

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 673/TT/2020

Coram:

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

Date of Order: 24.8.2022

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and determination of transmission tariff from COD to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 in respect of **Asset-I:** Combined Assets of 1) Charging of Tehri Pooling-Meerut line Ckt-I at 765kV level along with associated bays at Koteshwar (Tehri Pooling Station) end and 240 MVAR switchable line reactor and associated bays at Meerut end; 2) 765/400kV 800 MVA ICT- II alongwith associated bays at Koteshwar (Tehri Pooling Station); 3) 765/400kV 800 MVA ICT- III alongwith associated bays at Koteshwar (Tehri Pooling Station); 4) 765/400kV 800 MVA ICT- IV alongwith associated bays at Koteshwar (Tehri Pooling Station); **Asset-II:** Combined Assets of 1) Charging of Tehri Pooling-Meerut line Ckt-II at 765kV level along with associated bays at Koteshwar end and 240 MVAR switchable line reactor and associated bays at Meerut end; 2) 765/400kV 800 MVA ICT- I alongwith associated bays at Tehri (Koteshwar) (GIS Pooling Station); 3) 765/400kV 1500 MVA ICT alongwith associated bays at Meerut Sub-station; 4) Modification of series capacitor at Meerut Sub-station for operation at 765 kV level 5) 765 kV 240 MVAR Bus Reactor along with associated bay at Tehri (Koteshwar) under "Transmission System associated with Tehri Pump Storage Plant (PSP)"

And in the matter of:

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

.... Petitioner

Vs.

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited,
Vidyut Bhawan, Vidyut Marg, Jaipur - 302 005.
2. Ajmer Vidyut Vitran Nigam Limited,
132 kV, GSS RVPNL Sub- Station Building,
Caligiri Road, Malviya Nagar, Jaipur-302017 (Rajasthan).



3. Jaipur Vidyut Vitran Nigam Limited,
132 kV, GSS RVPNL Sub- Station Building,
Caligiri Road, Malviya Nagar, Jaipur-302017 (Rajasthan).
4. Jodhpur Vidyut Vitran Nigam Limited,
132 kV, GSS RVPNL Sub- Station Building,
Caligiri Road, Malviya Nagar, Jaipur-302017 (Rajasthan).
5. Himachal Pradesh State Electricity Board,
Vidyut Bhawan, Kumar House Complex Building II,
Shimla-171 004.
6. Punjab State Electricity Board,
The Mall, Patiala - 147 001.
7. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-6,
Panchkula -134 109(Haryana).
8. Power Development Department,
Government of Jammu & Kashmir, Mini Secretariat, Jammu.
9. Uttar Pradesh Power Corporation Limited,
(Formerly Uttar Pradesh State Electricity Board),
Shakti Bhawan, 14, Ashok Marg,
Lucknow - 226 001.
10. Delhi Transco Limited,
Shakti Sadan, Kotla Road,
New Delhi-110 002.
11. BSES Yamuna Power Limited,
BSES Bhawan, Nehru Place,
New Delhi.
12. BSES Rajdhani Power Limited,
BSES Bhawan, Nehru Place, New Delhi.
13. Tata Power Delhi Distribution Limited,
33 kV Sub-station, Building, Hudson Lane,
Kingsway Camp, North Delhi – 110009.
14. Chandigarh Administration,
Sector -9, Chandigarh.
15. Uttarakhand Power Corporation Limited,
Urja Bhawan, Kanwali Road, Dehradun.



16. North Central Railway,
Allahabad.
17. New Delhi Municipal Council,
Palika Kendra, Sansad Marg, New Delhi-110002.
18. Tehri Pump Storage Plant (PSP),
THDC India Ltd., B Puram
District Tehri Garhwal, Uttarakhand.

...Respondent(s)

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

For Respondents : Shri Tabrez Malawat, Advocate, THDC
Ms. Ankita Bafna, Advocate, THDC
Shri Mukesh Kumar, THDC
Shri Rajesh Sharma, THDC
Shri L.P. Joshi, THDC
Shri S.S. Panwar, THDC
Shri Manish Garg, UPPCL

ORDER

The instant petition has been filed by Power Grid Corporation of India Limited (PGCIL), a deemed transmission licensee, for determination of transmission tariff for the period 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 “Transmission System associated with Tehri Pump Storage Plant (PSP)” in Northern Region (hereinafter referred to as “the transmission project”).

2. The Petitioner has made the following prayers in the instant petition and revised the same vide affidavit dated 27.10.2021:



- "1) Admit the capital cost as claimed in the Petition and approve the Additional Capitalisation incurred / projected to be incurred.*
- 2) Approve the Transmission Tariff for the tariff block 2019-24 block for the asset covered under this petition, as per para -8.3 above.*
- 3) Allow the Petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulation 2019 as per para 8 above for respective block.*
- 4) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 70 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure (if any) in relation to the filing of petition.*
- 5) Allow the Petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the Respondents in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.*
- 6) Allow the Petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the beneficiaries.*
- 7) Allow the Petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 8.8 above.*
- 8) Allow the initial spare as procured in the current petition in full as claimed in the instant petition under Regulation 54 of the CERC (Terms and Condition of Tariff) Regulation, 2014, "Power to Relax" and Allow the Petitioner to claim capital spares at the end of tariff block as per actual.*
- 9) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the 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.*
- 10) 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.*
- 11) Allow the Petitioner to recover FERV on foreign loans deployed as provided under Clause 69 of the Tariff Regulations, 2019.*
- 12) Condone time over run of all assets as per Clause 22(2) of Tariff Regulation, 2019. and pass such other relief as Hon'ble Commission deems fit and appropriate under the circumstances of the case and in the interest of justice."*



Background

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

(a) The Investment Approval (IA) of the transmission project was accorded by Board of Directors (BoD) of the Petitioner's Company on 29.1.2015 vide Memorandum Ref.: C/CP/TEHRI (PSP) dated 2.2.2015, at an estimated cost of ₹87162 lakh including IDC of ₹5017 lakh based on December, 2015 price level.

(b) The Revised Cost Estimate (RCE) in respect of the transmission project was approved by Board of Directors (BoD) of the Petitioner on 25.12.2020 vide Memorandum Ref.: C/CP/PA2021-090T-RCE012 dated 6.1.2021 at an estimated cost of ₹90249 lakh including IDC of ₹8294 lakh based on June, 2020 price level.

(c) The scope of the transmission project was discussed and agreed in the 27th and 32nd Standing Committee on Transmission System Planning of Northern Region held on 30.5.2009 and 31.8.2013 respectively. The transmission scheme was agreed in 13th and 29th meetings of NRPC held on 27.6.2009 and 13.9.2013.

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

Transmission Line

- 400 kV S/C Tehri Generation – Tehri Pooling Station (Quad line)
- Charging of Tehri Pooling - Meerut line at 765 kV level[#]

Note: Scope under this element Includes diversion of 765 kV S/C Koteshwar - Meerut line 1&2 at Meerut

Sub-stations

i. 765/400 kV, 4 x 800 MVA Tehri GIS Pooling station

765 kV

- Line bays : 2 Numbers
- Bus Reactor bay : 1 Number

(1x240 MVAR bus reactor) (4 single phase units including 1 spare unit)

- 765/400 kV, 4x800 MVA ICTs (14 single phase units including 2 spare units)
- 765 kV ICT bays 4 Numbers

400 kV

- Line bays : 1 Number



- ICT bays : 2 + 2** Numbers
*** Note: 2 numbers of 400 kV line bays vacated by Tehri Pooling station-Meerut lines would be used for termination of 765/400 kV ICTs.*

ii. 765/400 kV Meerut Sub-station Extension

765 kV

- Line bays : 2 Numbers
- 2x240 MVAR Line reactor
- 765/400 kV, 1x1500 MVA ICTs along with associated 765 kV & 400 kV bays
- ICT bays : 1 Number
- Modification of Series Capacitors for operation at 765 kV level

400 kV

- ICT bays : 1 Number

(e) The Petitioner has submitted that all the assets covered in the instant petition was planned for evacuation of power from Tehri HEP and Koteshwar HEP and agreed in 18th SCM in Northern Region and the scope of the transmission project was discussed and agreed in the 27th and 32nd meeting of Standing Committee on Transmission System Planning of Northern Region held on 30.5.2009 and 31.8.2013 respectively. It was further discussed and agreed in the 13th and 29th meeting of NRPC held on 27.6.2009 and 13.9.2013 respectively. Further, in the 39th SCM of Northern Region held on 29.5.2017 and 30.5.2017, it was decided that 765 kV Tehri-Meerut line be de-linked from the generation project. In the Northern Regional Power Committee (Transmission Planning) (NRPCTP) meetings held on 24.1.2020 and 1.9.2020, the matter relating to delinking of assets was discussed wherein it was decided that only 3 assets were to be linked to the Tehri-HEP and other assets were to be developed as System Strengthening Scheme.

(f) Details of transmission assets covered under system strengthening and generation linked is as follows:



Sl. No.	Asset Name	System Strengthening /Generation linked
1	400kV S/C Tehri (Generation) –Tehri Pooling Station (Koteshwar) line along with associated bays	Generation linked
2	4 th ICT of 800 MVA at Tehri Pooling Station (Koteshwar) sub-station	Generation linked
3	3rd ICT of 1500 MVA at Meerut Sub-station	Generation linked
4	3 numbers 800 MVA ICT at Tehri Pooling Station (Koteshwar) Sub-station	System Strengthening
5	Charging of Tehri PS-Meerut line at 765 kV along with upgradation of series capacitors	System Strengthening
6	240MVAR Line reactors at Meerut end and 240MVAR Bus reactor at Tehri Pooling Station (Koteshwar) Sub-station	System Strengthening

(g) The Petitioner has submitted that commissioning of THDC generating units got delayed and the same was discussed in various JCC meetings and as per 6th JCC meeting 28.3.2019, commissioning schedule of generating units were given as December, 2020. The Petitioner has further submitted that in the 39th SCM in Northern Region held on 29.5.2017 and 30.5.2017 it was discussed and agreed that up-gradation of Tehri-Meerut 765 kV 2 x S/C lines (presently operated at 400 kV) with the commissioning of Tehri PSP generation project along with reactive compensation was delinked from the generation, which was in the scope of THDC.

(h) The Petitioner has submitted the revised status of tariff petitions in respect of the transmission assets covered under the transmission project vide affidavit dated 27.10.2021 which is as follows:

Sl. No.	Name of Assets	SCOD	Actual COD	Petition details
1	Asset-I: Combined Asset of 1) Charging of Tehri Pooling-Meerut line Ckt-I at 765 kV level along with associated bays at Koteshwar (Tehri Pooling Station) end and 240 MVAR switchable line reactor and associated bays at Meerut end; 2) 765/400 kV 800 MVA ICT- II alongwith associated bays at Koteshwar (Tehri Pooling Station); 3) 765/400 kV 800 MVA ICT- III	28.10.2017	17.4.2020	Covered in the present petition



Sl. No.	Name of Assets	SCOD	Actual COD	Petition details
	alongwith associated bays at Koteshwar (Tehri Pooling Station); 4) 765/400 kV 800 MVA ICT- IV alongwith associated bays at Koteshwar (Tehri Pooling Station).			
2	Asset-2: Charging of Tehri Pooling-Meerut line Ckt-II at 765kV level along with associated bays at Koteshwar (Tehri Pooling Station) end and 240 MVAR switchable line reactor and associated bays at Meerut end		30.6.2020	
3	Asset-3: 765/400 kV 1500 MVA ICT along with associated bays at Meerut Sub-station		30.6.2020	
4	Asset-4: 765 kV 240 MVAR Bus Reactor along with associated bays at Koteshwar (Tehri Pooling Station)		22.10.2020	
5	Asset-5: 765/400 kV 800 MVA ICT-I along with associated bays at Koteshwar (Tehri Pooling Station)		17.1.2021	
6	Asset-6: Modification of series capacitor at Meerut Sub-station for operation at 765 kV level		31.10.2021 (Anticipated.)	
7	Asset-7: 400 kV S/C Tehri (Generation)-Tehri (Koteshwar) (Quad) line along with associated bays at both ends		9.1.2021 (Proposed)	Petition No.270/TT/2021.

(i) As per IA dated 29.1.2015, the transmission assets were scheduled to be put into commercial operation within 33 months from the date of IA (29.1.2015) i.e., by 28.10.2017. As per the Indemnification Agreement dated 23.9.2014, signed between the Petitioner and THDC, SCOD has been stated as 3.11.2017.

(j) Therefore, we consider the SCOD of the transmission project as 3.11.2017, against which the transmission assets have been put under commercial operation as follows:

Assets	SCOD	COD	Time over-run (days)
Asset-I	3.11.2017	17.4.2020	896
Asset-II		30.6.2020	970
Asset-III		30.6.2020	970
Asset-IV		22.10.2020	1084
Asset-V		17.1.2021	1171



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

5. The Petitioner has served the petition on the Respondents and notice of this petition has also been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers by the Petitioner. Reply to the petition has been filed by THDC, Respondent No.18, vide affidavit dated 21.10.2021 raising the issue that delay is not attributable to it and it has been impleaded arbitrarily and without any formal directions of the Commission. UPPCL, Respondent No.9, has filed its reply vide affidavit dated 23.10.2021 raising the issue of COD of Asset-II, cost over-run, Initial Spares, security expense and IoL. The Petitioner vide affidavit dated 28.10.2021 and 30.11.2021 filed rejoinder to the reply of THDC and UPPCL, respectively. The issues raised by UPPCL and THDC and the clarifications given by the Petitioner are considered in relevant portions of the order.

6. The hearing in this matter was held on 29.10.2021 and the Commission reserved the order in the matter. However, the order could not be passed before Shri P.K. Pujari, former Chairperson, demitted the office. Therefore, the matter was heard again on 23.6.2022. The representative of the Petitioner prayed to file additional submissions with justification with respect to time over-run in the matter. Learned counsel for THDC submitted that the reply filed by them is already on record and the same may be considered while allowing the claims of the Petitioner. UPPCL's request



to file additional reply was allowed by the Commission and the Petitioner was allowed to file rejoinder. However, UPPCL has not filed any additional reply. But, THDC has made additional submissions vide affidavit dated 8.7.2022 and the Petitioner filed additional submissions vide affidavit dated 1.7.2022.

7. This order is issued considering the submissions made by the Petitioner in the petition vide affidavit dated 1.7.2022, 7.8.2020, and affidavits dated 27.10.2021 and 15.9.2021 and THDC's and UPPCL's reply vide affidavits dated 21.10.2021, 8.7.2022 and 23.10.2021, respectively and the Petitioner's rejoinder thereto.

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

9. The Petitioner has sought approval of tariff of Asset-VI on the basis of anticipated COD of 31.10.2021. UPPCL has submitted that the Petitioner has claimed the COD of Asset-VI on anticipated basis and the Petitioner may be directed to inform the latest status of COD of Asset-VI with revised tariff forms. In response, the Petitioner has submitted that the revised tariff forms along with revised Auditor's Certificate has already been submitted vide affidavit dated 27.10.2021 and has prayed to consider the revised tariff forms and allow the tariff.

