

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 113/TT/2022

Coram:

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

Date of Order: 06.04.2023

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 for the 2014-19 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff for the 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for assets under "POWERGRID works associated with System Strengthening for IPPs in Chhattisgarh and other generation projects 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, Panaji,
Near Mandvi Hotel, Goa-403001.
8. Electricity Department,
Administration of Daman & 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-492013.
12. Chhattisgarh- WR Transmission Limited,
Shantigram, S.G. Highway, Khodiyar,
Ahmedabad-382421, Gujarat.

...Respondents

For Petitioner : Shri S.S. Raju, PGCIL
Shri Mukesh Khanna, PGCIL
Shri D.K. Biswal, PGCIL
Shri Zafrul Hasan, PGCIL

For Respondents : None

ORDER

Power Grid Corporation of India Limited, has filed the instant petition for trueing-up of the transmission tariff for the period from COD to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014



(herein referred to as the “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 (herein after referred to as “the 2019 Tariff Regulations”) in respect of the following assets (hereinafter referred to as “transmission assets”) under “POWERGRID works associated with System Strengthening for IPPs in Chhattisgarh and other generation projects in Western Region” (hereinafter referred to as the “the transmission project”) in Western Region:

Asset-1: 1 number 765 kV line Bay at 765/400 kV Vindhyachal Pooling Station of POWERGRID (for Sasan UMPP-Vindhyachal Pooling Station (POWERGRID) 765 kV 2nd S/C line);

Asset-2: 2 numbers 400 kV line Bays at 765/400 kV Vindhyachal Pooling Station of POWERGRID (for Vindhyachal (IV/V) STPP switchyard (NTPC)-Vindhyachal Pooling Station (POWERGRID) 400 kV 2nd D/C (quad) line;

Asset-3: 2 numbers 400 kV GIS line Bays at Gwalior Substation (for Gwalior Sub-station-Morena (POWERGRID) 400 kV D/C (quad) line;

Asset-4: 2 numbers 765 kV GIS line Bay at 765/400 kV Pune (GIS) Sub-station of POWERGRID (for LILO of one circuit of Aurangabad (POWERGRID)-Padghe (POWERGRID) 765 kV D/C line at Pune (GIS) (POWERGRID));

Asset-5: 765 kV line bays at 765/400 kV Champa Pooling Station and Dharamjaygarh Pooling Station for 765 kV S/C Champa Pooling Station-Dharamjaygarh Pooling Station transmission line;

Asset-6: 765 kV line bays at 765/400 kV Champa Pooling Station and Kotra (Raigarh) Pooling Station for 765 kV S/C Champa Pooling Station-Kotra (Raigarh) Pooling Station transmission line;

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

“1) Allow the entire initial spares claimed under instant petition as the initial spares of combined asset are within the specified limits.



2) Allow the add cap for 2014-19 and 2019-24 tariff block as claimed as per Para 5 and 7 above.

3) 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 6 and 7 above.

4) 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 6 and 7 above for respective block.

5) 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.

6) 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.

7) 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.

8) Allow the Petitioner to claim the overall security expenses and consequential IOWC on that security expenses separately.

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

10) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the beneficiaries, if GST on transmission is levied at 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 (hereinafter referred as “IA”) for implementation of the transmission assets under the transmission project was accorded by Board of Directors of the Petitioner in 330th meeting held on 20.7.2016 (communicated



vide Memorandum Ref. No. C/CP/PA1617-07-0E-IA005 dated 22.7.2016) for ₹33317 lakh including IDC of ₹1937 lakh based on April, 2016 price level.

- b) The transmission project was discussed and agreed in the 36th meeting of Standing Committee on Power System Planning of Western region held on 29.8.2013. The scheme was later discussed and agreed for implementation in the 24th meeting of Western Regional Power Committee held on 9.10.2013.
- c) The scope of work covered under the transmission project is as follows:

Sub-stations:

- i. 765 kV line bay at 765/400 kV Vindhyachal Pooling Station of Powergrid (for Sasan UMPP-Vindhyachal Pooling Station (POWERGRID) 765 kV 2nd S/C)-1 number
- ii. 400 kV line bays at 765/ 400 kV Vindhyachal Pooling Station of Powergrid (for Vindhyachal (IV/V) STPP switchyard (NTPC)-Vindhyachal Pooling Station (POWERGRID) 400 kV 2nd D/C (quad))- 2 numbers
- iii. 400 kV GIS line bays at Gwalior Sub-station (for Gwalior Sub-station-Morena (POWERGRID) 400 kV D/C (quad) line) : 2 Numbers
- iv. 765 kV GIS line bays at 765/400 kV Pune (GIS) Sub-station of POWERGRID (for LILO of one circuit of Aurangabad (POWERGRID)-Padghe (POWERGRID) 765 kV D/C line at Pune (GIS) (POWERGRID)) : 2 Numbers
- v. 765 kV line bays at 765/ 400 kV Champa Pooling Station of POWERGRID (1 number for Champa PS (POWERGRID-Raigarh (Kotra) Pooling Station (POWERGRID) 765 kV 2nd S/C, 1 number for Champa- Pooling Station (POWERGRID)-Dharamjaigarh (POWERGRID) 765 kV 2nd S/C) : 2 Numbers
- vi. 765 kV line bay at 765/ 400 kV Raigarh (Kotra) Pooling Station of POWERGRID (for Champa Pooling Station (POWERGRID)-Raigarh (Kotra) Pooling Station (POWERGRID) 765 kV 2nd S/C) : 1 Number
- vii. 765 kV line bay at 765/ 400 kV Dharamjaigarh Pooling Station of POWERGRID (for Champa Pooling Station (POWERGRID)-Dharamjaigarh (POWERGRID) 765 kV 2nd S/C) : 1 Number



- d) The entire scope of the work as per IA is completed and covered in the instant petition.
- e) As per IA dated 22.7.2016, transmission assets were scheduled to be put into commercial operation by March, 2019. Details of commercial operation of the transmission assets along with time over-run are as follows:

Particulars	SCOD	COD	Time over-run
Asset-1	March, 2019	28.4.2018	-
Asset-2	March, 2019	18.3.2018	-
Asset-3	March, 2019	11.5.2018	-
Asset-4	March, 2019	31.3.2019*	-
Asset-5	March, 2019	23.7.2018	-
Asset-6	March, 2019	26.9.2018	-

**Commercial operation of Asset-4 was approved as 31.3.2019 under proviso (ii) to Regulation 4(3) of the 2014 Tariff Regulations. Asset-4 could not be utilized on account of delay in execution of LILO by CWRTL. The Commission vide order dated 9.4.2021 in Petition No. 366/TT/2018 held that the tariff for the period of mismatch would be borne by CWRTL and CWRTL has filed an Appeal before APTEL and it is pending adjudication.*

- f) The transmission tariff in respect of the transmission Asset-1, Asset-2, Asset-3, Asset-4, Asset-5 and Asset-6 for the period from COD to 31.3.2019 was allowed by the Commission vide order dated 9.4.2021 in Petition No. 366/TT/2018.

4. The Respondents are distribution licensees, power departments and transmission licensees, who 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 notice published in the newspapers by the Petitioner. MP Power Management Company Limited, Respondent No.1, has filed



its reply vide affidavit dated 12.7.2022 and has mainly raised issues like Initial Spares, ACE and GST. The Petitioner has filed its rejoinder vide affidavit dated 5.8.2022.

6. The hearing in this matter was held on 14.9.2022 and the order was reserved.

7. Having heard the representatives of the Petitioner and after perusal of the materials on record, we proceed to dispose of the petition.

8. This order is issued considering the submissions made by the Petitioner in the main petition vide affidavit dated 3.2.2022 and affidavits dated 7.9.2022 and 30.9.2022, MPPMCL's reply vide affidavit dated 12.7.2022 and the Petitioner's rejoinder vide affidavit dated 5.8.2022 thereto.

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

9. The details of the Transmission Charges claimed by the Petitioner for the transmission assets are as follows:

(₹ in lakh)

Particulars	Asset-1	Asset- 2		Asset-3
	2018-19 (Pro-rata for 338 days)	2017-18 (Pro-rata for 14 days)	2018-19	2018-19 (Pro-rata for 325 days)
Depreciation	81.39	1.94	57.41	81.94
Interest on Loan	77.30	1.97	56.32	78.58
Return on Equity	91.07	2.16	64.07	91.51
Interest on Working Capital	9.62	0.39	10.89	10.44
O&M Expenses	89.08	5.10	137.42	104.59
Total	348.46	11.56	326.11	367.06

(₹ in lakh)

Particulars	Asset-4	Asset-5	Asset-6
	2018-19 (Pro-rata for 1 day)	2018-19 (Pro-rata for 252 days)	2018-19 (Pro-rata for 187 days)
Depreciation	2.04	91.84	68.71
Interest on Loan	2.05	98.16	70.13
Return on Equity	2.37	108.42	80.03
Interest on Working Capital	0.16	12.81	9.45
O&M Expenses	0.53	132.84	98.58
Total	7.15	444.07	326.90



10. The details of the Interest on Working Capital claimed by the Petitioner for the transmission assets are as follows:

Particulars	(₹ in lakh)			
	Asset-1 2018-19 (Pro-rata for 338 days)	Asset-2 2017-18 (Pro-rata for 14 days)	Asset-2 2018-19	Asset-3 2018-19 (Pro-rata for 325 days)
O&M Expenses	8.02	11.09	11.45	9.79
Maintenance Spares	14.43	19.95	20.61	17.62
Receivables	62.72	50.25	54.35	68.70
Total Working Capital	85.17	81.29	86.41	96.11
Rate of Interest (in %)	12.20	12.60	12.60	12.20
Interest on Working Capital	9.62	0.39	10.89	10.44

Particulars	(₹ in lakh)		
	Asset-4 2018-19 (Pro-rata for 1 day)	Asset-5 2018-19 (Pro-rata for 252 days)	Asset-6 2018-19 (Pro-rata for 187 days)
O&M Expenses	16.03	16.03	16.03
Maintenance Spares	28.86	28.86	28.86
Receivables	434.80	107.20	106.34
Total Working Capital	479.69	152.09	151.23
Rate of Interest (in %)	12.20%	12.20	12.20
Interest on Working Capital	0.16	12.81	9.45

Capital Cost

11. The Commission vide order dated 9.4.2021 in Petition No. 366/TT/2018 has approved the following capital cost and ACE in respect of Asset-1, Asset-2, Asset-3, Asset-4, Asset-5 and Asset-6 :

