

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 45/TT/2022

Coram:

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

Date of Order: 28.06.2023

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for determination of Transmission Tariff from COD to 31.3.2024 for transmission assets under Project-"POWERGRID works associated with North Eastern Region Strengthening Scheme-VI" in the North Eastern Region.

And in the matter of:

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

.....Petitioner

Vs.

1. Assam Electricity Grid Corporation Limited,
(Formerly Assam State Electricity Board),
Bijulee Bhawan, Paltan Bazar,
Guwahati-781001, Assam.
2. Meghalaya Energy Corporation Limited,
(Formerly Meghalaya State Electricity Board),
Short Round Road, "Lumjingshai",
Shillong-793001, Meghalaya.
3. Government of Arunachal Pradesh,
Itanagar, Arunachal Pradesh.
4. Power and Electricity Department,
Government of Mizoram,
Aizawl, Mizoram.



5. Manipur State Power Distribution Corporation Limited,
(Formerly Electricity Department, Government of Manipur),
Keishampat, Imphal.
6. Department of Power,
Government of Nagaland,
Kohima, Nagaland.
7. Tripura State Electricity Corporation Limited,
Vidyut Bhawan, North Banamalipur,
Agartala, Tripura (W)-799001, Tripura.
8. Kohima-Mariani Transmission Limited,
Plot No. 101, Part III, GIDC Estate,
Sector 28 Gandhinagar-382028,
Gujarat.

...Respondent(s)

For Petitioner: Shri S. S. Raju, PGCIL
Shri D. K. Biswal, PGCIL
Shri V. P. Rastogi, PGCIL
Shri A. K. Verma, PGCIL

For Respondent: None

ORDER

The instant petition has been filed by Power Grid Corporation of India Limited, for determination of tariff from COD to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of the following transmission assets (hereinafter referred to as the “transmission assets”) under Project- "POWERGRID works associated with North Eastern Region Strengthening Scheme-VI” in the North Eastern Region (hereinafter referred to as “the transmission project”):

Asset-1: 2 numbers 400 kV line bays at Imphal Sub-station (for termination of Imphal-New Kohima 400 kV D/C line under TBCB);

Asset-2: 1x125 MVAR, 400 kV 3 Phase bus reactor at 400/132 kV Imphal (PG) Sub-station along with associated bays;

Asset-3: 400/220 kV, 500 MVA, ICT-2 along with associated bays, 400 kV, 125 MVAR, 3 Phase Bus Reactor-2 along with associated bay and 2



numbers 400 kV line bays for termination of 400 kV D/C New Kohima-New Mariani line (Line under TBCB scope) at 400/220 kV New Mariani Sub-station;

Asset-4: 400/220 kV, 500 MVA ICT-1 along with associated bays at 400/220 kV New Mariani Sub-station;

Asset-5: 420 kV, 125 MVAR Bus Reactor-1 along with associated bays at New Mariani Sub-station;

Asset-6: Additional works for operation of 400 kV D/C Misa-New Mariani line (initially operated at 220 kV) at 400 kV level along with 400 kV bays at Misa (GIS) and New Mariani Sub-station; and

Asset-7: 2 numbers 220 kV line bays at New Mariani Sub-station.

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

"1) Approve the proposed DOCO under clause 5(2) of Tariff Regulation, 2019 as explained at para 6.20.

2) Admit the capital cost as claimed in the Petition and approve the Additional Capitalisation incurred / projected to be incurred.

3) Approve the Transmission Tariff for the tariff block 2019-24 block for the asset covered under this petition, as per para –8.40 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 the Commission as provided in Tariff Regulation 2019 as per para 8.40 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 respondents 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 as mentioned at para 8.9 above.

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

10) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate in future. Further, any taxes including GST and duties including cess etc. imposed by any



statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.

11) Allow interim tariff in accordance with Regulation 10 (3) of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for purpose of inclusion in the PoC charges.

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. Investment Approval (IA) for implementation of the transmission project was accorded by the Board of Directors of the Petitioner in its 353rd meeting held on 1.5.2018 and communicated vide Memorandum No. C/CP/PA1819-02-0C-IA003 dated 25.5.2018, at an estimated cost of ₹21595 lakh including IDC of ₹1343 lakh based on December, 2017 price level.
 - b. The scope of the scheme was discussed and agreed in the 5th meeting of Standing Committee on Power System Planning in North-Eastern Region held on 8.8.2015. The transmission project was agreed in 15th NERPC meeting held on 25.8.2015 at Guwahati.
 - c. In the 6th Standing Committee Meeting on Power System Planning of North-Eastern Region held on 3.10.2016, the connectivity at New Mariani Sub-station was revised and it was decided that only Mariani (AEGCL)-Misa line section would be disconnected from Mariani (AEGCL) and terminated at New Mariani (Powergrid) for 400 kV operation. Further, only one circuit of Samaguri-Mariani (AEGCL) 220 kV line would be shifted to New Mariani Sub-station and 2 Numbers of 220 kV line bays would be constructed by the Petitioner at New Mariani Sub-station for termination of New Mariani-Mariani (AEGCL) 220 kV D/C (Twin Moose) line to be constructed by AEGCL. For reactive compensation, 420 kV, 2x125 MVAR bus reactors at New Mariani were also approved for implementation under this scheme.



- d. Subsequently, the final scope of works of the transmission project was approved in the 37th meeting of Empowered Committee on Transmission held on 19.9.2017 and 18th TCC/NERPC meetings held on 10.10.2017 and 11.10.2017.
- e. The scope of work covered under the transmission project is as follows:

Transmission Line

- (i) Disconnection of Mariani (AEGCL)-Misa 400 kV line (presently operated at 220 kV) from Mariani (AEGCL) and termination of the same at 400 kV bus at both New Mariani (Powergrid) and Misa Sub-stations and operation of the resultant New Mariani (Powergrid)-Misa line (ckt-2) at 400 kV
- (ii) Termination of the existing Misa-New Mariani (Powergrid) 400 kV (presently operated at 220 kV) line (ckt-1) at 400 kV bus at both Misa and New Mariani (Powergrid) Sub-stations and operation of the resultant line at rated voltage level of 400 kV

Sub-station

(i) Imphal Sub-station

- **Bus reactor:** 420 kV, 1x125 MVAR bus reactor (2nd) along with associated bay
- **400 kV Line bay:** 2 Numbers. 400 kV line bays for termination of Imphal-New Kohima 400 kV D/C line (line under TBCB)

(ii) Misa Sub-station

- * **400 kV Line bay:** 2 Numbers 400 kV line bays (GIS) for termination of New Mariani-Misa 400 kV D/C line

(iii) New Mariani Sub-station

- **ICT:** 400/ 220 kV, 2x500 MVA ICT along with associated bays
- **Bus reactor:** 420 kV, 2x125 MVAR bus reactor along with associated bays
- **400 kV Line bay:**
 - (a) 2 Numbers 400 kV line bays for termination of Misa-New Mariani 400 kV D/C line
 - (b) 2 Numbers. 400 kV line bays for termination of New Kohima-New Mariani 400 kV D/C line (line under TBCB)
- **220 kV Line bay:** 2 Numbers 220 kV line bays for termination of Mariani (AEGCL)-New Mariani (Powergrid) 220 kV D/C (Twin Moose) line (line under AEGCL scope)



Note:

- (a) * At Misa Sub-station under DPR of NERSS-II (Part-B) one complete diameter have been considered for Silchar-Misa (along with switchable line reactor). Similarly, in the DPR of NERSS-VI provision of procurement of one complete diameter has been kept for 400 kV Misa-Mariani D/C line to be terminated at Misa Sub-station.

It may be noted that these two schemes are being implemented in the almost same time frame and hence, one single GIS package has been considered comprising requirements of GIS bays at Misa Sub-station under both NERSS-II (part-B) & NERSS-VI.

Further, it may also be mentioned that considering the advantage of GIS technology from reliability point of view, it has been considered that both the diameters shall have one feeder for Silchar D/C line & one feeder for Mariani D/C line to ensure the availability of at least one bay of both Silchar D/C & Misa D/C line in case of LBB operation of TIE bay for any of the two diameters.

Accordingly, in the BOQ 2 Numbers line bays and one Tie bay has been considered under both NERSS-II (part-B) & NERSS-VI.

- (b) 2 Numbers 420 kV, 50 MVAR fixed line reactors installed at Misa end of the Misa – New Mariani line are required to be charged at rated voltage level of 400 kV in view of 400 kV operation of the Misa-New Mariani D/C line.
- (c) With 400 kV operation of Misa-New Mariani D/C line, 2 Numbers 220 kV line bays vacated at Misa shall be utilised by AEGCL for Misa-Sankardeb nagar 220 kV D/C line (line under AEGCL scope)
- (d) With 400 kV operation of Misa-New Mariani (ckt-1) at 400 kV, the 220 kV bay vacated at New Mariani shall be utilised by AEGCL for termination of one of the 220 kV Samaguri-Mariani (AEGCL) 2xS/C lines from Mariani (AEGCL) to New Mariani (Powergrid) thus forming Samaguri-New Mariani (Powergrid) and Samaguri-Mariani (AEGCL) 220 kV S/C lines.

f. The entire scope of work under the transmission project has been completed and is covered in the instant petition.

g. The details of date of commercial operation (COD) of the transmission assets covered in the transmission project are as follows:

Assets	Asset	COD	Covered under petition
Asset-1	2 Numbers 400 kV line bays at Imphal Sub-station (for termination of Imphal–New Kohima 400 kV D/C line under TBCB)	1.8.2020 (Proposed)	Covered in the instant petition
Asset-2	1x125 MVAR, 400 V 3 Phase bus reactor at 400/132 kV Imphal (Powergrid) Sub-station along with associated bays	22.8.2020	



Assets	Asset	COD	Covered under petition
Asset-3	400/220 kV, 500 MVA, ICT-2 along with associated bays, 400 kV 125 MVAR, 3-Ph Bus Reactor-2 along with associated bay and 2 Numbers 400 kV line bays for termination of 400 kV D/C New Kohima-New Mariani line (Line under TBCB scope) at 400/220 kV New Mariani Sub-station.	1.1.2021	
Asset-4	400/220 kV, 500 MVA ICT-1 along with associated bays at 400/220 kV New Mariani Sub-station.	14.2.2021	
Asset-5	420 kV 125 MVAR Bus Reactor-1 along with associated bays at New Mariani Sub-station.	17.3.2021	
Asset-6	Additional works for operation of 400 kV D/C Misa-New Mariani line (initially operated at 220 kV) at 400 kV level along with 400 kV bays at Misa (GIS) and New Mariani Sub-station.	11.5.2021	
Asset-7	2 Numbers 220 kV line bays at New Mariani Sub-station.	23.5.2021 (proposed)	

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

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has also been published in 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. Kohima Mariani Transmission Limited (KMTL), Respondent No. 8 has filed its reply vide affidavit dated 27.8.2022 and has raised the issues of Approval of COD of Asset-1, mismatch of KMTL's Element-2 associated with Asset-1. The Petitioner vide affidavit dated 15.12.2022 has filed its rejoinder to the reply of KMTL. The issues raised by KMTL and the clarification given by the Petitioner are discussed in the relevant paras of this order.

6. This order is issued considering the submissions made by the Petitioner in the petition vide affidavit dated 23.11.2021 and affidavits dated 1.4.2022 and 24.8.2022,



reply of KMTL vide affidavit dated 27.10.2022 and rejoinder of the Petitioner to the reply of KMTL vide affidavit dated 15.12.2022 and written submissions of KMTTL dated 29.12.2022.

7. The hearing in this matter was held on 26.7.2022 through video conference and the order was reserved.

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

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD

9. The Petitioner has claimed following transmission charges in respect of the transmission assets for 2019-24 tariff period:

Asset-1

(₹ in lakh)

Particulars	2020-21 (pro-rata 243 days)	2021-22	2022-23	2023-24
Depreciation	20.01	38.13	43.04	43.04
Interest on Loan	16.92	30.81	32.48	29.42
Return on Equity	19.77	38.16	43.32	43.32
O&M Expenses	44.31	68.90	71.32	73.82
Interest on Working Capital	2.60	4.31	4.57	4.62
Total	103.61	180.31	194.73	194.22

Asset-2

(₹ in lakh)

Particulars	2020-21 (pro-rata 222 days)	2021-22	2022-23	2023-24
Depreciation	37.23	70.56	74.57	74.57
Interest on Loan	32.36	57.88	56.54	51.47
Return on Equity	39.16	74.25	78.51	78.51
O&M Expenses	20.24	34.45	35.66	36.91
Interest on Working Capital	2.35	4.25	4.40	4.37
Total	131.34	241.39	249.68	245.83



Asset-3

(₹ in lakh)

Particulars	2020-21 (pro-rata 90 days)	2021-22	2022-23	2023-24
Depreciation	71.93	304.67	327.80	344.73
Interest on Loan	65.56	264.37	263.22	255.32
Return on Equity	75.85	321.38	345.88	363.84
O&M Expenses	84.32	353.92	366.60	378.98
Interest on Working Capital	6.43	26.92	28.09	28.92
Total	304.09	1271.26	1331.59	1371.79

Asset-4

(₹ in lakh)

Particulars	2020-21 (pro-rata 46 days)	2021-22	2022-23	2023-24
Depreciation	12.32	109.82	123.40	125.37
Interest on Loan	10.48	89.48	93.53	87.15
Return on Equity	13.07	116.52	130.99	133.08
O&M Expenses	30.51	250.57	259.62	268.25
Interest on Working Capital	1.75	14.64	15.46	15.75
Total	68.13	581.03	623.00	629.60

Asset-5

(₹ in lakh)

Particulars	2020-21 (pro-rata 15 days)	2021-22	2022-23	2023-24
Depreciation	2.47	68.46	78.22	79.59
Interest on Loan	2.35	62.66	66.57	62.17
Return on Equity	2.61	72.58	82.97	84.43
O&M Expenses	1.37	34.45	35.66	36.91
Interest on Working Capital	0.16	4.27	4.65	4.67
Total	8.96	242.42	268.07	267.77

Asset-6

(₹ in lakh)

Particulars	2021-22 (pro-rata 325 days)	2022-23	2023-24
Depreciation	207.12	304.02	320.19
Interest on Loan	169.01	232.87	226.29
Return on Equity	215.84	316.23	333.24
O&M Expenses	105.41	122.54	126.83
Interest on Working Capital	11.76	15.84	16.31
Total	709.14	991.50	1022.86



Asset-7

(₹ in lakh)

Particulars	2021-22 (pro-rata 313 days)	2022-23	2023-24
Depreciation	38.02	63.48	66.50
Interest on Loan	33.38	52.34	50.46
Return on Equity	38.67	64.33	67.43
O&M Expenses	41.37	49.92	51.68
Interest on Working Capital	3.01	4.26	4.37
Total	154.45	234.33	240.44

10. The details of Interest on Working Capital (IWC) claimed by the Petitioner in respect of the transmission assets for 2019-24 tariff period are as follows:

Asset-1

(₹ in lakh)

Particulars	2020-21 (pro-rata 243 days)	2021-22	2022-23	2023-24
O&M Expenses	5.55	5.74	5.94	6.15
Maintenance Spares	9.98	10.34	10.70	11.07
Receivables	19.19	22.23	24.01	23.88
Total Working Capital	34.72	38.31	40.65	41.10
Rate of Interest (in %)	11.25	11.25	11.25	11.25
Interest on Working Capital	2.60	4.31	4.57	4.62

Asset-2

(₹ in lakh)

Particulars	2020-21 (pro-rata 222 days)	2021-22	2022-23	2023-24
O&M Expenses	2.77	2.87	2.97	3.08
Maintenance Spares	4.99	5.17	5.35	5.54
Receivables	26.62	29.76	30.78	30.23
Total Working Capital	34.38	37.80	39.10	38.85
Rate of Interest (in %)	11.25	11.25	11.25	11.25
Interest on Working Capital	2.35	4.25	4.40	4.37

Asset-3

(₹ in lakh)

Particulars	2020-21 (pro-rata 90 days)	2021-22	2022-23	2023-24
O&M Expenses	28.49	29.49	30.55	31.58
Maintenance Spares	51.29	53.09	54.99	56.85
Receivables	152.04	156.73	164.17	168.66
Total Working Capital	231.82	239.31	249.71	257.09
Rate of Interest (in %)	11.25	11.25	11.25	11.25
Interest on Working Capital	6.43	26.92	28.09	28.92



Asset-4

(₹ in lakh)

Particulars	2020-21 (pro-rata 46 days)	2021-22	2022-23	2023-24
O&M Expenses	20.17	20.88	21.64	22.35
Maintenance Spares	36.31	37.59	38.94	40.24
Receivables	66.64	71.63	76.81	77.41
Total Working Capital	123.12	130.10	137.39	140.00
Rate of Interest (in %)	11.25	11.25	11.25	11.25
Interest on Working Capital	1.75	14.64	15.46	15.75

Asset-5

(₹ in lakh)

Particulars	2020-21 (pro-rata 15 days)	2021-22	2022-23	2023-24
O&M Expenses	2.77	2.87	2.97	3.08
Maintenance Spares	4.99	5.17	5.35	5.54
Receivables	26.87	29.89	33.05	32.92
Total Working Capital	34.63	37.93	41.37	41.54
Rate of Interest (in %)	11.25	11.25	11.25	11.25
Interest on Working Capital	0.16	4.27	4.65	4.67

Asset-6

(₹ in lakh)

Particulars	2021-22 (pro-rata 325 days)	2022-23	2023-24
O&M Expenses	9.87	10.21	10.57
Maintenance Spares	17.76	18.38	19.02
Receivables	98.19	122.24	125.76
Total Working Capital	125.82	150.83	155.35
Rate of Interest (in %)	10.50	10.50	10.50
Interest on Working Capital	11.76	15.84	16.31

Asset-7

(₹ in lakh)

Particulars	2021-22 (pro-rata 313 days)	2022-23	2023-24
O&M Expenses	4.02	4.16	4.31
Maintenance Spares	7.24	7.49	7.75
Receivables	22.21	28.89	29.56
Total Working Capital	33.47	40.54	41.62
Rate of Interest (in %)	10.50	10.50	10.50
Interest on Working Capital	3.01	4.26	4.37



Date of Commercial Operation (“COD”)

11. The Petitioner has claimed the COD of Asset-2, Asset-3, Asset-4, Asset-5 and Asset-6 as 22.8.2020, 1.1.2021, 14.2.2021, 17.3.2021 and 11.5.2021 respectively. The COD of Asset-1 and Asset-7 has been claimed under Regulation 5(2) of the 2019 Tariff Regulations as 1.8.2020 and 23.5.2021 respectively as the associated transmission line of Asset-1 being implemented by Kohima-Mariani Transmission Limited (KMTL) under TBCB and the associated transmission line of Asset-7 being implemented by Assam Electricity Grid Corporation Limited (AEGCL) are not ready.