10. We have considered the submissions of the Petitioner and UPPCL. It is observed that the Petitioner has claimed tariff for Asset-VI on the basis of anticipated COD of 31.10.2021. However, it has not been put into commercial operation. Hence, we are not inclined to approve tariff for Asset-VI in this order. The Petitioner is directed to file fresh petition based on the actual COD of Asset-VI. The Petitioner is directed to submit CMD certificate, CEA energisation certificate and RLDC certificate in line with the



2019 Tariff Regulations on the basis of actual COD of Asset-VI. Accordingly, tariff is allowed for Asset-I, Asset-II, Asset-III, Asset-IV and Asset-V in this order.

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD

11. The Annual Fixed Charges (AFC) claimed by the Petitioner in respect of the transmission assets for 2019-24 tariff period are as follows:

(₹ in lakh)

Asset – I				
Particulars	2020-21 (Pro-rata for 349 days)	2021-22	2022-23	2023-24
Depreciation	1839.11	2065.96	2203.05	2230.47
Interest on Loan	1476.63	1540.94	1520.87	1400.56
Return on Equity	1975.23	2226.90	2383.27	2414.54
Interest on working capital	130.57	142.86	148.90	149.93
O&M Expenses	1380.40	1494.74	1548.52	1602.56
Total	6801.94	7471.40	7804.61	7798.06

(₹ in lakh)

Asset – II				
Particulars	2020-21 (Pro-rata for 275 days)	2021-22	2022-23	2023-24
Depreciation	311.86	499.26	594.55	613.58
Interest on Loan	292.09	440.03	492.10	466.77
Return on Equity	335.25	536.98	639.71	660.24
Interest on working capital	15.69	24.17	27.81	28.06
O&M Expenses	60.91	83.67	86.62	89.66
Total	1015.80	1584.11	1840.79	1858.31

(₹ in lakh)

Asset – III				
Particulars	2020-21 (Pro-rata for 275 days)	2021-22	2022-23	2023-24
Depreciation	197.68	293.94	318.47	323.35
Interest on Loan	182.31	252.19	252.90	234.37
Return on Equity	210.95	313.39	339.22	344.36
Interest on working capital	34.12	47.55	49.55	50.64
O&M Expenses	634.29	871.68	903.09	934.59
Total	1259.35	1778.75	1863.23	1887.31



(₹ in lakh)

Asset – IV				
Particulars	2020-21 (Pro-rata for 161 days)	2021-22	2022-23	2023-24
Depreciation	176.76	441.34	485.00	499.33
Interest on Loan	159.84	378.84	388.80	369.30
Return on Equity	191.03	478.34	527.46	543.58
Interest on working capital	8.26	20.23	21.74	21.91
O&M Expenses	20.56	48.23	49.93	51.68
Total	556.45	1366.98	1472.93	1485.80

(₹ in lakh)

Asset – V				
Particulars	2020-21 (Pro-rata for 74 days)	2021-22	2022-23	2023-24
Depreciation	100.21	513.43	533.57	539.71
Interest on Loan	90.61	444.32	429.06	399.71
Return on Equity	107.96	555.13	579.45	586.93
Interest on working capital	8.21	41.76	42.91	43.35
O&M Expenses	98.59	503.48	521.59	539.79
Total	405.58	2058.12	2106.58	2109.49

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

(₹ in lakh)

Asset – I				
Particulars	2020-21 (Pro-rata for 349 days)	2021-22	2022-23	2023-24
O&M Expenses	120.31	124.56	129.04	133.55
Maintenance Spares	216.55	224.21	232.28	240.38
Receivables	877.04	921.13	962.21	958.78
Total	1213.90	1269.90	1323.53	1332.71
Rate of Interest (in %)	11.25	11.25	11.25	11.25
Interest on Working Capital	130.57	142.86	148.90	149.93

(₹ in lakh)

Asset – II				
Particulars	2020-21 (Pro-rata for 275 days)	2021-22	2022-23	2023-24
O&M Expenses	6.74	6.97	7.22	7.47
Maintenance Spares	12.13	12.55	12.99	13.45
Receivables	166.22	195.30	226.95	228.48
Total	185.09	214.82	247.16	249.40
Rate of Interest (in %)	11.25	11.25	11.25	11.25
Interest on Working Capital	15.69	24.17	27.81	28.06



(₹ in lakh)

Asset – III				
Particulars	2020-21 (Pro-rata for 275 days)	2021-22	2022-23	2023-24
O&M Expenses	70.16	72.64	75.26	77.88
Maintenance Spares	126.28	130.75	135.46	140.19
Receivables	206.08	219.30	229.71	232.05
Total	402.52	422.69	440.43	450.12
Rate of Interest (in %)	11.25	11.25	11.25	11.25
Interest on Working Capital	34.12	47.55	49.55	50.64

(₹ in lakh)

Asset – IV				
Particulars	2020-21 (Pro-rata for 161 days)	2021-22	2022-23	2023-24
O&M Expenses	3.88	4.02	4.16	4.31
Maintenance Spares	6.99	7.23	7.49	7.75
Receivables	155.53	168.53	181.59	182.68
Total	166.40	179.78	193.24	194.74
Rate of Interest (in %)	11.25	11.25	11.25	11.25
Interest on Working Capital	8.26	20.23	21.74	21.91

(₹ in lakh)

Asset – V				
Particulars	2020-21 (Pro-rata for 74 days)	2021-22	2022-23	2023-24
O&M Expenses	40.52	41.96	43.47	44.98
Maintenance Spares	72.94	75.52	78.24	80.97
Receivables	246.64	253.74	259.72	259.36
Total	360.10	371.22	381.43	385.31
Rate of Interest (in %)	11.25	11.25	11.25	11.25
Interest on Working Capital	8.21	41.76	42.91	43.35

Date of Commercial Operation (“COD”)

13. The Petitioner has claimed actual COD in respect of the transmission assets as follows:

Asset	SCOD of the transmission assets	Completion of Trial run	COD claimed for the transmission assets
Asset-I	3.11.2017	16.4.2020	17.4.2020
Asset-II		29.6.2020	30.6.2020
Asset-III		18.6.2020	30.6.2020
Asset-IV		15.8.2020	22.10.2020
Asset-V		16.1.2021	17.1.2021
Asset-VI		-	31.10.2021 (Anticipated)

Page 13 of 78



14. In support of actual COD of the transmission assets, the Petitioner has submitted CEA Energisation Certificate, RLDC charging certificate certifying completion of trial operation of assets and CMD certificate in accordance with Regulation 5(2) of the 2019 Regulations as follows:

Assets	COD	CMD certificate date	Completion of trial run	RLDC charging Certificate date	CEA Energisation certificate date
Asset-I	17.4.2020	-	16.4.2020	29.4.2020	30.3.2020
Asset-II	30.6.2020	-	29.6.2020	8.7.2020	17.6.2020*
Asset-III	30.6.2020	-	18.6.2020	10.7.2020	31.3.2020
Asset-IV	22.10.2020	-	15.8.2020	7.9.2020	17.6.2020*
Asset-V	17.1.2021	-	16.1.2021	22.1.2021	17.6.2020*

**Provisional CEA Energisation certificate*

15. It is observed that the Petitioner has submitted provisional CEA Energisation certificate for Asset-II, Asset-IV and Asset-V. It is mentioned in the CEA Energisation certificate that due to Covid-19 pandemic periodical inspection of electrical installations was not possible to be carried out. However, the Petitioner has submitted the RLDC charging certificate and CMD certificate as required under the Grid Code.

16. The Commission had directed the Petitioner to submit the status of downstream system of the transmission assets covered under the instant petition. In response, the Petitioner vide affidavit dated 15.9.2021 has submitted that downstream network at Koteshwar Sub-station is already in place through 765 kV Tehri Pooling Station(Koteshwar)-Meerut Transmission Line charged at 400 kV level and the same has been upgraded to 765 kV level in the transmission project.

17. The Petitioner has further submitted that downstream network w.r.t. ICT at Meerut Sub-station already existed and no additional downstream system at Meerut Sub-station were commissioned in the transmission project.



18. The Petitioner also submitted that 39th SCM of NR held on 29.5.2017 and 30.5.2017 wherein it has been agreed that upgradation of Tehri-Meerut 765 kV 2x S/C lines which were identified with the commissioning of their PSP generation project along with reactive compensation was delinked from the generation. The delinking of assets was also discussed in 1st and 2nd meeting of NRPCTP held on 24.1.2020, 1.9.2020 and special meeting separately held on 28.7.2020.

19. The Petitioner has submitted the details of the transmission assets covered under system strengthening and generation linked and it is as follows:

Sl. No.	Asset Name	System Strengthening /Generation linked
1	400 kV S/C Tehri (Generation) –Tehri Pooling Station (Koteshwar) line along with associated bays	Generation linked
2	4 th ICT of 800 MVA at Tehri Pooling Station (Koteshwar) Sub-station	Generation linked
3	3rd ICT of 1500 MVA at Meerut Sub-station	Generation linked
4	3 numbers of 800 MVA ICT at Tehri Pooling Station (Koteshwar) Sub-station	System Strengthening
5	Charging of Tehri Pooling Station-Meerut line at 765 kV along with upgradation of series capacitors	System Strengthening
6	240 MVAR Line reactors at Meerut end and 240 MVAR Bus reactor at Tehri Pooling Station (Koteshwar) Sub-station	System Strengthening

20. We have considered the submissions of the Petitioner.

(a) The relevant extracts of the 27th meeting of Standing Committee on Power System Planning in Northern Region, held on 30.5.2009 is as follows:

“9.0 Tehri PSP Transmission System

Powergrid explained that the transmission system to be associated with Tehri PSP was discussed and agreed during the 18th Standing Committee Meeting of Northern Region Transmission Planning held on 06.06.2005 and following transmission system was agreed:

- *Tehri Generation – Tehri Pooling Stn. 400 kV (Quad Conductor)*
- *LILO of Bareilly – Mandaula 400 kV D/c at Meerut*
- *Charging of Tehri Pooling – Meerut line at 765 kV by establishment of 765/400 kV, 3x1500 MVA substations at Tehri Pool (due to Space constraints, Tehri Pooling station would be GIS) & Meerut.*



- *Modification of Series Capacitors for operation at 765 kV level Out of the above transmission system, following transmission elements have been agreed as a part of System Strengthening in Central Part of Northern region during the 26th Standing Committee Meeting:*
 - *LILO of Bareilly – Mandaula 400 kV D/c at Meerut*
 - *Charging of Meerut substation at 765 kV level with 2x1500 MVA transformation capacity Keeping above in view following transmission system was proposed to be taken up with Tehri PSP*
 - *Tehri Generation – Tehri Pooling Stn. 400 kV (Quad Conductor)*
 - *Establishment of 765/400 kV, 3x1500 MVA GIS substation at Tehri Pool*
 - *Augmentation of 765/400 transformation capacity by 1x1500 MVA at Meerut*
 - *Charging of Tehri Pooling – Meerut line at 765 kV level*
 - *Modification of Series Capacitors for operation at 765 kV level RVPN enquired about the requirement of series compensation at 765 kV level. Member (PS) explained that the total generation to be evacuated over two 765 kV ckts was of the order of 3400 MW and considering the outage of one ckt there is a requirement of series 11 of 41 compensation. It was also explained that the series compensation equipment had been provided with to increase the height of insulated platform required for 765 kV and no other changes were required. The above was noted & concurred by the constituents.”*

(b) The relevant extracts of the 32nd meeting of Standing Committee on Power System Planning in Northern Region, held on 3.8.2013 is as follows:

“13.0 Tehri PSP Transmission System

13.1 POWERGRID stated that due to severe constraints in transportation of 500 MVA, 765/400 kV ICTs (Single Phase units) to Tehri Pooling station, POWERGRID proposed to provide 4 nos. of 800 MVA ICTs (14 Single Phase Units including 2 nos. spare units) instead of 3nos. of 1500 MVA ICTs. The four nos. of 800 MVA, 765/400 kV ICTs shall be able to evacuate from Tehri / Koteshwar HEPs. Accordingly Transmission system for Tehri PSP was modified as:

- i. Tehri Generation – Tehri Pooling Stn. 400 kV S/c (Quad Conductor)*
- ii. Establishment of 765/400 kV, 4x800 MVA ICTs and GIS substation at Tehri Pooling station*
- iii. Augmentation of 765/400 kV, 2x1500 MVA transformation capacity by 1x1500 MVA at Meerut*
- iv. Charging of Tehri Pooling – Meerut line at 765 kV level*
- v. Modification of Series Capacitors for operation at 765 kV level*

13.2 The members noted that under outage of one transformer the capacity would be reduced to 2400 MVA for a short period till the spare transformer can be brought in the system.

Members agreed to the above proposal.”

(c) The relevant extracts of the 39th meeting of Standing Committee on Power System Planning in Northern Region, held on 3.8.2013 is as follows:

“3.0 Delinking of up-gradation of Tehri Pooling Station–Meerut 765 kV 2xS/c lines (operated at 400 kV) at its rated voltage with the commissioning of Tehri PSS generation scheme.



3.1 CEA stated that in the 18th meeting of SCSPNR, the transmission system for Tehri PSP, Lohari Nagpala (4x150 MW) and Pala Maneri (416 MW) was agreed, which inter-alia included charging of Tehri-Meerut 765 kV 2 x S/C line at 765 kV (to be taken up matching with first of the three generation projects). The system was again discussed in 27th meeting of SCSPNR held on 11.06.2009, wherein, it was decided that charging of Tehri Meerut 765 kV 2 x S/C line at 765 kV would be taken up with Tehri PSP Generation. Presently, these lines are operating at 400 kV level. THDC vide their letter dated 14.2.2017 has informed that constraints are being observed in evacuation of power from Tehri / Koteshwar generation complex under contingency condition. THDC had mentioned that during planned shutdown of one circuit of 400kV Tehri pooling station (also called Koteshwar pooling station)-Meerut line, oscillations were observed at Tehri and Kotsehar hydro projects on 22.11.2016 at a power level of 1150 MW through single circuit. Subsequently, oscillations were damped on reduction of the generation. POWERGRID carried out the studies and observed that no oscillations were observed in the event of outage of one circuit of Tehri-Meerut 765 kV 2 x S/c lines, when the lines are operated at its rated voltage. Therefore, POWERGRID proposed that the up-gradation of this line at 765kV level may be de-linked with Tehri PSP generation and carried out on priority.

3.2 POWERGRID informed that Tehri PSP generation project is anticipated to be commissioned by August-September 2019 and the work on the upgradation of these lines at 765 kV (including upgradation of FSC) is already under progress and is expected to be completed by August/ Sep. 2018. The time gap between anticipated completion date of upgradation works and commissioning of Tehri PSP is about one year. Therefore, the proposal of delinking of upgrading of Tehri-Meerut 765 kV 2xS/C lines with the commissioning of Tehri PSP may be agreed.

3.3 POSOCO stated that the issue of oscillations was also discussed in recent OCC meetings of Northern Region. He enquired about the condition of FSC's on these lines. POWERGRID informed that FSC's on these lines would be operational in next two three months. 3.4 UPPTCL observed that the performance of FSC's, wherever provided in the grid is not satisfactory. Therefore, we should avoid planning FSC in future.

