

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 654/TT/2020**

**Coram:**

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

**Date of Order: 20.09.2022**

**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:** Conversion of 02 numbers 400 kV, 50 MVAR line reactors into switchable line reactors at Abdullapur Sub-station, **Asset-II:** Conversion of 63 MVAR Fixed Line Reactor of 400 kV Balia (PG)-Sohawal (PG) Line Circuit -1 & 2 to Switchable Line Reactor at Balia (PG) and Conversion of 50 MVAR Fixed Line Reactor of 400 kV Balia (PG)-Sohawal (PG) Line Circuit -1 & 2 to Switchable Line Reactor at Sohawal (PG) and **Asset-III:** Conversion of 50 MVAR Fixed Line Reactor of 400 kV Kankroli-Zerda Line to Switchable Line Reactor at Kankroli Sub-station under “Conversion of Fixed Line Reactors into Switchable Line Reactors in the Northern Region”

**And in the matter of:**

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

**.....Petitioner**

**Vs.**

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited,  
Vidyut Bhawan, Vidyut Marg, Jaipur – 302005.
2. Ajmer Vidyut Vitran Nigam Limited,  
132 kV, GSS RVPNL Sub-station Building,  
Caligiri Road, Malviya Nagar, Jaipur – 302017.



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

...Respondent(s)

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

**For Respondent** : None

### **ORDER**

The instant petition has been filed by Power Grid Corporation of India Limited, a deemed transmission licensee, for determination of tariff from COD to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of the following assets (hereinafter referred to as “the transmission assets”) under “Conversion of Fixed Line Reactors into Switchable Line Reactors in Northern Region” (hereinafter referred to as “the transmission system”):

**Asset-I:** Conversion of 02 Numbers 400 kV, 50 MVAR line reactors into switchable line reactors at Abdullapur Sub-station;

**Asset-II:** Conversion of 63 MVAR Fixed Line Reactor of 400 kV Balia (PG)-Sohawal (PG) Line Circuit -1 & 2 to Switchable Line Reactor at Balia (PG) and Conversion of 50 MVAR Fixed Line Reactor of 400 kV Balia (PG)-Sohawal (PG) Line Circuit -1 & 2 to Switchable Line Reactor at Sohawal (PG); and

**Asset-III:** Conversion of 50 MVAR Fixed Line Reactor of 400 kV Kankroli-Zerda Line to Switchable Line Reactor at kankroli Sub-station.

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

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

9) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the 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.

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

## **Background**

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

a. The Investment Approval (IA) for implementation of the transmission system was accorded by the Board of Directors of the Petitioner's Company vide Memorandum dated 13.11.2018 (communicated vide Ref No. C/CP/ PA1819-08-



OT-IA013 dated 13.11.2018), at an estimated cost of ₹1300 lakh including IDC of ₹64 lakh based on June, 2018 price level.

b. The scope of the scheme was discussed and agreed in the 39<sup>th</sup> meeting of the Standing Committee on Power System Planning of Northern Region held on 29/30.5.2017. The scheme was also agreed in 40<sup>th</sup> NRPC held on 28.10.2017 and 41<sup>st</sup> NRPC held on 28.2.2018.

c. The scope of work covered under the transmission system is as follows:

Sl. No.	Name of the line	Line Reactor (MVAR) to be converted into Switchable Line Reactor	
		From Bus	To Bus
1	400 kV Sohawal - Balia ckt 1	50	63
2	400 kV Sohawal - Balia ckt 2	50	63
3	400 kV Abdullapur - Panchkula ckt 1	50	-
4	400 kV Abdullapur - Panchkula ckt 2	50	-
5	400 kV Kankroli-Zerda	50	

d. The entire scope of work under the transmission system has been completed and covered in the instant petition.

e. The transmission assets were scheduled to be put into commercial operation within 21 months from the date of IA i.e. 13.11.2018, hence, the scheduled date of commercial operation of the transmission assets is 13.8.2020. There is time over-run in the execution of Asset-III. The details of scheduled date of commercial operation (SCOD), date of commercial operation (COD) and time over-run with respect to the transmission assets covered in the transmission system are as follows:

Sl. No.	Asset Description	SCOD	COD	Time Over run	Covered under Petition
1	Asset-I: Conversion of 02 Numbers 400 kV, 50 MVAR line reactors into switchable line reactors at Abdullapur Sub-station	13.8.2020	15.2.2020	-	Covered in the instant petition
2	Asset-II: Conversion of 63 MVAR Fixed Line Reactor of 400 kV Balia (PG)-Sohawal (PG) Line Circuit -1 & 2 to Switchable Line Reactor at Balia (PG) and Conversion of 50		18.3.2020	-	



Sl. No.	Asset Description	SCOD	COD	Time Over run	Covered under Petition
	MVAR Fixed Line Reactor of 400 kV Balia (PG)-Sohawal (PG) Line Circuit -1 & 2 to Switchable Line Reactor at Sohawal (PG)				
3	Asset-III: Conversion of 50 MVAR Fixed Line Reactor of 400 kV Kankroli-Zerda Line to Switchable Line Reactor at kankroli Sub-station		15.8.2020	2 days	

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

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has also been published in newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notice published in the newspapers by the Petitioner. Uttar Pradesh Power Corporation Limited (UPPCL) has filed its reply *vide* affidavit dated 7.10.2021 and has raised issues regarding implementation schedule, completion cost, Additional Capital Expenditure (ACE), initial spares, IDC, IEDC and security expenses. The Petitioner *vide* affidavit dated 28.10.2021 has filed rejoinder to the reply of UPPCL. The issues raised by UPPCL and the clarifications given by the Petitioner have been dealt in the relevant paragraphs of this order.

6. The hearing in this matter was held on 1.8.2022 through video conference and the order was reserved.



7. This order is issued considering the submissions made by the Petitioner in the petition dated 27.8.2020, and vide affidavits dated 7.10.2021 and 8.11.2021, reply filed by UPPCL vide affidavit dated 7.10.2021 and the Petitioner's rejoinder vide affidavit dated 28.10.2021 to the reply of UPPCL.

