of the claim made by the Petitioner has inadvertently allowed O&M Expenses for PLCC equipment @2% of its original project cost, which is applicable for other “communication system”, for 2019-24



period in 31 petitions given in Annexure-3 of this order. Therefore, the decision in this order shall also be applicable to all the petitions given in Annexure-3. Therefore, PGCIL is directed to bring this decision to the notice of all the stakeholders in the 31 petitions given in Annexure-3 and also make revised claim of O&M Expenses for PLCC as part of the sub-station at the time of truing up of the tariff allowed for 2019-24 period in respective petitions.”

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

68. The O&M Expenses have been worked out as per the norms specified in the 2019 Tariff Regulations and the O&M Expenses allowed are as under:

	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses					
400 kV bays at Gas Insulated Sub-station					
No. of bays	7	7	7	7	7
Norms (₹ lakh/Bay)	22.505	23.296	24.115	24.962	25.837
220 kV bays at Gas Insulated Sub-station					
No. of bays	8	8	8	8	8
Norms (₹ lakh/Bay)	15.757	16.31	16.884	17.472	18.088
Transformer(s)					
400 kV					
No. of ICTs	2	2	2	2	2
Capacity MVA	500	500	500	500	500
Norms (₹ lakh/MVA)	0.358	0.371	0.384	0.398	0.411
Transmission Line					
Double Circuit (Twin & Triple Conductor)					
Km of line	7.19	7.19	7.19	7.19	7.19
Norms (₹ Lakh per km)	0.881	0.912	0.944	0.977	1.011
Multi Circuit (Twin & Triple Conductor)					
Km of line	6.858	6.858	6.858	6.858	6.858
Norms (₹ Lakh per km)	1.544	1.598	1.654	1.713	1.773
Total O&M Expenses (₹ in lakh)	658.51	682.07	706.01	731.28	755.99



Interest on Working Capital (IWC)

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

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

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

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

- (c) For Hydro Generating Station (including Pumped Storage Hydro Generating Station) and Transmission System:
 - (i) Receivables equivalent to 45 days of annual fixed cost;*
 - (ii) Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and**



(iii) *Operation and maintenance expenses, including security expenses for one month.*

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

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

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

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

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

“3. Definitions ...

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

70. The Petitioner has submitted that it has computed IWC for the 2019-24 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 IWC considered is 12.05% (SBI 1-year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20 and 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350



basis points) for the 2020-24 period. The components of the working capital and interest allowed thereon are as under:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	54.88	56.84	58.83	60.94	63.00
Maintenance Spares	98.78	102.31	105.90	109.69	113.40
Receivables	423.72	416.91	409.54	402.35	393.94
Total Working Capital	577.38	576.06	574.28	572.99	570.34
Rate of Interest (%)	12.05	11.25	11.25	11.25	11.25
Interest on Working Capital	69.57	64.81	64.61	64.46	64.16

Annual Fixed Charges of the 2019-24 Tariff Period

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

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	922.10	922.10	922.10	922.10	922.10
Interest on Loan	676.42	592.96	509.47	426.02	342.13
Return on Equity	1119.67	1119.67	1119.67	1119.67	1119.67
Interest on Working Capital	69.57	64.81	64.61	64.46	64.16
O&M Expenses	658.51	682.07	706.01	731.28	755.99
Total	3446.28	3381.61	3321.85	3263.53	3204.05

Filing Fee and the Publication Expenses

72. 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

73. 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

74. 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 Respondents 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.

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

Security Expenses

76. The Petitioner has submitted that security expenses for the transmission assets are not claimed in the transmission petition and it would file a separate petition for claiming the overall security expenses and the consequential IWC. The Petitioner has requested to consider the actual security expenses incurred during 2018-19 for claiming estimated security expenses for 2019-20 which shall be subject to true up at the end of the year based on the actuals. The Petitioner has submitted that similar



petition for security expenses for 2020-21, 2021-22, 2022-23 and 2023-24 shall be filed on a yearly basis on the basis of the actual expenses of previous year subject to true up at the end of the year on actual expenses. The Petitioner has submitted that the difference, if any, between the estimated security expenses and actual security expenses as per the audited accounts may be allowed to be recovered from the beneficiaries on a yearly basis.

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

Capital Spares

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

Sharing of Transmission Charges

79. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 or the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission



Charges and Losses) Regulations, 2020, as applicable, as provided in Regulation 43 of the 2014 Tariff Regulations for the 2014-19 period and Regulation 57 of the 2019 Tariff Regulations for the 2019-24 period.

80. To summarise, the trued up Annual Fixed Charges allowed for the Combined Asset for the 2014-19 tariff period are as under:

(₹ in lakh)					
Assets	2014-15	2015-16	2016-17	2017-18	2018-19
AFC	3843.71	3924.77	3874.44	3811.80	3756.37

81. The Annual Fixed Charges allowed for the Combined Asset for the 2019-24 tariff period in the instant order are as under:

(₹ in lakh)					
Combined Asset	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	3446.28	3381.61	3321.85	3263.53	3204.05

82. This order disposes of Petition No. 82/TT/2020.

**Sd/
(Arun Goyal)
Member**

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

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



Annexure-I

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014/COD (₹ in lakh)	Approved Additional Capitalisation (₹ 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	Total			2014-15	2015-16	2016-17	2017-18	2018-19
Land - Freehold	2000.00	-	-	-	-	2000.00	-	-	-	-	-	-
Land - Leasehold	-	-	-	-	-	-	3.34%	-	-	-	-	-
Building Civil Works & Colony	1098.36	1266.77	18.46	27.58	1312.81	2411.17	3.34%	57.84	79.30	80.07	80.53	80.53
Transmission Line	2773.90	-	-	-	-	2773.90	5.28%	146.46	146.46	146.46	146.46	146.46
Sub Station	11865.51	267.39	92.47	-	359.86	12225.37	5.28%	633.56	643.06	645.50	645.50	645.50
PLCC	226.13	-	-	-	-	226.13	6.33%	14.31	14.31	14.31	14.31	14.31
IT Equipment (Incl. Software)	235.29	-	-	-	-	235.29	5.28%	12.42	12.42	12.42	12.42	12.42
Total	18199.19	1534.16	110.93	27.58	1672.67	19871.86	Total	864.60	895.56	898.77	899.23	899.23
Average Gross Block (₹ in lakh)								18966.27	19788.81	19858.07	19871.86	19871.86
Weighted Average Rate of Depreciation								4.56%	4.53%	4.53%	4.53%	4.53%



Annexure-II

2019-24 Capital Expenditure	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE Total	Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
					2019-20	2020-21	2021-22	2022-23	2023-24
Land - Freehold	2000.00	-	2000.00	-	-	-	-	-	-
Land - Leasehold	-	-	-	3.34%	-	-	-	-	-
Building Civil Works & Colony	2411.17	-	2411.17	3.34%	80.53	80.53	80.53	80.53	80.53
Transmission Line	2773.90	-	2773.90	5.28%	146.46	146.46	146.46	146.46	146.46
Sub Station	12225.37	-	12225.37	5.28%	645.50	645.50	645.50	645.50	645.50
PLCC	226.13	-	226.13	6.33%	14.31	14.31	14.31	14.31	14.31
IT Equipment (Incl. Software)	235.29	-	235.29	15.00%	35.29	35.29	35.29	35.29	35.29
Total	19871.86	-	19871.86		922.10	922.10	922.10	922.10	922.10
Average Gross Block (₹ in lakh)					19871.86	19871.86	19871.86	19871.86	19871.86
Weighted Average Rate of Depreciation					4.64%	4.64%	4.64%	4.64%	4.64%