12. The Petitioner has submitted that Asset-1 i.e. 2 Numbers 400 kV line bays at Imphal Sub-station (for termination of Imphal-New Kohima 400 kV D/C line under TBCB) was completed and was ready for charging as per CEA charging letter dated 13.7.2020. However, the power flow in Asset-1 could not be achieved due to non-readiness of inter-connected transmission line, i.e. Imphal-New Kohima 400 kV D/C line, being implemented by KMTL under TBCB. Thus, Asset-1 was charged on ‘No Load’ basis on 30.7.2020 and it achieved COD on 1.8.2020. The notice for intimation of charging Asset-1 has been served on KMTL vide the Petitioner’s letter dated 1.7.2020 that the bays will be ready for charging by 15.7.2020. Subsequently, the Petitioner vide letter dated 31.7.2020 intimated KMTL that the bays were completed and charged successfully on 30.7.2020. Accordingly, the Petitioner has sought approval of COD of Asset-1 under Regulation 5(2) of the 2019 Tariff Regulations.

13. With respect to Asset-7, the Petitioner has submitted that 2 numbers 220 kV line bays at New Mariani Sub-station (for termination of 220 kV D/C Mariani (AEGCL)-New Mariani (Powergrid) line under the scope of AEGCL) was completed and was ready for charging as per CEA charging letter dated 17.5.2021. However, the power flow in Asset-7 could not be achieved due to non-readiness of inter-connected transmission line, i.e.



220 kV D/C Mariani (AEGCL)-New Mariani (Powergrid) line, being implemented by AEGCL. Thus, Asset-7 was charged on 'No Load' basis on 21.5.2021 and it achieved COD on 23.5.2021. The Petitioner vide letter dated 30.3.2021 informed AEGCL that 2 Numbers 220 kV bays at New Mariani (Powergrid) for termination of 220 kV D/C Mariani (AEGCL)-New Mariani (Powergrid) line under the scope of AEGCL have been completed and planned for charging by 30.3.2021. Accordingly, the Petitioner has sought approval of COD of Asset-7 under Regulation 5(2) of the 2019 Tariff Regulations.

14. Regulation 5(2) of the 2019 Tariff Regulations provides as follows:

“5. Date of Commercial Operation: (1) *The date of commercial operation of a generating station or unit thereof or a transmission system or element thereof and associated communication system shall be determined in accordance with the provisions of the Grid Code.*

(2) *In case the transmission system or element thereof executed by a transmission licensee is ready for commercial operation but the interconnected generating station or the transmission system of other transmission licensee as per the agreed project implementation schedule is not ready for commercial operation, the transmission licensee may file petition before the Commission for approval of the date of commercial operation of such transmission system or element thereof:*

Provided that the transmission licensee seeking the approval of the date of commercial operation under this clause shall give prior notice of at least one month, to the generating company or the other transmission licensee and the long term customers of its transmission system, as the case may be, regarding the date of commercial operation:

Provided further that the transmission licensee seeking the approval of the date of commercial operation of the transmission system under this clause shall be required to submit the following documents along with the petition:

- a) *Energisation certificate issued by the Regional Electrical Inspector under Central Electricity Authority;*
- b) *Trial operation certificate issued by the concerned RLDC for charging element with or without electrical load;*
- c) *Implementation Agreement, if any, executed by the parties;*
- d) *Minutes of the coordination meetings or related correspondences regarding the monitoring of the progress of the generating station and transmission systems;*
- e) *Notice issued by the transmission licensee as per the first proviso under this clause and the response;*
- f) *Certificate of the CEO or MD of the company regarding the completion of the transmission system including associated communication system in all respects.”*



15. We have considered the submissions of the Petitioner. The Petitioner has sought declaration of COD Asset-1 as 1.8.2020 under Regulation 5(2) of the 2019 Regulations as it could not be put to regular use on account of non-readiness of downstream assets under the scope of KMTL.

16. In support of the actual COD of Asset-1, the Petitioner has submitted self-declaration of COD letter dated 31.7.2020; CEA Energisation certificate dated 13.7.2020, RLDC charging certificates dated 6.8.2020 certifying that successful trial operation was completed on 31.7.2020 and the CMD Certificate. The Petitioner has submitted that the 2 Numbers 400 kV bays at Imphal Sub-station was charged at 'No Load' as there is no power flow and associated line was not ready. As required under Regulation 5(2) of the 2019 Tariff Regulations, the Petitioner gave prior notice to KMTL vide letter dated 1.7.2020 informing that 2 Numbers 400 kV line bays at Imphal Sub-station for termination of Imphal-New Kohima 400 kV D/C line will be ready for charging by 15.7.2020. As the transmission asset is prevented from being put into commercial operation because of the non-readiness of the associated transmission line under the scope of KMTL, we approve the COD of the transmission asset as 1.8.2020.

17. The Petitioner has also sought approval of COD Asset-7 as 23.5.2021 under Regulation 5(2) of the 2019 Regulations as the inter-connected transmission line, i.e. 220 kV D/C Mariani (AEGCL)-New Mariani (Powergrid) line, under the scope of AEGCL was not ready.

18. In support of the actual COD of Asset-7, the Petitioner has submitted CEA Energisation Certificate dated 17.5.2021; RLDC charging certificates dated 4.6.2021 certifying that successful trial operation (idle charging) was completed on 22.5.2021 and CMD Certificate. The Petitioner has submitted that the 2 Numbers 220 kV bays at New Mariani (Powergrid) Sub-station was charged at 'No Load' as there is no power flow and



associated transmission line under the scope of AEGCL is not ready. As required under Regulation 5(2) of the 2019 Tariff Regulations, the Petitioner gave prior notice to AEGCL vide letter dated 30.3.2021 informing that 2 Numbers 220 kV line bays at New Mariani (Powergrid) Sub-station for termination of 220 kV D/C Mariani (AEGCL)-New Mariani (Powergrid) line under AEGCL scope will be ready for charging by 30.3.2021. Taking into consideration CEA energisation certificate, 'No-load' RLDC charging certificate and CMD certificate submitted by the Petitioner and notice to AEGCL, COD of Asset-7 is approved as 23.5.2021 under Regulation 5(2) of the 2019 Tariff Regulations as it could not be put to use due to non-readiness of the associated transmission line under the scope of AEGCL.

19. In support of the actual COD of Asset-2, the Petitioner has submitted self-declaration of COD letter dated 1.9.2020; CEA Energisation certificate dated 13.7.2020; RLDC charging certificate dated 31.8.2020 certifying that successful trial operation was completed on 21.8.2020 and the Petitioner's CMD Certificate. Therefore, COD of Asset-2 has been approved as 22.8.2020.

20. In support of the actual COD of Asset-3, the Petitioner has submitted self-declaration of COD letter dated 8.2.2021; CEA Energisation certificate dated 20.12.2020 and 3.12.2020; RLDC charging certificate dated 6.1.2021 certifying that successful trial operation was completed on 31.12.2020 and the Petitioner's CMD Certificate.

21. In support of the actual COD of the transmission Asset-4, the Petitioner has submitted self-declaration of COD letter dated 8.4.2021; CEA Energisation certificate



dated 1.2.2021 and 18.1.2021; RLDC charging certificate dated 8.4.2021 certifying that successful trial operation was completed on 13.2.2021 and the CMD Certificate.

22. In support of the actual COD of the transmission Asset-5, the Petitioner has submitted self-declaration of COD letter dated 7.4.2021; CEA Energisation certificate dated 8.3.2021; RLDC charging certificate dated 6.4.2021 certifying that successful trial operation was completed on 16.3.2021 and the Petitioner's CMD Certificate.

23. In support of the actual COD of the transmission Asset-6, the Petitioner has submitted self-declaration of COD letter dated 31.5.2021; CEA Energisation certificate dated 30.4.2021; RLDC charging certificate dated 28.5.2021 certifying that successful trial operation was completed on 5.5.2021, 7.5.2021 and 10.5.2021 and the Petitioner's CMD Certificate.

24. We have considered the submissions of the Petitioner in respect of Asset-3, Asset-4, Asset-5 and Asset-6 as above. Taking into consideration self-declaration of COD letter, CEA energisation certificate, RLDC charging certificate and the Petitioner's CMD certificate, the COD of Asset-3, Asset-4, Asset-5 and Asset-6 is approved as 1.1.2021, 14.2.2021, 17.3.2021 and 11.5.2021 respectively.

25. Accordingly, the details of COD approved for the transmission assets for the purpose of transmission charges of 2019-24 tariff period is as follows:

Assets	Asset Description	COD
Asset-1	2 Numbers 400 kV line bays at Imphal Sub-station (for termination of Imphal-New Kohima 400 kV D/C line under TBCB)	1.8.2020*
Asset-2	1x125 MVAR, 400 kV 3 Phase bus reactor at 400/132 kV Imphal (Powergrid) Sub-station along with associated bays	22.8.2020
Asset-3	400/220 kV, 500 MVA, ICT-2 along with associated bays, 400 kV 125 MVAR, 3 Phase Bus Reactor-2 along with	1.1.2021



Assets	Asset Description	COD
	associated bay and 2 Numbers 400 kV line bays for termination of 400 kV D/C New Kohima-New Mariani line (Line under TBCB scope) at 400/220 kV New Mariani Sub-station.	
Asset-4	400/220 kV, 500 MVA ICT-1 along with associated bays at 400/220 kV New Mariani Sub-station.	14.2.2021
Asset-5	420 kV 125 MVAR Bus Reactor-1 along with associated bays at New Mariani Sub-station.	17.3.2021
Asset-6	Additional works for operation of 400 kV D/C Misa-New Mariani line (initially operated at 220 kV) at 400 kV level along with 400 kV bays at Misa (GIS) and New Mariani Sub-station.	11.5.2021
Asset-7	2 Numbers 220 kV line bays at New Mariani Sub-station.	23.5.2021*

* Approved under Regulation 5(2) of the 2019 Tariff Regulations

Capital Cost

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

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

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

- (a) *The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- (b) *Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*
- (c) *Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*
- (d) *Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*
- (e) *Capitalised initial spares subject to the ceiling rates in accordance with these regulations;*
- (f) *Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;*
- (g) *Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;*
- (h) *Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;*
- (i) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (j) *Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other*



- appurtenant cost paid to the railway;*
- (k) *Capital expenditure on account of biomass handling equipment and facilities, for co-firing;*
 - (l) *Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;*
 - (m) *Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;*
 - (n) *Expenditure on account of change in law and force majeure events; and*
 - (o) *Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*
- (3) *The Capital cost of an existing project shall include the following:*
- (a) *Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;*
 - (b) *Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;*
 - (c) *Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;*
 - (d) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
 - (e) *Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and*
 - (f) *Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*
- (4) *The capital cost in case of existing or new hydro generating station shall also include:*
- (a) *cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and*
 - (b) *cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) project in the affected area.*
- (5) *The following shall be excluded from the capital cost of the existing and new projects:*
- (a) *The assets forming part of the project, but not in use, as declared in the tariff petition;*
 - (b) *De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:*

Provided that in case replacement of transmission asset is recommended by Regional Power Committee, such asset shall be de-



capitalised only after its redeployment;

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

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

27. The Petitioner has claimed the following capital cost in respect of the transmission assets and has submitted the Auditor’s Certificate in support of the same:

Assets	FR apportioned approved cost	Cost up to COD	Projected additional capital expenditure				Estimated completion cost
			2020-21	2021-22	2022-23	2023-24	
Asset-1	1166.91	469.13	117.00	182.77	-	-	768.90
Asset-2	1503.76	1055.04	198.11	140.14	-	-	1393.29
Asset-3	6606.05	5416.29	256.72	146.82	637.32	-	6457.15
Asset-4	2873.76	1852.56	15.26	419.93	74.10	-	2361.85
Asset-5	1835.88	1151.91	2.04	292.72	51.66	-	1498.33
Asset-6	6217.1	3256.38	-	2127.97	455.70	148.33	5988.38
Asset-7	1391.49	517.96	-	582.24	82.98	27.14	1210.32
Total	21594.95	13719.27	589.13	3892.59	1301.76	175.47	19678.22

Cost Over-run

28. The Petitioner has submitted the details of estimated completion cost *vis-à-vis* FR apportioned approved cost for the transmission assets as follows:



(₹ in lakh)

Assets	FR Approved cost (a)	Estimated completion cost (b)	Cost variation (c=b-a)
Asset-1	1166.91	768.90	-398.01
Asset-2	1503.76	1393.29	-110.47
Asset-3	6606.05	6457.15	-148.90
Asset-4	2873.76	2361.85	-511.91
Asset-5	1835.88	1498.33	-337.55
Asset-6	6217.1	5988.38	-228.72
Asset-7	1391.49	1210.32	-181.17
Total	21594.95	19678.22	-1916.73

29. The Petitioner has submitted that the estimated completion cost of all the transmission assets based on the Auditor's Certificate is within the FR apportioned approved cost. Therefore, there is no cost over-run. The item-wise cost variation between apportioned approved cost and estimated completion cost are explained in Form-5.

30. Further, the Petitioner has submitted the salient reasons of cost variation as follows:

i. IDC:

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. It may be mentioned that in FR, IDC was calculated considering rate of interest for domestic loans @10.5%. However, in actual, the weighted average rate of interest of loans is around 7.00-8.00%. The actual IDC accrued upto COD has been considered at the time of claim of tariff.

ii. IEDC:

In IA, 10.75% and 3% of equipment cost and civil works has been considered for IEDC and contingency respectively, whereas, based on the actual expenditure under the subject head, IEDC has been claimed in the Auditor's Certificate.



iii. Cost variation in the Equipment Cost including civil works:

Through open competitive bidding process, lowest possible market prices for required product/ services/ as per detailed designing is obtained and contracts are awarded on the basis of lowest evaluated eligible bidder on overall basis. The best competitive bid prices against tenders may vary as compared to the cost estimate depending upon prevailing market conditions, design and site requirements. Whereas, the estimates are prepared by the Petitioner as per well-defined procedures for cost estimate. The FR cost estimate is broad indicative cost worked out generally on the basis of average unit rates of recently awarded contracts as a general practice. The cost estimate of the transmission project is on the basis of December, 2017 price level.

Further, regarding variation in cost of individual item in sub-station packages, the packages under the 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.

31. The Commission *vide* TV letter dated 22.3.2022 directed the Petitioner to explain that the actual capital cost should be compared with the benchmark cost as per specified by the Commission and any variation in capital cost. In response, the Petitioner *vide* affidavit dated 1.4.2022 has submitted as follows:

- (i) There is no benchmark cost specified by the Commission for the similar type of asset in the 2019 Tariff Regulations. In this connection, Regulation 20 (1) of the 2019 Tariff Regulation states as follows:

“20. Prudence Check of Capital Cost : The following principles shall be adopted for prudence check of capital cost of the existing or new projects:



(1) In case of the thermal generating station and the transmission system, prudence check of capital cost shall include scrutiny of the capital expenditure, in the light of capital cost of similar projects based on past historical data, wherever available, reasonableness of financing plan, interest during construction, incidental expenditure during construction, use of efficient technology, cost over-run and time over-run, procurement of equipment and materials through competitive bidding and such other matters as may be considered appropriate by the Commission:

Provided that, while carrying out the prudence check, the Commission shall also examine whether the generating company or transmission licensee, as the case may be, has been careful in its judgments and decisions in execution of the project.

.....
*(4) The generating company or the transmission licensee, as the case may be, shall furnish the capital cost for execution of the existing and new projects as per Annexure-I to **these regulations along with tariff petition for the purpose of creating a database of benchmark capital cost of various components.***”

(ii) Further, the benchmarking analysis for determination of prudent costs would require database spanning across multiple variables that influence capital costs.

a. Capital cost in the context of transmission assets depends upon multiple variables:

- i. Project specific conditions such as terrain, project location, Right of Way (RoW) Constraints (including urbanization, river/highway/ railway line crossings, crossing of other transmission lines, forest area) and weather conditions may lead to different capital costs of similar transmission assets;
- ii. Market forces driven by demand supply balance viz availability of competition among vendors, purchase quantum (one time order vs repeat orders), input cost variations, economic environment etc. and
- iii. Technology adopted for implementation of the Sub-stations and requirement of reactive compensation etc.

b. Keeping track of all such factors that influence discovery of prudent costs, whether project specific or market forces driven, is practically challenging. To substantiate, the below table illustrates the variation in cost per km of transmission lines falling under same wind zones, soil conditions and topography. As can be observed from the table, for instance, the cost for a 765 kV line varies from ₹166.15 lakh per km to ₹210.79 lakh per km within similar regions. Also, the variation in cost per km of transmission lines falling under different wind zones, soil conditions and topography has been demonstrated as follows:



Asset	Region	COD	Line length in km	Completion cost (₹ in lakh)	Cost per km (₹ in lakh per km)
765 kV S/C Transmission Lines under same wind zone/ Soil condition/ Plain area					
Bareilly-Lucknow S/C	NR-III	1.4.2014	251	41704.85	166.15
Gaya-Varanasi S/C	NR-III	21.4.2015	273	57546.81	210.79
Jaipur-Bhiwani S/C	NR-I	7.10.2016	276	49343.72	178.78
765 kV D/C Transmission Lines under different wind zone/ Soil condition/ plain area					
Champa-Raipur D/C	WR-I	24.5.2014	149	67005.6	449.70
Angul-Srikakulam D/C	SR-I/ ER-II	1.2.2017	276.49	139487.89	504.50
Chittorgarh-Ajmer D/C	NR-I	31.12.2017	211	101482.97	480.96
400 kV Transmission Lines under same wind zone/ Soil condition/ plain area					
Barh-Gorakhpur D/C	NR-III	7.6.2015	349.17	97166.05	278.28
Sikar-Jaipur D/C	NR-I	16.2.2017	169.00	22820.21	135.03
Lucknow-Kanpur D/C	NR-III	1.6.2017	159.61	25221.01	158.02
400 kV D/C Transmission lines under different wind zone/ Soil condition/ plain area					
Ranchi-Chandwa-Gaya D/C	ER-I	12.7.2016	190.00	55996.46	294.72
Betul-Khandwa D/C	WR-I	24.8.2017	168.64	40241.28	238.62
400 kV D/C Transmission lines under different wind zone/ Soil condition/ Hilly area					
Balipara -Bongaigaon D/C	NER	7.11.2014	309.00	107030.77	346.38
Silcher-PK Bari D/C	NER	1.8.2015	128.76	40879.20	317.48
Kishenpur-New Wanpoh D/C	NR-II	31.7.2017	135.00	54324.00	402.40

c. Results of any benchmarking may significantly vary from actual costs and would result in severe losses for the transmission licensee, if benchmarks are set low or for the consumers, if the benchmarks are set too high.

