

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 688/TT/2020

Coram:

**Shri P.K. Pujari, Chairperson
Shri Arun Goyal, Member
Shri P. K. Singh, Member**

Date of Order: 29.01.2022

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing-up of transmission tariff of 2014-19 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for **Asset A1**: 420 kV, 125 MVAR Bus Reactor at Jabalpur Sub-station, **Asset A2**: 420 kV, 125 MVAR Bus Reactor at Khandwa Sub-station, **Asset A3**: 420 kV, 125 MVAR Bus Reactor at Bhatapara Sub-station, **Asset B**: 420 kV, 125 MVAR Bus Reactor at Shujalpur Sub-station, **Asset C1**: 420 kV, 125 MVAR Bus Reactor at Raigarh Sub-station, **Asset C2**: 420 kV, 80 MVAR Switchable Line Reactor at Solapur Sub-station and **Asset C3**: 420 kV, 125 MVAR Bus Reactor at Aurangabad Sub-station under **Installation of Reactors in Western Region** .

And in the matter of:

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

....Petitioner

Vs.

1. Madhya Pradesh Power Management Company Limited,
Shakti Bhawan, Rampur,
Jabalpur–482008.
2. Madhya Pradesh Power Transmission Company Limited,
Shakti Bhawan, Rampur,
Jabalpur–482008.
3. Madhya Pradesh Audyogik Kendra,
Vikas Nigam (Indore) Limited,
3/ 54, Press Complex, Agra-Bombay Road,
Indore–452008.



4. Maharashtra State Electricity Distribution Company Limited,
Hongkong Bank Building, 3rd Floor,
M.G. Road, Fort,
Mumbai-400001.
5. Maharashtra State Electricity Transmission Company Limited, Prakashganga,
6th Floor, Plot No. C-19, E-Block,
Bandra Kurla Complex, Bandra (East),
Mumbai-400051.
6. Gujarat Urja Vikas Nigam Limited,
Sardar Patel Vidyut Bhawan,
Race Course Road,
Vadodara-390007.
7. Electricity Department,
Government of Goa,
Vidyut Bhawan, Near Mandvi Hotel,
Panaji, Goa-403001.
8. Electricity Department,
Administration of Daman and Diu,
Daman - 396210.
9. DNH Power Distribution Corporation Limited,
Vidyut Bhawan, 66 kV Road, Near Secretariat, Amla,
Silvassa-396230.
10. Chhattisgarh State Power Transmission Company Limited,
Office of the Executive Director (C&P),
State Load Despatch Building,
Dangania,
Raipur-492013.
11. Chhattisgarh State Power Distribution Company Limited,
P.O. Sunder Nagar, Dangania,
Raipur, Chhattisgarh-492 013

....Respondents

For Petitioner : Shri S.S. Raju, PGCIL
Shri D.K. Biswal, PGCIL
Shri Ved Prakash Rastogi, PGCIL
Shri A.K. Verma, PGCIL

For Respondents : Shri Anindya Khare, MPPMCL



ORDER

The Petitioner, Power Grid Corporation of India Limited, a deemed transmission licensee, has filed the instant Petition for truing-up of transmission tariff for the period from the date of commercial operation 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 transmission tariff for the period from 1.4.2019 to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of the following assets (hereinafter referred to as “the transmission assets”) under “Installation of Reactors in Western Region” (hereinafter referred to as “the transmission project”) in Western Region:

Asset A1: 420 kV, 125 MVAR Bus Reactor at Jabalpur Sub-station,

Asset A2: 420 kV, 125 MVAR Bus Reactor at Khandwa Sub-station,

Asset A3: 420 kV, 125 MVAR Bus Reactor at Bhatapara Sub-station,

Asset B: 420 kV, 125 MVAR Bus Reactor at Shujalpur Sub-station,

Asset C1: 420 kV, 125 MVAR Bus Reactor at Raigarh Sub-station,

Asset C2: 420 kV, 80 MVAR Switchable Line Reactor at Solapur Sub-station,

Asset C3: 420 kV, 125 MVAR Bus Reactor at Aurangabad Sub-station.

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

“1) Allow the add cap for 2014-19 and 2019-24 tariff block as claimed as per Para 6 and 7 above.

2) 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.



3) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before Hon'ble Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 7 and 8 above for respective block.

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

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

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

7) Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 8.6 above.

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

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

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

Background

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

a) The Investment Approval (IA) for the transmission project was accorded by the Board of Directors of the Petitioner Company vide Memorandum No. C/CP/WR – 272 dated 6.8.2012 at an estimated cost of ₹8317 lakh including IDC of ₹423 lakh. Subsequently, Revised Cost Estimate (RCE) was approved vide Memorandum No. C/CP/RCE/RCE-Reactor-WR



dated 20.1.2016 at an estimated cost of ₹8317 lakh including IDC of ₹331 lakh at October, 2015 price level.

b) The scope of work covered under the transmission project is as follows:

Sub-stations

a) Installation of 400 kV, 125 MVAR Bus Reactor at

- i. Jabalpur
- ii. Khandwa
- iii. Shujalpur
- iv. Bhatapara
- v. Rajgarh
- vi. Aurangabad 400 kV Sub-stations.

b) Installation of 400 kV, 80 MVAR Switchable Line Reactor at 400 kV Sholapur Sub-station.

c) As per IA dated 6.8.2012, the transmission assets were scheduled to be put under commercial operation (“SCOD”) within 24 months from the date of IA i.e. by 5.8.2014. The details of the date of commercial operation (“COD”) of the transmission assets along with time over-run are as follows:

Particulars	SCOD	COD	Time over-run (in days)
Asset A1	5.8.2014	1.4.2014	-
Asset A2	5.8.2014	1.4.2014	-
Asset A3	5.8.2014	26.7.2014	-
Asset B	5.8.2014	2.8.2014	-
Asset C1	5.8.2014	1.8.2014	-
Asset C2	5.8.2014	26.11.2014	113 days
Asset C3	5.8.2014	30.4.2014	-

d) The transmission tariff with respect to Asset-A1, Asset-A2 and Asset-A3 from COD to 31.3.2019 was allowed by the Commission vide order dated 29.4.2016 in Petition No. 116/TT/2014; for Asset-B vide order dated 22.3.2016 in Petition No. 165/TT/2014; and for Asset-C1, Asset-C2 and Asset-C3 vide order dated 6.9.2017 in Petition No. 207/TT/2016.



e) There was time over-run of 3 months and 20 days in commissioning of Asset-C2 and the same was condoned by the Commission vide order dated 6.9.2017 in Petition No. 207/TT/2016.

f) The Commission vide order dated 29.4.2016 in Petition No. 116/TT/2014 had provisionally approved COD of Asset-A1 and Asset-A2 as 1.4.2014 and directed the Petitioner to submit Regional Load Despatch Centre ("RLDC") certificate as required under Regulation 5(2) of the 2014 Tariff Regulations at the time of truing up. In compliance of the said direction of the Commission, the Petitioner has submitted WRLDC certificates dated 2.5.2016 and 22.4.2016 for Asset-A1 and Asset-A2 respectively. Taking into consideration RLDC certificates, COD of Asset-A1 and Asset-A2 is approved as 1.4.2014.

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

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

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers by the Petitioner. Madhya Pradesh Power Management Company Limited, Respondent No. 1, has filed its reply vide affidavit dated 20.11.2020 and has raised the issues of grossing up of Return on Equity ("RoE") and effect of CGST. The Petitioner vide affidavit dated 18.1.2021 has filed its rejoinder to the reply of MPPMCL.



6. It has been placed before us that MPPMCL in the present petition has raised the same issue of RoE as has been raised by it in other petitions despite clear findings of the Commission. The contentions of MPPMCL regarding RoE have been rejected by the Commission in other petitions including vide order dated 25.4.2021 in Petition No. 348/TT/2019. As MPPMCL has not challenged the findings, the same have attained finality. In view of these, the pleas raised by MPPMCL regarding grossing up of RoE are rejected. Further, MPPMCL's submissions, Petitioner's clarifications thereto and the Commission's findings on the issue of RoE have not been repeated here to avoid repetition.

7. The hearing in this matter was held on 31.8.2021 through video conference and order was reserved.

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

9. This order is issued considering the submissions made by the Petitioner in the petition vide affidavits dated 10.1.2020 and 27.8.2021, MPPMCL's reply filed vide affidavit dated 20.11.2020 and Petitioner's rejoinder to the reply of MPPMCL filed vide affidavit dated 18.1.2021.

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

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



(₹ in lakh)

Asset-A1					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	32.84	39.91	43.01	43.18	44.06
Interest on Loan	40.13	44.43	43.34	37.51	34.12
Return on Equity	36.62	44.71	48.16	48.35	49.46
Interest on Working Capital	5.85	6.41	6.65	6.64	6.74
O&M Expenses	60.30	62.30	64.37	66.51	68.71
Total	175.74	197.76	205.53	202.19	203.09

(₹ in lakh)

Asset-A2					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	49.89	58.19	61.33	61.33	61.33
Interest on Loan	59.84	64.00	61.35	53.80	47.89
Return on Equity	55.63	65.18	68.67	68.67	68.85
Interest on Working Capital	7.14	7.75	7.96	7.91	7.90
O&M Expenses	60.30	62.30	64.37	66.51	68.71
Total	232.80	257.42	263.68	258.22	254.68

(₹ in lakh)

Asset-A3					
Particulars	2014-15 (Pro-rata for 249 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	41.85	67.25	70.69	75.81	80.63
Interest on Loan	51.59	75.39	71.81	67.91	65.49
Return on Equity	46.27	75.23	79.86	86.69	92.88
Interest on Working Capital	5.49	8.46	8.68	8.98	9.30
O&M Expenses	41.14	62.30	64.37	66.51	68.71
Total	186.34	288.63	295.41	305.90	317.01

(₹ in lakh)

Asset-B					
Particulars	2014-15 (Pro-rata for 242 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	46.74	76.60	77.20	78.12	79.03
Interest on Loan	57.73	85.35	76.62	66.46	59.62
Return on Equity	51.34	84.55	85.17	86.19	87.45
Interest on Working Capital	5.79	9.12	9.06	8.99	9.00
O&M Expenses	39.98	62.30	64.37	66.51	68.71
Total	201.58	317.92	312.42	306.27	303.81



(₹ in lakh)

Asset-C1					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
	(Pro-rata for 243 days)				
Depreciation	35.23	57.94	59.97	61.60	63.42
Interest on Loan	41.36	61.45	56.61	50.04	45.85
Return on Equity	37.06	61.55	63.80	65.81	68.20
Interest on Working Capital	4.83	7.61	7.71	7.76	7.88
O&M Expenses	40.14	62.30	64.37	66.51	68.71
Total	158.62	250.85	252.46	251.72	254.06

(₹ in lakh)

Asset-C2					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
	(Pro-rata for 126 days)				
Depreciation	11.54	36.60	38.27	40.31	42.11
Interest on Loan	14.70	43.35	40.77	37.47	35.43
Return on Equity	12.96	41.60	43.55	46.18	48.66
Interest on Working Capital	2.05	6.24	6.38	6.53	6.70
O&M Expenses	20.82	62.30	64.37	66.51	68.71
Total	62.07	190.09	193.34	197.00	201.61

(₹ in lakh)

Asset-C3					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
	(Pro-rata for 336 days)				
Depreciation	30.27	35.35	35.72	37.47	39.06
Interest on Loan	35.91	37.63	33.62	30.36	28.27
Return on Equity	32.32	38.15	38.57	40.70	42.76
Interest on Working Capital	5.34	6.00	6.04	6.17	6.33
O&M Expenses	55.51	62.30	64.37	66.51	68.71
Total	159.35	179.43	178.32	181.21	185.13

11. The details of the trued-up Interest on Working Capital (IWC) claimed by the Petitioner in respect of the transmission assets for 2014-19 tariff period are as follows:



(₹ in lakh)

Asset-A1					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	5.03	5.19	5.36	5.54	5.73
Maintenance Spares	9.05	9.35	9.66	9.98	10.31
Receivables	29.29	32.96	34.26	33.70	33.85
Total	43.37	47.50	49.28	49.22	49.89
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	5.34	6.00	6.04	6.17	6.33

(₹ in lakh)

Asset-A2					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	5.03	5.19	5.36	5.54	5.73
Maintenance Spares	9.05	9.35	9.66	9.98	10.31
Receivables	38.80	42.90	43.95	43.04	42.45
Total	52.88	57.44	58.97	58.56	58.49
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	7.14	7.75	7.96	7.91	7.90