Assets	FR apportioned approved cost	Admitted cost as on COD	ACE		Admitted cost as on 31.3.2019
			2017-18	2018-19	
Asset-1	2495.36	1493.82	0.00	459.08	1952.90
Asset-2	1621.11	932.79	38.66	376.00	1347.45
Asset-3	4148.25	1626.85	0.00	286.34	1913.19
Asset-4	17934.65	14538.12	0.00	0.00	14538.12
Asset-5	3574.41	2484.22	0.00	392.96	2877.18
Asset-6	3506.48	2473.66	0.00	225.73	2699.39
Total	33280.26	23549.46	38.66	1740.11	25328.23

12. The Petitioner vide Auditor's Certificates dated 7.8.2021 and 19.8.2021 has submitted the capital cost upto the date of commercial operation along with ACE upto



31.3.2019. The details of the approved apportioned capital cost, as on COD and the ACE incurred upto 31.3.2019 as claimed by the Petitioner in the instant true-up petition for the transmission assets are as follows:

(₹ in lakh)

Assets	FR apportioned approved cost	Admitted cost as on COD	Actual ACE		Cost as on 31.3.2019
			2017-18	2018-19	
Asset-1	2495.36	1547.32	0.00	277.06	1824.38
Asset-2	1621.11	945.76	38.66	205.71	1190.13
Asset-3	4148.25	1694.69	0.00	130.13	1824.82
Asset-4	17934.65	14946.64	0.00	0	14946.64
Asset-5*	3592.90	2558.67	0.00	225.57	2784.24
Asset-6*	3524.97	2554.84	0.00	233.93	2788.77
Total	33317.24	24247.92	38.66	1072.40	25358.98

* The Petitioner has submitted that due to inadvertent error, the apportioned approved cost of Asset-5 and Asset-6 was mentioned as ₹3574.41 lakh and 3506.48 lakh and the same has been corrected in the instant petition.

13. The Petitioner has claimed capital cost of ₹25358.98 lakh for the transmission assets as on 31.3.2019.

Cost variation

14. The Petitioner has submitted that the estimated completion cost of the transmission assets is within the FR apportioned approved cost and, therefore, there is no cost over-run. The Petitioner has submitted the following with respect to cost variation of estimated completion cost as compared with apportioned approved cost (FR):

i. Asset-1

(₹ in lakh)

Particulars	FR cost	Estimated completion cost	Variation	Reasons
Sub-station equipments including T&D	2086.46	1799.63	286.83	Actual awarded cost received in competitive bidding is higher than that in FR.
IDC	146.55	57.09	89.46	Decrease in IDC is attributable to variation in rate of interest considered in FR v/s Actuals, decrease in overall capital cost



				w.r.t. FR and deployment of funds based on actuals. Further, as the asset achieved COD before SCOD to match with the associated transmission line, the IDC has reduced.
Contingency & IEDC overheads etc.	262.34	23.96	238.38	While estimation 3% and 10.75% of equipment cost has been considered as contingency and IEDC respectively. The actual amount of IEDC, has been taken at the time of claim. Further, as the asset achieved COD before SCOD to match with the associated transmission line, the IEDC has reduced.
Total	2495.35	1880.68	614.67	

ii. Asset-2

(₹ in lakh)

Particulars	FR cost	Estimated completion cost	Variation	Reasons
Sub-station equipments including taxes & duties	1356.05	1184.37	171.68	Actual awarded cost received in competitive bidding is lower than that in FR.
IDC	95	18.44	76.56	Decrease in IDC is attributable to variation in rate of interest considered in FR v/s Actuals, decrease in overall Capital cost w.r.t. FR and deployment of funds based on actuals. Further, as the asset achieved COD before SCOD to match with the associated transmission line, the value of IDC has been reduced.
Contingency & IEDC overheads etc.	170.06	10.45	159.61	While estimation 3% and 10.75% of equipment cost has been considered as contingency and IEDC respectively. The actual amount of IEDC, has been taken at the time of claim. Further, as the asset achieved COD before SCOD to match with the associated transmission line, the value of IEDC has reduced.
Total	1621.1	1213.26	407.85	

iii. Asset-3:

(₹ in lakh)

Particulars	FR cost	Estimated completion cost	Variation	Reasons
Sub-station equipments including taxes and duties	3469.06	1841.14	1627.93	Actual awarded cost received in competitive bidding is lower than that in FR.



IDC	243.43	54.37	189.06	Decrease in IDC is attributable to variation in rate of interest considered in FR v/s Actuals, decrease in overall capital cost w.r.t. FR and deployment of funds based on actuals. The actual IDC accrued upto DOCO has been considered at the time of claim of tariff. Further, as the asset achieved COD before SCOD to match with the associated transmission line, the value of IDC has been reduced.
Contingency & IEDC overheads etc	435.76	23.98	411.78	While estimation 3% and 10.75% of equipment cost has been considered as contingency and IEDC respectively. The actual amount of IEDC, has been taken at the time of claim. Further, as the asset achieved COD before SCOD to match with the associated transmission line, the value of IEDC has reduced.
Total	4148.24	1919.48	2228.77	

iv. Asset-4:

(₹ in lakh)

Particulars	FR cost	Estimated completion cost	Variation	Reasons
Building & Civil Works	2054.44	2011.66	42.78	As per actual site conditions and rates received in competitive bidding.
Sub-station equipments including taxes & duties	13141.35	11797.87	1343.48	Actual awarded cost received in competitive bidding is lower than that in FR.
IDC	1076.43	1067.03	9.40	Decrease in IDC is attributable to variation in rate of interest considered in FR v/s Actuals, decrease in overall Capital cost w.r.t. FR and deployment of funds based on actuals. The actual IDC accrued upto DOCO has been considered at the time of claim of tariff.
IEDC	1662.43	1447.07	215.36	While estimation 10.75% of equipment cost has been considered as IEDC. The actual amount of IEDC has been taken at the time of claim. Further, as the asset achieved COD before SCOD to match with the associated transmission line, the value of IEDC has been reduced.
Total	17934.65	16323.63	1611.02	



v. Asset-5:

(₹ in lakh)

Particulars	FR cost	Estimated completion cost	Variation	Reasons
Building & Civil Works	521.08	590.87	-69.79	As per actual site conditions and rates received in competitive bidding.
Sub-station equipments including taxes & duties	2457.19	2228.79	228.40	Actual awarded cost received in competitive bidding is lower than that in FR.
IDC	212.20	111.25	100.95	Decrease in IDC is attributable to variation in rate of interest considered in FR v/s Actuals, decrease in overall Capital cost w.r.t. FR and deployment of funds based on actuals. The actual IDC accrued upto DOCO has been considered at the time of claim of tariff. Further, as the asset achieved COD before SCOD to match with the associated transmission line, the value of IDC has reduced.
Contingency & IEDC overheads etc.	402.43	217.44	184.99	While estimation 3% and 10.75 % of equipment cost has been considered as contingency and IEDC respectively and establishment cost also considered. The actual amount of IEDC, establishment and contingency has been taken at the time of claim. Further, as the asset achieved COD before SCOD to match with the associated transmission line, the value of IEDC has reduced.
Total	3592.90	3148.35	444.55	

vi. Asset-6:

(₹ in lakh)

Particulars	FR cost	Estimated completion cost	Variation	Reasons
Building & Civil Works	446.06	428.06	18.00	As per actual site conditions and rates received in competitive bidding.
Sub-station equipments including taxes & duties	2476.48	2337.10	139.38	Actual awarded cost received in competitive bidding is lower than that in FR.



IDC	207.93	134.2	73.73	Decrease in IDC is attributable to variation in rate of interest considered in FR v/s Actuals, decrease in overall Capital cost w.r.t. FR and deployment of funds based on actuals. The actual IDC accrued upto DOCO has been considered at the time of claim of tariff. Further, as the asset achieved COD before SCOD to match with the associated transmission line, the value of IDC has been reduced.
IEDC	394.50	205.01	189.49	While estimation 10.75% of equipment cost has been considered as IEDC. The actual amount of IEDC, has been taken at the time of claim. Further, as the asset achieved COD before SCOD to match with the associated transmission line, the value of IEDC has been reduced.
Total	3524.97	3104.37	420.60	

15. The Petitioner has submitted that equal opportunity to all eligible firms, lowest possible market prices for required product/services is obtained and contracts are awarded on the basis of lowest evaluated eligible bidder. The best competitive bid prices against tenders may happen to be lower or higher than the cost estimate depending upon prevailing market conditions.

16. Further, regarding variation in cost of individual item in sub-station packages, it is submitted that the packages under subject scope of works comprise of a large number of items and the same are awarded through open competitive bidding. In the said bidding process, bids are received from multiple parties quoting different rates for various BOQ items under the said package. Further, lowest bidder can be arrived at/ evaluated on overall basis only. Hence, item-wise unit prices in contracts and its variation over unit rate considered in FR estimates are beyond the control of the Petitioner.



17. We have considered the submissions of the Petitioner. The actual capital cost has reduced compared to FR due to decrease of IDC and IEDC on account of early execution of assets and further contracts are awarded on the basis of lowest evaluated eligible bidder. The estimated completion cost of the assets covered in the instant petition is within the FR cost. Therefore, there is no cost over-run. Further, the completion cost of each asset individually is also within the apportioned approved cost. Thus, the capital cost claimed by the Petitioner is approved.

18. The transmission assets were scheduled to be put into commercial operation in March, 2019 and all the transmission assets were put into commercial operation within the scheduled COD. Thus, there is no time over-run in case of the instant transmission assets.

Interest During Construction (IDC)

19. The Petitioner has claimed the IDC for the transmission assets and has submitted Auditor's Certificates in support of the same. The Petitioner has submitted computation of IDC along with the year-wise details of the IDC discharged.

20. The allowable IDC has been worked out considering the information submitted by the Petitioner for individual assets separately on cash basis. The loan details submitted in Form-9C for the 2014-19 tariff period and the IDC computation sheet have been considered for the purpose of IDC calculation on cash and accrued basis. The undischarged IDC as on COD has been considered as ACE during the year in which it has been discharged.