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

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

9. The Petitioner has claimed following transmission charges for 2019-24 tariff period:

**Asset-I**

(₹ in lakh)

Particulars	2019-20 (pro-rata 46 days)	2020-21	2021-22	2022-23	2023-24
Depreciation	0.83	8.46	10.25	10.25	10.25
Interest on Loan	0.82	8.02	9.10	8.34	7.57
Return on Equity	0.88	9.02	10.94	10.94	10.94
O&M Expenses	8.08	66.56	68.90	71.32	73.82
Interest on Working Capital	0.39	3.29	3.46	3.56	3.65
<b>Total</b>	<b>11.00</b>	<b>95.35</b>	<b>102.65</b>	<b>104.41</b>	<b>106.23</b>

**Asset-II**

(₹ in lakh)

Particulars	2019-20 (pro-rata 14 days)	2020-21	2021-22	2022-23	2023-24
Depreciation	0.76	21.06	23.13	24.03	24.03
Interest on Loan	0.75	19.91	20.31	19.45	17.66
Return on Equity	0.81	22.47	24.68	25.64	25.64
O&M Expenses	4.92	133.12	137.80	142.64	147.64
Interest on Working Capital	0.25	6.76	7.04	7.26	7.45
<b>Total</b>	<b>7.49</b>	<b>203.32</b>	<b>212.96</b>	<b>219.02</b>	<b>222.42</b>



**Asset-III****(₹ in lakh)**

Particulars	2020-21 (pro-rata 229 days)	2021-22	2022-23	2023-24
Depreciation	4.59	9.31	10.01	10.23
Interest on Loan	3.20	5.96	5.76	5.21
Return on Equity	3.88	7.74	8.29	8.46
O&M Expenses	20.88	34.45	35.66	36.91
Interest on Working Capital	1.01	1.73	1.79	1.84
<b>Total</b>	<b>33.56</b>	<b>59.19</b>	<b>61.51</b>	<b>62.65</b>

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

**Asset-I****(₹ in lakh)**

Particulars	2019-20 (pro-rata 46 days)	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for 1 month)	5.36	5.55	5.74	5.94	6.15
Working Capital for Maintenance Spares (15% of O&M Expenses)	9.65	9.98	10.34	10.70	11.07
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost/ annual transmission charges)	10.76	11.76	12.66	12.87	13.06
<b>Total Working Capital</b>	<b>25.77</b>	<b>27.29</b>	<b>28.74</b>	<b>29.51</b>	<b>30.28</b>
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>0.39</b>	<b>3.29</b>	<b>3.46</b>	<b>3.56</b>	<b>3.65</b>

**Asset-II****(₹ in lakh)**

Particulars	2019-20 (pro-rata 14 days)	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for 1 month)	10.72	11.09	11.48	11.89	12.30
Working Capital for Maintenance Spares (15% of O&M Expenses)	19.29	19.97	20.67	21.40	22.15
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost/ annual transmission charges)	24.07	25.07	26.25	27.00	27.35





Particulars	2019-20 (pro-rata 14 days)	2020-21	2021-22	2022-23	2023-24
<b>Total Working Capital</b>	<b>54.08</b>	<b>56.13</b>	<b>58.40</b>	<b>60.29</b>	<b>61.80</b>
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>0.25</b>	<b>6.76</b>	<b>7.04</b>	<b>7.26</b>	<b>7.45</b>

#### Asset-III

(₹ in lakh)

Particulars	2020-21 (pro-rata 229 days)	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for 1 month)	2.77	2.87	2.97	3.08
Working Capital for Maintenance Spares (15% of O&M Expenses)	4.99	5.17	5.35	5.54
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost/ annual transmission charges)	6.59	7.30	7.58	7.70
<b>Total Working Capital</b>	<b>14.35</b>	<b>15.34</b>	<b>15.90</b>	<b>16.32</b>
Rate of Interest (in %)	11.25	11.25	11.25	11.25
<b>Interest on Working Capital</b>	<b>1.01</b>	<b>1.73</b>	<b>1.79</b>	<b>1.84</b>

#### Date of Commercial Operation (“COD”)

11. The Petitioner has claimed actual COD in respect of the transmission assets covered in the instant petition and the same is as follows:

Asset's Description		COD
<b>Asset-I:</b> Conversion of 02 Numbers 400 kV,50 MVAR line reactors into switchable line reactors at Abdullapur Sub-station		15.2.2020
<b>Asset-II:</b> Conversion of 63 MVAR Fixed Line Reactor of 400 kV Balia (PG)-Sohawal (PG) Line Circuit -1 & 2 to Switchable Line Reactor at Balia (PG) and Conversion of 50 MVAR Fixed Line Reactor of 400 kV Balia (PG)-Sohawal (PG) Line Circuit -1 & 2 to Switchable Line Reactor at Sohawal (PG)	13.8.2020	18.3.2020
<b>Asset-III:</b> Conversion of 50 MVAR Fixed Line Reactor of 400 kV Kankroli-Zerda Line to Switchable Line Reactor at kankroli Sub-station		15.8.2020

12. Regulation 5 of the 2019 Tariff Regulations provides as follows:



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

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

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

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

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

(3) *The date of commercial operation in case of integrated mine(s), shall mean the earliest of —*

- a) *the first date of the year succeeding the year in which 25% of the Peak Rated Capacity as per the Mining Plan is achieved; or*
- b) *the first date of the year succeeding the year in which the value of production estimated in accordance with Regulation 7A of these regulations, exceeds total expenditure in that year; or*
- c) *the date of two years from the date of commencement of production:*

*Provided that on earliest occurrence of any of the events under sub-clauses (a) to (c) of Clause (3) of this Regulation, the generating company shall declare the date of commercial operation of the integrated mine(s) under the relevant sub-clause with one week prior intimation to the beneficiaries of the end-use or associated generating station(s);*



*Provided further that in case the integrated mine(s) is ready for commercial operation but is prevented from declaration of the date of commercial operation for reasons not attributable to the generating company or its suppliers or contractors or the Mine Developer and Operator, the Commission, on an application made by the generating company, may approve such other date as the date of commercial operation as may be considered appropriate after considering the relevant reasons that prevented the declaration of the date of commercial operation under any of the sub-clauses of Clause (3) of this Regulation;*

*Provided also that the generating company seeking the approval of the date of commercial operation under the preceding proviso shall give prior notice of one month to the beneficiaries of the end-use or associated generating station(s) of the integrated mine(s) regarding the date of commercial operation.”*

13. UPPCL has submitted that the Petitioner has submitted that the SCOD of the transmission assets is 21 months from the date of IA. As submitted by the Petitioner, IA was accorded on 13.11.2018 and therefore, COD comes to 12.8.2020. However, it is observed that out of the three assets as mentioned in the instant petition, COD in respect of Asset-I and Asset-II has already been declared much ahead of SCOD. UPPCL has further submitted that with such huge variances between SCOD and actual COD, especially in respect of Asset-I and Asset-II, UPPCL is of the opinion that fixing of COD is arbitrary and thus, questionable. The objective is purportedly to keep enough cushions in a bid to accommodate delay and avoid the issue of both time over-run and cost overrun in tariff determination process. With long experience in executing similar projects, the Petitioner has failed to demonstrate any prudence while fixing the SCOD. UPPCL has requested to ask the Petitioner to substantiate the same, in detail, through an additional submission.

