Central Electricity Regulatory Commission
New Delhi

Petition No. 84/TT/2023

Coram:
Shri Jishnu Barua, Chairperson
Shri Ramesh Babu V., Member
Shri Harish Dudani, Member

Date of Order: 10.09.2024

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing up of transmission tariff for the 2014-19 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and the determination of transmission tariff of the 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for the assets of Southern and Northern Regions under project "Phase-I-Unified Real Time Dynamic State Measurement".

And in the matter of:

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

Vs.

1. **Tamil Nadu Generation and Distribution Corporation Limited,**
NPKRR Maaligai, 800,
Anna Salai, Chennai-600002.

2. **Transmission Corporation of Andhra Pradesh Limited,**
Vidyut Soudha, Near Axis Bank ATM,
ELURU Road, Gunadala,
Vijaywada-520004.

3. **Kerala State Electricity Board Limited,**
Vaidyuthi Bhavanam Pattom,
Thiruvananthapuram-695004.

4. **Electricity Department,**
Government of Goa,
Vidyuti Bhawan, Panaji-403001, Goa.

5. **Electricity Department,**
Govt of Pondicherry,
Pondicherry-605001.

6. **Eastern Power Distribution Company of Andhra Pradesh Limited,**

P&T Colony,
Seethmmadhara, VISHAKHAPATNAM,
Andhra Pradesh.

7. **Southern Power Distribution Company of Andhra Pradesh Limited,**
Srinivasasa Kalyana Mandapam Backside,
Tiruchanoor Road, Kesavayana Gunta,
Tirupati-517501, Chittoor District, Andhra Pradesh.

8. **Southern Power Distribution Company of Telangana Limited,**
6-1-50, Corporate Office, Mint Compound,
Hyderabad-500063, Telangana.

9. **Northern Power Distribution Company of Telangana Limited,**
H. No.2-5-3 1/2, Vidyut Bhawan,
Corporate Office, Nakkal Gutta, Hanamkonda,
Warangal-506001, Telangana.

10. **Bangalore Electricity Supply Company Limited,**
Corporate Office, K. R. Circle
Bangalore-560001, Karanataka.

11. **Gulbarga Electricity Supply Company Limited,**
Station Main Road, GULBURGA, Karnataka.

12. **Hubli Electricity Supply Company Limited,**
Navanagar, PB Road, HUBLI, Karnataka.

13. **Mangalore Electricity Supply Company Limited,**
MESCOM Corporate Office,
Paradigm Plaza, AB Shetty Circle
Mangalore-575001, Karnataka.

14. **Chamundeswari Electricity Supply Corporation Limited,**
927, L J Avenue, Ground Floor,
New Kantharaj Urs Road Saraswatipuram,
Mysore-570009, Karnataka.

15. **Andhra Pradesh Solar Power Corporation Private Limited,**
6-3-856/A3, Neeraj Public School Lane,
Opp. to Green Park Hotel, Ameerpet,

<u>NR Respondents</u>

1. **Ajmer Vidyut Vitran Nigam Limited,**
Corporate Office, Vidyut Bhawan,
Panchsheel Nagar, Makarwali Road
Ajmer-305004 (Rajasthan).

2. **Jaipur Vidyut Vitran Nigam Limited,**
Vidyut Bhawan, Janpath, Jyoti Nagar,
Jaipur-302005 (Rajasthan).

3. **Jodhpur Vidyut Vitran Nigam Limited,**
New Power House, Industrial Area,
Jodhpur-342003(Rajasthan).

4. **Himachal Pradesh State Electricity Board Vidyut Bhawan,**
Kumar House Complex Building II,
Shimla-171004.

5. **Punjab State Power Corporation Limited,**
The Mall, PSEB Head Office, Patiala-147001.

6. **Haryana Power Purchase Centre,**
Shakti Bhawan, Sector-6,
Panchkula-134109 (Haryana).

7. **Power Development Department,**
Government of Jammu & Kashmir,
Mini Secretariat, Jammu.

8. **Uttar Pradesh Power Corporation Limited,**
Shakti Bhawan, 14, Ashok Marg
Lucknow-226001.

9. **BSES Yamuna Power Limited,**
B-Block, Shakti Kiran, Bldg. (Near Karkadooma Court),
Karkadooma 2nd Floor,
New Delhi-110092.

10. **BSES Rajdhani Power Limited,**
BSES Bhawan, Nehru Place,
New Delhi.

11. **Tata Power Delhi Distribution Limited,**
NDPL House, Hudson Lane,
Kingsway Camp North Delhi-110009.

12. **Chandigarh Administration,**
Sector -9, Chandigarh.

13. **Uttarakhand Power Corporation Limited,**
Urja Bhawan, Kanwali Road, Dehradun.

14. **North Central Railway,**
Allahabad.

15. **New Delhi Municipal Council,**
Palika Kendra, Sansad Marg,
New Delhi-110002.

…Respondents

Parties present: Ms. Zafrul Hasan, PGCIL
Ms. Mohd. Mohsin, PGCIL

ORDER

The instant Petition has been filed by Power Grid Corporation of India Limited for truing up of the transmission tariff for the 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations") and for the determination of transmission tariff under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as "the 2019 Tariff Regulations") for the 2019-24 tariff period in respect of the following transmission assets (hereinafter referred to as the "transmission assets") under "Phase-I- Unified Real Time Dynamic State Measurement" (hereinafter referred to as the "transmission project"):

Asset-1: URTDSM System (Control Center Equipment, PMU's, and associated equipment) integrated and commissioned at SRLDC & SLDCs of Southern Region under "Phase-I- Unified Real Time Dynamic State Measurement (URTDSM)",

Asset-2: Phase-I "Unified Real Time Dynamic State Measurement (URTDSM)" for NRLDC & SLDCs of Northern Region

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

"1) Approve the trued up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 8.3. and 9 above.

2) Approve the Completion cost and additional capitalization incurred during 2014-19 and allow the projected additional capitalization during 2019-24.

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 2014 and Tariff regulations 2019 as per para 11.1 and 12.1 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 respondents.

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

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.

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

Background

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

(a) The Investment Approval (IA) for the implementation of the transmission project was accorded by the Board of Directors of the Petitioner's Company vide Memorandum No. C/CP/URTDSM Ph-1 dated 13.1.2014 and conveyed on 21.1.2014 at an estimated cost of ₹37463 lakh, which included IDC of ₹2954 lakh, based on 3rd Quarter, 2013 price level, in its 297th meeting dated 13.1.2014.

(b) The scope of the scheme was discussed and agreed upon in the Joint SCM of all five Regions held on 5.3.2012 and further in the 20th SRPC meeting held on 28.9.2012. It was decided that the Petitioner would implement the Unified Real Time Dynamic State Measurement (URTDSM) scheme as approved in the joint meeting of all five Regional Standing Committee Meeting (SCM) on Power System Planning held on 5.3.2012.

(c) After deliberation in the said SCM, members of the Regional Standing Committee on Power System Planning agreed that the transmission project is to be implemented by the Petitioner as a System Strengthening Scheme, and its cost shall be added to the National Pool Account which shall be shared by all DICs as per the POC mechanism under the Central Electricity Regulatory Commission Regulations.

(d) It was also agreed that the Petitioner shall file a Petition before the Central Electricity Regulatory Commission for obtaining the Regulatory Approval for the transmission project. Resultantly, the Petitioner filed Petition No.129/MP/2012 for the grant of Regulatory Approval of the URTDSM project, and the Commission, vide its order dated 6.9.2013, granted Regulatory Approval for the same.

(e) In the transmission project, the PSDF grant of ₹26224 lakh (70% of the project cost of ₹37463 lakh) has been sanctioned by the Ministry of Power (MoP) vide letter dated 31.12.2014.

(f) The scope of work covered under the transmission scheme is as follows:

Phase 1:

1. Installation of approximately 1186 Nos. PMUs at the sub-stations and power plants of all utilities of the country based upon the following criteria:

(i) Sub-stations of 400 kV and above.
(ii) Generating station of 220 kV and above.
(iii) HVDC terminals
(iv) Important inter-regional and inter-national connection points.

2. The data flow hierarchy similar to that being followed for the ULDC system is being adopted for the URTDSM. Accordingly, the Phasor Data Concentrators (PDCs) that shall acquire data from PMUs to be installed are as under:

(i) Super PDCs at main and backup NLDCs (2 sets)
(ii) Super PDCs at all the five RLDCs. (5 sets) and NTAMC
(iii) Master PDCs at SLDCs (25 sets) and strategic locations.
(iv) Visualization software and data archiving server at all PDC locations including at NTAMC and NLDC.
(v) Router/Switches and miscellaneous items.
(vi) Communication interface cables, etc.
(vii) Remote Consoler at each RPC, Union Territories, CEA, CTU, and

other identified locations.

3. The hardware and software proposed to be installed at the Control Centers to accommodate all the PMUs under Phase-I with a provision for future expansion of about 50%.

4. The FO based communication system existing and being established by the PGCIL and constituents shall meet the requirement of Phase-I.

5. Analytical Software: though the process shall be initiated under Phase-I but completion may be possible under Phase-II.

(g) The details of assets under the transmission project are as follows:

Sl. No.	Asset Name	COD	Remarks
1	URTDSM System (Control Center Equipment, PMUs, and associated equipment) integrated and commissioned at SRLDC & SLDCs of Southern Region (Asset-1)	28.9.2018	Covered under the instant Petition
2	PHASE-I "UNIFIED REAL TIME DYNAMIC STATE MEASUREMENT (URTDSM)" for NRLDC & SLDCs of Northern Region. (Asset-2)	30.6.2018	
3	URTDSM Systems (Control Center Equipment, PMUs, and associated equipment) integrated and commissioned at ERLDC, Kolkata; SLDC, WBSETCL and SLDC, DVC	12.12.2018	Vide order dated 7.7.2022 in Petition No. 678/TT/2020
4	URTDSM Systems (Control Center Equipment, PMUs, and associated equipment) integrated and commissioned at SLDC, OPTCL.	2.1.2019	
5	URTDSM Systems (PDCs & its associated parts) supplied and installed at NERLDC and SLDCs of Assam, Meghalaya, and Tripura and PMUs along with 51 PMUs & its associated items (in 14 stations)	1.1.2020	Vide order dated 11.7.2022 in Petition No. 189/TT/2021
6	URTDSM System (Control Center Equipment, PMUs, and associated equipment) integrated and commissioned at WRLDC, Mumbai & SLDCs of Madhya Pradesh and Gujarat	31.5.2019	

Petition of balance scope of works commissioned during the 2019-24 tariff block under Northern and Eastern Regions will be filed separately.

(h) The instant Petition covers the truing up of the transmission tariff for the 2014-19 tariff period and the determination of the transmission tariff for the 2019-24 tariff period for the transmission assets.

(i) The tariffs for the transmission assets up to 31.3.2019 were approved vide order dated 8.7.2022 in Petition No. 254/TT/2019 for the Southern Region and vide order dated 8.7.2022 in Petition No. 486/TT/2019 for the Northern Region.

4. The Respondents are Distribution Licensees, Power Departments, Power Utilities and Transmission Licensees who are obtaining transmission services from the Petitioner, mainly the beneficiaries of the Southern Region and the Northern Region.

5. The Petitioner has served a copy of the Petition on the Respondents and notice regarding the filing of this Petition has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003 (the Act). No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers by the Petitioner. None of the Respondents have filed any reply in the matter.

6. This order is issued considering the submissions made by the Petitioner in the Petition and affidavits dated 29.1.2024, 13.2.2024,19.4.2024 and 16.5.2024. The hearing in this matter was held on 29.4.2024, and the order was reserved. However, the order could not be issued prior to Shri Arun Goyal, Member who formed a part of the coram, demitting the office. Accordingly, the matter was re-listed for the hearing on 8.8.2024. During the course of the hearing, the representative of the Petitioner submitted that the pleadings had been completed in the matter, and arguments were heard and requested the Commission to issue an order on the basis of the information already on record. Considering the submissions of the Petitioner's representative, the Commission directed the parties to file their respective written submissions/note of argument, if any, within a week's time with a copy to the other side. No reply has been received from the Respondents.