21. Accordingly, based on the information submitted by the Petitioner, the IDC considered is summarized as follows:



(₹ in lakh)

Particulars	IDC claimed by Petitioner (as per Auditor Certificate)	Entitled IDC up to COD	IDC disallowed as on COD due to computation difference	Undischarged portion of entitled IDC as on COD	IDC allowed on cash basis as on COD	Discharge of IDC		
						2017-18	2018-19	2019-20
	A	B	C=A-B	D	E=B-D			
Asset-1	57.09	57.09	0.00	53.44	3.65	0.00	53.44	0.00
Asset-2	18.44	18.24	0.20	12.77	5.48	0.00	12.77	0.00
Asset-3	54.37	53.75	0.62	51.34	2.41	0.00	51.34	0.00
Asset-4	1067.03	1067.03	0.00	380.68	686.35	0.00	0.00	380.68
Asset-5	111.25	111.25	0.00	42.27	68.98	0.00	40.50	1.77
Asset-6	134.20	133.37	0.83	51.21	82.16	0.00	29.91	21.30

Incidental Expenditure During Construction (IEDC)

22. The Petitioner has claimed IEDC for the transmission assets and submitted Auditors 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. The details of claimed and allowed IEDC are as follows:

(₹ in lakh)

Particulars	IEDC claimed as per Auditor Certificate	IEDC disallowed due to time over-run	IEDC allowed as on COD
	1	2	3=(1-2)
Asset-1	23.96	0.00	23.96
Asset-2	10.45	0.00	10.45
Asset-3	23.98	0.00	23.98
Asset-4	1447.07	0.00	1447.07
Asset-5	217.44	0.00	217.44
Asset-6	205.01	0.00	205.01

Initial Spares

23. The Petitioner has claimed the following Initial Spares for the transmission assets and prayed to revise the Initial Spares allowed earlier in light of the judgement of the Appellate Tribunal for Electricity (APTEL) dated 14.9.2019 in Appeal No. 74 of 2017. Initial Spares claimed by the Petitioner are as follows:



(₹ in lakh)

Assets	Parts	Plant and Machinery Cost (A)	Initial Spares Claimed (B)	Ceiling Limit (C)	Initial Spares Worked out $D = [(A-B)*C / (100-C)]$	Excess [B-D] If B>D	Balance Available within criteria [D-B] If D>B
Asset-1	Sub-station (AIS)	1799.63	102.96	6	108.30	0.00	5.34
Asset-2	Sub-station (AIS)	1184.37	30.32	6	73.66	0.00	43.34
Asset-3	Sub-station (GIS)	1827.11	122.10	5	89.74	32.36	89.74
Asset-4	Sub-station (GIS)	11797.89	502.12	5	594.51	0.00	92.39
Asset-5	Sub-station (AIS)	2228.79	131.56	6	133.87	0.00	2.31
Asset-6	Sub-station (AIS)	2337.09	132.23	6	140.74	0.00	8.51
Combined asset	Sub-station (GIS)	13625.00	624.22	5	684.25	32.36	60.03
	Sub-station (AIS)	7549.88	397.07	6	456.56	0.00	59.49

24. The discharge of Initial Spares claimed by Petitioner is as follows:

(₹ in lakh)

Particulars	As on COD	2018-19	2019-20	Total
Asset-1	83.76	19.2	0.00	102.96
Asset-2	22.54	7.78	0.00	30.32
Asset-3	117.72	4.38	0.00	122.1
Asset-4	380.69	54.53	66.90	502.12
Asset-5	117.3	9.89	4.36	131.55
Asset-6	117.9	9.94	4.38	132.22

25. MPPMCL has submitted that the Initial Spares claimed for Asset-3 are beyond the permissible limits and, hence, may be disallowed.

26. In response, the Petitioner has submitted that the Initial Spares claimed are within the permissible limits on an overall project basis.

27. We have considered the submission of the Petitioner and MPPMCL. As per the APTEL's judgment dated 14.9.2019 in Appeal No. 74 of 2017, Initial Spares are to be allowed initially as percentage of the capital cost of the individual transmission assets and later at the time of truing up on the basis of the total project cost. The APTEL in judgement dated 14.9.2019 in Appeal No. 74 of 2017 held as follows:



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

28. In the instant case, the Initial Spares are allowed for the transmission assets put into commercial operation in 2014-19 tariff period taking into consideration their individual capital cost based on the norms specified in the 2014 Tariff Regulations respectively. The Initial Spares already allowed for the instant transmission assets has to be revised on the basis of the total project cost, which is possible when all the transmission assets are put into commercial operation and the total project cost is arrived at. The transmission project has been completed during 2014-19 tariff period. However, the total project cost has not been arrived at as tariff for Asset-4 is computed separately based on its individual capital cost, as its tariff has to be recovered bilaterally from the beneficiary CWRTL. The overall project cost of the transmission project in the instant case shall be known when Asset- 4 is also combined with all the other assets. Accordingly, Initial Spares are allowed based on the individual capital cost of the transmission asset and Initial Spares shall be allowed on the basis of the total project cost as per the directions of APTEL in judgement dated 14.9.2019 in Appeal No. 74 of 2017 when capital cost of Asset-4 is combined with other assets of the transmission project and total project is arrived at. The Petitioner is at liberty claim to Initial Spares as per the APTEL judgement dated 14.9.2019 in Appeal No. 74 of 2017 when all the transmission assets are combined and the total project cost is arrived at.

29. On the basis of the discharge flow of initial spare as provided by the Petitioner, the details of the Initial Spares allowable for the transmission assets for the 2014-19 tariff period are as follows:



Particulars	Plant & machinery cost up to cut-off date (excluding IDC and IEDC as per Auditor certificate) (₹ in lakh) (A)	Initial Spares claimed (₹ in lakh) (B)	Ceiling Limit (in %) (C)	Allowable Initial Spares worked out $D = [(A-B)*C]/(100-C)$	Excess Initial Spares (₹ in lakh)	Initial Spares allowed (₹ in lakh)	Discharge of Initial Spares (₹ in lakh)			
							As on COD	2017-18	2018-19	2019-20
Asset-1	1799.63	102.96	6	108.3	0.00	102.96	83.76	0.00	19.20	0.00
Asset-2	1184.37	30.32	6	73.66	0.00	30.32	22.54	0.00	7.78	0.00
Asset-3	1827.11	122.10	5	89.74	32.36	89.74	89.74	0.00	0.00	0.00
Asset-4	11797.80	502.12	5	594.51	0.00	502.12	380.69		54.53	66.90
Asset-5	2224.80	131.56	6	133.61	0.00	131.56	117.30	0.00	9.89	4.36
Asset-6	2336.20	132.23	6	140.68	0.00	132.23	117.90	0.00	9.94	4.38

Capital cost as on COD

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

Particulars	Capital cost as on COD as per Auditors' Certificate	Less: IDC as on COD due to		Less: IEDC disallowed as on COD	Excess Initial Spares as on COD	Capital cost considered as on COD
		Computation difference	Un-discharged			
Asset-1	1547.32	0.00	53.44	0.00	0.00	1493.88
Asset-2	945.76	0.20	12.77	0.00	0.00	932.80
Asset-3	1694.69	0.61	51.34	0.00	27.98	1614.76
Asset-4	14946.64	0.00	380.68	0.00	0.00	14565.96
Asset-5	2558.67	0.00	42.27	0.00	0.00	2516.40
Asset-6	2554.84	0.83	51.21	0.00	0.00	2502.80

Additional Capital Expenditure (ACE)

31. The Commission vide order dated 9.4.2021 in Petition No. 366/TT/2018 has approved ACE for the transmission assets covered in the instant petition which is as follows:

Particulars	Additional Capital Expenditure	
	2017-18	2018-19
Asset-1	0.00	459.08
Asset-2	38.66	376.00
Asset-3	0.00	286.34
Asset-4	0.00	0.00
Asset-5	0.00	392.96
Asset-6	0.00	225.73



32. The Petitioner has claimed the following ACE in respect of the transmission assets and submitted Auditor's Certificate in support of its claim:

(₹ in lakh)

Particulars	Additional Capital Expenditure	
	2017-18	2018-19
Asset-1	0.00	277.06
Asset-2	38.66	205.71
Asset-3	0.00	130.13
Asset-4	0.00	0.00
Asset-5	0.00	225.57
Asset-6	0.00	233.93

33. The Petitioner has submitted that the ACE claimed includes the accrued IDC and initial spare discharged during the 2014-19 tariff period. It is observed that the Petitioner has not claimed any ACE during 2018-19 in the case of Asset-4, however, discharge initial spares of ₹54.53 lakh during 2018-19 has been submitted by the Petitioner as aforementioned in the instant order.

34. MPPMCL has submitted that the Petitioner has claimed ACE for the year 2018-19 on account of balance and retention payments on account of undischarged liability for works executed within the cut-off date and has failed to provide any details of such undischarged liability, reasons of withholding of payment and release of payments etc. It is not possible to properly scrutinize the Petitioner's claim in absence of such documents.

35. In response, the Petitioner has submitted that ACE claimed for the 2014-19 tariff period is within the cut-off date and, accordingly, claimed as per Regulation 14(1)(i) and Regulation 14(1)(ii) of 2014 Tariff Regulations. Element-wise break-up of cost claimed for each asset has already been submitted in Form-5.

36. We have considered the submissions of the Petitioner and MPPMCL. The ACE claimed by the Petitioner for 2014-19 tariff period is within cut-off date of 31.3.2021 and



the same has been allowed under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations as it is towards balance and retention payments and works deferred for execution. The undischarged IDC as on COD has been allowed as ACE.

The details of ACE allowed are as follows:

Particulars	(₹ in lakh)			
	Asset-1 2018-19	Asset-2 2017-18 2018-19		Asset-3 2018-19
ACE to the extent of Balance & Retention Payments and work deferred for execution/ ACE to the extent of unexecuted work	277.06	38.66	205.71	130.13
Add: IDC Discharged	53.44	0.00	12.77	51.34
				Less: Initial Spares 4.38
Total ACE allowed	330.50	38.66	218.48	177.09

Particulars	(₹ in lakh)		
	Asset-4 2018-19	Asset-5 2018-19	Asset-6 2018-19
ACE to the extent of Balance & Retention Payments and work deferred for execution/ ACE to the extent of unexecuted work	0.00	225.57	233.93
Add: IDC Discharged	0.00	40.50	29.91
Total ACE allowed	0.00	266.07	263.84

Capital Cost for the 2014-19 tariff period

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

Particulars	Apportioned Approved Capital Cost as per FR	Capital Cost as on COD on cash basis	Additional Capital Expenditure (ACE)		Total Capital Cost as on 31.3.2019
			2017-18	2018-19	
Asset-1	2495.36	1493.88	0.00	330.50	1824.38
Asset-2	1621.11	932.80	38.66	218.48	1189.93
Asset-3	4148.25	1614.76	0.00	177.09	1791.85
Asset-4	17934.65	14565.96	0.00	0.00	14565.96
Asset-5	3592.90	2516.40	0.00	266.07	2782.47
Asset-6	3524.97	2502.80	0.00	263.84	2766.64



Debt-Equity Ratio

38. The Petitioner has considered a debt-equity ratio of 70:30 as on COD and for Additional Capital Expenditure post COD. The debt-equity ratio of 70:30 has been considered for capital cost as on COD and ACE during the 2014-19 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 the date of commercial operation and as on 31.3.2019 is as follows:

