

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 475/TT/2020

Coram:

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

Date of order: 08.12.2021

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 for trueing up of transmission tariff of the 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff for the 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for **Asset-I:** 400 kV D/C (Quard) Circuit-I of Dehradun- Abdullahpur Transmission Line along with associated bays at Dehradun and Abdullahpur Sub-station; **Asset-II:** 400 kV D/C (Quard) Circuit-II of Dehradun-Abdullahpur Transmission Line along with associated bays at Dehradun and Abdullahpur Sub-station; **Asset-III:** 400 kV D/C (Quard) Dulhasti-Kishenpur single circuit strung along with associated bays at Kishenpur; and **Asset-IV:** Two nos. of 63 MVAR 400 kV Line Reactor at Balia (PG) Sub-station (Extn) under “Northern Region System Strengthening Scheme-XXIV” in the Northern Region.

And in the matter of:

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

.....Petitioner

Vs

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited,
Vidyut Bhawan, Vidyut Marg,
Jaipur – 302005
2. Ajmer Vidyut Vitran Nigam Limited,
132kV, GSS RVPNL Sub-Station Building,



Caligiri Road, Malviya Nagar,
Jaipur – 302017 (Rajasthan)

3. Jaipur Vidyut Vitran Nigam Limited,
132kV, GSS RVPNL Sub-Station Building,
Caligiri Road, Malviya Nagar,
Jaipur – 302017 (Rajasthan)
4. Jodhpur Vidyut Vitran Nigam Limited,
132kV, GSS RVPNL Sub-Station Building,
Caligiri Road, Malviya Nagar,
Jaipur – 302017 (Rajasthan)
5. Himachal Pradesh State Electricity Board,
Vidyut Bhawan, Kumar House Complex Building II,
Shimla – 171004
6. Punjab State Electricity Board,
The Mall, Patiala – 147001
7. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-6,
Panchkula – 134109 (Haryana)
8. Power Development Department,
Government of Jammu & Kashmir,
Mini Secretariat, Jammu
9. Uttar Pradesh Power Corporation Limited,
(Formerly Uttar Pradesh State Electricity Board)
Shakti Bhawan, 14, Ashok Marg,
Lucknow – 226001
10. Delhi Transco Limited,
Shakti Sadan, Kotla Road,
New Delhi – 110002
11. BSES Yamuna Power Limited,
BSES Bhawan, Nehru Place,
New Delhi – 110092



12. BSES Rajdhani Power Limited,
BSES Bhawan, Nehru Place,
New Delhi – 110019
13. Tata Power Delhi Distribution Limited,
33 kV Sub-station Building,
Hudson Lane, Kingsway Camp,
North Delhi – 110009
14. Chandigarh Administration,
Sector- 9, Chandigarh
15. Uttarakhand Power Corporation Limited,
Urja Bhawan, Kanwali Road,
Dehradun
16. North Central Railway,
Allahabad (Uttar Pradesh).
17. New Delhi Municipal Council,
Palika Kendra, Sansad Marg
New Delhi- 110002.

...Respondent(s)

For Petitioner: Shri S. S. Raju, PGCIL
Shri D.K. Biswal, PGCIL
Shri Ved Prakash Rastogi, PGCIL
Shri Amit Yadav, PGCIL

For Respondents: None

ORDER

The instant petition has been filed by the Petitioner, Power Grid Corporation of India Limited, a deemed transmission licensee, for truing up of transmission tariff from 1.4.2014/COD to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and determination of tariff under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019



(hereinafter referred to as “the 2019 Tariff Regulations”) for the 2019-24 tariff period in respect of the following transmission assets associated with “Northern Region System Strengthening Scheme-XXIV” (hereinafter referred to as “the transmission project”) in the Northern Region:

- Asset-I:** 400 kV D/C (Quard) Circuit-I of Dehradun- Abdullahpur Transmission Line along with associated bays at Dehradun and Abdullahpur Sub-station;
- Asset-II:** 400 kV D/C (Quard) Circuit-II of Dehradun-Abdullahpur Transmission Line along with associated bays at Dehradun and Abdullahpur Sub-station;
- Asset-III:** 400 kV D/C (Quard) Dulhasti-Kishenpur single circuit strung along with associated bays at Kishenpur; and
- Asset-IV:** Two nos. of 63 MVAR 400kV Line Reactor at Balia (PG) Sub-station (Extn).

Asset-I, Asset-II, Asset-III and Asset-IV have been collectively referred to as "transmission assets" for the 2014-19 tariff period. Asset-I, Asset-II, Asset-III and Asset-IV have been combined as on 1.4.2019 and have been collectively referred to as "Combined Asset under NRSS XXIV" (or in short, “Combined Asset”) for the 2019-24 tariff period.

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 7 and 8 above.*
- 2) 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 7 and 8 above for respective block.*
- 3) 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.*



- 4) *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.*
 - 5) *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.*
 - 6) *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 8.10 above.*
 - 7) *Allow the Petitioner to claim the capital spares at the end of tariff block as per actual.*
 - 8) *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.*
 - 9) *Allow the Petitioner for the reimbursement of Amount of Rs. 88,87,476.00/- Lakhs Plus GST towards Annuity Payment as per Para-8.6 above and also allow the Petitioner to bill and recover Rs. 88,87,476.00/- Lakhs Plus GST per annum towards Annuity Payment.*
- 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 follows:

- a) The Investment Approval (IA) of the transmission project was accorded by the Board of Directors of the Petitioner Company *vide* Memorandum No. C/CP/NRSS-XXIV dated 21.11.2011 at an estimated cost of ₹72363 lakh including IDC of ₹4269 lakh (based on 2nd quarter, 2011 price level).
- b) The Petitioner *vide* affidavit dated 1.1.2018 has submitted Revised Cost Estimate (RCE). As per RCE (dated 31.3.2017), cost of the transmission project is approved for ₹88213 lakh including IDC of ₹12091 lakh at October 2016 price level.
- c) The Petitioner has subsequently submitted RCE-II *vide* Memorandum No. PA1920-11-0AC-RCE007 dated 18.2.2020 for the transmission project at an estimated cost of ₹90680 lakh including IDC of ₹12991 lakh at December 2018 price level.



d) The transmission project was discussed and agreed in the 28th SCM held on 23.2.2010 at NRPC, New Delhi which is to be implemented by the Petitioner as a regional strengthening scheme (NRSS-XXIV). The details of the transmission elements covered under the transmission project are broadly as follows:

Transmission Lines:

- (i) Dehradun – Abdullapur 400 kV D/C Quad line;
- (ii) Dulhasti – Kishenpur 400 kV D/C Quad line- single circuit strung.

Sub-stations:

- (i) Extension of 400/220 kV Substation at Dehradun, Abdullapur and Kishenpur;
- (ii) Extension of Balia 400/220 kV Substation – 2x63 MVAR, 400 kV line reactors on Barh-Balia 400 KV D/C line (one on each circuit).

Note: One spare 400 KV Bay at Dulhasti HEP Switchyard of NHPC would be used for termination of the line at Dulhasti end.

e) The entire scope of work is covered under the instant petition. Various details with respect to the transmission assets covered in the instant petition are as follows:

Asset nomenclature in instant Petition	Previous CERC Order	Asset nomenclature in Previous Order	SCOD	COD	Time over-run	
					Delay	Condoned/ Not Condoned
Asset-I	Order dated 9.10.2018 in Petition No. 56/TT/2017	Asset-I(a)	20.11.2014	31.3.2018	40 months, 11 days	Condoned
Asset-II		Asset-I(b)		1.4.2018	40 months, 12 days	
Asset-III		Asset-II		23.1.2018	38 months, 3 days	
Asset-IV	Order dated 31.12.2018 in Petition No. 109/TT/2018	NA	1.12.2014	1.2.2014	None	N/A

f) The transmission tariff of the 2014-19 period in respect of Asset-I, Asset-II and Asset-III were allowed *vide* order dated 9.10.2018 in Petition No.



56/TT/2017. The transmission tariff in respect of Asset-IV for the 2009-14 tariff period and trued-up tariff for 2014-19 period was allowed *vide* order dated 31.12.2018 in Petition No. 109/TT/2018.

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

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

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

7. This order is issued considering the submissions made by the Petitioner *vide* affidavits dated 23.1.2020, 24.11.2020 and 26.7.2021.