14. In response, the Petitioner has submitted that with regard to contention raised by of UPPCL, that fixation of COD is arbitrary, it is submitted that the Petitioner have a vast experience in project execution and project timeline is decided on various aspects and past experiences and the contention UPPCL that cushion is kept to accommodate time



over-run and cost over-run is not true and further execution of the transmission assets before SCOD result in cost reduction with respect to IDC and IEDC. With regard to the instant transmission system, the scheme was implemented due to requirement of switching off the reactors during different operating conditions and executing the project before timeline have benefitted the system.

15. We have considered the submissions of the Petitioner and UPPCL. In support of actual COD of Asset-I, Asset-II and Asset-III, the Petitioner has submitted self-declaration of COD letter dated 16.3.2020, 20.4.2020 and 25.8.2020 respectively; CEA Energisation certificates dated 3.2.2020, 28.2.2020 and 10.8.2020 respectively, RLDC charging certificates dated 5.3.2020, 17.4.2020 and 31.8.2020 respectively certifying that successful trial operation was completed for Asset-I on 14.2.2020, for Asset-II on 17.3.2020 and for Asset-III on 14.8.2020 and CMD Certificate.

16. Taking into consideration self-declaration of COD letter, CEA energisation certificate, RLDC charging certificate and CMD certificate submitted by the Petitioner, COD of Asset-I, Asset-II and Asset-III is approved as 15.2.2020, 18.3.2020 and 15.8.2020 respectively.

### **Capital Cost**

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

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

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

(a) *The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*



- (b) *Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*
- (c) *Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*
- (d) *Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*
- (e) *Capitalised initial spares subject to the ceiling rates in accordance with these regulations;*
- (f) *Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;*
- (g) *Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;*
- (h) *Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;*
- (i) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (j) *Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;*
- (k) *Capital expenditure on account of biomass handling equipment and facilities, for co-firing;*
- (l) *Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;*
- (m) *Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;*
- (n) *Expenditure on account of change in law and force majeure events; and*
- (o) *Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*

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

- (a) *Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;*
- (b) *Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;*
- (c) *Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;*
- (d) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (e) *Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and*
- (f) *Capital cost incurred or projected to be incurred by a thermal generating*



station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

- (4) The capital cost in case of existing or new hydro generating station shall also include:
- 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
  - 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:
- The assets forming part of the project, but not in use, as declared in the tariff petition;
  - De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:

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

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

- 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;
- Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and
- 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."

18. The Petitioner has claimed the following capital cost as on COD and Additional Capital Expenditure (ACE) for 2019-24 tariff period in respect of the transmission asset and has submitted the Auditor's Certificate in support of the same:

Assets	Approved apportioned cost (as per FR)	Cost up to COD	Projected ACE				Capital cost as on 31.3.2024
			2019-20	2020-21	2021-22	2022-23	
Asset-I	455.95	125.51	2.58	66.13	0.00	0.00	194.22
Asset-II	628.73	386.73	0.00	34.21	34.21	0.00	455.15
Asset-III	214.99	90.12	0.00	42.00	12.00	6.00	150.12

(₹ in lakh)





19. UPPCL has submitted that there is a wide variance between approved apportioned cost and estimated completion cost in respect of the assets. In spite of long experience in executing similar projects, the Petitioner failed to estimate the completion cost likely to be discovered through the tender with a reasonable variation. Such wide variation calls for detailed justification instead of just stating that variation is on account of low bid price as received through open competitive bidding. UPPCL has further submitted that the Petitioner in support of both upward and downward variation between actual and approved apportioned cost in respect of Asset-II has made the following submissions:

- In case, the actual is more than estimated cost the reason for upward variation is mentioned as “Increase on account of low bid price as received through open competitive bidding”.
- In case, the actual is less than estimated cost the reason for downward variation is mentioned as “Decrease on account of low bid price as received through open competitive bidding”.

UPPCL has submitted that therefore low bid price cannot be the reason for the above two opposite situations.

20. In response, the Petitioner has submitted that, 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/ service/ as per detailed designing is obtained and contracts are awarded on the basis of 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. The



estimates, are prepared by the Petitioner as per well-defined procedures, The FR cost estimate is a broad indicative cost worked out generally on the basis of average unit rates of recently awarded contracts/ general practice. The package under the subject scope of works comprises a large number of items and the same are awarded through open competitive bidding. In the said bidding process, bids are received from multiple parties quoting different rates for various BOQ items under the said package. Further, lowest bidder can be arrived at or 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.

21. We have considered the submissions of the Petitioner and UPPCL. As compared with FR cost, the estimated completion cost of Asset-I, Asset-II and Asset-III is less by ₹261.73 lakh, ₹173.58 lakh and ₹64.87 lakh respectively. Since the estimated completion cost of the transmission assets are within the respective apportioned approved cost as per FR, there is no cost over-run.

### **Time Over-run**

22. As per IA dated 13.11.2018, the transmission asset was scheduled to be put into commercial operation within 21 months from the date of IA. Accordingly, SCOD of the transmission asset was 13.8.2020 against which, Asset-I and Asset-II were executed before SCOD while Asset-III was declared under commercial operation with effect from 15.8.2020. Hence, there is time over-run of 2 days in case of Asset-III covered in the instant petition. The Petitioner has not submitted any reasons for the two days' time over-run in case of Asset-III. Therefore, time over-run of 2 days in respect to Asset-III is not condoned.





### **Interest during Construction (“IDC”)**

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

(₹ in lakh)

<b>Assets</b>	<b>IDC as per Auditor’s Certificate</b>	<b>IDC discharged upto COD</b>	<b>IDC discharged during 2020-21</b>	<b>IDC discharged during 2021-22</b>
Asset-I	2.03	0.00	2.03	0.00
Asset-II	10.02	0.00	10.02	0.00
Asset-III	1.44	0.00	0.00	1.44

24. With reference to accrued IDC as on COD, accrued IDC was not considered for calculating tariff as the same was undischarged up to COD. Accrued IDC has been reduced from the capital cost as on COD and it is added in ACE when it was discharged. It is observed that, the calculation is done from the date of drawl of the loan to COD.