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

Truing-up of Annual Fixed Charges for the 2014-19 Tariff Period For Asset-1

8. The details of the trued-up transmission charges claimed by the Petitioner for the 2014-19 tariff period in respect of Asset-1 are as follows:

(₹ in lakh)

Particulars	2018-19 (pro-rata for 185 days)
Depreciation	36.31
Interest on Loan	0.00
Return on Equity	113.32
Interest on Working Capital	4.87
O&M Expenses	35.42
Total	**189.92**

9. The details of the trued-up Interest on Working Capital (IWC) claimed by the Petitioner for the 2014-19 tariff period in respect of Asset-1 are as under:

(₹ in lakh)

Particulars	2018-19 (pro-rata for 185 days)
O&M Expenses	5.82
Maintenance Spares	10.48
Receivables	62.45
Total Working Capital	78.75
Rate of Interest (in %)	12.20
Interest on working Capital	**4.87**

Capital Cost

10. The capital cost for Asset-1 as on COD as well as on 31.3.2019 as claimed by the Petitioner and allowed by the Commission vide order dated 8.7.2022 in Petition No. 254/TT/2019 is as under:

(₹ in lakh)

Apportioned Approved Cost as per FR	Expenditure up to COD	Additional Capital Expenditure (ACE)	Total Capital Cost as on 31.3.2019
		2018-19	
8327.19	4241.93	1009.90	5251.83

11. The Petitioner, vide Auditor's Certificates, has submitted the capital cost incurred up to COD and ACE during the 2014-19 tariff period in respect of Asset-1. The details

of the apportioned approved capital cost, capital cost as on COD, and ACE incurred up to 31.3.2019, as claimed by the Petitioner for Asset-1 are as under:

(₹ in lakh)

FR approved cost	Expenditure up to COD (As per Auditor's Certificate)	ACE	Total completion cost as on 31.3.2019
		2018-19	
8327.19	4241.93	509.65	4751.58

12. The Petitioner vide affidavit dated 29.1.2024 has submitted the revised FR and RCE for Asset-1, which is as follows:

(₹ in lakh)

FR approved cost	Approved cost as per RCE	Expenditure up to COD (As per Auditor's Certificate)	ACE	Total completion cost as on 31.3.2019
			2018-19	
6560.69	5555.75	4241.93	509.65	4751.58

13. The Petitioner has submitted that since the claimed capital cost as on 31.3.2019, including ACE in respect of Asset-1, is within the RCE approved cost, there is no cost overrun in the case of Asset-1.

<u>Time Overrun</u>

14. As per the Investment Approval (IA) dated 13.1.2014, Asset-1 was scheduled to be put under commercial operation within 27 months from the date of the IA, i.e., by 12.4.2016. However, Asset-1 was put into commercial operation on 28.9.2018. Therefore, there is a time overrun of 898 days in the case of the Asset-1.

15. The Commission, vide order dated 8.7.2022 in Petition No. 254/TT/2019, condoned the time overrun of 504 days out of 898 days for Asset-1 and granted liberty to the Petitioner to approach the Commission with supporting documents at the time of truing-up with regard to the non-condonation of the delay. The Commission, in the said order dated 8.7.2022, had observed regarding time overrun as under:

> *"32. It is observed from the chronology of events placed on record that the Petitioner placed LOA as per schedule. Further, it is observed that IEEE standard (Ref: C 37.118-*

1a-2014) was made available on 30.5.2014 whereas test lab was authorized vide letter dated 1.5.2015 of IEEE Standards Association against the schedule of 30.1.2014 causing a delay of about 456 days. Additional time delay between 30.1.2014 to 31.5.2015 of about 504 days is towards ensuring availability of testing facility which had a cascading effect on the completion of the transmission asset. Therefore, time over-run of 504 days due to delay caused by IEEE authorized testing facility land is beyond the control of the Petitioner and the same is accordingly condoned. Other reasons submitted by the Petitioner are in respect of delay due to non-availability of basic infrastructure/fronts/work permission for connection at various State Utilities sub-stations and generating stations. Therefore, out of the total time over-run/delay of 898 days, delay of 504 days is beyond the control of the Petitioner and the same is accordingly condoned. However, the Petitioner is granted liberty to approach the Commission along with relevant supporting documents at the time of true-up with regard to the non-condonation of time over-run."

16. The Petitioner has submitted that the delay between 30.1.2014 and 31.5.2015 of about 504 days was condoned on the grounds that the same was towards ensuring the availability of testing facility of IEEE standards for the PMU equipment. Further, the delay beyond 31.5.2015 was mainly due to the non-availability of basic infrastructure/fronts/work permission for connection at various State Utilities sub-stations and the generating stations. The detailed reasons submitted by the Petitioner for the delay in execution of Asset-1 are as under:

i) The issue of testing was taken up with the Energy Laboratory Service, USA, and the testing was scheduled in June, 2015. Accordingly, the testing was done in Consumer Energy, USA, from 14th June to 24^{th} June 2015. After successful completion of the testing in the Consumer Energy, the type test approval was given to the GE (ALSTOM) on 7.7.2015 for manufacturing, supply, installation, and commissioning of PMUs at various sub-stations in the Central and State Sector Constituents. Further, as per the original schedule, six (6) months were considered for manufacturing and dispatch and only after that the installation and commissioning of the PMUs could start. Therefore, after the type test approval on 7.7.2015, the manufacturing and delivery were started at various sites from January 2016 onwards, and the supply of the PMUs was effectively deferred till 15.1.2016.
ii) The scope of the project involves hardware and software installations at State Sector Control Centers/ Central Sector Control Sectors/ SLDCs, and there was a significant delay by the Constituents in providing the requisite infrastructure.
iii) The work was delayed due to space constraints, non-availability of the basic infrastructure/ work permission for connection at various State utilities' sub-stations,

and the generating stations, which are as follows:

a. The delay from 1.4.2016 to 7.2.2017 (approximately 10 months) was attributable to AP Transco. PMUs pertaining to Chittoor and Vemagiri AP Transco had already been supplied in January 2016; Kurnool AP Transco and VTPS were supplied in April 2016. The delay in the installation of the PMUs was due to the delay in permission by AP Transco, Vemagiri AP Transco, GMR Vemagiri, Kurnool AP Transco, and VTPS. Integration was delayed due to the non-availability of a timely shutdown for CT/PT termination and the availability of testing and commissioning teams pertaining to the Transcos. The said constraints were discussed in the SRPC meeting held on 7.2.2017, wherein APTRANSCO confirmed that all the constraints in the installation had been resolved and requested GE to complete the installation work.

b. The delay from 25.4.2017 to 29.12.2017 (approximately 8 months) was attributable to TS Transco. In the SRPC meeting held on 24.10.2017, TS Transco informed that the space identified for the URTDSM server was to be made ready for the hardware installation. The forum agreed that such issues would further slowdown the progress of the project. The supply of Control Center equipment to Vidyut Soudha SLDC had already been done on 24.4.2017. The delay in the installation was due to the non-availability of the work from TSTRANSCO. Vide mail dated 29.12.2017, TSTRANSCO requested for installation of the Control Center equipment at a temporary location.

c. Delay from 6.4.2017 to 9.3.2018 (approximately 11 months) was attributable to AP Transco. The supply of the Control Center equipment to Nunna ALDC was done on 5.4.2017. In the SRPC meeting held on 24.10.2017, AP Transco informed that URTDSM hardware was received at Nunna, but due to the non-availability of facilities at Nunna, AP Transco agreed to shift the Control System Equipment to SLDC 5 km away from Nunna. AP Transco confirmed that SLDC has all the facilities (except for the UPS) to accommodate the hardware. With the temporary UPS supply, the installation would be completed by November, 2017. In the letter addressed to AP Transco, the Petitioner informed that even after the confirmation by AP Transco to shift the Control Center from Nunna to Gundala SLDC on 24.10.2017, the Control Center equipment was finally shifted on 9.3.2018 after a lot of persuasion. This further delayed the commissioning of the URTDSM Control Center equipment in AP Transco.

d. The delay from 14.8.2015 to 31.10.2017 (approximately 27 months) was attributable to GMR Vemagiri. PMU pertaining to the GMR Vemagiri was already supplied on 13.8.2015. However, GMR Vemagiri did not give permission for the installation of the PMU, which led to a delay of approximately 2 years in the installation of the PMU. SRPC had given clearance for shifting the PMU to NP Kunta vide mail dated 3.6.2017. Subsequently, the survey and shifting of the material was done in October 2017, and the said PMU was diverted and installed at NP Kunta Powergrid.

e. The delay from 7.5.2016 to 17.5.2018 (approximately 25 months) was attributable to NTPC Simhadri. The supplies pertaining to Chittoor, Kaiga and Arasur were affected due to the implementation of GST w.e.f. 1.7.2017. The supply of PMUs was withheld due to the taxation issues, and the installation works at Simhadri were completed on 7.5.2016. However, the integration (CT/PT termination) of Simhadri PMU was delayed due to the shutdown. NTPC insisted that it would do CT/PT termination only when the opportunity was given for the shutdown and requested the Petitioner for verification of the work after the completion. The integration was completed by NTPC on 17.5.2018. The System Availability Test (SAVT) could only be commenced after the integration of PMUs.

17. The Petitioner has furnished the following format indicating the activity-wise details of time over-run, scheduled date, and actual completion date of various activities involved in the implementation of Asset-1, including the reasons for delay:

Sr. No.	Activity	Period of activity				Time over-run in days	Reasons for time over-run
		Planned		Achieved			
		From	To	From	To		
1	LOA Supplies Installation SAT	15.1.2014	14.1.2016	15.1.2014	28.9.2018	988	
2	Delay due to the release of IEEE standard	30.1.2014	30.1.2014	30.1.2014	23.4.2014	83	The IEEE standard was approved and finalized on 23.4.2014. As per L2 IEEE standard was to be finalized by 30.1.2014
3	Non-availability of competent labs for testing of PMUs			15.1.2014	7.7.2015	538	Test Lab with IEEE standard was approved on 1.5.2015. Thereafter, the Type Test was completed on 18.6.2015 and was approved by LD&C on 7.7.2015
4	Delay due to change of sub-station location			13.8.2015	31.10.2017	810	GMR Vemagiri did not give permission for the installation of PMU; the said PMU was to be diverted

							and was installed at NP Kunta POWERGRID. SRPC had given clearance for the shifting of the PMU to NP Kunta vide mail dated30.6.2017. Subsequently, the survey and the shifting of material was done in October 2017. PMU pertaining to GMR Vemagiri was supplied on 13.8.2015.
5	Delay in permission by AP Transco for installation of PMU (Chittor & Vemagiri)			1.8.2015	7.2.2017	556	Delay in permission by AP Transco for the installation of PMU at Chittor AP Transco, Vemagiri AP Transco, GMR Vemagiri, Kurnool AP Transco, and VTPS. Clearance for installation of the PMU was confirmed during the SRPC meeting dated 7.2.2017. The supply of PMU pertaining to Chittor and Vemagiri AP Transco was done in August 2015, while for Kurnool AP Transco and VTPS was done in April - 2016. Integration was delayed due to the non-availability of a timely shut-down for CT/PT termination and the availability of the Testing and Commissioning Team pertaining to Transcos.
	Delay in permission by AP Transco for installation of PMU (Kurnool APTransco& VTPS)			1.4.2016	7.2.2017	312	
6	Delay due to shifting of equipment to Gunadala SLDC			6.4.2017	9.3.2018	337	During the meeting on 24.10.2017, AP Transco changed the Control Center location from Nunna ALDC AP Transco to Gunadala SLDC. AP Transco agreed to shift the material to the new location of the Control Center, which delayed the shifting of the supplies of the Control Center equipment from Nunna ALDC Transco to Gunadala SLDC. The supply of Control Center equipment to Nunna ALDC was done on 5.4.2017. However, the shifting of equipment to Gunadala SLDC was done on 9.3.2018.
7	Testing and COD		12.4.2016		28.9.2018		Though the testing of the Control Centers was completed on various dates COD was declared w.e.f. 28.9.2018. Refer to COD letter dated 2.11.2018
8	Any other Activities for time over-run, if any:						
	Non provision of work front by TSTRANSCO			25.4.2017	29.12.2017	248	Non-provision of the work front by TS Transco for the installation of the Control Center equipment pertaining to TS Transco. The request for the

							installation of the Control Center equipment at a temporary location was made vide mail dated 29.12.2017. However, the supply of the Control Center equipment to Vidhut Soudha SLDC was done on 24.4.2017. Permanent location was provided only after the commissioning of the system in May-June, 2019.