(₹ in lakh)

Asset-A3					
Particulars	2014-15 (Pro-rata for 249 days)	2015-16	2016-17	2017-18	2018-19
O&M Expenses	5.03	5.19	5.36	5.54	5.73
Maintenance Spares	9.05	9.35	9.66	9.98	10.31
Receivables	45.53	48.10	49.24	50.98	52.84
Total	59.61	62.64	64.26	66.50	68.88
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	5.49	8.46	8.68	8.98	9.30

(₹ in lakh)

Asset-B					
Particulars	2014-15 (Pro-rata for 242 days)	2015-16	2016-17	2017-18	2018-19
O&M Expenses	5.03	5.19	5.36	5.54	5.73
Maintenance Spares	9.05	9.35	9.66	9.98	10.31
Receivables	50.67	52.99	52.07	51.05	50.64
Total	64.75	67.53	67.09	66.57	66.68
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	5.79	9.12	9.06	8.99	9.00



(₹ in lakh)

Asset-C1					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
	(Pro-rata for 243 days)				
O&M Expenses	5.03	5.19	5.36	5.54	5.73
Maintenance Spares	9.05	9.35	9.66	9.98	10.31
Receivables	39.71	41.81	42.08	41.95	42.35
Total	53.79	56.35	57.10	57.47	58.39
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	4.83	7.61	7.71	7.76	7.88

(₹ in lakh)

Asset-C2					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
	(Pro-rata for 126 days)				
O&M Expenses	5.03	5.19	5.36	5.54	5.73
Maintenance Spares	9.05	9.35	9.66	9.98	10.31
Receivables	29.97	31.68	32.22	32.83	33.60
Total	44.05	46.22	47.24	48.35	49.64
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	2.05	6.24	6.38	6.53	6.70

(₹ in lakh)

Asset-C3					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
	(Pro-rata for 336 days)				
O&M Expenses	5.03	5.19	5.36	5.54	5.73
Maintenance Spares	9.05	9.35	9.66	9.98	10.31
Receivables	28.85	29.91	29.72	30.20	30.86
Total	42.93	44.45	44.74	45.72	46.90
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	5.34	6.00	6.04	6.17	6.33

Capital Cost

12. The Commission vide order dated 29.4.2016 in Petition No. 116/TT/2014, vide order dated 22.3.2016 in Petition No. 165/TT/2014 and vide order dated 6.9.2017 in Petition No. 207/TT/2016 approved the capital cost as on COD and



Additional Capital Expenditure (“ACE”) in respect of the transmission assets and the same is as follows:

Assets	Nomenclature of Asset in earlier petition	Apportioned approved cost (RCE)	Admitted Cost as on COD	ACE					Admitted Cost as on 31.3.2019
				2014-15	2015-16	2016-17	2017-18	2018-19	
Asset A1	Asset-I (in Petition No. 116/TT/2014)	856.17	552.53	221.60	73.11	0.00	0.00	0.00	847.24
Asset A2	Asset-II (in Petition No. 116/TT/2014)	1305.76	867.53	340.95	84.29	0.00	0.00	0.00	1292.77
Asset A3	Asset-III (in Petition No. 116/TT/2014)	1673.48	1099.93	391.37	121.56	0.00	0.00	0.00	1612.86
Asset B	Asset (in Petition No. 165/TT/2014)	1537.24	1212.13*	206.2	73.38	16.39	0.00	0.00	1508.1
Asset C1	Asset-A (in Petition No. 207/TT/2016)	1281.47	720.22	0.00	0.00	0.00	0.00	0.00	720.22
Asset C2	Asset-B (in Petition No. 207/TT/2016)	866.92	572.49	85.36	52.30	0.00	0.00	0.00	710.15
Asset C3	Asset-C (in Petition No. 207/TT/2016)	796.11	525.87	99.33	4.76	13.89	0.00	0.00	643.85

*The COD cost has been reduced due to shifting of IDC from COD cost to ACE as per cash IDC statement.

13. The Petitioner vide Auditor’s Certificate dated 31.7.2019 has submitted capital cost as on COD and estimated ACE incurred or projected to be incurred in respect of the transmission assets which are as follows:

Particulars	Apportioned approved cost (RCE)	Capital Cost as on COD	ACE					Admitted Cost as on 31.3.2019
			2014-15	2015-16	2016-17	2017-18	2018-19	
Asset A1	856.17	552.53	152.34	106.58	6.42	0.00	33.16	851.03
Asset A2	1305.76	867.53	190.39	103.72	0.00	0.00	0.00	1161.64
Asset A3	1673.48	1099.94	134.72	85.07	62.24	168.87	32.10	1582.94
Asset B	1537.24	1223.99	201.09	15.74	0.00	34.55	0.00	1475.37
Asset C1	1281.47	889.82	112.9	75.93	1.39	66.40	8.34	1154.78
Asset C2	866.92	610.74	75.19	44.6	12.33	76.57	3.18	822.61
Asset C3	796.11	562.16	80.53	4.76	9.87	62.48	3.18	722.98



14. The Petitioner has claimed total capital cost of ₹5806.71 lakh in respect of the transmission assets as on 31.3.2019.

Cost Over-run

15. The Petitioner has claimed capital cost of ₹552.53 lakh, ₹867.53 lakh, ₹1099.94 lakh, ₹1223.99 lakh, ₹889.82 lakh, ₹610.74 lakh and ₹562.16 lakh in respect of Asset-A1, Asset-A2, Asset-A3, Asset-B, Asset-C1, Asset-C2 and Asset-C3 respectively as on COD.

16. The Petitioner was asked to explain the variation in the cost between Assets-C1 and C2 and Asset-C3, which are of similar configuration, at the time of truing up. The Petitioner has submitted that the existing dia of 400/200 kV ICT-1 at Aurangabad Sub-station has been utilized for Asset-C3 and, thus, only one circuit breaker was required. However, in case of Asset-C1, entire new dia (2 main and 1 tie) remained involved for construction due to re-arrangement of the transmission lines termination and installation of Bus Reactor. Therefore, 2 circuit breakers without Pre-insertion Resistor (PIR), 1 CB with PIR and corresponding bay equipment were required for implementation of Asset-C1. Accordingly, associated cost of civil works, power and control cables, control and relay panels, equipment structure, hardware etc. were higher with respect of Asset-C3.

17. As regards the cost variation between Asset-C2 and Asset-C3, the Petitioner has submitted that Asset-C2 includes Neutral Grounding Reactor (NGR) which is not included in Asset-C3. Due to inclusion of NGR and other equipment associated with NGR, the cost of Asset-C2 is slightly higher than Asset-C3. The Petitioner has further submitted that amount of IDC of Asset-C2 is also higher than Asset-C3 to the extent of ₹26.60 lakh as per actual loan deployment. The Petitioner has



submitted that SLDs of Raigarh, Solapur and Aurangabad Sub-stations have been enclosed with the petition.

18. We have considered the submissions of the Petitioner. It is observed that capital cost of Asset-C1 and Asset-C2 has increased in comparison to Asset-C3 and the same is due to structural arrangements at Raigarh, Solapur and Aurangabad Sub-stations. It is further observed that total completion cost including ACE in respect of the transmission assets is ₹7771.35 lakh and the revised approved apportioned cost is ₹8317.15 lakh. Hence, completion cost in respect of the transmission assets is within the approved FR cost and, therefore, there is no cost over-run with regard to the transmission assets.

Time Over-run

19. As per IA, the transmission assets were scheduled to be put under commercial operation within 24 months from the date of IA, i.e., 6.8.2012. Accordingly, SCOD of the transmission assets was 5.8.2014, against which they have achieved COD as follows:

Particulars	SCOD	COD	Time over-run (in days)
Asset-A1	5.8.2014	1.4.2014	-
Asset-A2	5.8.2014	1.4.2014	-
Asset-A3	5.8.2014	26.7.2014	-
Asset-B	5.8.2014	2.8.2014	-
Asset-C1	5.8.2014	1.8.2014	-
Asset-C2	5.8.2014	26.11.2014	113 days
Asset-C3	5.8.2014	30.4.2014	-

20. The Commission vide order dated 6.9.2016 in Petition No. 207/TT/2016 has condoned the entire time over run of 113 days (3 months and 20 days) with respect to Asset-C2.

Interest During Construction ('IDC')

21. The Petitioner has claimed IDC in respect of the transmission assets and has submitted Auditor's Certificate dated 31.7.2019 in support of the same. The



Petitioner has submitted computation of IDC along with year-wise details of IDC discharged.

22. The allowable IDC has been worked out considering the information submitted by the Petitioner in respect of the transmission assets separately on cash basis. Loan details submitted in Form-9C for 2014-19 tariff period and IDC computation sheet have been taken into consideration for the purpose of calculation of IDC on cash basis and on accrued basis. The un-discharged IDC as on COD has been considered as ACE during the year in which it has been discharged.

23. Accordingly, based on the information furnished by the Petitioner, IDC considered in respect of the transmission assets is as follows:

(₹ in lakh)

Particulars	IDC as per Auditor's Certificate	IDC Admissible	IDC disallowed due to excess claim	IDC Discharged as on COD	IDC Un-discharged as on COD
	A	B	C=A-B	D	E=B-D
Asset-A1	21.32	16.80	4.52	12.30	4.50
Asset-A2	33.79	18.46	15.33	13.37	5.09
Asset-A3	64.47	53.96	10.71	44.30	9.66
Asset-B	48.24	42.16	6.08	36.38	5.78
Asset-C1	49.04	49.04	0.00	47.44	1.60
Asset-C2	57.34	51.20	6.14	45.67	5.53
Asset-C3	30.74	26.76	3.98	18.54	8.22

Incidental Expenditure During Construction ("IEDC")

24. The Petitioner has claimed IEDC in respect of the transmission assets and submitted Auditor's Certificate in support of the same. The Petitioner has also submitted that entire IEDC has been discharged as on COD in respect of the transmission assets. Accordingly, IEDC is allowed as has been claimed by the Petitioner.



Initial Spares

25. Initial spares are provided in Regulation 13(d) of the 2014 Tariff Regulations subject to the following ceiling norms:

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

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

Assets	Particulars	Plant and Machinery Cost (A) (₹ in lakh)	Initial Spares claimed (B) (₹ in lakh)	Ceiling (in %) (C)	Initial Spares as % of Capital Cost (₹ in lakh)
Asset-A1	Sub-station	804.84	10.10	6.00	1.19
Asset-A2	Sub-station	1088.13	27.15	6.00	2.41
Asset-A3	Sub-station	1277.68	78.62	6.00	6.16
Asset-B	Sub-station	1394.67	10.10	6.00	0.69
Asset-C1	Sub-station	1057.85	10.10	6.00	0.00
Asset-C2	Sub-station	701.36	72.71	6.00	10.87
Asset-C3	Sub-station	661.86	32.25	6.00	4.81

*(excluding IDC/IEDC, land cost and cost of civil works)

27. We have considered the submissions of the Petitioner. As per the APTEL’s judgment dated 14.9.2019 in Appeal No. 74 of 2017, Initial Spares are to be allowed as per the ceiling on overall project cost.

28. We note that the transmission assets were put under commercial operation during 2014-19 tariff period and the entire transmission project was completed during 2014-19 tariff period. The overall project cost of the transmission assets can be arrived at only when all the transmission assets are combined. The Petitioner has combined the transmission assets while claiming tariff for 2019-24 period.



Therefore, Initial Spares are allowed on the basis of cost of the individual asset during 2014-19 tariff period and on the basis of the overall project cost during 2019-24 period.

29. With regard to Asset-A3 and Asset-C2, it is observed that the Petitioner vide affidavit dated 27.8.2021 has submitted Form-13 wherein the Petitioner has failed to mention the year-wise discharge of Initial Spares. However, it is noticed that the Petitioner in Form-7 (Statement of Additional Capitalization after COD) has submitted year-wise details of the additional capitalization wherein it is mentioned that for Asset-C2, an amount of ₹8.27 lakh has been discharged towards Initial Spares during 2014-15 and amount of ₹5.29 lakh has been discharged as Initial Spares during 2016-17. Similarly for Asset-A3, no discharge has been shown in Form-7.

30. We have considered the submissions of the Petitioner and are of the view that apart from the discharges as mentioned in Form-7, remaining amount has been discharged as on COD towards Initial Spares. Accordingly, excess Initial Spares with reference to Asset-A3 and Asset-C2 has been deducted from the capital cost as on COD during truing up of tariff for 2014-19 period.