Funding Asset-1	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	1045.72	70.00	1277.07	70.00
Equity	448.16	30.00	547.31	30.00
Total	1493.88	100.00	1824.38	100.00
Funding Asset-2	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	652.96	70.00	832.96	70.00
Equity	279.84	30.00	356.98	30.00
Total	932.80	100.00	1189.93	100.00
Funding Asset-3	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	1130.34	70.00	1254.30	70.00
Equity	484.42	30.00	537.55	30.00
Total	1614.76	100.00	1791.85	100.00
Funding Asset-4	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	10196.17	70.00	10196.17	70.00
Equity	4369.79	30.00	4369.79	30.00
Total	14565.96	100.00	14565.96	100.00
Funding Asset-5	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)
	(₹ in lakh)		(₹ in lakh)	
Debt	1761.49	70.00	1947.74	70.00
Equity	754.91	30.00	834.73	30.00
Total	2516.40	100.00	2782.47	100.00
Funding Asset-6	As on COD		As on 31.3.2019	
	Amount	(in %)	Amount	(in %)



	(₹ in lakh)		(₹ in lakh)	
Debt	1751.96	70.00	1936.65	70.00
Equity	750.84	30.00	829.99	30.00
Total	2502.80	100.00	2766.64	100.00

Depreciation

39. The 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 the 2014-19 tariff period. The Gross Block during the 2014-19 tariff period has been depreciated at weighted average rate of depreciation (WAROD) and working of WAROD is at Annexure-1. The depreciation for the 2014-19 period is trued-up for the transmission assets as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations and the same is as follows:

(₹ in lakh)

Particulars	Asset-1	Asset-2		Asset-3
	2018-19 (Pro-rata for 338 days)	2017-18 (Pro-rata for 14 days)	2018-19	(2018-19 (Pro-rata for 325 days)
A Opening Gross Block	1493.88	932.80	971.46	1614.76
B Addition during the year 2014-19	330.50	38.66	218.48	177.09
C Closing Gross Block (A+B)	1824.38	971.46	1189.93	1791.85
D Average Gross Block (A+C)/2	1659.13	952.13	1080.70	1703.30
E Depreciable value(D*90%)	1493.22	856.92	972.63	1532.97
F Weighted average rate of Depreciation (WAROD) (in %)	5.30	5.31	5.31	5.31
G Lapsed useful life at the beginning of the year (Year)	0.00	0.00	0.00	0.00
H Balance useful life at the beginning of the year (Year)	25.00	22.00	22.00	24.00
I Cumulative Depreciation at the beginning of the year	0.00	0.00	1.94	0.00
J Remaining Aggregate Depreciable Value at the beginning of the year (E-I)	1493.22	856.92	970.69	1532.97
K Depreciation during the year	81.39	1.94	57.41	80.50
L Cumulative Depreciation at the end of the year (I+K)	81.39	1.94	59.35	80.50
M Remaining Aggregate Depreciable Value at the end of the year (E-L)	1411.82	854.98	913.28	1452.47



(₹ in lakh)				
Particulars		Asset-4	Asset-5	Asset-6
		2018-19 (Pro-rata for 1 day)	2018-19 (Pro-rata for 252 days)	2018-19 (Pro-rata for 187 days)
A	Opening Gross Block	14565.96	2516.40	2502.80
B	Addition during the year 2014-19	0.00	266.07	263.84
C	Closing Gross Block (A+B)	14565.96	2782.47	2766.64
D	Average Gross Block (A+C)/2	14565.96	2649.44	2634.72
E	Depreciable value(D*90%)	13109.36	2384.49	2371.25
F	Weighted average rate of Depreciation (WAROD) (in %)	5.11	5.02	5.09
G	Lapsed useful life at the beginning of the year (Year)	0.00	0.00	0.00
H	Balance useful life at the beginning of the year (Year)	25.00	25.00	25.00
I	Cumulative Depreciation at the beginning of the year	0.00	0.00	0.00
J	Remaining Aggregate Depreciable Value at the beginning of the year (E-I)	13109.36	2384.49	2371.25
K	Depreciation during the year	2.04	91.84	68.69
L	Cumulative Depreciation at the end of the year (I+K)	2.04	91.84	68.69
M	Remaining Aggregate Depreciable Value at the end of the year (E-L)	13107.33	2292.66	2302.56

40. The details of depreciation allowed for the transmission Asset-1, Asset-2, Asset-3, Asset-4, Asset-5 and Asset-6 vide order dated 9.4.2021 in Petition No. 366/TT/2018, claimed by the Petitioner in the instant petition and trued up in the instant order is as follows:

(₹ in lakh)			
Assets	Particulars	2017-18	2018-19
Asset-1	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	84.50
	As claimed by the Petitioner	0.00	81.39
	Approved after Truing Up	0.00	81.39
Asset-2	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	1.94	61.58
	As claimed by the Petitioner	1.94	57.41
	Approved after Truing Up	1.94	57.41
Asset-3	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	83.68
	As claimed by the Petitioner	0.00	81.94
	Approved after Truing Up	0.00	80.50
Asset-4	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	2.03



Assets	Particulars	2017-18	2018-19
	As claimed by the Petitioner	0.00	2.04
	Approved after Truing Up	0.00	2.04
Asset-5	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	92.79
	As claimed by the Petitioner	0.00	91.84
	Approved after Truing Up	0.00	91.84
Asset-6	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	67.59
	As claimed by the Petitioner	0.00	68.71
	Approved after Truing Up	0.00	68.69

Interest on Loan (IoL)

41. The Petitioner has prayed for change in interest rates prevailing as on 1.4.2019 for respective loans. The change in interest rate is due to floating rate of interest applicable for the project to be claimed/ adjusted over a period of 5 years directly from the beneficiaries. We have considered the submissions of the Petitioner and, accordingly, calculated IoL based on actual interest rate in accordance with Regulation 26 of the 2014 Tariff Regulations. The IoL has been worked out as follows:

- (i) Gross amount of loan, repayment of instalments and weighted average rate of interest on actual average loan have been considered as per the petition.
- (ii) The repayment for the tariff period 2014-19 has been considered to be equal to the depreciation allowed for that period.

42. The details of IoL calculated in respect of the transmission assets are as follows:

		(₹ in lakh)			
Particulars		Asset-1	Asset-2		Asset-3
		2018-19 (Pro-rata for 338 days)	2017-18 (Pro-rata for 14 days)	2018-19	2018-19 (Pro-rata for 325 days)
A	Gross Normative Loan	1045.72	652.96	680.02	1130.34
B	Cumulative Repayments up to Previous Year	0.00	0.00	1.94	0.00
C	Net Loan-Opening (A-B)	1045.72	652.96	678.08	1130.34
D	Addition due to ACE	231.35	27.06	152.94	123.97
E	Repayment during the year	81.39	1.94	57.41	80.50
F	Net Loan-Closing(C+D-E)	1195.68	678.08	773.61	1173.80
G	Average Loan (A+F)/2	1120.70	665.52	725.85	1152.07
H	Weighted Average Rate of Interest on Loan (in %)	7.448	7.703	7.758	7.525



Particulars	Asset-1	Asset-2		Asset-3
	2018-19 (Pro-rata for 338 days)	2017-18 (Pro-rata for 14 days)	2018-19	2018-19 (Pro-rata for 325 days)
I Interest on Loan (GxH)	77.30	1.97	56.31	77.20

(₹ in lakh)

Particulars	Asset-4	Asset-5	Asset-6
	2018-19 (Pro-rata for 1 day)	2018-19 (Pro-rata for 252 days)	2018-19 (Pro-rata for 187 days)
A Gross Normative Loan	10196.17	1761.49	1751.96
B Cumulative Repayments up to Previous Year	0.00	0.00	0.00
C Net Loan-Opening (A-B)	10196.17	1761.49	1751.96
D Addition due to ACE	0.00	186.25	184.69
E Repayment during the year	2.04	91.84	68.69
F Net Loan-Closing(C+D-E)	10194.13	1855.90	1867.96
G Average Loan (A+F)/2	10195.15	1808.69	1809.96
H Weighted Average Rate of Interest on Loan (in %)	7.350	7.860	7.561
I Interest on Loan (GxH)	2.05	98.16	70.11

43. The details of IoL allowed for the transmission Asset-1, Asset-2, Asset-3, Asset-4, Asset-5 and Asset-6 vide order dated 9.4.2021 in Petition No. 366/TT/2018, claimed by the Petitioner in the instant petition and trued up in the instant order is as follows:

(₹ in lakh)

Assets	Particulars	2017-18	2018-19
Asset-1	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	79.42
	As claimed by the Petitioner	0.00	77.30
	Approved after Truing Up	0.00	77.30
Asset-2	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	1.97	60.24
	As claimed by the Petitioner	1.97	56.32
	Approved after Truing Up	1.97	56.31
Asset-3	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	79.92
	As claimed by the Petitioner	0.00	78.58
	Approved after Truing Up	0.00	77.20
Asset-4	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	2.10
	As claimed by the Petitioner	0.00	2.05
	Approved after Truing Up	0.00	2.05
Asset-5	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	98.17
	As claimed by the Petitioner	0.00	98.16
	Approved after Truing Up	0.00	98.16



Assets	Particulars	2017-18	2018-19
Asset-6	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	68.26
	As claimed by the Petitioner	0.00	70.13
	Approved after Truing Up	0.00	70.11

Return on Equity (RoE)

44. The Petitioner has claimed RoE for 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 the 2014-19 tariff period:

Year	Claimed effective tax (in %)	Grossed-up RoE [(Base Rate)/(1-t)] (in %)
2017-18	21.342	19.706
2018-19	21.549	19.758

45. 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 as follows:

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

46. The same MAT rates are considered for the purpose of grossing up of the rate of RoE for truing up of the tariff of the 2014-19 period in terms of the provisions of the 2014 Tariff Regulations, which is as follows:

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



47. The Petitioner has prayed for claiming the differential tariff on account of the trued-up RoE based on effective rate calculated on completion of Income tax assessment/re-assessment for 2014-15, 2015-16, 2016-17, 2017-18 and 2018-19 on receipt of respective assessment orders, directly from the beneficiaries, on year-to-year basis as provided under the 2014 Tariff Regulations.