18. We have considered the submissions of the Petitioner. As per the IA dated 13.1.2014, Asset-1 was scheduled to be declared under commercial operation within 27 months from the date of the IA, i.e., by 12.4.2016, against which it was put into commercial operation on 28.9.2018. Therefore, there is a time overrun of 898 days in the commissioning of Asset-1. The Petitioner has submitted that the delay is mainly due to the (i) release of the IEEE Standard and non-availability of the testing labs for the PMUs as per the latest standards, (ii) Space constraints in the sub-stations, and (iii) non-availability of basic infrastructure or work permission for connection at various State Utility sub-stations and the generating stations. The Commission vide order dated 8.7.2022 in Petition No. 254/TT/2019 has already condoned a time overrun of 504 days on account of the delay caused by the IEEE-authorized testing facility.

19. With regard to the delay due to the change in the location of the sub-station, the Petitioner has claimed the time overrun of 810 days, i.e., from 13.8.2015 to 31.10.2017 and has submitted that GMR Vemagiri did not give permission for the installation of the PMU whereas SRPC had given clearance for shifting the PMU to NP Kunta vide mail dated 30.6.2017. However, the Petitioner neither submitted any documents substantiating the delay claimed from 13.8.2015 nor any e-mails, letters, or documents addressed to GMR Vemagiri. Therefore, the time overrun due to the change in the location of the sub-station is not condoned.

20. With regard to a delay in obtaining permission from AP Transco for the installation of the PMU, the Petitioner has claimed a delay of 556 days, i.e., from

1.8.2015 to 7.2.2017 and from 1.4.2016 to 7.2.2017, i.e., 312 days. The Petitioner has submitted that clearance for the installation of the PMU was confirmed during the SRPC meeting dated 7.2.2017. However, the Petitioner did not submit any documents to substantiate the delay before 7.2.2017. Therefore, the time overrun with regard to the delay in granting permission by AP Transco for the installation of the PMU is not condoned.

21. The Petitioner has claimed condonation of the time over-run of 337 days, from 6.4.2017 to 9.3.2018, due to the delay in shifting the equipment to Gunadala SLDC. It is noticed that AP Transco during the meeting held on 24.10.2017, changed the location of the Control Center from Nunna ALDC AP Transco to Gunadala SLDC. It is pertinent to mention that the Petitioner did not submit any e-mails, letters, or documents addressed to AP Transco regarding such delay. Accordingly, the delay is not condoned.

22. With regard to the non-provisioning of the work front by TSTRANSCO, the Petitioner has claimed a time over-run of 248 days, i.e., from 24.4.2017 to 29.12.2017. The Petitioner has submitted that TSTRANSCO requested the installation of the Control Center equipment at a temporary location, vide its mail dated 29.12.2017. However, the Petitioner did not submit any documents to substantiate the delay prior to 29.12.2017. Therefore, the time overrun with regard to the delay due to non-provisioning of the work front by TSTRANSCO is not condoned.

23. The Petitioner has cited the reasons for the delay attributable to the non-availability of the essential infrastructure, interfaces, and necessary permissions for the connection at various sub-stations and the generating stations operated by the State Utilities. In this connection, the Petitioner has reiterated its earlier submissions pleaded by it in Petition No. 254/TT/2019. However, the Petitioner has failed to show to our satisfaction any new facts to prove that the delay of 394 days was beyond its control. Therefore, the time over-run of 394 days is not condoned.

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

24. The Petitioner has not claimed the IDC.

25. The Petitioner has claimed IEDC of ₹118.55 lakh in respect of Asset-1 and has submitted the Auditor's Certificate in support of the same. The Petitioner has also submitted that the entire IEDC has been discharged as on COD. As the time overrun for Asset-1 has not been completely condoned, there is a disallowance of IEDC on a proportionate basis. The IEDC claimed as per the Auditor's Certificate, IEDC considered, disallowed, and discharged up to the COD are as under:

(₹ in lakh)

IEDC claimed as per the Auditor's Certificate (A)	IEDC disallowed due to time overrun not condoned (B)	IEDC allowed (C)=(A-B)
118.55	27.17	91.38

Initial Spares

26. The Petitioner has claimed initial spares in respect of Asset-1 and prayed to allow the same as per the actuals. The Initial Spares claimed by the Petitioner in respect of Asset-1 are as under:

(₹ In lakh)

Head	Plant and Machinery cost for calculation of initial spares (A)	Initial Spares Claimed	Ceiling Limit	Initial Spares Worked out	Excess
		(B)	(C)	D = [(A-B)*C /(100-C)]	[B-D] If B>D
Communication equipment	5320.93	396.11	3.5	178.62	217.49

27. The Petitioner has submitted the year-wise discharge details of the initial spares claimed for Asset-1, and the same are as follows:

(₹ in lakh)

Particulars	Initial spares (As per Auditor's Certificate)	Discharged Upto COD	Discharged in 2018-19	Discharged in 2019-20
Sub-station	396.11	390.26	5.85	-

28. The Petitioner has further submitted that the initial spares may be reclaimed to the extent of limit available on an overall project basis, at the time of truing up of the entire project.

29. We have considered the submissions of the Petitioner. As per the APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017, the initial spares are to be allowed as per the ceiling on overall project cost. The APTEL vide its judgement dated 14.9.2019 in Appeal No. 74 of 2017 held as under:

> *"18.13………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."*

30. It is noted that the complete scope of the work is yet to be completed, and other assets, in addition to the transmission assets covered in the present Petition, are covered under different Petitions. Accordingly, the overall project cost of the transmission assets will arrive only when all the assets under the transmission scheme are combined while claiming the tariff. Therefore, initial spares have been allowed based on the cost of the individual assets in the 2014-19 tariff period. The details of the initial spares allowed for the 2014-19 tariff period are as under:

Plant and machinery cost under Sub-station excluding IDC and IEDC, land & civil works (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Ceiling (in %)	Initial Spares worked out (₹ 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
5320.93	396.11	3.50	178.62	217.49	178.62

Power System Development Fund Grant (PSDF)

31. The proviso to Regulation 9(6) of the 2014 Tariff Regulations provides as follows:

> *"Provided that 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 shall be excluded from the Capital Cost for the purpose of computation of interest on loan, return on equity and depreciation;"*

32. The Petitioner has submitted that the tariff has been calculated after the adjustment of the grant from the capital cost. Accordingly, we have considered the submissions of the Petitioner. The details of the grant allocated and its adjustment in the capital cost relating to Asset-1 are as follows:

(₹ in lakh)

Particulars	WAMS
Capital cost up to COD as per Auditor's certificate	4241.93
Grant utilised up to COD (70%)	2969.35
Capital cost up to COD for tariff calculation (30%)	**1272.58**
Additional Capital Expenditure for 2018-19 as per certificate	509.65
Grant utilised for Additional Capital Expenditure 2018-19	356.76
Additional capitalisation cost for tariff calculation 2018-19	**152.89**
Additional Capital Expenditure for 2019-20 as per certificate	335.14
Grant utilised for Additional Capitalisation for 2019-20	234.60
Additional Capitalisation cost for tariff calculation 2019-20	**100.54**
Additional Capital Expenditure for 2020-21 as per certificate	178.96
Grant utilised for Additional Capitalisation for 2020-21	125.27
Additional Capitalisation cost for tariff calculation 2020-21	**53.69**
Additional Capital Expenditure for 2021-22 as per certificate	172.80
Grant utilised for Additional Capitalisation for 2021-22	120.96
Additional Capitalisation cost for tariff calculation 2021-22	**51.84**
Estimated Additional Capital Expenditure for 2022-23 as per certificate	1.00
Estimated grant utilised for Additional Capitalisation for 2022-23	0.70
Estimated Additional Capitalisation cost for tariff calculation 2022-23	**0.30**
Total cost as per certificate	**5439.48**
Total grant utilized	3807.64
Cost considered for tariff calculation (equity)	1631.84

Capital Cost as on the COD

33. Accordingly, the capital cost allowed as on the COD in respect of the Asset-1 is as follows:

(₹ in lakh)

Capital cost as on COD as per Auditor's Certificate	Less: IEDC and Excess Initial Spares disallowed as on COD due to:		Less: PSDF grant received	Capital cost as on COD *(on a cash basis)*
	IEDC disallowed due to time over-run	Excess Initial Spares		
4241.93	27.17	211.64	2969.35	1033.77

Additional Capital Expenditure (ACE)

34. The Petitioner has claimed additional capitalization for the 2014-19 tariff period under Regulation 14(1)(i) and 14(1)(ii) of the 2014 Tariff Regulations. The Petitioner has claimed ACE of ₹509.65 lakh in FY 2018-19. We have considered the submissions of the Petitioner. ACE claimed by the Petitioner for the FY 2018-19 is allowed in terms of Regulations 14(1)(i) and 14(1)(ii) of the 2014 Tariff Regulations. The ACE allowed in respect of the Asset-1 for the 2014-19 tariff period is as follows:

(₹ in lakh)

ACE 2018-19	
ACE claimed	509.65
Less: PSDF grant received	356.76
Less: Excess Initial Spares	5.85
ACE allowed	**147.04**

Capital Cost for 2014-19 Tariff Period

35. The capital cost considered for the truing --up of transmission tariff for the 2014-19 tariff period in respect of Asset-1 is as follows:

(₹ in lakh)

Capital cost as on COD	Additional Capital Expenditure (ACE)	Total capital cost as on 31.3.2019
	2018-19	
1033.77	147.04	1180.81

Debt-Equity Ratio

36. The Commission, vide order dated 8.7.2022 in Petition No. 254/TT/2019, considered the capital cost claimed by the Petitioner as equity. The relevant extracts of the said order are as follows:

"48. The Petitioner has submitted that as per terms and conditions mentioned in clause 3(vi) of sanction letter issued by Ministry of Power, Government of India, expenditure beyond 70% of the cost shall be provided by Petitioner from its own resources. Accordingly, remaining 30% expenditure is being claimed as equity.

49. We have considered the submissions of the Petitioner. The capital cost claimed by the Petitioner is considered as equity in the present order."

37. Accordingly, the total capital cost allowed in the present order is also considered equity.

Depreciation

38. The Petitioner has submitted that communication equipment such as URTDSM is to be considered IT equipment and has claimed depreciation at the rate of 15%. We have considered the submissions of the Petitioner. URTDSM is an upgradation of the SCADA system, which has been defined as a "Communication System" under Regulation 3(11) of the 2014 Tariff Regulations. Accordingly, depreciation has been considered for communication equipment such as URTDSM @6.33% as a part of PLCC up to 31.3.2019.

39. The depreciation has been computed considering the capital expenditure as on the COD and ACE approved for the 2014-19 tariff period. The Weighted Average Rate of Depreciation (WAROD) at Annexure-I has been worked out for Asset-1 as per the rates of depreciation prescribed in the 2014 Tariff Regulations. The depreciation allowed for the Asset-1 is as follows:

(₹ in lakh)

	Particulars	**2018-19 (pro-rata for 185 days)**
A	Opening Gross Block	1033.77
B	ACE	147.04
C	Closing Gross Block (A+B)	1180.81
D	Average Gross Block (A+C)/2	1107.29
E	Rate of Depreciation (in %)	6.33
F	Lapsed Life at the beginning of the year (Year)	0.00
G	Balance useful life at the beginning of the year (Year)	15.00
H	Aggregate Depreciable Value	996.56
I	**Depreciation during the year (D×E)**	**35.53**

J	Cumulative Depreciable Value at the end of the year	35.53
K	Remaining Aggregate Depreciable Value at the end of the year (H-J)	961.03

40. The details of depreciation approved vide order dated 8.7.2022 in Petition No. 254/TT/2019, depreciation claimed in the instant Petition, and trued-up depreciation allowed in the instant order in respect of the Asset-1 is as follows:

(₹ in lakh)

Particulars	**2018-19 (pro-rata for 185 days)**
Approved vide order dated 8.7.2022 in Petition No. 254/TT/2019	37.98
Claimed by the Petitioner in the instant Petition	36.31
Allowed after true-up in this order	35.53

Interest on Loan (IoL)

41. The Petitioner has not claimed IOL considering the PSDF grant. As the balance amount after reducing the grant is being treated as equity, no IoL has been approved.