25. UPPCL has submitted that the Petitioner has mentioned that there has been mismatch between Form 9C and statement of IDC due to shifting of loan from COD to ACE, but the reason for the same has not corroborated by the Auditor. The Petitioner may be asked to furnish Auditor’s Certificate in support of the above justification for mismatch. UPPCL has further 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 check 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 by the Commission. In response, the Petitioner has submitted that all the information has been submitted.



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

(₹ in lakh)

Assets	IDC as per Auditor certificate	IDC disallowed due to computational difference /time over-run	IDC undischarged as on COD	IDC discharged up to COD	IDC discharged during the year		
					2019-20	2020-21	2021-22
1	2	3	4	5=(2-3-4)	6	7	8
Asset-I	2.03	0.03	2.00	0.00	0.00	2.00	0.00
Asset-II	10.02	0.18	9.84	0.00	0.00	9.84	0.00
Asset-III	1.44	0.04	1.40	0.00	0.00	0.00	1.40

**Incidental Expenditure During Construction (“IEDC”)**

27. The Petitioner has claimed IEDC of ₹5.62 lakh, ₹17.79 lakh and nil in respect of Asset-I, Asset-II and Asset-III respectively and has submitted Auditor’s Certificate in this regard.

28. IEDC considered in respect of the transmission asset as on COD for the purpose of tariff determination in the instant order is as follows:



(₹ in lakh)

Assets	IEDC claimed as per Auditor's Certificate	IEDC disallowed	IEDC considered as on COD	IEDC discharged up to COD
Asset-I	5.62	0.00	5.62	5.62
Asset-II	17.79	0.00	17.79	17.79
Asset-III	0.00	0.00	0.00	0.00

### **Initial Spares**

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

*“(d) Transmission System  
Transmission line: 1.00%  
Transmission sub-station (Green Field): 4.00%  
Transmission sub-station (Brown Field): 6.00%  
GIS Sub-station (Green Field): 5.00%  
GIS Sub-station (Brown Field): 7.00%  
Communication System: 3.50%”*

30. The Petitioner has claimed the following Initial Spares for the transmission assets:

(₹ in lakh)

Assets	Plant and Machinery excluding IDC, IEDC, land cost and cost of Civil works as on cut-off date (A)	Initial Spares claimed by the Petitioner (B)	Ceiling limit (in %) (C)	Initial Spares worked out by the Petitioner
Asset-I	186.57	12.63	6.00	10.44
Asset-II	427.34	29.98	6.00	23.84
Asset-III	148.68	14.99	6.00	8.02



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

(₹ in lakh)

Assets	Total spares Claimed	Initial Spares discharged up to COD	Initial Spares discharged during	
			2020-21	2021-22
Asset-I	12.63	8.84	3.79	0.00
Asset-II	29.98	27.45	2.53	0.00
Asset-III	14.99	11.45	1.27	2.27

32. UPPCL has submitted that the Petitioner has mentioned that as per Form-13 Initial Spares in respect of Asset-I and Asset-II are in excess, whereas Form-13 with respect to Asset-III will be submitted later on and requested not to allow the excess Initial Spares as claimed for Asset-III. In response, the Petitioner has submitted that Form-13 with respect to Asset-III has already been submitted vide affidavit dated 7.10.2021.

33. We have considered the submissions of Petitioner and UPPCL. Initial Spares are allowed towards brown filed Sub-station as per Regulation 23(d) of the 2019 Tariff Regulations. Initial Spares claimed towards Asset-I, Asset-II and Asset-III is restricted to 6% of the ceiling limit as specified under Regulation 23(d) of the 2019 Tariff Regulations. Therefore, Initial Spares allowed in respect of the transmission assets for 2019-24 tariff period are as follows:



(₹ in lakh)

Assets	Particulars	Plant and Machinery cost (excluding IDC and IEDC, land cost & cost of civil works) up to cut-off date (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Norms as per the 2019 Tariff Regulations	Initial Spares allowable (₹ in lakh)	Excess Initial Spares (₹ in lakh)	Initial Spares allowed (₹ in lakh)
		A	B	C	$D=(A-B)*C/(100-C)$	$E = B-D$	$F=B-E$
Asset-I	Sub-station (Brownfield)	186.57	12.63	6.00%	11.10	1.53	11.10
Asset-II	Sub-station (Brownfield)	427.34	29.98	6.00%	25.36	4.62	25.36
Asset-III	Sub-station (Brownfield)	148.68	14.99	6.00%	8.53	6.46	8.53

34. Excess Initial Spares have been deducted as follows:

Assets	Excess Initial Spares	Deduction from initial Spares discharged up to COD	Deduction from Initial Spares discharged during	
			2020-21	2021-22
Asset-I	1.53	0.00	1.53	0.00
Asset-II	4.62	2.09	2.53	0.00
Asset-III	6.46	2.92	1.27	2.27

35. The details of capital cost approved as on COD in respect of the transmission assets are as follows:

(₹ in lakh)

Assets	Capital Cost claimed as on COD (A)	Disallowed (B)			Items corresponding to admitted capital cost as on COD (C)		Capital Cost allowed as on COD (D = A-B-C)
		IDC	IEDC	Deduction from initial Spares discharged up to COD	Undis-charged IDC	Balance & Retention payments	
Asset-I	125.51	0.03	0.00	0.00	2.00	0.00	123.48
Asset-II	386.73	0.18	0.00	2.09	9.84	0.00	374.62
Asset-III	90.12	0.04	0.00	2.92	1.40	0.00	85.76



## **Additional Capital Expenditure (“ACE”)**

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

### ***“24. Additional Capitalisation within the original scope and upto the cut-off date:***

(1) *The additional capital expenditure in respect of a new project or an existing project incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:*

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

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

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

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

(1) *The additional capital expenditure incurred or projected to be incurred in respect of an existing project or a new project on the following counts within the original scope of work and after the cut-off date may be admitted by the Commission, subject to prudence check:*

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

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



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

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

(₹ in lakh)

Assets	ACE claimed			
	2019-20	2020-21	2021-22	2022-23
Asset-I	2.58	68.16	0.00	0.00
Asset-II	0.00	44.23	34.21	0.00
Asset-III	0.00	42.00	13.44	6.00

38. UPPCL has submitted that estimated ACE in respect of Asset-II for 2020-21 as per Auditor’s Certificate is ₹34.21 lakh. As per Form-4A (Statement of Capital Cost), Form – 6 (Financial Package up to COD) ₹10.02 lakh has been shown as undischarged IDC which was discharged in 2020-21. In Form 1A and Form 7, ₹5.48 lakh is shown as ACE while balance ₹4.54 lakh has been merged in discharge of liabilities for 2020-21. UPPCL has further submitted that the position of liabilities, which are important component for determination of cash cost as also tariff, need to be certified by the Auditor together with the subsequent discharges thereof for prudence check.