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

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

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



(₹ in lakh)

Particulars	2017-18 (Pro-rata 1 day)	2018-19
Asset-I		
Depreciation	2.05	750.03
Interest on Loan	1.67	617.71
Return on Equity	2.28	840.13
O&M Expenses	0.52	137.42
Interest on Working Capital	0.16	54.43
Total	6.68	2399.72

(₹ in lakh)

Particulars	2018-19
Asset-II	
Depreciation	757.37
Interest on Loan	648.09
Return on Equity	848.39
O&M Expenses	245.56
Interest on Working Capital	59.01
Total	2558.42

(₹ in lakh)

Particulars	2017-18 (Pro-rata 68 days)	2018-19
Asset-III		
Depreciation	525.62	2928.86
Interest on Loan	577.76	3084.98
Return on Equity	592.16	3310.38
O&M Expenses	27.07	150.09
Interest on Working Capital	37.76	207.73
Total	1760.37	9682.04

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-IV					
Depreciation	56.44	59.36	59.58	60.00	60.20
Interest on Loan	63.08	61.41	56.35	51.50	46.41
Return on Equity	62.93	66.49	66.70	67.17	67.58
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	4.20	4.31	4.20	4.11	4.01
Total	186.65	191.57	186.83	182.78	178.20

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

(₹ in lakh)

Particulars	2017-18 (Pro-rata 1 day)	2018-19
Asset-I		
WC for O&M Expenses (O&M Expenses for 1 month)	16.07	11.45
WC for Maintenance Spares (15% of O&M Expenses)	28.92	20.61
WC for Receivables (Equivalent to 2 months of annual fixed cost)	406.61	399.95
Total Working Capital	451.60	432.01
Rate of Interest (in %)	12.60	12.60
Interest on Working Capital	0.16	54.43

(₹ in lakh)

Particulars	2018-19
Asset-II	
WC for O&M Expenses (O&M Expenses for 1 month)	20.46
WC for Maintenance Spares (15% of O&M Expenses)	36.83
WC for Receivables (Equivalent to 2 months of annual fixed cost)	426.40
Total Working Capital	483.69
Rate of Interest (in %)	12.20
Interest on Working Capital	59.01

(₹ in lakh)

Particulars	2017-18 (Pro-rata 68 days)	2018-19
Asset-III		
WC for O&M Expenses (O&M Expenses for 1 month)	12.11	12.51
WC for Maintenance Spares (15% of O&M Expenses)	21.80	22.51
WC for Receivables (Equivalent to 2 months of annual fixed cost)	1574.84	1613.67
Total Working Capital	1608.75	1648.69
Rate of Interest (in %)	12.60	12.60
Interest on Working Capital	37.76	207.73



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-IV					
WC for O&M Expenses (O&M Expenses for 1 month)	0.00	0.00	0.00	0.00	0.00
WC for Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
WC for Receivables (Equivalent to 2 months of annual fixed cost)	31.11	31.93	31.14	30.46	29.70
Total Working Capital	31.11	31.93	31.14	30.46	29.70
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	4.20	4.31	4.20	4.11	4.01

Capital Cost

11. The Commission *vide* order dated 9.10.2018 in Petition No. 56/TT/2017 allowed capital cost as on COD for Asset-I, Asset-II and Asset-III. The Commission *vide* order dated 31.12.2018 in Petition No. 109/TT/2018 had trued-up the capital cost for the 2009-14 period and allowed the capital cost as on 1.4.2014 for Asset-IV. The details of the capital cost as allowed and the capital cost now claimed by the Petitioner in the instant petition are as follows:

(₹ in lakh)

Particulars	Apportioned approved cost as per FR	Apportioned approved cost as per RCE	Apportioned approved cost as per RCE-II	Admitted Capital Cost as on COD/1.4.2014	Capital Cost as on COD/1.4.2014 claimed in the instant petition (on cash basis)
Asset-I	8764.87	14793.39	14988.74	13654.10	14080.57
Asset-II	9660.77	14960.01	15145.15	14182.68	14182.68
Asset-III	52901.32	57023.11	59154.60	54918.68	53361.52
Asset-IV	1036.07	1436.49	1391.83	1012.55	1013.58

Cost Over-run

12. The Commission *vide* order dated 9.10.2018 in Petition No. 56/TT/2017 had restricted the estimated completion capital cost in respect of respect of Asset-I, Asset-II and Asset-III to approved capital cost as per RCE and decided to review the same



based on the submission of RCE-II, if any, at the time of truing up. The relevant paragraph of the Order dated 9.10.2018 in Petition No. 56/TT/2017 are as follows:

“24. We have considered the submissions made by the Petitioner & BRPL and based on the reasons submitted by the petitioner, the cost overrun is allowed. However, the estimated completion costs are restricted to revised approved apportioned cost (as per RCE) and will be reviewed at the time of truing-up on submission of RCE-II, if any.”

13. The Petitioner vide affidavit dated 24.11.2020 has submitted copy of RCE-II. The Petitioner has also submitted the following justification for variation in cost with respect approved apportioned cost as per FR:

- a. Increase of about ₹28.35 crore in preliminary investigation, right of way, forest clearance, PTCC, general civil works etc. is due to actual amount paid to statutory authorities based on rate fixed by the administration and on actual route of the transmission line.
- b. Increase of about ₹32.36 crore in tower steel, ₹4.68 crore in insulator, ₹5.98 crore in hardware fittings and ₹1.85 crore in spares and decrease of ₹64.31 crore in erection, stringing and civil works including foundation is due to actual awarded price based on price received through open competitive bidding.
- c. Increase of ₹4.13 crore in taxes and duties of transmission system is due to actual amount paid as taxes.
- d. Increase of ₹64.31 crore in IDC is due to time over-run in commissioning of Asset-I, Asset-II and Asset-III and is as per actual loan deployment.
- e. Increase/ decrease in award cost received in competitive bidding compared to initial estimates (FR cost). Open competitive bidding route is followed to provide equal opportunity to all eligible firms, lowest possible market prices for procurement of product/ services and contracts are awarded on the basis of lowest evaluated eligible bidder. The best competitive bid prices against tenders may happen to be lower or higher than the cost estimate depending upon prevailing market conditions.



14. The Petitioner has prayed to allow the cost variation and to allow the transmission tariff as claimed in the instant petition in respect of transmission assets. The Petitioner has claimed the following capital cost for the 2014-19 tariff period in respect of the transmission assets:

(₹ in lakh)

Asset	Apportioned cost as per RCE-II	Capital Cost claimed as on COD/1.4.2014	ACE claimed					Capital Cost claimed as on 31.3.2019
			2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-I	14988.74	14080.58	-	-	-	0.00	186.09	14266.67
Asset-II	15145.15	14182.68	-	-	-	-	261.08	14443.76
Asset-III	59154.60	53361.52	-	-	-	812.36	3349.83	57523.71
Asset-IV	1391.83	1013.58	110.59	0.00	8.30	7.71	0.00	1140.18

15. On perusal of the submissions made by the Petitioner, we note that the capital cost as on 31.3.2019 as claimed by the Petitioner in respect of the transmission assets is within the apportioned approved cost as per RCE-II. Therefore, there is no cost over-run.

Time Over-run

16. The time over-run in case of Asset-I, Asset-II and Asset-III has already been condoned *vide* order dated 9.10.2018 in Petition No. 56/TT/2017. There was no time over-run in commissioning of Asset-IV.

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

17. The Petitioner *vide* Auditor's certificates and *vide* affidavit dated 26.7.2021 has claimed the following IDC for the transmission asset and has submitted the statement showing IDC claim, discharge of IDC liability as on date of commercial operation and thereafter:



(₹ in lakh)

Particulars	IDC as per Auditor Certificate	IDC Discharge Claimed up to COD/1.4.2014	Undischarged IDC as on COD
Asset-I	1649.17	1459.71	189.45
Asset-II	1350.45	1067.95	282.49
Asset-III	9953.20	8657.95	1295.25
Asset-IV	60.51	60.51	0.00

18. The allowable IDC for Asset-I, Asset-II and Asset-III has been worked out considering the information submitted by the Petitioner. The loan details submitted in Form-9C for the 2014-19 period and date of drawl submitted in IDC statements have been considered for the purpose of calculating IDC for Asset-I, Asset-II and Asset-III. IDC allowed for Asset-IV is considered as per order dated 31.12.2018 in Petition No. 109/TT/2018. Accordingly, IDC allowed is as follows:

(₹ in lakh)

Asset	IDC as per Auditor Certificate	IDC allowed	IDC allowed up to COD/ 1.4.2014 on cash basis	Undischarged IDC as on COD/ 1.4.2014	IDC discharged in 2014-15	IDC discharged in 2017-18	IDC discharged in 2018-19
Asset-I	1649.17	1649.17	1459.71	189.46	0.00	0.00	189.46
Asset-II	1350.45	1350.45	1067.95	282.50	0.00	0.00	282.50
Asset-III	9953.20	9953.20	8657.95	1295.25	0.00	430.23	865.02
Asset-IV	60.51	60.51	32.76	27.75	27.75	0.00	0.00

19. The Petitioner has claimed IEDC for the transmission assets for the 2014-19 tariff period as follows:

Particulars	IEDC claimed as per Auditor Certificate (₹ in lakh)
Asset-I	475.05
Asset-II	480.13
Asset-III	1743.92
Asset-IV	36.34

20. The Commission had allowed IEDC for Asset-IV *vide* order dated 31.12.2018 in Petition No. 109/TT/2018. The time over-run in case of Asset-I, Asset-II and Asset-III



was condoned *vide* order dated 9.10.2018 in Petition No. 56/TT/2017. Further, the IEDC claimed as on date of commercial operation for Asset-I, Asset-II and Asset-III are within the percentage of hard cost as per the abstract cost estimate mentioned in the IA. Accordingly, IEDC details considered for the purpose of tariff calculation are as under:

Particulars	IEDC claimed (as per Auditor Certificate) (₹ in lakh)	IEDC allowed (as on COD/1.4.2014) (₹ in lakh)
Asset-I	475.05	475.05
Asset-II	480.13	480.13
Asset-III	1743.92	1743.92
Asset-IV	36.34	36.34

Initial Spares

21. Asset-IV was put into commercial operation in the 2009-14 tariff period while Asset-I, Asset-II and Asset-III were put into commercial operation in the 2014-19 tariff period. Accordingly, as regards eligibility of initial spares, the 2009 Tariff Regulations are applicable for Asset-IV whereas the 2014 Tariff Regulations are applicable in respect of Asset-I, Asset-II and Asset-III. Regulation 8(iv) of the 2009 Tariff Regulations provides that Initial Spares shall be capitalised as a percentage of the admitted capital expenditure incurred within the original scope of the project up to the cut-off date, 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%”*



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

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

23. The Initial Spares claimed by the Petitioner are as follows:

Asset	Plant and Machinery Cost (₹ in lakh)			Initial Spares claimed by the Petitioner (₹ in lakh)		
	Transmission Line	Sub-station	PLCC	Transmissi on Line	Sub-station	PLCC
Asset-I	12193.28	559.75	0.00	121.89	48.15	0.00
Asset-II	12531.15	692.61	0.00	125.27	67.00	0.00
Asset-III	46974.11	212.48	70.15	396.25	25.36	8.22
Asset-IV	0.00	1184.58	0.00	0.00	45.60	0.00