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

(₹ in lakh)

Particulars	Asset-1	Asset-2		Asset-3
	2018-19 (Pro-rata for 338 days)	2017-18 (Pro-rata for 14 days)	2018-19	2018-19 (Pro-rata for 325 days)
A Opening Equity	448.16	279.84	291.44	484.42
B Addition due to ACE	99.15	11.60	65.54	53.13
C Closing Equity (A+B)	547.31	291.44	356.98	537.55
D Average Equity(A+B)/2	497.74	285.64	324.21	510.98
E Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F Tax Rate applicable (in %)	21.549	21.342	21.549	21.549
G Rate of Return on Equity (Pre-tax)	19.758	19.705	19.758	19.758
H Return on Equity (Pre-tax)	91.07	2.16	64.06	89.90

(₹ in lakh)

Particulars	Asset-4	Asset-5	Asset-6
	2018-19 (Pro-rata for 1 day)	2018-19 (Pro-rata for 252 days)	2018-19 (Pro-rata for 187 days)
A Opening Equity	4369.79	754.91	750.84
B Addition due to ACE	0.00	79.82	79.15
C Closing Equity (A+B)	4369.79	834.73	829.99
D Average Equity(A+B)/2	4369.79	794.82	790.42
E Return on Equity (Base Rate) (in %)	15.500	15.500	15.500
F Tax Rate applicable (in %)	21.549	21.549	21.549
G Rate of Return on Equity (Pre-tax)	19.758	19.758	19.758
H Return on Equity (Pre-tax)	2.37	108.42	80.01

49. The details of RoE allowed for the transmission assets Asset-1, Asset-2, Asset-3, Asset-4, Asset-5 and Asset-6 vide order dated 9.4.2021 in Petition No. 366/TT/2018, claimed by the Petitioner in the instant petition and trued up in the instant order is as follows:



(₹ in lakh)

Assets	Particulars	2017-18	2018-19
Asset-1	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	94.59
	As claimed by the Petitioner	0.00	91.07
	Approved after Truing Up	0.00	91.07
Asset-2	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	2.16	68.73
	As claimed by the Petitioner	2.16	64.07
	Approved after Truing Up	2.16	64.06
Asset-3	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	93.42
	As claimed by the Petitioner	0.00	91.51
	Approved after Truing Up	0.00	89.90
Asset-4	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	2.36
	As claimed by the Petitioner	0.00	2.37
	Approved after Truing Up	0.00	2.37
Asset-5	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	109.70
	As claimed by the Petitioner	0.00	108.42
	Approved after Truing Up	0.00	108.42
Asset-6	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	78.55
	As claimed by the Petitioner	0.00	80.03
	Approved after Truing Up	0.00	80.01

Operation & Maintenance Expenses (O&M Expenses)

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

Asset-1	
O&M Expenses	
Particulars	2018-19
Sub-station	
765 kV Vindhyachal: SASAN UMPP Bay	
Number of bays	1
Total O&M Expenses (₹ in lakh)	89.08

Asset-2		
O&M Expenses		
Particulars	2017-18	2018-19
Sub-station		
400 kV Vindhyachal: Vindhyachal (IV/V) (NTPC) Bays		
Number of bays	2	2
Total O&M Expenses (₹ in lakh)	5.1	137.442



Asset-3	
O&M Expenses	
Particulars	2018-19
Sub-station	
400 kV GIS Gwalior: Morena Bays	
Number of bays	2
Total O&M Expenses (₹ in lakh)	104.59

Asset-4	
O&M Expenses	
Particulars	2018-19
Sub-station	
765 kV GIS Pune: Aurangabad Bay and Padghe Bay	
Number of bays	2
Total O&M Expenses (₹ in lakh)	0.53

Asset-5	
O&M Expenses	
Particulars	2018-19
Sub-station	
765 kV Dharamjaigarh: Champa Bay & 765 kV Champa: Dharamjaygarh Bay	
Number of bays	2
Total O&M Expenses (₹ in lakh)	132.84

Asset-6	
O&M Expenses	
Particulars	2018-19
Sub-station	
765 kV Champa: Raigarh (Kotra) Bay & 765 kV Raigarh: Champa Bay	
Number of bays	2
Total O&M Expenses (₹ in lakh)	98.58

51. Regulation 29(3) of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission project and the norms specified for the elements covered under the transmission assets are as follows: -

Asset-1			
Element	UoM	Norms for 2018-19	
765 kV Sub-station	₹ lakh/bay	96.20	
Asset-2			
Element	UoM	Norms for 2017-18	Norms for 2018-19
400 kV Sub-station	₹ lakh/bay	66.51	68.71
Asset-3			
Element	UoM	Norms for 2018-19	



400 kV GIS Sub-station	₹ lakh/bay	96.20
Asset-4		
Element	UoM	Norms for 2018-19
765 kV GIS Sub-station	₹ lakh/bay	96.20
Asset-5		
Element	UoM	Norms for 2018-19
765 kV Sub-station	₹ lakh/bay	96.20
Asset-6		
Element	UoM	Norms for 2018-19
765 kV Sub-station	₹ lakh/bay	96.20

52. We have considered the submissions of the Petitioner. The O&M Expenses approved for various elements of the transmission assets under Regulation 29(3) of the 2014 Tariff Regulations are as follows:

(₹ in lakh)

Asset-1	
Details	2018-19 (Pro-rata for 338 days)
1 Number of 765 kV Sub-station bay	96.20
Total	89.08

(₹ in lakh)

Asset-2		
Details	2017-18 (Pro-rata for 14 days)	2018-19
2 Number of 400 kV Sub-station bay	133.02	137.42
Total	5.10	137.42

(₹ in lakh)

Asset-3	
Details	2018-19 (Pro-rata for 325 days)
2 Number of 400 kV GIS Sub-station bay	117.46
Total	104.59

(₹ in lakh)

Asset-4	
Details	2018-19 (Pro-rata for 1 day)
2 Number of 765 kV GIS Sub-station bay	192.40
Total	0.53



(₹ in lakh)

Asset-5	
Details	2018-19 (Pro-rata for 252 days)
2 Number of 765 kV Sub-station bay	192.40
Total	132.84

(₹ in lakh)

Asset-6	
Details	2018-19 (Pro-rata for 187 days)
2 Number of 765 kV Sub-station bay	192.40
Total	98.57

53. The details of O&M Expenses allowed for Asset-1, Asset-2, Asset-3, Asset-4, Asset-5 and Asset-6 vide order dated 9.4.2021 in Petition No. 366/TT/2018, claimed by the Petitioner in the instant petition and trued up in the instant order is as follows:

(₹ in lakh)

Asset	Particulars	2017-18	2018-19
Asset-1	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	88.99
	As claimed by the Petitioner	0.00	89.08
	Approved after Truing Up	0.00	89.08
Asset-2	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	5.01	137.42
	As claimed by the Petitioner	5.10	137.42
	Approved after Truing Up	5.10	137.42
Asset-3	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	104.51
	As claimed by the Petitioner	0.00	104.59
	Approved after Truing Up	0.00	104.59
Asset-4	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	0.32
	As claimed by the Petitioner	0.00	0.53
	Approved after Truing Up	0.00	0.53
Asset-5	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	132.83
	As claimed by the Petitioner	0.00	132.84
	Approved after Truing Up	0.00	132.84
Asset-6	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	98.57
	As claimed by the Petitioner	0.00	98.58
	Approved after Truing Up	0.00	98.57



Interest on Working Capital (IWC)

54. The Petitioner is entitled to claim interest on working capital as per Regulation 28(1)(c) of the 2014 Tariff Regulations as follows:

i. **Maintenance spares:**

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

ii. **O & M Expenses:**

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

iii. **Receivables:**

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

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

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

55. The Interest on Working Capital allowed for the transmission assets is as follows:

Particulars	(₹ in lakh)			
	Asset-1 2018-19 (Pro-rata for 338 days)	Asset-2 2017-18 (Pro-rata for 14 days)		Asset-3 2018-19 (Pro-rata for 325 days)
Working Capital for O&M Expenses (O&M Expenses for one month)	8.02	11.09	11.45	9.79
Working Capital for Maintenance Spares (15% for O&M)	14.43	19.95	20.61	17.62
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	62.72	50.23	54.35	67.86
Total Working Capital	85.16	81.27	86.41	95.27
Rate of Interest on working capital (in %)	12.20	12.60	12.60	12.20
Interest of Working Capital	9.62	0.39	10.89	10.35



Particulars	(₹ in lakh)		
	Asset-4 2018-19 (Pro-rata for 1 day)	Asset-5 2018-19 (Pro-rata for 252 days)	Asset-6 2018-19 (Pro-rata for 187 days)
Working Capital for O&M Expenses (O&M Expenses for one month)	16.03	16.03	16.03
Working Capital for Maintenance Spares (15% for O&M)	28.86	28.86	28.86
Working Capital for Receivables (Equivalent to two months of annual transmission charges)	434.63	107.20	106.32
Total Working Capital	479.52	152.09	151.22
Rate of Interest on working capital (in %)	12.20	12.20	12.20
Interest of Working Capital	0.16	12.81	9.45

56. The details of IWC allowed for the transmission allowed for Asset 1, Asset-2, Asset-3, Asset-4, Asset-5 and Asset-6 vide order dated 9.4.2021 in Petition No. 366/TT/2018, claimed by the Petitioner in the instant petition and trued up in the instant order is as follows:

Asset	Particulars	(₹ in lakh)	
		2017-18	2018-19
Asset-1	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	9.80
	As claimed by the Petitioner	0.00	9.62
	Approved after Truing Up	0.00	9.62
Asset-2	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.39	11.16
	As claimed by the Petitioner	0.39	10.89
	Approved after Truing Up	0.39	10.89
Asset-3	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	10.54
	As claimed by the Petitioner	0.00	10.44
	Approved after Truing Up	0.00	10.35
Asset-4	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	0.15
	As claimed by the Petitioner	0.00	0.16
	Approved after Truing Up	0.00	0.16
Asset-5	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	12.86
	As claimed by the Petitioner	0.00	12.81
	Approved after Truing Up	0.00	12.81
Asset-6	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	9.36
	As claimed by the Petitioner	0.00	9.45
	Approved after Truing Up	0.00	9.45



Approved Annual Fixed Charges for the 2014-19 Tariff Period

57. Accordingly, the annual fixed charges in respect of the transmission assets after truing-up for the 2014-19 tariff period are as follows:

(₹ in lakh)

Particulars	Asset-1	Asset-2		Asset-3
	2018-19 (Pro-rata for 338 days)	2017-18 (Pro-rata for 14 days)	2018-19	2018-19 (Pro-rata for 325 days)
Depreciation	81.39	1.94	57.41	80.50
Interest on Loan	77.30	1.97	56.31	77.20
Return on Equity	91.07	2.16	64.06	89.90
O&M Expenses	89.08	5.10	137.42	104.59
Interest on Working Capital	9.62	0.39	10.89	10.35
Total	348.46	11.56	326.09	362.54