3.5 Chief Engineer, PSPA-1, CEA stated that system studies carried out by POWERGRID indicate that in the event of outage of one circuit of Tehri-Meerut 765 kV 2 x S/C lines, when the lines are charged at 765 kV, no oscillations are observed. Therefore, the upgradation works may be completed at the earliest to overcome any power evacuation constraints.

3.6 After further deliberations, members agreed to the proposal of de-linking of up-gradation of Tehri-Meerut 765 kV 2 x S/C lines (presently operated at 400 kV) with the commissioning of Tehri PSP generation project alongwith reactive compensation.”

(d) The relevant extracts of the minutes of the 1st NRPCTP held on 24.1.2020 is as follows:

“20.0 Up-gradation of Tehri Pooling Station–Meerut 765kV 2xS/c lines (operated at 400 kV) at its rated voltage 20.1 CTU stated that under Tehri PSP (1000 MW) transmission system, 4x800 MVA, 765/400 kV ICTs and GIS Tehri/Koteshwar Pooling station along with charging of Tehri-Meerut at 765 kV & modification of series capacitors for operation at 765 kV level were agreed. However, during the 39th SCM of NR, the issue of oscillations at Tehri complex (1400 MW existing) under contingency condition was discussed and it was agreed to de-link the upgradation of Tehri-Meerut 765 kV 2 x S/C lines (presently operated at 400 kV) along with reactive compensation with the commissioning of Tehri PSP generation project. Considering power evacuation requirement from Tehri generation complex is only 1400 MW so 3x800



MVA ICTs & charging of Tehri-Meerut at 765 kV is proposed to be covered as part of system strengthening and 4th 800 MVA ICT along with other associated elements is proposed to be covered as part of transmission system associated with Tehri PSP. CTU added that the above transmission system is under advance stage of implementation and upon operationalization of LTA granted to THDC for Tehri PSP, the applicable transmission charges shall be payable by THDC/beneficiaries in accordance with the CERC Regulations. 20.2 CEA suggested that since commercial issue is involved, therefore consent from Tehri is needed. 20.3 CTU stated that for evacuation of 1400 MW power from Tehri HEP the transformer requirement is only 3x800 MVA, so, it is always beneficial from transmission tariff point of view to charge only three transformer instead of 4x800 MV. As such, the 4th 800 MVA ICT could be charged with the commissioning of Generation at Tehri PSS. Accordingly, following proposals were agreed: • For power evacuation requirement from Tehri HEP, only 3x800 MVA ICTs may be covered under strengthening scheme along with charging of Tehri-Meerut at 765 kV & modification of series capacitors for operation at 765 kV level. • Charging of 4th ICT should be matched with Tehri PSP generation. Members agreed to the above proposal subject to consent from THDC.”

(e) The relevant extracts of the minutes of the 2nd NRPCTP held on 24.1.2020 is as follows:

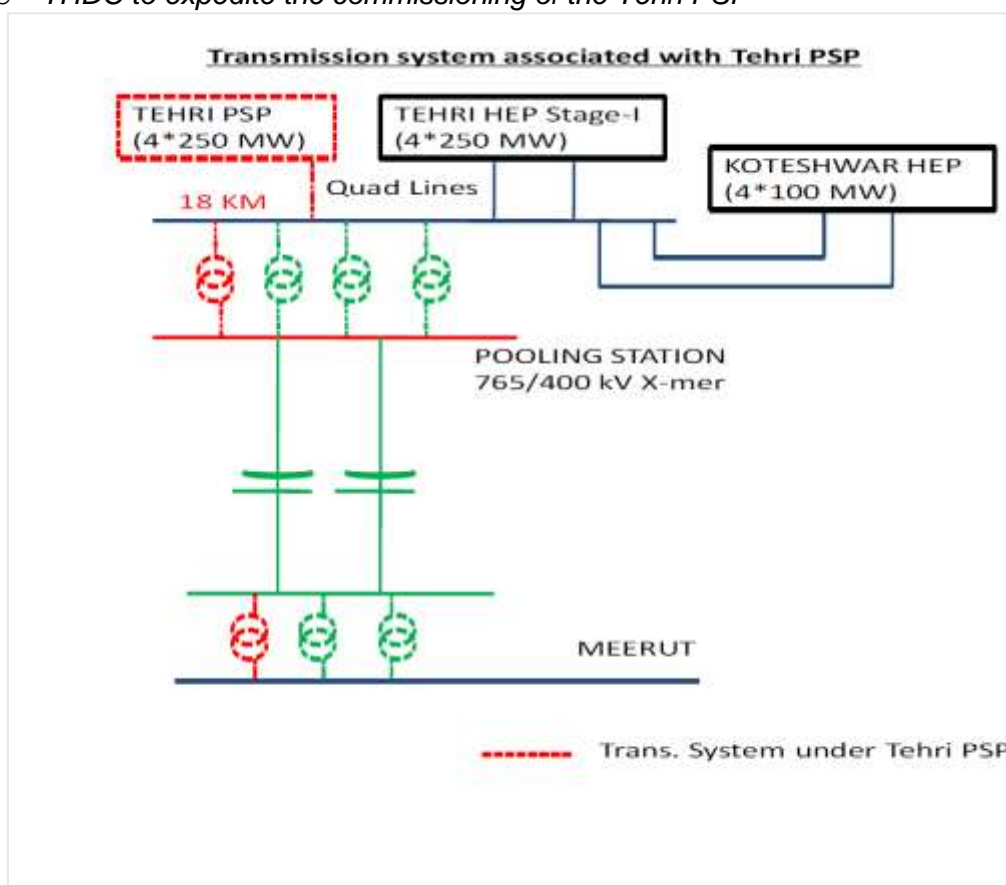
“9.0 Up-gradation of Tehri Pooling Station–Meerut 765kV 2xS/c lines (operated at 400 kV) at its rated voltage 9.1 CEA stated that the transmission system under Tehri PSP (1000 MW) includes 4x800 MVA, 765/400 kV ICTs and Tehri/Koteshwar Pooling station, charging of Tehri-Meerut at 765 kV 2xS/c line along with modification of series capacitors for operation at 765 kV level, 240MVar on each circuit of above line at Meerut end & 240 MVar bus reactor at Tehri/Koteshwar Pooling Station. However, during the 39th Meeting of SCPSPNR, the issue of oscillations at Tehri complex (1400 MW existing) under n-1 contingency condition was discussed and it was agreed to de-link the up gradation of Tehri - Meerut 765 kV 2 x S/C lines (presently operated at 400 kV) along with reactive compensation with the commissioning of Tehri PSP generation project. Subsequently, in 1st meeting of NRPCTP held on 24.01.2020, for evacuation of 1400MW power from Tehri generation complex, following was agreed: (i) 3x800 MVA ICTs & charging of Tehri-Meerut line at 765 kV may be covered as part of system strengthening (ii) Charging of 4th 800 MVA ICT along with other associated elements to be matched with Tehri PSP 9.2 CEA further stated that the above decisions were to be intimated to THDC. Accordingly, a meeting was held among CEA, CTU and THDC on 28.07.2020 through VC, wherein THDC informed that they have no objection in this regard, however, their generation project has been delayed and is likely to be commissioned by June 2022. On this, it was also informed that charging of Tehri-Meerut line at 765 kV level and three ICTs have been completed. It was further informed that LTA granted to THDC would be operationalized with the charging of following transmission elements which are expected by Dec’20: • 4 th 800MVA ICT at Tehri PS • Tehri PSP – Tehri PS 400kV S/c line Upon operationalization, THDC will have to pay the transmission charges of above elements till commissioning of generation project. After deliberations, following was agreed: • 3x800 MVA ICTs at Tehri Pooling & charging of Tehri-Meerut line at 765 kV along with upgradation of series capacitors, 240MVar Line reactors at Meerut end and 240MVar Bus reactor at Koteshwar PS to be considered with the strengthening scheme. 9.2 CEA further stated that the above decisions were to be intimated to THDC. Accordingly, a meeting was held among CEA, CTU and THDC on 28.07.2020 through VC, wherein THDC informed that they have no objection in this regard, however, their



generation project has been delayed and is likely to be commissioned by June 2022. On this, it was also informed that charging of Tehri-Meerut line at 765 kV level and three ICTs have been completed. It was further informed that LTA granted to THDC would be operationalized with the charging of following transmission elements which are expected by Dec'20: • 4 th 800MVA ICT at Tehri PS • Tehri PSP – Tehri PS 400kV S/c line Upon operationalization, THDC will have to pay the transmission charges of above elements till commissioning of generation project. After deliberations, following was agreed:

- 3x800 MVA ICTs at Tehri Pooling & charging of Tehri-Meerut line at 765 kV along with upgradation of series capacitors, 240MVAR Line reactors at Meerut end and 240MVAR Bus reactor at Koteshwar PS to be considered with the strengthening scheme.

- 18km line from Tehri PSP to the Pooling station, the 4th ICT at Tehri Pooling station and the 3rd ICT at Meerut to be considered associated with Tehri PSP
- THDC to expedite the commissioning of the Tehri PSP



9.4 Regarding the progress of Tehri PSP, THDC informed that there is delay in the civil works due to the contractor issue in Tehri PSP, however, EM works have been started as per the original schedule, GSU have been installed for all 4 units and GIS works have been completed. Due to COVID, works may further get delayed to Dec, 2022.

9.5 CE, CEA further stated that with expected Dec, 2022 timeframe, transmission charges have to be paid for 2 years, i.e. from Dec, 2020 to Dec, 2022. THDC stated that the existing Tehri HEP faces evacuation problem and is forced to be backed down by NRLDC whenever one of the line goes out.



9.6 POSOCO stated that earlier when the system was at 400 kV, whenever there was problem in FSC, restrictions were imposed as 1400 MW (plus overload) could not be evacuated on a single 400 kV circuit due to oscillations, therefore shutdown was required. He further stated that now at 765 kV there would be no constraint as loading of the line is increased. He then enquired about the requirement of FSC's with the coming of Tehri PSP and after upgradation of Meerut – Koteshwar D/C at 765 kV level.

9.7 Regarding FSC, CTU stated that the total installed capacity will be 2400 MW at Tehri Complex, after the commissioning of Tehri PSP. There is a possibility that oscillations might occur in the complex, therefore FSC's would be required at 765 kV level also.

CTU further informed that as per the latest updates, the commissioning of the 4th ICT and the 18 km 400 kV S/c line from Tehri PSP to Tehri PS would be done by the end of October, 2020 and LTA will be effective from 1st November, 2020. Tariff for the same would be applicable as per the CERC regulations.

9.8 CE, CEA suggested THDC to resolve the issue with the contractor at the generation site at the earliest and expedite the charging of units at Tehri PSP, in order to reduce the burden of the transmission charges.

9.9 After deliberations, following was agreed:

(i) 3x800 MVA ICTs at Tehri Pooling Station & charging of Tehri-Meerut line at 765 kV along with upgradation of series reactors, 240MVar Line reactors at Meerut end and 240 MVar Bus reactor at Koteshwar PS to be considered with the strengthening scheme.

(ii) 18 km line from Tehri PSP to the Pooling station, the 4th ICT at Tehri Pooling station and the 3rd ICT at Meerut to be considered associated with Tehri PSP and after Commissioning of these transmission elements, THDC will have to pay the transmission Charges as per CERC regulations till the commissioning of their generation.”

21. Based on the above, Asset-I, Asset-II and Asset-IV are part of system strengthening and Asset-III and Asset-V are generation linked.

22. The CODs of the transmission assets are approved taking into consideration the provisional CEA energisation certificate, RLDC charging certificate and CMD certificate. The details are given in the following table. The Petitioner is directed to submit the CEA energisation certificate of Asset-II, IV and V at the time of truing up.



Assets	COD
Asset-I	17.4.2020
Asset-II	30.6.2020
Asset-III	30.6.2020
Asset-IV	22.10.2020
Asset-V	17.1.2021

23. Asset-III and Asset-V are linked with Tehri PSP and the treatment of sharing of transmission charges is dealt in relevant paragraph of this order.

Capital Cost

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

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

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

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

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

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

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



(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.”

25. The Petitioner vide Auditor’s Certificate dated 14.10.2021 has claimed the following capital cost incurred as on COD and Additional Capital Expenditure (ACE) projected to be incurred, in respect of the transmission assets:

Assets	Apportioned Approved Cost as per FR	RCE Apportioned Cost*	Capital Cost claimed as on COD	Projected ACE				Total Capital Cost as on 31.3 2024
				2020-21	2021-22	2022-23	2023-24	
Asset-I	36674.95	42852.25	36359.66	942.44	4440.12	1110.03	0.00	42852.25
Asset-II	10291.31	11717.59	7829.99	243.69	2915.12	728.79	0.00	11717.59
Asset-III	7627.76	6111.57	4806.30	392.71	730.04	182.52	0.00	6111.57
Asset-IV	10855.61	9742.61	7634.22	200.48	1335.54	381.58	190.79	9742.61
Asset-V	8437.33	10460.80	9474.08	101.71	619.50	177.01	88.50	10460.80
Total	73886.96	80884.82	66104.25	1881.03	10040.32	2579.93	279.29	80884.82

*Provisional apportionment

Cost Over-run

26. The estimated completion cost of the transmission assets based on the Auditor’s Certificate works out to ₹80884.82 lakh including IEDC and IDC. The estimated completion cost is more than the FR cost, but it is within the RCE approved cost of ₹80884.82 lakh. The Petitioner has submitted that apportionment of cost in the RCE is based on provisional calculation, hence, apportionment may be revised after finalization of actual expenditure.

27. UPPCL has submitted that there has been significant delay in achieving the COD



both in respect of Asset-I and Asset-II, which, inter alia, also contributed towards cost over-run. The Petitioner instead of furnishing detailed justifications for cost over-run, has mentioned that bid price discovered through tender has been high, hence the actual cost is more than the estimated (FR) cost. In the absence of RCE, the Commission may restrict the tariff based on the approved cost subject to true-up.

28. In response, the Petitioner has submitted that the cost variation details /Copy of RCE/ Revised Auditor's Certificates of all the assets along with the detailed justification of cost variation has been submitted vide affidavit dated 27.10.2021 and has prayed to allow capital cost of all the assets as claimed in the instant petition

29. We have considered the submissions of the Petitioner and UPPCL. The Petitioner has submitted Form-5 and following justification for cost variation from FR cost of ₹73886.96 lakh to completion cost of ₹80884.82 lakh as on 31.3.2024:

(a) The Petitioner, being a Government enterprise, has been following a well laid down procurement policy which ensures both transparency and competitiveness in the bidding process. Through this process, lowest possible market prices for required product/services/as per detailed designing is obtained and contracts are awarded based on lowest evaluated eligible bidder. The best competitive bid prices against tenders may vary as compared to the cost estimate depending upon prevailing market forces, design and site requirements. Whereas, the estimates, are prepared by the Petitioner as per well-defined procedures. The FR cost estimate is broad indicative cost worked out generally based on average unit rates of recently awarded contracts/general practice.