24. The Petitioner has claimed the transmission tariff after reducing the following excess Initial Spares in respect of the Asset-I, Asset-II and Asset-III:

Asset	Excess Initial Spares reduced by the Petitioner	Year-wise excess Initial Spares reduced by the Petitioner		
		As on COD	2018-19	2019-20
		(₹ in lakh)		
Asset-I	15.49	0.00	0.00	15.49
Asset-II	27.07	0.00	0.00	27.07
Asset-III	18.38	10.48	7.90	0.00

25. We have considered the submissions of the Petitioner. The Petitioner in the instant true up petition has claimed Initial Spares for PLCC separately in respect of Asset-III. The Petitioner vide Petition No. 56/TT/2017 had claimed Initial Spares for



Asset-III towards sub-station but had not claimed Initial Spares towards PLCC (as a communication system) separately from that of the sub-station. Accordingly, the Commission vide order dated vide order dated 9.10.2018 in Petition No. 56/TT/2017 had allowed Initial Spares for sub-station (and no initial spares was allowed for PLCC separately) under Asset-III. Therefore, the Initial Spares have been computed by combining the cost of both PLCC and sub-station for Asset-III and allowed as per the norms specified for sub-station in the 2014 Tariff Regulations. The Initial Spares allowed for Asset-I, Asset-II and Asset-III as per percentage specified in the 2014 Tariff Regulations are as follows:

Particulars	P&M Cost as on cut-off date (A) (₹ in lakh)	Initial Spares claimed (B) (₹ in lakh)	Ceiling limit (%) (C)	Initial Spares worked out	Excess Initial Spares	Initial Spares allowed (₹ in lakh)
				$D = [(A-B)*C / (100-C)]$ (₹ in lakh)	$E = D-B$ (₹ in lakh)	
Transmission line						
Asset-I	12193.28	121.89	1.00	121.93	Nil	121.89
Asset-II	12531.15	125.27		125.31		125.27
Asset-III	46974.11	396.25		470.48		396.25
Sub-station (Brown Field)						
Asset-I	559.75	48.15	6.00	32.66	15.49	32.66
Asset-II	692.61	67.00		39.93	27.07	39.93
Asset-III	282.63	33.58		15.90	17.68	15.90

26. The Initial Spares allowed for Asset-IV as per percentage specified in the 2009 Tariff Regulations are as follows:

Particulars	Capital Cost as on cut-off date (A) (₹ in lakh)	Initial Spares claimed (B) (₹ in lakh)	Ceiling limit (%) (C)	Initial Spares worked out	Excess Initial Spares	Initial Spares allowed (₹ in lakh)
				$D = [(A-B)*C / (100-C)]$ (₹ in lakh)	$E = D-B$ (₹ in lakh)	
Sub-station						
Asset-IV	1131.97	45.60	2.50	27.86	17.74	27.86



27. The Petitioner has submitted that the expenditure pertaining to Initial Spares for Asset-IV has been fully discharged as on 31.3.2014. The Petitioner has further submitted that the discharge of Initial Spares has been considered on cash basis in the Auditor Certificates. The discharge of expenditure pertaining to Initial Spares for Asset-I, Asset-II and Asset-III as submitted by the Petitioner are as follows:

Asset-I

(₹ in lakh)

Particulars	Discharge of Initial Spares	
	Transmission Line	Sub-station
Expenditure up to COD (31.3.2018)	121.89	20.08
Expenditure from COD to 31.3.2018	0.00	0.00
Expenditure in 2018-19	0.00	0.00
Expenditure in 2019-20	0.00	28.07
Total	121.89	48.15

Asset-II

(₹ in lakh)

Particulars	Discharge of Initial Spares	
	Transmission Line	Sub-station
Expenditure up to COD (1.4.2018)	125.27	39.55
Expenditure in 2018-19	0.00	0.00
Expenditure in 2019-20	0.00	27.45
Total	125.27	67.00

Asset-III

(₹ in lakh)

Particulars	Discharge of Initial Spares		
	Transmission Line	Sub-station	PLCC
Expenditure up to COD (23.1.2018)	196.80	17.46	8.22
Expenditure from COD to 31.3.2018	164.38	0.00	0.00
Expenditure in 2018-19	35.07	1.82	0.00
Total	396.25	25.36	8.22

28. Based on the discharge of expenditure pertaining to Initial Spares submitted by the Petitioner for Asset-I, Asset-II and Asset-III, Excess initial Spares deducted are follows:



(₹ in lakh)

Asset	Excess Initial Spares computed above	Year-wise deduction of excess Initial Spares		
		As on COD	2018-19	2019-20
Asset-I	15.49	0.00	0.00	15.49
Asset-II	27.07	0.00	0.00	27.07
Asset-III	17.68	15.86	1.82	0.00

29. With regard to excess initial spares of ₹ 17.74 lakh in respect of Asset-IV, it has been noted that the Commission vide Order dated 31.12.2018 in Petition No. 109/TT/2018 had deducted the excess Initial Spares of ₹ 16.90 lakh from the admitted capital cost as on 1.4.2014. Thus, additional excess initial spares of ₹ 0.84 lakh (17.74-16.90) is required to be reduced from capital cost as on 1.4.2014 in respect of Asset-IV.

Capital Cost as on COD/1.4.2014

30. The capital cost of the transmission assets has been calculated in accordance with Regulation 9(3) of the 2014 Tariff Regulations. The details of the capital cost now approved as on COD after adjustment of IDC, IEDC and Initial Spares for Asset-I, Asset-II, Asset-III and Asset-IV are as follows:

(₹ in lakh)

Particulars	Capital Cost claimed vide Auditor Certificates (as on COD / 1.4.2014) (on accrual basis) (A)	Un-discharged IDC (as on COD) (B)	Excess Initial Spares disallowed as on COD / 1.4.2014 (C)	Capital Cost allowed (as on COD) (D) = (A-B-C)
Asset-I	14266.67	189.46	0.00	14077.21
Asset-II	14443.76	282.50	0.00	14161.26
Asset-III	54667.25	1295.25	15.86	53356.14
Asset-IV	1040.30	27.75	0.84	1011.71



Additional Capital Expenditure (ACE)

31. The Commission *vide* order dated 9.10.2018 in Petition No. 56/TT/2017 for Asset-I, Asset-II and Asset-III and *vide* order dated 31.12.2018 in Petition No. 109/TT/2018 for Asset-IV had allowed ACE for the 2014-19 period as follows:

Asset	ACE admitted (₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	--	--	--	0.00	595.66
Asset-II	--	--	--	--	676.85
Asset-III	--	--	--	382.13	1722.30
Asset-IV	110.59	0.00	24.44	0.00	0.00

32. The Petitioner has claimed the following ACE in respect of the transmission assets for 2014-19 tariff period based on actual expenditure:

Asset	ACE claimed (on cash basis) (₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	--	--	--	0.00	186.09
Asset-II	--	--	--	--	261.08
Asset-III	--	--	--	812.36	3349.83
Asset-IV	110.59	0.00	8.30	7.71	0.00

33. The Petitioner has submitted that ACE incurred during the 2014-19 period is on account of undischarged liabilities recognized to be payable at a future date under Regulation 14(1)(i) of the 2014 Tariff Regulations, works deferred for execution under Regulation 14(1)(ii) of the 2014 Tariff Regulations and undischarged liabilities for works executed prior to the cut-off date under Regulation 14(2)(iv) of the 2014 Tariff Regulations.

34. ACE claimed by the Petitioner has been verified from the Auditor Certificates. The discharge of IDC for the transmission assets has been considered as per the IDC statements submitted by the Petitioner. Further, the capital cost claimed as on



31.3.2019 for Asset-I, Asset-II, Asset-III and Asset-IV is within the apportioned approved cost as per RCE-II. ACE allowed for the 2014-19 period is as follows:

(₹ in lakh)

Particulars	Regulation	ACE				
		2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I						
IDC discharged after COD	14(1)(i)	--	--	--	0.00	189.46
Total ACE (Asset-I)		--	--	--	0.00	189.46
Asset-II						
IDC discharged after COD	14(1)(i)	--	--	--	--	282.50
Total ACE (Asset-II)		--	--	--	--	282.50
Asset-III						
Balance and retention payments for liabilities other than IDC	14(1)(i)	--	--	--	382.13	1212.27
Works deferred for execution	14(1)(ii)	--	--	--	0.00	1278.62
IDC discharged after COD	14(1)(i)	--	--	--	430.23	865.02
Total ACE (Asset-III)		--	--	--	812.36	3355.91
Asset-IV						
Balance and retention payments for liabilities other than IDC	14(1)(i)	0.00	0.00	8.30	0.00	0.00
Balance and retention payments for liabilities for works executed prior to the cut-off date	14(2)(iv)	0.00	0.00	0.00	7.71	0.00
Works deferred for execution	14(1)(ii)	83.37	0.00	0.00	0.00	0.00
IDC discharged after COD	14(1)(i)	27.75	0.00	0.00	0.00	0.00
Total ACE (Asset-IV)		111.12	0.00	8.30	7.71	0.00

(₹ in lakh)

Asset	Apportioned Cost (as per RCE-II)	Capital Cost allowed (as on COD / 1.4.2014)	ACE					Capital Cost allowed (as on 31.3.2019)
			2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-I	14988.74	14077.21	--	--	--	0.00	189.46	14266.67
Asset-II	15145.15	14161.26	--	--	--	--	282.50	14443.76
Asset-III	59154.60	53356.14	--	--	--	812.36	3355.91	57524.41
Asset-IV	1391.83	1011.71	111.12	0.00	8.30	7.71	0.00	1138.84