31. We have considered the submissions of the Petitioner. Initial Spares in respect of the transmission assets allowed for 2014-19 tariff period are as follows:

Sub-stations



Particulars	Plant & Machinery cost considered as on cut-off date (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Norms as per 2014 Tariff Regulations (in %)	Initial Spares allowable as per 2014 Tariff Regulations (₹ in lakh)	Initial Spares allowed (₹ in lakh)	Excess Initial Spares (₹ in lakh)	Initial Spares discharged as on COD (₹ in lakh)
	A	B	C	D = [(A-B)*C/(100-C)]	E	F	G
Asset-A1	804.84	10.10	6.00	50.73	10.10	0.00	10.10
Asset-A2	1088.13	27.15	6.00	67.72	27.15	0.00	27.15
Asset-A3	1277.68	78.62	6.00	76.54	76.54	2.08	76.54
Asset-B	1394.67	10.10	6.00	88.38	10.10	0.00	10.10
Asset-C1	1057.85	0.00	6.00	66.88	0.00	0.00	0.00
Asset-C2*	701.36	72.71	6.00	40.13	40.13	32.58*	40.13
Asset-C3	661.86	32.25	6.00	40.19	32.25	0.00	20.36

*Excess initial spares deducted as on COD – ₹19.02 lakh

Excess initial spares deducted from additional capitalization in 2014-15 - ₹8.27 lakh and in 2016-17 is ₹5.29 lakh.

Capital cost allowed as on COD

32. Accordingly, the capital cost allowed as on COD is as follows:

Particulars	Capital cost as on COD as per Auditor's Certificate	Less: IDC as on COD due to		Less: IEDC disallowed as on COD	Less: Excess Initial Spares as on COD	Capital cost considered as on COD (on cash basis)
		IDC disallowed	Un-discharged			
Asset-A1	552.53	4.52	4.50	0.00	0.00	543.51
Asset-A2	867.53	15.33	5.09	0.00	0.00	847.11
Asset-A3	1099.94	12.51	9.66	0.00	2.08	1077.77
Asset-B	1223.99	6.08	5.78	0.00	0.00	1212.13
Asset-C1	889.82	0.00	1.60	0.00	0.00	888.22
Asset-C2	610.74	6.14	5.53	0.00	19.02	580.04
Asset-C3	562.16	3.98	8.22	0.00	0.00	549.96

Additional Capital Expenditure ("ACE")

33. The Commission vide order dated 29.4.2016 in Petition No. 116/TT/2014, vide order 22.3.2016 in Petition No. 165/TT/2014 and vide order 6.9.2017 in Petition No.207/TT/2016 approved ACE in respect of the transmission assets covered in the instant petition which is as follows:



(₹ in lakh)

Particulars	Additional Capital Expenditure				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-A1	221.60	73.11	0.00	0.00	0.00
Asset-A2	340.95	84.29	0.00	0.00	0.00
Asset-A3	391.37	121.56	0.00	0.00	0.00
Asset-B	206.20	73.38	16.39	0.00	0.00
Asset-C1	0.00	0.00	0.00	0.00	0.00
Asset-C2	85.36	52.30	0.00	0.00	0.00
Asset-C3	99.33	4.76	13.89	0.00	0.00

34. The Petitioner has claimed the following ACE after adjustment of IDC/ IEDC, Initial Spares and liability in respect of the transmission assets covered in the instant petition:

(₹ in lakh)

Particulars	Additional Capital Expenditure				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset-A1	152.34	106.58	6.42	0.00	33.16
Asset-A2	190.39	103.72	0.00	0.00	0.00
Asset-A3	134.72	85.07	62.24	168.87	32.10
Asset-B	201.09	15.74	0.00	34.55	0.00
Asset-C1	112.9	75.93	1.39	66.4	8.34
Asset-C2	75.19	44.60	12.33	76.57	3.18
Asset-C3	80.53	4.76	9.87	62.48	3.18

35. The Petitioner has submitted that ACE during 2014-19 period has been claimed under Regulations 14(1)(i), Regulation 14(1)(ii) and Regulation 14(2)(iv) of the 2014 Tariff Regulations and the same is within the cut-off date. The Petitioner has submitted Auditor's Certificate in support ACE and liability flow statement.

36. We have considered the submissions of Petitioner. The un-discharged IDC as on COD has been allowed as ACE during the year of its discharge. ACE claimed by the Petitioner has been allowed under Regulation 14(1)(i), Regulation 14(1)(ii) and Regulation 14(2)(iv) of the 2014 Tariff Regulations which pertain to un-



discharged liabilities recognized to be payable at a future date. Accordingly, ACE allowed in respect of the transmission assets for 2014-19 tariff period is as follows:

(₹ in lakh)

Asset-A1	ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments	41.01	2.30	3.28	0.00	33.16
Unexecuted Works	111.33	104.28	3.14	0.00	0.00
Add: IDC Discharged	4.50	0.00	0.00	0.00	0.00

(₹ in lakh)

Asset-A2	ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments	67.07	58.14	0.00	0.00	0.00
Unexecuted Works	123.32	45.58	0.00	0.00	0.00
Add: IDC Discharged	5.09	0.00	0.00	0.00	0.00

(₹ in lakh)

Asset-A3	ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments	35.12	41.29	62.24	168.87	32.10
Unexecuted Works	99.60	43.78	0.00	0.00	0.00
Add: IDC Discharged	8.37	1.29	0.00	0.00	0.00

(₹ in lakh)

Asset-B	ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments	126.37	15.74	0.00	34.55	0.00
Unexecuted Works	74.72	0.00	0.00	0.00	0.00
Add: IDC Discharged	5.11	0.66	0.00	0.00	0.00

(₹ in lakh)

Asset-C1	ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments	48.03	75.93	1.39	66.40	8.34
Unexecuted Works	64.87	0.00	0.00	0.00	0.00
Add: IDC Discharged	1.60	0.00	0.00	0.00	0.00

(₹ in lakh)

Asset-C2	ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
ACE to the extent of Balance &	66.92	44.60	7.04	76.57	3.18



Retention Payments					
Unexecuted Works	0.00	0.00	0.00	0.00	0.00
Add: IDC Discharged	1.90	3.63	0.00	0.00	0.00

(₹ in lakh)

Asset-C3	ACE				
	2014-15	2015-16	2016-17	2017-18	2018-19
ACE to the extent of Balance & Retention Payments	5.48	4.76	9.87	62.48	3.18
Unexecuted Works	75.05	0.00	0.00	0.00	0.00
Add: IDC Discharged	8.22	0.00	0.00	0.00	0.00

Capital Cost for 2014-19 Tariff Period

37. Accordingly, the capital cost of the transmission assets considered for 2014-19 tariff period is as follows:

(₹ in lakh)

Particulars	Apportioned approved cost as per FR	Capital Cost as on COD on cash basis	Additional Capital Expenditure (ACE)					Total Capital Cost as on 31.3.2019
			2014-15	2015-16	2016-17	2017-18	2018-19	
Asset-A1	856.17	543.51	156.84	106.58	6.42	0.00	33.16	846.51
Asset-A2	1305.76	847.11	195.48	103.72	0.00	0.00	0.00	1146.31
Asset-A3	1673.48	1077.69	143.09	86.36	62.24	168.87	32.10	1570.35
Asset-B	1537.24	1212.13	206.20	16.40	0.00	34.55	0.00	1469.28
Asset-C1	1281.47	888.22	114.49	75.93	1.39	66.40	8.34	1154.77
Asset-C2	866.92	580.04	68.82	48.23	7.04	76.57	3.18	783.88
Asset-C3	796.11	549.96	88.75	4.76	9.87	62.48	3.18	719.00

Debt-Equity Ratio

38. The Petitioner has claimed debt-equity ratio of 70:30 as on COD and for ACE. Debt-equity ratio of 70:30 has been considered for capital cost as on COD and ACE during 2014-19 tariff period as provided under Regulation 19 of the 2014 Tariff Regulations. The details of debt-equity ratio in respect of the transmission assets as on COD and 31.3.2019 are as follows:

Asset- A1	As on COD		As on 31.3.2019	
	Amount (₹ in lakh)	(in %)	Amount (₹ in lakh)	(in %)
Debt	380.46	70.00	592.56	70.00
Equity	163.05	30.00	253.95	30.00
Total	543.51	100.00	846.51	100.00
Asset-A2	As on COD		As on 31.3.2019	



	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	592.98	70.00	802.43	70.00
Equity	254.13	30.00	343.88	30.00
Total	847.11	100.00	1146.31	100.00
Asset-A3	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
(₹ in lakh)	(₹ in lakh)			
Debt	754.38	70.00	1099.25	70.00
Equity	323.30	30.00	471.10	30.00
Total	1077.69	100.00	1570.35	100.00
Asset-B	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
(₹ in lakh)	(₹ in lakh)			
Debt	848.51	70.00	1028.52	70.00
Equity	363.63	30.00	440.77	30.00
Total	1212.13	100.00	1469.28	100.00
Asset-C1	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
(₹ in lakh)	(₹ in lakh)			
Debt	621.75	70.00	808.34	70.00
Equity	266.47	30.00	346.43	30.00
Total	888.22	100.00	1154.77	100.00
Asset-C2	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
(₹ in lakh)	(₹ in lakh)			
Debt	406.03	70.00	548.73	70.00
Equity	174.01	30.00	235.15	30.00
Total	580.04	100.00	783.88	100.00
Asset-C3	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
(₹ in lakh)	(₹ in lakh)			
Debt	384.97	70.00	503.31	70.00
Equity	164.99	30.00	215.69	30.00
Total	549.96	100.00	719.00	100.00

Depreciation

39. Depreciation has been allowed as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations. Depreciation has been allowed considering capital expenditure as on 1.4.2014 and approved ACE during 2014-19 tariff period. The Gross Block during 2014-19 tariff period has been depreciated at Weighted Average Rate of Depreciation (WAROD) and working of WAROD is given



at Annexure-1. WAROD has been worked out after considering the depreciation rates of asset as prescribed in the 2014 Tariff Regulations and depreciation allowed during 2014-19 tariff period in respect of the transmission assets is as follows:

(₹ in lakh)

Asset-A1	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	543.51	700.35	806.93	813.35	813.35
ACE	156.84	106.58	6.42	0.00	33.16
Closing gross block	700.35	806.93	813.35	813.35	846.51
Average gross block	621.93	753.64	810.14	813.35	829.93
Weighted Average Rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28
Aggregated Depreciable Value	559.74	678.27	729.12	732.01	746.94
Depreciation during the year	32.84	39.79	42.78	42.94	43.82
Remaining Aggregated Depreciable Value	526.90	605.64	613.72	573.66	544.77

(₹ in lakh)

Asset-A2	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	847.11	1042.59	1146.31	1146.31	1146.31
ACE	195.48	103.72	0.00	0.00	0.00
Closing gross block	1042.59	1146.31	1146.31	1146.31	1146.31
Average gross block	944.85	1094.45	1146.31	1146.31	1146.31
Weighted Average Rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28
Aggregated Depreciable Value	850.37	985.01	1031.68	1031.68	1031.68
Depreciation during the year	49.89	57.79	60.53	60.53	60.53
Remaining Aggregated Depreciable Value	800.48	877.33	863.48	802.96	742.43

(₹ in lakh)

Asset-A3	2014-15 (Pro-rata for 249 days)	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	1077.69	1220.78	1307.14	1369.38	1538.25
ACE	143.09	86.36	62.24	168.87	32.10
Closing gross block	1220.78	1307.14	1369.38	1538.25	1570.35
Average gross block	1149.23	1263.96	1338.26	1453.81	1554.30
Weighted Average Rate of Depreciation (WAROD) (in %)	5.06	5.05	5.00	4.96	4.95
Aggregated Depreciable Value	1034.31	1137.56	1204.43	1308.43	1398.87
Depreciation during the year	39.69	63.79	66.98	72.10	76.93
Remaining Aggregated Depreciable Value	994.62	1034.08	1033.97	1065.87	1079.37

(₹ in lakh)

Asset-B	2014-15 (Pro-rata for 242 days)	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	1212.13	1418.33	1434.73	1434.73	1469.28



ACE	206.20	16.40	0.00	34.55	0.00
Closing gross block	1418.33	1434.73	1434.73	1469.28	1469.28
Average gross block	1315.23	1426.53	1434.73	1452.01	1469.28
Weighted Average Rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28
Aggregated Depreciable Value	1183.71	1283.88	1291.26	1306.81	1322.36
Depreciation during the year	46.04	75.32	75.75	76.67	77.58
Remaining Aggregated Depreciable Value	1137.67	1162.52	1094.14	1033.03	970.99