(b) Further, regarding variation in cost of individual item, the packages under subject scope of works comprises of a large no. 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.

(c) Details of cost variation w.r.t. FR cost is as follows:

Sl. No.	Variation on account of:	Variation	
		(₹ in lakh)	(in %)
(i)	Price Variation		
A	DPR to Award (on competitive bidding while tendering)	1474	1.69%
B	As per contractual provisions (for PV based on indices)	3244	3.72%
	Sub-Total (PV)	4718	5.41%
(ii)	Variation in quantities of approved items	(-) 785	(-) 0.90 %
(iii)	Addition / Deletion	(-) 3608	(-) 4.14 %
(iv)	Land and Compensation	(-) 268	(-) 0.31 %
(v)	FERV on packages awarded in foreign currency	4129	4.74%
(vi)	Other Reasons (IEDC and IDC)		
A	IEDC (incl. Contingencies)	(-) 4376	(-) 5.02 %
B	IDC	3278	3.76%
	Sub-total (IEDC and IDC)	(-) 1099	(-) 1.26 %
	Grand Total	3087	3.54%

(d) Details of major variation:

Price Variation (PV) (Net increase of ₹4718 lakh: 5.41 %)

There has been an increase in the cost of the transmission project by ₹4718 lakh on this account, which works out to 5.41% of the approved cost as per details given below:

- Out of a total price variation, price variation of ₹1474 lakh has been incurred from the time of approval of project till award of various contracts (DPR to Award) based on prices received as per competitive bidding and balance price variation of ₹3244 lakh has been incurred/ likely to be incurred on the basis of PV based on indices as per provision of respective contracts.
- As regards price variation from DPR to Award, the Contracts for various packages under this project were awarded to the lowest evaluated and



responsive bidder, on the basis of Competitive Bidding. Thus, the award prices represent the lowest prices offered at the time of bidding of various packages.

- Further, price variation of ₹3244 lakh has been incurred/ likely to be incurred under contracts based on provision of respective contracts. The reasons for the same is attributable to inflationary trends prevalent during execution of project from December 2013 (first OBD under the project) to March, 2020 (period of major supplies). The details of variation in indices of various major raw materials as follows:

Name of Indices	November, 2013	March, 2016	March, 2018	March, 2020	% Increase from first OBD
	(one month prior to first OBD)				
Blooms	31695	26100	41291	34313	8
(150mm x 150mm)	(available from April, 2014)				
HG Zinc	145000	143900	260800	170500	18
EC Grade Al	150217	135972	159720	145164	-3
Copper	466922	352213	466163	402571	-14
CRGO	199393	269025	246075	249475	25
WPI	114.3	107.7	116.3	120.4	5
WPI for Basic Metals	102.3	89.2	109.6	106.0	4
WPI for Fuel & Power	116.2	76.5	98.0	99.5	-14
CPI	243	270	287	326	34

- The project involves foreign currency payments in US Dollar for GIS package during the project execution. Due to variation in exchange rates, there is an actual/ anticipated increase of ₹4129 lakh under the head FERV of packages.

30. We have considered the submissions of the Petitioner. It is observed that the cost variation is primarily on account of variation in estimated prices and final competitive prices. As compared with FR cost, the estimated completion cost of Asset-I, Asset-II and Asset-III is varied by about ₹6177.30 lakh, ₹1426.28 lakh and ₹2023.47 lakh. Based on the estimated completion cost, the Petitioner has submitted the RCE duly approved by the Board of Directors. The estimated completion cost of



Asset-I, Asset-II, Asset-III, Asset-IV and Asset-V is within RCE cost.

Time Over-run

31. The scheduled COD of the transmission project as 3.11.2017, against which the transmission assets have been put under commercial operation as follows:

Assets	SCOD	COD	Time over-run (days)
Asset-I	3.11.2017	17.4.2020	896
Asset-II		30.6.2020	970
Asset-III		30.6.2020	970
Asset-IV		22.10.2020	1084
Asset-V		17.1.2021	1171

32. Therefore, there is a time over-run ranging from 896 days to 1171 days in respect of the transmission assets.

33. The Petitioner has submitted that, as per IA, all the transmission assets covered in the instant petition was supposed to be commissioned matching with the Zero date of the Implementation Agreement (IA) signed with the generator. The Petitioner further made the following submissions:

- a) All the assets covered in the instant petition was planned for evacuation of power from Tehri HEP and Koteshwar HEP and agreed in 18th SCM in Northern Region. Subsequently, the scope of the transmission project was also discussed and agreed in the 27th and 32nd Standing Committee on Transmission System Planning of Northern Region held on 30.5.2009 and 31.8.2013 respectively and 13th and 29th meetings of NRPC held on 27.6.2009 and 13.9.2013.
- b) However, commissioning of THDC generating units got delayed. Same was discussed in various JCC meetings. As per 6th JCC meeting held on 28.3.2019, commissioning schedule of generating units were given as December, 2020. In the 39th SCM in Northern Region held on 29.5.2017 and 30.5.2017 it was discussed and agreed that up-gradation of Tehri-Meerut 765 kV 2 x S/C lines



(presently operated at 400 kV) with the commissioning of Tehri PSP generation project along with reactive compensation was delinked from the generation, which was in the scope of THDC.

34. THDC has submitted that the time over-run in case of the transmission asset cannot be attributable to THDC and it is not liable for payment of any transmission charges till commissioning of the Tehri PSP. THDC also submitted that the Petitioner has failed to adhere to its obligations of commissioning transmission assets within required time frame and the transmission assets were de-linked from commissioning of the Tehri PSP. THDC made the following submissions w.r.t to delay in commissioning of the transmission project:

- a) Tehri Hydro Complex gets pooled at Koteshwar Pooling Station(KPS) owned by the Petitioner through the following transmission lines:
 - (i) Two 400kV single circuits from Tehri HPP.
 - (ii) One 400kV single circuit from Tehri PSP
 - (iii) Two 400kV single circuits from Koteshwar HPP.

- b) During 18th meeting of Standing Committee on Power System Planning in Northern Region (SCPSNR) held on 6.6.2005 following was agreed:
 - Tehri-Meerut Transmission Line would be upgraded to 765kV for evacuation of power from Tehri PSP, Lohari Nagpala (4X150 MW) and Pala Maneri (416 MW)
 - Charging of this line at 765 kV would be taken up matching with generation of the aforementioned three projects.

- c) **2xS/C line at 765 kV to be constructed**-It was further re-affirmed during 27th meeting of SCPSNR held on 11.6.2009 that charging of Tehri-Meerut 765kV 2xS/C line at 765kV would be taken up matching with commissioning of Tehri PSP.



- d) **765 kV circuits were operated at 400 kV compensated by FSCs**-Two outgoing circuits for the transmission of pooled power from KPS to Meerut, though designed for 765 kV since inception were however, being operated at 400 kV till 10.4.2020, because only 1400 MW power (1000 MW from Tehri HPP and 400 MW from Koteshwar HEP) was being handled by this pooling station. These two outgoing circuits have been compensated by two FSCs (400 kV) at Meerut-end to enhance the power transfer capability of these circuits for smooth flow of power without causing any unwanted oscillations in the system.
- e) **Constraints noted in evacuation of power**-Constraints were observed in evacuation of power from Tehri/ Koteshwar generation complex under contingency condition. It is matter of record that transmission system between KPS and Meerut charged at 400 kV was not able to handle power transmission of 1400 MW from Tehri Power Complex during contingency in the event of outage of one of the lines and associated FSC.
- f) **FSCs installed faced frequent breakdowns**- FSCs installed at Meerut end were under frequent breakdowns thus limiting the power handling capacity of lines. This led to power oscillations at Tehri power complex as and when the total generation from Tehri Complex exceeded 1150 MW. In order to address the said issue and to manage power oscillations optimally, the issue was discussed in various meetings of NRPC (OCC, TCC) and the Petitioner was asked to take suitable measures to ameliorate the transmission constraint.
- g) **Generation backed down to avoid tripping**-In 126th OCC Meeting, it was decided that 350 MW generation (1 unit of 250 MW of Tehri HPP and one unit of 100 MW Koteshwar HEP) from Tehri Power Complex would be backed out from grid by way of special protection scheme (SPS) during tripping of one of the lines so that peak power (1400MW) from both the plants could safely be transmitted between KPS and Meerut.
- h) **Assets de-linking from generation**-FSC at Meerut was getting inordinately delayed and the Petitioner has failed to rectify the issue. In order to mitigate the issue, during 39th meeting of SCPSPNR dated 29.5.2017 and 30.5.2017, the



Petitioner itself proposed to delink the up gradation of Tehri-Meerut lines at 765 kV which is being operated at 400 kV with the commissioning of Tehri PSP to get rid of the power oscillations being observed and unreliability of series compensation at Meerut end and it was unanimously agreed to advance the up gradation process to alleviate the problem of oscillations in the system during transmission of peak power from Tehri complex.

- i) If not for the problems of oscillations due to non-functioning of FSC at Meerut, installation of exclusive elements required for transmission of Power from Tehri PSP could have been deferred and rescheduled matching with the commissioning of Tehri PSP.
- j) The Petitioner vide letter no. C/CTU/N/07/Tehri PSP/Op dated 26.8.2020, intimated the expected date of commissioning of ISTS system associated with Tehri PSP i.e., October, 2020 and stated that LTA would be made effective w.e.f. 1.11.2020 and THDC shall be liable to pay transmission charges for delayed generation in accordance with the Commission's Regulations.
- k) THDC vide letter no. THDC/RKSH/EMD/3668 dated 31.8.2020 contested against correspondence and requested for linking the charging of equipment associated with Tehri PSP at KPS co-terminus with the commissioning schedule of Tehri PSP.

35. In response, the Petitioner has reiterated the submission that the transmission assets were planned for evacuation of power from Tehri HEP and Koteshwar HEP. It was discussed and agreed that up-gradation of Tehri-Meerut 765 kV 2 x S/C lines (presently operated at 400 kV) with the commissioning of Tehri PSP generation project along with reactive compensation was delinked from the generation, which was in the scope of THDC. Further, detailed discussion for delinking of assets discussed in 1st Northern Regional Power Committee (Transmission Planning) (NRPCTP) held on 24.1.2020, 2nd Meeting of Northern Regional Power Committee (Transmission Planning) (NRPCTP) held on 1.9.2020 and special meeting separately held on



28.7.2020. As per 1st and 2nd NRPCTP meeting, it was deliberated and agreed that THDC will have to pay the transmission charges till commissioning of generating units. The transmission assets were put into commercial operation from 17.4.2020 onwards. As per latest JCC i.e., 18th JCC meeting held on 25.6.2021 commissioning schedule of generating units were revised to December,2023. Therefore, generation linked transmission assets were also commissioned along with the delinked assets due to contractual obligation.

36. As regards the contention of THDCL that it is not liable to pay transmission charges for the delayed period is baseless and wrong. As per the Indemnification Agreement dated 23.9.2014 zero date has been agreed as 3.11.2017 and as per the clause 1(i) of the Indemnification Agreement, in case of non-commissioning of 1st unit of THDC, THDC shall bear the IDC or the transmission charges till the transmission system is declared under commercial operation. The Petitioner has further submitted the following clarifications regarding the liability of THDC:

- a) Further, in 39th SCM of Power System Planning of NR held on 29.5.2017 and 30.5.2017 matter of urgency of commissioning of Tehri-Meerut 765 kV 2x S/C line was discussed due to oscillations observed at Tehri and Koteshwar Hydro Projects during planned shutdown of one circuit of 400 kV Tehri Pooling Station-Meerut line and at power level of 1150 MW and Oscillations were damped on reduction of generation. Further, generating units were also getting delayed. Therefore, to avoid oscillations and generation shutdown, de-linking of Tehri-Meerut 765 kV 2xS/C line was discussed and agreed.
- b) Further, in 6th JCC meeting held on 28.3.2018, and all subsequent JCC meetings in NR, the issue of NHPC liability of payment of transmission charges after competition of transmission system was discussed continuously. Apart from JCC meetings, issue of liability THDC w.r.t. the payment of transmission charges has been discussed in other forums/meetings also.



c) Further, in the 1st NRPCTP meeting held-on 24.1.2020 and 2nd meeting of NRPCTP held on 1.9.2020, CTUIL stated that applicable transmission charges shall be payable by THDC/beneficiaries in accordance with the Commission's Regulations.

d) It is submitted that, as per the final discussions and deliberations in various forums it is submitted that among all the assets covered in the instant petition, Asset-I, Asset-II, Asset-IV, Asset-VI has been de-linked form the generation and agreed as System Strengthening Scheme and Asset-III and Asset-V remained to be linked to Tehri PSP. Therefore, Transmission tariff for Asset-III and Asset-V shall be borne by the THDC till the commissioning of its generation.

37. The Petitioner in its Written Submissions dated 1.7.2022 has made the following submissions:

- 400 kV Koteshwar GIS Pooling Station was put into commercial operation in 2011 under the Project "Transmission System associated with Koteshwar HEP." Investment approval for this project was accorded in 2005 and land (for both 400 kV and 765 kV) at Koteshwar was acquired in 2006. It is mentioned that a road for movement of the local villagers was coming inside the land premises (at 765 kV side) due to which boundary wall could not be constructed as the villagers protested against the same.
- Due to non-closure of the sub-station boundary, villagers' movement could not be restricted, and they created frequent RoW issues during construction of 400 kV Koteshwar GIS which led to delay in completion of the said project. Due to priority of 400 kV GIS under the said system and protest from the villagers, site levelling and slope protection work of only 400 kV land was carried out and the Petitioner was forced to stop the levelling of 765 kV land.



- The Petitioner submitted the documentary evidence and chronology of events, of the overall delay as shown below:

Sl. No.	Particulars	Date	Remarks
1.	Local villagers raised their demands for rehabilitation and employment	February, 2015 & March, 2015	ROW issue created by the local villagers and
2.	Finalized rate was communicated by SDM, Narendra Nagar to DM, Tehri Garhwal vide letter dated 20.10.2015	9.10.2015	SDM, Narendra Nagar held a meeting with the villagers for their consent in respect of land acquisition for construction of road
3.	SDM, Narendra Nagar intimated DM, Tehri Garhwal for revised survey	27.1.2016	SDM, Narendra Nagar intimated DM, Tehri Garhwal that land of some villagers was left out during survey and therefore re-survey was done
4.	Land Record issued	26.12.2016	--
5.	Notification of land auction issued	27.1.2017	--
6.	Revised Land Record issued	27.5.2017	Final Land purchase
7.	DM Permission for purchase of land from SC	22.9.2017	Small portion of land purchase approval
8.	MOU with PWD	4.10.2017	--
Following ROW continued even after purchase of Land			
9.	Letter regarding Forcible Stoppage of work at Koteshwar site	31.1.2016	Work stopped by the local villagers for additional demand of compensation, relocations of the affected villagers and employment of local people and deployment of local contractors
10.	Letter regarding Forcible Stoppage of work at Koteshwar site	8.2.2016	Work stopped by the local villagers for additional demand of compensation, relocations of the affected villagers and employment of local people and deployment of local contractors
11.	Letter from Koteshwar Power Pooling (Prabhawit) Jan Hitashi Samiti, Village Fafaran, Tehri	2.3.2016	Letter regarding employment for local villagers.
12.	Letter from Koteshwar Power Pooling (Prabhawit) Jan Hitashi Samiti, Village Fafaran, Tehri	April, 2016	Letter regarding employment for local villagers
13.	Letter regarding Forcible Stoppage of work at Koteshwar site	3.5.2016	Work stopped by the local labourers and local labourers misbehaved with the working staff



Sl. No.	Particulars	Date	Remarks
14.	Letter regarding Lodging of F.I.R	4.5.2016	Complaint was registered to against the local villagers/individuals who came inside the POWERGRID premises and physically assaulted and abused the officials and workers
15.	Letter regarding Forcible Stoppage of work at Koteshwar site	5.5.2016	Work stopped by the local villagers for additional demand of compensation, relocations of the affected villagers and employment of local people and deployment of local contractors
16.	FIR lodged on account of incident held on 04.05.2016	5.5.2016	FIR filed to hinder the work
17.	Charge sheet filed against Project Manager of executing agency (KEC)	14.8.2016	FIR filed to hinder the work
18.	Court Case disposed of by the court	7.3.2018	Hon'ble High Court of Uttarakhand, Nainital instructed POWERGRID to consider shifting the alignment of the towers to protect the life and liberty of the residents of Village Saunthyal Gaon & Fafran Gaon, if technically feasible.