(iii) Therefore, benchmarking for determination of capital cost is not feasible, since it may not be practically possible to factor in all the considerations mentioned above in any benchmarking.

32. We have considered the submissions of the Petitioner. As compared with FR cost of ₹21594.95 lakh, the estimated completion cost of ₹19678.22 lakh is lower by ₹1916.73 lakh including ACE as mentioned above and is within the FR apportioned approved cost. Therefore, there is no cost over-run.

33. It is further observed that the cost variation is primarily on account of variation in estimated prices and final competitive prices. The asset-wise completion cost is within



the respective FR apportioned cost. Further, against the total FR apportioned approved cost of ₹21594.95 lakh, the estimated completion cost (including projected ACE during the 2019-24 period) is ₹19678.22 lakh, which is within the apportioned approved cost. Accordingly, the cost variation is allowed.

Time Over-run

34. As per IA dated 1.5.2018, the transmission assets was scheduled to be put into commercial operation within 24 months from the date of IA, matching with TBCB schedule. The details of time over-run in respect of transmission assets are as follows:

Assets	SCOD	COD	Time over-run (days)
Asset-1	1.5.2020	1.8.2020	93
Asset-2		22.8.2020	114
Asset-3		1.1.2021	246
Asset-4		14.2.2021	290
Asset-5		17.3.2021	321
Asset-6		11.5.2021	376
Asset-7		23.5.2021	388

35. The Petitioner has submitted that the MoP in its letter dated 27.7.2020 allowed the extension of SCOD by 5 months in case of all the inter-State transmission projects, which were under construction as on date of COVID-19 induced lockdown i.e. 25.3.2020 to mitigate the issues of disruption in supply chains and manpower, caused due to outbreak of COVID-19 pandemic. Accordingly, MoP’s letter dated 27.7.2020 is applicable in the instant case for granting extension to TSP/ transmission licensees for completion of the under construction inter-State transmission projects by additional 5 months. As per the revised SCOD of 31.12.2020, the details of time over-run in respect of transmission assets are as follows:



Assets	Revised SCOD as per MoP letter dated 27.7.2020	COD	Time over-run (days)
Asset-1	31.12.2020	1.8.2020	0
Asset-2		22.8.2020	0
Asset-3		1.1.2021	0
Asset-4		14.2.2021	45
Asset-5		17.3.2021	76
Asset-6		11.5.2021	131
Asset-7		23.5.2021	143

36. With respect to time over-run, the Petitioner has submitted general as well as asset-wise reasons such as delay due to COVID pandemic, delay due to transport, rains and flood and RoW issues etc. and submitted documentary evidences in support of the same. Further, the Commission vide TV letter dated 22.3.2022 directed the Petitioner to submit detailed justification for time over-run for the transmission assets. In response, the Petitioner vide affidavit dated 1.4.2022 has submitted as follows:

Delay due to Worldwide COVID-19 Pandemic

(i) Due to outbreak of Coronavirus, posed the greatest potential for harm as unforeseen/ unplanned interruption or delay. The Petitioner faced a multitude of challenges as they navigated through largely uncharted territory with their projects experiencing highly unique and mounting risks from the effects of COVID-19.

(ii) Nationwide lockdown:

Phase 1: 25.3.2020-14.4.2020 (21 days)

Phase 2: 15.4.2020-3.5.2020 (19 days)

Phase 3: 4.5.2020-17.5.2020 (14 days)

Phase 4: 18.5.2020-31.5.2020 (14 days)

Unlock:

Unlock 1.0: 1.6.2020-30.6.2020 (30 days)

Unlock 2.0: 1.7.2020-31.7.2020 (31 days)

Unlock 3.0: 1.8.2020-31.8.2020 (31 days)

Unlock 4.0: 1.9.2020-30.9.2020 (30 days)

(iii) The lockdown restricted people from stepping out of their homes. All transport services road, air and rail were suspended, with exceptions for



transportation of essential goods, fire, police and emergency services. Educational institutions, industrial establishments and hospitality services were also suspended. Services such as food shops, banks and ATMs, petrol pumps, other essentials and their manufacturing were exempted. The Home Ministry stated that anyone who fails to follow the restrictions can face up to a year in jail. The government locked down all the cities and restricted the movement from one place to another. The movement restriction affected the supply chain, transportation shortage, worker absenteeism due to illness/ quarantine/ migration labour shortages, which resulted in decrease in output and delayed all country wide ongoing projects.

(iv) The Petitioner faced specific COVID-19-related challenges including supplier delivery issues, worker absenteeism due to illness, delayed issuance of permits, travel restrictions, and lost time or inefficiencies due to the need to practice social distancing on the job site. Lack of engineering and technical support and supply chain disruptions being the major factor impacting project schedule and implementations. Due to Covid pandemic, the work was at stand still position for almost 5-6 months and gradually the construction activities picked up as per Government directives.

(v) Further, MoP *vide* letter dated 27.7.2020 has also considered that the construction activities of transmission projects sites have been severely affected by the first wave of COVID-19 pandemic and granted the relaxation of 5 months with respect to the completion of projects.

Other unprecedented delays:

Asset-1 and Asset-2

(i) **Delay in transportation of Reactor (9 months):** The 125 MVAR reactor was dispatched in June, 2019. However, on reaching Lahorijan, Nagaland (which is around 215 km from Imphal) in August, 2019, the trailer carrying the reactor could not move any further due to damage to the Assam-Nagaland highway beyond Lahorijan area. The reactor was then shifted to Khatkhati, Assam for temporary storage, until the road was repaired in February, 2020. In the meantime,



complete nation-wide lockdown was imposed due to COVID-19 pandemic w.e.f. 25.3.2020 and the reactor was stuck again. The Petitioner obtained special permission for movement of consignment from the Administrative Authority and the reactor finally reached site on 18.5.2020. As such, there was a delay of 9 months in transportation of the reactor.

Asset-3, Asset-4 and Asset-5

(i) **Delay in transportation of Transformer (12 months):** The 500 MVA transformers were dispatched from Gujarat in October 2019 and reached Kolaghat port, West Bengal in December 2019. However, the ICTs could not be dispatched from the port due to non-availability of requisite draught in the river. The dispatch was further affected due to various restrictions imposed by the Central and the State Government on account of COVID-19 pandemic. Although the barge was arranged by the agency, the same could not be placed at the Kolaghat jetty due to presence of another barge at said jetty. The matter was taken up with Inland Waterways Authority of India for resolution. In the meantime, all waterway communications came to a standstill due to the disastrous effects of cyclone Amphan in West Bengal, which further affected the dispatch of the transformer. The barge was finally placed at the jetty point and the ICTs were dispatched in July, 2020. The ICTs reached Silghat port, Assam in September, 2020 and on site in October, 2020.

(ii) **Damage to ICT bushing:** After the ICTs reached site, it was observed that 7 Number 52 kV bushings, 4 Number 245 kV bushings, and 1 Number 420 kV bushing had indicated poor tan delta values and 145 kV neutral bushing was found to be damaged. Replacement of the same took a considerable amount of time by the executing agency and consequently, the bushings had to be diverted from other sites/ projects of the Petitioner.

(iii) **Delay due to Citizenship Amendment Bill (CAA):** Violent protests erupted in Assam from 4.12.2019 and continued till March 2020 after promulgation of CAA, 2019. Curfews were imposed in various parts of Assam and even were extended to an indefinite period. Almost all roads and rail transportation has been blocked



by the activities. This caused a delay in transportation of the man and materials at the site and created inconvenience in the execution of work.

(iv) **Extended Rainfall and Flood (3 months):** The 500 MVA transformers and reactor were dispatched from Gujarat in October, 2019 and reached Kolaghat port, West Bengal in December, 2019. The barge was finally placed at the Kolaghat jetty point and the ICTs were dispatched in July, 2020. The transportation of the transformers was severely hampered by the monsoon of 2020, which extended up to November, 2020. Particularly, high rainfall was experienced in the entire North East Region resulting in inundated and waterlogged sites/ locations. The rains were recorded as the highest for last 20 years which has severely affected nearby villages in these districts. Unprecedented heavy rain resulted in sites being waterlogged and unapproachable at most of the locations, which led to a delay of about 3 months in the transport of the transformers and reactor. The district and month wise details of rainfall of some of the districts in the vicinity of transportation route sourced from Indian Meteorological data is as follows:

District	Month of heavy Rainfall	Total No. of affected months
Kokrajhar	July, 2020, September, 2020	2
Bongaigaon	July, 2020, September, 2020, November, 2020	3
Chirang	July, 2020, September, 2020	2
Cooch Behar	July, 2020, September, 2020, October, 2020	3
Jalpaiguri	July, 2020, September, 2020, October, 2020	3

Asset-6 and Asset-7

(i) **Delay in manufacturing and supply on account of Nationwide lockdown/ subsequent restrictions in the wake of COVID-19:** In view of the lockdown conditions and various restriction in the wake of COVID-19 pandemic, process of manufacturing of various transmission line items viz. towers, conductors, hardware fittings were affected and the transmission line materials could finally be delivered at site starting from August, 2020 and progressively by January, 2021 only.

(ii) **Severe RoW issues at the new transmission tower locations- leading to delay in commencement of transmission line foundation works:** The



foundation and erection works suffered substantially on account of severe RoW issues encountered by the Petitioner during the course of the work. The works could be carried out after continuous persuasion with the administration for finalization of compensation and subsequent disbursement to Project Affected Persons (PEPs). Further, in view of wide gap between demand and the payable compensation as worked out by the Revenue Authority, repeated persuasion and negotiations had to be carried out by the Revenue Authorities with PEPs before the same could be settled. Process of finalization of compensation was also delayed on account of Elections in the state of Assam in the 1st quarter of 2021. This led to a delay of about 3 months in the execution of Asset-6.

(iii) **Extended rain and inundation of work site:** Although efforts were made for commencement of foundation works in transmission line by August/September, 2020, after receipt of towers and stubs at site, extended rainfall and water logging at work site had adversely affected the foundation works. In view of the uncondusive soil conditions, heavy duty ground stabilization mat, which had been found capable of bearing load of heavy vehicles like hydra crane, JCB, concrete mixer m/c, trucks, etc. over loose soil for movement, had to be used to facilitate civil works and carriage of erection materials too. The foundation works could be commenced only in 1st week of December, 2020 and progressively completed by March, 2021 owing to the reasons given above.

(iv) **Delay due to Violent protest and blockade:** Violent protests erupted in Assam from 4.12.2019 and continued till March 2020 after promulgation of CAA, 2019. Curfews were imposed in various parts of Assam and even were extended to an indefinite period. Almost all roads and rail transportation has been blocked by the activities. This caused a delay in transportation of the man and materials at the site and created inconvenience in the execution of work.

37. The Petitioner has submitted the details of activity wise timelines as per Form-12 and the same is as follows:



Asset-1

S.N.	Activity	Original schedule (As per planning)		Actual achieved (As per actual)		Time over-run	Reason(s) for delay along with reference to supporting documents
		Start Date	Completion date	Start date	Completion date	Months	
1	Notification under Section 164 of EA, 2003	NA				-	(i) Delay in transportation of Reactor (9 months) (ii) Outbreak of COVID-19 Pandemic (5 months)
2	Supplies	25.12.2018	25.10.2019	30.4.2019	18.5.2020	6	
3	Civil works and erection	25.12.2018	25.12.2019	23.1.2019	30.7.2020	7	
4	Testing and commissioning (as per IA)	25.12.2019	25.1.2020	30.6.2020	20.7.2020	5	
5	Completion as per TBCB schedule	30.7.2020	30.7.2020	30.6.2020	1.8.2020	0	

Asset-2

S.N.	Activity	Original schedule (As per planning)		Actual achieved (As per actual)		Time over-run	Reason(s) for delay along with reference to supporting documents
		Start Date	Completion date	Start date	Completion date	Months	
1	Notification under Section 164 of EA, 2003	NA				-	(i) Delay in transportation of Reactor (9 months) (ii) Outbreak of COVID-19 Pandemic (5 months)
2	Supplies	25.12.2018	25.10.2019	30.4.2019	18.5.2020	6	
3	Civil works and erection	25.12.2018	25.12.2019	23.1.2019	30.7.2020	7	
4	Testing and commissioning (as per IA)	25.12.2019	25.1.2020	10.7.2020	20.8.2020	6	
5	Completion as per TBCB schedule	30.7.2020	30.7.2020	30.7.2020	20.8.2020	0	

Asset-3

S.N.	Activity	Original schedule (As per planning)		Actual achieved (As per actual)		Time over-run	Reason(s) for Delay along with reference to supporting documents
		Start date	Completion date	Start date	Completion date	Months	
1	Notification under Section 164 of EA, 2003	NA				-	(i) Delay in transportation of Transformer (12 months) (ii) Delay due to Citizenship Amendment Bill (CAA) (iii) Poor soil condition in
2	Supplies	25.12.2018	25.10.2019	30.3.2019	28.10.2020	12	
3	Civil works and erection	25.12.2018	25.12.2019	1.1.2019	30.11.2020	11	



S.N.	Activity	Original schedule (As per planning)		Actual achieved (As per actual)		Time over-run	Reason(s) for Delay along with reference to supporting documents
		Start date	Completion date	Start date	Completion date	Months	
4	Testing and commissioning (as per IA)	25.12.2019	25.1.2020	1.9.2020	15.12.2020	10	Sub-station working area (iv) Outbreak of Covid-19 pandemic (v) Extended Rainfall & Flood
5	Completion as per TBCB schedule	30.7.2020	30.7.220	15.12.2020	1.1.2021	5	

Asset-4

S.N.	Activity	Original schedule (As per planning)		Actual achieved (As per actual)		Time over-run	Reason(s) for delay along with reference to supporting documents
		Start date	Completion date	Start date	Completion date	Months	
1	Notification under Section 164 of EA, 2003	NA				-	(i) Delay in transportation of Transformer (12 months) (ii) Delay due to Citizenship Amendment Bill (CAA) (iii) Poor soil condition in Sub-station working area (iv) Outbreak of Covid-19 pandemic (v) Extended Rainfall & Flood
2	Supplies	25.12.2018	25.10.2019	30.3.2019	28.10.2020	12	
3	Civil works and erection	25.12.2018	25.12.2019	1.1.2019	30.11.2020	11	
4	Testing and commissioning (as per IA)	25.12.2019	25.1.2020	1.9.2020	15.12.2020	10	
5	Completion as per TBCB schedule	30.7.2020	30.7.2020	15.12.2020	14.2.2021	6	

Asset-5

S.N.	Activity	Original schedule (As per planning)		Actual achieved (As per actual)		Time over-run	Reason(s) for delay along with reference to supporting documents
		Start date	Completion date	Start date	Completion date	Months	
1	Notification under Section 164 of EA, 2003	NA				-	(i) Delay in transportation of Transformer (12 months) (ii) Delay due to Citizenship Amendment Bill (CAA) (iii) Poor soil condition in Sub-station working area (iv) Outbreak of Covid-19 pandemic (v) Extended Rainfall & Flood
2	Supplies	25.12.2018	25.10.2019	30.3.2019	28.10.2020	12	
3	Civil works and erection	25.12.2018	25.12.2019	1.1.2019	15.1.2021	12	
4	Testing and commissioning (as per IA)	25.12.2019	25.1.2020	1.9.2020	28.2.2021	13	
5	Completion as per TBCB schedule	30.7.2020	30.7.2020	15.12.2020	17.3.2021	7	



Asset-6

S.N.	Activity	Original schedule (As per planning)		Actual achieved (As per actual)		Time over-run	Reason(s) for delay along with reference to supporting documents
		Start date	Completion date	Start date	Completion date	Months	
1	Notification under Section 164 of EA, 2003	NA				-	(i) Delay in manufacturing & supply on account of Nation-wide lockdown/ subsequent restrictions in the wake of Covid-19 (October 2020 to January 2021: 5 months) (ii) Severe RoW issues at the new Transmission tower locations- leading to delay in commencement of transmission Line foundation works (January 2021 to March 2021: 3 months) (iii) Extended Rain & inundation of work site (December 2020 to March 2021: 4 months) (iv) Hindrance to work on account of road blockade & Bandhs in the aftermath of anti-CAB agitation (December 2019 to March 2020: 4 months)
2	Supplies	25.12.2018	25.10.2019	30.3.2019	28.10.2020	12	
3	Civil works and erection	25.12.2018	25.12.2019	1.1.2019	30.4.2021	16	
4	Testing and commissioning (as per IA)	25.12.2019	25.1.2020	1.9.2020	9.5.2021	15	
5	Completion as per TBCB schedule	30.7.2020	30.7.2020	9.5.2021	11.5.2021	9	

Asset-7

S.N.	Activity	Original schedule (As per planning)		Actual Achieved (As per actual)		Time over-run	Reason(s) for delay along with reference to supporting documents
		Start date	Completion date	Start date	Completion date	Months	
1	Notification under Section 164 of EA, 2003	NA		-	-	-	(i) Delay in manufacturing & supply on account of nation-wide lockdown/ subsequent restrictions in the wake of Covid-19 (October 2020 to January 2021: 5 months) (ii) Severe RoW issues at the new transmission tower locations- leading to delay in commencement of transmission Line foundation works (January 2021 to March 2021: 3 months) (iii) Extended Rain & inundation of work site (December 2020 to March 2021: 4 months) (iv) Hindrance to work on account of road blockade & Bandhs in the aftermath of anti-CAB agitation (December 2019 to March 2020: 4 months)
2	Supplies	25.12.2018	25.10.2019	30.3.2019	28.10.2020	12	
3	Civil works and erection	25.12.2018	25.12.2019	1.1.2019	15.5.2021	16	
4	Testing and commissioning (as per IA)	25.12.2019	25.1.2020	1.9.2020	23.5.2021	15	
5	Completion as per TBCB schedule	30.7.2020	30.7.2020	9.5.2021	23.5.2021	9	



38. We have considered the submissions of the Petitioner. We have also gone through the documentary evidence placed on record by the Petitioner to justify time over-run. The transmission assets were scheduled to be put into commercial operation within 24 months from the date of IA dated 1.5.2018 against which Asset-1, Asset-2, Asset-3, Asset-4, Asset-5, Asset-6 and Asset-7 have been put to commercial operation on 1.8.2020 (proposed), 22.8.2020, 1.1.2021, 14.2.2021, 17.3.2021, 11.5.2021 and 23.5.2021 (proposed) respectively. Accordingly, there is a time over-run of 93 days, 114 days, 246 days, 290 days, 321 days, 376 days and 388 days in respect of Asset-1, Asset-2, Asset-3, Asset-4, Asset-5, Asset-6 and Asset-7 respectively.