Return on Equity (RoE)

42. The Petitioner has claimed the RoE in respect of the Asset-1 in terms of Regulations 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that it is liable to pay income tax at MAT rates and has claimed the following effective tax rates for the 2014-19 tariff period:

Year	**Claimed effective tax rate (in %)**	**Grossed-up RoE [(Base Rate)/(1-t)] (in %)**
2018-19	21.549	19.758

43. The Commission, vide order dated 27.4.2020 in Petition No. 274/TT/2019, had arrived at the effective tax rate for the Petitioner based on the notified MAT rates, and the same is as under:

Year	Notified MAT rates (in %) (inclusive of surcharge & cess)	Effective tax (in %)
2018-19	21.549	21.549

44. The MAT rates, as considered in an order dated 27.4.2020 in Petition No. 274/TT/2019, are considered for the purpose of grossing up the rate of RoE for the truing-up of the tariff of the 2014-19 period in terms of the provisions of the 2014 Tariff Regulations and the same are as follows:

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

45. Accordingly, the trued-up RoE allowed in respect of Asset-1 for the 2014-19 tariff period is as follows:

(₹ in lakh)

	Particulars	2018-19 (pro-rata for 185 days)
A	Opening Equity	1033.77
B	Additions	147.04
C	Closing Equity (A+B)	1180.81
D	Average Equity (A+C)/2	1107.29
E	Return on Equity (Base Rate) (in %)	15.500
F	MAT Rate for respective year (in %)	21.549
G	Rate of Return on Equity(in%) (G=E/(1-F))	19.758
H	**Return on Equity (D×G)**	**110.89**

46. The details of the RoE approved vide order dated 8.7.2022 in Petition No. 254/TT/2019, RoE claimed in the instant Petition, and trued-up RoE allowed in the instant order in respect of the Asset-1 is as follows:

(₹ in lakh)

Particulars	2018-19 (pro-rata for 185 days)
Approved vide order dated 8.7.2022 in Petition No. 254/TT/2019	118.55
Claimed by the Petitioner in the instant Petition	113.32
Allowed after true-up in this order	110.89

Operation & Maintenance Expenses (O&M Expenses)

47. The Petitioner has claimed the O&M Expenses of ₹35.42 lakh for Asset-1. We have considered the submissions of the Petitioner. Accordingly, O&M Expenses allowed in respect of Asset-1 for the FY 2018-19 are ₹35.42 lakh. The details of O&M Expenses approved vide order dated 8.7.2022 in Petition No. 254/TT/2019, O&M Expenses claimed in the instant Petition, and trued-up O&M Expenses allowed in the instant order in respect of the Asset-1 are as follows:

(₹ in lakh)

Particulars	2018-19 (pro-rata for 185 days)
Approved vide order dated 8.7.2022 in Petition No. 254/TT/2019	35.42
Claimed by the Petitioner in the instant Petition	35.42
Allowed after true-up in this order	35.42

Interest on Working Capital (IWC)

48. IWC is worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations, and the trued-up IWC approved for Asset-1 is as follows:

(₹ in lakh)

Particulars	2018-19 (pro-rata for 185 days)
O&M Expenses (O&M Expenses for one month)	5.82
Maintenance Spares (15% of O&M Expenses)	10.48
Receivables (Equivalent to two months of annual fixed cost)	61.37
Total Working Capital	**77.67**
Rate of Interest (in %)	12.20
Interest on Working Capital	**4.80**

49. The details of the IWC Expenses approved vide order dated 8.7.2022 in Petition No. 254/TT/2019, IWC claimed in the instant Petition, and trued-up IWC allowed in the instant order in respect of Asset-1 are as follows:

(₹ in lakh)

Particulars	2018-19 (pro-rata for 185 days)
Approved vide order dated 8.7.2022 in Petition No. 254/TT/2019	5.01
Claimed by the Petitioner in the instant Petition	4.87
Allowed after true-up in this order	4.80

Trued Up Annual Fixed Charges for the 2014-19 Tariff Period

50. Accordingly, the annual fixed charges after truing-up for the 2014-19 tariff period in respect of Asset-1 are as follows:

(₹ in lakh)

Particulars	2018-19 (pro-rata for 185 days)
Depreciation	35.53
Interest on Loan	0.00
Return on Equity	110.89
Interest on working capital	4.80
O&M Expenses	35.42
Total	**186.64**

51. The details of annual transmission charges approved vide order dated 8.7.2022 in Petition No. 254/TT/2019, annual transmission charges claimed in the instant Petition, and trued-up annual transmission charges allowed in the instant order in respect of the Asset-1 are as follows:

(₹ in lakh)

Particulars	2018-19 (pro-rata for 185 days)
Approved vide order dated 8.7.2022 in Petition No. 254/TT/2019	196.96
Claimed by the Petitioner in the instant Petition	189.92
Allowed after truing-up in this order	186.64

Determination of Annual Fixed Charges for the 2019-24 Tariff Period

52. The Petitioner has submitted the tariff forms for Asset-1 and has claimed the following transmission charges for the 2019-24 tariff period:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	188.74	200.31	208.22	212.13	212.15
Interest on Loan	-	-	-	-	-
Return on Equity	236.32	250.81	260.72	265.62	265.64
Interest on Working Capital	8.20	9.61	28.54	11.95	11.93
O&M Expenses	41.43	64.32	492.12	108.79	108.79
Total	**474.69**	**525.05**	**989.60**	**598.49**	**598.51**

53. The Petitioner has claimed the following IWC in respect of Asset-1 for the 2019-24 tariff period:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	3.45	5.36	41.01	9.07	9.07
Maintenance Spares	6.21	9.65	73.82	16.32	16.32
Receivables	58.36	64.73	122.01	73.79	73.59
Total	68.02	79.74	236.84	99.18	98.98
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	**8.20**	**9.61**	**28.54**	**11.95**	**11.93**

Capital Cost

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

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

(a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by ex including 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."

55. The Petitioner has claimed the capital cost of ₹1207.98 lakhs as on 31.3.2019 for Asset-1, against which the Commission has approved the capital cost of ₹1180.81 lakhs. Accordingly, the capital cost of ₹1180.81 lakh has been considered for Asset-1 as on 1.4.2019 for the determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

Additional Capital Expenditure

56. Regulation 24 of the 2019 Tariff Regulations provides 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."

57. The Petitioner has claimed the following Additional Capital Expenditure (ACE) for the Asset-1 for the 2019-24 tariff period:

(` in lakh)

Expenditure as on 31.3.2019	**ACE 2019-24 (Net of Grant)**					**Cost as on 31.3.2024**
	2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**	
1207.98	100.54	53.69	51.84	0.30	-	1414.35
Applicable ACE Regulation	**24(1)(a) & (b)**	**24(1)(a) & (b)**	**25(1)(f)**	**25(1)(f)**		

58. The Petitioner has submitted that the ACE incurred during the 2019-24 tariff period is on account of undischarged liability towards the final payment/withheld payment due to the contractual exigencies for works executed within the cut-off date. We have considered the submissions of the Petitioner. We are of the view that the ACE proposed by the Petitioner is on account of the undischarged liabilities, and the same has been claimed in terms of Regulations 24(1)(a) and 25(1)(f) of the 2019 Tariff Regulations. The Commission has considered and approved the ACE for the 2019-24 tariff period as claimed by the Petitioner under Regulations 24(1)(a), 24(1)(d), and 25(1)(f) of the 2019 Tariff Regulations. The same shall be trued up based on actuals at the time of the truing up. Further, the completion cost as of 31.3.2024, including ACE claimed in respect of Asset-1, is within the FR-approved cost. Hence, there is no cost overrun in the case of Asset-1.

59. The capital cost of the Asset-1 considered for the 2019-24 tariff period, subject to truing-up, is as follows:

(₹ in lakh)

Expenditure as on 31.3.2019	ACE 2019-24 (Net of Grant)					Cost as on 31.3.2024
	2019-20	2020-21	2021-22	2022-23	2023-24	
1180.81	100.54	53.69	51.84	0.30	0.00	1387.18

Debt Equity Ratio

60. 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 tht 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."

61. As discussed above in this order, the capital cost of Asset-1 is considered to be funded through equity for the purpose of computation of the transmission tariff for the 2019-24 tariff period.

Depreciation

62. 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 asset 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 asset 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 up to 31.3.2019 from the gross depreciable value of the asset.

(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 asset 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."

63. The Commission has considered the submissions of the Petitioner. Depreciation has been worked out on the basis of the capital cost approved as on 31.3.2019 and ACE allowed during the 2019-24 period. The depreciation rates of IT and non-IT assets, as prescribed in the 2019 Tariff Regulations, have been considered to arrive at the Weighted Average Rate of Depreciation (WAROD) and are annexed to this order. The lapsed useful life of Asset-1 is considered as detailed in the truing-up for the 2014-19 tariff period. Depreciation allowed for Asset-1 for the 2019-24 tariff period is as under:

(₹ in lakh)

	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	1180.81	1281.35	1335.04	1386.88	1387.18
B	ACE	100.54	53.69	51.84	0.30	0.00
C	Closing Gross Block(A+B)	1281.35	1335.04	1386.88	1387.18	1387.18
D	Average Gross Block(A+C)/2	1231.08	1308.20	1360.96	1387.03	1387.18
E	Weighted average rate of Depreciation (WAROD)(in %)	6.33	6.33	6.33	6.33	6.33
F	Balance useful life at the beginning of	15.00	14.00	13.00	12.00	11.00

	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	the year (Year)					
G	Elapsed life at the beginning of the year (Year)	0.00	1.00	2.00	3.00	4.00
H	Aggregate Depreciable Value	1107.97	1177.38	1224.86	1248.33	1248.46
I	**Depreciation during the year (D×E)**	**77.93**	**82.81**	**86.15**	**87.80**	**87.81**
J	Cumulative Depreciation at the end of the year	113.45	196.26	282.41	370.21	458.02
K	Remaining Aggregate Depreciable Value at the end of the year(H-J)	994.52	981.11	942.45	878.12	790.44

<u>Interest on Loan (IoL)</u>

64. The Petitioner has not claimed IOL considering the PSDF grant. As the balance amount after reducing the grant has been considered to be funded through equity, no IOL has been approved.

<u>Return on Equity (RoE)</u>

65. Regulations 30 and 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 due to Change in Law, 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:

Rate of pre-tax return on equity = 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:

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."

66. The Petitioner has submitted that the MAT rate applies to it. Accordingly, the MAT rate applicable in the 2019-24 period for the respective financial years has been considered for the purpose of RoE, which shall be trued up in accordance with Regulation 31(3) of the 2019 Tariff Regulations. The RoE allowed with respect to the Asset-1 for the 2019-24 tariff period is as follows:

(₹ in lakh)

	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	1180.81	1281.35	1335.04	1386.88	1387.18
B	Addition due to ACE	100.54	53.69	51.84	0.30	0.00
C	Closing Equity(A+B)	1281.35	1335.04	1386.88	1387.18	1387.18
D	Average Equity (A+C)/2	1231.08	1308.20	1360.96	1387.03	1387.18
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (Pre-tax) (in %) (G=E/(1-F))	18.782	18.782	18.782	18.782	18.782
H	**Return on Equity (Pre-tax) (D*G)**	**231.22**	**245.71**	**255.62**	**260.51**	**260.54**

<u>Operation and Maintenance Expenses ("O&M Expenses")</u>

67. The Petitioner has claimed the actual O&M Expenses from FY 2019-20 to FY 2021-22 and, for the remaining period, has claimed O&M Expenses @ 2.0% of the capital cost. The details of the O&M Expenses claimed by the Petitioner for the Asset-1 are as follows:

(₹ in lakh)

Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Original project Cost (₹ lakh)	5439.48	5439.48	5439.48	5439.48	5439.48
Norms (in %)	2.00	2.00	2.00	2.00	2.00
Normative O&M Expenses	**108.79**	**108.79**	**108.79**	**108.79**	**108.79**
Actual O&M Expenses	**41.43**	**64.32**	**492.12**	**-**	**-**
O&M Expenses Claimed	**41.43**	**64.32**	**492.12**	**108.79**	**108.79**

68. Regulation 35(4) of the 2019 Tariff Regulations provides as follows:

> ***"35. Operation and Maintenance Expenses***
> ***(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."*

69. We have considered the submissions of the Petitioner. The Petitioner, vide Auditor Certificate dated 22.12.2022, has submitted the actual O&M Expenses for the FY 2019-20 to FY 2021-22. However, the Petitioner has not submitted the break-up of the actual O&M Expenses. Accordingly, the O&M Expenses for the 2019-24 tariff period have been allowed on a normative basis, and the same will be subject to truing up. The O&M Expenses approved for Asset-1 for the 2019-24 tariff period as per Regulation 35 of the 2019 Tariff Regulations are as under:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Original project Cost (₹ lakh)	5021.02	5021.02	5021.02	5021.02	5021.02
Norms (in %)	2.00	2.00	2.00	2.00	2.00
Total O&M Expenses	**100.42**	**100.42**	**100.42**	**100.42**	**100.42**

Interest on Working Capital (IWC)

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

> *"34. **Interest on Working Capital:** (1) The working capital shall cover: ……*
> *(c) For Hydro Generating Station (including Pumped Storage Hydro Generating Station) and Transmission System:*
> *(i) Receivables equivalent to 45 days of annual fixed cost;*
> *(ii) Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and*
> *(iii) Operation and maintenance expenses, including security expenses for one month.*
>
> *(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1st April of the year during the tariff period 2019 - 24 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later:*
> *Provided that in case of truing-up, the rate of interest on working capital shall be considered at* bank rate as on 1st April of each of the financial year during the tariff period 2019-24.
>
> *(4) Interest on working capital shall be payable on normative basis notwithstanding that the generating company or the transmission licensee has not taken loan for working*

capital from any outside agency."