Debt-Equity ratio

35. The Petitioner has claimed debt-equity ratio of 70:30 as on COD/1.4.2014. Debt-Equity ratio of 70:30 is considered as provided under Regulation 19 of the 2014 Tariff Regulations. The details of the debt and equity as on the COD/1.4.2014 and as on 31.3.2019 for Asset-I, Asset-II, Asset-III and Asset-IV considered for the purpose of tariff of the 2014-19 period are as follows:

Asset-I

Funding	Capital Cost (as on COD) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2019) (₹ in lakh)	(in %)
Debt	9854.05	70.00	9986.67	70.00
Equity	4223.16	30.00	4280.00	30.00
Total	14077.21	100.00	14266.67	100.00

Asset-II

Funding	Capital Cost (as on COD) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2019) (₹ in lakh)	(in %)
Debt	9912.88	70.00	10110.63	70.00
Equity	4248.38	30.00	4333.13	30.00
Total	14161.26	100.00	14443.76	100.00

Asset-III

Funding	Capital Cost (as on COD) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2019) (₹ in lakh)	(in %)
Debt	37349.30	70.00	40267.08	70.00
Equity	16006.84	30.00	17257.32	30.00
Total	53356.14	100.00	57524.41	100.00

Asset-IV

Funding	Capital Cost (as on 1.4.2014) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2019) (₹ in lakh)	(in %)
Debt	708.19	70.00	797.18	70.00
Equity	303.51	30.00	341.65	30.00
Total	1011.71	100.00	1138.84	100.00



Depreciation

36. The Petitioner's claim towards depreciation for Asset-I and Asset-II was found to be higher than the depreciation allowed for the transmission assets vide order dated 9.10.2018 in Petition No. 56/TT/2017. The Petitioner has neither given any justification for claiming higher depreciation than that allowed earlier in order dated 9.10.2018 in Petition No. 56/TT/2017 nor made any specific prayer for allowing higher depreciation in this petition. While claiming depreciation for these assets, the Petitioner has segregated IT equipment from that of sub-station and claimed higher depreciation for IT equipment. Similar issue had come up in Petition No. 19/TT/2020 and the Commission *vide* order dated 9.5.2020 has considered depreciation for IT equipment @ 5.28% as part of the sub-station up to 31.3.2019 while truing up the capital expenditure for 2014-19 period. However, for 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 read with Sr. No. (p) of the Appendix-I (Depreciation Schedule) of the 2019 Tariff Regulations. The Gross Block during 2014-19 tariff period has been depreciated at Weighted Average Rate of Depreciation (WAROD). WAROD at Annexure-I, Annexure-II, Annexure-III and Annexure-IV in respect of Asset-I, Asset-II, Asset-III and Asset-IV respectively has been worked out after taking into account the depreciation rates of transmission assets as specified in the 2014 Tariff Regulations. The depreciation allowed during 2014-19 period for the transmission assets is as follows:

Particulars	(₹ in lakh)	
	2017-18 (Pro-rata 1 day)	2018-19
Asset-I		
Opening Gross Block	14077.21	14077.21



ACE	0.00	189.46
Closing Gross Block	14077.21	14266.67
Average Gross Block	14077.21	14171.94
Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28
Balance useful life of the asset (Year)	35	35
Lapsed life at the beginning of the year (Year)	0	0
Aggregate Depreciable Value	12669.49	12754.75
Combined Depreciation during the year	2.04	748.61
Cumulative Aggregate Depreciation at the end of the year	2.04	750.65
Remaining Aggregate Depreciable Value at the end of the year	12667.45	12004.10

(₹ in lakh)

Particulars	2018-19
Asset-II	
Opening Gross Block	14161.26
ACE	282.50
Closing Gross Block	14443.76
Average Gross Block	14302.51
Weighted average rate of Depreciation (WAROD) (in %)	5.28
Balance useful life of the asset (Year)	35
Lapsed life at the beginning of the year (Year)	0
Aggregate Depreciable Value	12872.26
Combined Depreciation during the year	755.47
Cumulative Aggregate Depreciation at the end of the year	755.47
Remaining Aggregate Depreciable Value at the end of the year	12116.79

(₹ in lakh)

Particulars	2017-18 (Pro-rata 68 days)	2018-19
Asset-III		
Opening Gross Block	53356.14	54168.50
ACE	812.36	3355.91
Closing Gross Block	54168.50	57524.41
Average Gross Block	53762.32	55846.45
Weighted average rate of Depreciation (WAROD) (in %)	5.25	5.24
Balance useful life of the asset (Year)	35	35



Lapsed life at the beginning of the year (Year)	0	0
Depreciable Value	48386.09	50261.81
Depreciation during the year	525.57	2928.76
Cumulative Depreciation at the end of the year	525.57	3454.32
Remaining Depreciable Value at the end of the year	47860.52	46807.49

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-IV					
Opening Gross Block	1011.71	1122.83	1122.83	1131.13	1138.84
ACE	111.12	0.00	8.30	7.71	0.00
Closing Gross Block	1122.83	1122.83	1131.13	1138.84	1138.84
Average Gross Block	1067.27	1122.83	1126.98	1134.98	1138.84
Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28
Balance useful life of the asset (Year)	25	24	23	22	21
Lapsed life at the beginning of the year (Year)	0	1	2	3	4
Depreciable Value	960.54	1010.54	1014.28	1021.48	1024.95
Depreciation during the year	56.35	59.29	59.50	59.93	60.13
Cumulative Depreciation at the end of the year	64.99	124.28	183.78	243.71	303.84
Remaining Depreciable Value at the end of the year	895.55	886.27	830.50	777.77	721.11

37. The details of depreciation allowed *vide* order dated 9.10.2018 in Petition No. 56/TT/2017 in respect of Asset-I, Asset-II and Asset-III, *vide* order dated 31.12.2018 in Petition No. 109/TT/2018 in respect of Asset-IV, depreciation claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

(₹ in lakh)

Particulars	2017-18 (Pro-rata 1 day)	2018-19
Asset-I		
Allowed <i>vide</i> order dated 9.10.2018 in Petition No. 56/TT/2017	1.98	737.01
Claimed by the Petitioner in the instant petition	2.05	750.03
Approved after true-up in this order	2.04	748.61



(₹ in lakh)

Particulars	2018-19
Asset-II	
Allowed <i>vide</i> order dated 9.10.2018 in Petition No. 56/TT/2017	767.04
Claimed by the Petitioner in the instant petition	757.37
Approved after true-up in this order	755.47

(₹ in lakh)

Particulars	2017-18 (Pro-rata 68 days)	2018-19
Asset-III		
Allowed <i>vide</i> order dated 9.10.2018 in Petition No. 56/TT/2017	538.76	2943.66
Claimed by the Petitioner in the instant petition	525.62	2928.86
Approved after true-up in this order	525.57	2928.76

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-IV					
Allowed <i>vide</i> order dated 31.12.2018 in Petition No. 109/TT/2018	56.38	59.30	59.95	60.59	60.59
Claimed by the Petitioner in the instant petition	56.44	59.36	59.58	60.00	60.20
Approved after true-up in this order	56.35	59.29	59.50	59.93	60.13

Interest on Loan (IoL)

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

(₹ in lakh)

Particulars	2017-18 (Pro-rata 1 day)	2018-19
Asset-I		
Gross Normative Loan	9854.05	9854.05
Cumulative Repayments up to Previous Year	0.00	2.04



Net Loan-Opening	9854.05	9852.01
Additions due to ACE	0.00	132.62
Repayment during the year	2.04	748.61
Net Loan-Closing	9852.01	9236.02
Average Loan	9853.03	9544.02
Weighted Average Rate of Interest on Loan (in %)	6.1702	6.4719
Interest on Loan	1.67	617.68

(₹ in lakh)

Particulars	2018-19
Asset-II	
Gross Normative Loan	9912.88
Cumulative Repayments up to Previous Year	0.00
Net Loan-Opening	9912.88
Additions due to ACE	197.75
Repayment during the year	755.47
Net Loan-Closing	9355.16
Average Loan	9634.02
Weighted Average Rate of Interest on Loan (in %)	6.7225
Interest on Loan	647.65

(₹ in lakh)

Particulars	2017-18 (Pro-rata 68 days)	2018-19
Asset-III		
Gross Normative Loan	37349.30	37917.95
Cumulative Repayments up to Previous Year	0.00	525.57
Net Loan-Opening	37349.30	37392.38
Additions due to ACE	568.65	2349.13
Repayment during the year	525.57	2928.76
Net Loan-Closing	37392.38	36812.76
Average Loan	37370.84	37102.57
Weighted Average Rate of Interest on Loan (in %)	8.2977	8.3144
Interest on Loan	577.71	3084.85



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-IV					
Gross Normative Loan	708.19	785.98	785.98	791.79	797.18
Cumulative Repayments up to Previous Year	8.64	64.99	124.28	183.78	243.71
Net Loan-Opening	699.55	720.99	661.70	608.01	553.48
Additions due to ACE	77.78	0.00	5.81	5.40	0.00
Repayment during the year	56.35	59.29	59.50	59.93	60.13
Net Loan-Closing	720.99	661.70	608.01	553.48	493.35
Average Loan	710.27	691.34	634.85	580.74	523.41
Weighted Average Rate of Interest on Loan (in %)	8.8669	8.8716	8.8660	8.8579	8.8574
Interest on Loan	62.98	61.33	56.29	51.44	46.36

39. The details of IoL allowed *vide* order dated 9.10.2018 in Petition No. 56/TT/2017 in respect of Asset-I, Asset-II and Asset-III, *vide* order dated 31.12.2018 in Petition No. 109/TT/2018 in respect of Asset-IV, IoL claimed by the Petitioner in the instant petition and true-up in the instant order are as follows:

