

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 96/TT/2024

Coram:

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

Date of Order: 13th October, 2025

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and determination of transmission tariff from COD to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for **Asset-1:** Phase-I Unified Real Time Dynamic State Measurement (URTDMS) for NLDC, Backup NLDC And NTAMC System-Phase -I Unified Real Time Dynamic State Measurement (URTDMS) for NLDC, Backup NLDC And NTAMC System-Phasor Data Concentrator (PDC) At NLDC, Backup NLDC and NTAMC System, and **Asset-2:** URTDMS System (Control Center equipment, PMUs and associated equipment integrated and commissioned at ERLDC (7 PMUs) under “Phase-I- Unified Real Time Dynamic State Measurement (URTDMS)”.

And in the matter of:

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

...Petitioner

Versus

- 1. Uttar Pradesh Power Corporation Limited,**
Shakti Bhawan, 14, Ashok Marg,
Lucknow - 226 001
- 2. Ajmer Vidyut Vitran Nigam Limited,**
Corporate Office, Vidyut Bhawan,
Panchsheel Nagar, Makarwali Road,
Ajmer – 305004
- 3. Jaipur Vidyut Vitran Nigam Limited,**
Vidyut Bhawan, Janpath, Jyoti Nagar,
Jaipur-302005



- 4. Jodhpur Vidyut Vitran Nigam Limited,**
New Power House, Industrial Area,
Jodhpur – 342003
- 5. Himachal Pradesh State Electricity Board Limited,**
Vidyut Bhawan, Kumar House Complex Building II,
Shimla-171004
- 6. Punjab State Power Corporation Limited,**
The Mall, PSEB Head Office
Patiala-147001
- 7. Haryana Power Purchase Centre,**
Shakti Bhawan, Sector-6,
Panchkula- 134109
- 8. Jammu Kashmir Power Corporation Limited (JKPCL)**
220/66/33 kV Gladni S/s SLDC Building
Narwal, Jammu, J&K
- 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-110019
- 11. Tata Power Delhi Distribution Limited,**
NDPL house, Hudson Lines Kingsway Camp
Delhi – 110009
- 12. Uttarakhand Power Corporation Limited,**
Urja Bhawan, Kanwali Road, Dehradun
- 13. North Central Railway,**
DRM Office, Nawab Yusuf Road
Prayagraj, Uttar Pradesh-211011



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

15. Chandigarh Electricity Department,
UT-Chandigarh, Div-11, Opposite, Transport Nagar,
Industrial Area Phase - I, Chandigarh

16. Bihar State Power (holding) Company Limited,
Vidyut Bhawan, Bailey road,
Patna – 800001

17. West Bengal State Electricity Distribution Company Limited,
Bidyut Bhawan, Bidhan Nagar, Block DJ, Sector-II, Salt Lake City,
Calcutta – 700091

18. Grid Corporation of Orissa Limited,
Shahid Nagar,
Bhubaneswar – 751007

19. Damodar Valley Corporation,
DVC Tower, Maniktala, Civic Centre, VIP Road,
Calcutta – 700054

20. Power Department,
Government of Sikkim,
Gangtok – 737101

21. Jharkhand Bijli Vitran Nigam Limited,
Engineering Building, H.E.C., Dhurwa,
Ranchi – 834004

22. Grid Controller of India Limited,
B-9 (1st Floor), Qutab Institutional Area, Katwaria Sarai,
New Delhi – 110016.

...Respondent(s)

Parties Present : Shri V.C. Sekhar, PGCIL



ORDER

The instant Petition has been filed by Power Grid Corporation of India Limited (hereinafter referred to as “the Petitioner”), a deemed transmission licensee, for determination of tariff under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) of the tariff period from COD to 31.3.2024 with respect to the following assets (hereinafter referred to as the “transmission assets”) under “Phase-I Unified Real Time Dynamic State Measurement (URTDSM)” (hereinafter referred as “the transmission project”):

Asset-1: Phase-I Unified Real Time Dynamic State Measurement (URTDSM) for NLDC, Backup NLDC and NTAMC System for NLDC, Backup NLDC and NTAMC System Phasor Data Concentrator (PDC) at NLDC, Backup NLDC and NTAMC System.

Asset-2: URTDSM System (Control Center equipment, PMUs and associated equipment integrated and commissioned at ERLDC (7 PMUs).