*"**3. Definitions.** - 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;"*

71. The Petitioner has submitted that it has computed the IWC for the 2019-24 tariff 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% for the complete tariff period. The IWC has been worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of IWC considered is 12.05% (SBI 1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for the FY 2019-20, 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for the FY 2020-21 and 10.50% (SBI 1-year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) for the FYs 2021-23 and 12.00% (SBI 1 year MCLR applicable as on 1.4.2023 of 8.50% plus 350 basis points) for the FY 2023-24. The components of the working capital and interest allowed thereon in respect of Asset-1 are as under:

(₹ in lakh)

Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Working Capital for O&M Expenses (O&M Expenses for one month)	8.37	8.37	8.37	8.37	8.37
Working Capital for Maintenance Spares (15% of O&M Expenses)	15.06	15.06	15.06	15.06	15.06
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	51.47	53.96	55.54	56.36	56.35
Total Working Capital	**74.90**	**77.39**	**78.97**	**79.79**	**79.79**
Rate of Interest for working capital (in %)	12.05	11.25	10.50	10.50	12.00
Interest on working capital	**9.03**	**8.71**	**8.29**	**8.38**	**9.57**

Annual Fixed Charges for the 2019-24 Tariff Period

72. The transmission charges allowed in respect of Asset-1 for the 2019-24 tariff period are as follows:

(₹ in lakh)

Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Depreciation	77.93	82.81	86.15	87.80	87.81
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	231.22	245.71	255.62	260.51	260.54
O&M Expenses	100.42	100.42	100.42	100.42	100.42

Interest on Working Capital	9.03	8.71	8.29	8.38	9.57
Total	**418.60**	**437.65**	**450.48**	**457.11**	**458.34**

Truing-up of Annual Fixed Charges for the 2014-19 Tariff Period for Asset-2

73. The details of the trued-up transmission charges claimed by the Petitioner for the 2014-19 tariff period in respect of Asset-2 are as follows:

(₹ in lakh)

Particulars	**2018-19 (pro-rata for 275 days)**
Depreciation	84.82
Interest on Loan	0.00
Return on Equity	264.75
Interest on working capital	8.80
O&M Expenses	31.03
Total	**389.40**

74. The details of the trued-up Interest on Working Capital (IWC) claimed by the Petitioner for the 2014-19 tariff period in respect of Asset-2 are as follows:

(₹ In lakh)

Particulars	**2018-19 (pro-rata for 275 days)**
O&M Expenses	3.43
Maintenance Spares	6.18
Receivables	86.14
Total Working Capital	95.75
Rate of Interest (in %)	12.20
Interest on working capital	**8.80**

Capital Cost

75. The capital cost of Asset-2 as on COD as well as on 31.3.2019 as claimed by the Petitioner and allowed by the Commission vide order dated 8.7.2022 in Petition No. 486/TT/2019 is as follows:

(₹ in lakh)

FR approved cost	**Expenditure up to COD**	**Projected Additional Capital Expenditure (ACE)**	**Total Capital cost as on 31.3.2019**
		2018-19	
Claimed by the Petitioner			
9074.88	5994.70	1022.59	7017.29
Allowed by the Commission			
	1722.79	143.81	1866.60

76. The Petitioner vide Auditor's Certificates has claimed the capital cost incurred up to the COD and ACE during the 2014-19 tariff period in respect of Asset-2. The details of apportioned approved cost, capital cost as on COD, and ACE incurred up to 31.3.2019 claimed by the Petitioner for Asset-2 are as follows:

(₹ in lakh)

FR approved cost	Expenditure up to COD (As per Auditor's Certificate)	Additional Capital Expenditure (ACE) 2018-19	Total completion cost as on 31.3.2019
9074.88	5994.70	750.70	6745.40

77. The Petitioner, vide affidavit dated 29.1.2024, has submitted the revised FR and RCE for Asset-2, which are as follows:

(₹ in lakh)

FR approved cost	Approved cost as per RCE	Expenditure up to COD (As per Auditor's Certificate)	Additional Capital Expenditure (ACE) 2018-19	Total completion cost as on 31.3.2019
7374.88	7374.43	5994.70	750.70	6745.40

78. The Petitioner has submitted that since the cost as on 31.3.2019, including the ACE claimed in respect of Asset-2 is within the RCE approved cost, there is no cost overrun in the case of the Asset-2.

<u>Time Overrun</u>

79. As per the IA dated 13.1.2014, Asset-2 was scheduled to be put under commercial operation within 27 months from the date of the IA. Accordingly, the scheduled COD of Asset-2 was 12.4.2016, against which it was put into commercial operation w.e.f. 30.6.2018. Accordingly, there was a time overrun of 808 days in the case of the Asset-2. The Commission, vide order dated 8.7.2022 in Petition No. 486/TT/2019, condoned the time overrun of 504 days out of 808 days and granted liberty to the Petitioner to approach the Commission with supporting documents at the time of truing up with regard to the non-condonation of delay. The Commission, in the

said order dated 8.7.2022, had observed as under:

> *"36. The Petitioner has submitted that the transmission asset was further delayed due to non-availability of Control Center's of NRLDC and SLDCs. It is observed that the Petitioner has not submitted valid documentary evidence in support of these activities. As such the time over-run from 1.6.2015 to 26.6.2018 is not being condoned. Accordingly, out of the total delay of 808 days, we condone the time over-run of 504 days in respect of the transmission asset. Thus, time over-run of 304 days in respect of the transmission asset is not condoned. However, the Petitioner is granted liberty to approach the Commission along with relevant supporting documents at the time of true-up with regard to the non-condonation of the time over-run."*

80. The Petitioner has submitted that the delay between 30.1.2014 and 31.5.2015 of about 504 days was condoned due to the non-availability of the testing facility of IEEE standard for the PMU equipment. Further, the delay beyond 31.5.2015 was mainly due to the non-availability of the basic infrastructure/work permission for connection at various State Utilities sub-stations, and generating stations. The detailed reasons submitted by the Petitioner for the delay in execution of Asset-2 are as under:

i) The project was awarded just after the Investment Approval, i.e., on 15.1.2014, and survey work started thereafter. During the survey, the Petitioner started communicating with the Constituents (State Sector Control Centers/Central Sector Control Sectors/SLDCs) to provide the space/basic civil structure/fronts, etc. However, there was a significant delay by the constituents in providing the requisite infrastructure.

ii) Accordingly, the works were delayed due to the space constraints and non-availability of the basic infrastructure/fronts/work permission for connection at various State utilities' sub-stations and the generating stations. Termination of CT/PT and DI cables was possible to be done in live line conditions. However, the State utilities did not agree to it, and a shutdown was arranged for the CT/PT and DI termination of various sub-stations in real time conditions from NRLDC. No space was provided by NTPC-Dadri for the installation of the PMU due to the space constraint. The Phasor Data Concentrator was to be installed in respective SLDC and NRLDC in the Northern Region. However, due to space constraints, installation and execution were delayed. The issue of space was raised in every TeST Sub-committee meeting of NRPC.

81. The Petitioner has submitted that the following issues were discussed in various

TeST meetings. The chronological details of the events are as under:

(a) 1st TeST meeting (17.4.2014): The Petitioner requested the Nodal Officer of each of the Constituents for smooth implementation of the project. However, the required data was not provided by the Constituents for sub-stations where PMUs were to be installed. These sub-stations came under the Transmission Wing to the Nodal Officer for carrying out the works, which were either not provided or provided at a delayed stage when execution was going due to which the works were delayed.

(b) 2nd TeST meeting (12.8.2014): The Petitioner again requested the Nodal Officer as some of the Constituents were not showing interest for the URTDSM Project. The following points were also discussed in the meeting:

  I. Control Room (SLDC) survey not carried out in HVPNL, PTCUL, HPSEBL and UPPTCL due to the non-availability of manpower at SLDCs.
  II. Signature on survey reports for 11 sites was pending from UPPTCL. The sub-station in-charges informed that they did not receive any communication from their higher officers.
  III. Space constraint at SLDCs in the installation of UPS to be supplied under the URTDSM project.

(c) 3rd TeST meeting (21.11.2014): The Petitioner raised the issue of space constraints in SLDCs. All the Constituents agreed to provide the space in SLDCs for the installation of the PDC system on their premises.

(d) 4th TeST meeting (6.2.2015): The Petitioner raised the issue of space constraint in all the SLDCs for the installation of the PDC system and supply of the UPS system in BBMB. Space was a big issue in UPPTCL due to the ongoing works of civil construction for the new building in SLDC, Lucknow.

(e) 5th TeST meeting (28.4.2015): The Petitioner raised the issue of space constraint with all SLDCs for the installation of the PDC and UPS systems to be supplied for the project.

(f) 6th TeST meeting (10.9.2015): The Petitioner again requested all the Constituents to nominate their Nodal Officer for their sub-station works so that the Petitioner can co-ordinate with the concerned officers of the sub-station. However, the required details were not provided. Further, the space issue was also discussed during the meeting, and all the Constituents agreed to provide space.

(g) 7th TeST meeting (11.1.2016): BBMB also raised the issue of space in its Control Centre at Chandigarh. During the meeting, the Petitioner briefed the details of works at the site requiring a Nodal Officer at each site. During the meeting, the Petitioner again mentioned that only RRVPNL, BBMB, and PSTCL provided the list of Nodal Officers for the sub-station. Further, the Petitioner again requested the remaining Constituents to provide the name of their Nodal Officers for works to be carried out at each sub-station and all the Constituents agreed to the same.

(h) 8th TeST meeting (26.7.2016): BBMB again raised the issue of space in its Control Centre at Chandigarh. During the meeting, the Petitioner again requested the Constituents to provide a list of the Nodal Officers for their sub-stations for smooth works, which were seriously affected due to the absence of any Nodal Officer. The Petitioner also mentioned in the meeting that PTCUL did not provide space even for the storage of the materials in SLDC, Dehradun. The Petitioner, therefore, kept these materials in its Dehradun Sub-station.

(i) 10th TeST meeting (22.3.2017): The Petitioner mentioned in the meeting that PTCUL did not provide the space in SLDC, Dehradun, and this issue was not discussed during the meeting as a representative from PTCUL was not available in the meeting.

(j) 11th TeST meeting (10.7.2017): The Petitioner requested all the Constituents to ensure the space for the installation of servers in SLDC Control Rooms as well as the availability of manpower to implement the project by December 2017. The Petitioner informed that some of the Constituents requested the shut-down for CT/PT termination at various stations under the URTDSM project. The Petitioner further informed that for the execution of the PMUs at the site, CT/PT and DI termination was required with existing CR panels. The CT/PT termination for most of the stations had been done in live line conditions. However, some of the stations, especially generating units of NTPC and UPRVUNL, were insisting on the shutdown for CT/PT termination. After the discussions with NRLDC for the shut-down, the vendor was deployed four times at Obra-BTPS and three times at Singrauli Station. However, at the last moment, the shutdown could not be allowed, citing grid related issues. Consequently, due to the shut-down issues, execution was hampered at these sites. It was informed that in each sub-station 30-30 minute shut-down was needed for each of the feeders for CT/PT connections. The Petitioner requested NTPC and UPPTCL to co-ordinate for the outages. Both the Constituents agreed to the same.