(₹ in lakh)

Particulars	2017-18 (Pro-rata 1 day)	2018-19
Asset-I		
Allowed <i>vide</i> order dated 9.10.2018 in Petition No. 56/TT/2017	1.64	592.27
Claimed by the Petitioner in the instant petition	1.67	617.71
Approved after true-up in this order	1.67	617.68

(₹ in lakh)

Particulars	2018-19
Asset-II	
Allowed <i>vide</i> order dated 9.10.2018 in Petition No. 56/TT/2017	625.22
Claimed by the Petitioner in the instant petition	648.09
Approved after true-up in this order	647.65



(₹ in lakh)

Particulars	2017-18 (Pro-rata 68 days)	2018-19
Asset-III		
Allowed <i>vide</i> order dated 9.10.2018 in Petition No. 56/TT/2017	599.17	3130.29
Claimed by the Petitioner in the instant petition	577.76	3084.98
Approved after true-up in this order	577.71	3084.85

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-IV					
Allowed <i>vide</i> order dated 31.12.2018 in Petition No. 109/TT/2018	60.18	58.73	54.35	49.95	44.85
Claimed by the Petitioner in the instant petition	63.08	61.41	56.35	51.50	46.41
Approved after true-up in this order	62.98	61.33	56.29	51.44	46.36

Return on Equity (RoE)

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

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

41. The Commission, *vide* order dated 27.4.2020 in Petition No.274/TT/2019, had arrived at the effective tax rate for the Petitioner based on the notified MAT rates and the same is as follows:

Year	Notified MAT rates (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

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

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

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

(₹ in lakh)

Particulars	2017-18 (Pro-rata 1 day)	2018-19
Asset-I		
Opening Equity	4223.16	4223.16
Additions due to ACE	0.00	56.84
Closing Equity	4223.16	4280.00
Average Equity	4223.16	4251.58
Return on Equity (Base Rate) (in %)	15.500	15.500
MAT Rate for respective year (in %)	21.342	21.549
Rate of Return on Equity (in %)	19.705	19.758
Return on Equity	2.28	840.03



(₹ in lakh)

Particulars	2018-19
Asset-II	
Opening Equity	4248.38
Additions due to ACE	84.75
Closing Equity	4333.13
Average Equity	4290.75
Return on Equity (Base Rate) (in %)	15.500
MAT Rate for respective year (in %)	21.549
Rate of Return on Equity (in %)	19.758
Return on Equity	847.77

(₹ in lakh)

Particulars	2017-18 (Pro-rata 68 days)	2018-19
Asset-III		
Opening Equity	16006.84	16250.55
Additions due to ACE	243.71	1006.77
Closing Equity	16250.55	17257.32
Average Equity	16128.70	16753.94
Return on Equity (Base Rate) (in %)	15.500	15.500
MAT Rate for respective year (in %)	21.342	21.549
Rate of Return on Equity (in %)	19.705	19.758
Return on Equity	592.10	3310.24

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-IV					
Opening Equity	303.51	336.85	336.85	339.34	341.65
Additions due to ACE	33.34	0.00	2.49	2.31	0.00
Closing Equity	336.85	336.85	339.34	341.65	341.65
Average Equity	320.18	336.85	338.09	340.49	341.65
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	62.79	66.38	66.62	67.09	67.50

44. The details of RoE allowed *vide* order dated 9.10.2018 in Petition No. 56/TT/2017 in respect of Asset-I, Asset-II and Asset-III, *vide* order dated 31.12.2018 in



Petition No. 109/TT/2018 in respect of Asset-IV, RoE claimed by the Petitioner in the instant petition and true-up in the instant order is as follows:

(₹ in lakh)

Particulars	2017-18 (Pro-rata 1 day)	2018-19
Asset-I		
Allowed <i>vide</i> order dated 9.10.2018 in Petition No. 56/TT/2017	2.20	820.79
Claimed by the Petitioner in the instant petition	2.28	840.13
Approved after true-up in this order	2.28	840.03

(₹ in lakh)

Particulars	2018-19
Asset-II	
Allowed <i>vide</i> order dated 9.10.2018 in Petition No. 56/TT/2017	854.28
Claimed by the Petitioner in the instant petition	848.39
Approved after true-up in this order	847.77

(₹ in lakh)

Particulars	2017-18 (Pro-rata 68 days)	2018-19
Asset-III		
Allowed <i>vide</i> order dated 9.10.2018 in Petition No. 56/TT/2017	604.01	3304.01
Claimed by the Petitioner in the instant petition	592.16	3310.38
Approved after true-up in this order	592.10	3310.24

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-IV					
Allowed <i>vide</i> order dated 31.12.2018 in Petition No. 109/TT/2018	62.82	66.07	66.79	67.51	67.51
Claimed by the Petitioner in the instant petition	62.93	66.49	66.70	67.17	67.58
Approved after true-up in this order	62.79	66.38	66.62	67.09	67.50

Operation & Maintenance Expenses (O&M Expenses)

45. The O&M Expenses claimed by the Petitioner for the transmission assets for the 2014-19 tariff period are as follows:



(₹ in lakh)

O&M Expenses claimed by the Petitioner					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-I	--	--	--	0.52*	137.42
Asset-II	--	--	--	--	245.56
Asset-III	--	--	--	27.07*	150.09
Asset-IV	0.00	0.00	0.00	0.00	0.00

*Pro-rata O&M Expenses

46. We have considered the submissions of the Petitioner. The petitioner has bifurcated the 400 kV Dehradun-Abdullapur D/C line into 400 kV Dehradun-Abdullapur Ckt-I and Ckt-II and claimed COD as 31.3.2018 and 1.4.2018 respectively. We are not inclined to grant O&M for CKt-I and Ckt-II separately. The O&M Expenses for the Dehradun – Abdullapur D/C (quad) line is allowed in Asset-II. The O&M Expenses norms specified for the elements covered in the transmission assets under Regulation 29(3) of the 2014 Tariff Regulations are as follows:

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station (400 kV)					
Norms (₹ lakh/bay)	60.30	62.30	64.37	66.51	68.71
Transmission line (Single Circuit Bundled Conductor with four sub-conductors)					
Norms (₹ lakh/km)	0.606	0.627	0.647	0.669	0.691
Transmission line (Double Circuit Bundled conductor with four or more sub-conductors)					
Norms (₹ lakh/km)	1.062	1.097	1.133	1.171	1.210

47. The Petitioner has not claimed O&M Expenses in respect of Asset-IV. The O&M Expenses allowed in respect of Asset-I, Asset-II and Asset-III in terms of Regulation 29(3) of the 2014 Tariff Regulations are as follows:

Particulars	2017-18 (Pro-rata 1 day)	2018-19
Asset-I		
Sub-stations at Dehradun and Abdullapur		
400 kV bays (Number of bays)	2	2
Norms (₹ lakh/bay)	66.51	68.71
Total O&M Expenses (₹ in lakh)	0.36	137.42



Particulars	2018-19
Asset-II	
Sub-stations at Dehradun and Abdullapur	
400 kV bays (Number of bays)	2
Norms (₹ lakh/bay)	68.71
Transmission line (400 KV Dehradun – Abdullapur D/C (Quad) line)	
D/C Bundled Conductor with four sub-conductors (km)	89.37
Norms (₹ lakh/km)	1.210
Total O&M Expenses (₹ in lakh)	245.56

Particulars	2017-18 (Pro-rata 68 days)	2018-19
Asset-III		
Sub-stations at Kishenpur		
400 kV bays (Number of bays)	1	1
Norms (₹ lakh/bay)	66.51	68.71
Transmission line (400kV D/C (Quad) Dulhasti – Kishenpur single circuit line)		
S/C Bundled Conductor with four sub-conductors (km)	117.77	117.77
Norms (₹ lakh/km)	0.669	0.691
Total O&M Expenses (₹ in lakh)	27.07	150.09

48. The details of O&M Expenses allowed *vide* order dated 9.10.2018 in Petition No. 56/TT/2017 in respect of Asset-I, Asset-II and Asset-III, O&M Expenses claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

Particulars	(₹ in lakh)	
	2017-18 (Pro-rata 1 day)	2018-19
Asset-I		
Allowed <i>vide</i> order dated 9.10.2018 in Petition No. 56/TT/2017	0.18	68.71
Claimed by the Petitioner in the instant petition	0.52	137.42
Approved after true-up in this order	0.36	137.42



(₹ in lakh)

Particulars	2018-19
Asset-II	
Allowed <i>vide</i> order dated 9.10.2018 in Petition No. 56/TT/2017	245.56
Claimed by the Petitioner in the instant petition	245.56
Approved after true-up in this order	245.56

(₹ in lakh)

Particulars	2017-18 (Pro-rata 68 days)	2018-19
Asset-III		
Allowed <i>vide</i> order dated 9.10.2018 in Petition No. 56/TT/2017	24.98	138.51
Claimed by the Petitioner in the instant petition	27.07	150.09
Approved after true-up in this order	27.07	150.09

Interest on Working Capital (IWC)

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

(₹ in lakh)

Particulars	2017-18 (Pro-rata 1 day)	2018-19
Asset-I		
WC for O&M Expenses (O&M Expenses for 1 month)	11.09	11.45
WC for Maintenance Spares (15% of O&M Expenses)	19.95	20.61
WC for Receivables (Equivalent to 2 months of annual fixed cost)	395.07	399.69
Total Working Capital	426.11	431.76
Rate of Interest (in %)	12.60	12.60
Interest on Working Capital	0.15	54.40

(₹ in lakh)

Particulars	2018-19
Asset-II	
WC for O&M Expenses (O&M Expenses for 1 month)	20.46
WC for Maintenance Spares	36.83