38. We have considered the submissions of the Petitioner and THDC and have gone through the documentary evidence provided by the Petitioner in support of time over-run. As per IA, the assets are scheduled to be put into commercial operation within 33 months matching with the zero date of the implementation agreement signed with the generator. As per the implementation agreement, SCOD of the ATS is 3.11.2017 against which Asset-I, Asset-II, Asset-III, Asset-IV and Asset-V were put into commercial operation on 17.4.2020, 30.6.2020, 30.6.2020, 22.10.2020 and 17.1.2021 respectively, Thus, there is time over-run of 896 days, 970 days, 970 days, 1094 days and 1071 days, respectively.

39. The Petitioner has submitted that the main reason for time over-run is delay in purchase of land for construction of alternate road and RoW issues.



40. The time over-run of remaining assets i.e., Asset-I, Asset-II, Asset-III, Asset-IV, and Asset-V is dealt hereunder:

(a) The Petitioner has submitted that from February, 2015 and March, 2015 to 4.10.2017, the assets are delayed due to purchase of land for construction of road. It is observed that as per the chronology of the RoW events, about 976 days delayed due to RoW issues towards purchase of land for construction of road. Out of the 976 days, the Petitioner has submitted valid justification from 9.10.2015 to 27.1.2016 and 26.12.2016 to 27.5.2017. Then from 9.10.2015 to 26.12.2016, the Petitioner submitted that, on 9.10.2015, SDM, Narendra Nagar held a meeting with the villagers for their consent in respect of land acquisition for construction of road. The finalised rate was communicated by SDM, Narendra Nagar to DM, Tehri Garhwal vide letter dated 20.10.2015 requesting to instruct the Petitioner for paying this amount to the respective landowners. The Petitioner has submitted relevant documentary evidence to justify the same. Hence, the period from 9.10.2015 to 26.12.2016 i.e., 111 days is condoned for Asset-I, Asset-II, Asset-III, Asset-IV, and Asset-V. Further, it can be observed that after land record was issued on 26.12.2016, the same was revised and re-issued on 27.5.2017. However, no justification for the same is given. Hence, delay during this period is not condoned. Then from 27.5.2017 to 4.10.2017, after purchase of land there was re-negotiation with landowners due to revision in estimate for construction of alternate road, hence, MOU signed with PWD, Uttarakhand was no longer valid and another MOU was signed on 4.10.2017. The Petitioner has submitted relevant documentary evidence for the period hence this delay of 131 days is condoned for Asset-I, Asset-II, Asset-III, Asset-IV, and Asset-V.



Therefore, out of the total delay of 970 days towards purchase of land for construction of road, time delay of 242 days is beyond the control of the Petitioner and the same has been condoned for Asset-I, Asset-II, Asset-III, Asset-IV, and Asset-V.

(b) The Petitioner has submitted that the Petitioner has faced RoW problems from 31.1.2016 to 14.8.2016 and the same has been subsumed in the RoW problems towards purchase of land for construction of road. The Petitioner has further submitted that there was time over-run due to court case, which was disposed on 7.3.2018. However, the Petitioner has not submitted when the court case was filed and which location was impacted because of the court case. Due to non-submission of valid justification, and exact time period impacted due to court case, we have not condoned the time overrun due to court case.

41. Accordingly, the decision with regard to time over-run in respect of the transmission assets covered in the instant petition is as follows:

Assets	SCOD	COD	Time over-run (days)	Time over-run condoned	Time over-run not condoned
Asset-I	3.11.2017	17.4.2020	896	242	654
Asset-II		30.6.2020	970	242	728
Asset-III		30.6.2020	970	242	728
Asset-IV		22.10.2020	1084	242	842
Asset-V		17.1.2021	1171	242	929

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

42. The Petitioner has claimed IDC in respect of the transmission assets and has submitted the Auditor’s Certificate dated 14.10.2021 in support of the same. The Petitioner has submitted the computation of IDC along with year-wise details of IDC discharged.



43. UPPCL has submitted that the Petitioner has provided the incomplete information regarding the rate of interest on various loans which are substantial quantum of the total borrowings, hence, no prudence is possible in quantification of IDC. Accordingly, no IDC should be allowed in the tariff as of now. In response, the Petitioner has submitted that it has submitted revised IDC statements along with the IDC calculations as per the revised Auditor's Certificates vide affidavit dated 27.10.2021.

44. We have considered the submissions of the Petitioner and UPPCL. The loan amount as on COD has been mentioned in Form-6 and Form-9C. While going through these documents, it is observed that there is mismatch in loan amount between IDC statement and in Form-9C. Therefore, the allowable IDC has been worked out based on the available information and relying on loan amount as per Tariff Form 9C. The Petitioner is directed to submit the detailed IDC statement by rectifying the above-mentioned deviation, at the time of true up.

45. The loan details submitted in Form-9C for 2019-24 tariff period and IDC computation statement have been considered for the purpose of IDC calculation on cash basis and on accrued basis. The un-discharged IDC as on COD has been considered as ACE during the year in which it has been discharged. Further, adjustment on account of time over-run has been done to arrive at the admissible IDC. However, in the statement showing IDC discharged up to COD, the Petitioner has not indicated the floating rate of interest of the loans deployed. IDC on cash basis up to COD has been worked out on the basis of loan details given in the statement showing discharge of IDC and Form-9C in respect of the transmission assets.



46. For loans after 1.4.2019, i.e., for 'SBI-04 (2019-2020) (Q1)' the rate of interest has been considered at 8.35% on drawl date. The Petitioner is directed to submit information on actual interest rates at the time of truing-up.

47. Accordingly, based on the information furnished by the Petitioner, IDC allowed, is as follows:

(₹ in lakh)

Assets	IDC as per Auditor's Certificate	IDC admissible	IDC disallowed due to time over-run/ computational difference	IDC discharged as on COD	IDC Un-discharged as on COD	IDC discharge during
						2019-24
	A	B	C=A-B	D	E=B-D	F
Asset-I	3522.87	801.31	2721.56	801.31	0.00	0.00
Asset-II	843.02	151.21	691.82	151.21	0.00	0.00
Asset-III	506.38	94.95	411.43	94.95	0.00	0.00
Asset-IV	1048.41	203.74	844.67	203.74	0.00	0.00
Asset-V	1452.16	315.77	1136.39	315.77	0.00	0.00

48. The Petitioner has claimed IEDC and has submitted Auditor's Certificate in support of the same. IEDC is allowed as claimed subject to adjustment as per non-condonation of time over-run. The details of claimed and allowed IEDC are as follows:

(₹ in lakh)

Particulars	IEDC claimed (As per Auditor's Certificate)	IEDC disallowed (due to time over-run)	IEDC allowed (As on COD)
	1	2	3 = (1-2)
Asset – I	354.27	121.56	232.71
Asset – II	72.32	26.59	45.73
Asset – III	55.09	20.26	34.83
Asset – IV	69.75	28.05	41.70
Asset – V	109.22	46.52	62.70

Initial Spares

49. The Petitioner has claimed Initial Spares in respect of the transmission assets in accordance with the Regulation 23(d) of the 2019 Tariff Regulations subject to the following ceiling norms:



“(d) Transmission System

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

50. The Petitioner has claimed the following Initial Spares:

Assets	Particulars	Plant & Machinery Cost up to cut-off date (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Ceiling (in%)
Asset – I	Sub-station	5583.00	350.29	6.00
	Sub-station (GIS)	27810.92	1744.90	7.00
	Transmission Line	1356.04	12.69	1.00
	PLCC	115.49	3.84	3.50
Asset – II	Sub-station	4227.88	259.34	6.00
	Sub-station (GIS)	4227.88	259.34	7.00
	Transmission Line	1346.97	12.69	1.00
	PLCC	91.81	5.55	3.50
Asset – III	Sub-station	5256.52	293.58	6.00
Asset – IV	Sub-station	7598.25	502.30	7.00
Asset – V	Sub-station	7819.72	518.16	7.00

51. The Petitioner has prayed to consider Initial Spares on overall project basis as per the APTEL’s judgement dated 14.9.2019 in Appeal No. 74 of 2017. Further, the Petitioner has submitted that Initial Spares are essential spares for smooth running of the grid and has prayed to be allowed in full under Regulation 76 of 2019 Tariff Regulation, “Power to Relax”.

52. UPPCL has submitted that the Commission may not allow such excess initial spares in respect of PLCC/ Communication as claimed in absence of justifiable reason submitted by the Petitioner, except requesting for invocation of Power to Relax under Regulation 76 of 2019 Tariff Regulations. In response, the Petitioner has reiterated its submissions.



53. We have considered the submissions of the Petitioner and UPPCL. As per the APTEL's judgment dated 14.9.2019 in Appeal No. 74 of 2017, Initial Spares are to be allowed as per the ceiling on overall project cost. The APTEL in judgement dated 14.9.2019 in Appeal No. 74 of 2017 held as follows:

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

54. Accordingly, Initial Spares are to be allowed as percentage of the project cost as a whole. The transmission project is currently not complete. Therefore, initial spares is allowed on the basis of individual transmission asset wise in 2019-24 tariff period. The project cost as a whole shall be arrived at, only when all the assets are combined in the subsequent tariff periods. Further, the Petitioner has not submitted any justifiable reason for claiming excess Initial Spares in respect of Asset-I and Asset-II. Hence, Initial Spares are allowed as per the norms in 2019 Tariff Regulations.

55. The Petitioner has claimed Initial Spares on PLCC under Communication System separately for Asset-I and Asset-II. Form 5 under Part-III of the 2019 Tariff Regulations requires the transmission licensee to provide "Element wise Break-up of Project/Asset/Element Cost for Transmission System or Communication System". Details are required to be furnished regarding (a) transmission line (preliminary works, transmission lines material, taxes and duties); (b) sub-stations (preliminary works & land, civil works, sub-station equipment, spares, taxes and duties); and (c) communication system (preliminary works, communication system equipment, taxes and duties). PLCC forms a part of sub-station equipment (Sl. No 6) under the head



'sub-station equipment' and there is no mention of PLCC under communication system. The Petitioner has also submitted Form-13, wherein the Petitioner has neither mentioned nor claimed Initial Spares towards PLCC. Initial Spares claimed towards PLCC are included in the sub-station. Therefore, we are not inclined to approve Initial Spares separately towards PLCC under "Communication System" head.

56. Accordingly, Initial Spares allowed are as follows:

Sub-station:

Assets	Plant & Machinery Cost up to cut-off date (excluding IDC and IEDC as per Auditor certificate*) (₹ in lakh) (A)	Initial Spares Claimed (₹ in lakh) (B)^	Ceiling Limit (in%) (C)	Allowable Initial Spares worked out D = [(A-B) *C(100-C)]	Excess Initial Spares (₹ in lakh)	Initial Spares allowed (₹ in lakh)	Discharge of Initial Spares			
							As on COD	2020-21	2021-22	2022-23
Asset-I	5698.49	354.13	6.00	341.13	13.00 [§]	341.13	143.94	24.96	170.49	1.74
Asset-II	4319.69	264.89	6.00	258.82	6.07 ^{§§}	258.82	130.96	21.25	93.30	13.31
Asset-III	5256.52	293.58	6.00	316.78	0.00	293.58	23.54	84.98	150.32	34.74

^As per Form 13, #PLCC included.

§Deducted from add cap of 2022-23, §§Deducted from add cap of 2022-23

Sub-station (GIS)

Assets	Plant & Machinery Cost up to cut-off date (excluding IDC and IEDC as per Auditor certificate) (₹ in lakh) (A)	Initial Spares Claimed (₹ in lakh)* (B)	Ceiling Limit (in%) (C)	Allowable Initial Spares worked out D = [(A-B) *C(100-C)]	Excess Initial Spares (₹ in lakh)	Initial Spares allowed (₹ in lakh)	Discharge of Initial spares			
							As on COD	2020-21	2021-22	2022-23
Asset-I	27810.92	1744.90	7.00	1961.96	0.00	1744.90	719.72	120.94	840.14	64.10
Asset-II	4227.88	259.34	7.00	298.71	0.00	259.34	127.12	16.49	102.96	12.77
Asset-IV	7598.25	502.30	7.00	534.10	0.00	502.30	23.54	50.96	398.43	29.37
Asset-V	7819.72	518.16	7.00	549.58	0.00	518.16	378.48	4.98	102.97	31.73

*As per Form 13



Transmission Line:

Assets	Plant & Machinery Cost up to cut-off date (excluding IDC and IEDC as per Auditor certificate) (₹ in lakh) (A)	Initial Spares Claimed* (₹ in lakh) (B)	Ceiling Limit (in%) (C)	Allowable Initial Spares worked out	Excess Initial Spares (₹ in lakh)	Initial Spares allowed (₹ in lakh)	Discharge of Initial spares			
				$D = [(A-B) * C(100-C)]$			As on COD	2020-21	2021-22	2022-23
Asset-I	1356.04	12.69	1.00	13.57	0.00	12.69	3.89	-	6.25	2.55
Asset-II	1346.97	12.69	1.00	13.48	0.00	12.69	5.89	1.24	4.51	1.05

*As per Form 13

57. The Petitioner has submitted that capital cost as on COD includes the discharged portions of initial spares as on COD and un-discharged portion is shown in ACE in future periods and the same is reflected in the auditor's certificate. Hence, further adjustment in this regard in capital cost is not required.