39. In response, the Petitioner has submitted that ₹10.02 lakh against undischarged IDC and the same is part of the liability in Form-1A and Form-7. Out of total ACE of



₹44.23 lakh during 2020-21 with respect to Asset-II, ACE due to addition to gross block is ₹5.48 lakh and ₹38.75 lakh is against discharge of liability.

40. We have considered the submissions of the Petitioner and UPPCL. ACE claimed by the Petitioner with respect to Asset-I and Asset-II in year 2020-21 and for Asset-III in year 2021-22 is towards the undischarged IDC. The same is allowed after deducting the disallowed ACE. For other years ACE is allowed under Regulation 24(1)(a) and Regulation 24(1)(b) of the 2019 Tariff Regulations, as it is towards undischarged liabilities recognised to be payable at a future date and balance work deferred for execution.

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

Assets	Capital Cost as on COD	Projected ACE				Capital Cost admitted as on 31.3.2024
		2019-20	2020-21	2021-22	2022-23	
Asset-I	123.48	2.58	66.61	0.00	0.00	192.67
Asset-II	374.62	0.00	41.52	34.21	0.00	450.35
Asset-III	85.76	0.00	40.73	11.13	6.00	143.62

**Debt-Equity ratio**

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

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

*Provided that:*

- i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:
- ii. the equity invested in foreign currency shall be designated in Indian rupees





on the date of each investment:

- iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.

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

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

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

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

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

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

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

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

43. The Petitioner has considered debt-equity ratio of 70:30 as on COD and for ACE for 2019-24 tariff period. Debt-equity ratio of 70:30 has been considered for ACE



allowed during 2019-24 period in accordance with Regulation 19 of the 2019 Tariff Regulations. The details of debt-equity ratio considered for the purpose of computation of tariff for 2019-24 tariff period is as follows:

Particulars	Capital Cost as on COD (₹ in lakh)	(in %)	ACE during 2019-24 (₹ in lakh)	(in %)	Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
<b>Asset-I</b>						
Debt	86.44	70.00	48.43	70.00	134.87	70.00
Equity	37.04	30.00	20.76	30.00	57.80	30.00
<b>Total</b>	<b>123.48</b>	<b>100.00</b>	<b>69.19</b>	<b>100.00</b>	<b>192.67</b>	<b>100.00</b>
<b>Asset-II</b>						
Debt	262.24	70.00	53.01	70.00	315.25	70.00
Equity	112.39	30.00	22.72	30.00	135.11	30.00
<b>Total</b>	<b>374.62</b>	<b>100.00</b>	<b>75.73</b>	<b>100.00</b>	<b>450.35</b>	<b>100.00</b>
<b>Asset-III</b>						
Debt	60.03	70.00	40.50	70.00	100.53	70.00
Equity	25.73	30.00	17.36	30.00	43.09	30.00
<b>Total</b>	<b>85.76</b>	<b>100.00</b>	<b>57.86</b>	<b>100.00</b>	<b>143.62</b>	<b>100.00</b>

### **Depreciation**

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

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

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

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

(3) The salvage value of the asset shall be considered as 10% and depreciation shall be



allowed up to maximum of 90% of the capital cost of the asset:

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

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

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

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

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

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

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

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

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

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

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

*(10) Depreciation of the emission control system of an existing or a new generating station*



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

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

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

**Asset-I**

		(₹ in lakh)				
	Particulars	2019-20 (pro-rata 46 days)	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	123.48	126.06	192.67	192.67	192.67
B	ACE	2.58	66.61	0.00	0.00	0.00
C	Closing Gross Block (A+B)	126.06	192.67	192.67	192.67	192.67
D	Average Gross Block (A+C)/2	124.77	159.36	192.67	192.67	192.67
E	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28
F	Balance useful life of the asset (Year)	25	25	24	23	22
G	Lapsed life at the beginning of the year (Year)	0	0	1	2	3
H	Aggregate Depreciable Value	112.29	143.43	173.40	173.40	173.40
I	<b>Combined Depreciation during the year</b>	<b>0.83</b>	<b>8.41</b>	<b>10.17</b>	<b>10.17</b>	<b>10.17</b>



J	Aggregate Cumulative Depreciation	0.83	9.24	19.42	29.59	39.76
K	Remaining Aggregate Depreciable Value (H-J)	111.47	134.18	153.99	143.81	133.64

### Asset-II

(₹ in lakh)

	Particulars	2019-20 (pro-rata 14 days)	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	374.62	374.62	416.14	450.35	450.35
B	ACE	0.00	41.52	34.21	0.00	0.00
C	Closing Gross Block (A+B)	374.62	416.14	450.35	450.35	450.35
D	Average Gross Block (A+C)/2	374.62	395.38	433.25	450.35	450.35
E	Weighted average rate of Depreciation (WAROD) (in %)	5.28	5.28	5.28	5.28	5.28
F	Balance useful life of the asset (Year)	25	25	24	23	22
G	Lapsed life at the beginning of the year (Year)	0	0	1	2	3
H	Aggregate Depreciable Value	337.16	355.84	389.92	405.32	405.32
I	<b>Combined Depreciation during the year</b>	<b>0.76</b>	<b>20.88</b>	<b>22.88</b>	<b>23.78</b>	<b>23.78</b>
J	Aggregate Cumulative Depreciation	0.76	21.63	44.51	68.29	92.07
K	Remaining Aggregate Depreciable Value (H-J)	336.40	334.21	345.41	337.03	313.25

### Asset-III

(₹ in lakh)

	Particulars	2020-21 (pro-rata 229 days)	2021-22	2022-23	2023-24
A	Opening Gross Block	85.76	126.49	137.62	143.62
B	ACE	40.73	11.13	6.00	0.00
C	Closing Gross Block	126.49	137.62	143.62	143.62
D	Average Gross Block	106.13	132.06	140.62	143.62



E	Weighted average rate of Depreciation (WAROD) (in %)	6.71	6.84	6.87	6.88
F	Balance useful life of the asset (Year)	23	23	22	21
G	Lapsed life at the beginning of the year	0	0	1	2
H	Depreciable Value	97.07	120.97	128.86	131.63
I	<b>Combined Depreciation during the year</b>	<b>4.47</b>	<b>9.03</b>	<b>9.67</b>	<b>9.88</b>
J	Cumulative depreciation at the end of the year	4.47	13.49	23.16	33.04
K	Remaining Depreciable Value at the end of the year	92.61	107.47	105.71	98.58