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

- 1) *“Admit the capital cost as claimed in the Petition and approve the Additional Capitalisation incurred/projected to be incurred.*
- 2) *Approve the Transmission Tariff for the tariff block 2019-24 block for the asset covered under this petition, as per para –8.3 above.*
- 3) *Condone the delay and allow IEDC as claimed in the petition.*
- 4) *Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulation 2019 as per para 8 above for respective block.*
- 5) *Tariff may be allowed as claimed based on 30% of the cost considered as equity after adjustment of grant.*
- 6) *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.

- 7) 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.*
- 8) Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the beneficiaries.*
- 9) Allow the petitioner to file a separate petition before the Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 8.3 above.*
- 10) Allow the petitioner to claim the capital spares at the end of tariff block as per actual.*
- 11) 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.*
- 12) Allow the initial spare as procured in the current petition in full as given in para-7.1 under Regulation 76 of the CERC (Terms and Condition of Tariff) Regulation, 2019, "Power to Relax".*
- 13) Allow interim tariff in accordance with Regulation 10 (3) of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for purpose of inclusion in the PoC charges.*

and pass such other relief as the 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 under:

- a) The Investment Approval (the IA) and expenditure sanction to the transmission project were accorded by the Board of Directors (BoD) of the POWERGRID on 13.1.2014 vide Memorandum No. C/CP/URTDSM Ph-1 dated 21.1.2014 at an estimated cost of ₹37463.00 lakh, including an Interest During Construction (IDC) of ₹2954.00 lakh based on the October 2013 price level. The project was



scheduled to be commissioned within 27 months from the date of IA, i.e., 13.1.2014.

- b) The scope of the transmission project was discussed and agreed upon in the Joint SCM of all five Regions held on 5.3.2012 and further in the Special TCC Meeting held on 9.2.2013, 14th NERPC held on 4.9.2013 and 20th WRPC meeting held on 18.5.2012. It was decided that the Petitioner would implement the URTDSM project as approved in the Joint meeting of all five Regional Standing Committee Meetings (SCM) on Power System Planning held on 5.3.2012.
- c) After deliberation in the aforementioned SCM, members of the Regional Standing Committee on Power System Planning agreed upon that the subject scheme is to be implemented by the Petitioner as System Strengthening Scheme, and the cost shall be added to the National Pool Account and to be shared by all DICs as per the PoC mechanism under the Sharing Regulations.
- d) It was also agreed upon that the Petitioner shall file the Petition before the Commission for seeking Regulatory Approval for the transmission project. Accordingly, the Petitioner filed Petition No. 129/MP/2012 seeking Regulatory Approval for the URTDSM project. Subsequently, the Commission vide order dated 6.9.2013 in Petition No. 129/MP/2012, granted Regulatory Approval for the URTDSM project.



e) The scope of work covered under the transmission project broadly includes:

Phase-I:

A. Based on the following criteria, approximately 1186 Nos. of PMUs have been installed at the sub-stations and Power Plants of all utilities of the Country:

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

B. The data flow hierarchy that is similar to that of the ULDC system has been adopted for URTDSM. Accordingly, Phasor Data Concentrators (PDCs), which will be installed in order to acquire data from PMUs, are as under:

- i. Super PDCs at Main and Backup NLDCs (2 Sets);
- ii. Super PDCs at all five RLDCs (5 sets) and NTAMC;
- iii. Master PDCs at SLDCs (25 sets) and strategic locations;
- iv. Visualisation software & Data archiving server at all the PDC locations at including NTAMC and NLDC;
- v. Router/Switches and miscellaneous items;
- vi. Communication interfaces, cables etc;
- vii. Remote Consoles at each RPC, Union Territories, CEA, CTU and other identified locations.

C. All of the PMUs under Phase-I will be accommodated by the hardware and software that is proposed to be installed in Control Centres with an additional 50% future expansion provision.



D. The Fibre Optic (FO), based on the communication system existing and being established by the Petitioner and Constituents, will meet the requirements of Phase-I.