(₹ in lakh)

Particulars	Asset-4	Asset-5	Asset-6
	2018-19 (Pro-rata for 1 day)	2018-19 (Pro-rata for 252 days)	2018-19 (Pro-rata for 187 days)
Depreciation	2.04	91.84	68.69
Interest on Loan	2.05	98.16	70.11
Return on Equity	2.37	108.42	80.01
O&M Expenses	0.53	132.84	98.57
Interest on Working Capital	0.16	12.81	9.45
Total	7.1	444.07	326.83

58. The details of Annual Fixed Charges allowed for Asset-1, Asset-2, Asset-3, Asset-4, Asset-5 and Asset-6 vide order dated 9.4.2021 in Petition No. 366/TT/2018, claimed by the Petitioner in the instant petition and trued up in the instant order is as follows:

(₹ in lakh)

Asset	Particulars	2017-18	2018-19
Asset-1	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	357.31
	As claimed by the Petitioner	0.00	348.46
	Approved after Truing Up	0.00	348.46
Asset-2	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	11.47	339.13
	As claimed by the Petitioner	11.56	326.11
	Approved after Truing Up	11.56	326.09
Asset-3	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	372.07
	As claimed by the Petitioner	0.00	367.06
	Approved after Truing Up	0.00	362.54



Asset	Particulars	2017-18	2018-19
Asset- 4	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	6.97
	As claimed by the Petitioner	0.00	7.15
	Approved after Truing Up	0.00	7.14
Asset- 5	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	446.35
	As claimed by the Petitioner	0.00	444.07
	Approved after Truing Up	0.00	444.07
Asset-6	Allowed vide order dated 9.4.2021 in Petition No. 366/TT/2018	0.00	322.33
	As claimed by the Petitioner	0.00	326.90
	Approved after Truing Up	0.00	326.83

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

59. The Petitioner has claimed the following transmission charges in respect of the Combined Asset (Asset-1, Asset-2, Asset-3, Asset- 5 and Asset-6) and Asset-4 for the 2019-24 tariff period:

(₹ in lakh)					
Combined Asset					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	578.04	594.82	610.78	614.27	614.27
Interest on Loan	513.50	485.16	456.07	414.56	367.06
Return on Equity	590.81	609.70	628.98	634.79	634.79
Interest on Working Capital	39.87	40.58	41.20	41.27	41.03
Operation and Maintenance	334.36	346.15	358.28	370.89	383.89
Total	2056.58	2076.41	2095.31	2075.78	2041.04

(₹ in lakh)					
Asset-4					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	758.93	776.09	798.75	819.04	819.04
Interest on Loan	755.76	716.32	688.41	656.01	593.63
Return on Equity	836.65	855.82	889.42	919.77	919.77
Interest on Working Capital	38.11	38.26	38.79	39.16	38.23
Operation and Maintenance	63.01	65.24	67.52	69.90	72.35
Total	2452.46	2451.73	2482.89	2503.88	2443.02

60. The Petitioner has claimed the following Interest on Working Capital in respect of the Combined Asset and Asset-4 for the 2019-24 tariff period:



(₹ in lakh)

Combined Asset					
Particulars	2019-20	2020-21	201-22	2022-23	2023-24
O&M expenses	27.86	28.85	29.86	30.91	31.99
Maintenance Spares	50.15	51.92	53.74	55.63	57.58
Receivables	252.86	256.00	258.33	255.92	250.95
Total	330.87	336.77	341.93	342.46	340.52
Rate of Interest on working capital (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	39.87	40.58	41.20	41.27	41.03

(₹ in lakh)

Asset-4					
Particulars	2019-20	2020-21	201-22	2022-23	2023-24
O&M expenses	5.25	5.44	5.63	5.83	6.03
Maintenance Spares	9.45	9.79	10.13	10.49	10.85
Receivables	301.53	302.27	306.11	308.70	300.37
Total	316.23	317.50	321.87	325.02	317.25
Rate of Interest on working capital (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	38.11	38.26	38.79	39.16	38.23

Effective Date of Commercial Operation (E-COD)

61. The Petitioner has claimed E-COD of the Combined Asset as 28.6.2018. Accordingly, based on the trued-up admitted capital cost and actual COD of all the assets, the E-COD has been worked out as follows:

Computation of Effective COD						
Assets	Actual COD	Admitted Capital Cost as on 31.3.2019	Weight of the cost (in %)	No. of Days from last COD	Weighted Days	Effective COD (Latest COD – Total weighted Days)
Asset-1	28.4.2018	1824.38	17.62	151.00	26.60	27.6.2018
Asset-2	18.3.2018	1189.93	11.49	192.00	22.06	
Asset-3	11.5.2018	1791.85	17.30	138.00	23.88	
Asset-5	23.7.2018	2782.47	26.87	65.00	17.47	
Asset-6	26.9.2018	2766.24	26.72	0.00	0.00	

62. The E-COD is used to determine the lapsed life of the project as a whole, which works out as (0) year as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD).



Weighted Average Life (WAL)

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

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

65. The WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2019 and their respective life as stipulated in the 2019 Tariff Regulations. The element-wise life as defined in the 2014 Tariff Regulations prevailing at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in the 2019 Tariff Regulations has been considered for determination of WAL. Accordingly, WAL of the Combined Asset has been worked out as 24 years and is demonstrated as follows:

Admitted Capital Cost as on 31.03.2019				
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	824.90	25	20622.60	
Sub-station	8869.88	25	221747.08	
PLCC	265.79	15	3986.85	
IT Equipment and software	394.70	7	2631.34	
Total	10355.28		248987.86	24.04 (rounded off to 24 years)

66. The WAL as on 1.4.2019 as determined above is applicable prospectively (i.e. for the 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,



the Effective COD of the assets is 29.1.2017 and the lapsed life of the project as a whole, works out as zero (0) years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from Effective COD). Accordingly, WAL has been used to determine the remaining useful life as on 31.3.2019 to be 24 years.

Capital Cost

67. Regulations 19(3) and 19(5) of the 2019 Tariff Regulations provide as follows:

“19 Additional Capitalization

(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 tried 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.”*

“(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.”

68. The capital cost has been dealt in line with Regulation 19(3) of the 2019 Tariff Regulations. The element-wise capital cost (i.e. building, sub-station PLCC and IT Equipment and software) as admitted by the Commission as on 31.3.2019 for the transmission assets is clubbed together is as follows:

(₹ in lakh)						
Element	Asset-1	Asset-2	Asset-3	Asset-5	Asset-6	Capital Cost for Combined Assets as on 31.3.2019
Building	0.00	0.00	0.00	471.74	353.17	824.90
Sub-station Equipment	1756.62	1002.38	1629.76	2195.98	2285.14	8869.88
PLCC	31.22	39.34	49.33	67.56	78.35	265.79
IT Equipment and Software	36.54	148.21	112.76	47.20	49.98	394.70
Total	1824.38	1189.93	1791.85	2782.47	2766.64	10355.28

(₹ in lakh)	
Elements	Asset-4
Building	1323.11
Sub-station	13172.86
PLCC	69.99
Total	14565.96

69. The Petitioner has claimed capital cost of ₹24955.23 lakh as on 1.4.2019 in respect of the transmission assets as against the overall approved capital cost (as per FR) of ₹33317.20 lakh, the estimated completion cost including ACE is ₹27589.77 lakh as on 31.3.2024 as follows:



Asset	Apportioned approved cost	Cost upto 31.3.2019	ACE			Estimated completion Cost
			2019-20	2020-21	2021-22	
Combined Asset-1, 2, 3, 5 and 6	15382.6	10389.27	192.4	478.03	206.43	11266.13
Asset-4	17934.7	14565.96	565.08	115.1	1077.5	16323.64
Total	33317.2	24955.23	757.48	593.13	1283.93	27589.77

(₹ in lakh)

70. The Commission has worked out capital cost of ₹10355.28 lakh in Combined Asset and of ₹14565.96 in Asset-4 as on 31.3.2019 in preceding paragraphs and it has been considered as the opening capital cost as on 1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

Additional Capital Expenditure (ACE)

71. Regulation 24 and Regulation 25 of the 2019 Tariff Regulations provides as follows:

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

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

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

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

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

(1) The additional capital expenditure incurred or projected to be incurred in respect of an existing project or a new project on the following counts within the original scope of



work and after the cut-off date may be admitted by the Commission, subject to prudence check:

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

(2) In case of replacement of assets deployed under the original scope of the existing project after cut-off date, the additional capitalization may be admitted by the Commission, after making necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds:

- (a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations;
- (b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;
- (c) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and
- (d) The replacement of such asset or equipment has otherwise been allowed by the Commission.”

72. The Petitioner has claimed ACE in respect of the transmission assets during 2019-24 in accordance with Regulation 24(1)(a) and Regulation 24(1)(b) and of the 2019 Tariff Regulations as follows:

Asset	FR apportioned approved cost	Cost upto 31.03.2019	ACE			Estimated Completion Cost
			2019-20	2020-21	2021-22	
Combined Asset-1, 2, 3, 5 and 6	15382.6	10389.27	192.4	478.03	206.43	11266.13
Asset-4	17934.7	14565.96	565.08	115.1	1077.5	16323.64
Total	33317.2	24955.23	757.48	593.13	1283.93	27589.77

73. MPPMCL has submitted that Petitioner has proposed ACE for the years 2019-20, 2020- 21 and during 2021- 2022 without supporting its contention with proper documents and details and has also failed to justify the same. Therefore, the ACE for 2019-24 may be deferred till truing-up.



74. In response, the Petitioner has submitted that the tariff claimed for 2019-24 tariff block is in line with 2019 Tariff Regulations and, therefore, the cost and tariff may be allowed as claimed in the petition.

75. We have considered the submissions of the Petitioner and MPPMCL. The ACE claimed is towards balance & retention payments and unexecuted work is allowed under Regulation 24(1)(a) and Regulation 24(1)-(b) of the 2019 Tariff Regulations which is subject to true-up. The ACE allowed in respect of the Combined Asset is as follows:

(₹ in lakh)		
Particulars	Regulation	ACE (2019-24)
Combined Asset	Regulation 24(1)(a) and Regulation 24(1)(b) of the 2019 Tariff Regulations	876.86
Asset-4		1757.68

Capital Cost for the 2019-24 tariff period

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

(₹ in lakh)					
Particulars	Capital cost (As on 1.4.2019)	ACE			Total estimated completion cost (up to 31.3.2024)
		2019-20	2020-21	2021-22	
Combined Asset	10355.28	192.40*	478.03	206.43	11232.14
Asset-4	14565.96	565.08#	115.10	1077.50	16323.64

*inclusive of accrual IDC of ₹ 1.77 lakh in Asset-5 and ₹ 21.30 lakh in Asset-6

#inclusive of accrual IDC of ₹ 380.68 lakh

77. Against the overall FR apportioned approved capital cost of ₹ 33317.20 lakh, the estimated project cost of the Combined Asset and Asset-4 including Additional Capital Expenditure is ₹27555.78 lakh which is within the approved cost. Therefore, there is no cost over-run as per the apportioned approved cost.