### **Interest on Loan (“IoL”)**

46. Regulation 32 of the 2019 Tariff Regulations provides as follows:

**“32. Interest on loan capital:** (1) *The loans arrived at in the manner indicated in Regulation 18 of these regulations shall be considered as gross normative loan for calculation of interest on loan.*

(2) *The normative loan outstanding as on 1.4.2019 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2019 from the gross normative loan.*

(3) *The repayment for each of the year of the tariff period 2019-24 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalisation of such asset.*

(4) *Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.*

(5) *The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:*

*Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered;*



*Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.*

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

*(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.*

*(7) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.”*

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

**Asset-I**

(₹ in lakh)

	Particulars	2019-20 (pro-rata 46 days)	2020-21	2021-22	2022-23	2023-24
A	Gross Normative Loan	86.44	88.24	134.87	134.87	134.87
B	Cumulative Repayments upto Previous Year	0.00	0.83	9.24	19.42	29.59
C	Net Loan-Opening (A-B)	86.44	87.41	125.62	115.45	105.28
D	Additions	1.81	46.62	0.00	0.00	0.00
E	Repayment during the year	0.83	8.41	10.17	10.17	10.17
F	Net Loan-Closing (C+D-E)	87.41	125.62	115.45	105.28	95.11
G	Average Loan (C+F)/2	86.93	106.52	120.54	110.37	100.19





	Particulars	2019-20 (pro-rata 46 days)	2020-21	2021-22	2022-23	2023-24
H	Weighted Average Rate of Interest on Loan (in %)	7.4900	7.4900	7.4900	7.4900	7.4900
I	<b>Interest on Loan (G*H)</b>	<b>0.82</b>	<b>7.98</b>	<b>9.03</b>	<b>8.27</b>	<b>7.50</b>

## Asset-II

(₹ in lakh)

	Particulars	2019-20 (pro-rata 14 days)	2020-21	2021-22	2022-23	2023-24
A	Gross Normative Loan	262.24	262.24	291.30	315.25	315.25
B	Cumulative Repayments upto Previous Year	0.00	0.76	21.63	44.51	68.29
C	Net Loan-Opening (A-B)	262.24	261.48	269.67	270.74	246.96
D	Additions	0.00	29.06	23.95	0.00	0.00
E	Repayment during the year	0.76	20.88	22.88	23.78	23.78
F	Net Loan-Closing (C+D-E)	261.48	269.67	270.74	246.96	223.18
G	Average Loan (C+F)/2	261.86	265.57	270.20	258.85	235.07
H	Weighted Average Rate of Interest on Loan (in %)	7.4331	7.4331	7.4331	7.4331	7.4331
I	<b>Interest on Loan (G*H)</b>	<b>0.74</b>	<b>19.74</b>	<b>20.08</b>	<b>19.24</b>	<b>17.47</b>

## Asset-III

(₹ in lakh)

	Particulars	2020-21 (pro-rata 229 days)	2021-22	2022-23	2023-24
A	Gross Normative Loan	60.03	88.55	96.33	100.53
B	Cumulative Repayments up to Previous Year	0.00	4.47	13.49	23.16
C	Net Loan-Opening	60.03	84.08	82.84	77.38





	Particulars	2020-21 (pro-rata 229 days)	2021-22	2022-23	2023-24
D	Additions due to ACE	28.51	7.79	4.20	0.00
E	Repayment during the year	4.47	9.03	9.67	9.88
F	Net Loan-Closing	84.08	82.84	77.38	67.49
G	Average Loan	72.06	83.46	80.11	72.43
H	Weighted Average Rate of Interest on Loan (in %)	6.8500	6.8500	6.8500	6.8500
I	<b>Interest on Loan</b>	<b>3.10</b>	<b>5.72</b>	<b>5.49</b>	<b>4.96</b>

### **Return on Equity (“RoE”)**

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

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

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

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

*Provided further that:*

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



on the report submitted by the concerned RLDC, rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;

- iii. in case of a thermal generating station, with effect from 1.4.2020:
- a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;
  - b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:

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

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

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

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

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

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

#### **Illustration-**

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

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

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



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

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

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

#### Asset-I

		(₹ in lakh)				
	Particulars	2019-20 (pro-rata 46 days)	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	37.04	37.82	57.80	57.80	57.80
B	Additions	0.77	19.98	0.00	0.00	0.00
C	Closing Equity (A+B)	37.82	57.80	57.80	57.80	57.80
D	Average Equity (A+C)/2	37.43	47.81	57.80	57.80	57.80
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
H	<b>Return on Equity (D*G)</b>	<b>0.88</b>	<b>8.98</b>	<b>10.86</b>	<b>10.86</b>	<b>10.86</b>



## Asset-II

(₹ in lakh)

	Particulars	2019-20 (pro-rata 14 days)	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	112.39	112.39	124.84	135.11	135.11
B	Additions	0.00	12.46	10.26	0.00	0.00
C	Closing Equity (A+B)	112.39	124.84	135.11	135.11	135.11
D	Average Equity (A+C)/2	112.39	118.61	129.97	135.11	135.11
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
H	<b>Return on Equity (D*G)</b>	<b>0.81</b>	<b>22.28</b>	<b>24.41</b>	<b>25.38</b>	<b>25.38</b>

## Asset-III

(₹ in lakh)

	Particulars	2020-21 (pro-rata 229 days)	2021-22	2022-23	2023-24
A	Opening Equity	25.73	37.95	41.29	43.09
B	Additions due to ACE	12.22	3.34	1.80	0.00
C	Closing Equity	37.95	41.29	43.09	43.09
D	Average Equity	31.84	39.62	42.19	43.09
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782
H	<b>Return on Equity</b>	<b>3.75</b>	<b>7.44</b>	<b>7.92</b>	<b>8.09</b>

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

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Asset-I: Abdullapur, 400 kV, 50 MVAR SLR (pro-rata 46 days)</b>					
Number of bays	2	2	2	2	2



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>8.08</b>	<b>66.56</b>	<b>68.90</b>	<b>71.32</b>	<b>73.82</b>
<b>Asset-II: Balia, 400 kV, 63 MVAR SLR Sohawal I&amp;II (pro-rata 14 days)</b>					
Number of bays	2	2	2	2	2
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
<b>Asset-II: Sohawal, 400 kV, 50 MVAR SLR Balia I&amp;II (pro-rata 14 days)</b>					
Number of bays	2	2	2	2	2
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>4.92</b>	<b>133.12</b>	<b>137.80</b>	<b>142.64</b>	<b>147.64</b>
<b>Asset-III: Kankroli, 400 kV, 413 Reactor Bay Zerda LR Switchable (pro-rata 229 days)</b>					
Number of bays		1	1	1	1
Norms (₹ lakh/Bay)		33.28	34.45	35.66	36.91
<b>Total O&amp;M Expenses (₹ in lakh)</b>		<b>20.88</b>	<b>34.45</b>	<b>35.66</b>	<b>36.91</b>

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

**“35. Operation and Maintenance Expenses:**

...