E. Analytical Software.

f) The commissioning status of the various transmission assets under the transmission project is as under:

SI No.	Assets Name	SCOD	Actual DOCO	Covered in Petition No.
1	URTDSM System (Control Centre Equipment, PMU's and associated equipment) integrated and commissioned at SRLDC & SLDCs of Southern Region	12.4.2016	28.9.2018	254/TT/2019
2	PHASE-I "Unified Real Time Dynamic State Measurement (URTDSM)" for NRLDC & SLDCs of Northern Region.		30.6.2018	486/TT/2019
3	URTDSM Systems (Control Centre Equipment, PMUs and associated equipment) integrated and commissioned at ERLDC, Kolkata; SLDC, WBSETCL and SLDC, DVC		12.12.2018	678/TT/2020
4	URTDSM Systems (Control Centre Equipment, PMU, and associated equipment) integrated and commissioned at SLDC, OPTCL.		2.1.2019	
5	URTDSM Systems (PDCs & their associated parts) supplied and installed at NERLDC and SLDCs of Assam, Meghalaya and Tripura and PMUs along with 51 PMUs & their associated items (in 14 stations)		1.1.2020	189/TT/2021
6	URTDSM System (Control Centre Equipment, PMUs and associated equipment) integrated and commissioned at WRLDC, Mumbai & SLDCs of Madhya Pradesh and Gujarat		31.5.2019	
7	Asset-1: Phase-I Unified Real Time Dynamic State Measurement (URTDSM) for		5.3.2021	Covered in the instant Petition



SI No.	Assets Name	SCOD	Actual DOCO	Covered in Petition No.
	NLDC, Backup NLDC and NTAMC System Phase-I Unified Real Time Dynamic State Measurement (URTDSM) *Backup NLDC is at ERLDC premises.			
8	Asset-2: URTDSM System (Control Centre equipment, PMUs and associated equipment integrated and commissioned at ERLDC (7 PMUs)		31.12.2023 (Anticipated)	

g) As per the IA dated 13.1.2014, the transmission project was scheduled to be put into commercial operation within 27 months from the date of the IA. Therefore, the SCOD of the transmission assets covered under the instant Petition works out to be 12.4.2016. However, the Asset-1 has been put under commercial operation on 5.3.2021 with a time overrun of 1788 days, and the Asset-2 is anticipated to be commissioned on 31.12.2023 with a time overrun of 2819 days.

Assets	SCOD	COD	Time over-run
Asset-1	12.4.2016	5.3.2021	1788 days
Asset-2		31.12.2023 (anticipated)	2819 days

4. The Petitioner, vide the affidavit dated 4.12.2023, has submitted the Revised Cost Estimate (RCE) revising the cost estimate from ₹37463.00 lakh including an IDC of ₹2954.00 lakh based on the October 2013 price level to ₹35808.00 lakh including an IDC of ₹0.00 lakh based on the December 2022 price level given the Project has been implemented with funding through PSDF grant and the Petitioner's internal resources in the ratio of 70:30.

5. It has been observed that the Petitioner has claimed the tariff for Asset-2 based on the anticipated COD of 31.12.2023. However, in compliance with the RoP for the hearing dated 28.8.2024, the Petitioner, vide the affidavit dated 26.4.2024, has submitted that



Asset-2 comprises seven PMUs, of which five Nos. have already been commissioned. However, the remaining two PMUs are yet to be commissioned and are expected to be put into commercial operation by December 2024. Given the low cost, the Petitioner has consolidated all seven PMUs into a single asset, and the COD for the same shall be issued upon the commissioning of the remaining two PMUs.

6. Therefore, as observed above, Asset-2 is still under execution and thus, we are not inclined to determine the transmission tariff for Asset-2 in the instant order. The Petitioner is directed to file a fresh Petition based on the actual COD of Asset-2, along with all the requisite supporting documents in accordance with the relevant Tariff Regulations as per the actual COD with respect to Asset-2. Accordingly, the transmission tariff only for Asset-1 (transmission asset) is being determined in this instant order.

7. The Respondents are the distribution licensees and power departments which are procuring transmission service from the Petitioner, mainly beneficiaries of the Northern Region. The Petitioner has served a copy of the Petition to the Respondents, and notice regarding the filing of this Petition has also been published in newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notice published in the newspapers by the Petitioner. No reply has been received from the Respondents.

8. The hearing in this matter was held on 8.11.2024, and the order was reserved. This order is being passed considering the Petitioner's submissions vide affidavit dated 4.12.2023, 26.4.2024 and 5.9.2024.