(15% of O&M Expenses)	
WC for Receivables (Equivalent to 2 months of annual fixed cost)	425.90
Total Working Capital	483.20
Rate of Interest (in %)	12.20
Interest on Working Capital	58.95

(₹ in lakh)

Particulars	2017-18 (Pro-rata 68 days)	2018-19
Asset-III		
WC for O&M Expenses (O&M Expenses for 1 month)	12.11	12.51
WC for Maintenance Spares (15% of O&M Expenses)	21.79	22.51
WC for Receivables (Equivalent to 2 months of annual fixed cost)	1574.69	1613.61
Total Working Capital	1608.59	1648.63
Rate of Interest (in %)	12.60	12.60
Interest on Working Capital	37.76	207.73

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-IV					
WC for O&M Expenses (O&M Expenses for 1 month)	0.00	0.00	0.00	0.00	0.00
WC for Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	0.00
WC for Receivables (Equivalent to 2 months of annual fixed cost)	31.05	31.88	31.10	30.43	29.67
Total Working Capital	31.05	31.88	31.10	30.43	29.67
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	4.19	4.30	4.20	4.11	4.00

50. The details of IWC allowed vide order dated 9.10.2018 in Petition No. 56/TT/2017 in respect of Asset-I, Asset-II and Asset-III, vide order dated 31.12.2018 in Petition No. 109/TT/2018 in respect of Asset-IV, IWC claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:



(₹ in lakh)

Particulars	2017-18 (Pro-rata 1 day)	2018-19
Asset-I		
Allowed <i>vide</i> order dated 9.10.2018 in Petition No. 56/TT/2017	0.13	49.66
Claimed by the Petitioner in the instant petition	0.16	54.43
Approved after true-up in this order	0.15	54.40

(₹ in lakh)

Particulars	2018-19
Asset-II	
Allowed <i>vide</i> order dated 9.10.2018 in Petition No. 56/TT/2017	58.86
Claimed by the Petitioner in the instant petition	59.01
Approved after true-up in this order	58.95

(₹ in lakh)

Particulars	2017-18 (Pro-rata 68 days)	2018-19
Asset-III		
Allowed <i>vide</i> order dated 9.10.2018 in Petition No. 56/TT/2017	38.65	208.29
Claimed by the Petitioner in the instant petition	37.76	207.73
Approved after true-up in this order	37.76	207.73

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-IV					
Allowed <i>vide</i> order dated 31.12.2018 in Petition No. 109/TT/2018	4.13	4.24	4.17	4.10	3.98
Claimed by the Petitioner in the instant petition	4.20	4.31	4.20	4.11	4.01
Approved after true-up in this order	4.19	4.30	4.20	4.11	4.00

Approved Annual Fixed Charges for 2014-19 Tariff Period

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



(₹ in lakh)

Particulars	2017-18 (Pro-rata 1 day)	2018-19
Asset-I		
Depreciation	2.04	748.61
Interest on Loan	1.67	617.68
Return on Equity	2.28	840.03
O&M Expenses	0.36	137.42
Interest on Working Capital	0.15	54.40
Total	6.49	2398.14

(₹ in lakh)

Particulars	2018-19
Asset-II	
Depreciation	755.47
Interest on Loan	647.65
Return on Equity	847.77
O&M Expenses	245.56
Interest on Working Capital	58.95
Total	2555.40

(₹ in lakh)

Particulars	2017-18 (Pro-rata 68 days)	2018-19
Asset-III		
Depreciation	525.57	2928.76
Interest on Loan	577.71	3084.85
Return on Equity	592.10	3310.24
O&M Expenses	27.07	150.09
Interest on Working Capital	37.76	207.73
Total	1760.20	9681.67

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-IV					
Depreciation	56.35	59.29	59.50	59.93	60.13
Interest on Loan	62.98	61.33	56.29	51.44	46.36
Return on Equity	62.79	66.38	66.62	67.09	67.50
O&M Expenses	0.00	0.00	0.00	0.00	0.00
Interest on Working Capital	4.19	4.30	4.20	4.11	4.00
Total	186.31	191.30	186.61	182.57	178.00



52. The details of AFC allowed *vide* order dated 9.10.2018 in Petition No. 56/TT/2017 in respect of Asset-I, Asset-II and Asset-III, *vide* order dated 31.12.2018 in Petition No. 109/TT/2018 in respect of Asset-IV, AFC claimed by the Petitioner in the instant petition and true-up in the instant order are as follows:

(₹ in lakh)

Particulars	2017-18 (Pro-rata 1 day)	2018-19
Asset-I		
Allowed <i>vide</i> order dated 9.10.2018 in Petition No. 56/TT/2017	6.14	2268.44
Claimed by the Petitioner in the instant petition	6.68	2399.72
Approved after true-up in this order	6.49	2398.14

(₹ in lakh)

Particulars	2018-19
Asset-II	
Allowed <i>vide</i> order dated 9.10.2018 in Petition No. 56/TT/2017	2550.95
Claimed by the Petitioner in the instant petition	2558.42
Approved after true-up in this order	2555.40

(₹ in lakh)

Particulars	2017-18 (Pro-rata 68 days)	2018-19
Asset-III		
Allowed <i>vide</i> order dated 9.10.2018 in Petition No. 56/TT/2017	1805.57	9724.76
Claimed by the Petitioner in the instant petition	1760.37	9682.04
Approved after true-up in this order	1760.20	9681.67

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-IV					
Allowed <i>vide</i> order dated 31.12.2018 in Petition No. 109/TT/2018	183.51	188.34	185.26	182.15	176.93
Claimed by the Petitioner in the instant petition	186.65	191.57	186.83	182.78	178.20
Approved after true-up in this order	186.31	191.30	186.61	182.57	178.00



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

53. The Petitioner has combined the transmission assets covered in the transmission project into one single “Combined Asset under NRSS XXIV” and has claimed the tariff for the Combined Asset under NRSS XXIV as a whole for the 2019-24 tariff period as provided in Regulation 8(1) of the 2019 Tariff Regulations.

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

	(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	4628.66	4690.57	4718.57	4718.57	4718.57
Interest on Loan	4217.96	3910.41	3582.24	3205.63	2821.07
Return on Equity	4961.34	5033.64	5067.79	5067.79	5067.79
O&M Expenses	371.34	384.16	397.60	411.41	425.75
Interest on Working Capital	223.83	222.37	218.94	213.87	208.15
Total	14403.13	14241.15	13985.14	13617.27	13241.33

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

	(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
WC for O&M Expenses (O&M Expenses for 1 month)	30.95	32.01	33.13	34.28	35.48
WC for Maintenance Spares (15% of O&M Expenses)	55.70	57.62	59.64	61.71	63.86
WC for Receivables (Equivalent to 45 days of annual transmission charges)	1770.88	1755.76	1724.20	1678.84	1628.03
Total Working Capital	1857.53	1845.39	1816.97	1774.83	1727.37
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	223.83	222.37	218.94	213.87	208.15



Effective Date of Commercial Operation (E-COD)

56. The Petitioner has claimed E-COD of the Combined Asset as 26.1.2018. Based on the trued-up admitted capital cost as on 31.3.2019 and actual COD of all the transmission assets, the same E-COD has been worked out as follows:

Particulars	Capital Cost (as on 31.3.2019) (₹ in lakh)	COD	Number of days from last COD	Weightage of Cost (in %)	Weighted days	Effective COD (latest COD – weighted days)
Asset-I	14266.67	31.3.2018	1	16.33	0.16	26.1.2018
Asset-II	14443.76	1.4.2018	0	16.53	0.00	
Asset-III	57524.41	23.1.2018	68	65.84	44.77	
Asset-IV	1138.84	1.2.2014	1520	1.30	19.81	
Total	87373.67			100.00	64.74	

57. E-COD is used to determine the lapsed life of the project as a whole which works out as 1 (one) year as on 1.4.2019 (i.e., the number of completed years as on 1.4.2019 from E-COD).

Weighted Average Life (WAL) of the Assets

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

59. WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2019 and their respective life as specified in the 2019 Tariff Regulations. Accordingly, WAL of the transmission assets has been worked out as 35 years as follows:



Particulars	Capital Cost (as on 31.3.2019) (₹ in lakh) (1)	Life (in years) (2)	Weighted Cost (₹ in lakh) (3) = (1)x(2)	Weighted Average Life of Asset (in years) (4) = (3)/(1)
Building Civil Works & Colony	15.56	25	389.00	34.64 (rounded off to 35 years)
Transmission Line	83323.37	35	2916317.95	
Sub Station	2669.53	25	66738.29	
PLCC	167.15	15	2507.27	
IT Equipment (Including Software)	27.38	6.67	182.53	
Total	86202.99		2986135.03	

60. WAL as on 1.4.2019 as determined above is applicable prospectively (i.e., for 2019-24 tariff period onwards) and no retrospective adjustment of depreciation in previous tariff period is required to be done. As discussed above, Effective COD of the Combined Asset is 26.1.2018 and the lapsed life of the project as a whole works out to 1 year as on 1.4.2019 (i.e., the number of completed years as on 1.4.2019 from Effective COD). Accordingly, WAL has been used to determine the remaining useful life as on 31.3.2019 to be 34 years.

Capital Cost

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

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

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

- (a) *The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- (b) *Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*
- (c) *Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*
- (d) *Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*



- (e) Capitalised Initial Spares subject to the ceiling rates in accordance with these regulations;
- (f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;
- (g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;
- (h) Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;
- (i) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
- (j) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;
- (k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;
- (l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;
- (m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;
- (n) Expenditure on account of change in law and force majeure events; and
- (o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

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

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

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

- (a) cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and



(b) cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) project in the affected area.

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

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

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

Provided that in case replacement of transmission asset is recommended by Regional Power Committee, such asset shall be decapitalised only after its redeployment;

Provided further that unless shifting of an asset from one project to another is of permanent nature, there shall be no de-capitalization of the concerned assets.