(₹ in lakh)

Asset-C1	2014-15 (Pro-rata for 243 days)	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	888.22	1002.71	1078.64	1080.03	1146.43
ACE	114.49	75.93	1.39	66.40	8.34
Closing gross block	1002.71	1078.64	1080.03	1146.43	1154.77
Average gross block	945.47	1040.68	1079.34	1113.23	1150.60
Weighted Average Rate of Depreciation (WAROD) (in %)	5.18	5.19	5.19	5.18	5.17
Aggregated Depreciable Value	850.92	936.61	971.40	1001.91	1035.54
Depreciation during the year	32.63	54.03	56.06	57.69	59.51
Remaining Aggregated Depreciable Value	818.29	849.95	828.69	801.50	775.62

(₹ in lakh)

Asset-C2	2014-15 (Pro-rata for 126 days)	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	580.04	648.86	697.09	704.13	780.70
ACE	68.82	48.23	7.04	76.57	3.18
Closing gross block	648.86	697.09	704.13	780.70	783.88
Average gross block	614.45	672.98	700.61	742.42	782.29
Weighted Average Rate of Depreciation (WAROD) (in %)	5.25	5.21	5.19	5.16	5.13
Aggregated Depreciable Value	553.01	605.68	630.55	668.17	704.06
Depreciation during the year	11.13	35.05	36.41	38.31	40.12
Remaining Aggregated Depreciable Value	541.88	559.50	547.97	547.28	543.04

(₹ in lakh)

Asset-C3	2014-15 (Pro-rata for 336 days)	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	549.96	638.71	643.47	653.34	715.82
ACE	88.75	4.76	9.87	62.48	3.18
Closing gross block	638.71	643.47	653.34	715.82	719.00
Average gross block	594.34	641.09	648.41	684.58	717.41
Weighted Average Rate of Depreciation (WAROD) (in %)	5.22	5.21	5.20	5.19	5.17
Aggregated Depreciable Value	534.90	576.98	583.56	616.12	645.67
Depreciation during the year	28.56	33.37	33.74	35.50	37.09
Remaining Aggregated Depreciable Value	506.34	515.04	487.88	484.94	477.40



40. The details of depreciation allowed by the Commission in respect of the transmission assets vide order dated 29.4.2016 in Petition No. 116/TT/2014, vide order 22.3.2016 in Petition No. 165/TT/2014 and vide order dated 6.9.2017 in Petition No. 207/TT/2016, as claimed by the Petitioner in the instant petition and as trued up in the instant order is as follows:

(₹ in lakh)

Asset-A1	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 29.4.2016 in Petition No. 116/TT/2014	35.02	42.80	44.73	44.73	44.73
Claimed by the Petitioner in the instant petition	32.84	39.91	43.01	43.18	44.06
Approved after true-up in this order	32.84	39.79	42.78	42.94	43.82

(₹ in lakh)

Asset-A2	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 29.4.2016 in Petition No. 116/TT/2014	54.81	66.03	68.26	68.26	68.26
Claimed by the Petitioner in the instant petition	49.89	58.19	61.33	61.33	61.33
Approved after true-up in this order	49.89	57.79	60.53	60.53	60.53

(₹ in lakh)

Asset-A3	2014-15 (Pro-rata for 249 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 29.4.2016 in Petition No. 116/TT/2014	44.03	76.31	79.36	79.36	79.36
Claimed by the Petitioner in the instant petition	41.85	67.25	70.69	75.81	80.63
Approved after true-up in this order	39.69	63.79	66.98	72.10	76.93

(₹ in lakh)

Asset-B	2014-15 (Pro-rata for 242 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 22.3.2016 in Petition No. 165/TT/2014	46.04	76.83	79.19	79.63	79.63
Claimed by the Petitioner in the instant petition	46.74	76.60	77.20	78.12	79.03



Approved after true-up in this order	46.04	75.32	75.75	76.67	77.58
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(₹ in lakh)

Asset-C1	2014-15 (Pro-rata for 243 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 6.9.2017 in Petition No. 207/TT/2016	24.82	37.29	37.29	37.29	37.29
Claimed by the Petitioner in the instant petition	35.23	57.94	59.97	61.60	63.42
Approved after true-up in this order	32.63	54.03	56.06	57.69	59.51

(₹ in lakh)

Asset-C2	2014-15 (Pro-rata for 126 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 6.9.2017 in Petition No. 207/TT/2016	11.13	35.51	36.77	36.77	36.77
Claimed by the Petitioner in the instant petition	11.54	36.60	38.27	40.31	42.11
Approved after true-up in this order	11.13	35.05	36.41	38.31	40.12

(₹ in lakh)

Asset-C3	2014-15 (Pro-rata for 336 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 6.9.2017 in Petition No. 207/TT/2016	27.64	32.62	33.09	33.45	33.45
Claimed by the Petitioner in the instant petition	30.27	35.35	35.72	37.47	39.06
Approved after true-up in this order	28.56	33.37	33.74	35.50	37.09

Interest on Loan (“IoL”)

41. The Petitioner has claimed the Weighted Average Rate of IoL based on its actual loan portfolio and rate of interest. Accordingly, IoL is calculated based on actual interest rate, in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of IoL allowed in respect of the transmission assets are as follows:

(₹ in lakh)

Asset-A1	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	380.46	490.25	564.85	569.35	569.35
Cumulative Repayments up to	0.00	32.84	72.63	115.41	158.35



Asset-A1	2014-15	2015-16	2016-17	2017-18	2018-19
Previous Year					
Net Loan-Opening	380.46	457.41	492.22	453.94	411.00
Addition due to ACE	109.79	74.61	4.49	0.00	23.21
Repayment during the year	32.84	39.79	42.78	42.94	43.82
Net Loan-Closing	457.41	492.22	453.94	411.00	390.39
Average Loan	418.94	474.82	473.08	432.47	400.69
Weighted Average Rate of Interest on Loan (in %)	9.579	9.327	9.104	8.620	8.462
Interest on Loan	40.13	44.29	43.07	37.28	33.91

(₹ in lakh)

Asset-A2	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	592.98	729.82	802.43	802.43	802.43
Cumulative Repayments up to Previous Year	0.00	49.89	107.68	168.20	228.73
Net Loan-Opening	592.98	679.93	694.76	634.23	573.70
Addition due to ACE	136.84	72.61	0.00	0.00	0.00
Repayment during the year	49.89	57.79	60.53	60.53	60.53
Net Loan-Closing	679.93	694.76	634.23	573.70	513.18
Average Loan	636.46	687.34	664.49	603.97	543.44
Weighted Average Rate of Interest on Loan (in %)	9.402	9.242	9.096	8.775	8.680
Interest on Loan	59.84	63.53	60.44	53.00	47.17

(₹ in lakh)

Asset-A3	2014-15 (Pro-rata for 249 days)	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	754.38	854.55	915.00	958.57	1076.78
Cumulative Repayments up to Previous Year	0.00	39.69	103.48	170.46	242.56
Net Loan-Opening	754.38	814.86	811.52	788.11	834.22
Addition due to ACE	100.17	60.45	43.57	118.21	22.47
Repayment during the year	39.69	63.79	66.98	72.10	76.93
Net Loan-Closing	814.86	811.52	788.11	834.22	779.76
Average Loan	784.62	813.19	799.82	811.16	806.99
Weighted Average Rate of Interest on Loan (in %)	9.629	9.252	8.964	8.396	8.177
Interest on Loan	51.54	75.23	71.69	68.11	65.99

(₹ in lakh)

Asset-B	2014-15 (Pro-rata for 242 days)	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	848.51	992.85	1004.33	1004.33	1028.52
Cumulative Repayments up to Previous Year	0.00	46.04	121.36	197.12	273.78
Net Loan-Opening	848.51	946.80	882.97	807.21	754.74
Addition due to ACE	144.34	11.48	0.00	24.19	0.00
Repayment during the year	46.04	75.32	75.75	76.67	77.58
Net Loan-Closing	946.80	882.97	807.21	754.74	677.16
Average Loan	897.66	914.88	845.09	780.97	715.95
Weighted Average Rate of	9.704	9.321	9.050	8.509	8.343



Asset-B	2014-15 (Pro-rata for 242 days)	2015-16	2016-17	2017-18	2018-19
Interest on Loan (in %)					
Interest on Loan	57.75	85.28	76.48	66.45	59.73

(₹ in lakh)

Asset-C1	2014-15 (Pro-rata for 243 days)	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	621.75	701.90	755.05	756.02	802.50
Cumulative Repayments upto Previous Year	0.00	32.63	86.66	142.72	200.40
Net Loan-Opening	621.75	669.27	668.39	613.31	602.10
Addition due to ACE	80.14	53.15	0.97	46.48	5.84
Repayment during the year	32.63	54.03	56.06	57.69	59.51
Net Loan-Closing	669.27	668.39	613.31	602.10	548.42
Average Loan	645.51	668.83	640.85	607.70	575.26
Weighted Average Rate of Interest on Loan (in %)	9.643	9.250	8.952	8.406	8.202
Interest on Loan	41.44	61.87	57.37	51.08	47.18

(₹ in lakh)

Asset-C2	2014-15 (Pro-rata for 126 days)	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	406.03	454.21	487.97	492.90	546.50
Cumulative Repayments up to Previous Year	0.00	11.13	46.18	82.58	120.90
Net Loan-Opening	406.03	443.08	441.80	410.32	425.60
Addition due to ACE	48.17	33.77	4.93	53.60	2.23
Repayment during the year	11.13	35.05	36.41	38.31	40.12
Net Loan-Closing	443.08	441.80	410.32	425.60	387.71
Average Loan	424.56	442.44	426.06	417.96	406.66
Weighted Average Rate of Interest on Loan (in %)	9.667	9.373	9.091	8.512	8.298
Interest on Loan	14.17	41.47	38.73	35.58	33.74

(₹ in lakh)

Asset-C3	2014-15 (Pro-rata for 336 days)	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	384.97	447.10	450.43	457.34	501.08
Cumulative Repayments up to Previous Year	0.00	28.56	61.94	95.68	131.18
Net Loan-Opening	384.97	418.53	388.49	361.66	369.89
Addition due to ACE	62.13	3.33	6.91	43.74	2.23
Repayment during the year	28.56	33.37	33.74	35.50	37.09
Net Loan-Closing	418.53	388.49	361.66	369.89	335.04
Average Loan	401.75	403.51	375.07	365.77	352.47
Weighted Average Rate of Interest on Loan (in %)	9.698	9.324	9.010	8.389	8.155
Interest on Loan	35.87	37.62	33.79	30.68	28.74



42. The details of interest on loan allowed by the Commission in respect of the transmission assets vide order dated 29.4.2016 in Petition No. 116/TT/2014, vide order 22.3.2016 in Petition No. 165/TT/2014 and vide order dated 6.9.2017 in Petition No. 207/TT/2016, as claimed by the Petitioner in the instant petition and as trued up in the instant order is as follows:

(₹ in lakh)

Asset-A1	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 29.4.2016 in Petition No. 116/TT/2014	44.02	50.34	48.52	44.10	39.70
Claimed by the Petitioner in the instant petition	40.13	44.43	43.34	37.51	34.12
Approved after true-up in this order	40.13	44.29	43.07	37.28	33.91

(₹ in lakh)

Asset-A2	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 29.4.2016 in Petition No. 116/TT/2014	69.65	78.46	74.71	67.94	61.18
Claimed by the Petitioner in the instant petition	59.84	64.00	61.35	53.80	47.89
Approved after true-up in this order	59.84	63.53	60.44	53.00	47.17

(₹ in lakh)

Asset-A3	2014-15 (Pro-rata for 249 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 29.4.2016 in Petition No. 116/TT/2014	59.88	99.62	96.07	88.19	80.34
Claimed by the Petitioner in the instant petition	51.59	75.39	71.81	67.91	65.49
Approved after true-up in this order	51.54	75.23	71.69	68.11	65.99

(₹ in lakh)

Asset-B	2014-15 (Pro-rata for 242 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 22.3.2016 in Petition No. 165/TT/2014	57.75	89.61	85.09	77.97	70.30
Claimed by the Petitioner in the instant petition	57.73	85.35	76.62	66.46	59.62
Approved after true-up in this	57.75	85.28	76.48	66.45	59.73



order					
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(₹ in lakh)