39. The Petitioner has submitted that the time over-run in case of all the transmission assets is due to Covid-19. The Petitioner has further submitted that in case of Asset-1 and Asset-2, it was due to problems in transportation of Reactor. Asset-3, Asset-4 and Asset-5 got delayed due to problem in transportation of transformer, damage of ICT bushing, delay due to Citizenship Amendment Bill (CAA), extended rain fall and floods. Asset-6 and Asset-7 got delayed due to delay in manufacturing and supply on account of nation-wide lockdown/subsequent restrictions in the wake of Covid-19, severe RoW issues at the new transmission tower locations, extended rain and inundation of work site, hindrance to work on account of road blockade and bandhs in the aftermath of anti CAB agitation.

40. The Ministry of Power (MoP) vide letter dated 27.7.2020 has extended the SCOD in respect of inter-State transmission project by 5 months due to COVID-19 pandemic.

The relevant portion of the letter dated 27.7.2020 is as follows:

“Sub: Extension to TSP/Transmission Licensees for completion of under construction inter-State transmission projects

Sir,



I am directed to state that transmission utilities have pointed out that construction activities at various transmission project sites have been severely affected by the nationwide lockdown measures announced since 25th march, 2020 to contain outbreak of COVID-19 and have requested for extension of Scheduled Commercial Operation (SCOD) to mitigate the issues of disruption in supply chains and manpower, caused due to outbreak of COVID-19 pandemic.

2. It has been, therefore, decided that; i. All inter-state transmission projects, which were under construction as on date of lock-down i.e. 25th March 2020, shall get an extension of five months in respect of SCOD

ii. This order shall not apply to those projects, whose SCOD date was prior to 25th March 2020

iii. Start date of Long Term Access granted to a generator by CTU based on completion of a transmission line, whose SCOD is extended by 5 months due to COVID-19 as mentioned above at point(i), shall also be extended by 5 months.”

41. In the aforesaid letter, MoP, taking into account, the construction activities at the various transmission project sites having been severely affected by the nationwide lockdown measures announced since 25.3.2020 to contain the outbreak of Covid-19 and the request of the transmission utilities for extension of SCOD to mitigate the issues of disruption in supply chains and manpower caused due to outbreak of Covid-19, decided that all inter-State transmission projects which were under construction as on date of lockdown i.e. 25.3.2020 shall get an extension of 5 months in respect of SCOD provided the SCOD of these projects was post 25.3.2020. It is also relevant to note that the above letter of the MoP is in nature of generic order/blanket order applicable to all the transmission licensees whose projects fall under the criteria specified therein and as such does not require the individual licensee to substantiate/ make out its case for availing the dispensation provided under the said order. In the present case, the transmission project of the Petitioner was under construction stage as on the date of lockdown i.e. 25.3.2020 and the SCOD of the transmission project was 31.7.2020 i.e. post 25.3.2020 and, therefore, the dispensation provided by the MoP vide its letter dated



27.7.2020 is applicable in the instant case. Accordingly, the SCOD of the transmission project is considered as 31.12.2020.

42. As per I.A., the SCOD of the transmission project is 31.7.2020. In terms of the above letter dated 27.7.2020, the revised SCOD of the transmission project is considered as 31.12.2020. Hence, there is no time over-run in execution of Asset-1, Asset-2 and Asset-3 in terms of the revised SCOD. However, there is time over-run of 45 days, 76 days, 131 days and 143 days in declaring the commercial operation of the Asset-4, Asset-5, Asset-6 and Asset-7 respectively, in terms of the revised SCOD.

43. With respect to Asset-4 and Asset-5, the Petitioner has submitted that 12 months of delay due to transportation of transformer, damage of ICT bushing, delay due to citizenship amendment bill and extended rain fall and flood. We have gone through the submissions of the Petitioner. The Petitioner has attributed the time over-run from October 2019 to October 2020 to the delay in transportation of transformer, the time over-run from December, 2019 to March, 2020 to anti CAA protests and the time over-run in July, September, and October, 2020 is because of extended rainfall and floods. The SCOD of the transmission project has already been revised to 31.12.2020. The Petitioner has given reasons for time over-run upto October 2020 and has attributed the time over-run upto October 2020 was due to delay in transportation of transformer, damage of ICT bushing, delay due to citizenship amendment bill and extended rainfall and flood. The time over-run upto October 2020, for which the Petitioner has given reasons, is subsumed in the time over-run already condoned upto 31.12.2020 on account of Covid-19 pandemic. Further, as stated above, the Petitioner has not explained the time over-run beyond the revised SCOD of 31.12.2020. . In view of the



above, time over-run beyond 31.12.2020 in case of Asset-4 and Asset-5 is not condoned.

44. As regards Asset-6 and Asset-7, the Petitioner has submitted that the time over-run is on account of Covid-19, severe RoW issues, extended rain and inundation of work, anti CAA agitation. We have gone through the submissions of the Petitioner. As stated above, the SCOD of the transmsison project has already been revised to 31.12.2020. The time over-run due to the reasons given by the Petitioner, i.e. delay in manufacturing and supply on account of lockdown and restrictions due to Covid-19, anti-CAA protests and extended rainfall and flood is subsumed in the time over-run already condoned upto 31.12.2020 on account of Covid-19 pandemic. Threfore, the time over-run beyond 31.12.2020 in case of Asset-6 and Asset-7 is not condoned. The Petitioner has not explained the time over-run beyond the revised SCOD of 31.12.2020. As regards RoW problems, the Petitioner is directed to submit the status of transmission line as on 31.12.2020 and submit locations impacted due RoW problems faced at the time of truing-up. Accordingly, time over-run on account of RoW problems will be considered at the time of truing up based on the submission of the Petitioner. Therefore, the time over-run beyond 31.12.2020 in case of Asset-6 and Asset-7 is not condoned

45. Accordingly, the time over-run condoned/ not condoned in the aforesaid paragraphs in respect of the transmission assets is summarised as follows:

Assets	SCOD as per IA	Revised SCOD as per MoP letter dated 27.7.2020	COD	Time over-run (days)	Time over-run not condoned (days)
Asset-1	1.5.2020	31.12.2020	1.8.2020	Nil	-
Asset-2			22.8.2020	Nil	-
Asset-3			1.1.2021	Nil	-



Assets	SCOD as per IA	Revised SCOD as per MoP letter dated 27.7.2020	COD	Time over-run (days)	Time over-run not condoned (days)
Asset-4			14.2.2021	45	45
Asset-5			17.3.2021	76	76
Asset-6			11.5.2021	131	131
Asset-7			23.5.2021	143	143

Interest During Construction (“IDC”)

46. The Petitioner has claimed the following IDC in respect of the transmission assets covered in the instant petition and has submitted the statement showing IDC claim, discharge of IDC liability as on COD and thereafter:

(₹ in lakh)				
Assets	IDC as per Auditor’s Certificate	IDC discharged up to COD	IDC discharged during 2020-21	IDC discharged during 2021-22
Asset-1	26.36	25.87	0.00	0.49
Asset-2	36.95	25.03	1.17	10.75
Asset-3	298.76	213.36	0.00	85.40
Asset-4	63.15	41.89	1.72	19.54
Asset-5	77.24	52.80	0.00	24.44
Asset-6	131.93	95.59	0.00	36.34
Asset-7	48.45	31.07	0.00	17.38

47. With reference to methodology adopted and applicable, the rate of interest used for computation of IDC in case of loans obtained with “floating rate”, the Petitioner vide affidavit dated 1.4.2022 has submitted that IDC is calculated for loan with “floating rate” of interest by multiplying the loan amount with prevailing interest rate for a particular time period. Changed rate of interest is applied for the next particular time period for which rate of interest has been changed. The calculation is done from the date of drawl of the loan to COD. For the purpose of supporting documents for rate of interest, a compendium of floating rate of interest of various loans during 2014-19 tariff period will be submitted at the time of truing up.



48. We have considered the submissions of the Petitioner. The allowable IDC has been worked out considering the information submitted by the Petitioner. Further, the loan amount as on COD has been mentioned in Form-6 and Form-9C. The allowable IDC has been worked out based on the information available on record and relying on loan amount as per Form-9C. IDC claimed and considered as on COD and summary of discharge of IDC liability up to COD and thereafter for the purpose of tariff determination is as follows:

Assets	IDC as per Auditor's Certificate	IDC disallowed due to computational errors	IDC disallowed due to time over-run not condoned	IDC allowed on accrual basis	IDC allowed on cash basis as on COD	Un-discharged IDC liability as on COD	Discharge of IDC liability allowed as ACE	
							2020-21	2021-22
Asset-1	26.36	2.13	0.00	24.23	23.75	0.48	0.00	0.48
Asset-2	36.95	3.41	0.00	33.54	22.98	10.55	1.17	9.38
Asset-3	298.76	4.44	0.00	294.32	208.93	85.40	0.00	85.40
Asset-4	63.15	0.00	10.33	52.82	37.70	15.13	1.72	13.41
Asset-5	77.24	0.00	12.10	65.14	51.69	13.45	0.00	13.45
Asset-6	131.93	0.00	38.02	93.91	80.40	13.51	0.00	13.51
Asset-7	48.45	0.00	11.62	36.83	27.79	9.04	0.00	9.04

Incidental Expenditure During Construction ("IEDC")

49. The Petitioner has claimed IEDC of ₹63.05 lakh, ₹116.53 lakh, ₹596.11 lakh, ₹189.36 lakh, ₹126.46 lakh, ₹429.73 lakh and ₹156.91 lakh in respect of Asset-1, Asset-2, Asset-3, Asset-4, Asset-5, Asset-6 and Asset-7, respectively and has submitted Auditor's Certificate in support of its claim. Further, the Petitioner has submitted that entire IEDC claimed in the Auditor's Certificates is on cash basis and has been paid up to the COD of the transmission assets. IEDC considered in respect of the transmission assets as on COD for the purpose of tariff determination in the instant order is as follows:

Assets	IEDC claimed as per Auditor's Certificate	IEDC disallowed due to time over-run not condoned	IEDC allowed	
Asset-1	63.05	-		63.05
Asset-2	116.53	-		116.53



Assets	IEDC claimed as per Auditor's Certificate	IEDC disallowed due to time over-run not condoned	IEDC allowed
Asset-3	596.11	-	596.11
Asset-4	189.36	8.35	181.01
Asset-5	126.46	9.14	117.32
Asset-6	429.73	50.90	378.83
Asset-7	156.91	20.07	136.84

Initial Spares

50. Regulation 23(d) of the 2019 Tariff Regulations provides that Initial Spares shall be capitalized as a percentage of plant and machinery cost up to cut-off date, subject to the following ceiling norms:

“(d) Transmission System

<i>(i) Transmission line:</i>	<i>1.00%</i>
<i>(ii) Transmission sub-station</i>	
- <i>(Green Field):</i>	<i>4.00%</i>
- <i>(Brown Field):</i>	<i>6.00%</i>
<i>(iii) Series Compensation devices and HVDC Station:</i>	<i>4.00%</i>
<i>(iv) GIS Insulated Sub-station</i>	
- <i>(Green Field):</i>	<i>5.00%</i>
- <i>(Brown Field):</i>	<i>7.00%</i>
<i>(v) Communication System:</i>	<i>3.50%</i>
<i>(vi) Static Synchronous Compensator:</i>	<i>6.00%</i>

51. The Petitioner has claimed following Initial Spares in respect of the transmission assets:

Assets	Details as per Form-13			
	Plant and machinery excluding IDC, IEDC, land cost and cost of civil works as on cut-off date (A)	Initial Spares claimed by the Petitioner (B)	Norm (in %) (C)	Initial Spares worked out by the Petitioner
				$D = [(A-B)*C/(100-C)]$
Sub-station (Brownfield)				
Asset-1	625.12	43.85	6.00	37.10
Asset-2	1235.80	34.23	6.00	76.70
Asset-3	5529.62	144.30	6.00	343.74
Asset-6	3840.10	394.60	6.00	219.93
Asset-7	1004.96	102.22	6.00	57.62



Assets	Details as per Form-13			
	Plant and machinery excluding IDC, IEDC, land cost and cost of civil works as on cut-off date (A)	Initial Spares claimed by the Petitioner (B)	Norm (in %) (C)	Initial Spares worked out by the Petitioner
				$D = [(A-B)*C/(100-C)]$
	Transmission Line			
Asset-6	1399.21	3.58	1.00	14.10
	Communication System/ PLCC			
Asset-6	187.41	5.48	3.50	6.60

52. The Petitioner has submitted that the discharge of Initial Spares has been considered on cash basis in the Auditor's Certificate. The discharge statement of Initial Spares is submitted as follows:

(₹ in lakh)

Assets	Total Initial Spares claimed	Initial Spares discharged up to COD	Initial Spares discharged during			
			2020-21	2021-22	2022-23	2023-24
	Sub-station (Brownfield)					
Asset-1	43.85	38.43	0.92	4.49	0.00	0.00
Asset-2	34.23	2.90	19.11	12.22	0.00	0.00
Asset-3	144.30	71.54	72.76	0.00	0.00	0.00
Asset-6	394.60	147.06	0.00	140.74	106.58	0.21
Asset-7	102.22	0.00	0.00	51.11	51.11	0.00
	Transmission Line					
Asset-6	3.58	0.00	0.00	3.58	0.00	0.00
	Communication System/ PLCC					
Asset-6	5.48	5.48	0.00	0.00	0.00	0.00

53. The Petitioner has claimed Initial Spares on PLCC under communication system separately for Asset-6. Though PLCC is a communication system, it has been considered as part of the sub-station in the 2014 Tariff Regulations and the 2019 Tariff Regulations and the norms for Sub-station have been specified accordingly. Form-5 under Part-III of the 2019 Tariff Regulations requires a transmission licensee to provide "Element-wise Break-up of the project/ asset/ element cost of transmission system or communication system". The Petitioner is required to furnish the details in respect of (a)



transmission line: preliminary works, transmission lines material, taxes and duties; (b) Sub-stations: preliminary works and land, civil works, sub-station equipment, spares, taxes and duties; and for (c) Communication system: preliminary works, communication system equipment, taxes and duties. PLCC is a part of sub-station equipment at Sl. No. 6.5 of Form-5 under the head ‘Sub-station equipment’ and PLCC has not been mentioned under communication system. Therefore, we are not inclined to grant Initial Spares of Asset-6 separately towards PLCC under communication system since Initial Spares claimed towards PLCC are included in the sub-station.

54. We have considered the submissions of Petitioner. We note that there is variation in the plant and machinery cost (excluding IDC, IEDC, land cost and cost of civil works) considered for computation of Initial Spares as per Auditor’s Certificate and as per Form-13. We have considered the plant and machinery cost as per Auditor’s Certificate for computation of Initial Spares. Therefore, Initial Spares allowed in respect of the transmission assets for 2019-24 tariff period are as follows:

(₹ in lakh)

Assets	Plant and machinery excluding IDC, IEDC, land cost and cost of civil works as on cut-off date	Initial Spares claimed by the Petitioner	Norm (in %)	Initial Spares Allowed (₹ in lakh)	Excess Initial Spares disallowed (₹ in lakh)
	(A)	(B)	(C)	(D)	(E)=(B-D)
For Transmission Sub-station (Brownfield)					
Asset-1	625.12	43.85	6.00	37.10	6.75
Asset-2	1235.80	34.23	6.00	34.23	-
Asset-3	5529.62	144.30	6.00	144.30	-
Asset-4	No Initial Spares claimed by the Petitioner for Asset-4 and Asset-5				
Asset-5					
Asset-6 (*)	4027.51	400.08	6.00	231.54	168.54
Asset-7	1004.96	102.22	6.00	57.62	44.60
For Transmission Line					
Asset-6	1399.21	3.58	1.00	3.58	-

(*) included in PLCC



55. The details of capital cost allowed as on COD in respect of the transmission assets covered in the instant petition after adjusting disallowed/ undischarged IDC and excess Initial Spares are as follows:

(₹ in lakh)

Assets	Capital cost claimed as on COD (Auditor's Certificate)	IDC disallowed due to computational error	IDC disallowed due to time over-run not condoned	IEDC disallowed due to time over-run not condoned	Excess Initial Spares disallowed upto COD	Undischarged IDC	Capital cost allowed as on COD
	(A)	(B)	(C)	(D)	(E)	(F)	(G = A-B-C-D-E-F)
Asset-1	469.13	2.13	0.00	-	1.34	0.48	465.18
Asset-2	1055.04	3.41	0.00	-	0.00	10.55	1041.07
Asset-3	5416.29	4.44	0.00	-	0.00	85.40	5326.46
Asset-4	1852.56	0.00	10.33	8.35	0.00	15.13	1818.75
Asset-5	1151.91	0.00	12.10	9.14	0.00	13.45	1117.21
Asset-6	3256.38	0.00	38.02	50.90	0.00	13.51	3153.95
Asset-7	517.96	0.00	11.62	20.07	0.00	9.04	477.23

Additional Capital Expenditure ("ACE")

56. Regulation 24 and Regulation 25 of the 2019 Tariff Regulations provide as follows:

"24. Additional Capitalisation 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
- (d) The replacement of such asset or equipment has otherwise been allowed by the Commission.”