(k) The representative of the Petitioner informed that PTCUL did not provide space for the installation of PDS/PDC at SLDC, Dehradun. PDS materials were dispatched to Dehradun in February 2016. However, PTCUL officials did not take delivery of PDS materials. Even the matter was discussed in the 7th TeST meeting. Therefore, the

PDS was temporarily stored at the Dehradun Sub-station of the Petitioner, and FAT for PDC was going, and thereby, the PDC would be dispatched in July 2017. He informed that PTCUL may ensure space for the PDC at the site. Since PTCUL`s representative was not present in the meeting, the Sub-committee advised the NRPC Secretariat to take up the matter with PTCUL.

(l) 12th TeST meeting (22.12.2017): During the meeting, the Petitioner stated that NTPC Dadri did not provide space for the installation of PMUs to date, as supply was done in January 2016. NTPC confirmed that by February 2018, space shall be provided for the installation of PMUs at the Dadri plant.

(m) The Petitioner informed that materials for the PDC were supplied to all the Control Centers. Installation was completed except for NLDC, Jammu, and Dehradun SLDCs, which could not be completed due to space issues. All the Constituents were requested to nominate and post at least two officials for the WAMS System who had undergone training on the PDC System. The Sub-committee expressed its concern over the inordinate delay in the implementation of the URTDSM project and advised all the concerned utilities to take necessary action for the completion of the project in all respects by March 2018. During the meeting, BBMB raised the issue of pending civil works in its premises for UPS installation which also delayed the project.

(n) By January/February 2018, installation at all SLDCs was completed, SAT was started in mid of February 2018, and System Availability Test (1000 hrs) was completed on 28.3.2018.

82. The Petitioner has furnished the following format indicating the activity-wise details of time over-run, scheduled date, and actual completion date of various activities involved in the implementation of Asset-2, including the reasons for delay:

Activity	**Period of activity**				**Time over-run in days**	**Reason(s) for time over-run**
	Planned		**Achieved**			
	From	**To**	**From**	**To**		
LOA	14.1.2014	10.2.2014	15.1.2014	15.1.2014	0	--
Supplies	23.9.2014	14.12.2015	15.1.2016	25.2.2017	439	Due to delay in the release of IEEE standard/ non-availability of Test Lab and non-availability of basic infrastructure/ fronts/ work permission for connection at various State utilities' sub-stations and generating stations. Copies of relevant test reports and completion certificate of type tests along with all the relevant extracts of TeST meeting/ documents provided.
Installation	16.12.2014	8.2.2016	25.1.2016	25.12.2017	686	
SAT	2.6.2015	12.4.2016	25.12.2017	29.3.2018	716	

Activity	Period of activity				Time over-run in days	Reason(s) for time over-run
	Planned		Achieved			
	From	To	From	To		
Delay due to release of IEEE standard	13.1.2014	13.1.2014	30.5.2014	30.5.2014	137	Delay due to the release of IEEE standards and the non-availability a competent lab delayed the overall project by 581 days. Further, the actual testing of PMUs was completed by 7.7.2015. Accordingly, the overall project was delayed by an additional 67 days contributing to the overall delay of 648 days.
Non-availability of competent labs for testing of PMUs	13.1.2014	13.1.2014	1.5.2015	1.5.2015	473	
Testing and commissioning	29.2.2016	12,4.2016	14.2.2018	29.3.2018	716	Due to the delay in the release of IEEE standard/ non-availability of Test Lab and the non-availability of basic infrastructure/fronts/ work permission for connection at various State utilities sub-stations and generating stations.
Any other Activities for time over-run, if any	NA	NA	30.3.2018	30.6.2018	92	POSOCO did not issue a commissioning letter (Format-IV) citing the non-closure of pending points observed during SAT. Most of the issues were off display documents and included during testing and commissioning. However, these issues/ observations did not affect the performance of the system.
Project Completion	12.4.2016	12.4.2016	30.6.2018	30.6.2018	809	Testing and commissioning, along with SAT (Sight Assessment Test completed on 29.3.2018. Accordingly, the delay was only of 716 days. The overall delay was mainly due to the delay in the release of IEEE standards/ non-availability of Test Lab and the non-availability of basic infrastructure/fronts/ work permission for connection at various State utilities sub-stations and generating stations.

83. We have considered the submissions of the Petitioner. As per the IA dated 13.1.2014, Asset-2 was scheduled to be declared under commercial operation within 27 months from the date of the IA, i.e., by 12.4.2016, against which it was put into commercial operation on 30.6.2018. Therefore, there is a time over-run of 808 days in the execution of Asset-2. The Commission vide order dated 8.7.2022 in Petition No. 486/TT/2019 has already condoned the time overrun of 504 days on account of the delay caused by the IEEE authorised testing facility. Further, the Petitioner was directed

to approach the Commission with relevant supporting documents at the time of truing-up with regard to the non-condonation of the time overrun. The Petitioner has submitted that there was a delay of 450 days due to the space constraint and the non-availability of basic infrastructure/fronts/work permission for connection at various State utilities' sub-stations, and generating stations. However, it is observed that the Petitioner has failed to provide the supporting documents with regard to the correspondence made with the State utilities, sub-stations and generating stations, denying the work permission to the Petitioner. It is noticed that the Petitioner only submitted the documents relating to the communication made with the contractor regarding idling days. Therefore, we are not able to assess the efforts made by the Petitioner to resolve the issue regarding the space constraint and the non-availability of basic infrastructure/ fronts/ work permission. Accordingly, the time overrun due to the space constraint and the non-availability of basic infrastructure/fronts/work permission for the connection at various State utilities, sub-stations, and generating stations is not condonable. It is noticed that the Petitioner did not submit any valid documentary evidence in support of the activities and only reiterated its earlier submissions pleaded by it in Petition No. 486/TT/2019. The Petitioner has failed to submit any significant new facts substantiating the delay of the balance of 394 days, which were beyond its control. Accordingly, the time over-run of 394 days is not condoned.

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

84. The Petitioner has not claimed IDC.

85. The Petitioner has claimed IEDC of ₹119.39 lakh in respect of the Asset-2 and has submitted the Auditor's Certificate in support of the same. The Petitioner has also submitted that the entire IEDC has been discharged as on COD. The time over-run for Asset-2 has not been completely condoned, there is a disallowance of IEDC on a

proportionate basis. The IEDC claimed as per the Auditor's Certificate, IEDC considered, disallowed, and discharged up to the COD in respect of the Asset-2 are as follows:

(` in lakh)

IEDC claimed as per Auditor's certificate (A)	IEDC disallowed due to time over-run not condoned (B)	IEDC allowed (C)=(A-B)
119.39	22.28	97.11

Initial Spares

86. The Petitioner has claimed the initial spares in respect of Asset-2 and has prayed to allow the same as per actuals. The initial spares claimed by the Petitioner in respect of the Asset-2 are as follows:

(` in lakh)

Head	Plant and Machinery cost for calculation of initial spares (A)	Initial Spares Claimed	Ceiling	Initial Spares Worked out	Excess
		(B)	(C)	D = [(A-B)*C /(100-C)]	[B-D] If B>D
Communication equipment	6749.38	465.64	3.5	227.91	237.73

87. The Petitioner has submitted the following year-wise details of the initial spares discharged for the Asset-2:

(` in lakh)

Particulars	Initial Spares (As per Auditor's Certificate)	Discharged Upto COD	Discharged In 2018-19	Discharged In 2019-20
Sub-station	465.64	279.38	162.97	23.29

88. The Petitioner has further submitted that the initial spares may be reclaimed to the extent of the limit available on an overall project basis at the time of truing up of the entire project. We have considered the submissions of the Petitioner. As per the APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017, the initial spares are to be allowed as per the ceiling on overall project cost. The APTEL vide judgement dated

14.9.2019 in Appeal No. 74 of 2017 held as follows:

> *"18.13……….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."*

89. It is observed that the complete scope of the work is yet to be completed, and other assets, in addition to Asset-2 covered in the present Petition, are covered under different Petitions. The overall project cost of the transmission asset is arrived at only when all the assets under the transmission scheme are combined while claiming the tariff. Therefore, the Initial Spares have been allowed on the basis of the cost of the individual assets in the 2014-19 tariff period. The details of Initial Spares allowed for 2014-19 tariff period are as follows:

Plant and machinery cost under Sub-station excluding IDC and IEDC, land & civil works (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Ceiling (in %)	Initial Spares worked out (₹ 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
6749.38	465.64	3.50	227.91	237.73	227.91

Power System Development Fund Grant (PSDF)

90. Proviso to Regulation 9(6) of the 2014 Tariff Regulations provides as follows:

> *"Provided that 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 shall be excluded from the Capital Cost for the purpose of computation of interest on loan, return on equity and depreciation;"*

91. The Petitioner has submitted that the tariff has been calculated after the adjustment of the grant from the capital cost. Accordingly, we have considered the submissions of the Petitioner. The details of the grant allocated and its adjustment in the capital cost of Asset-2 are as follows:

(₹ in lakh)

Particular	WAMS
Capital cost up to COD as per Auditor's certificate	5994.70
Grant utilised up to COD (70%)	4196.29
Capital cost up to COD for tariff calculation (30%)	**1798.41**
Additional Capital Expenditure for 2018-19 as per certificate	750.70
Grant utilised for Additional Capital Expenditure 2018-19	525.49
Additional capitalisation cost for tariff calculation 2018-19	**225.24**
Additional Capital Expenditure for 2019-20 as per certificate	521.48
Grant utilised for Additional Capitalisation for 2019-20	365.04
Additional Capitalisation cost for tariff calculation 2019-20	**156.44**
Additional Capital Expenditure for 2020-21 as per certificate	67.53
Grant utilised for Additional Capitalisation for 2020-21	47.27
Additional Capitalisation cost for tariff calculation 2020-21	**20.26**
Total cost as per certificate	**7334.41**
Total grant utilized	5134.09
Cost considered for tariff calculation (equity)	2200.32

Capital Cost as on the COD

92. Accordingly, the capital cost allowed as on COD in respect of the Asset-2 is as follows:

(₹ in lakh)

Capital cost as on COD as per Auditor's Certificate	Less: IEDC and Excess Initial Spares disallowed as on COD due to		Less: PSDF grant received	Capital cost as on COD
	IEDC disallowed due to time over-run	Excess Initial Spares up to COD		
5994.70	22.28	51.48	4196.29	1724.65

Additional Capital Expenditure (ACE)

93. The Petitioner has claimed additional capitalization for the 2014-19 tariff period in terms of Regulations 14(1)(i) and 14(1)(ii) of the 2014 Tariff Regulations. The Petitioner has claimed ACE of ₹750.70 lakh in the FY 2018-19. We have considered the submissions of the Petitioner. ACE allowed in respect of Asset-2 for the 2018-19 is as follows:

(₹ in lakh)

ACE	2018-19
ACE Claimed	750.70
Less: Excess Initial Spares disallowed	162.97
Less: PSDF grant received	525.49
ACE allowed	**62.24**

Capital cost for the 2014-19 Tariff Period

94. The capital cost considered for truing -up of the transmission tariff for the 2014-19 tariff period of Asset-2 is as follows:

(₹ in lakh)

Capital Cost as on COD	Additional Capital Expenditure(ACE) 2018-19	Total Capital Cost as on 31.3.2019
1724.65	62.24	1786.89

Debt-Equity Ratio

95. The Commission vide order dated 8.7.2022 in Petition No. 486/TT/2019 considered the capital cost claimed by the Petitioner as equity. Therefore, the capital cost allowed in the present order is also considered equity.