Asset-C1	2014-15 (Pro-rata for 243 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 6.9.2017 in Petition No. 207/TT/2016	31.57	43.85	40.06	36.41	32.79
Claimed by the Petitioner in the instant petition	41.36	61.45	56.61	50.04	45.85
Approved after true-up in this order	41.44	61.87	57.37	51.08	47.18

(₹ in lakh)

Asset-C2	2014-15 (Pro-rata for 126 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 6.9.2017 in Petition No. 207/TT/2016	14.18	43.39	41.68	38.04	34.45
Claimed by the Petitioner in the instant petition	14.70	43.35	40.77	37.47	35.43
Approved after true-up in this order	14.17	41.47	38.73	35.58	33.74

(₹ in lakh)

Asset-C3	2014-15 (Pro-rata for 336 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 6.9.2017 in Petition No. 207/TT/2016	34.73	38.04	35.43	32.61	29.35
Claimed by the Petitioner in the instant petition	35.91	37.63	33.62	30.36	28.27
Approved after true-up in this order	35.87	37.62	33.79	30.68	28.74

Return on Equity (“RoE”)

43. The Petitioner has claimed RoE in respect of the transmission assets in terms of Regulation 24 and Regulation 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 2014-19 tariff period:

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



Year	Claimed effective tax (in %)	Grossed-up RoE (in %) [(Base Rate)/(1-t)]
2017-18	21.337	19.704
2018-19	21.549	19.757

44. 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 are as follows:

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

45. MAT rates considered vide order dated 27.4.2020 in Petition No. 274/TT/2019 for the purpose of grossing up of rate of RoE for truing up of tariff of 2014-19 period in terms of the provisions of the 2014 Tariff Regulations, have been considered in the instant case which are as follows:

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

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

(₹ in lakh)					
Asset-A1	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	163.05	210.10	242.07	244.00	244.00



Asset-A1	2014-15	2015-16	2016-17	2017-18	2018-19
Addition due to ACE	47.05	31.97	1.93	0.00	9.95
Closing Equity	210.10	242.07	244.00	244.00	253.95
Average Equity	186.58	226.09	243.04	244.00	248.97
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax)	19.610	19.705	19.705	19.705	19.758
Return on Equity	36.59	44.55	47.89	48.08	49.19

(₹ in lakh)

Asset-A2	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	254.13	312.77	343.88	343.88	343.88
Addition due to ACE	58.64	31.11	0.00	0.00	0.00
Closing Equity	312.77	343.88	343.88	343.88	343.88
Average Equity	283.45	328.33	343.88	343.88	343.88
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax)	19.610	19.705	19.705	19.705	19.758
Return on Equity	55.58	64.70	67.76	67.76	67.94

(₹ in lakh)

Asset-A3	2014-15 (Pro-rata for 249 days)	2015-16	2016-17	2017-18	2018-19
Opening Equity	323.30	366.23	392.14	410.81	461.47
Addition due to ACE	42.92	25.91	18.67	50.66	9.63
Closing Equity	366.23	392.14	410.81	461.47	471.10
Average Equity	344.77	379.18	401.47	436.14	466.28
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax)	19.610	19.705	19.705	19.705	19.758
Return on Equity	46.12	74.72	79.11	85.94	92.13

(₹ in lakh)

Asset-B	2014-15 (Pro-rata for 242 days)	2015-16	2016-17	2017-18	2018-19
Opening Equity	363.63	425.49	430.41	430.41	440.77
Addition due to ACE	61.86	4.92	0.00	10.36	0.00
Closing Equity	425.49	430.41	430.41	440.77	440.77
Average Equity	394.56	427.95	430.41	435.59	440.77
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax)	19.610	19.705	19.705	19.705	19.758
Return on Equity	51.30	84.33	84.81	85.83	87.09



(₹ in lakh)

Asset-C1	2014-15 (Pro-rata for 243 days)	2015-16	2016-17	2017-18	2018-19
Opening Equity	266.47	300.81	323.59	324.01	343.93
Addition due to ACE	34.35	22.78	0.42	19.92	2.50
Closing Equity	300.81	323.59	324.01	343.93	346.43
Average Equity	283.64	312.20	323.80	333.97	345.18
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax)	19.610	19.705	19.705	19.705	19.758
Return on Equity	37.03	61.52	63.80	65.81	68.20

(₹ in lakh)

Asset-C2	2014-15 (Pro-rata for 126 days)	2015-16	2016-17	2017-18	2018-19
Opening Equity	174.01	194.66	209.12	211.23	234.20
Addition due to ACE	20.65	14.46	2.11	22.97	0.95
Closing Equity	194.66	209.12	211.23	234.20	235.15
Average Equity	184.33	201.89	210.17	222.71	234.67
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax)	19.610	19.705	19.705	19.705	19.758
Return on Equity	12.48	39.78	41.41	43.89	46.37

(₹ in lakh)

Asset-C3	2014-15 (Pro-rata for 336 days)	2015-16	2016-17	2017-18	2018-19
Opening Equity	164.99	191.61	193.04	196.00	214.74
Addition due to ACE	26.63	1.43	2.96	18.74	0.95
Closing Equity	191.61	193.04	196.00	214.74	215.69
Average Equity	178.30	192.33	194.52	205.37	215.22
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax)	19.610	19.705	19.705	19.705	19.758
Return on Equity	32.19	37.90	38.33	40.47	42.52

47. The details of RoE allowed by the Commission in respect of the transmission assets vide order dated 29.4.2016 in Petition No. 116/TT/2014, vide order 22.3.2016 in Petition No. 165/TT/2014 and vide order dated 6.9.2017 in Petition No.



207/TT/2016, as claimed by the Petitioner in the instant petition and as trued up in the instant order is as follows:

(₹ in lakh)

Asset-A1	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 29.4.2016 in Petition No. 116/TT/2014	39.02	47.69	49.84	49.84	49.84
Claimed by the Petitioner in the instant petition	36.62	44.71	48.16	48.35	49.46
Approved after true-up in this order	36.59	44.55	47.89	48.08	49.19

(₹ in lakh)

Asset-A2	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 29.4.2016 in Petition No. 116/TT/2014	61.07	73.57	76.05	76.05	76.05
Claimed by the Petitioner in the instant petition	55.63	65.18	68.67	68.67	68.85
Approved after true-up in this order	55.58	64.70	67.76	67.76	67.94

(₹ in lakh)

Asset-A3	2014-15 (Pro-rata for 249 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 29.4.2016 in Petition No. 116/TT/2014	52.00	91.31	94.88	94.88	94.88
Claimed by the Petitioner in the instant petition	46.27	75.23	79.86	86.69	92.88
Approved after true-up in this order	46.12	74.72	79.11	85.94	92.13

(₹ in lakh)

Asset-B	2014-15 (Pro-rata for 242 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 22.3.2016 in Petition No. 165/TT/2014	51.30	85.60	88.24	88.72	88.72
Claimed by the Petitioner in the instant petition	51.34	84.55	85.17	86.19	87.45
Approved after true-up in this order	51.30	84.33	84.81	85.83	87.09



(₹ in lakh)

Asset-C1	2014-15 (Pro-rata for 243 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 6.9.2017 in Petition No. 207/TT/2016	28.21	42.37	42.37	42.37	42.37
Claimed by the Petitioner in the instant petition	37.06	61.55	63.80	65.81	68.20
Approved after true-up in this order	37.03	61.52	63.80	65.81	68.20

(₹ in lakh)

Asset-C2	2014-15 (Pro-rata for 126 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 6.9.2017 in Petition No. 207/TT/2016	12.49	40.24	41.78	41.78	41.78
Claimed by the Petitioner in the instant petition	12.96	41.60	43.55	46.18	48.66
Approved after true-up in this order	12.48	39.78	41.41	43.89	46.37

(₹ in lakh)

Asset-C3	2014-15 (Pro-rata for 336 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 6.9.2017 in Petition No. 207/TT/2016	31.17	36.92	37.47	37.88	37.88
Claimed by the Petitioner in the instant petition	32.32	38.15	38.57	40.70	42.76
Approved after true-up in this order	32.19	37.90	38.33	40.47	42.52

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

48. O&M Expenses claimed by the Petitioner in respect of the transmission assets are as follows:

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
400 kV Sub-station Bays (Conventional)	7	7	7	7	7
Norms (₹ lakh/bay)	60.30	62.30	64.37	66.51	68.71

49. O&M Expenses determined are in line with the norms specified in Regulation 29(3) of the 2014 Tariff Regulations and are allowed as follows:



(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset – A1 (125 MVAR Bus Reactor bay at Jabalpur Sub-station)	60.30	62.30	64.37	66.51	68.71
Asset – A2 (125 MVAR Bus Reactor bay at Khandwa Sub-station)	60.30	62.30	64.37	66.51	68.71
Asset – A3 (125 MVAR Bus Reactor bay at Bhatapara Sub-station) (Pro rata for 249 days)	41.14	62.30	64.37	66.51	68.71
Asset – B (125 MVAR Bus Reactor bay at Shujalpur Sub-station) (Pro rata for 242 days)	39.98	62.30	64.37	66.51	68.71
Asset – C1 (125 MVAR Bus Reactor bay at Rajgarh Sub-station) (Pro rata for 243 days)	40.14	62.30	64.37	66.51	68.71
Asset – C2 (80 MVAR SLR at 400 kV Solapur Sub-station)(Pro rata for 126 days)	20.82	62.30	64.37	66.51	68.71
Asset – C3 (125 MVAR Bus Reactor at Aurangabad Sub-station) (Pro rata for 336 days)	55.51	62.30	64.37	66.51	68.71

50. The details of O&M Expenses allowed by the Commission in respect of the transmission assets vide order dated 29.4.2016 in Petition No. 116/TT/2014, vide order 22.3.2016 in Petition No. 165/TT/2014 and vide order dated 6.9.2017 in Petition No. 207/TT/2016, as claimed by the Petitioner in the instant petition and as trued up in the instant order are as follows:

(₹ in lakh)					
Asset-A1	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 29.4.2016 in Petition No. 116/TT/2014	60.30	62.30	64.37	66.51	68.71
Claimed by the Petitioner in the instant petition	60.30	62.30	64.37	66.51	68.71
Approved after true-up in this order	60.30	62.30	64.37	66.51	68.71



(₹ in lakh)

Asset-A2	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 29.4.2016 in Petition No. 116/TT/2014	60.30	62.30	64.37	66.51	68.71
Claimed by the Petitioner in the instant petition	60.30	62.30	64.37	66.51	68.71
Approved after true-up in this order	60.30	62.30	64.37	66.51	68.71

(₹ in lakh)

Asset-A3	2014-15 (Pro-rata for 249 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 29.4.2016 in Petition No. 116/TT/2014	41.14	62.30	64.37	66.51	68.71
Claimed by the Petitioner in the instant petition	41.14	62.30	64.37	66.51	68.71
Approved after true-up in this order	41.14	62.30	64.37	66.51	68.71

(₹ in lakh)

Asset-B	2014-15 (Pro-rata for 242 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 22.3.2016 in Petition No. 165/TT/2014	39.98	62.30	64.37	66.51	68.71
Claimed by the Petitioner in the instant petition	39.98	62.30	64.37	66.51	68.71
Approved after true-up in this order	39.98	62.30	64.37	66.51	68.71

(₹ in lakh)

Asset-C1	2014-15 (Pro-rata for 243 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 6.9.2017 in Petition No. 207/TT/2016	40.20	62.30	64.37	66.51	68.71
Claimed by the Petitioner in the instant petition	40.14	62.30	64.37	66.51	68.71
Approved after true-up in this order	40.14	62.30	64.37	66.51	68.71

(₹ in lakh)

Asset-C2	2014-15 (Pro-rata for 126 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 6.9.2017 in Petition No. 207/TT/2016	20.94	62.30	64.37	66.51	68.71
Claimed by the Petitioner	20.82	62.30	64.37	66.51	68.71



Asset-C2	2014-15 (Pro-rata for 126 days)	2015-16	2016-17	2017-18	2018-19
in the instant petition					
Approved after true-up in this order	20.82	62.30	64.37	66.51	68.71

(₹ in lakh)

Asset-C3	2014-15 (Pro-rata for 336 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 6.9.2017 in Petition No. 207/TT/2016	55.51	62.30	64.37	66.51	68.71
Claimed by the Petitioner in the instant petition	55.51	62.30	64.37	66.51	68.71
Approved after true-up in this order	55.51	62.30	64.37	66.51	68.71

Interest on Working Capital (“IWC”)