Capital Cost allowed as on COD

58. Accordingly, capital cost allowed in respect of the transmission assets as on COD is as follows:

Assets	Capital Cost (as on COD as per Auditor's Certificate)	Less: IDC (as on COD)		Less: IEDC disallowed due to time over-run	Capital Cost (as on COD on cash basis)
		IDC disallowed due to time over-run	Un-discharged IDC		
Asset-I	36359.66	2721.56	0.00	121.56	33516.54
Asset-II	7829.99	691.82	0.00	26.59	7111.58
Asset-III	4806.30	411.43	0.00	20.26	4374.61
Asset-IV	7634.22	844.67	0.00	28.05	6761.51
Asset-V	9474.08	1136.39	0.00	46.52	8291.17

Additional Capital Expenditure ("ACE")

59. Regulation 24 and Regulation 25 of the 2019 Tariff Regulations provide as



follows:

“24. Additional Capitalization within the original scope and up to 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 ACE incurred or projected to be incurred in respect of an existing project or a new project on the following counts within the original scope of work and after the cut-off date may be admitted by the Commission, subject to prudence check:*

a) *Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;*

b) *Change in law or compliance of any existing law;*

c) *Deferred works relating to ash pond or ash handling system in the original scope of work;*

d) *Liability for works executed prior to the cut-off date;*

e) *Force Majeure events;*

f) *Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and g) Raising of ash dyke as a part of ash disposal system.*

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



(a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations.

(b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;

(c) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and

(d) The replacement of such asset or equipment has otherwise been allowed by the Commission.”

60. The Petitioner has claimed projected ACE for 2019-24 tariff period on account of balance and retention payments due to un-discharged liability projected for works executed within the cut-off date. The Petitioner has claimed projected ACE as per Auditor’s Certificate and it is as follows:

Assets	ACE Claimed as per Auditor’s Certificate				Total ACE Claimed
	2020-21	2021-22	2022-23	2023-24	
Asset-I	942.44	4440.13	1110.03	0.00	6492.60
Asset-II	243.69	2915.13	728.78	0.00	3887.60
Asset-III	392.71	730.05	182.51	0.00	1305.27
Asset-IV	200.48	1335.54	381.58	190.79	2108.39
Asset-V	101.71	619.51	177.00	88.50	986.72
Total	1881.03	10040.36	2579.90	279.29	14780.58

61. We have considered the submissions of Petitioner. ACE claimed on account of balance and retention payments is allowed under Regulations 24(1)(a) of the 2019 Tariff Regulations. ACE allowed in respect of the transmission assets is as follows:

Assets	FR Apportio ned Cost	RCE Apportio ned Cost	Capital Cost as on 1.4.2019	Admitted ACE				Capital Cost as on 31.3.2024
				2020-21	2021-22	2022-23	2023-24	
Asset-I	36674.95	42852.26	33516.54	942.44	4440.12	1097.03	0.00	39996.13
Asset-II	10291.31	11717.59	7111.58	243.69	2915.12	722.72	0.00	10993.11
Asset-III	7627.76	6111.57	4374.61	392.71	730.04	182.52	0.00	5679.88
Asset-IV	10855.61	9742.61	6761.51	200.48	1335.54	381.58	190.79	8869.90
Asset-V	8437.33	10460.8	8291.17	101.71	619.50	177.00	88.50	9277.89



Debt-Equity Ratio

62. Regulations 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 details of debt-equity ratio considered in accordance with Regulation 18 of the 2019 Tariff Regulations for the purpose of computation of tariff of 2019-24 period in respect of the transmission assets is as follows:

Funding Asset-I	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)	Total Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	23461.63	70.00	27997.35	70.00
Equity	10054.92	30.00	11998.78	30.00
Total	33516.54	100.00	39996.13	100.00
Funding Asset-II	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)	Total Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	4978.11	70.00	7695.18	70.00
Equity	2133.47	30.00	3297.93	30.00
Total	7111.58	100.00	10993.11	100.00
Funding Asset-III	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)	Total Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	3062.23	70.00	3976.06	70.00
Equity	1312.38	30.00	1703.82	30.00
Total	4374.61	100.00	5679.88	100.00
Funding Asset-IV	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)	Total Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	4733.06	70.00	6208.93	70.00
Equity	2028.45	30.00	2660.96	30.00
Total	6761.51	100.00	8869.90	100.00
Funding Asset-V	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)	Total Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	5803.82	70.00	6494.53	70.00
Equity	2487.35	30.00	2783.36	30.00
Total	8291.17	100.00	9277.89	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 Asset-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 asset”

(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. The IT equipment has been considered as part of the Gross Block and depreciated using Weighted Average Rate of Depreciation (WAROD). WAROD at Annexure-I has been worked out after considering the depreciation rates of IT and non-IT assets as prescribed in the 2019 Tariff Regulations. The salvage value of IT equipment has been considered nil, i.e., IT asset has been considered as 100% depreciable. Depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. Depreciation allowed in respect of the transmission



assets is as follows:

(₹ in lakh)

Asset – I					
	Particulars	2020-21 (Pro-rata for 349 days)	2021-22	2022-23	2023-24
A	Opening Gross Block	33516.54	34458.98	38899.10	39996.13
B	Addition during the year 2019-24 due to projected ACE	942.44	4440.12	1097.03	0.00
C	Closing Gross Block (A+B)	34458.98	38899.10	39996.13	39996.13
D	Average Gross Block (A+C)/2	33987.76	36679.04	39447.62	39996.13
Y	Freehold land	27.59	27.59	27.59	27.59
E	Average Gross Block (90% depreciable assets)	33886.43	36573.97	39341.51	39889.82
F	Average Gross Block (100% depreciable assets)	73.75	77.49	78.52	78.72
G	Depreciable value (excluding IT equipment and software) (E*90%)	30497.79	32916.57	35407.36	35900.84
H	Depreciable value of IT equipment and software	73.75	77.49	78.52	78.72
I	Total Depreciable Value (G+H)	30571.53	32994.06	35485.88	35979.56
J	Weighted average rate of Depreciation (WAROD) (in %)	5.25	5.23	5.21	5.20
K	Lapsed useful life at the beginning of the year (Year)	0.00	0.00	1.00	2.00
L	Balance useful life at the beginning of the year (Year)	25.00	24.00	23.00	22.00
M	Depreciation during the year(D*J)	1704.89	1916.74	2053.49	2080.57
N	Aggregate Cumulative Depreciation at the end of the year	1704.89	3621.63	5675.12	7755.69
O	Remaining Aggregate Depreciable Value at the end of the year(I-N)	28866.64	29372.43	29810.75	28223.87

(₹ in lakh)

Asset – II					
	Particulars	2020-21 (Pro-rata for 275 days)	2021-22	2022-23	2023-24
A	Opening Gross Block	7111.58	7355.27	10270.39	10993.11
B	Addition during the year 2019-24 due to projected ACE	243.69	2915.12	722.72	0.00
C	Closing Gross Block (A+B)	7355.27	10270.39	10993.11	10993.11
D	Average Gross Block (A+C)/2	7233.43	8812.83	10631.75	10993.11
Y	Freehold land	5.60	5.60	5.60	5.60
E	Average Gross Block (90% depreciable assets)	7215.74	8792.72	10609.77	10970.75
F	Average Gross Block (100% depreciable assets)	12.04	14.46	16.33	16.71
G	Depreciable value (excluding IT equipment and software) (E*90%)	6494.16	7913.45	9548.79	9873.68



Asset – II					
	Particulars	2020-21 (Pro-rata for 275 days)	2021-22	2022-23	2023-24
H	Depreciable value of IT equipment and software	12.04	14.46	16.33	16.71
I	Total Depreciable Value (G+H)	6506.20	7927.91	9565.12	9890.38
J	Weighted average rate of Depreciation (WAROD) (in %)	5.24	5.24	5.24	5.24
K	Lapsed useful life at the beginning of the year (Year)	0.00	0.00	1.00	2.00
L	Balance useful life at the beginning of the year (Year)	26.00	25.00	24.00	23.00
M	Depreciation during the year(D*J)	285.65	461.66	556.73	575.61
N	Aggregate Cumulative Depreciation at the end of the year	285.65	747.31	1304.04	1879.65
O	Remaining Aggregate Depreciable Value at the end of the year(I-N)	6220.56	7180.60	8261.08	8010.73

(₹ in lakh)

Asset – III					
	Particulars	2020-21 (Pro-rata for 275 days)	2021-22	2022-23	2023-24
A	Opening Gross Block	4374.61	4767.32	5497.36	5679.88
B	Addition during the year 2019-24 due to projected ACE	392.71	730.04	182.52	0.00
C	Closing Gross Block (A+B)	4767.32	5497.36	5679.88	5679.88
D	Average Gross Block (A+C)/2	4570.97	5132.34	5588.62	5679.88
Y	Freehold land	0.00	0.00	0.00	0.00
E	Average Gross Block (90% depreciable assets)	4570.97	5129.63	5582.52	5673.10
F	Average Gross Block (100% depreciable assets)	0.00	2.71	6.10	6.78
G	Depreciable value (excluding IT equipment and software)(E*90%)	4113.87	4616.67	5024.27	5105.79
H	Depreciable value of IT equipment and software	0.00	2.71	6.10	6.78
I	Total Depreciable Value (G+H)	4113.87	4619.38	5030.37	5112.57
J	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.29	5.29	5.29
K	Lapsed useful life at the beginning of the year (Year)	0.00	0.00	1.00	2.00
L	Balance useful life at the beginning of the year (Year)	25.00	24.00	23.00	22.00
M	Depreciation during the year(D*J)	181.84	271.25	295.67	300.56
N	Aggregate Cumulative Depreciation at the end of the year	181.84	453.09	748.76	1049.32
O	Remaining Aggregate Depreciable Value at the end of the year(I-N)	3932.03	4166.29	4281.61	4063.25



(₹ in lakh)

Asset – IV					
	Particulars	2020-21 (Pro-rata for 161 days)	2021-22	2022-23	2023-24
A	Opening Gross Block	6761.51	6961.99	8297.53	8679.11
B	Addition during the year 2019-24 due to projected ACE	200.48	1335.54	381.58	190.79
C	Closing Gross Block (A+B)	6961.99	8297.53	8679.11	8869.90
D	Average Gross Block (A+C)/2	6861.75	7629.76	8488.32	8774.50
Y	Freehold land	11.10	11.10	11.10	11.10
E	Average Gross Block (90% depreciable assets)	6841.42	7608.95	8467.35	8753.48
F	Average Gross Block (100% depreciable assets)	9.23	9.70	9.87	9.92
G	Depreciable value (excluding IT equipment and software) (E*90%)	6157.28	6848.06	7620.61	7878.13
H	Depreciable value of IT equipment and software	9.23	9.70	9.87	9.92
I	Total Depreciable Value (G+H)	6166.51	6857.76	7630.48	7888.05
J	Weighted average rate of Depreciation (WAROD) (in %)	5.21	5.20	5.18	5.17
K	Lapsed useful life at the beginning of the year (Year)	0.00	0.00	1.00	2.00
L	Balance useful life at the beginning of the year (Year)	25.00	24.00	23.00	22.00
M	Depreciation during the year (D*J)	157.81	396.53	439.51	453.84
N	Aggregate Cumulative Depreciation at the end of the year	157.81	554.34	993.85	1447.69
O	Remaining Aggregate Depreciable Value at the end of the year (I-N)	6008.69	6303.42	6636.63	6440.37

(₹ in lakh)

Asset – V					
	Particulars	2020-21 (Pro-rata for 74 days)	2021-22	2022-23	2023-24
A	Opening Gross Block	8291.17	8392.88	9012.38	9189.39
B	Addition during the year 2019-24 due to projected ACE	101.71	619.50	177.01	88.50
C	Closing Gross Block (A+B)	8392.88	9012.38	9189.39	9277.89
D	Average Gross Block (A+C)/2	8342.02	8702.63	9100.88	9233.64
Y	Freehold land	6.55	6.55	6.55	6.55
E	Average Gross Block (90% depreciable assets)	8324.21	8683.97	9081.15	9213.54
F	Average Gross Block (100% depreciable assets)	11.27	12.11	13.19	13.55
G	Depreciable value (excluding IT equipment and software) (E*90%)	7491.78	7815.57	8173.03	8292.19
H	Depreciable value of IT equipment and software	11.27	12.11	13.19	13.55
I	Total Depreciable Value (G+H)	7503.06	7827.69	8186.22	8305.74

Page 51 of 78



	Particulars	Asset – V			
		2020-21 (Pro-rata for 74 days)	2021-22	2022-23	2023-24
J	Weighted average rate of Depreciation (WAROD) (in %)	5.23%	5.21%	5.18%	5.17%
K	Lapsed useful life at the beginning of the year (Year)	0.00	0.00	1.00	2.00
L	Balance useful life at the beginning of the year (Year)	25.00	24.00	23.00	22.00
M	Depreciation during the year(D*J)	88.46	453.31	471.71	477.84
N	Aggregate Cumulative Depreciation at the end of the year	88.46	541.77	1013.48	1491.32
O	Remaining Aggregate Depreciable Value at the end of the year(I-N)	7414.60	7285.91	7172.74	6814.42

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 asset, 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. UPPCL has submitted that the Petitioner has not furnished any authenticated documents showing details of allocation of loan among different projects. Since such details are mandatory for prudence of loan and rate of interest (floating or fixed) thereof, the Petitioner should invariably submit such documents duly certified by the Auditor for prudence check.

68. In response, the Petitioner has submitted that as per IA the transmission project is to be implemented through combination of loan from the domestic borrowings/bonds/external commercial (ECB's) borrowings and the Petitioner's internal resources with debt-equity ratio of 70:30. The Petitioner has further submitted that loan deployed in a project are drawn from common pool of loans and further allocated to different elements based on periodic expenditure and availability of loans.