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Norms for sub-station Bays (₹ Lakh per bay)</b>					
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
<b>Norms for Transformers (₹ Lakh per MVA)</b>					
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
<b>Norms for AC and HVDC lines (₹ Lakh per km)</b>					
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



<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
<i>Single Circuit (Single Conductor)</i>	0.252	0.260	0.270	0.279	0.289
<i>Double Circuit (Bundled conductor with four or more sub-conductors)</i>	1.322	1.368	1.416	1.466	1.517
<i>Double Circuit (Twin &amp; Triple Conductor)</i>	0.881	0.912	0.944	0.977	1.011
<i>Double Circuit (Single Conductor)</i>	0.377	0.391	0.404	0.419	0.433
<i>Multi Circuit (Bundled Conductor with four or more sub-conductor)</i>	2.319	2.401	2.485	2.572	2.662
<i>Multi Circuit (Twin &amp; Triple Conductor)</i>	1.544	1.598	1.654	1.713	1.773
<b>Norms for HVDC stations</b>					
<i>HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)</i>	834	864	894	925	958
<i>Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)</i>	1,666	1,725	1,785	1,848	1,913
<i>500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)</i>	2,252	2,331	2,413	2,498	2,586
<i>±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)</i>	2,468	2,555	2,645	2,738	2,834
<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  $\pm 800$  kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for  $\pm 800$  kV, Bishwanath-Agra HVDC bi-pole scheme;
- v. the O&M expenses of  $\pm 800$  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  $\pm 800$  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.”

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Asset-I: Abdullapur, 400 kV, 50 MVAR SLR (pro-rata 46 days)</b>					
Number of bays	2	2	2	2	2
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>8.08</b>	<b>66.56</b>	<b>68.90</b>	<b>71.32</b>	<b>73.82</b>
<b>Asset-II: Balia, 400 kV, 63 MVAR SLR Sohawal I&amp;II (pro-rata 14 days)</b>					
Number of bays	2	2	2	2	2
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
<b>Asset-II: Sohawal, 400 kV, 50 MVAR SLR Balia I&amp;II (pro-rata 14 days)</b>					



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Number of bays	2	2	2	2	2
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
<b>Total O&amp;M Expenses (₹ in lakh)</b>	<b>4.92</b>	<b>133.12</b>	<b>137.80</b>	<b>142.64</b>	<b>147.64</b>
<b>Asset-III: Kankroli, 400 kV, 413 Reactor Bay Zerda LR Switchable (pro-rata 229 days)</b>					
Number of bays		1	1	1	1
Norms (₹ lakh/Bay)		33.28	34.45	35.66	36.91
<b>Total O&amp;M Expenses (₹ in lakh)</b>		<b>20.88</b>	<b>34.45</b>	<b>35.66</b>	<b>36.91</b>

### **Interest on Working Capital (“IWC”)**

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

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

.....

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

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

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

*Operation and maintenance expenses, including security expenses for one month.*

(3) *Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1<sup>st</sup> 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 triung-up, the rate of interest on working capital shall be considered at bank rate as on 1st April of each of the financial year during the tariff period 2019-24.*

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

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

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





54. 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%.

55. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest (RoI) considered is 12.05% (SBI 1-year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-2021 and from 2021-22 onwards as 10.50% (SBI 1-year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points). The components of the working capital and interest allowed thereon in respect of the transmission assets are as follows:

**Asset-I**

(₹ in lakh)						
	Particulars	2019-20 (pro-rata 46 days)	2020-21	2021-22	2022-23	2023-24
A	Working Capital for O&M Expenses (O&M Expenses for one month)	5.36	5.55	5.74	5.94	6.15
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	9.65	9.98	10.34	10.70	11.07
C	Working Capital for Receivables (Equivalent to 45 days of annual fixed cost/ annual transmission charges)	10.76	11.71	12.57	12.79	12.97
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>25.77</b>	<b>27.24</b>	<b>28.65</b>	<b>29.43</b>	<b>30.20</b>
E	Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
<b>F</b>	<b>Interest on working capital (D*E)</b>	<b>0.39</b>	<b>3.06</b>	<b>3.01</b>	<b>3.09</b>	<b>3.17</b>



## Asset-II

(₹ in lakh)						
	Particulars	2019-20 (pro-rata 14 days)	2020-21	2021-22	2022-23	2023-24
A	Working Capital for O&M Expenses (O&M Expenses for one month)	10.72	11.09	11.48	11.89	12.30
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	19.29	19.97	20.67	21.40	22.15
C	Working Capital for Receivables (Equivalent to 45 days of annual fixed cost/ annual transmission charges)	24.03	24.94	26.05	26.80	27.14
<b>D</b>	<b>Total Working Capital (A+B+C)</b>	<b>54.04</b>	<b>56.00</b>	<b>58.20</b>	<b>60.08</b>	<b>61.59</b>
E	Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
<b>F</b>	<b>Interest on working capital (D*E)</b>	<b>0.25</b>	<b>6.30</b>	<b>6.11</b>	<b>6.31</b>	<b>6.47</b>

## Asset-III

(₹ in lakh)					
	Particulars	2020-21 (pro-rata 229 days)	2021-22	2022-23	2023-24
A	Working Capital for O&M Expenses (O&M Expenses for one month)	2.77	2.87	2.97	3.08
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	4.99	5.17	5.35	5.54
C	Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	6.52	7.18	7.45	7.57
<b>D</b>	<b>Total Working Capital</b>	<b>14.29</b>	<b>15.22</b>	<b>15.77</b>	<b>16.18</b>
E	Rate of Interest (in %)	11.25	10.50	10.50	10.50
<b>F</b>	<b>Interest on Working Capital</b>	<b>1.01</b>	<b>1.60</b>	<b>1.66</b>	<b>1.70</b>

### Annual Fixed Charges of 2019-24 Tariff Period

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



**Asset-I**

(₹ in lakh)