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

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

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

62. The Petitioner has claimed the capital cost of ₹87374.31 lakh as on 31.3.2019 for the Combined Asset. The capital cost of ₹87373.67 lakh has been admitted for the transmission assets as on 31.3.2019. Accordingly, the same capital cost of ₹87373.67 lakh has been considered as opening capital cost as on 1.4.2019 in respect of the Combined Asset for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

Additional Capital Expenditure (ACE)

63. 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.”

64. The Petitioner has claimed the following ACE for the 2019-24 tariff period under Regulations 25(1)(d) of the 2019 Tariff Regulations on account of undischarged liability towards final payment after the cut-off date for works executed prior to the cut-off date/ works differed for execution:

(₹ in lakh)

Particulars	ACE Claimed	
	2019-20	2020-21
Asset-I	369.01	200.00
Asset-II	357.43	200.00
Asset-III	599.76	812.00
Asset-IV	28.00	0.00
Total (Combined Asset)	1354.20	1212.00

65. The Petitioner has submitted that ACE to be incurred during the 2019-24 period is on account of undischarged liabilities recognized to be payable at a future date under Regulation 24(1)(a) of the 2019 Tariff Regulations in respect of Asset-I, Asset-II and Asset-III and undischarged liabilities after the cut-off date for works executed prior to the cut-off date under Regulation 25(1)(d) of the 2019 Tariff Regulations in respect of Asset-IV. The Petitioner has claimed ACE after deducting the excess Initial Spares computed by the Petitioner for Asset-I and Asset-II in 2019-20. The break-up of ACE claimed by the Petitioner is as follows:



(₹ in lakh)

Particulars	Regulation	ACE claimed	
		2019-20	2020-21
Combined Asset			
Undischarged liabilities recognized to be payable at a future date	24(1)(a)	1326.20	1212.00
Undischarged liabilities after the cut-off date for works executed prior to the cut-off date	25(1)(d)	28.00	0.00
Total ACE		1354.20	1212.00

66. ACE claimed by the Petitioner has been allowed under Regulation 24(1)(a) of the 2019 Tariff Regulations (undischarged liabilities recognized to be payable at a future date and under Regulation 25(1)(d) of the 2019 Tariff Regulations (undischarged liabilities after the cut-off date for works executed prior to the cut-off date). The excess Initial Spares for Asset-I and Asset-II discussed in the preceding paragraphs of this order and disallowed in 2019-20 as per the year of discharge. Accordingly, the ACE allowed for the 2019-24 tariff period is as follows:

(₹ in lakh)

Particulars	ACE Claimed in Auditor Certificates		Initial Spares Disallowed	ACE Allowed	
	2019-20 (A)	2020-21 (B)	2019-20 (C)	2019-20 (D)=(A)-(C)	2020-21 (E)=(B)
Asset-I	384.50	200.00	15.49	369.01	200.00
Asset-II	384.50	200.00	27.07	357.43	200.00
Asset-III	599.76	812.00	0.00	599.76	812.00
Asset-IV	28.00	0.00	0.00	28.00	0.00
Total (Combined Asset)	1396.76	1212.00	42.56	1354.20	1212.00

67. The estimated completion cost in respect of Combined Asset allowed as on 31.3.2024 is within the apportioned approved capital cost as per RCE-II. Accordingly, ACE considered for the 2019-24 tariff period and the capital cost as on 31.3.2024 considered for the Combined Asset is as follows:



(₹ in lakh)

Particulars	Capital Cost admitted (as on 1.4.2019)	ACE admitted		Capital Cost admitted (as on 31.3.2024)
		2019-20	2020-21	
Combined Asset	87373.67	1354.20	1212.00	89939.87

Debt-Equity ratio

68. 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.”

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

Funding	Capital Cost (as on 1.4.2019) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2024) (₹ in lakh)	(in %)
Debt	61161.57	70.00	62957.91	70.00
Equity	26212.10	30.00	26981.96	30.00
Total	87373.67	100.00	89939.87	100.00

Depreciation

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

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

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

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



operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

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

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

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

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

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

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

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

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

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

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

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



71. WAROD has been worked out after taking into account the depreciation rates of IT and non-IT assets as specified in the 2019 Tariff Regulations. The salvage value of IT equipment has been considered as nil, i.e. IT asset has been considered as 100 per cent depreciable. The calculation of WAROD for the 2019-24 period is at Annexure-V. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The depreciation allowed for the Combined Asset is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	87373.67	88727.87	89939.87	89939.87	89939.87
Addition during the year due to projected ACE	1354.20	1212.00	0.00	0.00	0.00
Closing Gross Block	88727.87	89939.87	89939.87	89939.87	89939.87
Average Gross Block	88050.77	89333.87	89939.87	89939.87	89939.87
Weighted Average Rate of Depreciation (in %)	5.26	5.25	5.25	5.25	5.25
Balance useful life at the beginning of the year (Year)	34	33	32	31	30
Lapsed Life at the beginning of the year (Year)	1	2	3	4	5
Aggregate Depreciable Value	79248.54	80403.44	80948.84	80948.84	80948.84
Combined Depreciation during the year	4628.59	4690.45	4718.45	4718.45	4718.45
Aggregate Cumulative depreciation at the end of year	9892.88	14583.33	19301.78	24020.23	28738.69
Remaining Aggregate Depreciable Value at the end of year	69355.67	65820.11	61647.06	56928.61	52210.15

Interest on Loan (IoL)

72. 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.”

73. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2019. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during the 2019-24 tariff period may be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up. IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed for the Combined Asset for the 2019-24 tariff period is as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	61161.57	62109.51	62957.91	62957.91	62957.91
Cumulative Repayments up to Previous Year	5264.28	9892.88	14583.33	19301.78	24020.23



Net Loan-Opening	55897.29	52216.63	48374.58	43656.13	38937.68
Additions due to ACE	947.94	848.40	0.00	0.00	0.00
Repayment during the year	4628.59	4690.45	4718.45	4718.45	4718.45
Net Loan-Closing	52216.63	48374.58	43656.13	38937.68	34219.22
Average Loan	54056.96	50295.61	46015.35	41296.90	36578.45
Weighted Average Rate of Interest on Loan (in %)	7.8033	7.7754	7.7855	7.7631	7.7132
Interest on Loan	4218.21	3910.69	3582.52	3205.93	2821.38

Return on Equity (RoE)

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

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

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

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

Provided further that:

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

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

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

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



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

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

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

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

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

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

Illustration-

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

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

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

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

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from



the income tax authorities pertaining to the tariff period 2019-24 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee, as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long term customers, as the case may be, on year to year basis.”

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

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	26212.10	26618.36	26981.96	26981.96	26981.96
Additions due to ACE	406.26	363.60	0.00	0.00	0.00
Closing Equity	26618.36	26981.96	26981.96	26981.96	26981.96
Average Equity	26415.23	26800.16	26981.96	26981.96	26981.96
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	4961.31	5033.61	5067.75	5067.75	5067.75

Operation & Maintenance Expenses (O&M Expenses)

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-stations at Dehradun, Abdullapur and Kishenpur					
400 kV bays (Number of bays)	5	5	5	5	5
Norms (₹ lakh/bay)	32.15	33.28	34.45	35.66	36.91
O&M Expenses (₹ in lakh)	160.75	166.40	172.25	178.30	184.55
Transmission line (400KV D/C Ckt-I and Ckt-II of Dehradun – Abdullapur D/C (Quad) line)					
D/C Bundled Conductor with four sub-conductors (km)	89.37	89.37	89.37	89.37	89.37
Norms (₹ lakh/km)	1.322	1.368	1.416	1.466	1.517
O&M Expenses (₹ in lakh)	118.15	122.26	126.55	131.02	135.57



Transmission line (400kV D/C (Quad) Dulhasti – Kishenpur single circuit line)					
S/C Bundled Conductor with four sub-conductors (km)	117.77	117.77	117.77	117.77	117.77
Norms (₹ lakh/km)	0.755	0.781	0.809	0.837	0.867
O&M Expenses (₹ in lakh)	88.92	91.98	95.28	98.57	102.11
PLCC (2% of ₹175.90 lakh)	3.52	3.52	3.52	3.52	3.52
Total O&M Expenses (₹ in lakh)	371.34	384.16	397.60	411.41	425.75

77. Regulation 35(3)(a) and Regulation 33(4) of the 2019 Tariff Regulations provides as follows:

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Norms for sub-station Bays (₹ Lakh per bay)					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
Norms for Transformers (₹ Lakh per MVA)					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
Norms for AC and HVDC lines (₹ Lakh per km)					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011



Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					
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 year

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

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

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

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

78. 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 Regulations @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.



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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-stations at Dehradun, Abdullapur and Kishenpur					
400 kV bays (Number of bays)	5	5	5	5	5
Norms (₹ lakh/bay)	32.15	33.28	34.45	35.66	36.91
O&M Expenses (₹ in lakh)	160.75	166.40	172.25	178.30	184.55
Transmission line (400KV D/C Dehradun – Abdullapur D/C (Quad) line)					
D/C Bundled Conductor with four sub-conductors (km)	89.37	89.37	89.37	89.37	89.37
Norms (₹ lakh/km)	1.322	1.368	1.416	1.466	1.517
O&M Expenses (₹ in lakh)	118.15	122.26	126.55	131.02	135.57
Transmission line (400kV D/C (Quad) Dulhasti – Kishenpur single circuit line)					
S/C Bundled Conductor with four sub-conductors (km)	117.77	117.77	117.77	117.77	117.77
Norms (₹ lakh/km)	0.755	0.781	0.809	0.837	0.867
O&M Expenses (₹ in lakh)	88.92	91.98	95.28	98.57	102.11
Total O&M Expenses (₹ in lakh)	367.81	380.64	394.07	407.89	422.23

Interest on Working Capital (IWC)

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

“34. Interest on Working Capital

(1)...