Debt-Equity Ratio

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

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

Provided that:

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

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

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

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

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

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

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

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 as may be admitted by the Commission as Additional Capital Expenditure for determination of tariff,



and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this Regulation.

(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.”

79. The details of the debt-equity considered for the purpose of tariff for the 2019-24 tariff period are as follows:

(₹ in lakh)				
Combined Assets	Capital Cost (as on 1.4.2019) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2024) (₹ in lakh)	(in %)
Debt	7248.72	70.00	7862.54	70.00
Equity	3106.56	30.00	3369.59	30.00
Total	10355.28	100.00	11232.14	100.00

(₹ in lakh)				
Asset-4	Capital Cost (as on 1.4.2019) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2024) (₹ in lakh)	(in %)
Debt	10196.17	70.00	11426.55	70.00
Equity	4369.79	30.00	4897.09	30.00
Total	14565.96	100.00	16323.64	100.00

Depreciation

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

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

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

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



from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.”

“(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. “

81. The weighted average rate of depreciation (WAROD) has been worked out at Annexure-2 after taking into account the depreciation rates of IT and non-IT assets as prescribed in the 2019 Tariff Regulations. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The depreciation allowed for the Combined Asset and Asset-4 are as follows:

(₹ in lakh)

Combined Asset						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	10355.28	10547.68	11025.71	11232.14	11232.14
B	Addition during the year 2019-24 due to projected ACE	192.40	478.03	206.43	0.00	0.00
C	Closing Gross Block (A+B)	10547.68	11025.71	11232.14	11232.14	11232.14
D	Average Gross Block (A+C)/2	10451.48	10786.69	11128.92	11232.14	11232.14
E	Average Gross Block (90% depreciable assets)	10053.86	10386.15	10728.38	10831.60	10831.60
F	Average Gross Block (100% depreciable assets)	397.62	400.54	400.54	400.54	400.54
G	Depreciable value (excluding IT equipment and software) (E*90%)	9048.47	9347.54	9655.54	9748.44	9748.44
H	Depreciable value of IT equipment and software	397.62	400.54	400.54	400.54	400.54
I	Total Depreciable Value (G+H)	9446.09	9748.08	10056.08	10148.98	10148.98
J	Weighted average rate of Depreciation (WAROD) (in %)	5.51	5.50	5.47	5.45	5.45
K	Lapsed useful life at the beginning of the year (Year)	0.00	1.00	2.00	3.00	4.00
L	Balance useful life at the beginning of the year (Year)	24.00	23.00	22.00	21.00	20.00
M	Depreciation during the year(D*J)	576.22	593.00	608.96	612.45	612.45



N	Aggregate Cumulative Depreciation at the end of the year	957.99	1550.98	2159.94	2772.39	3384.85
O	Remaining Aggregate Depreciable Value at the end of the year(I-N)	8488.10	8197.09	7896.14	7376.58	6764.13

(₹ in lakh)

Asset-4						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	14565.96	15131.04	15246.14	16323.64	16323.64
B	Addition during the year 2019-24 due to projected ACE	565.08	115.10	1077.50	0.00	0.00
C	Closing Gross Block (A+B)	15131.04	15246.14	16323.64	16323.64	16323.64
D	Average Gross Block (A+C)/2	14848.50	15188.59	15784.89	16323.64	16323.64
E	Average Gross Block (90% depreciable assets)	14848.50	15188.59	15784.89	16323.64	16323.64
F	Average Gross Block (100% depreciable assets)	0.00	0.00	0.00	0.00	0.00
G	Depreciable value (excluding IT equipment and software) (E*90%)	13363.65	13669.73	14206.40	14691.28	14691.28
H	Depreciable value of IT equipment and software	0.00	0.00	0.00	0.00	0.00
I	Total Depreciable Value (G+H)	13363.65	13669.73	14206.40	14691.28	14691.28
J	Weighted average rate of Depreciation (WAROD) (in %)	5.11	5.11	5.06	5.02	5.02
K	Lapsed useful life at the beginning of the year (Year)	0.00	1.00	2.00	3.00	4.00
L	Balance useful life at the beginning of the year (Year)	25.00	24.00	23.00	22.00	21.00
M	Depreciation during the year(D*J)	758.94	776.09	798.75	819.04	819.04
N	Aggregate Cumulative Depreciation at the end of the year	760.98	1537.07	2335.82	3154.86	3973.90
O	Remaining Aggregate Depreciable Value at the end of the year(I-N)	12602.67	12132.66	11870.58	11536.42	10717.38

Interest on Loan (IoL)

82. 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”.

83. 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 the 2019-24 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true-up. In view of the above, IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL considered for the Combined Asset and Asset-4 are as follows:



(₹ in lakh)

Combined Asset						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Gross Normative Loan	7248.72	7383.42	7718.04	7862.54	7862.54
B	Cumulative Repayments up to Previous Year	381.77	957.99	1550.98	2159.94	2772.39
C	Net Loan-Opening (A-B)	6866.96	6425.43	6167.06	5702.60	5090.15
D	Addition due to ACE	134.70	334.62	144.50	0.00	0.00
E	Repayment during the year	576.22	593.00	608.96	612.45	612.45
F	Net Loan-Closing(C+D-E)	6425.43	6167.06	5702.60	5090.15	4477.70
G	Average Loan (A+F)/2	6646.19	6296.25	5934.83	5396.38	4783.92
H	Weighted Average Rate of Interest on Loan (in %)	7.701	7.682	7.662	7.659	7.650
I	Interest on Loan (GxH)	511.85	483.65	454.71	413.33	365.98

(₹ in lakh)

Asset- 4						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Gross Normative Loan	10196.17	10591.73	10672.30	11426.55	11426.55
B	Cumulative Repayments up to Previous Year	2.04	760.98	1537.07	2335.82	3154.86
C	Net Loan-Opening (A-B)	10194.13	9830.75	9135.23	9090.73	8271.69
D	Addition due to ACE	395.56	80.57	754.25	0.00	0.00
E	Repayment during the year	758.94	776.09	798.75	819.04	819.04
F	Net Loan-Closing(C+D-E)	9830.75	9135.23	9090.73	8271.69	7452.65
G	Average Loan (A+F)/2	10012.44	9482.99	9112.98	8681.21	7862.17
H	Weighted Average Rate of Interest on Loan (in %)	7.548	7.554	7.554	7.557	7.550
I	Interest on Loan (GxH)	755.76	716.32	688.41	656.00	593.62

Return on Equity (RoE)

84. 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 ₹ 1,000 crore;

(b) Estimated Advance Tax for the year on above is ₹240 crore;

(c) Effective Tax Rate for the year 2019-20 = ₹240 Crore/₹1000 Crore = 24%;

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

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

85. The RoE considered for the Combined Asset and Asset-4 under Regulation 30 of the 2019 Tariff Regulations are as follows:

(₹ in lakh)						
Combined Asset						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	3106.56	3164.26	3307.67	3369.59	3369.59
B	Addition due to ACE	57.70	143.41	61.93	0.00	0.00
C	Closing Equity (A+B)	3164.26	3307.67	3369.59	3369.59	3369.59
D	Average Equity(A+B)/2	3135.41	3235.96	3338.63	3369.59	3369.59
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (Pre-tax)	18.782	18.782	18.782	18.782	18.782
H	Return on Equity (Pre-tax)	588.89	607.78	627.06	632.88	632.88



(₹ in lakh)

Asset-4						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	4369.79	4539.31	4573.84	4897.09	4897.09
B	Addition due to ACE	169.52	34.53	323.25	0.00	0.00
C	Closing Equity (A+B)	4539.31	4573.84	4897.09	4897.09	4897.09
D	Average Equity(A+B)/2	4454.55	4556.58	4735.47	4897.09	4897.09
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (Pre-tax)	18.782	18.782	18.782	18.782	18.782
H	Return on Equity (Pre-tax)	836.65	855.82	889.42	919.77	919.77

Operation & Maintenance Expenses (O&M Expenses)

86. The O&M Expenses claimed by the Petitioner is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Combined Asset (Asset-1, 2, 3, 5 and 6)	334.36	346.15	358.28	370.89	383.89
Asset-4	63.01	65.24	67.52	69.90	72.35

87. Regulation 35(3) 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



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bi-pole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bi-pole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bi-pole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bi-pole 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.”

88. The O&M Expenses approved for the Combined Asset and Asset-4 for the 2019-24 tariff period are as follows:

(₹ in lakh)

Combined Asset					
Details	2019-20	2020-21	2021-22	2022-23	2023-24
5 Numbers of 765 kV Sub-station bays	225.05	233.00	241.15	249.65	258.40
2 Numbers of 400 kV Sub-station GIS bays	45.01	46.59	48.23	49.92	51.67
2 Numbers of 400 kV Sub-station bays	64.30	66.56	68.90	71.32	73.82
Total	334.36	346.15	358.28	370.89	383.89

(₹ in lakh)

Asset-4					
Details	2019-20	2020-21	2021-22	2022-23	2023-24
2 Numbers of 765 kV GIS Sub-station bays	63.01	65.24	67.52	69.90	72.35
Total	63.01	65.24	67.52	69.90	72.35

Interest on Working Capital (IWC)

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

“34. Interest on Working Capital: (1) 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;”

90. 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 IWC considered is 12.05% (SBI 1year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, 11.25% (SBI 1year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21 and 10.50% (SBI 1year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) for 2021-24. The components of the working capital and interest allowed thereon are as follows:

(₹ in lakh)

Particulars	Combined Asset				
	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M expenses for One month)	27.86	28.85	29.86	30.91	31.99



Working Capital for Maintenance Spares (15 % of O&M Expenses)	50.15	51.92	53.74	55.63	57.58
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	252.19	255.00	257.03	254.64	249.69
Total	330.20	335.77	340.63	341.18	339.27
Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
Interest of working capital	39.79	37.77	35.77	35.82	35.62

(₹ in lakh)

Asset-4					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for O & M Expenses (O&M expenses for One month)	5.25	5.44	5.63	5.83	6.03
Working Capital for Maintenance Spares (15 % of O&M Expenses)	9.45	9.79	10.13	10.49	10.85
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	301.53	301.95	305.49	308.07	299.76
Total	316.24	317.17	321.24	324.38	316.64
Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
Interest of working capital	38.11	35.68	33.73	34.06	33.25