57. The Petitioner has claimed the following ACE in respect of the transmission assets for 2019-24 period in accordance with the provisions of Regulation 24 of the 2019 Tariff Regulations on account of undischarged liability towards final payment for works executed and for works deferred for execution within the cut-off date:

Assets	ACE claimed			
	2020-21	2021-22	2022-23	2023-24
Asset-1	117.00	182.77	0.00	0.00
Asset-2	198.11	140.14	0.00	0.00
Asset-3	256.72	146.82	637.32	0.00
Asset-4	15.26	419.93	74.10	0.00
Asset-5	2.04	292.72	51.66	0.00
Asset-6	0.00	2127.97	455.70	148.33
Asset-7	0.00	582.24	82.98	27.14

(₹ in lakh)



58. Further, the Petitioner *vide* affidavit dated 1.4.2022 has submitted the package-wise and vendor-wise details of ACE claimed in respect of the transmission assets during 2019-24 tariff period and the same is as follows:

(₹ in lakh)

Particulars (Package/Vendor)	Discharge of Liability during				
	2019-20	2020-21	2021-22	2022-23	2023-24
Asset-1					
Sterling & Wilson Ltd. (Sub-station, PLCC & IT)	-	117.00	182.78	-	-
Asset-2					
Sterling & Wilson Ltd. (Sub-station, PLCC & IT)	-	198.11	140.15	-	-
Asset-3					
Sterling & Wilson Ltd. (Sub-station, PLCC & IT)	-	256.73	146.82	637.32	-
Asset-4					
Sterling & Wilson Ltd. (Sub-station & IT)	-	15.26	419.94	74.11	-
Asset-5					
Sterling & Wilson Ltd. (Sub-station & IT)	-	2.03	292.72	51.66	-
Asset-6					
Sterling & Wilson Ltd. (Sub-station, PLCC, IT & TL)	-	-	1003.88	55.77	55.77
JV of M/s. NHVS & KEC International Ltd. (Sub-station & PLCC)	-	-	322.69	35.86	-
M/s. Godrej & Boyce Ltd. (Sub-station)	-	-	4.55	0.51	-
Toshniwal Industries (Sub-station)	-	-	23.55	2.62	-
M/s. AVS Engg. Services (Sub-station)	-	-	81.39	9.04	-
M/s. Deepak Baruah (Sub-station)	-	-	17.86	1.98	-
Procurement of Spares (Sub-station & TL)	-	-	203.58	126.67	-
Upgradation of SAS at Mariani (IT)	-	-	38.23	4.25	-
Compensation (transmission line)	-	-	29.00	-	-
Provision for Insulator Replacement (transmission line)	-	-	403.25	219.02	92.56
Total	-	-	2127.98	455.72	148.33



Particulars (Package/Vendor)	Discharge of Liability during				
	2019-20	2020-21	2021-22	2022-23	2023-24
Asset-7					
Sterling & Wilson Ltd. (Sub-station, PLCC & IT)	-	-	488.47	27.15	27.15
Toshniwal Industries (Sub-station)	-	-	23.55	2.62	-
Procurement of Spares (Sub-station)	-	-	51.11	51.11	-
Upgradation of SAS at Mariani (IT)	-	-	19.12	2.12	-
Total	-	-	582.25	83.00	27.15

59. We have considered the submissions of the Petitioner. ACE claimed by the Petitioner is allowed under Regulation 24(1)(a) and Regulation 24(1)(b) of the 2019 Tariff Regulations, as it is towards undischarged liabilities recognised to be payable at a future date and balance work deferred for execution. Since the CODs of the Asset-1 and Asset-2 is shifted to 31.12.2020, the Petitioner is directed to submit the revised Auditor Certificate at the time of true-up. ACE allowed for both the transmission assets is subject to true-up.

60. ACE allowed in respect of the transmission assets for 2019-24 tariff period is as follows:

Particulars	(₹ in lakh)			
	2020-21	2021-22	2022-23	2023-24
Asset-1				
ACE as per Auditor's Certificate allowed under Regulation 24(1)(a) of the 2019 Tariff Regulations towards undischarged liabilities recognised to be payable at a future date	13.05	21.68	0.00	0.00
ACE as per Auditor's Certificate allowed under Regulation 24(1)(b) of the 2019 Tariff Regulations towards balance work deferred for execution	103.95	161.10	0.00	0.00
Less: Initial Spares disallowed	0.92	4.49	0.00	0.00
Add: IDC Discharged	0.00	0.48	0.00	0.00
ACE allowed in the instant order	116.08	178.76	0.00	0.00
Asset-2				
ACE as per Auditor's Certificate allowed under Regulation 24(1)(a) of the 2019	58.48	42.30	0.00	0.00



Particulars	2020-21	2021-22	2022-23	2023-24
Tariff Regulations towards undischarged liabilities recognised to be payable at a future date				
ACE as per Auditor's Certificate allowed under Regulation 24(1)(b) of the 2019 Tariff Regulations towards balance work deferred for execution	139.63	97.85	0.00	0.00
Add: IDC Discharged	1.17	9.38	0.00	0.00
ACE allowed in the instant order	199.28	149.52	0.00	0.00
Asset-3				
ACE as per Auditor's Certificate allowed under Regulation 24(1)(a) of the 2019 Tariff Regulations towards undischarged liabilities recognised to be payable at a future date	0.00	0.00	637.32	0.00
ACE as per Auditor's Certificate allowed under Regulation 24(1)(b) of the 2019 Tariff Regulations towards balance work deferred for execution	256.72	146.82	0.00	0.00
Add: IDC Discharged	0.00	85.40	0.00	0.00
ACE allowed in the instant order	256.72	232.22	637.32	0.00
Asset-4				
ACE as per Auditor's Certificate allowed under Regulation 24(1)(a) of the 2019 Tariff Regulations towards undischarged liabilities recognised to be payable at a future date	4.81	296.52	52.33	0.00
ACE as per Auditor's Certificate allowed under Regulation 24(1)(b) of the 2019 Tariff Regulations towards balance work deferred for execution	10.45	123.42	21.78	0.00
Add: IDC Discharged	1.72	13.41	0.00	0.00
ACE allowed in the instant order	16.98	433.34	74.10	0.00
Asset-5				
ACE as per Auditor's Certificate allowed under Regulation 24(1)(a) of the 2019 Tariff Regulations towards undischarged liabilities recognised to be payable at a future date	0.48	90.66	16.00	0.00
ACE as per Auditor's Certificate allowed under Regulation 24(1)(b) of the 2019 Tariff Regulations towards balance work deferred for execution	1.55	202.06	35.66	0.00
Add: IDC Discharged	0.00	13.45	0.00	0.00
ACE allowed in the instant order	2.04	306.17	51.66	0.00
Asset-6				
ACE as per Auditor's Certificate allowed under Regulation 24(1)(a) of the 2019 Tariff Regulations towards undischarged liabilities recognised to be payable at a future date	0.00	398.96	28.93	15.40



Particulars	2020-21	2021-22	2022-23	2023-24
ACE as per Auditor's Certificate allowed under Regulation 24(1)(b) of the 2019 Tariff Regulations towards balance work deferred for execution	0.00	1729.01	426.78	132.93
IS disallowed	0.00	61.96	106.58	0.00
Add: IDC Discharged	0.00	13.51	0.00	0.00
ACE allowed in the instant order	0.00	2079.52	349.12	148.33
Asset-7				
ACE as per Auditor's Certificate allowed under Regulation 24(1)(a) of the 2019 Tariff Regulations towards undischarged liabilities recognised to be payable at a future date	0.00	30.70	1.71	1.71
ACE as per Auditor's Certificate allowed under Regulation 24(1)(b) of the 2019 Tariff Regulations towards balance work deferred for execution	0.00	551.55	81.28	25.43
Less: Initial Spares disallowed	0.00	0.00	44.60	0.00
Add: IDC Discharged	0.00	9.04	0.00	0.00
ACE allowed in the instant order	0.00	591.28	38.38	27.14

61. Accordingly, ACE for 2019-24 tariff period and capital cost as on 31.3.2024 in respect of the transmission assets considered for the purpose of tariff determination for 2019-24 tariff period are as follows:

Assets	Capital cost as on COD	Projected expenditure				Capital cost admitted as on 31.3.2024
		2020-21	2021-22	2022-23	2023-24	
Asset-1	465.18	116.08	178.76	0.00	0.00	760.02
Asset-2	1041.07	199.28	149.52	0.00	0.00	1389.88
Asset-3	5326.46	256.72	232.22	637.32	0.00	6452.71
Asset-4	1818.75	16.98	433.34	74.10	0.00	2343.17
Asset-5	1117.21	2.04	306.17	51.66	0.00	1477.08
Asset-6	3153.95	0.00	2079.52	349.12	148.33	5730.92
Asset-7	477.23	0.00	591.28	38.38	27.14	1134.03

Debt-Equity Ratio

62. 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.”



63. The Petitioner has considered debt-equity ratio of 70:30 as on COD and for ACE for 2019-24 tariff period. Debt-equity ratio of 70:30 has been considered for ACE allowed during 2019-24 period in accordance with Regulation 19 of the 2019 Tariff Regulations. The details of debt-equity ratio considered for the purpose of computation of tariff for 2019-24 tariff period is as follows:

Particulars	Capital cost as on 1.4.2019 (₹ in lakh)	(in %)	ACE during 2019-24 (₹ in lakh)	(in %)	Capital cost as on 31.3.2024 (₹ in lakh)	(in %)
Asset-1						
Debt	325.63	70.00	206.39	70.00	532.01	70.00
Equity	139.55	30.00	88.45	30.00	228.01	30.00
Total	465.18	100.00	294.84	100.00	760.02	100.00
Asset-2						
Debt	728.75	70.00	244.16	70.00	972.91	70.00
Equity	312.32	30.00	104.64	30.00	416.96	30.00
Total	1041.07	100.00	348.80	100.00	1389.88	100.00
Asset-3						
Debt	3728.52	70.00	788.38	70.00	4516.90	70.00
Equity	1597.94	30.00	337.88	30.00	1935.81	30.00
Total	5326.46	100.00	1126.26	100.00	6452.71	100.00
Asset-4						
Debt	1273.13	70.00	367.09	70.00	1640.22	70.00
Equity	545.63	30.00	157.32	30.00	702.95	30.00
Total	1818.75	100.00	524.42	100.00	2343.17	100.00
Asset-5						
Debt	782.05	70.00	251.91	70.00	1033.96	70.00
Equity	335.16	30.00	107.96	30.00	443.12	30.00
Total	1117.21	100.00	359.87	100.00	1477.08	100.00
Asset-6						
Debt	2207.76	70.00	1803.88	70.00	4011.64	70.00
Equity	946.18	30.00	773.09	30.00	1719.28	30.00
Total	3153.95	100.00	2576.97	100.00	5730.92	100.00
Asset-7						
Debt	334.06	70.00	459.76	70.00	793.81	70.00
Equity	143.17	30.00	197.04	30.00	340.21	30.00
Total	477.23	100.00	656.80	100.00	1134.03	100.00

Depreciation

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



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

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

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

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

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

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

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

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

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

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

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

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



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

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

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

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

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

65. We have considered the submissions of the Petitioner. Weighted Average Rate of Depreciation (WAROD) at Annexure-I has been worked out after taking into account the depreciation rates of the transmission assets as specified in the 2019 Tariff Regulations. Depreciation has been worked out considering ACE as on COD and ACE in 2019-24 tariff period. Depreciation allowed in respect of the transmission assets are as follows:



Asset-1

(₹ in lakh)

Particulars	2020-21 (pro-rata 243 days)	2021-22	2022-23	2023-24
Opening Gross Block	465.18	581.26	760.02	760.02
ACE	116.08	178.76	0.00	0.00
Closing Gross Block	581.26	760.02	760.02	760.02
Average Gross Block	523.22	670.64	760.02	760.02
Weighted average rate of Depreciation (WAROD) (in %)	5.70	5.63	5.60	5.60
Balance useful life of the asset (Year)	23	23	22	21
Lapsed life (Year)	0	0	1	2
Depreciable Value	472.55	605.32	685.82	685.82
Combined Depreciation during the year	19.87	37.76	42.56	42.56
Cumulative depreciation at the end of the year	19.87	57.63	100.19	142.75
Remaining Depreciable Value at the end of the year	452.68	547.69	585.63	543.07

Asset-2

(₹ in lakh)

Particulars	2020-21 (pro-rata 222 days)	2021-22	2022-23	2023-24
Opening Gross Block	1041.07	1240.35	1389.88	1389.88
ACE	199.28	149.52	0.00	0.00
Closing Gross Block	1240.35	1389.88	1389.88	1389.88
Average Gross Block	1140.71	1315.12	1389.88	1389.88
Weighted average rate of Depreciation (WAROD) (in %)	5.36	5.35	5.35	5.35
Balance useful life of the asset (Year)	25	25	24	23
Lapsed life (Year)	0	0	1	2
Depreciable Value	1027.50	1184.55	1251.88	1251.88
Combined Depreciation during the year	37.17	70.41	74.39	74.39
Cumulative depreciation at the end of the year	37.17	107.57	181.97	256.36
Remaining Depreciable Value at the end of the year	990.33	1076.98	1069.91	995.51



Asset-3

(₹ in lakh)

Particulars	2020-21 (pro-rata 90 days)	2021-22	2022-23	2023-24
Opening Gross Block	5326.46	5583.18	5815.39	6452.71
ACE	256.72	232.22	637.32	0.00
Closing Gross Block	5583.18	5815.39	6452.71	6452.71
Average Gross Block	5454.82	5699.29	6134.05	6452.71
Weighted average rate of Depreciation (WAROD) (in %)	5.34	5.34	5.34	5.34
Balance useful life of the asset (Year)	25	25	24	23
Lapsed life (Year)	0	0	1	2
Depreciable Value	4912.56	5132.66	5524.08	5810.94
Combined Depreciation during the year	71.87	304.44	327.56	344.49
Cumulative depreciation at the end of the year	71.87	376.30	703.87	1048.36
Remaining Depreciable Value at the end of the year	4840.70	4756.36	4820.21	4762.58

Asset-4

(₹ in lakh)

Particulars	2020-21 (pro-rata 46 days)	2021-22	2022-23	2023-24
Opening Gross Block	1818.75	1835.73	2269.07	2343.17
ACE	16.98	433.34	74.10	0.00
Closing Gross Block	1835.73	2269.07	2343.17	2343.17
Average Gross Block	1827.24	2052.40	2306.12	2343.17
Weighted average rate of Depreciation (WAROD) (in %)	5.31	5.31	5.31	5.31
Balance useful life of the asset (Year)	25	25	24	23
Lapsed life (Year)	0	0	1	2
Depreciable Value	1645.13	1847.80	2076.18	2109.52
Combined Depreciation during the year	12.23	108.99	122.41	124.37
Cumulative depreciation at the end of the year	12.23	121.22	243.63	368.01
Remaining Depreciable Value at the end of the year	1632.90	1726.58	1832.54	1741.52



Asset-5

(₹ in lakh)

Particulars	2020-21 (pro-rata 15 days)	2021-22	2022-23	2023-24
Opening Gross Block	1117.21	1119.25	1425.42	1477.08
ACE	2.04	306.17	51.66	0.00
Closing Gross Block	1119.25	1425.42	1477.08	1477.08
Average Gross Block	1118.23	1272.34	1451.25	1477.08
Weighted average rate of Depreciation (WAROD) (in %)	5.32	5.31	5.31	5.31
Balance useful life of the asset (Year)	25	25	24	23
Lapsed life (Year)	0	0	1	2
Depreciable Value	1006.84	1145.56	1306.61	1329.86
Combined Depreciation during the year	2.44	67.62	77.09	78.46
Cumulative depreciation at the end of the year	2.44	70.06	147.16	225.62
Remaining Depreciable Value at the end of the year	1004.40	1075.49	1159.45	1104.24

Asset-6

(₹ in lakh)

Particulars	2021-22 (pro-rata 325 days)	2022-23	2023-24
Opening Gross Block	3153.95	5233.47	5582.59
ACE	2079.52	349.12	148.33
Closing Gross Block	5233.47	5582.59	5730.92
Average Gross Block	4193.71	5408.03	5656.76
Weighted average rate of Depreciation (WAROD) (in %)	5.41	5.42	5.42
Balance useful life of the asset (Year)	26	26	25
Lapsed life (Year)	0	0	1
Depreciable Value	3777.68	4872.74	5096.81
Combined Depreciation during the year	201.95	293.15	306.50
Cumulative depreciation at the end of the year	201.95	495.10	801.60
Remaining Depreciable Value at the end of the year	3575.73	4377.65	4295.21



Asset-7**(₹ in lakh)**

Particulars	2021-22 (pro-rata 313 days)	2022-23	2023-24
Opening Gross Block	477.23	1068.51	1106.89
ACE	591.28	38.38	27.14
Closing Gross Block	1068.51	1106.89	1134.03
Average Gross Block	772.87	1087.70	1120.46
Weighted average rate of Depreciation (WAROD) (in %)	5.54	5.57	5.57
Balance useful life of the asset (Year)	25	25	24
Lapsed life (Year)	0	0	1
Depreciable Value	697.66	982.14	1011.74
Combined Depreciation during the year	36.73	60.55	62.39
Cumulative depreciation at the end of the year	36.73	97.28	159.67
Remaining Depreciable Value at the end of the year	660.94	884.86	852.07

Interest on Loan (“IoL”)

66. 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.”