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



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

10. The Petitioner has claimed the following transmission charges with respect to the transmission asset for the 2019-24 tariff period:

(₹ in lakh)				
Particulars	2020-21 (pro-rata 27 days)	2021-22	2022-23	2023-24
Depreciation	7.55	125.56	145.35	145.35
Interest on Loan	0.00	0.00	0.00	0.00
Return on Equity	22.40	372.56	431.27	431.27
Interest on Working Capital	0.42	8.90	20.32	14.79
O&M Expenses	0.00	46.63	300.00	165.00
Total	30.37	553.65	896.94	756.41

11. The Petitioner has claimed the following Interest on Working Capital (IWC) with respect to the transmission asset for the 2019-24 tariff period:

(₹ in lakh)				
Particulars	2020-21 (pro-rata 27 days)	2021-22	2022-23	2023-24
O&M Expenses	0.00	3.89	25.00	13.75
Maintenance Spares	0.00	6.99	45.00	24.75
Receivables	50.62	68.26	110.58	93.00
Total Working Capital	50.62	79.14	180.58	131.50
Rate of Interest (in %)	11.25	11.25	11.25	11.25
Interest on Working Capital	0.42	8.90	20.32	14.79

Date of Commercial Operation ("COD")

12. The Petitioner has claimed COD with respect to Asset-1 as of 5.3.2021.

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

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

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



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

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

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

14. With regard to the COD of Asset-1, the Petitioner has submitted a self-declaration COD Certificate dated 30.3.2021 and an NLDC Charging Certificate issued by POSOCO dated 10.3.2021.

15. We have considered the Petitioner's submissions. Taking into consideration the NLDC Charging Certificate dated 10.3.2021 certifying the successful commissioning of Asset-1 on 5.3.2021 and the Self-declaration COD Certificate dated 30.3.2021 as per Regulation 5 of the 2019 Tariff Regulation, the COD of Asset-1 is approved as 5.3.2021.

Capital Cost

16. Regulation 19 of the 2019 Tariff Regulations provides as under:

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

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

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



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

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

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



(PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

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

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

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

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

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

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

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

17. The capital cost claimed by the Petitioner as on COD and projected ACE for the 2019-24 tariff period for Asset-1 covered in the instant Petition is as under:

Asset	Apportioned Approved Cost (As per FR)	Apportioned Approved Cost (as per RCE)	Expenditure up to COD	Projected ACE				Estimated Completion Cost
				2020-21	2021-22	2022-23	2023-24	
Asset-1	7420.62	7645.35	5175.97	394.00	2083.92	0.00	0.00	7653.89

* PSDF grant received and utilised against the capital cost as on COD and ACE is discussed in subsequent paras.



Cost Overrun

18. The Petitioner has submitted that the cost variation with respect to Asset-1 is mainly on account of the actual site requirement. The Petitioner has also submitted that the Revised Cost Estimate (RCE) of the transmission project was issued vide the Memorandum dated 4.5.2023 at an estimated cost of ₹35808.00 lakh, including an IDC of ₹0.00 lakh. Further, the variation between the FR cost and the RCE cost of the instant project as submitted by the Petitioner is as under:

(₹ In Lakh)			
Description	Approved Cost (Oct 13 PL) (A)	Revised Cost Estimate (Dec 22 PL) (B)	Variation (B) - (A)
Cost (excl. IEDC / IDC)	32899.00	34366.00	1467.00
IEDC incl. contingencies	1610.00	1442.00	(-) 168.00
IDC	2954.00	0.00	(-) 2954.00
Total	37463.00	35808.00	(-) 1655.00 (-) 4.42%

19. The item-wise details of variation under the instant project, as submitted by the Petitioner, are as under:

Sl. No.	Variation on account of:	Variation	
		(₹ in lakh)	(%)
(i)	Price Variation		
a	DPR to Award (on competitive bidding while tendering)	(-) 349.00	(-) 0.93 %
b	Provision kept as per contract (based on applicable indices)	0.00	0.00 %
	Sub- Total (i)	(-) 349.00	(-) 0.93 %
(ii)	Quantity Variation/Addition and Deletion	1816.00	4.85 %
	Sub-Total [(i) to (ii)]	1467.00	3.92 %
(iii)	Other Reasons (IEDC and IDC)		
a	IEDC (incl. Contingencies)	(-) 168.00	(-) 0.45 %
b	IDC	(-) 2954.00	(-) 7.89 %
	Sub- Total (iii)	(-) 3122.00	(-) 8.33 %



Sl. No.	Variation on account of:	Variation	
		(₹ in lakh)	(%)
	GRAND TOTAL	(-) 1655.00	(-) 4.42 %

20. The head-wise reasons for variation between FR cost & RCE cost as submitted by the Petitioner are as under:

a) Price Variation (PV) (Net decrease of ₹3.49 crore: (-) 0.93 %)