Depreciation

96. The Petitioner has submitted that the communication equipment, such as URTDSM is to be considered as IT equipment and has claimed depreciation at the rate of 15%. We have considered the submissions of the Petitioner. URTDSM is an upgradation of the SCADA system, which has been defined as a "Communication System" under Regulation 3(11) of the 2014 Tariff Regulations. Accordingly, depreciation has been considered for the communication equipment such as URTDSM @6.33% as a part of PLCC up to 31.3.2019 while computing the capital expenditure for the 2014-19 tariff period. The depreciation has been computed considering the capital expenditure as on COD and ACE approved for the 2014-19 tariff period. The Weighted Average Rate of Depreciation (WAROD) given in Annexure-II in this order has been worked out for Asset-2 as per the rates of depreciation prescribed in the 2014 Tariff Regulations. The depreciation allowed for Asset-2 is as under:

(₹ in lakh)

	Particulars	2018-19 (pro-rata for 275 days)
A	Opening Gross Block	1724.65
B	ACE	62.24
C	Closing Gross Block (A+B)	1786.89
D	Average Gross Block (A+C)/2	1755.77
E	Rate of Depreciation (in %)	6.33
F	Lapsed Life at the beginning of the year (Year)	0.00
G	Balance useful life at the beginning of the year (Year)	15.00
H	Aggregate Depreciable Value	1580.19
I	**Depreciation during the year (D×E)**	**83.74**
J	Cumulative Depreciable Value at the end of the year	83.74
K	Remaining Aggregate Depreciable Value at the end of the year (H-J)	1496.45

97. The details of depreciation approved vide order dated 8.7.2022 in Petition No. 486/TT/2019, the depreciation claimed in the instant Petition, and trued-up depreciation allowed in the instant order in respect of Asset-2 is as follows:

(₹ in lakh)

Particulars	2018-19 (pro-rata for 275 days)
Approved vide order dated 8.7.2022 in Petition No. 486/TT/2019	85.59
Claimed by the Petitioner in the instant Petition	84.82
Allowed after truing-up in this order	83.74

Interest on Loan (IoL)

98. The Petitioner has not claimed IOL considering the PSDF grant. Since the balance amount after reducing the grant is being treated as equity, there shall be no IoL.

Return on Equity (RoE)

99. The Petitioner has claimed RoE in respect of Asset-2 in terms of Regulations 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that it is liable to pay income tax at MAT rates and has claimed the following effective tax rates for the 2014-19 tariff period:

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

100. The Commission vide order dated 27.4.2020 in Petition No. 274/TT/2019 had arrived at the effective tax rate for the Petitioner based on the notified MAT rates, and the same is given as follows:

Year	Notified MAT rates (in %) (inclusive of surcharge & cess)	Effective tax (in %)
2018-19	21.549	21.549

101. The MAT rates, as considered in an order dated 27.4.2020 in Petition No. 274/TT/2019 for the purpose of grossing up the RoE for the truing-up of the 2014-19 tariff period as per the 2014 Tariff Regulations are as follows:

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

102. Accordingly, the trued-up RoE allowed in respect of Asset-2 for the 2014-19 tariff period is as follows:

(₹ in lakh)

	Particulars	2018-19 (pro-rata for 275 days)
A	Opening Equity	1724.65
B	Additions	62.24
C	Closing Equity (A+B)	1786.89
D	Average Equity (A+C)/2	1755.77
E	Return on Equity (Base Rate) (in %)	15.500
F	MAT Rate for respective year (in %)	21.549
G	Rate of Return on Equity(in%) (G=E/(1-F))	19.758
H	**Return on Equity (D×G)**	**261.37**

103. The details of the RoE approved vide order dated 8.7.2022 in Petition No. 486/TT/2019, RoE claimed in the instant Petition, and trued-up RoE allowed in the instant order in respect of Asset-2 are as follows:

(₹ in lakh)

Particulars	2018-19 (pro-rata for 275 days)
Approved vide order dated 8.7.2022 in Petition No. 486/TT/2019	267.16
Claimed by the Petitioner in the instant petition	264.75
Allowed after true-up in this order	261.37

Operation & Maintenance Expenses (O&M Expenses)

104. The Petitioner has claimed the O&M Expenses of ₹31.03 lakh. We have considered the submissions of the Petitioner. Accordingly, O&M Expenses of ₹31.03 lakh for the FY 2018-19 is allowed in respect of Asset-2. The details of O&M Expenses approved vide order dated 8.7.2022 in Petition No. 486/TT/2019, O&M Expenses claimed in the instant Petition and trued-up O&M Expenses allowed in the instant order in respect of Asset-2 are as follows:

(₹ in lakh)

Particulars	2018-19 (Pro-rata for 275 days)
Approved vide order dated 8.7.2022 in Petition No. 486/TT/2019	31.03
Claimed by the Petitioner in the instant Petition	31.03
Allowed after truing-up in this order	31.03

Interest on Working Capital (IWC)

105. IWC is worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations, and the trued-up IWC approved for Asset-2 is as follows:

(₹ in lakh)

Particulars	2018-19 (pro-rata for 275 days)
O&M Expenses (O&M Expenses for one month)	3.43
Maintenance Spares (15% of O&M Expenses)	6.18
Receivables (Equivalent to two months of annual fixed cost)	85.13
Total Working Capital	**94.74**
Rate of Interest (in %)	12.20
Interest on Working Capital	**8.71**

106. The details of IWC approved vide order dated 8.7.2022 in Petition No. 486/TT/2019, IWC claimed in the instant Petition, and trued-up IWC allowed in the instant order in respect of Asset-2 are as follows:

(₹ in lakh)

Particulars	2018-19 (pro-rata for 275 days)
Approved vide order dated 8.7.2022 in Petition No. 486/TT/2019	8.87
Claimed by the Petitioner in the instant petition	8.80
Allowed after truing up in this order	8.71

Trued up Annual Fixed Charges for the 2014-19 Tariff Period

107. Accordingly, the annual fixed charges after truing-up for the 2014-19 tariff period in respect of Asset-2 are as follows:

(₹ in lakh)

Particulars	2018-19 (pro-rata for 275 days)
Depreciation	83.74
Interest on Loan	0.00
Return on Equity	261.37
Interest on Working Capital	8.71
O&M Expenses	31.03
Total	**384.85**

108. The details of annual transmission charges approved vide order dated 8.7.2022 in Petition No. 486/TT/2019, annual transmission charges claimed in the instant Petition, and trued-up annual transmission charges allowed in the instant order in respect of the Asset-2 are as follows:

(₹ in lakh)

Particulars	2018-19 (pro-rata for 275 days)
Approved vide order dated 20.5.2022 in Petition No. 254/TT/2019	392.65
Claimed by the Petitioner in the instant Petition	389.40
Allowed after truing -up in this order	384.85

Determination of Annual Fixed Charges for the 2019-24 Tariff Period

109. The Petitioner has submitted tariff forms for Asset-2 and has claimed the following transmission charges for the 2019-24 tariff period:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	281.39	292.87	294.39	294.39	294.39
Interest on Loan	-	-	-	-	-
Return on Equity	352.34	366.71	368.61	368.61	368.61
Interest on Working Capital	15.58	17.60	24.70	33.99	26.09
O&M Expenses	138.73	175.44	337.10	550.00	370.00
Total	**788.04**	**852.62**	**1024.80**	**1246.99**	**1059.09**

110. The Petitioner has claimed the following IWC in respect of the Asset-2 for the 2019-24 tariff period:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	11.56	14.62	28.09	45.83	30.83
Maintenance Spares	20.81	26.32	50.57	82.50	55.50
Receivables	96.89	105.12	126.35	153.74	130.22
Total	129.26	146.06	205.01	282.07	216.55
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	**15.58**	**17.60**	**24.70**	**33.99**	**26.09**

Capital Cost

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

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

(a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by ex including 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 VidyutikaranYojana (RGGVY) and DeendayalUpadhyaya Gram JyotiYojana (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."

112. The Petitioner has claimed the capital cost of ₹1809.58 lakh for Asset-2 as on 31.3.2019. We have worked out the capital cost of Asset-2 as on 31.3.2019 of ₹1786.89 lakh. Accordingly, the capital cost of ₹1786.89 lakh for Asset-2 has been considered as on 1.4.2019 for the determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

Additional Capital Expenditure

113. Regulation 24 of the 2019 Tariff Regulations provides as follows:

"*24. Additional Capitalization within the original scope and up to the cut-off date*

(3) 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.

(4) 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."

114. The Petitioner has submitted the following ACE for Asset-2 for the 2019-24 tariff period:

(` in lakh)

Expenditure as on 31.3.2019	ACE 2019-24 (Net of Grant)					Cost as on 31.3.2024
	2019-20	2020-21	2021-22	2022-23	2023-24	
1809.58	132.75	20.26	-	-	-	1962.59
Applicable Add-cap Regulation	24(1)(a) & (b)	24(1)(a) & (b)	-	-	-	

115. The Petitioner has submitted that the ACE incurred during the 2019-24 tariff period is on account of the undischarged liability towards the final payment/withheld payment due to the contractual exigencies for works executed within the cut-off date.

116. We have considered the submissions of the Petitioner. It is observed that the ACE proposed by the Petitioner is on account of the undischarged liabilities, and the same has been claimed in terms of Regulations 24(1)(a) and 24(1)(b) of the 2019 Tariff Regulations. The Commission has considered and approved the ACE for the 2019-24 tariff period as claimed by the Petitioner. The details of ACE allowed for the 2019-24 tariff period are as follows:

(₹ in lakh)

ACE	2019-20	2020-21
ACE Claimed	521.48	67.53
Less: Excess Initial Spares disallowed	23.29	-
Less: PSDF grant received	365.04	47.27
ACE allowed	**133.15**	**20.26**

117. The capital cost of the Asset-2 considered for the 2019-24 tariff period, subject to truing-up, is as follows:

(₹ in lakh)

Asset	Expenditure as on 31.3.2019	ACE 2019-24 (Net of Grant)					Cost as on 31.3.2024
		2019-20	2020-21	2021-22	2022-23	2023-24	
Asset-2	1786.89	133.15	20.26	-	-	-	1940.30

118. Further, the completion cost as on 31.3.2024, including ACE claimed in respect of Asset-2, is within the FR-approved cost. Hence, there is no cost overrun in the case of Asset-2.

Debt-Equity Ratio

119. 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."

120. The capital cost is considered as equity for the purpose of computation of the transmission tariff of Asset-2 for the 2019-24 tariff period.

Depreciation

121. 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 asset 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 asset 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 up to 31.3.2019 from the gross depreciable value of the asset.

(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 asset 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."

122. We have considered the submissions of the Petitioner. The depreciation has been worked out on the basis of the capital cost approved as on 31.3.2019 and ACE allowed during the 2019-24 tariff period. The depreciation rates of IT and non-IT assets, as prescribed in the 2019 Tariff Regulations, have been considered to arrive at the Weighted Average Rate of Depreciation (WAROD) in Annexure-II, and the same has been worked out for Asset-2 as per the rates of depreciation. The lapsed useful life of Asset-2 is considered, as mentioned in the truing-up for the 2014-19 tariff period. The

depreciation allowed for Asset-2 for the 2019-24 tariff period is as under:

(₹ in lakh)

	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	1786.89	1920.04	1940.30	1940.30	1940.30
B	ACE	133.15	20.26	0.00	0.00	0.00
C	Closing Gross Block(A+B)	1920.04	1940.30	1940.30	1940.30	1940.30
D	Average Gross Block(A+C)/2	1853.46	1930.17	1940.30	1940.30	1940.30
E	Weighted average rate of Depreciation (WAROD) (in %)	6.33	6.33	6.33	6.33	6.33
F	Balance useful life at the beginning of the year (Year)	15.00	14.00	13.00	12.00	11.00
G	Elapsed life at the beginning of the year (Year)	0.00	1.00	2.00	3.00	4.00
H	Aggregate Depreciable Value	1668.12	1737.15	1746.27	1746.27	1746.27
I	**Depreciation during the year (D×E)**	**117.32**	**122.18**	**122.82**	**122.82**	**122.82**
J	Cumulative Depreciation at the end of the year	201.06	323.24	446.06	568.88	691.70
K	Remaining Aggregate Depreciable Value at the end of the year(H-J)	1467.06	1413.91	1300.21	1177.39	1054.57

Interest on Loan (IoL)

123. The Petitioner has not claimed IOL considering the PSDF grant. Since the balance amount after reducing the grant is being treated as equity, there shall be no IoL.