69. We have considered the submissions of the Petitioner and UPPCL. The weighted average rate of IoL has been considered on the basis of the rates prevailing as on COD for respective loans. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during 2019-24 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true-up. In view of above, IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed in respect of the



transmission assets is as follows:

(₹ in lakh)

Asset – I					
	Particulars	2020-21 (Pro-rata for 349 days)	2021-22	2022-23	2023-24
A	Gross Normative Loan	23461.63	24121.34	27229.43	27997.35
B	Cumulative Repayments up to Previous Year	0.00	1704.89	3621.63	5675.12
C	Net Loan-Opening (A-B)	23461.63	22416.45	23607.80	22322.23
D	Addition due to ACE	659.72	3108.09	767.92	0.00
E	Repayment during the year	1704.89	1916.74	2053.49	2080.57
F	Net Loan-Closing (C+D-E)	22416.45	23607.80	22322.23	20241.66
G	Average Loan (C+F)/2	22939.04	23012.13	22965.01	21281.94
H	Weighted Average Rate of Interest on Loan (in %)	6.24	6.22	6.18	6.15
I	Interest on Loan (G*H)	1368.89	1430.23	1419.70	1308.84

(₹ in lakh)

Asset – II					
	Particulars	2020-21 (Pro-rata for 275 days)	2021-22	2022-23	2023-24
A	Gross Normative Loan	4978.11	5148.69	7189.27	7695.18
B	Cumulative Repayments up to Previous Year	0.00	285.65	747.31	1304.04
C	Net Loan-Opening (A-B)	4978.11	4863.04	6441.96	6391.14
D	Addition due to ACE	170.58	2040.58	505.90	0.00
E	Repayment during the year	285.65	461.66	556.73	575.61
F	Net Loan-Closing (C+D-E)	4863.04	6441.96	6391.14	5815.52
G	Average Loan (C+F)/2	4920.58	5652.50	6416.55	6103.33
H	Weighted Average Rate of Interest on Loan (in %)	7.22	7.20	7.20	7.19
I	Interest on Loan (G*H)	267.54	407.12	461.72	438.97

(₹ in lakh)

Asset – III					
	Particulars	2020-21 (Pro-rata for 275 days)	2021-22	2022-23	2023-24
A	Gross Normative Loan	3062.23	3337.13	3848.30	3976.06
B	Cumulative Repayments up to Previous Year	0.00	181.84	453.09	748.76
C	Net Loan-Opening (A-B)	3062.23	3155.29	3395.07	3227.16
D	Addition due to ACE	274.90	511.03	127.76	0.00
E	Repayment during the year	181.84	271.25	295.67	300.56
F	Net Loan-Closing (C+D-E)	3155.29	3395.07	3227.16	2926.60



Asset – III					
	Particulars	2020-21 (Pro-rata for 275 days)	2021-22	2022-23	2023-24
G	Average Loan (C+F)/2	3108.76	3275.18	3311.12	3076.88
H	Weighted Average Rate of Interest on Loan (in %)	7.16	7.11	7.10	7.09
I	Interest on Loan (G*H)	167.70	232.76	235.00	218.10

(₹ in lakh)

Asset – IV					
	Particulars	2020-21 (Pro-rata for 161 days)	2021-22	2022-23	2023-24
A	Gross Normative Loan	4733.06	4873.39	5808.27	6075.38
B	Cumulative Repayments up to Previous Year	0.00	157.81	554.34	993.85
C	Net Loan-Opening (A-B)	4733.06	4715.58	5253.93	5081.53
D	Addition due to ACE	140.34	934.88	267.11	133.55
E	Repayment during the year	157.81	396.53	439.51	453.84
F	Net Loan-Closing (C+D-E)	4715.58	5253.93	5081.53	4761.25
G	Average Loan (C+F)/2	4724.32	4984.75	5167.73	4921.39
H	Weighted Average Rate of Interest on Loan (in %)	6.85	6.83	6.83	6.89
I	Interest on Loan (G*H)	142.70	340.55	352.98	338.89

(₹ in lakh)

Asset – V					
	Particulars	2020-21 (Pro-rata for 74 days)	2021-22	2022-23	2023-24
A	Gross Normative Loan	5803.82	5875.02	6308.67	6432.58
B	Cumulative Repayments up to Previous Year	0.00	88.46	541.77	1013.48
C	Net Loan-Opening (A-B)	5803.82	5786.56	5766.89	5419.10
D	Addition due to ACE	71.20	433.65	123.91	61.95
E	Repayment during the year	88.46	453.31	471.71	477.84
F	Net Loan-Closing (C+D-E)	5786.56	5766.89	5419.10	5003.21
G	Average Loan (C+F)/2	5795.19	5776.73	5593.00	5211.15
H	Weighted Average Rate of Interest on Loan (in %)	6.81	6.79	6.79	6.80
I	Interest on Loan (G*H)	79.98	392.49	379.81	354.58

Return on Equity (“RoE”)

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



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

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

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

Provided further that:

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

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

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

- a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;*
- b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:*

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

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

“31. Tax on Return on Equity:(1) The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in respect of the financial year in line



with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax paid on income from other businesses including deferred tax liability (i.e. income from business other than business of generation or transmission, as the case may be) shall be excluded for the calculation of effective tax rate.

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

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

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

Illustration-

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

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

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

(a) Estimated Gross Income from generation or transmission business for FY 2019-20 is Rs 1,000 crore;

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

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

(d) 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 true up, shall be recovered or refunded to beneficiaries or the long term customers, as the case may be, on year to year basis.”

71. The Petitioner has submitted that MAT rate is applicable to it. MAT rate applicable in the year 2019-20 has been considered for the purpose of RoE which shall be true-up with actual tax rate in accordance with Regulation 31(3) of the 2019



Tariff Regulations. RoE allowed in respect of the transmission assets is as follows:

(₹ in lakh)

		Asset – I			
	Particulars	2020-21 (Pro-rata for 349 days)	2021-22	2022-23	2023-24
A	Opening Equity	10054.92	10337.64	11669.67	11998.78
B	Addition due to ACE	282.72	1332.03	329.11	0.00
C	Closing Equity (A+B)	10337.64	11669.67	11998.78	11998.78
D	Average Equity (A+C)/2	10196.28	11003.66	11834.23	11998.78
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in%)	17.472	17.472	17.472	17.472
G	Applicable RoE Rate (in%)	18.782	18.782	18.782	18.782
H	Return on Equity for the year (D*G)	1831.12	2066.71	2222.70	2253.61

(₹ in lakh)

		Asset – II			
	Particulars	2020-21 (Pro-rata for 275 days)	2021-22	2022-23	2023-24
A	Opening Equity	2133.47	2206.58	3081.12	3297.93
B	Addition due to ACE	73.11	874.54	216.82	0.00
C	Closing Equity (A+B)	2206.58	3081.12	3297.93	3297.93
D	Average Equity (A+C)/2	2170.03	2643.85	3189.53	3297.93
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	17.472	17.472	17.472	17.472
G	Applicable RoE Rate (in %)	18.782	18.782	18.782	18.782
H	Return on Equity for the year (D*G)	307.08	496.57	599.06	619.42

(₹ in lakh)

		Asset – III			
	Particulars	2020-21 (Pro-rata for 275 days)	2021-22	2022-23	2023-24
A	Opening Equity	1312.38	1430.19	1649.06	1703.82
B	Addition due to ACE	117.81	218.87	54.76	0.00
C	Closing Equity (A+B)	1430.19	1649.06	1703.82	1703.82
D	Average Equity (A+C)/2	1371.29	1539.63	1676.44	1703.82
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	17.472	17.472	17.472	17.472
G	Applicable RoE Rate (in %)	18.782	18.782	18.782	18.782
H	Return on Equity for the year (D*G)	194.05	289.19	314.90	320.04



(₹ in lakh)

Asset – IV					
	Particulars	2020-21 (Pro-rata for 161 days)	2021-22	2022-23	2023-24
A	Opening Equity	2028.45	2088.59	2489.25	2603.72
B	Addition due to ACE	60.14	400.66	114.47	57.24
C	Closing Equity (A+B)	2088.59	2489.25	2603.72	2660.96
D	Average Equity (A+C)/2	2058.52	2288.92	2546.49	2632.34
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	17.472	17.472	17.472	17.472
G	Applicable RoE Rate (in %)	18.782	18.782	18.782	18.782
H	Return on Equity for the year (D*G)	170.54	429.91	478.28	494.41

(₹ in lakh)

Asset – V					
	Particulars	2020-21 (Pro-rata for 74 days)	2021-22	2022-23	2023-24
A	Opening Equity	2487.35	2517.86	2703.71	2756.81
B	Addition due to ACE	30.51	185.85	53.10	26.55
C	Closing Equity (A+B)	2517.86	2703.71	2756.81	2783.36
D	Average Equity (A+C)/2	2502.61	2610.79	2730.26	2770.08
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	17.472	17.472	17.472	17.472
G	Applicable RoE Rate (in %)	18.782	18.782	18.782	18.782
H	Return on Equity for the year (D*G)	95.30	490.36	512.80	520.28

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

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

Assets	2019-20	2020-21	2021-22	2022-23	2023-24
Asset-I	0.00	6801.94	7471.40	7804.61	7798.06
Asset-II	0.00	1015.80	1584.11	1840.79	1858.31
Asset-III	0.00	1259.35	1778.75	1863.23	1887.31
Asset-IV	0.00	556.45	1366.98	1472.93	1485.80
Asset-V	0.00	98.59	503.48	521.59	539.79

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



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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Norms for sub-station Bays (₹ Lakh per bay)					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
Norms for Transformers (₹ Lakh per MVA)					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
Norms for AC and HVDC lines (₹ Lakh per km)					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<i>±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)</i>	1,696	1,756	1,817	1,881	1,947
<i>±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)</i>	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.”

74. O&M Expenses for the 2019-24 tariff period allowed in respect of the transmission assets are as follows:

(₹ in lakh)				
Asset – I				
Particulars	2020-21 (Pro-rata for 349 days)	2021-22	2022-23	2023-24
Transmission Line:				
Tehri PS-Meerut 765 kV S/C line	0.485	0.485	0.485	0.485
Tehri PS-Meerut 765 kV S/C line	0.554	0.554	0.554	0.554
Norm (₹ lakh/km)				
S/C (Four or more sub-conductors)	0.781	0.809	0.837	0.867
Total Transmission O&M Expenses	0.81	0.84	0.87	0.90
Sub-station Bays:				
Koteshwar: 765 kV Meerut GIS Line Bay	1	1	1	1
Meerut: 765 kV Tehri Line Bay	1	1	1	1
Koteshwar: 2 Numbers of 400 kV GIS Tehri ICT Bays	2	2	2	2
Koteshwar: 3 Numbers of 765 kV GIS Tehri ICT Bays	3	3	3	3
Norm (₹ lakh/bay)				
400 kV GIS*	23.30	24.12	24.96	25.84
765 kV	46.60	48.23	49.93	51.68
765 kV GIS*	32.62	33.76	34.95	36.18
Total Sub-station O&M Expenses	223.67	231.50	239.66	248.06
Transformer:				
Koteshwar: 3 Numbers of 800 MVA Tehri ICTs	2400	2400	2400	2400
Norm (₹ lakh/ MVA)				
765 kV	0.51	0.53	0.55	0.56
Total Transformer Expenses	1219.20	1262.40	1308.00	1353.60
Total O&M Expenses	1380.40	1494.74	1548.53	1602.56

* O&M expenses for the GIS bays shall be allowed by multiplying 0.70 of the O&M Expenses of the normative O&M expenses for bays.

(₹ in lakh)				
Asset – II				
Particulars	2020-21 (Pro-rata for 275 days)	2021-22	2022-23	2023-24
Transmission Line:				
Tehri PS-Meerut 765 kV S/C line	0.969	0.969	0.969	0.969



Tehri PS-Meerut 765 kV S/C line	1.108	1.108	1.108	1.108
Norm (₹ lakh/km)				
S/C (Four or more sub-conductors)	0.781	0.809	0.837	0.867
Total Transmission Expenses	1.62	1.68	1.74	1.80
Sub-station Bays:				
Koteshwar: 765 kV GIS Meerut Line Bay	1	1	1	1
Meerut: 765 kV Tehri PSP Line Bay	1	1	1	1
Norm (₹ lakh/bay)				
765 kV	46.60	48.23	49.93	51.68
765 kV GIS*	32.62	33.76	34.95	36.18
Total Sub-station Expenses	79.22	81.99	84.88	87.86
Total O&M Expenses (₹ in lakh)	60.91	83.67	86.62	89.66

* O&M expenses for the GIS bays shall be allowed by multiplying 0.70 of the O&M Expenses of the normative O&M expenses for bays.

(₹ in lakh)

Asset – III				
Particulars	2020-21 (Pro-rata for 275 days)	2021-22	2022-23	2023-24
Sub-station Bays:				
Meerut: 765 kV ICT Bays at Meerut Sub-station	1	1	1	1
Meerut: 400 kV ICT Bay at Meerut Sub-station	1	1	1	1
Norm (₹ lakh/bay)				
765 kV	46.60	48.23	49.93	51.68
400 kV	33.28	34.45	35.66	36.91
Total Sub-station Expenses	79.88	82.68	85.59	88.59
Transformers:				
Meerut: 1500 MVA ICT at Meerut Sub-station	1500	1500	1500	1500
Norm (₹ lakh/ MVA)				
765 kV GIS*	0.51	0.53	0.55	0.56
Total Transformer Expenses	762.00	789.00	817.50	846.00
Total O&M Expenses (₹ in lakh)	634.29	871.68	903.09	934.59

* O&M expenses for the GIS bays shall be allowed by multiplying 0.70 of the O&M Expenses of the normative O&M expenses for bays.

(₹ in lakh)

Asset – IV				
Particulars	2020-21 (Pro-rata for 161 days)	2021-22	2022-23	2023-24
Sub-station Bays:				
Koteshwar: 240 MVAR Bus Reactor Bay	1	1	1	1
Norm (₹ lakh/bay)				
765 kV	46.60	48.23	49.93	51.68
Total Sub-station Expenses	46.60	48.23	49.93	51.68
Total O&M Expenses (₹ in lakh)	20.56	48.23	49.93	51.68



Asset – V				
Particulars	2020-21 (Pro-rata for 74 days)	2021-22	2022-23	2023-24
Sub-station Bays:				
Koteshwar: 765 kV ICT Bay	1	1	1	1
Koteshwar: 400 kV ICT Bays	1	1	1	1
Norm (₹ lakh/bay)				
765 kV	46.60	48.23	49.93	51.68
400 kV	33.28	34.45	35.66	36.91
Total Sub-station Expenses	79.88	82.68	85.59	88.59
Transformers:				
Koteshwar: 800 MVAT ICT	800	800	800	800
Norm (₹ lakh/bay)				
765 kV GIS*	0.51	0.53	0.55	0.56
Total Transformer Expenses	406.40	420.80	436.00	451.20
Total O&M Expenses (₹ in lakh)	98.59	503.48	521.59	539.79

* O&M expenses for the GIS bays shall be allowed by multiplying 0.70 of the O&M Expenses of the normative O&M expenses for bays.

Interest on Working Capital (“IWC”)

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

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

.....