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

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

(₹ in lakh)

Asset-A1	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	5.03	5.19	5.36	5.54	5.73
Working Capital for Maintenance Spares (15% of O&M Expenses)	9.05	9.35	9.66	9.98	10.31
Working Capital for Receivables (Equivalent to two months of annual fixed cost / annual transmission charges)	29.28	32.89	34.12	33.57	33.72
Total Working Capital	43.35	47.43	49.14	49.09	49.76
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest of Working Capital	5.85	6.40	6.63	6.63	6.72



(₹ in lakh)

Asset-A2	2014-15	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	5.03	5.19	5.36	5.54	5.73
Working Capital for Maintenance Spares (15% of O&M Expenses)	9.05	9.35	9.66	9.98	10.31
Working Capital for Receivables (Equivalent to two months of annual fixed cost / annual transmission charges)	38.79	42.67	43.50	42.61	42.03
Total Working Capital	52.86	57.21	58.52	58.13	58.06
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest of Working Capital	7.14	7.72	7.90	7.85	7.84

(₹ in lakh)

Asset-A3	2014-15 (Pro-rata for 249 days)	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	5.03	5.19	5.36	5.54	5.73
Working Capital for Maintenance Spares (15% of O&M Expenses)	9.05	9.35	9.66	9.98	10.31
Working Capital for Receivables (Equivalent to two months of annual fixed cost / annual transmission charges)	44.93	47.40	48.45	50.26	52.16
Total Working Capital	59.00	61.94	63.47	65.78	68.19
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest of Working Capital	5.43	8.36	8.57	8.88	9.21

(₹ in lakh)

Asset-B	2014-15 (Pro-rata for 242 days)	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	5.03	5.19	5.36	5.54	5.73
Working Capital for Maintenance Spares (15% of O&M Expenses)	9.05	9.35	9.66	9.98	10.31
Working Capital for Receivables (Equivalent to two months of annual	50.49	52.72	51.74	50.73	50.34



Asset-B	2014-15 (Pro-rata for 242 days)	2015-16	2016-17	2017-18	2018-19
fixed cost / annual transmission charges)					
Total Working Capital	64.56	67.25	66.76	66.25	66.38
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest of Working Capital	5.78	9.08	9.01	8.94	8.96

(₹ in lakh)

Asset-C1	2014-15 (Pro-rata for 243 days)	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M expenses for one month)	5.03	5.19	5.36	5.54	5.73
Working Capital for Maintenance Spares (15% of O&M Expenses)	9.05	9.35	9.66	9.98	10.31
Working Capital for Receivables (Equivalent to two months of annual fixed cost / annual transmission charges)	39.06	41.21	41.54	41.46	41.90
Total Working Capital	53.13	55.74	56.56	56.98	57.94
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest of Working Capital	4.77	7.53	7.64	7.69	7.82

(₹ in lakh)

Asset-C2	2014-15 (Pro-rata for 126 days)	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	5.03	5.19	5.36	5.54	5.73
Working Capital for Maintenance Spares (15% of O&M Expenses)	9.05	9.35	9.66	9.98	10.31
Working Capital for Receivables (Equivalent to two months of annual fixed cost / annual transmission charges)	29.26	30.79	31.19	31.78	32.58
Total Working Capital	43.33	45.32	46.21	47.30	48.62
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest of Working Capital	2.02	6.12	6.24	6.39	6.56



(₹ in lakh)

Asset-C3	2014-15 (Pro-rata for 336 days)	2015-16	2016-17	2017-18	2018-19
Working Capital for O&M Expenses (O&M Expenses for one month)	5.03	5.19	5.36	5.54	5.73
Working Capital for Maintenance Spares (15% of O&M Expenses)	9.05	9.35	9.66	9.98	10.31
Working Capital for Receivables (Equivalent to two months of annual fixed cost / annual transmission charges)	28.50	29.52	29.37	29.88	30.56
Total Working Capital	42.57	44.06	44.39	45.40	46.59
Rate of Interest on Working Capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest of Working Capital	5.29	5.95	5.99	6.13	6.29

53. The details of O&M Expenses allowed by the Commission in respect of the transmission assets vide order dated 29.4.2016 in Petition No. 116/TT/2014, vide order 22.3.2016 in Petition No. 165/TT/2014 and vide order dated 6.9.2017 in Petition No. 207/TT/2016, as claimed by the Petitioner in the instant petition and as trued up in the instant order is as follows:

(₹ in lakh)

Asset-A1	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 29.4.2016 in Petition No. 116/TT/2014	6.05	6.68	6.85	6.87	6.89
Claimed by the Petitioner in the instant petition	5.85	6.41	6.65	6.64	6.74
Approved after true-up in this order	5.85	6.40	6.63	6.63	6.72

(₹ in lakh)

Asset-A2	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 29.4.2016 in Petition No. 116/TT/2014	7.60	8.46	8.60	8.56	8.53
Claimed by the Petitioner in the instant petition	7.14	7.75	7.96	7.91	7.90
Approved after true-up in this order	7.14	7.72	7.90	7.85	7.84



(₹ in lakh)

Asset-A3	2014-15 (Pro-rata for 249 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 29.4.2016 in Petition No. 116/TT/2014	5.86	9.59	9.78	9.71	9.66
Claimed by the Petitioner in the instant petition	5.49	8.46	8.68	8.98	9.30
Approved after true-up in this order	5.43	8.36	8.57	8.88	9.21

(₹ in lakh)

Asset-B	2014-15 (Pro-rata for 242 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 22.3.2016 in Petition No. 165/TT/2014	5.78	9.24	9.37	9.34	9.29
Claimed by the Petitioner in the instant petition	5.79	9.12	9.06	8.99	9.00
Approved after true-up in this order	5.78	9.08	9.01	8.94	8.96

(₹ in lakh)

Asset-C1	2014-15 (Pro-rata for 243 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 6.9.2017 in Petition No. 207/TT/2016	4.17	6.28	6.31	6.35	6.38
Claimed by the Petitioner in the instant petition	4.83	7.61	7.71	7.76	7.88
Approved after true-up in this order	4.77	7.53	7.64	7.69	7.82

(₹ in lakh)

Asset-C2	2014-15 (Pro-rata for 126 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 6.9.2017 in Petition No. 207/TT/2016	2.03	6.18	6.32	6.36	6.40
Claimed by the Petitioner in the instant petition	2.05	6.24	6.38	6.53	6.70
Approved after true-up in this order	2.02	6.12	6.24	6.39	6.56

(₹ in lakh)

Asset-C3	2014-15 (Pro-rata for 336 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 6.9.2017 in Petition No. 207/TT/2016	5.22	5.92	6.00	6.07	6.11



Claimed by the Petitioner in the instant petition	5.34	6.00	6.04	6.17	6.33
Approved after true-up in this order	5.29	5.95	5.99	6.13	6.29

Approved Annual Fixed Charges for 2014-19 Tariff Period

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

(₹ in lakh)

Asset-A1					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	32.84	39.79	42.78	42.94	43.82
Interest on Loan	40.13	44.29	43.07	37.28	33.91
Return on Equity	36.59	44.55	47.89	48.08	49.19
O&M Expenses	60.30	62.30	64.37	66.51	68.71
Interest on Working Capital	5.85	6.40	6.63	6.63	6.72
Total	175.71	197.33	204.74	201.44	202.35

(₹ in lakh)

Asset-A2					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	49.89	57.79	60.53	60.53	60.53
Interest on Loan	59.84	63.53	60.44	53.00	47.17
Return on Equity	55.58	64.70	67.76	67.76	67.94
O&M Expenses	60.30	62.30	64.37	66.51	68.71
Interest on Working Capital	7.14	7.72	7.90	7.85	7.84
Total	232.75	256.03	261.00	255.64	252.19

(₹ in lakh)

Asset-A3					
Particulars	2014-15 (Pro-rata for 249 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	39.69	63.79	66.98	72.10	76.93
Interest on Loan	51.54	75.23	71.69	68.11	65.99
Return on Equity	46.12	74.72	79.11	85.94	92.13
O&M Expenses	41.14	62.30	64.37	66.51	68.71
Interest on Working Capital	5.43	8.36	8.57	8.88	9.21
Total	183.92	284.40	290.72	301.54	312.96



(₹ in lakh)

Asset-B					
Particulars	2014-15 (Pro-rata for 242 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	46.04	75.32	75.75	76.67	77.58
Interest on Loan	57.75	85.28	76.48	66.45	59.73
Return on Equity	51.30	84.33	84.81	85.83	87.09
O&M Expenses	39.98	62.30	64.37	66.51	68.71
Interest on Working Capital	5.78	9.08	9.01	8.94	8.96
Total	200.85	316.30	310.43	304.41	302.07

(₹ in lakh)

Asset-C1					
Particulars	2014-15 (Pro-rata for 243 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	32.63	54.03	56.06	57.69	59.51
Interest on Loan	41.44	61.87	57.37	51.08	47.18
Return on Equity	37.03	61.52	63.80	65.81	68.20
O&M Expenses	40.14	62.30	64.37	66.51	68.71
Interest on Working Capital	4.77	7.53	7.64	7.69	7.82
Total	156.02	247.25	249.24	248.78	251.43

(₹ in lakh)

Asset-C2					
Particulars	2014-15 (Pro-rata for 126 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	11.13	35.05	36.41	38.31	40.12
Interest on Loan	14.17	41.47	38.73	35.58	33.74
Return on Equity	12.48	39.78	41.41	43.89	46.37
O&M Expenses	20.82	62.30	64.37	66.51	68.71
Interest on Working Capital	2.02	6.12	6.24	6.39	6.56
Total	60.61	184.72	187.17	190.67	195.50

(₹ in lakh)

Asset-C3					
Particulars	2014-15 (Pro-rata for 336 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	28.56	33.37	33.74	35.50	37.09
Interest on Loan	35.87	37.62	33.79	30.68	28.74
Return on Equity	32.19	37.90	38.33	40.47	42.52
O&M Expenses	55.51	62.30	64.37	66.51	68.71
Interest on Working Capital	5.29	5.95	5.99	6.13	6.29
Total	157.42	177.15	176.23	179.29	183.35



55. Accordingly, AFC in respect of the transmission assets as allowed vide orders dated 29.4.2016, 22.3.2016 and 6.9.2017 in Petition No. 116/TT/2014, Petition No. 165/TT/2014 and Petition No. 207/TT/2016 respectively, as claimed by the Petitioner in the instant petition and approved after trueing up in the instant order are as follows:

(₹ in lakh)

Asset-A1	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 29.4.2016 in Petition No. 116/TT/2014	184.41	209.81	214.31	212.05	209.87
Claimed by the Petitioner in the instant petition	175.74	197.76	205.53	202.19	203.09
Approved after true-up in this order	175.71	197.33	204.74	201.44	202.35

(₹ in lakh)

Asset-A2	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 29.4.2016 in Petition No. 116/TT/2014	253.43	288.82	291.99	287.32	282.73
Claimed by the Petitioner in the instant petition	232.80	257.42	263.68	258.22	254.68
Approved after true-up in this order	232.75	256.03	261.00	255.64	252.19

(₹ in lakh)

Asset-A3	2014-15 (Pro-rata for 249 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 29.4.2016 in Petition No. 116/TT/2014	202.91	339.13	344.46	338.65	332.95
Claimed by the Petitioner in the instant petition	186.34	288.63	295.41	305.90	317.01
Approved after true-up in this order	183.92	284.40	290.72	301.54	312.96

(₹ in lakh)

Asset-B	2014-15 (Pro-rata for 242 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 22.3.2016 in Petition No. 165/TT/2014	200.85	323.58	326.26	322.17	316.65
Claimed by the Petitioner in the instant petition	201.58	317.92	312.42	306.27	303.81
Approved after true-up in this order	200.85	316.30	310.43	304.41	302.07



(₹ in lakh)

Asset-C1	2014-15 (Pro-rata for 243 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 6.9.2017 in Petition No. 207/TT/2016	128.97	192.09	190.40	188.93	187.54
Claimed by the Petitioner in the instant petition	158.62	250.85	252.46	251.72	254.06
Approved after true-up in this order	156.02	247.25	249.24	248.78	251.43

(₹ in lakh)

Asset-C2	2014-15 (Pro-rata for 126 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 6.9.2017 in Petition No. 207/TT/2016	60.77	187.62	190.92	189.46	188.11
Claimed by the Petitioner in the instant petition	62.07	190.09	193.34	197.00	201.61
Approved after true-up in this order	60.61	184.72	187.17	190.67	195.50