Particulars	2019-20 (pro-rata 46 days)	2020-21	2021-22	2022-23	2023-24
Depreciation	0.83	8.41	10.17	10.17	10.17
Interest on Loan	0.82	7.98	9.03	8.27	7.50
Return on Equity	0.88	8.98	10.86	10.86	10.86
O&M Expenses	8.08	66.56	68.90	71.32	73.82
Interest on Working Capital	0.39	3.06	3.01	3.09	3.17
<b>Total</b>	<b>11.00</b>	<b>94.99</b>	<b>101.97</b>	<b>103.71</b>	<b>105.52</b>

**Asset-II**

(₹ in lakh)

Particulars	2019-20 (pro-rata 14 days)	2020-21	2021-22	2022-23	2023-24
Depreciation	0.76	20.88	22.88	23.78	23.78
Interest on Loan	0.74	19.74	20.08	19.24	17.47
Return on Equity	0.81	22.28	24.41	25.38	25.38
O&M Expenses	4.92	133.12	137.80	142.64	147.64
Interest on Working Capital	0.25	6.30	6.11	6.31	6.47
<b>Total</b>	<b>7.48</b>	<b>202.32</b>	<b>211.28</b>	<b>217.35</b>	<b>220.74</b>

**Asset-III**

(₹ in lakh)

Particulars	2020-21 (pro-rata 229 days)	2021-22	2022-23	2023-24
Depreciation	4.47	9.03	9.67	9.88
Interest on Loan	3.10	5.72	5.49	4.96
Return on Equity	3.75	7.44	7.92	8.09
O&M Expenses	20.88	34.45	35.66	36.91
Interest on Working Capital	1.01	1.60	1.66	1.70
<b>Total</b>	<b>33.21</b>	<b>58.24</b>	<b>60.40</b>	<b>61.54</b>



### **Filing Fee and the Publication Expenses**

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

### **Licence Fee and RLDC Fees and Charges**

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

### **Goods and Services Tax**

59. 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.

60. 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**

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

62. UPPCL has submitted that the Petitioner has mentioned that as per Regulation 35(3)(c) of the 2019 Tariff Regulations, security expenses and capital spares for transmission system shall be allowed separately after prudence check and a separate petition for the same will be filed by the Petitioner. Therefore, in absence of the above, 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., which will be against the stipulation of the Regulation 35(3)(c) of the 2019 Tariff Regulations and outside the ambit of the instant petition as well. In response, the Petitioner has submitted that all the information has been submitted.

63. We have considered the above submissions of 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. 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**

64. The Petitioner has sought reimbursement of capital spares at the end of tariff block. The Petitioner's claim, if any, shall be dealt with in accordance with the provisions of the 2019 Tariff Regulations.

### **Sharing of Transmission Charges**

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

66. To summarise:

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



**Asset-I****(₹ in lakh)**

Particulars	Asset-I				
	2019-20 (pro-rata 46 days)	2020-21	2021-22	2022-23	2023-24
AFC	11.00	94.99	101.97	103.71	105.52

**Asset-II****(₹ in lakh)**

Particulars	Asset-II				
	2019-20 (pro-rata 14 days)	2020-21	2021-22	2022-23	2023-24
AFC	7.48	202.32	211.28	217.35	220.74

**Asset-III****(₹ in lakh)**

Particulars	Asset-III			
	2020-21 (pro-rata 229 days)	2021-22	2022-23	2023-24
AFC	33.21	58.24	60.40	61.54

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

68. This order disposes of Petition No. 654/TT/2020 in terms of the above discussions and findings.

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

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

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



## Asset-I

2019-24	Admitted Capital Cost as on 1.4.2019/ COD (₹ in lakh)	Projected ACE (₹ in lakh)			Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)							
		2019-20	2020-21	Total			2019-20	2020-21	2021-22	2022-23	2023-24			
Capital Expenditure														
Sub-station	123.48	2.58	66.61	69.19	192.67	5.28%	6.59	8.41	10.17	10.17	10.17			
<b>Total</b>	<b>123.48</b>	<b>2.58</b>	<b>66.61</b>	<b>69.19</b>	<b>192.67</b>	<b>Total</b>	<b>6.59</b>	<b>8.41</b>	<b>10.17</b>	<b>10.17</b>	<b>10.17</b>			
<b>Average Gross Block (₹ in lakh)</b>							<b>124.77</b>	<b>159.37</b>	<b>192.67</b>	<b>192.67</b>	<b>192.67</b>			
<b>Weighted Average Rate of Depreciation (in %)</b>							<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>		





## Asset-II

2019-24 Capital Expenditure	Admitted Capital Cost as on 1.4.2019/ COD (₹ in lakh)	Projected ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2019-20	2020-21	2021-22	Total			2019-20	2020-21	2021-22	2022-23	2023-24
Sub-station	374.62	-	41.52	34.21	75.73	450.35	5.28%	19.78	20.88	22.88	23.78	23.78
<b>Total</b>	<b>374.62</b>	<b>-</b>	<b>41.52</b>	<b>34.21</b>	<b>75.73</b>	<b>450.35</b>	<b>Total</b>	<b>19.78</b>	<b>20.88</b>	<b>22.88</b>	<b>23.78</b>	<b>23.78</b>
						<b>Average Gross Block (₹ in lakh)</b>		<b>374.62</b>	<b>395.38</b>	<b>433.25</b>	<b>450.35</b>	<b>450.35</b>
						<b>Weighted Average Rate of Depreciation (in %)</b>		<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>	<b>5.28%</b>



### Asset-III

2019-24 Capital Expenditure	Admitted Capital Cost as on 1.4.2019/ COD (₹ in lakh)	Projected ACE (₹ in lakh)				Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)			
		2020-21	2021-22	2022-2023	Total			2020-21	2021-22	2022-23	2023-24
Sub-station	74.44	32.22	8.52	4.78	45.52	119.96	5.28%	4.78	5.86	6.21	8.25
IT Equipment (Incl. Software)	11.33	8.51	2.61	1.22	12.34	23.66	15.00%	2.34	3.17	3.46	3.55
<b>Total</b>	<b>85.76</b>	<b>40.73</b>	<b>11.13</b>	<b>6.00</b>	<b>57.86</b>	<b>143.62</b>	<b>Total</b>	<b>7.12</b>	<b>9.03</b>	<b>9.67</b>	<b>9.88</b>
						<b>Average Gross Block (₹ in lakh)</b>		<b>106.13</b>	<b>132.06</b>	<b>140.62</b>	<b>143.62</b>
						<b>Weighted Average Rate of Depreciation (in %)</b>		<b>6.71%</b>	<b>6.84%</b>	<b>6.87%</b>	<b>6.88%</b>