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

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

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

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

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



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

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

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

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

76. The Petitioner has submitted that it has computed IWC for 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. However, IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of IWC considered is 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21, 10.50% (SBI 1 year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) for 2021-22, 2022-23 and 2023-24. The components of the working capital and interest allowed thereon is as follows:

(₹ in lakh)				
Asset – I				
Particulars	2020-21 (Pro-rata for 349 days)	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M expenses for one month)	120.31	124.56	129.04	133.55
Working Capital for Maintenance Spares (15% of O&M expenses)	216.55	224.21	232.28	240.38
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	826.56	867.47	909.60	907.39
Total Working Capital	1163.42	1216.24	1270.92	1281.32
Rate of Interest for working capital (in %)	11.25	10.50	10.50	10.50
Interest of working capital	125.15	127.71	133.45	134.54



(₹ in lakh)

Asset – II				
Particulars	2020-21 (Pro-rata for 275 days)	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M expenses for one month)	6.74	6.97	7.22	7.47
Working Capital for Maintenance Spares (15% of O&M expenses)	12.13	12.55	12.99	13.45
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	153.12	181.25	213.12	214.97
Total Working Capital	171.99	200.77	233.33	235.89
Rate of Interest for working capital (in %)	11.25	10.50	10.50	10.50
Interest of working capital	14.58	21.08	24.50	24.77

(₹ in lakh)

Asset – III				
Particulars	2020-21 (Pro-rata for 275 days)	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M expenses for one month)	70.16	72.64	75.26	77.88
Working Capital for Maintenance Spares (15% of O&M expenses)	126.28	130.75	135.46	140.19
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	198.22	210.62	221.18	223.73
Total Working Capital	394.66	414.01	431.90	441.80
Rate of Interest for working capital (in %)	11.25	10.50	10.50	10.50
Interest of working capital	33.45	43.47	45.35	46.39

(₹ in lakh)

Asset – IV				
Particulars	2020-21 (Pro-rata for 161 days)	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M expenses for one month)	3.88	4.02	4.16	4.31
Working Capital for Maintenance Spares (15% of O&M expenses)	6.99	7.23	7.49	7.75
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	139.49	151.93	165.11	166.92

Page 66 of 78



Total Working Capital	150.36	163.19	176.76	178.98
Rate of Interest for working capital (in %)	11.25	10.50	10.50	10.50
Interest of working capital	7.46	17.13	18.56	18.79

(₹ in lakh)

Asset – V				
Particulars	2020-21 (Pro-rata for 74 days)	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M expenses for one month)	40.52	41.96	43.47	44.98
Working Capital for Maintenance Spares (15% of O&M expenses)	72.94	75.52	78.24	80.97
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	225.03	231.32	237.15	237.37
Total Working Capital	338.50	348.80	358.86	363.32
Rate of Interest for working capital (in %)	11.25	10.50	10.50	10.50
Interest of working capital	7.72	36.62	37.68	38.15

Annual Fixed Charges for 2019-24 Tariff Period

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

(₹ in lakh)

Asset – I				
Particulars	2020-21 (Pro-rata for 349 days)	2021-22	2022-23	2023-24
Depreciation	1704.89	1916.74	2053.49	2080.57
Interest on Loan	1368.89	1430.23	1419.70	1308.84
Return on Equity	1831.12	2066.71	2222.70	2253.61
O&M Expenses	1380.40	1494.74	1548.53	1602.56
Interest on Working Capital	125.15	127.71	133.45	134.54
Total	6410.44	7036.13	7377.87	7380.12

(₹ in lakh)

Asset – II				
Particulars	2020-21 (Pro-rata for 275 days)	2021-22	2022-23	2023-24
Depreciation	285.65	461.66	556.73	575.61
Interest on Loan	267.54	407.12	461.72	438.97
Return on Equity	307.08	496.57	599.06	619.42
O&M Expenses	60.91	83.67	86.62	89.66
Interest on Working Capital	14.58	21.08	24.50	24.77
Total	935.76	1470.10	1728.63	1748.43



(₹ in lakh)

Asset – III				
Particulars	2020-21 (Pro-rata for 275 days)	2021-22	2022-23	2023-24
Depreciation	181.84	271.25	295.67	300.56
Interest on Loan	167.70	232.76	235.01	218.11
Return on Equity	194.05	289.17	314.87	320.01
O&M Expenses	634.29	871.68	903.09	934.59
Interest on Working Capital	33.45	43.47	45.35	46.39
Total	1211.33	1708.35	1794.01	1819.68

(₹ in lakh)

Asset – IV				
Particulars	2020-21 (Pro-rata for 161 days)	2021-22	2022-23	2023-24
Depreciation	157.81	396.53	439.51	453.84
Interest on Loan	142.70	340.55	352.98	338.89
Return on Equity	170.54	429.91	478.28	494.41
O&M Expenses	20.56	48.23	49.93	51.68
Interest on Working Capital	7.46	17.13	18.56	18.79
Total	499.07	1232.35	1339.26	1357.61

(₹ in lakh)

Asset – V				
Particulars	2020-21 (Pro-rata for 74 days)	2021-22	2022-23	2023-24
Depreciation	88.46	453.31	471.71	477.84
Interest on Loan	79.98	392.49	379.81	354.58
Return on Equity	95.30	490.36	512.80	520.28
O&M Expenses	98.59	503.48	521.59	539.79
Interest on Working Capital	7.72	36.62	37.68	38.15
Total	370.05	1876.26	1923.59	1930.64

Filing Fee and Publication Expenses

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



Licence Fee and RLDC Fees and Charges

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

Goods and Services Tax

80. 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.

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

Security Expenses

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

83. UPPCL has submitted that the Commission may not allow any ad-hoc expenditure on account of security expenses by escalating the actual of 2018-19 by 3.5% p.a. as the same is against the stipulation of the Regulation 35(3)(c) of 2019 Tariff Regulation and outside the ambit of the instant petition as well. In response, the



Petitioner has reiterated its submission.

84. We have considered the above submissions of the Petitioner and UPPCL. 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 and the Commission has approved security expenses from 1.4.2019 to 31.3.2024. Therefore, security expenses will be shared in terms of the order dated 3.8.2021 in Petition No. 260/MP/2020. 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.

Capital Spares

85. 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

86. The Petitioner has prayed that the transmission charges for 2019-24 period 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 Respondents in accordance with 2010 Sharing Regulations.

87. THDC has submitted that as per Ministry of Power vide order dated 21.6.2021, THDC is exempted from the payment of applicable transmission charges for delayed generation period. THDC has further submitted that as per clause 4 of the



implementation agreement read with clause 14 of the TSA, THDC is not be liable for any claim including payment of transmission charges on account of delay in commissioning of Tehri PSP.

88. In response, the Petitioner has submitted that Asset-I, Asset-II, Asset-IV and Asset-VI have been de-linked from the generation project and agreed to be utilised for System strengthening. The Petitioner further clarified that Asset-III and Asset-V remain linked to Tehri PSP. The Petitioner has further submitted that waiver of transmission charges is not applicable in the instant case.

89. We have considered the submissions of the Petitioner and THDC. As discussed above, Asset-I, Asset-II, Asset- IV and Asset-VI are part of system strengthening and Asset-III and Asset-V are generation linked. It is observed that the Petitioner and THDC signed Indemnification Agreement dated 23.9.2014. The Indemnification Agreement provides as follows:

“In the event of 1st unit of generating station is not commissioned (COD) by 03.11.2017 (zero date) i.e., scheduled commissioning date of the Associated Transmission System (ATS), the Generation Company shall bear the IDC or the transmission charges if the transmission system is declared under commercial operation by the CERC in accordance with the Clause 3 of Regulation 4 of Tariff Regulations, 2014, till the Generating station is Commissioned (COD).”

90. Accordingly, transmission charges in respect of Asset-I, Asset-II and Asset-IV shall be recovered through PoC mechanism as provided in Sharing Regulations. As regards, Asset-III and Asset-V, which are linked to generation of Tehri PSP, THDC has contend that as per MoP order dated 21.6.2021, THDC is not liable to pay transmission charges. We are of the view that THDC is eligible for waiver of transmission charges only when the generation under the control of Tehri PSP has been commissioned. In the instant case, the generation under the control of Tehri PSP



has not been commissioned yet. Accordingly, transmission charges of Asset-III and Asset-V from COD till commissioning of the generation units shall be borne by THDC.

91. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems was governed by the 2010 Sharing Regulations and with effect from 1.11.2020 (after repeal of the 2010 Sharing Regulations), sharing of transmission charges is governed by the 2020 Sharing Regulations. The Billing, collection and disbursement of the transmission charges shall be recovered in terms of provisions of the 2010 Sharing Regulations and 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

92. To summarise,

(a) AFC allowed in respect of the transmission assets for 2019-24 tariff period in the instant order are as follows:

(₹ in lakh)

Asset – I				
Particulars	2020-21 (Pro-rata for 349 days)	2021-22	2022-23	2023-24
AFC	6410.44	7036.13	7377.87	7380.12

(₹ in lakh)

Asset – II				
Particulars	2020-21 (Pro-rata for 275 days)	2021-22	2022-23	2023-24
AFC	935.76	1470.10	1728.63	1748.43

(₹ in lakh)

Asset – III				
Particulars	2020-21 (Pro-rata for 275 days)	2021-22	2022-23	2023-24
AFC	1211.33	1708.35	1794.01	1819.68



(₹ in lakh)

Asset – IV				
Particulars	2020-21 (Pro-rata for 161 days)	2021-22	2022-23	2023-24
AFC	499.07	1232.35	1339.26	1357.61

(₹ in lakh)

Asset – V				
Particulars	2020-21 (Pro-rata for 74 days)	2021-22	2022-23	2023-24
AFC	370.05	1876.26	1923.59	1930.64

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

94. This order disposes of Petition No. 673/TT/2020 in terms of the above discussions and findings.

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

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

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



Petition No.:	673/TT/2020
Period	2019-24 Tariff

Asset – I

Annexure – I

2019-24 Capital Expenditure as on 1.4.2019	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	ACE			Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Deprecia tion (in %)	Annual Depreciation as per Regulations				
		2020-21 (₹ in lakh)	2021-22 (₹ in lakh)	2022-23 (₹ in lakh)			2019-20 (₹ in lakh)	2020-21 (₹ in lakh)	2021-22 (₹ in lakh)	2022-23 (₹ in lakh)	2023-24 (₹ in lakh)
Land	27.59	0.00	0.00	0.00	27.59	0.00	-	-	-	-	-
Building	884.40	120.86	792.10	198.03	1995.39	3.34	-	31.56	46.80	63.34	66.65
Transmission Line	477.12	16.23	712.12	178.03	1383.50	5.28	-	25.62	44.85	68.35	73.05
Sub Station	31953.15	794.14	2923.30	717.82	36388.41	5.28	-	1708.09	1806.23	1902.36	1921.31
PLCC	103.45	5.38	10.95	2.74	122.52	6.33	-	6.72	7.24	7.67	7.76
IT Equipment and software	70.83	5.83	1.65	0.41	78.72	15.00	-	11.06	11.62	11.78	11.81
TOTAL	33516.54	942.44	4440.12	1097.03	39996.13		-	1783.05	1916.74	2053.49	2080.57
Average Gross Block (₹ in lakh)							-	33987.76	36679.04	39447.62	39996.13
Weighted Average Rate of Depreciation (in %)							-	5.25	5.23	5.21	5.20



Petition No.:	673/TT/2020
Period	2019-24 Tariff

Asset – II

Annexure – II

2019-24 Capital Expenditure as on 1.4.2019	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	ACE			Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Deprecia tion (in %)	Annual Depreciation as per Regulations				
		2020-21 (₹ in lakh)	2021-22 (₹ in lakh)	2022-23 (₹ in lakh)			2019-20 (₹ in lakh)	2020-21 (₹ in lakh)	2021-22 (₹ in lakh)	2022-23 (₹ in lakh)	2023-24 (₹ in lakh)
Land	5.65	0.00	0.00	0.00	5.65	0.00	-	-	-	-	-
Building	226.67	19.91	99.44	24.86	370.88	3.34	-	7.90	9.90	11.97	12.39
Transmission Line	479.05	21.01	698.34	174.59	1,372.99	5.28	-	25.85	44.84	67.88	72.49
Sub Station	6303.11	196.68	2106.73	520.61	9127.13	5.28	-	338.00	398.81	468.17	481.91
PLCC	85.98	4.24	7.62	1.91	99.75	6.33	-	5.58	5.95	6.25	6.31
IT Equipment and software	11.12	1.85	2.99	0.75	16.71	15.00	-	1.81	2.17	2.45	2.51
TOTAL	7111.58	243.69	2915.12	722.72	10993.11		-	379.13	461.66	556.73	575.61
					Average Gross Block (₹ in lakh)		-	7233.43	8812.83	10631.75	10993.11
					Weighted Average Rate of Depreciation (in %)		-	5.24	5.24	5.24	5.24



Petition No.:	673/TT/2020
Period	2019-24 Tariff

Asset – III

Annexure – III

2019-24 Capital Expenditure as on 1.4.2019	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	ACE			Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Deprecia tion (in %)	Annual Depreciation as per Regulations				
		2020-21 (₹ in lakh)	2021-22 (₹ in lakh)	2022-23 (₹ in lakh)			2019-20 (₹ in lakh)	2020-21 (₹ in lakh)	2021-22 (₹ in lakh)	2022-23 (₹ in lakh)	2023-24 (₹ in lakh)
Sub Station	4374.61	392.71	724.62	181.16	5673.10	5.28	-	241.35	270.84	294.76	299.54
IT Equipment and software	0.00	0.00	5.42	1.36	6.78	15.00	-	0.00	0.41	0.92	1.02
TOTAL	4374.61	392.71	730.04	182.52	5679.88		-	241.35	271.25	295.67	300.56
Average Gross Block (₹ in lakh)							-	4570.97	5132.34	5588.62	5679.88
Weighted Average Rate of Depreciation (in %)							-	5.28	5.29	5.29	5.29



Petition No.:	673/TT/2020
Period	2019-24 Tariff

Asset – IV

Annexure – IV

2019-24 Capital Expenditure as on 1.4.2019	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	ACE				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depre- ciatio n (in %)	Annual Depreciation as per Regulations				
		2020-21 (₹ in lakh)	2021-22 (₹ in lakh)	2022-23 (₹ in lakh)	2023-24 (₹ in lakh)			2019-20 (₹ in lakh)	2020-21 (₹ in lakh)	2021-22 (₹ in lakh)	2022-23 (₹ in lakh)	2023-24 (₹ in lakh)
Land	11.10	0.00	0.00	0.00	0.00	11.10	0.00	-	-	-	-	-
Building	249.40	0.00	189.77	54.22	27.11	520.50	3.34	-	8.33	11.50	15.57	16.93
Sub Station	6492.12	199.79	1145.51	327.29	163.64	8328.35	5.28	-	348.06	383.57	422.46	435.42
IT Equipment and software	8.88	0.69	0.26	0.07	0.04	9.94	15.00	-	1.38	1.46	1.48	1.49
TOTAL	6761.51	200.48	1335.54	381.58	190.79	8869.90		-	357.77	396.53	439.51	453.84
Average Gross Block (₹ in lakh)								-	6861.75	7629.76	8488.32	8774.50
Weighted Average Rate of Depreciation (in %)								-	5.21	5.20	5.18	5.17



Petition No.:	673/TT/2020
Period	2019-24 Tariff

Asset – V

Annexure – V

2019-24 Capital Expenditure as on 1.4.2019	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	ACE				Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations				
		2020-21 (₹ in lakh)	2021-22 (₹ in lakh)	2022-23 (₹ in lakh)	2023-24 (₹ in lakh)			2019-20 (₹ in lakh)	2020-21 (₹ in lakh)	2021-22 (₹ in lakh)	2022-23 (₹ in lakh)	2023-24 (₹ in lakh)
Land	6.55	0.00	0.00	0.00	0.00	6.55	0.00	-	-	-	-	-
Building	251.81	0.00	219.64	62.76	31.38	565.59	3.34	-	8.41	12.08	16.79	18.37
Sub Station	8021.54	101.71	398.18	113.77	56.88	8692.08	5.28	-	426.22	439.42	452.93	457.44
IT Equipment and software	11.27	0.00	1.68	0.48	0.24	13.67	15.00	-	1.69	1.82	1.98	2.03
TOTAL	8291.17	101.71	619.50	177.01	88.50	9277.89		-	436.32	453.31	471.71	477.84
						Average Gross Block (₹ in lakh)		-	8342.02	8702.63	9100.88	9233.64
						Weighted Average Rate of Depreciation (in %)		-	5.23	5.21	5.18	5.17