Return on Equity (RoE)

124. Regulations 30 and 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 due to Change in Law, 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:

Rate of pre-tax return on equity = 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:

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."

125. The Petitioner has submitted that the MAT rate is applicable to it. Accordingly, the MAT rate applicable in the 2019-24 tariff period for the respective financial years has been considered for the purpose of RoE, which shall be trued up in accordance with Regulation 31(3) of the 2019 Tariff Regulations. The RoE allowed with respect to the Asset-2 for the 2019-24 tariff period is as follows:

(₹ in lakh)

	Asset-2					
	Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
A	Opening Equity	1786.89	1920.04	1940.30	1940.30	1940.30
B	Addition due to ACE	133.15	20.26	0.00	0.00	0.00
C	Closing Equity(A+B)	1920.04	1940.30	1940.30	1940.30	1940.30
D	Average Equity (A+C)/2	1853.46	1930.17	1940.30	1940.30	1940.30
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (Pre-tax) (in %) (G=E/(1-F))	18.782	18.782	18.782	18.782	18.782
H	**Return on Equity (Pre-tax) (D*G)**	**348.12**	**362.52**	**364.43**	**364.43**	**364.43**

Operation and Maintenance Expenses

126. The Petitioner has claimed the actual O&M Expenses from FY 2019-20 to FY 2021-22, and for the remaining period, it has claimed O&M Expenses @ 2.0% of the capital cost. The details of the O&M Expenses claimed by the Petitioner for the Asset-2 are as follows:

(₹ in lakh)

Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Original project Cost (₹ lakh)	7334.41	7334.41	7334.41	7334.41	7334.41
Norms (in %)	2.00	2.00	2.00	2.00	2.00
Normative O&M Expenses	146.69	146.69	146.69	146.69	146.69
Actual O&M Expenses	**138.73**	**175.44**	**337.10**	**550.00**	**370.00**
O&M Expenses Claimed	**138.73**	**175.44**	**337.10**	**550.00**	**370.00**

127. Regulation 35(4) of the 2019 Tariff Regulations provides as follows:

"(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."*

128. We have considered the submissions of the Petitioner. The Petitioner, vide Auditor's Certificate dated 5.7.2022, has submitted the actual O&M Expenses for the 2019-24 tariff period. However, the Petitioner has not submitted the break-up of the actual O&M Expenses. Therefore, the O&M Expenses for 2019-24 have been allowed on a normative basis, and the same will be subject to truing up. The O&M Expenses approved for Asset-2 for the 2019-24 tariff period as per Regulation 35 of the 2019 Tariff Regulations are as follows:

(₹ in lakh)

Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Original project Cost (₹ lakh)	7074.40	7074.40	7074.40	7074.40	7074.40
Norms (in %)	2.00	2.00	2.00	2.00	2.00
Total O&M Expenses	**141.49**	**141.49**	**141.49**	**141.49**	**141.49**

<u>Interest on Working Capital (IWC)</u>

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

> ***"34. Interest on Working Capital:*** *(1) The working capital shall cover:*
> ***…****…..*
>
> ***(c) For Hydro Generating Station (including Pumped Storage Hydro Generating Station) and Transmission System:***
> *(i) Receivables equivalent to 45 days of annual fixed cost;*
> *(ii) Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and*
> *(iii) Operation and maintenance expenses, including security expenses for one month.*
>
> *(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1st April of the year during the tariff period 2019-24 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later:*
>
> *Provided that in case of truing-up, the rate of interest on working capital shall be considered at bank rate as on 1st April of each of the financial year during the tariff period 2019-24.*
>
> *(4) Interest on working capital shall be payable on normative basis notwithstanding that the generating company or the transmission licensee has not taken loan for working capital from any outside agency."*
>
> *"**3. 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;"*

130. The Petitioner has submitted that it has computed IWC for the 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% for the complete tariff period. The IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of IWC considered is 12.05% (SBI 1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for the FY 2019-20, 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for the FY 2020-21 and 10.50% (SBI 1-year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) for the FY 2021-23 and 12.00% (SBI 1 year MCLR applicable as on 1.4.2023 of 8.50% plus 350 basis points) for the FY 2023-24. The components of the working capital and interest allowed thereon for Asset-2 are as follows:

(₹ in lakh)

Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Working Capital for O&M Expenses (O&M Expenses for one month)	11.79	11.79	11.79	11.79	11.79
Working Capital for Maintenance Spares (15% of O&M Expenses)	21.22	21.22	21.22	21.22	21.22
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost /annual transmission charges)	76.24	78.75	78.96	78.96	78.96
Total Working Capital	**109.26**	**111.77**	**111.98**	**111.98**	**111.97**
Rate of Interest for Working Capital (in %)	12.05	11.25	10.50	10.50	12.00
Interest on working capital	**13.17**	**12.57**	**11.76**	**11.76**	**13.44**

Annual Fixed Charges for the 2019-24Tariff Period

131. The transmission charges allowed for the Asset-2 for the 2019-24 tariff period are as follows:

(₹ in lakh)

Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Depreciation	117.32	122.18	122.82	122.82	122.82
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	348.12	362.52	364.43	364.43	364.43
O&M Expenses	141.49	141.49	141.49	141.49	141.49
Interest on Working Capital	13.17	12.57	11.76	11.76	13.44
Total	**620.10**	**638.76**	**640.50**	**640.50**	**642.18**

Filing Fee and Publication Expenses

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

License Fee and RLDC Fees and Charges

133. The Petitioner has claimed reimbursement of the license fee, RLDC Fees, and Charges. The Petitioner is allowed reimbursement of the license fee in accordance with Regulation 70(4) of the 2019 Tariff Regulations for the 2019-24 tariff period. The Petitioner is also allowed the recovery of the RLDC fee and charges terms of Regulation 70(3) of the 2019 Tariff Regulations for the 2019-24 tariff period.

Goods and Services Tax

134. The Petitioner has submitted that the transmission charges claimed herein are exclusive of GST, and in case GST is levied in the future, the same shall be additionally paid by the Respondents and be charged and billed separately by the Petitioner. It is also prayed that additional taxes, if any, are paid by the Petitioner on account of the demand from the Government/ statutory authorities, and the Commission may allow the same to be recovered from the beneficiaries. We have considered the submissions of the Petitioner. Since GST is not levied on the transmission service at present, we are of the view that the Petitioner’s prayer on this count is premature.

Security Expenses

135. The Petitioner has submitted that the 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. We

have considered the above submissions of the Petitioner. The Petitioner has claimed consolidated security expenses for all the transmission assets owned by it on a projected basis for the 2019-24 tariff period on the basis of actual security expenses incurred in the FY 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

136. The Petitioner has prayed for reimbursement of the capital spares at the end of the 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

137. With effect from 1.7.2011, the sharing of transmission charges for inter-State transmission systems was governed by the 2010 Sharing Regulations, and with effect from 1.11.2020 (after the repeal of the 2010 Sharing Regulations), the sharing of transmission charges is governed by the 2020 Sharing Regulations. Accordingly, the billing, collection, and disbursement of the transmission charges for the transmission assets, which are communication equipment, shall be recovered in terms of provisions of the applicable Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

138. To summarize:

a. The trued-up Annual Fixed Charges approved in respect of the transmission assets for the 2014-19 tariff period are as follows:

(₹ in lakh)

Asset	2018-19
Asset-1 **(pro-rata for 185 days)**	186.64
Asset-2 **(pro-rata for 275 days)**	384.85

b. The Annual Fixed Charges approved in respect of the transmission assets for the 2019-24 tariff period are as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Asset-1	418.60	437.65	450.48	457.11	458.34
Asset-2	620.10	638.76	640.50	640.50	642.18

139. Annexures to this order form part of the order.

140. This order disposes of Petition No. 84/TT/2023 in terms of the above discussions and findings.

sd/-
(Harish Dudani)
Member

sd/-
(Ramesh Babu V.)
Member

sd/-
(Jishnu Barua)
Chairperson

Annexure-I

Asset-1														
2014-19	**Capital Expenditure as on 31.3.2014 (₹in lakh)**	**Additional Capitalization (₹ in lakh)**					**Admitted Capital Costas on 31.3.2019 (₹in lakh)**	**Rate of Depreciation (in %)**	**Annual Depreciation as per Regulations (₹ in lakh)**					
		2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**			**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Building		-	-	-	-	-	-	3.34	-	-	-	-	-
Transmission Line		-	-	-	-	-	-	5.28	-	-	-	-	-
Sub Station		-	-	-	-	-	-	5.28	-	-	-	-	-
PLCC	1033.77	-	-	-	-	147.04	1180.81	6.33	-	-	-	-	70.08
Total	**1027.92**	**-**	**-**	**-**	**-**	147.04	1180.81		**-**	**-**	**-**	**-**	**70.08**
							Average Gross Block (₹ in lakh)		0.00	0.00	0.00	0.00	1107.29
							Weighted Average Rate of Depreciation(%)		**0.00**	**0.00**	**0.00**	**0.00**	**6.33**

Asset-1													
Particular	**Admitted Capital Cost as on 1.4.2019 (₹in lakh)**	**Projected ACE**					**Admitted Capital Cost as on 31.3.2024**	**Rate of Depreciation (in %)**	**Annual Depreciation**				
		2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**			**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Building	-	-	-	-	-	-	-	3.34	-	-	-	-	-
Transmission Line	-	-	-	-	-	-	-	5.28	-	-	-	-	-
Substation	-	-	-	-	-	-	-	5.28	-	-	-	-	-
PLCC	1180.81	100.54	53.69	51.84	0.30	-	1387.18	6.33	**77.93**	**82.81**	**86.15**	**87.80**	**87.81**
IT Equipment	-	-	-	-	-	-	-	15.00	-	-	-	-	-
Total	**1,180.81**	**100.54**	**53.69**	**51.84**	**0.30**	**-**	**1387.18**		**77.93**	**82.81**	**86.15**	**87.80**	**87.81**
							Average Gross Block (₹ in lakh)		**1231.08**	**1308.20**	**1360.96**	**1387.03**	**1387.18**
							Weighted Average Rate of Depreciation (in %)		**6.33**	**6.33**	**6.33**	**6.33**	**6.33**

Annexure-2

Asset-2													
2014-19	**Capital Expenditure as on 31.3.2014 (₹ in lakh)**	**Additional Capitalization (₹ in lakh)**					**Admitted Capital Cost as on 31.3.2019 (₹in lakh)**	**Rate of Depreciation (in %)**	**Annual Depreciation as per Regulations (₹ in lakh)**				
		2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**			**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Building	-	-	-	-	-	-	-	3.34	-	-	-	-	-
Transmission Line	-	-	-	-	-	-	-	5.28	-	-	-	-	-
Sub Station	-	-	-	-	-	-	-	5.28	-	-	-	-	-
PLCC	1724.65	-	-	-	-	62.24	1786.89	6.33	-	-	-	-	111.13
Total	**1724.65**	**-**	**-**	**-**	**-**	**62.24**	**1786.89**		-	-	-	-	111.13
							Average Gross Block (₹ in lakh)		0.00	0.00	0.00	-	1755.77
							Weighted Average Rate of Depreciation (in %)		**0.00**	**0.00**	**0.00**	**0.00**	**6.33**

Asset-2														
Particular	**Admitted Capital Cost as on 1.4.2019 (₹in lakh)**	**Projected ACE**					**Admitted Capital Cost as on 31.3.2024**	**Rate of Depreciation (in %)**	**Annual Depreciation**					
		2019-20	**2020-21**	**2021-22**	**2022-23**	**2023-24**			**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Building	-	-	-	-	-	-	-	3.34	-	-	-	-	-
Transmission Line	-	-	-	-	-	-	-	5.28	-	-	-	-	-
Substation	-	-	-	-	-	-	-	5.28	-	-	-	-	-
PLCC	1786.89	132.15	20.26	-			1940.30	6.33	117.32	122.18	122.82	122.82	122.82
IT Equipment	-	-	-	-	-	-	-	15.00	-	-	-	-	-
Total	1786.89	132.15	20.26	-		-	1940.30		117.32	122.18	122.82	122.82	122.82
							Average Gross Block (₹ in lakh)		1853.46	1930.17	1940.30	1940.30	1940.30
							Weighted Average Rate of Depreciation (in %)		**6.33**	**6.33**	**6.33**	**6.33**	**6.33**