Annual Fixed Charges for the 2019-24 Tariff Period

91. The transmission charges allowed in respect of the Combined Asset and Asset-4 for the 2019-24 tariff period as follows:

(₹ in lakh)

Combined Asset					
Particulars	2019-20	2020-21	201-22	2022-23	2023-24
Depreciation	576.22	593.00	608.96	612.45	612.45
Interest on Loan	511.85	483.65	454.71	413.33	365.98
Return on Equity	588.89	607.78	627.06	632.88	632.88
Operation and Maintenance	334.36	346.15	358.28	370.89	383.89
Interest on Working Capital	39.79	37.77	35.77	35.82	35.62
Total	2051.11	2068.35	2084.78	2065.37	2030.82

(₹ in lakh)

Asset-4					
Particulars	2019-20	2020-21	201-22	2022-23	2023-24
Depreciation	758.94	776.09	798.75	819.04	819.04
Interest on Loan	755.76	716.32	688.41	656.00	593.62
Return on Equity	836.65	855.82	889.42	919.77	919.77
Operation and Maintenance	63.01	65.24	67.52	69.90	72.35
Interest on Working Capital	38.11	35.68	33.73	34.06	33.25
Total	2452.47	2449.15	2477.83	2498.77	2438.03



Filing Fee and Publication Expenses

92. The Petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses.

93. The Petitioner is entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the beneficiaries on pro-rata basis in accordance with Regulation 70(1) of the 2019 Tariff Regulations.

Licence Fee and RLDC Fees and Charges

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

Good and Service Tax

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

96. MPPMCL has submitted that the demand for GST is premature and need not to be considered at this juncture. In response, the Petitioner reiterated its submissions.

97. 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

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

99. 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 the 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

100. 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

101. The Commission vide order dated 9.4.2021 in Petition No. 366/TT/2018 approved the COD of Asset-4 as 31.3.2019 under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations as it could not be put to use due to non-completion of the LILO under the scope of CWRTL and held that the transmission charges of Asset-4 should be borne by CWRTL from its COD to COD of LILO of CWRTL. The relevant portion of the order is as follows:



“27. From the above discussion, it is clear that non-utilization of Asset-4 of the Petitioner was on account of delay in commissioning of the LILO of CWRTL. Accordingly, we approve COD of the Asset-4 as 31.3.2019 under proviso(ii) of Regulation 4(3) of the 2014 Tariff Regulations. As the associated transmission line (the LILO of CWRTL) was not ready on 31.3.2019, we are of the view that the yearly transmission charges of the Asset-4 should be borne by CWRTL from COD of Asset-4 (31.3.2019) till COD of the LILO of CWRTL. Thereafter, the transmission charges of Asset-4 shall be included in the POO computation.”

102. The Petitioner during hearing 14.9.2022 submitted that CWRTL has filed an appeal before APTEL against the Commission order dated 9.4.2021 in Petition No. 366/TT/2018 against the Commission’s finding that the tariff for the period of mismatch would be borne by CWRTL.

103. As the tariff of Asset-4 has to be borne by CWRTL as per order dated 9.4.2021, combined tariff for Asset-1, Asset-2, Asset-3, Asset-5 and Asset-6 is approved as per proviso (i) of Regulation 8(1) of the 2019 Tariff Regulations and a separate tariff for Asset-4 is approved since LILO of CWRTL is not still achieved and its tariff has to be borne by CWRTL, subject to the outcome of appeal filed by CWRTL before the APTEL.

Combined Asset

104. 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. The billing, collection and disbursement of the transmission charges shall be governed by the applicable Sharing Regulations as provided under Regulation 43 and Regulation 57 of the 2014 Tariff Regulations and 2019 Tariff Regulations respectively.



105. To summarise:

- a) Trued-up Annual Fixed Charges allowed for the transmission assets for the 2014-19 tariff period are as follows:

Particulars	2018-19	
	2017-18	2018-19
Asset-1 (Pro-rata for 338 days)	348.46	
Asset-2 (Pro-rata for 14 days)	11.56	326.09
Asset-3 (Pro-rata for 325 days)	362.54	
Asset-4 (Pro-rata for 1 day)	7.15	
Asset-5 (Pro-rata for 252 days)	444.07	
Asset-6 (Pro-rata for 187 days)	326.83	

- b) Annual Fixed Charges allowed for the Combined Asset and Asest-4 for the 2019-24 tariff period in the instant order are as follows:

Particulars	2018-19				
	2019-20	2020-21	201-22	2022-23	2023-24
Combined Asset	2051.11	2068.35	2084.78	2065.37	2030.82

Particulars	2018-19				
	2019-20	2020-21	201-22	2022-23	2023-24
Asset-4	2452.47	2449.15	2477.83	2498.77	2438.03

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

107. This order disposes of Petition No. 113/TT/2022 in terms of the above discussion and findings.

sd/-
(P. K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I. S. Jha)
Member



2014-19
Asset-1

Annexure-I
(₹ lakh)

Particulars	Admitted Capital Cost as on COD (₹ in lakh)	ACE	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)
		2018-19			2018-19
Sub Station	1435.40	321.22	1756.62	5.28%	84.27
PLCC	24.46	6.76	31.22	6.33%	1.76
IT Equipment & Software	34.02	2.52	36.54	5.28%	1.86
Total	1493.88	330.50	1824.38		87.89
Weighted Average Rate of Depreciation (in %)					5.30
Average Gross Block (₹ in lakh)					1659.13



2014-19
Asset-2

Annexure-I
(₹ lakh)

Particulars	Admitted Capital Cost as on COD (₹ in lakh)	ACE		Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)	
		2017-18	2018-19			2017-18	2018-19
Sub Station	770.59	38.66	193.13	1002.38	5.28%	41.71	47.83
PLCC	26.83	0.00	12.51	39.34	6.33%	1.70	2.09
IT Equipment & Software	135.38	0.00	12.83	148.21	5.28%	7.15	7.49
Total	932.80	38.66	218.48	1189.93		50.55	57.41
Weighted Average Rate of Depreciation (in %)						5.31%	5.31
Average Gross Block (₹ in lakh)						952.13	1080.70



2014-19
Asset-3

Annexure-I
(₹ lakh)

Particulars	Admitted Capital Cost as on COD (₹ in lakh)	ACE	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)
		2018-19			2018-19
Sub Station	1469.29	160.47	1629.76	5.28%	81.81
PLCC	41.16	8.17	49.33	6.33%	2.86
IT Equipment & Software	104.31	8.45	112.76	5.28%	5.73
Total	1614.76	177.09	1791.85		90.41
Weighted Average Rate of Depreciation (in %)					5.31
Average Gross Block (₹ in lakh)					1703.30



2014-19
Asset-4

Annexure-I
(₹ lakh)

Particulars	Admitted Capital Cost as on COD (₹ in lakh)	ACE	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)
		2018-19			2018-19
Building	1323.11	0.00	1323.11	3.34%	44.19
Sub Station	13172.86	0.00	13172.86	5.28%	695.53
PLCC	69.99	0.00	69.99	6.33%	4.43
Total	14565.96	0.00	14565.96		744.15
Weighted Average Rate of Depreciation (in %)					5.11
Average Gross Block (₹ in lakh)					14565.96



**2014-19
Asset-5**

**Annexure-I
(₹ lakh)**

Particulars	Admitted Capital Cost as on COD (₹ in lakh)	ACE	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)
		2018-19			2018-19
Building	300.93	170.81	471.74	3.34%	12.90
Sub Station	2118.18	77.80	2195.98	5.28%	113.89
PLCC	50.85	16.71	67.56	6.33%	3.75
IT Equipment & Software	46.45	0.75	47.20	5.28%	2.47
Total	2516.40	266.07	2782.47		133.02
Weighted Average Rate of Depreciation (in %)					5.02
Average Gross Block (₹ in lakh)					2649.44



2014-19
Asset-6

Annexure-I
(₹ lakh)

Particulars	Admitted Capital Cost as on COD (₹ in lakh)	ACE	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)
		2018-19			2018-19
Building	251.07	102.10	353.17	3.34%	10.09
Sub Station	2124.92	160.22	2285.14	5.28%	116.43
PLCC	77.42	0.93	78.35	6.33%	4.93
IT Equipment & Software	49.39	0.59	49.98	5.28%	2.62
Total	2502.80	263.84	2766.64		134.07
Weighted Average Rate of Depreciation (in %)					5.09
Average Gross Block (₹ in lakh)					2634.72



2019-24

Annexure-II

Combined Asset - Determination

(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	ACE 2019-24			Admitted Capital Cost as on 1.4.2024 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
		2019-20	2020-21	2021-22			2019-20	2020-21	2021-22	2022-23	2023-24
Building	824.90	108.90	29.59	201.55	1164.94	0.00%	29.37	31.68	35.54	38.91	38.91
Sub Station	8869.88	76.96	423.27	4.88	9374.99	5.28%	470.36	483.57	494.87	495.00	495.00
PLCC	265.79	0.70	25.17	0.00	291.66	6.33%	16.85	17.67	18.46	18.46	18.46
IT Equipment & Software	394.70	5.84	0.00	0.00	400.54	15.00%	59.64	60.08	60.08	60.08	60.08
Total	10355.28	192.40	478.03	206.43	11232.14		576.22	593.00	608.96	612.45	612.45
Weighted Average Rate of Depreciation (in %)							5.51%	5.50%	5.47%	5.45%	5.45
Average Gross Block (₹ in lakh)							10451.48	10786.69	11128.92	11232.14	11232.14



2019-24
Asset-4

Annexure-II
(₹ lakh)

Particulars	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	ACE 2019-24			Admitted Capital Cost as on 1.4.2024 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
		2019-20	2020-21	2021-22			2019-20	2020-21	2021-22	2022-23	2023-24
Building	1323.11	52.22	72.00	869.40	2316.73	0.00%	45.06	47.14	62.86	77.38	77.38
Sub Station	13172.86	441.20	37.84	155.34	13807.24	5.28%	707.17	719.82	724.92	729.02	729.02
PLCC	69.99	71.66	5.26	52.76	199.67	6.33%	6.70	9.13	10.97	12.64	12.64
Total	14565.96	565.08	115.10	1077.50	16323.64		758.94	776.09	798.75	819.04	819.04
Weighted Average Rate of Depreciation (in %)							5.11%	5.11%	5.06%	5.02%	5.02
Average Gross Block (₹ in lakh)							14848.50	15188.59	15784.89	16323.64	16323.64