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

Asset-1

Particulars	(₹ in lakh)			
	2020-21 (Pro-rata 243 days)	2021-22	2022-23	2023-24
Gross Normative Loan	325.63	406.88	532.01	532.01
Cumulative Repayments up to Previous Year	0.00	19.87	57.63	100.19
Net Loan-Opening	325.63	387.01	474.38	431.82
Additions due to ACE	81.26	125.13	0.00	0.00
Repayment during the year	19.87	37.76	42.56	42.56
Net Loan-Closing	387.01	474.38	431.82	389.26
Average Loan	356.32	430.69	453.10	410.54
Weighted Average Rate of Interest on Loan (in %)	7.0820	7.0819	7.0818	7.0813
Interest on Loan	16.80	30.50	32.09	29.07



Asset-2

(₹ in lakh)

Particulars	2020-21 (pro-rata 222 days)	2021-22	2022-23	2023-24
Gross Normative Loan	728.75	868.25	972.91	972.91
Cumulative Repayments up to Previous Year	0.00	37.17	107.57	181.97
Net Loan-Opening	728.75	831.08	865.34	790.95
Additions due to ACE	139.50	104.67	0.00	0.00
Repayment during the year	37.17	70.41	74.39	74.39
Net Loan-Closing	831.08	865.34	790.95	716.55
Average Loan	779.92	848.21	828.14	753.75
Weighted Average Rate of Interest on Loan (in %)	6.8097	6.8099	6.8102	6.8108
Interest on Loan	32.30	57.76	56.40	51.34

Asset-3

(₹ in lakh)

Particulars	2020-21 (pro-rata 90 days)	2021-22	2022-23	2023-24
Gross Normative Loan	3728.52	3908.22	4070.78	4516.90
Cumulative Repayments up to Previous Year	0.00	71.87	376.30	703.87
Net Loan-Opening	3728.52	3836.36	3694.47	3813.03
Additions due to ACE	179.70	162.55	446.12	0.00
Repayment during the year	71.87	304.44	327.56	344.49
Net Loan-Closing	3836.36	3694.47	3813.03	3468.54
Average Loan	3782.44	3765.41	3753.75	3640.79
Weighted Average Rate of Interest on Loan (in %)	7.0242	7.0157	7.0073	7.0082
Interest on Loan	65.51	264.17	263.04	255.15

Asset-4

(₹ in lakh)

Particulars	2020-21 (pro-rata 46 days)	2021-22	2022-23	2023-24
Gross Normative Loan	1273.13	1285.01	1588.35	1640.22
Cumulative Repayments up to Previous Year	0.00	12.23	121.22	243.63
Net Loan-Opening	1273.13	1272.78	1467.13	1396.58
Additions due to ACE	11.89	303.33	51.87	0.00
Repayment during the year	12.23	108.99	122.41	124.37
Net Loan-Closing	1272.78	1467.13	1396.58	1272.21
Average Loan	1272.95	1369.95	1431.86	1334.40
Weighted Average Rate of Interest on Loan (%)	6.4853	6.4823	6.4794	6.4794
Interest on Loan	10.40	88.80	92.78	86.46



Asset-5

(₹ in lakh)

Particulars	2020-21 (pro-rata 15 days)	2021-22	2022-23	2023-24
Gross Normative Loan	782.05	783.48	997.79	1033.96
Cumulative Repayments up to Previous Year	0.00	2.44	70.06	147.16
Net Loan-Opening	782.05	781.03	927.73	886.80
Additions due to ACE	1.43	214.32	36.16	0.00
Repayment during the year	2.44	67.62	77.09	78.46
Net Loan-Closing	781.03	927.73	886.80	808.34
Average Loan	781.54	854.38	907.27	847.57
Weighted Average Rate of Interest on Loan (%)	7.2577	7.2437	7.2300	7.2300
Interest on Loan	2.33	61.89	65.59	61.28

Asset-6

(₹ in lakh)

Particulars	2021-22 (pro-rata 325 days)	2022-23	2023-24
Gross Normative Loan	2207.76	3663.43	3907.81
Cumulative Repayments up to Previous Year	0.00	201.95	495.10
Net Loan-Opening	2207.76	3461.48	3412.72
Additions due to ACE	1455.67	244.38	103.83
Repayment during the year	201.95	293.15	306.50
Net Loan-Closing	3461.48	3412.72	3210.05
Average Loan	2834.62	3437.10	3311.38
Weighted Average Rate of Interest on Loan (%)	6.5271	6.5239	6.5236
Interest on Loan	164.74	224.23	216.02

Asset-7

(₹ in lakh)

Particulars	2021-22 (pro-rata 313 days)	2022-23	2023-24
Gross Normative Loan	334.06	747.96	774.82
Cumulative Repayments up to Previous Year	0.00	36.73	97.28
Net Loan-Opening	334.06	711.23	677.54
Additions due to ACE	413.90	26.87	19.00
Repayment during the year	36.73	60.55	62.39
Net Loan-Closing	711.23	677.54	634.15
Average Loan	522.65	694.39	655.85
Weighted Average Rate of Interest on Loan (%)	7.1901	7.1749	7.1778
Interest on Loan	32.23	49.82	47.08



Return on Equity (“RoE”)

68. 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 cutoff date beyond the original scope, excluding additional capitalization on account of emission control system, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%.

Provided further that:

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

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

(3) *The return on equity in respect of additional capitalization on account of emission control system shall be computed at the base rate of one-year marginal cost of lending rate (MCLR) of the State Bank of India as on 1st April of the year in which the date of*



operation (ODe) occurs plus 350 basis point, subject to ceiling of 14%.”

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

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

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

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

Illustration-

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

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

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

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



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

Asset-1

(₹ in lakh)

Particulars	2020-21 (pro-rata 243 days)	2021-22	2022-23	2023-24
Opening Equity	139.55	174.38	228.01	228.01
Additions due to ACE	34.82	53.63	0.00	0.00
Closing Equity	174.38	228.01	228.01	228.01
Average Equity	156.97	201.19	228.01	228.01
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472
Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782
Return on Equity	19.63	37.79	42.82	42.82

Asset-2

(₹ in lakh)

Particulars	2020-21 (pro-rata 222 days)	2021-22	2022-23	2023-24
Opening Equity	312.32	372.11	416.96	416.96
Additions due to ACE	59.78	44.86	0.00	0.00
Closing Equity	372.11	416.96	416.96	416.96
Average Equity	342.21	394.53	416.96	416.96
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472
Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782
Return on Equity	39.09	74.10	78.31	78.31

Asset-3

(₹ in lakh)

Particulars	2020-21 (pro-rata 90 days)	2021-22	2022-23	2023-24
Opening Equity	1597.94	1674.95	1744.62	1935.81
Additions due to ACE	77.02	69.66	191.20	0.00
Closing Equity	1674.95	1744.62	1935.81	1935.81
Average Equity	1636.45	1709.79	1840.22	1935.81
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472
Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782



Particulars	2020-21 (pro-rata 90 days)	2021-22	2022-23	2023-24
Return on Equity	75.79	321.13	345.63	363.58

Asset-4

(₹ in lakh)

Particulars	2020-21 (pro-rata 46 days)	2021-22	2022-23	2023-24
Opening Equity	545.63	550.72	680.72	702.95
Additions due to ACE	5.09	130.00	22.23	0.00
Closing Equity	550.72	680.72	702.95	702.95
Average Equity	548.17	615.72	691.84	702.95
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472
Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782
Return on Equity	12.98	115.64	129.94	132.03

Asset-5

(₹ in lakh)

Particulars	2020-21 (pro-rata 15 days)	2021-22	2022-23	2023-24
Opening Equity	335.16	335.78	427.63	443.12
Additions due to ACE	0.61	91.85	15.50	0.00
Closing Equity	335.78	427.63	443.12	443.12
Average Equity	335.47	381.70	435.38	443.12
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472
Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782
Return on Equity	2.59	71.69	81.77	83.23

Asset-6

(₹ in lakh)

Particulars	2021-22 (pro-rata 325 days)	2022-23	2023-24
Opening Equity	946.18	1570.04	1674.78
Additions due to ACE	623.86	104.74	44.50
Closing Equity	1570.04	1674.78	1719.28
Average Equity	1258.11	1622.41	1697.03
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500
MAT Rate for respective year (in %)	17.472	17.472	17.472
Rate of Return on Equity (in %)	18.782	18.782	18.782
Return on Equity	210.40	304.72	318.74



Asset-7

(₹ in lakh)

Particulars	2021-22 (pro-rata 313 days)	2022-23	2023-24
Opening Equity	143.17	320.55	332.07
Additions due to ACE	177.38	11.51	8.14
Closing Equity	320.55	332.07	340.21
Average Equity	231.86	326.31	336.14
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500
MAT Rate for respective year (in %)	17.472	17.472	17.472
Rate of Return on Equity (in %)	18.782	18.782	18.782
Return on Equity	37.34	61.29	63.13

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

70. O&M Expenses claimed by the Petitioner in respect of the transmission assets for 2019-24 period are as follows:

Asset-1:

Particulars	2020-21 (pro-rata 243 days)	2021-22	2022-23	2023-24
2 numbers 400 kV line bays at Imphal Sub-station				
Number of bays	2	2	2	2
Norms (₹ lakh/Bay)	33.28	34.45	35.66	36.91
Total O&M Expenses (₹ in lakh)	44.31	68.90	71.32	73.82

Asset-2:

Particulars	2020-21 (pro-rata 222 days)	2021-22	2022-23	2023-24
1x125 MVAR, 400 kV 3 Phase bus reactor at 400/132 kV Imphal Sub-station				
Number of bays	1	1	1	1
Norms (₹ lakh/Bay)	33.28	34.45	35.66	36.91
Total O&M Expenses (₹ in lakh)	20.24	34.45	35.66	36.91

Asset-3:

Particulars	2020-21 (pro-rata 90 days)	2021-22	2022-23	2023-24
400 kV ICT 2 bay, 400 kV Bus reactor bay at New Mariani and 2 Numbers of 400 kV line bays for 400 kV D/C New Kohima-New Mariani line				
Number of bays	4	4	4	4
Norms (₹ lakh/Bay)	33.28	34.45	35.66	36.91



Particulars	2020-21 (pro-rata 90 days)	2021-22	2022-23	2023-24
400 kV ICT 2 bay, 400 kV Bus reactor bay at New Mariani and 2 Numbers of 400 kV line bays for 400 kV D/C New Kohima-New Mariani line				
220 kV ICT 2 Bay at at New Mariani				
Number of bays	1	1	1	1
Norms (₹ lakh/Bay)	23.3	24.12	24.96	25.84
500 MVA ICT 2 at New Mariani				
Transformation Capacity (MVA)	500	500	500	500
Norms (₹ Lakh per MVA)	0.371	0.384	0.398	0.411
Total O&M Expenses (₹ in lakh)	84.32	353.92	366.60	378.98

Asset-4:

Particulars	2020-21 (pro-rata 46 days)	2021-22	2022-23	2023-24
400 kV ICT-1 Bay at New Mariani				
Number of bays	1	1	1	1
Norms (₹ lakh/Bay)	33.28	34.45	35.66	36.91
220 kV ICT Bay at New Mariani				
Number of bays	1	1	1	1
Norms (₹ lakh/Bay)	23.3	24.12	24.96	25.84
500 MVA ICT 1, 400 kV at New Mariani				
Transformation Capacity (MVA)	500	500	500	500
Norms (₹ Lakh per MVA)	0.371	0.384	0.398	0.411
Total O&M Expenses (₹ in lakh)	30.51	250.57	259.62	268.25

Asset-5:

Particulars	2020-21 (pro-rata 15 days)	2021-22	2022-23	2023-24
125 MVAR Bus Reactor Bay at 400 kV New Mariani				
Number of bays	1	1	1	1
Norms (₹ lakh/Bay)	33.28	34.45	35.66	36.91
Total O&M Expenses (₹ in lakh)	1.37	34.45	35.66	36.91

Asset-6:

Particulars	2021-22 (pro-rata 325 days)	2022-23	2023-24
2 numbers of 400 kV line bays at New Mariani for New Mariani – Misa transmission line			
Number of bays	2	2	2
Norms (₹ lakh/Bay)	34.45	35.66	36.91
2 numbers of 400 kV GIS line bays at Misa for New Mariani – Misa transmission line			



Particulars	2021-22 (pro-rata 325 days)	2022-23	2023-24
2 numbers of 400 kV line bays at New Mariani for New Mariani – Misa transmission line			
Number of bays	2	2	2
Norms (₹ lakh/Bay)	24.115	24.962	25.837
400 kV D/C Additional Transmission Line			
D/C (Twin & Triple Conductor) (km)	1.33	1.33	1.33
Norms (₹ lakh/ km)	0.944	0.977	1.011
Total O&M Expenses (₹ in lakh)	105.41	122.54	126.83

Asset-7:

Particulars	2021-22 (pro-rata 313 days)	2022-23	2023-24
2 Numbers of 220 kV Line Bays at New Mariani Sub-station			
Number of bays	2	2	2
Norms (₹ lakh/Bay)	24.12	24.96	25.84
Total O&M Expenses (₹ in lakh)	41.37	49.92	51.68

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

“35. Operation and Maintenance Expenses:

...

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

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



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

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

Provided further that:

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;*
- ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;*
- iii. the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);*
- iv. the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme;*



- v. the O&M expenses of ± 800 kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ± 800 kV, Bishwanath-Agra HVDC bi-pole scheme; and
- vi. the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years.

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

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

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

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

72. O&M Expenses allowed as per the norms specified in the 2019 Tariff Regulations in respect of the transmission assets are as follows:

Asset-1:

Particulars	2020-21 (pro-rata 243 days)	2021-22	2022-23	2023-24
2 numbers 400 kV line bays at Imphal Sub-station				
Number of bays	2	2	2	2
Norms (₹ in lakh/Bay)	33.28	34.45	35.66	36.91
Total O&M Expenses allowed (₹ in lakh)	44.31	68.90	71.32	73.82

Asset-2:

Particulars	2020-21 (pro-rata 222 days)	2021-22	2022-23	2023-24
1x125 MVAR, 400 kV 3 Phase bus reactor at 400/132 kV Imphal Sub-station				
Number of bays	1	1	1	1
Norms (₹ in lakh/Bay)	33.28	34.45	35.66	36.91
Total O&M Expenses allowed (₹ in lakh)	20.24	34.45	35.66	36.91



Asset-3:

Particulars	2020-21 (pro-rata 90 days)	2021-22	2022-23	2023-24
New Mariani ICT 2 bay, Bus reactor bay and New Kohima Bay 1 and 2				
Number of bays	4	4	4	4
Norms (₹ in lakh/Bay)	33.28	34.45	35.66	36.91
New Mariani ICT 2 Bay at 220 kV				
Number of bays	1	1	1	1
Norms (₹ in lakh/Bay)	23.3	24.12	24.96	25.84
New Mariani ICT 2				
Transformation Capacity (MVA)	500	500	500	500
Norms (₹ in lakh per MVA)	0.371	0.384	0.398	0.411
Total O&M Expenses allowed (₹ in lakh)	84.31	353.92	366.60	378.98

Asset-4:

Particulars	2020-21 (pro-rata 46 days)	2021-22	2022-23	2023-24
New Mariani ICT Bay 400 kV				
Number of bays	1	1	1	1
Norms (₹ in lakh/Bay)	33.28	34.45	35.66	36.91
New Mariani ICT Bay 220 kV				
Number of bays	1	1	1	1
Norms (₹ in lakh/Bay)	23.3	24.12	24.96	25.84
New Mariani ICT 1, 400 kV				
Transformation Capacity (MVA)	500	500	500	500
Norms (₹ in lakh per MVA)	0.371	0.384	0.398	0.411
Total O&M Expenses allowed (₹ in lakh)	30.51	250.57	259.62	268.25

Asset-5:

Particulars	2020-21 (pro-rata 15 days)	2021-22	2022-23	2023-24
New Mariani Bus Reactor Bay 400 kV				
Number of bays	1	1	1	1
Norms (₹ in lakh/Bay)	33.28	34.45	35.66	36.91
Total O&M Expenses allowed (₹ in lakh)	1.37	34.45	35.66	36.91



Asset-6:

Particulars	2021-22 (pro-rata 325 days)	2022-23	2023-24
New Mariani – Misa Bays 400 kV			
Number of bays	2	2	2
Norms (₹ in lakh/Bay)	34.45	35.66	36.91
New Mariani Bays, GIS 400 kV			
Number of bays	2	2	2
Norms (₹ in lakh/Bay)	24.115	24.962	25.837
Additional Transmission Line D/C 400 kV			
D/C (Twin & Triple Conductor) (km)	1.33	1.33	1.33
Norms (₹ lakh/ km)	0.944	0.977	1.011
Total O&M Expenses allowed (₹ in lakh)	105.41	122.54	126.84

Asset-7:

Particulars	2021-22 (pro-rata 313 days)	2022-23	2023-24
New Mariani Line Bays 220 kV			
Number of bays	2	2	2
Norms (₹ in lakh/Bay)	24.12	24.96	25.84
Total O&M Expenses allowed (₹ in lakh)	41.37	49.92	51.68

Interest on Working Capital (“IWC”)

73. 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
- Operation and maintenance expenses, including security expenses for one month.

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



commercial operation, whichever is later:

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

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

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

‘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;”

74. The Petitioner has submitted that it has computed IWC for 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 11.25%.

75. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest (RoI) considered is 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-2021, 10.50% (SBI 1-year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) and from 2022-23 onwards 10.50% (SBI 1-year MCLR applicable as on 1.4.2022 of 7.00% plus 350 basis points).The components of the working capital and interest allowed thereon in respect of the transmission assets are as follows:

Asset-1

(₹ in lakh)

Particulars	2020-21 (pro-rata 243 days)	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for one month)	5.55	5.74	5.94	6.15
Working Capital for Maintenance Spares (15% of O&M Expenses)	9.98	10.34	10.70	11.07
Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	19.11	22.06	23.80	23.68
Total Working Capital	34.64	38.14	40.44	40.90
Rate of Interest (in %)	11.25	10.50	10.50	10.50
Interest on Working Capital	2.59	4.00	4.25	4.29



Asset-2

(₹ in lakh)

Particulars	2020-21 (pro-rata 222 days)	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for one month)	2.77	2.87	2.97	3.08
Working Capital for Maintenance Spares (15% of O&M Expenses)	4.99	5.17	5.35	5.54
Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	26.59	29.67	30.68	30.13
Total Working Capital	34.35	37.71	39.00	38.74
Rate of Interest (in %)	11.25	10.50	10.50	10.50
Interest on Working Capital	2.35	3.96	4.10	4.07

Asset-3

(₹ in lakh)

Particulars	2020-21 (pro-rata 90 days)	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for one month)	28.49	29.49	30.55	31.58
Working Capital for Maintenance Spares (15% of O&M Expenses)	51.29	53.09	54.99	56.85
Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	151.95	156.42	163.85	168.34
Total Working Capital	231.73	239.00	249.39	256.77
Rate of Interest (in %)	11.25	10.50	10.50	10.50
Interest on Working Capital	6.43	25.10	26.19	26.96

Asset-4

(₹ in lakh)

Particulars	2020-21 (pro-rata 46 days)	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for one month)	20.17	20.88	21.64	22.35
Working Capital for Maintenance Spares (15% of O&M Expenses)	36.31	37.59	38.94	40.24
Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	66.39	71.21	76.33	76.94
Total Working Capital	122.87	129.68	136.91	139.53
Rate of Interest (in %)	11.25	10.50	10.50	10.50
Interest on Working Capital	1.74	13.62	14.38	14.65



Asset-5

(₹ in lakh)

Particulars	2020-21 (pro-rata 15 days)	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for one month)	2.77	2.87	2.97	3.08
Working Capital for Maintenance Spares (15% of O&M Expenses)	4.99	5.17	5.35	5.54
Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	26.67	29.54	32.60	32.48
Total Working Capital	34.44	37.58	40.92	41.09
Rate of Interest (in %)	11.25	10.50	10.50	10.50
Interest on Working Capital	0.16	3.95	4.30	4.31

Asset-6

(₹ in lakh)

Particulars	2021-22 (pro-rata 325 days)	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for one month)	9.87	10.21	10.57
Working Capital for Maintenance Spares (15% of O&M Expenses)	17.76	18.38	19.03
Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	96.10	118.37	120.97
Total Working Capital	123.73	146.96	150.57
Rate of Interest (in %)	10.50	10.50	10.50
Interest on Working Capital	11.57	15.43	15.81

Asset-7

(₹ in lakh)

Particulars	2021-22 (pro-rata 313 days)	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for one month)	4.02	4.16	4.31
Working Capital for Maintenance Spares (15% of O&M Expenses)	7.24	7.49	7.75
Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	21.66	27.83	28.09
Total Working Capital	32.91	39.48	40.15
Rate of Interest (in %)	10.50	10.50	10.50
Interest on Working Capital	2.96	4.15	4.22



Annual Fixed Charges for 2019-24 Tariff Period

76. The transmission charges allowed in respect of the transmission assets for 2019-24 tariff period are as follows:

Asset-1

(₹ in lakh)

Particulars	2020-21 (pro-rata 243 days)	2021-22	2022-23	2023-24
Depreciation	19.87	37.76	42.56	42.56
Interest on Loan	16.80	30.50	32.09	29.07
Return on Equity	19.63	37.79	42.82	42.82
O&M Expenses	44.31	68.90	71.32	73.82
Interest on Working Capital	2.59	4.00	4.25	4.29
Total	103.20	178.96	193.04	192.57

Asset-2

(₹ in lakh)

Particulars	2020-21 (pro-rata 222 days)	2021-22	2022-23	2023-24
Depreciation	37.17	70.41	74.39	74.39
Interest on Loan	32.30	57.76	56.40	51.34
Return on Equity	39.09	74.10	78.31	78.31
O&M Expenses	20.24	34.45	35.66	36.91
Interest on Working Capital	2.35	3.96	4.10	4.07
Total	131.16	240.68	248.86	245.02

Asset-3

(₹ in lakh)

Particulars	2020-21 (pro-rata 90 days)	2021-22	2022-23	2023-24
Depreciation	71.87	304.44	327.56	344.49
Interest on Loan	65.51	264.17	263.04	255.15
Return on Equity	75.79	321.13	345.63	363.58
O&M Expenses	84.31	353.92	366.60	378.98
Interest on Working Capital	6.43	25.10	26.19	26.96
Total	303.91	1268.76	1329.02	1369.16

Asset-4

(₹ in lakh)

Particulars	2020-21 (pro-rata 46 days)	2021-22	2022-23	2023-24
Depreciation	12.23	108.99	122.41	124.37
Interest on Loan	10.40	88.80	92.78	86.46



Particulars	2020-21 (pro-rata 46 days)	2021-22	2022-23	2023-24
Return on Equity	12.98	115.64	129.94	132.03
O&M Expenses	30.51	250.57	259.62	268.25
Interest on Working Capital	1.74	13.62	14.38	14.65
Total	67.86	577.62	619.12	625.76

Asset-5

(₹ in lakh)

Particulars	2020-21 (pro-rata 15 days)	2021-22	2022-23	2023-24
Depreciation	2.44	67.62	77.09	78.46
Interest on Loan	2.33	61.89	65.59	61.28
Return on Equity	2.59	71.69	81.77	83.23
O&M Expenses	1.37	34.45	35.66	36.91
Interest on Working Capital	0.16	3.95	4.30	4.31
Total	8.89	239.60	264.41	264.19

Asset-6

(₹ in lakh)

Particulars	2021-22 (pro-rata 325 days)	2022-23	2023-24
Depreciation	201.95	293.15	306.50
Interest on Loan	164.74	224.23	216.02
Return on Equity	210.40	304.72	318.74
O&M Expenses	105.41	122.54	126.84
Interest on Working Capital	11.57	15.43	15.81
Total	694.07	960.07	983.91

Asset-7

(₹ in lakh)

Particulars	2021-22 (pro-rata 313 days)	2022-23	2023-24
Depreciation	36.73	60.55	62.39
Interest on Loan	32.23	49.82	47.08
Return on Equity	37.34	61.29	63.13
O&M Expenses	41.37	49.92	51.68
Interest on Working Capital	2.96	4.15	4.22
Total	150.63	225.73	228.50



Filing Fee and the Publication Expenses

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

Licence Fee & RLDC Fees and Charges

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

Security Expenses

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

80. We have considered the above submissions of Petitioner. The Petitioner has claimed consolidated security expenses for all the transmission assets owned by it on projected basis for 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19 in Petition No. 260/MP/2020. The said petition has already been disposed of by the Commission vide order dated 3.8.2021. Therefore, 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.



Goods and Services Tax

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

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

Capital Spares

83. 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

84. The Petitioner has prayed that transmission charges in respect of the transmission assets from COD to 31.3.2024 may be allowed to be recovered on monthly basis in accordance with Regulation 57 of the 2019 Tariff Regulations and may be shared by the beneficiaries in accordance with 2020 Sharing Regulations or as amended from time to time.

85. The Petitioner has submitted that the Asset-1 consisting of 2 numbers 400 kV line bays at Imphal Sub-station and Asset-7 consisting of 2 numbers 220 kV line bays at New Mariani Sub-station were completed but could not be charged due to delay in execution of matching transmission system. Further, the COD in respect of the Asset-1



and Asset-7 has been claimed under Regulation 5(2) of the 2019 Tariff Regulations as the associated transmission line of Asset-1 being implemented by Kohima-Mariani Transmission Limited (KMTL) under TBCB and the associated transmission line of Asset-7 being implemented by Assam Electricity Grid Corporation Limited (AEGCL) are not ready.

86. KMTL has submitted the following:

i. KMTL, a transmission licensee, has developed its transmission system consisting of 3 numbers elements, as per the transmission service agreement dated 20.9.2016 (“TSA”) with its beneficiaries i.e. DISCOMs of North Eastern Region. These 3 number elements are as follows:

- (a) 7 x 167 MVA-400/220 kV Kohima Sub-station (“**Element 1**”);
- (b) Imphal-New Kohima 400 kV D/C line of 135.867 km (“**Element 2**”);
- (c) New Kohima-New Mariani 400 kV D/C line of 118.20 km (“**Element 3**”).

ii. KMTL, has developed its transmission system associated with Asset-1 and Asset-3. KMTL’s transmission system (Element-2) is associated with Asset-1 for termination of its Imphal-New Kohima 400 kV D/C line whereas, KMTL’s Element-3 is associated with part of Asset-3 for termination of its New Kohima-New Mariani 400 kV D/C line.

iii. Asset-1 of the Petitioner achieved deemed COD on 1.8.2020 with a time over-run caused due to COVID-19 related lockdowns. However, KMTL commercially operated its Element-2 i.e. Imphal-New Kohima 400 kV D/C Line w.e.f. 31.12.2020.

iv. Asset-3 of the Petitioner achieved COD on 1.1.2021 with a time over-run caused due to delay in transportation of 500 MVA transformers, damage to ICT bushing, poor soil condition in sub-station working area, extended rainfall and flood. However, KMTL commercially operated its Element-2 i.e. Imphal-New Kohima 400 kV D/C Line w.e.f. 31.12.2020.



- v. The Petitioner has claimed that power flow in its Asset-1 could not occur due to non-readiness of KMTL's line. The said line of KMTL was ready on 14.10.2020 and even received a provisional approval for energisation certificate from the CEA on 19.10.2020. However, active power flow could not have taken place even after October, 2020 for the following reason:
- (a) As per Schedule 3 of the TSA, all three Elements were supposed to commercially operate simultaneously and the Petitioner was to provide Asset-1 at Imphal and part of Asset-3 at New Mariani Sub-station.
 - (b) Unless the Petitioner's Asset-3 was ready, Element 3 could not have achieved active power flow.
 - (c) The Petitioner's Asset-3 at New Mariani Sub-station was admittedly not ready till 30.12.2020. Until completion of Asset-3, Element 3 could not have commercially operated.
- vi. Element 1 and Element 2 would not have achieved active power flow/commercial operation even after October, 2020. In fact, all three Elements of KMTL were ready and charged on 7.12.2020 and Asset-3 was still not ready. In this view, the Petitioner's Asset-1 also achieved active power flow only from 31.12.2020.
- vii. In case mismatch is to be considered, the Commission may take into consideration execution of Element 1 and Element 3 before the Petitioner's interconnecting facility at New Mariani Sub-station.
- viii. By virtue of claimed COD of Asset-1 by the Petitioner as 1.8.2020, no liability can be fastened upon KMTL for delay in completion of Element 2 for the following reasons:
- (a) Delay in execution of Element 2 was not attributable to KMTL. Element 2 was delayed due to *force majeure* events i.e. COVID-19, continuous rainfall and RoW issues.
 - (b) KMTL has filed a Petition No. 164/MP/2021 [*KMTL v. Assam Electricity Grid Corporation Ltd. & Ors.*] *inter alia* seeking extension of SCOD of the



transmission system (including Element 2) by 5 months i.e. from 31.7.2020 to 31.12.2020. KMTL in its petition has claimed that it was prevented by *force majeure* events viz

- (i) Continuous lockdowns being imposed on account of the COVID-19 pandemic in the State of Assam, Nagaland, and Manipur and the quarantine requirements imposed by the local authorities, severely impacted the progress of work at the Element 2,
- (ii) Continuous seasonal rainfall resulting in landslides, that made the access to road leading to the Project and working at heights, unsafe and
- (iii) Resistance at various locations in Kohima District, Nagaland. The situation was aggravated by the objections raised by a house owner to construction, which was pending before the local administration. KMTL was also constrained to shift the foundation to near-by locations, so as to ensure that there is no damage to any of the villagers.

ix. The contents of KMTL's Petition No. 164/MP/2021 may also be read as part and parcel of the present reply and the Commission may decide Petition No. 164/MP/2021 before deciding the present Petition No. 45/TT/2022. As KMTL's objections are limited to the Petitioner's claim for approval of COD of Asset-1.

87. In response, the Petitioner has submitted as follows:

- i. Primarily, KMTL has confined its replies to the deemed COD claimed by the Petitioner for Asset-1 under Regulation 5(2) of the 2019 Tariff Regulations. KMTL contends that the deemed COD ought not to be allowed. The issue wise reply to the contentions of KMTL is as follows:



Re: As per TSA, all three elements were to commercially operate simultaneously

- ii. KMTL has contended that the as per the TSA dated 20.9.2016, all three elements being developed by it were to be put into commercial operation simultaneously and, therefore, even when Element 2 was ready on 14.10.2020, it could not have active power flow because the other elements had not achieved commercial operation.
- iii. The TSA is a contract between KMTL and its beneficiaries. KMTL has entered into this TSA as per a competitive bidding process under Section 63 of the Electricity Act, 2003 and the terms of the TSA are binding on it. The Petitioner, however, is not bound by the TSA in any manner being a third party having neither a statutory nor contractual relationship with the parties to the TSA. Therefore, what was decided in the TSA cannot be used to disallow the deemed COD for Asset -1.
- iv. The claim for deemed COD of the Petitioner's Asset-1 is under Regulation 5(2) of the 2019Tariff Regulations. Therefore, as long as the Petitioner satisfies the provisions of the above Regulations, and submits the documents mentioned, deemed COD, which is a statutory right of the Petitioner cannot be denied. Even otherwise, the proposed COD by the Petitioner for Asset-1 was 1.8.2020 while admittedly; the Element 2 was ready only on 14.10.2020 i.e. much later than 1.8.2020. On this ground alone, the Petitioner should be allowed to claim deemed COD under Regulation 5 (2) of the 2019 Tariff Regulations.

Re: Linking of Element 1 and Element 3 of KMTL with Assets-1 and Asset-3 of the Petitioner

- v. KMTL has contended that even though its Element 1 was ready on 24.7.2020 and Element 2 on 14.10.2020, since Element 3 i.e. the new Kohima-new Mariani 400 kV double circuit line of 118.20 km was linked with Asset-3 of NERSS-VI (i.e. the 400/220 kV, 500 MVA ICT-2 along with associated bays, 400 kV, 125 MVAR, 3 Phase Bus Reactor-2 along with associated bay and 2 numbers 400 kV line bays for termination of 400 kV D/C New Kohima-New Mariani Line), due to the provisions of its TSA, it could not declare the COD of



any of its elements in individual manner. According to KMTL, since the Petitioner has achieved the COD of Asset 3 only on 1.1.2021, there can be no liabilities imposed on KMTL with regard to the transmission charges of Asset-1, even if deemed COD is granted.

- vi. The above is a convoluted attempt to defeat the mandate of the provisions of Regulation 5(2) of the 2019 Tariff Regulations which deals with deemed COD. It is wrong and denied that there is any delay in achievement of COD of Asset-3 by the Petitioner. As stated earlier, against the SCOD of July, 2020, which got extended to December, 2020 by the MoP letter dated 27.7.2020, Asset-3 has been declared under COD w.e.f. 1.1.2021. There is no delay in so far as achievement of COD vis-à-vis the extended SCOD for Asset-3.
- vii. The provisions of the TSA, which have been voluntarily signed by KMTL cannot be pleaded as a defence to the provisions of the 2019 Tariff Regulations. The Petitioner has not delayed its Asset-3. The NERSS-VI has been established by the Petitioner under a capital cost-based determination in terms of Section 61 and Section 62 of the Act. The 2019 Tariff Regulations, have also been framed by the Commission in furtherance of Section 61 read with Section 178 of the Act.
- viii. Even though the 2019 Tariff Regulations provide for a manner for declaration of deemed COD, in the peculiar facts of the present case, the Petitioner's alternative submission is that, if the Commission comes to the conclusion that the three elements of KMTL have to necessarily achieve the COD with Asset-1 and Asset-3 of NERSS-VI, the IDC and IEDC for Asset-1 should be capitalized and the COD should be shifted to 1.1.2021 even for Asset-1. This is an alternate contention of the Petitioner without prejudice to its first contention of deemed COD declaration.



Re: COD of Element 2 was delayed due to *force majeure* events

- i. The contention of KMTL that no liability can be fastened on KMTL for delay in commissioning of Element 2 as the delay occurred due to *force majeure* events may not be correct. The effect of Element 2 being affected by *force majeure* will be considered by the Commission while deciding Petition No. 164/MP/2021 which has been filed by KMTL against its beneficiaries.
- ii. The rationale behind seeking deemed COD is that when the system of one transmission licensee is ready and the interconnecting system of another transmission licensee is delayed, then the transmission licensee who came on time can apply for a deemed COD. Therefore, the reasons for delay of another transmission licensee may not be relevant as far as the claim of deemed COD is concerned. However, the Petitioner reiterates its alternative contention that if in the peculiar facts of this case, the Commission comes to the conclusion that the COD of KMTL'S Element 1, Element 2 and Element 3 are to match with Asset-1 and Asset-3 implemented by the Petitioner, the COD of Asset-1 may be shifted to 1.1.2021 and the IDC and IEDC for the period from 1.8.2020 to 1.1.2021 may be capitalized in the tariff to be determined.

88. We have considered the submissions of the Petitioner and KMTL and have also gone through the record.

89. KMTL has filed Petition No. 164/MP/2021 *inter alia* seeking extension of SCOD of the transmission system (including Element 2) by 5 months i.e. from 31.7.2020 to 31.12.2020. KMTL in its petition has claimed that it was prevented by *force majeure* events and referred to MoP's circular dated 27.7.2020 granting carte blanche extension of time for 5 (five) months for under construction inter-State transmission projects. In addition, the MoF *vide* its office memorandum on 13.5.2020 provided for an "Extension of up to 6 months" (without costs to contractor) to be provided by all central agencies, and allowed the invocation of the *force majeure* clause by parties for all construction/



works contracts, goods and services contracts and public private partnership contracts with government agencies. Accordingly, KMTL invoked Article 11 [*force majeure*] and Article 4.4 [extension of time] of the TSA and sought extension of SCOD for the transmission project due to delay in completion of Element 2 and requested the Commission to take cognizance of the contents of KMTL's Petition No. 164/MP/2021 may also be read as part and parcel of the present reply and the Commission may decide Petition No. 164/MP/2021 before deciding the present Petition No. 45/TT/2022.

90. The Commission in order dated 26.4.2022 in Petition No. 60/TT/2017 with regard to mismatch arising out of *force majeure* observed as follows:

"67. Hence, the principle has been followed consistently that even if under Force majeure, delay is condoned or SCOD is extended by the Commission, the liability of upstream/downstream system remains on such delayed transmission licensee."

91. The Commission is of the consistent view that even if the time over-run in case of the associated upstream/downstream elements is condoned due to *force majeure* events, the entity responsible for the delay in implementation of the associated upstream/downstream elements is liable to bear the transmission charges for the period of mismatch. Accordingly, the Commission did not provide for any exemption from payment of transmission charges even in case of *force majeure* conditions in the 2020 Sharing Regulations.

92. In view of the above, we are of the view that KMTL is liable to bear the transmission charges for the period of mismatch in the COD of Asset-1 even though the transmission assets are affected by force majeure conditions. It is further observed that the Petitioner filed Petition No.164/MP/2021 for extension of SCOD due to force majeure conditions. The issues raised by the KMTL regarding time delay in



commissioning shall be dealt in separate petition filed by KMTL in Petition No. 164/MP/2021.