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

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

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



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

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

“3.Definitions ...

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

81. The Petitioner has submitted that it has computed IWC for 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%.

82. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. ROI considered is 12.05% (SBI 1-year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, whereas ROI for 2020-21 onwards has been considered as 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21 and from 2021-22 onwards has been considered as 10.50% (SBI 1-year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points). The components of the working capital and interest allowed thereon for the Combined Asset is as follows:

	(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
WC for O&M Expenses (O&M Expenses for 1 month)	30.65	31.72	32.84	33.99	35.19
WC for Maintenance Spares (15% of O&M Expenses)	55.17	57.10	59.11	61.18	63.33
WC for Receivables (Equivalent to 45 days of annual transmission charges)	1770.44	1753.48	1720.24	1674.97	1624.27
Total Working Capital	1856.27	1842.29	1812.19	1770.15	1722.79
Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50



Interest on Working Capital	223.68	207.26	190.28	185.87	180.89
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Annual Fixed Charges of the 2019-24 Tariff Period

83. 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	4628.59	4690.45	4718.45	4718.45	4718.45
Interest on Loan	4218.21	3910.69	3582.52	3205.93	2821.38
Return on Equity	4961.31	5033.61	5067.75	5067.75	5067.75
O&M Expenses	367.81	380.64	394.07	407.89	422.23
Interest on Working Capital	223.68	207.26	190.28	185.87	180.89
Total	14399.60	14222.65	13953.08	13585.89	13210.71

Annuity Payments to Forest Department

84. The Petitioner has submitted the Commission vide Order dated 9.10.2018 had allowed the reimbursement of annuity payments which is to be recovered from the beneficiaries directly and directed to furnish the details of annuity payment done in 2014-19 tariff period at the time of truing up. Accordingly, the Petitioner has submitted the following details in the instant petition:

Sl. No.	Description	DD No.	Date	Amount (₹)
1	Annuity payment for 2016-17	230745	24.4.2014	88,87,476.00 + GST
2	Annuity payment for 2017-18	248600	17.9.2018	88,87,476.00 + GST
3	Annuity payment for 2018-19	238924	13.7.2016	88,87,476.00 + GST

85. The Petitioner has submitted that it is liable to pay an estimated amount of ₹2619.14 lakh (inclusive of GST) to landowners through Annuity Payments (Lease rent) as per letter issued by Chief Conservator of Forest, Lucknow, dated 13.6.2017 and the said amount is not included in the capital cost. The Petitioner has submitted the details of computation of Annuity Payment duly certified by the Auditor. The Petitioner has prayed to allow reimbursement for an amount of ₹ 88,87,476/- (plus



GST) per annum towards Annuity Payment. The Petitioner has further prayed to allow to recover the Annuity Payment already made in the year 2016-17 and from 2017-18 onwards the Annuity Payment of ₹ 88,87,476/- (plus GST) per annum may be allowed to be billed and recovered from the respondents separately.

86. We have considered the submissions of the Petitioner. The Commission vide Order dated 9.10.2018 in Petition No. 56/TT/2017 had allowed the reimbursement of annuity payments to be recovered from the beneficiaries directly. Relevant paragraph of the Order dated 9.10.2018 in Petition No. 56/TT/2017 is as follows:

“68. The petitioner is liable to make annuity payment as per letter issued by Chief Conservator of Forest, Lucknow, Dated 13.06.2017. The reimbursement of annuity payments is allowed to be recovered from the beneficiaries directly. The petitioner shall directly claim the payments from the beneficiaries along with the proof of payments. The petitioner is directed to file details of annuity payment done in 2014-19 period at the time of truing-up of 2014-19 period.”

87. The Petitioner has submitted the computation of Annuity Payment duly certified by the Auditor in the instant petition. Accordingly, the annuity payments made upto 2016-17 are allowed to be recovered from the beneficiaries. Thereafter, from 2017-18 the Petitioner shall claim the payments directly from the beneficiaries for the remaining annuity payments after submitting proper proof of payments. .

Filing Fee and Publication Expenses

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



License Fee and Publication Expenses

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

Goods and Services Tax

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

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

Security Expenses

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

93. We have considered the submissions of the Petitioner. The Petitioner has claimed consolidated security expenses on projected basis for 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. Accordingly, 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

94. 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

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



96. To summarise:

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

(₹ in lakh)

Particulars	2017-18 (Pro-rata 1 day)	2018-19
Asset-I		
AFC	6.49	2398.14

(₹ in lakh)

Particulars	2018-19
Asset-II	
AFC	2555.40

(₹ in lakh)

Particulars	2017-18 (Pro-rata 68 days)	2018-19
Asset-III		
AFC	1760.20	9681.67

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-IV					
AFC	186.31	191.30	186.61	182.57	178.00

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

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	14399.60	14222.65	13953.08	13585.89	13210.71

97. Annexure-I, Annexure-II, Annexure-III, Annexure-IV and Annexure-V given hereinafter shall form part of the instant order.



98. This order disposes of Petition No. 475/TT/2020 in terms of above discussions and findings.

**sd/-
(P. K. Singh)
Member**

**sd/-
(Arun Goyal)
Member**

**sd/-
(I.S. Jha)
Member**



Annexure-I

Asset-I

2014-19 Capital Expenditure	Admitted Capital Cost as on 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)	
		2017- 18	2018- 19	Total			2017-18	2018-19
Building Civil Works & Colony	7.68	0.00	0.10	0.10	7.78	3.34%	0.26	0.26
Transmission Line	13449.61	0.00	181.01	181.01	13630.62	5.28%	710.14	714.92
Sub Station	560.65	0.00	7.55	7.55	568.20	5.28%	29.60	29.80
PLCC	45.76	0.00	0.62	0.62	46.38	6.33%	2.90	2.92
IT Equipment (Incl. Software)	13.51	0.00	0.18	0.18	13.69	5.28%	0.71	0.72
Total	14077.21	0.00	189.46	189.46	14266.67		743.61	748.61
Average Gross Block (₹ in lakh)							14077.21	14171.94
Weighted Average Rate of Depreciation							5.28%	5.28%



Annexure-II

Asset-II

2014-19 Capital Expenditure	Admitted Capital Cost as on 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)
		2018-19	Total			2018-19
Building Civil Works & Colony	7.63	0.15	0.15	7.78	3.34%	0.26
Transmission Line	13403.64	267.39	267.39	13671.03	5.28%	714.77
Sub Station	694.16	13.85	13.85	708.01	5.28%	37.02
PLCC	42.40	0.85	0.85	43.25	6.33%	2.71
IT Equipment (Incl. Software)	13.42	0.27	0.27	13.69	5.28%	0.72
Total	14161.26	282.50	282.50	14443.76		755.47
Average Gross Block (₹ in lakh)						14302.51
Weighted Average Rate of Depreciation						5.28%



Annexure-III

Asset-III

2014-19 Capital Expenditure	Admitted Capital Cost as on 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)	
		2017-18	2018-19	Total			2017-18	2018-19
Land - Leasehold	918.05	39.71	212.92	252.63	1170.68	3.34%	31.33	35.54
Transmission Line	52164.06	770.31	3087.35	3857.66	56021.72	5.28%	2774.60	2876.44
Sub Station	216.94	1.85	35.70	37.55	254.49	5.28%	11.50	12.49
PLCC	57.10	0.49	19.94	20.43	77.52	6.33%	3.63	4.28
Total	53356.14	812.36	3355.91	4168.27	57524.41		2821.06	2928.76
Average Gross Block (₹ in lakh)							53762.32	55846.45
Weighted Average Rate of Depreciation							5.25%	5.24%



Asset-IV

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014 (₹ 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	2016- 17	2017-18	Total			2014-15	2015-16	2016-17	2017-18	2018-19
Sub Station	1011.71	111.12	8.30	7.71	127.13	1138.84	5.28%	56.35	59.29	59.50	59.93	60.13
Total	1011.71	111.12	8.30	7.71	127.13	1138.84		56.35	59.29	59.50	59.93	60.13
Average Gross Block (₹ in lakh)								1067.27	1122.83	1126.98	1134.98	1138.84
Weighted Average Rate of Depreciation								5.28%	5.28%	5.28%	5.28%	5.28%



Combined Asset under NRSS XXIV

2019-24 Capital Expenditure	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE (₹ in lakh)			Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2019-20	2020-21	Total			2019-20	2020-21	2021-22	2022-23	2023-24
Land - Leasehold	1170.68	210.41	412.00	622.41	1793.09	3.34%	42.61	53.01	59.89	59.89	59.89
Building Civil Works & Colony	15.56	-0.46	0.00	-0.46	15.10	3.34%	0.51	0.50	0.50	0.50	0.79
Transmission Line	83323.37	1089.35	800.00	1889.35	85212.72	5.28%	4428.23	4478.11	4499.23	4499.23	4470.46
Sub Station	2669.53	45.36	0.00	45.36	2714.89	5.28%	142.15	143.35	143.35	143.35	142.43
PLCC	167.15	7.36	0.00	7.36	174.51	6.33%	10.81	11.05	11.05	11.05	9.15
IT Equipment (Incl. Software)	27.38	2.19	0.00	2.19	29.57	15.00%	4.27	4.44	4.44	4.44	4.44
Total	87373.67	1354.20	1212.00	2566.20	89939.87		4628.59	4690.45	4718.45	4718.45	4718.45
Average Gross Block (₹ in lakh)							88050.77	89333.87	89939.87	89939.87	89939.87
Weighted Average Rate of Depreciation							5.26%	5.25%	5.25%	5.25%	5.25%