(₹ in lakh)

Asset-C3	2014-15 (Pro-rata for 336 days)	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 6.9.2017 in Petition No. 207/TT/2016	154.27	175.80	176.36	176.52	175.50
Claimed by the Petitioner in the instant petition	159.35	179.43	178.32	181.21	185.13
Approved after true-up in this order	157.42	177.15	176.23	179.29	183.35

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF

PERIOD

56. The Petitioner has combined the transmission assets into Combined Asset and has claimed combined tariff in respect of the same for 2019-24 tariff period as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	201-22	2022-23	2023-24
Depreciation	411.76	411.16	396.55	396.55	396.55
Interest on Loan	287.62	252.47	218.82	185.76	152.58
Return on Equity	437.87	437.87	437.87	437.87	437.87



Interest on Working Capital	26.91	26.77	26.40	26.27	26.10
O&M Expenses	225.05	232.96	241.15	249.62	258.37
Total	1389.21	1361.23	1320.79	1296.07	1271.47

57. The Petitioner has claimed the following IWC in respect of the Combined Asset for 2019-24 tariff period:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M expenses	18.75	19.41	20.10	20.80	21.53
Maintenance Spares	33.76	34.94	36.17	37.44	38.76
Receivables	170.80	167.82	162.84	159.79	156.33
Total	223.31	222.17	219.11	218.03	216.62
Rate of Interest on working capital (in %)	12.10	12.10	12.10	12.10	12.10
Interest on Working Capital	26.91	26.77	26.40	26.27	26.10

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

58. The Petitioner has claimed E-COD in respect of the Combined Asset as 3.7.2014. Based on the trued-up admitted capital cost and actual COD of the individual transmission assets, same E-COD of the Combined Asset works out as follows:

Computation of E-COD					
Particulars	Actual COD	Admitted Capital Cost as on 31.3.2019	Weight of the cost (in %)	Number of Days from last COD	Weighted Days
Asset - A1	1.4.2014	846.51	10.96	239.00	26.19
Asset - A2	1.4.2014	1146.31	14.84	239.00	35.47
Asset - A3	26.7.2014	1572.43	20.36	123.00	25.04
Asset – B	2.8.2014	1469.28	19.02	116.00	22.06
Asset - C1	1.4.2014	1154.77	14.95	117.00	17.49
Asset – C2	26.11.2014	816.46	10.57	0.00	0.00
Asset – C3	30.4.2014	719.00	9.31	210.00	19.55
			100.00		145.79
E-COD (Latest COD – Total weighted Days) - 3.7.2014					

59. E-COD is used to determine the lapsed life of the project as a whole, which works out as (4) four years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD).

Weighted Average Life (“WAL”)



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

61. WAL has been determined based on the admitted capital cost of individual elements under the transmission system as on 31.3.2019 and their respective life as stipulated in the 2019 Tariff Regulations. Accordingly, WAL in respect of the Combined Asset has been worked out as 25 years as follows:

Admitted Capital Cost as on 31.3.2019				
Particulars	Combined Asset Cost (₹ in lakh) (1)	Life as per 2019 Regulation (Years) (2)	Weighted Cost (3)=(1)x(2)	Weighted Average Life of Asset (in years) (4)=(3)/(1)
Building	430.52	25	10763.07	
Sub-station	7158.65	25	178966.37	
IT Equipment and Software	100.93	7	672.85	
Total	7690.11		190402.30	24.76 years (rounded off to 25 years)

62. 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 in the preceding paragraphs, E-COD of the Combined Asset is 3.7.2014 and the lapsed life of the project as a whole, works out as (4) four year as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD). Accordingly, WAL has been used to determine the remaining useful life as on 31.3.2019 to be 21 years.

Capital Cost

63. Regulations 19 of the 2019 Tariff Regulations provide 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 asset 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 up to the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;*
- (k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;*
- (l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;*
- (m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;*
- (n) Expenditure on account of change in law and force majeure events; and*
- (o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*

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

- (a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;*
- (b) Additional Capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;*
- (c) Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;*



- (d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
- (e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and
- (f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

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

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

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

- (a) The assets forming part of the project, but not in use, as declared in the tariff petition;
- (b) De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:

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

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

- (c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;
- (d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and
- (e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment."

64. The Petitioner has claimed capital cost of ₹7771.35 lakh as on 31.3.2019 in respect of the Combined Asset. The Commission has worked out the capital cost as



on 31.3.2019 as ₹7690.11 lakh and the same has been considered as the opening capital cost as on 1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

65. The Petitioner has not projected any ACE during 2019-24 tariff period in respect of the Combined Asset.

Initial Spares

66. As stated above in this order, Initial Spares have been allowed for 2014-19 true-up period on the basis of cost of individual assets. The transmission assets covered in the transmission project have been combined during 2019-24 tariff period and, hence, Initial Spares are allowed on the basis of overall project cost as per the APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017.

67. Accordingly, Initial Spares allowed in 2019-24 tariff period are as follows:

Sub-station

Asset	Plant & Machinery cost considered as on cut-off date	Initial Spares claimed	Norms as per 2019 Tariff Regulations	Initial spares allowable as per 2019 Tariff Regulations	Initial spares allowed during 2019-24 period	Initial Spares allowed on Combined Asset
Asset-A1	804.84	10.10	6.00	50.73	10.10	
Asset-A2	1088.13	27.15	6.00	67.72	27.15	
Asset-A3	1277.68	78.62	6.00	76.54	76.54	
Asset-B	1394.67	10.10	6.00	88.38	10.10	
Asset-C1	1057.85	0.00	6.00	66.88	0.00	
Asset-C2	701.36	72.71	6.00	40.13	40.13	
Asset-C3	661.86	32.25	6.00	40.19	32.25	
Combined Asset	6986.39	230.93	6.00	283.36	196.26	230.93*

*Additional Initial Spares of ₹34.67 lakh (₹230.93 lakh - ₹196.26 lakh) are allowed for Sub-station.

68. Thus, in line with the APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017, additional Initial Spares of ₹34.67 lakh (₹2.08 + ₹32.58) are admissible.

Particulars	Total Capital Cost	Additional Initial Spares	Total Capital Cost
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	as on 31.3.2019	as per APTEL's Judgment dated 14.9.2019	as on 1.4.2019
Asset-A1	846.51	0.00	846.51
Asset-A2	1146.31	0.00	1146.31
Asset-A3	1570.35	2.08	1572.43
Asset-B	1469.28	0.00	1469.28
Asset-C1	1154.77	0.00	1154.77
Asset-C2	770.32	32.58	802.90
Asset-C3	719.00	0.00	719.00
Total	7690.11	34.66	7724.77

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

Particulars	Apportioned approved cost as per RCE	Capital Expenditure as on 31.3.2019	ACE		Capital Cost as on 31.3.2024
			2019-24		
Combined Asset	8317.15	7724.77	0.00		7724.77

Debt-Equity Ratio

70. 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:

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

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

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



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

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

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

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

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

(6) Any expenditure incurred for the emission control system during the tariff period as may be admitted by the Commission as additional capital expenditure for determination of supplementary tariff, shall be serviced in the manner specified in clause (1) of this Regulation.”

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

(₹ in lakh)				
Combined Asset	Capital Cost (as on 1.4.2019) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2024) (₹ in lakh)	(in %)
Debt	5407.41	70.00	5407.41	70.00
Equity	2317.36	30.00	2317.36	30.00
Total	7724.77	100.00	7724.77	100.00

Depreciation

72. Regulations 33 of the 2019 Tariff Regulations provide as follows:

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



the generating station or the transmission system taking into consideration the depreciation of individual units:

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

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

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

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

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

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

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

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

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

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

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

(7) The generating company or the transmission licensee, as the case may be, shall submit the details of proposed capital expenditure five years before the



completion of useful life of the project along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure.

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

(9) Where the emission control system is implemented within the original scope of the generating station and the date of commercial operation of the generating station or unit thereof and the date of operation of the emission control system are the same, depreciation of the generating station or unit thereof including the emission control system shall be computed in accordance with Clauses (1) to (8) of this Regulation.

(10) Depreciation of the emission control system of an existing or a new generating station or unit thereof where the date of operation of the emission control system is subsequent to the date of commercial operation of the generating station or unit thereof, shall be computed annually from the date of operation of such emission control system based on straight line method, with salvage value of 10%, over a period of-

- a) twenty five years, in case the generating station or unit thereof is in operation for fifteen years or less as on the date of operation of the emission control system; or*
- b) balance useful life of the generating station or unit thereof plus fifteen years, in case the generating station or unit thereof is in operation for more than fifteen years as on the date of operation of the emission control system; or*
- c) ten years or a period mutually agreed by the generating company and the beneficiaries, whichever is higher, in case the generating station or unit thereof has completed its useful life.”*

73. The IT equipment has been considered as a part of the Gross Block and depreciated using WAROD. WAROD given at Annexure-II has been worked out after taking into account the depreciation rates of IT and non-IT assets as prescribed in the 2019 Tariff Regulations. The salvage value of IT equipment has been considered nil, i.e. IT asset has been considered as 100% depreciable. Depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. Depreciation allowed in respect of the Combined Asset is as follows:



(₹ in lakh)

Combined Asset					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	7724.77	7724.77	7724.77	7724.77	7724.77
Addition during 2019-24 due to Projected ACE	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	7724.77	7724.77	7724.77	7724.77	7724.77
Average Gross Block	7724.77	7724.77	7724.77	7724.77	7724.77
Weighted Average Rate of Depreciation (WAROD) (in %)	5.30	5.30	5.30	5.30	5.30
Balance Useful life at the beginning of the year (Year)	21.00	20.00	19.00	18.00	17.00
Aggregated Depreciable Value	6962.39	6962.39	6962.39	6962.39	6962.39
Combined Depreciation during the year	409.33	409.33	409.33	409.33	409.33
Cumulative depreciation at the end of the year	2160.81	2570.14	2979.46	3388.79	3798.11
Remaining depreciable at the end of the year	4801.58	4392.25	3982.93	3573.60	3164.27

Interest on Loan (“IoL”)

74. 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.

(5a) The rate of interest on loan for installation of emission control system shall be the weighted average rate of interest of actual loan portfolio of the emission control system or in the absence of actual loan portfolio, the weighted average rate of interest of the generating company 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”.

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

(₹ in lakh)					
Combined Asset					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	5407.41	5407.41	5407.41	5407.41	5407.41
Cumulative Repayments up to Previous Year	1751.48	2160.81	2570.14	2979.46	3388.79
Net Loan-Opening	3655.93	3246.60	2837.27	2427.95	2018.62
Addition due to ACE	0.00	0.00	0.00	0.00	0.00
Repayment during the year	409.33	409.33	409.33	409.33	409.33
Net Loan-Closing	3246.60	2837.27	2427.95	2018.62	1609.30
Average Loan	3451.26	3041.94	2632.61	2223.28	1813.96
Weighted Average Rate of Interest on Loan (in %)	8.409	8.391	8.400	8.412	8.421
Interest on Loan	290.22	255.25	221.14	187.02	152.75

Return on Equity (“RoE”)

76. 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 on account of emission control system, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%.

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.

(3) The return on equity in respect of additional capitalization on account of emission control system shall be computed at the base rate of one year marginal cost of lending rate (MCLR) of the State Bank of India as on 1st April of the year in which the date of operation (ODe) occurs plus 350 basis point, subject to ceiling of 14%;”

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%;

$$(d) \text{Rate of return on equity} = 15.50 / (1-0.24) = 20.395\%$$

(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 of 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.”