93. As we have already approved the COD of the Asset-1 under Regulation 5(2) of the 2019 Tariff Regulations as the associated transmission asset of KMTL is not ready. Regulation 6(2) of the 2019 Tariff Regulations which contains detailed provisions with regard to liability for mismatch of the COD between generating station and transmission system or between two transmission licensees of a connected transmission system is applicable in case of the instant transmission assets. The Regulation 6(2) of the 2019 Tariff Regulations provides as follows:

“6. Treatment of mismatch in date of commercial operation:

(1) In case of mismatch of the date of commercial operation of the generating station and the transmission system, the liability for the transmission charges shall be determined as under:

(a) Where the generating station has not achieved the commercial operation as on the date of commercial operation of the associated transmission system (which is not before the SCOD of the generating station) and the Commission has approved the date of commercial operation of such transmission system in terms of clause (2) of the Regulation 5 of these regulations, the generating company shall be liable to pay the transmission charges of the associated transmission system in accordance with clause (5) of Regulation 14 of these regulations to the transmission licensee till the generating station or unit thereof achieves commercial operation:

(b) Where the associated transmission system has not achieved the commercial operation as on the date of commercial operation of the concerned generating station or unit thereof (which is not before the SCOD of the transmission system), the transmission licensee shall make alternate arrangement for the evacuation from the generating station at its own cost, failing which, the transmission licensee shall be liable to pay the transmission charges to the generating company as determined by the Commission, in accordance with clause (5) of Regulation 14 of these regulations, till the transmission system achieves the commercial operation. (2) In case of mismatch of the date of commercial operation of the transmission system and the transmission system of other transmission licensee, the liability for the transmission charges shall be determined as under:

(a) Where an interconnected transmission system of other transmission licensee has not achieved the commercial operation as on the date of commercial operation of the transmission system (which is not before the SCOD of the interconnected transmission system) and the Commission has approved the date of commercial operation of such transmission system in terms of clause (2) of Regulation 5 of these regulations, the other transmission licensee shall be liable to pay the transmission charges of the transmission system in accordance with clause (5) of Regulation 14 of these regulations to the transmission licensee till the interconnected transmission system achieves commercial operation: (b) Where the transmission system has not achieved the commercial



operation as on the date of commercial operation of the interconnected transmission system of other transmission licensee (which is not before the SCOD of the transmission system), the transmission licensee shall be liable to pay the transmission charges of such interconnected transmission system to the other transmission licensee or as may be determined by the Commission, in accordance with clause (5) of Regulation 14 of these regulations, till the transmission system achieves the commercial operation.”

94. In the instant case, as stated above, the COD of the asset-1 has been approved as 1.8.2020 under Regulation 5(2) of the 2019 Tariff Regulations. As per Regulation 6(2)(a) and 6(2)(b) of the 2019 Tariff Regulations, if an interconnected transmission system of other transmission licensee is not ready on the COD of the transmission asset and if the COD of the transmission asset has been approved under Regulation 5(2) of the 2019 Tariff Regulations, the transmission licensee has to bear the transmission charges of the transmission asset of the other transmission licensee till the COD of the interconnected transmission system under its scope. The said provision does not distinguish between a transmission project under the RTM route and the TBCB route.

95. Further, as per the scheme of Regulation 5(2) of the 2019 Tariff Regulations, if a transmission licensee is prevented from putting its transmission assets into regular use due to non-readiness of the downstream or upstream transmission licensee or a generating station, the transmission licensee can approach the Commission for declaration of COD of such transmission assets. The entity responsible for execution of the downstream or upstream transmission licensee or a generating station, irrespective of the fact that it is affected by force majeure events, has to bear the transmission charges for the period of mismatch from the transmission asset to the COD of transmission asset/ scheme under its scope. In the instant case, non-utilization of transmission asset of the Petitioner was on account of delay in completion of the transmission line under the scope of KMTL. Accordingly, we have approved COD of the transmission asset-1 as 1.8.2020 under Regulation 5(2) of the 2019 Tariff Regulations.



As the associated transmission line was ready on 31.12.2020, we are of the view that the yearly transmission charges of the Asset-1 should be borne by KMTL from COD of the transmission asset from 1.8.2020 upto 31.12.2020 and thereafter the transmission charges of the 2 Numbers 400 kV line bays at Imphal Sub-station shall be recovered from the pool.

Asset-7

96. The Commission vide Record of Proceedings dated 26.7.2022 observed that it would like to have the views of AEGCL especially on the Petitioner's plea for approval of the COD of Asset-1 and Asset-7 under Regulation 5(2) of the 2019 Tariff Regulations and the status of the associated downstream assets under its scope. The Respondents, including AEGCL, were directed to file their reply and it was further observed that if no reply and rejoinder is received from the parties, the matter will be decided on the basis of the information already on record. In spite of a clear direction, AEGCL has not filed any reply.

97. The 2 Numbers of 220 kV bays at New Mariani Sub-station was charged at 'No Load' as there is no power flow and associated line under the scope of AEGCL is not ready. As required under Regulation 5(2) of the 2019 Tariff Regulations, the Petitioner gave prior notice to AEGCL *vide* letter dated 30.3.2021 informing that 2 Numbers 220 kV line bays at New Mariani Sub-station for termination of 220 kV D/C Mariani (AEGCL)-New Mariani (PG) line under the scope of AEGCL will be ready for charging by 30.3.2021. Accordingly, taking into consideration the CEA Energisation certificate dated 17.5.2021, 'No Load' RLDC charging certificates dated 4.6.2021 in respect of 220 kV Bays (211 and 212) at New Mariani (Powergrid) Sub-station certifying that successful trial operation (idle charging) was completed on 22.5.2021, CMD Certificate and prior



notice to AEGCL dated 30.3.2021, the COD of Asset-7 is approved as 23.5.2021 under Regulation 5(2) of the 2019 Tariff Regulations.

98. The scope of transmission systems of AEGCL and the Petitioner is covered under NERSS-VI and was discussed in 5th SCM of NER held on 8.8.2015 and agreed in 15th NERPC meeting held on 21.8.2015, wherein the following scheme was finalised pertaining to the instant petition. The relevant portion of the minutes of the 5th SCM and 15th NERPC is extracted below:

“B. NERSS-VI-POWERGRID Scope

- i. xxxxxx
- ii. *Up-gradation of New Mariani substation to 400/220 kV with 2x500 MVA transformer along with associated bays*
xxxxxx
xxxxxx

Further, Nagaland and AEGCL would implement the following scope of works

- (i) *New Mariani-Mariani 220 kV D/c line (with high capacity conductor) (By AEGCL)*
- (ii) xxxxx
xxxxx”

Minutes of 15th NERPC meeting held on 20.8.2015 and 21.8.2015 at Guwahati

“TBCB Scope

- 1) *Establishment of 2x500 MVA 400/220 kV S/S at New Kohima along with 4 no. 400 kV line bays, 2x125 MVAR bus reactor and 4 no. 220 kV line bays.*
- 2) *Imphal – New Kohima 400 kV D/C line*
- 3) *New Kohima – New Mariani 400kV D/c line*

Note:

- a) *CTU (POWERGRID) to provide 2 no. 400kV line bays at Imphal (PG) S/s for termination of Imphal – New Kohima 400kV D/c line*
- b) *CTU (POWERGRID) to provide 2 no. 400kV line bays at New Mariani S/s for termination of New Kohima - New Mariani 400kV D/c line*

POWERGRID Scope

- 1) *1x125 MVAR bus reactor (2nd) at Imphal (PG)*
- 2) *Up-gradation of New Mariani substation to 400/200 kV with 2x500MVA transformer along with associated bays.*
- 3) *2 no. 400kV line bays at New Mariani for termination of Misa-New Mariani 400kV D/c at 400kV*
- 4) *Termination of Misa-New Mariani section of existing LILO of Kathalguri-Misa 400 kV D/C line (circuit-1) (op. at 220 kV) at New Mariani from 220 kV to 400 kV*



- 5) *Disconnection of Kathalguri – Mariani (AEGCL) – Misa line from Mariani (AEGCL) S/s and LILO of the same at New Mariani (POWERGRID) with Misa-New Mariani section connected at 400kV and Kathalguri – New Mariani section connected at 220kV at New Mariani*
- 6) *2 no. 400 kV line bays (GIS) at Misa for termination of New Mariani – Misa 400kV D/c line (presently charged at 220kV) at 400kV*
- 7) *Operation of New Mariani – Misa 400kV D/c line (presently charged at 220kV) at 400kV along with termination at Misa 400kV*
- 8) *Operation of New Mariani – Kathalguri 400kV D/c line (presently charged at 220kV) at 220kV”*

99. Subsequently, in the 6th SCM held on 3.10.2016, the scope of NERSS-VI being implemented by the Petitioner was revised due to revised connectivity proposed by AEGCL at Mariani (AEGCL) and New Mariani (PG) Sub-stations and requirement of 220 kV bays at New Mariani. The revised scope of works being implemented by the Petitioner portion under NERSS-VI is as follows:

“NERSS-VI (being implemented by POWERGRID through RTM)

(i) xxxxx

xxxxx

(viii) 2 no. 220 kV line bays at New Mariani for termination of New Mariani-Mariani (AEGCL) 220 kV D/c twin moose line (line under AEGCL scope)

Xxxx”

100. Thus, it is clear from the above that the 2 numbers 220 kV line bays at New Mariani (Powergrid) Sub-station covered under Asset-7 and the associated transmission line of AEGCL i.e. New Mariani-Mariani (AEGCL) 220 kV D/C line are inter-linked and dependant on each other and in absence of the said line, the line bays of the Petitioner would serve no purpose.

101. In view of the above, the 2 numbers 220 kV line bays at New Mariani (Powergrid) Sub-station covered under Asset-7 were ready on 17.5.2021 as per CEA charging certificate and was energised on 22.5.2021 on ‘No Load’ as per RLDC charging certificates dated 4.6.2021. However, as submitted by the Petitioner during hearing dated 26.7.2022, the downstream line of AEGCL i.e. New Mariani-Mariani (AEGCL) 220



kV D/C line is yet to be put under commercial operation. Accordingly, the transmission charges from the COD of Asset-7, i.e. 23.5.2021 to the actual power flow in the downstream asset of AEGCL shall be borne by AEGCL. Thereafter, it will be included in the PoC charges.

102. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems is governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2010. With effect from 1.11.2020, sharing of transmission charges is governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2020. Accordingly, the billing, collection and disbursement of the transmission charges approved in this order shall be governed by the provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

103. To summarise:

- a) The Annual Fixed Charges (AFC) allowed in respect of the transmission assets for 2019-24 tariff period are as follows:

(₹ in lakh)

Particulars	Asset-1			
	2020-21 (pro-rata 243 days)	2021-22	2022-23	2023-24
AFC	103.20	178.96	193.04	192.57

(₹ in lakh)

Particulars	Asset-2			
	2020-21 (pro-rata 222 days)	2021-22	2022-23	2023-24
AFC	131.16	240.68	248.86	245.02



(₹ in lakh)

Particulars	Asset-3			
	2020-21 (pro-rata 90 days)	2021-22	2022-23	2023-24
AFC	303.91	1268.76	1329.02	1369.16

(₹ in lakh)

Particulars	Asset-4			
	2020-21 (pro-rata 46 days)	2021-22	2022-23	2023-24
AFC	67.86	577.62	619.12	625.76

(₹ in lakh)

Particulars	Asset-5			
	2020-21 (pro-rata 15 days)	2021-22	2022-23	2023-24
AFC	8.89	239.60	264.41	264.19

(₹ in lakh)

Particulars	Asset-6		
	2021-22 (pro-rata 325 days)	2022-23	2023-24
AFC	694.07	960.07	983.91

(₹ in lakh)

Particulars	Asset-7		
	2021-22 (pro-rata 313 days)	2022-23	2023-24
AFC	150.63	225.73	228.50

104. Annexure-I given hereinafter form part of the order.

105. This order disposes of Petition No. 45/TT/2022 in terms of the above discussions and findings.

sd/-
(P. K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I. S. Jha)
Member



Asset-1

2019-24 Capital Expenditure	Admitted Capital Cost as on 1.4.2019/COD (₹ in lakh)	Projected ACE (₹ in lakh)			Admitted capital cost as on 31.3.2024 (₹ in lakh)	Rate of depreciation as per Regulations (in %)	Annual depreciation as per Regulations (₹ in lakh)				
		2020-21	2021-22	Total			2020-21	2021-22	2022-23	2023-24	
Sub Station	391.80	112.40	173.36	285.76	677.56	5.28%	23.65	31.20	35.78	35.78	
PLCC	57.31	2.81	4.29	7.10	64.41	6.33%	3.72	3.94	4.08	4.08	
IT Equipment (Incl. Software)	16.07	0.87	1.11	1.98	18.05	15.00%	2.48	2.62	2.71	2.71	
Total	465.18	116.08	178.76	294.84	760.02		29.85	37.76	42.56	42.56	
							Average Gross Block (₹ in lakh)	523.22	670.64	760.02	760.02
							Weighted Average Rate of Depreciation (in %)	5.70	5.63	5.60	5.60



Asset-2

2019-24 Capital expenditure	Admitted capital cost as on 1.4.2019/COD (₹ in lakh)	Projected ACE (₹ in lakh)			Admitted capital cost as on 31.3.2024 (₹ in lakh)	Rate of depreciation as per Regulations (in %)	Annual depreciation as per Regulations (₹ in lakh)			
		2020-21	2021-22	Total			2020-21	2021-22	2022-23	2023-24
Sub Station	1028.74	198.06	148.56	346.62	1375.36	5.28%	59.55	68.70	72.62	72.62
PLCC	4.27	0.20	0.18	0.38	4.66	6.33%	0.28	0.29	0.29	0.29
IT Equipment (Incl. Software)	8.06	1.02	0.78	1.80	9.86	15.00%	1.29	1.42	1.48	1.48
Total	1041.07	199.28	149.52	348.80	1389.88		61.11	70.41	74.39	74.39
Average Gross Block (₹ in lakh)							1140.71	1315.12	1389.88	1389.88
Weighted Average Rate of Depreciation (in %)							5.36	5.35	5.35	5.35



Asset-3

2019-24 Capital expenditure	Admitted capital cost as on 1.4.2019/COD (₹ in lakh)	Projected ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of depreciation as per Regulations (in %)	Annual depreciation as per Regulations (₹ in lakh)				
		2020-21	2021-22	2021-22	Total			2020-21	2021-22	2022-23	2023-24	
Sub Station	5265.60	256.51	230.40	628.32	1115.23	6380.83	5.28	284.80	297.65	320.32	336.91	
PLCC	28.68	-	0.46	7.78	8.24	36.92	6.33	1.82	1.83	2.09	2.34	
IT Equipment (Incl. Software)	32.18	0.21	1.36	1.22	2.79	34.96	15.00	4.84	4.96	5.15	5.24	
Total	5326.46	256.72	232.22	637.32	1126.26	6452.71		291.45	304.44	327.56	344.49	
								Average Gross Block (₹ in lakh)	5454.82	5699.29	6134.05	6452.71
								Weighted Average Rate of Depreciation (in %)	5.3	5.34	5.34	5.34



Asset-4

2019-24	Admitted capital cost as on 1.4.2019/ COD (₹ in lakh)	Projected ACE (₹ in lakh)				Admitted capital cost as on 31.3.2024 (₹ in lakh)	Rate of depreciation as per Regulations (in %)	Annual depreciation as per Regulations (₹ in lakh)				
		2020-21	2021-22	2022-23	Total			2020-21	2021-22	2022-23	2023-24	
Sub Station	1812.63	16.97	432.83	74.02	523.82	2336.45	5.28	96.15	108.03	121.41	123.36	
IT Equipment (Incl. Software)	6.13	0.01	0.51	0.08	0.59	6.72	15.00	0.92	0.96	1.00	1.01	
Total	1818.75	16.98	433.34	74.10	524.42	2343.17		97.07	108.99	122.41	124.37	
								Average Gross Block (₹ in lakh)	1827.24	2052.40	2306.12	2343.17
								Weighted Average Rate of Depreciation (in %)	5.31	5.31	5.31	5.31



Asset-5

2019-24 Capital expenditure	Admitted capital cost as on 1.4.2019/CO D (₹ in lakh)	Projected ACE (₹ in lakh)				Admitted capital cost as on 31.3.2024 (₹ in lakh)	Rate of depreciation as per Regulations (in %)	Annual depreciation as per Regulations (₹ in lakh)				
		2020-21	2021-22	2022-23	Total			2020-21	2021-22	2022-23	2023-24	
Sub Station	1112.90	2.04	305.72	51.59	359.35	1472.24	5.28	58.81	66.94	76.37	77.73	
IT Equipment (Incl. Software)	4.32	-	0.45	0.07	0.52	4.84	15.00	0.65	0.68	0.72	0.73	
Total	1117.21	2.04	306.17	51.66	359.87	1477.08		59.46	67.62	77.09	78.46	
								Average Gross Block (₹ in lakh)	1118.23	1272.34	1451.25	1477.08
								Weighted Average Rate of Depreciation (in %)	5.32	5.31	5.31	5.31



Asset-6

2019-24 Capital Expenditure	Admitted capital cost as on 1.4.2019/COD (₹ in lakh)	Projected ACE (₹ in lakh)				Admitted capital cost as on 31.3.2024 (₹ in lakh)	Rate of depreciation as per Regulations (in %)	Annual depreciation as per Regulations (₹ in lakh)			
		2021-22	2022-23	2023-24	Total			2021-22	2022-23	2023-24	
Transmission Line	454.93	682.06	232.59	106.13	1020.78	1475.70	5.28	42.03	66.17	75.12	
Sub Station	2492.66	1337.97	110.50	41.71	1490.18	3982.83	5.28	166.93	205.17	209.19	
PLCC	192.55	20.32	1.73	0.44	22.49	215.04	6.33	12.83	13.53	13.60	
IT Equipment (Incl. Software)	13.82	39.17	4.30	0.05	43.52	57.34	15.00	5.01	8.27	8.60	
Total	3153.95	2079.52	349.12	148.33	2576.97	5730.92		226.80	293.15	306.50	
								Average Gross Block (₹ in lakh)	4193.71	5408.03	5656.76
								Weighted Average Rate of Depreciation (in %)	5.41	5.42	5.42



Asset-7

2019-24 Capital expenditure	Admitted capital cost as on 1.4.2019/COD (₹ in lakh)	Projected ACE (₹ in lakh)				Admitted capital cost as on 31.3.2024 (₹ in lakh)	Rate of depreciation as per Regulations (in %)	Annual depreciation as per Regulations (₹ in lakh)			
		2021-22	2022-23	2023-24	Total			2021-22	2022-23	2023-24	
Sub Station	466.69	570.78	36.19	27.07	634.04	1100.73	5.28	39.71	55.73	57.40	
IT Equipment (Incl. Software)	10.54	20.50	2.19	0.07	22.76	33.30	15.00	3.12	4.82	4.99	
Total	477.23	591.28	38.38	27.14	656.80	1134.03		42.83	60.55	62.39	
								Average Gross Block (₹ in lakh)	772.87	1087.70	1120.46
								Weighted Average Rate of Depreciation (in %)	5.54	5.57	5.57