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

(₹ in lakh)					
Combined Asset					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	2317.36	2317.36	2317.36	2317.36	2317.36
Addition due to ACE	0.00	0.00	0.00	0.00	0.00
Closing Equity	2317.36	2317.36	2317.36	2317.36	2317.36
Average Equity	2317.36	2317.36	2317.36	2317.36	2317.36



Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (in %)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (Pre-tax)	18.782	18.782	18.782	18.782	18.782
Return on Equity (Pre-tax)	435.25	435.25	435.25	435.25	435.25

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

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

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<i>Norms for sub-station Bays (₹ Lakh per bay)</i>					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
<i>Norms for Transformers (₹ Lakh per MVA)</i>					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
<i>Norms for AC and HVDC lines (₹ Lakh per km)</i>					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
<i>Norms for HVDC stations</i>					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

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

Provided further that:

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;*
 - ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;*
 - iii. the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);*
 - iv. the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme;*
 - v. the O&M expenses of ±800 kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme; and*
 - vi. the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years.*
- (b) The total allowable operation and maintenance expenses for the transmission system shall be calculated by multiplying the number of sub-station bays, transformer capacity of the transformer (in MVA) and km of line length with the applicable norms for the operation and maintenance expenses per bay, per MVA and per km respectively.*
- (c) The Security Expenses and Capital Spares for transmission system shall be allowed separately after prudence check:*



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

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

79. O&M Expenses claimed and allowed in respect of the Combined Asset for 2019-24 tariff period are as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station					
420 kV, 125 MVAR Bus Reactor at Jabalpur Sub-station	1	1	1	1	1
420 kV, 125 MVAR Bus Reactor at Khandwa Sub-station	1	1	1	1	1
420 kV, 125 MVAR Bus Reactor at Bhatapara Sub-station	1	1	1	1	1
420 kV, 125 MVAR Bus Reactor at Shujalpur Sub-station station	1	1	1	1	1
420 kV, 125 MVAR Bus Reactor at Raigarh Sub-station	1	1	1	1	1
420 kV, 80 MVAR Switchable Line Reactor at Solapur Sub-station	1	1	1	1	1
420 kV, 125 MVAR Bus Reactor at Aurangabad Sub-station	1	1	1	1	1
Norms (₹ lakh/Bay)					
400 kV	32.15	33.28	34.45	35.66	36.91
Total O&M Expenses (₹ in lakh)	225.05	232.96	241.15	249.62	258.37

* The Petitioner has not claimed any O&M towards PLCC.

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 provide as follows:

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

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

(i) Receivables equivalent to 45 days of annual fixed cost;

(ii) Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and



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

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

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

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

“3. Definition - In these regulations, unless the context otherwise requires:-

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

81. The Petitioner has submitted that it has computed IWC for 2019-24 period considering SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest considered is 12.05% (SBI 1-year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, 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 1.4.2020 of 7.00% plus 350 basis points). The components of the working capital and interest allowed thereon is as follows:

(₹ in lakh)

Combined Asset					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for one month)	18.75	19.41	20.10	20.80	21.53
Working Capital for Maintenance Spares (15% of O&M Expenses)	33.76	34.94	36.17	37.44	38.76



Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	170.50	167.39	163.97	160.79	157.20
Total	223.01	221.75	220.24	219.04	217.48
Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
Interest on working capital	26.87	24.95	23.13	23.00	22.84

Annual Fixed Charges for 2019-24 Tariff Period

82. The various components of AFC in respect of the Combined Asset for 2019-24 tariff period are as follows:

(₹ in lakh)					
Combined Asset					
Particulars	2019-20	2020-21	201-22	2022-23	2023-24
Depreciation	409.33	409.33	409.33	409.33	409.33
Interest on Loan	290.22	255.25	221.14	187.02	152.75
Return on Equity	435.25	435.25	435.25	435.25	435.25
O&M Expenses	225.05	232.96	241.15	249.62	258.37
Interest on Working Capital	26.87	24.95	23.13	23.00	22.84
Total	1386.72	1357.73	1329.99	1304.21	1278.53

Filing Fee and Publication Expenses

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

Licence Fee & RLDC Fees and Charges

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



Good and Service Tax

85. 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 Government/ Statutory authorities, the same may be allowed to be recovered from the beneficiaries.

86. MPPMCL has submitted that claim of CGST is premature and need not be considered at this juncture. In response, the Petitioner has reiterated its submissions.

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

Security Expenses

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

89. We have considered the above submissions of Petitioner. The Petitioner has claimed consolidated security expenses for all the transmission assets owned by it 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 said petition has already been disposed of by the Commission vide order dated 3.8.2021. 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

90. 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

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

92. To summarise:

- a) Trued-up AFC allowed in respect of the transmission assets for 2014-19 tariff period are as follows:

(₹ in lakh)					
Asset-A1					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
AFC	175.71	197.33	204.74	201.44	202.35



(₹ in lakh)

Asset-A2					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
AFC	232.75	256.03	261.00	255.64	252.19

(₹ in lakh)

Asset-A3					
Particulars	2014-15 (Pro-rata for 249 days)	2015-16	2016-17	2017-18	2018-19
AFC	183.92	284.40	290.72	301.54	312.96

(₹ in lakh)

Asset-B					
Particulars	2014-15 (Pro-rata for 242 days)	2015-16	2016-17	2017-18	2018-19
AFC	200.85	316.30	310.43	304.41	302.07

(₹ in lakh)

Asset-C1					
Particulars	2014-15 (Pro-rata for 243 days)	2015-16	2016-17	2017-18	2018-19
AFC	156.02	247.25	249.24	248.78	251.43

(₹ in lakh)

Asset-C2					
Particulars	2014-15 (Pro-rata for 126 days)	2015-16	2016-17	2017-18	2018-19
AFC	60.61	184.72	187.17	190.67	195.50

(₹ in lakh)

Asset-C3					
Particulars	2014-15 (Pro-rata for 336 days)	2015-16	2016-17	2017-18	2018-19
AFC	157.42	177.15	176.23	179.29	183.35

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

(₹ in lakh)

Combined Asset					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	1386.72	1357.73	1329.99	1304.21	1278.53



93. The Annexure-I and Annexure-II given hereinafter shall form part of the order.

94. This order disposes of Petition No. 688/TT/2020 in terms of the above discussions and findings.

sd/-
(P. K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(P. K. Pujari)
Chairperson



2014-19

Annexure-I

Asset-A1- True-Up

(₹ in lakh)

Particulars	Admitted Capital Cost as on COD (₹ in lakh)	ACE					Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations				
		2014-15	2015-16	2016-17	2017-18	2018-19			2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station	543.51	156.84	106.58	6.42	0.00	33.16	846.51	5.28	32.84	39.79	42.78	42.94	43.82
Total	543.51	156.84	106.58	6.42	0.00	33.16	846.51		32.84	39.79	42.78	42.94	43.82
Weighted Average Rate of Depreciation (in %)									5.28	5.28	5.28	5.28	5.28
Average Gross Block (₹ in lakh)									621.93	753.64	810.14	813.35	829.93



2014-19

Annexure-I

Asset-A2- True-Up

(₹ in lakh)

Particulars	Admitted Capital Cost as on COD (₹ in lakh)	ACE					Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations				
		2014-15	2015-16	2016-17	2017-18	2018-19			2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station	847.11	195.48	103.72	0.00	0.00	0.00	1146.31	5.28	49.89	57.79	60.53	60.53	60.53
Total	847.11	195.48	103.72	0.00	0.00	0.00	1146.31		49.89	57.79	60.53	60.53	60.53
Weighted Average Rate of Depreciation (in %)									5.28	5.28	5.28	5.28	5.28
Average Gross Block (₹ in lakh)									944.85	1094.45	1146.31	1146.31	1146.31



2014-19
Asset-A3- True-Up

Annexure-I
(₹ in lakh)

Particulars	Admitted Capital Cost as on COD (₹ in lakh)	ACE					Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations				
		2014-15	2015-16	2016-17	2017-18	2018-19			2014-15	2015-16	2016-17	2017-18	2018-19
Building	118.34	21.19	24.52	51.35	49.42	0.00	264.82	3.34	4.31	5.07	6.34	8.02	8.84
Sub-station	928.39	121.66	61.80	10.89	119.45	32.10	1274.30	5.28	52.23	57.07	58.99	62.43	66.44
IT Equipment and software	30.95	0.24	0.04	0.00	0.00	0.00	31.23	5.28	1.64	1.65	1.65	1.65	1.65
Total	1077.69	143.09	86.36	62.24	168.87	32.10	1570.35		58.18	63.79	66.98	72.10	76.93
Weighted Average Rate of Depreciation (in %)									5.06	5.05	5.00	4.96	4.95
Average Gross Block (₹ in lakh)									1149.23	1263.96	1338.26	1453.81	1554.30



2014-19
Asset-B True-Up

Annexure-I
(₹ in lakh)

Particulars	Admitted Capital Cost as on COD (₹ in lakh)	ACE					Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations				
		2014-15	2015-16	2016-17	2017-18	2018-19			2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station	1201.93	204.89	16.39	0.00	34.55	0.00	1457.77	5.28	68.87	74.71	75.15	76.06	76.97
IT Equipment and software	10.20	1.31	0.01	0.00	0.00	0.00	11.52	5.28	1.63	0.61	0.61	0.61	0.61
Total	1212.13	206.20	16.40	0.00	34.55	0.00	1469.28		70.50	75.32	75.75	76.67	77.58
Weighted Average Rate of Depreciation (in %)									5.28	5.28	5.28	5.28	5.28
Average Gross Block (₹ in lakh)									1315.23	1426.53	1434.73	1452.01	1469.28



2014-19
Asset-C1- True-Up

Annexure-I
(₹ in lakh)

Particulars	Admitted Capital Cost as on COD (₹ in lakh)	ACE					Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations				
		2014-15	2015-16	2016-17	2017-18	2018-19			2014-15	2015-16	2016-17	2017-18	2018-19
Building	47.16	0.08	0.00	1.39	15.14	0.00	63.77	3.34	1.58	1.58	1.60	1.88	2.13
Sub-station	800.96	114.34	75.93	0.00	51.26	8.34	1050.83	5.28	45.31	50.33	52.34	53.69	55.26
IT Equipment and software	40.11	0.07	0.00	0.00	0.00	0.00	40.18	5.28	2.12	2.12	2.12	2.12	2.12
Total	888.22	114.49	75.93	1.39	66.40	8.34	1154.77		49.00	54.03	56.06	57.69	59.51
Weighted Average Rate of Depreciation (in %)									5.18	5.19	5.19	5.18	5.17
Average Gross Block (₹ in lakh)									945.47	1040.68	1079.34	1113.23	1150.60



2014-19
Asset-C2- True-Up

Annexure-I
(₹ in lakh)

Particulars	Admitted Capital Cost as on COD (₹ in lakh)	ACE					Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations				
		2014-15	2015-16	2016-17	2017-18	2018-19			2014-15	2015-16	2016-17	2017-18	2018-19
Building	0.52	19.63	9.96	0.00	30.99	0.00	61.11	3.34	0.35	0.84	1.01	1.52	2.04
Sub-station	579.52	49.19	38.26	7.04	45.58	3.18	722.77	5.28	31.90	34.21	35.40	36.79	38.08
Total	580.04	68.82	48.23	7.04	76.57	3.18	783.88		32.24	35.05	36.41	38.31	40.12
Weighted Average Rate of Depreciation (in %)									5.25	5.21	5.20	5.16	5.13
Average Gross Block (₹ in lakh)									614.45	672.98	700.61	742.42	782.29



2014-19
Asset-C3- True-Up

Annexure-I
(₹ in lakh)

Particulars	Admitted Capital Cost as on COD (₹ in lakh)	ACE					Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations				
		2014-15	2015-16	2016-17	2017-18	2018-19			2014-15	2015-16	2016-17	2017-18	2018-19
Building	12.19	11.84	0.89	0.76	15.15	0.00	40.83	3.34	0.60	0.82	0.85	1.11	1.36
Sub-station	520.03	76.65	3.87	9.11	47.33	3.18	660.17	5.28	29.48	31.61	31.95	33.44	34.77
IT Equipment and software	17.74	0.26	0.00	0.00	0.00	0.00	18.00	5.28	0.94	0.95	0.95	0.95	0.95
Total	549.96	88.75	4.76	9.87	62.48	3.18	719.00		31.03	33.37	33.74	35.50	37.09
Weighted Average Rate of Depreciation (in %)									5.22	5.21	5.20	5.19	5.17
Average Gross Block (₹ in lakh)									594.34	641.09	648.41	684.58	717.41



2019-24

Combined Asset - Determination

Annexure-II

(₹ in lakh)

Particulars	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	ACE	Admitted Capital Cost as on 1.4.2024 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
		2019-24			2019-20	2020-21	2021-22	2022-23	2023-24
Building	430.52	0.00	430.52	3.34	14.38	14.38	14.38	14.38	14.38
Sub-station	7193.22	0.00	7193.22	5.28	379.81	379.81	379.81	379.81	379.81
IT Equipment and software	100.93	0.00	100.93	15.00	15.14	15.14	15.14	15.14	15.14
Total	7724.77	0.00	7724.77		409.33	409.33	409.33	409.33	409.33
Weighted Average Rate of Depreciation (in s%)					5.30	5.30	5.30	5.30	5.30
Average Gross Block (₹ in lakh)					7724.77	7724.77	7724.77	7724.77	7724.77