21. Due to price differences between the project's approval and the awarding of various contracts based on competitive prices obtained through competitive bidding, the project's cost has decreased by ₹3.49 crores, or (-) 0.93% of the approved cost. It was submitted that the contracts for various packages under this project were awarded after the approval of the Competent Authority/BoD as per DoP to the lowest evaluated and responsive bidder, on the basis of Competitive Bidding by POWERGRID. The award prices represent the lowest prices offered at the time of bidding for various packages. Since all the contracts awarded under the project are on the "FIRM" price basis, accordingly, no price variation is applicable during execution.

b) Quantity variation and Addition/deletion of items (Net increase of ₹18.16 crore: 4.85 %)

22. The following modifications have been done as per the actual site requirement:

Description	Cost Implication
In Northern Region: During the course of execution of the project, the following changes have been made in the scope; a) New PMUs quantities have been included due to the addition of new feeders and sub-stations (Kurukshetra, Unchahar). PMUs increased from 288 nos. in DPR to 407 nos. in RCE. b) Due to space constraints, most of the control centres' owners have requested to delete 40kVA/60kVA UPS and 48V DC power supply (DCPS) from the scope. This has led to a reduction in Auxiliary power supply from 13 nos. DPR to 3 nos.. in RCE.	₹18.92 crore



c) Additional Cost implication for the development of Analytical Applications by IIT Mumbai from ₹6.10 crore in DPR to ₹17.77 crore in RCE.	
In Western Region: Due to an increase in the quantity of PMUs and accessories, including cabling, due to the inclusion of additional locations of NHPTL, Bina, and SAS substation. PMUs Quantities increased from 235 nos. (in DPR) to 406 nos. as per RCE. In addition to this, the deletion of the 48V DC Power Supply (DCPS) for sub-stations.	₹4.68 crore
In Eastern Region: a) Deletion of 02 nos. control center (Bihar & Jharkhand) & its associated equipment's b) Deletion of 02 set UPS (60 kVA) System along with Battery Bank at ERLDC. In addition to this, there is a deletion of the 48V DC Power Supply (DCPS).	(-) ₹3.89 crore
In North Eastern Region: a) Due to space constraints, the deletion of 40kVA UPS and 48V DC power supply (DCPS) from the scope. b) Due to site requirement nos. of PMUs and associated accessories has been increased from 39 nos. in the DPR to 51 nos. in the RCE	₹0.37 crore
In the Southern Region Deletion of 40kVA UPS, along with battery bank and 48V DC power supply (DCPS) from the scope.	(-) ₹1.93 crore
TOTAL	₹18.16 crore

c) Other Reasons (IEDC & IDC) (Net decrease of ₹31.22 crore: (-) 8.33 %)

23. The total cost of the transmission project under the head IEDC and IDC of the project has been decreased by ₹31.22 crores in comparison to the approved cost, which works out to be (-) 8.33% as per the following break-up:

i. Decrease in IEDC: According to the IA, an IEDC including contingencies for the transmission project based on the approved cost was estimated to be ₹16.10 crores. However, based on the actual/anticipated funds flow in the RCE, an IEDC, including contingencies, works out to be ₹14.42 crores, resulting in a decrease of ₹1.68 crores.



ii. **Decrease in IDC**: According to the approval cost, the transmission project's IDC was estimated to be ₹29.54 crores. Since the PSDF funding covers 70% of the project expenditures, the transmission project has no actual IDC. Therefore, the authorised IDC amount itself represents the overall decrease in IDC head.

24. Further, in compliance with the ROP for the hearing dated 28.8.2024, the Petitioner vide the affidavit dated 5.9.2024 has submitted that RCE-II for the transmission project is being prepared and will be submitted on approval of the competent authority at the time of truing up of the 2019-24 tariff period and prayed to allow the cost overrun.

25. We have considered the Petitioner's submissions and perused the documents placed on record. As per the FORM-5 submitted by the Petitioner, the major cost variation in completion cost vis-à-vis an estimated cost and RCE cost for the same items is as under:

(₹ In Lakh)						
Sr. No.	Particulars	FR cost	RCE-I Cost	Estimated completion cost	Variation w.r.t FR Cost	Variation w.r.t RCE-I cost
1	WAMS system for NLDC, Back up NLDC and NTAMC	4867.51	5167.10	5180.63	313.12	13.53
2	PMUs	435.20	593.83	593.66	158.46	(0.17)

26. We observe that there is considerable cost variation in the estimated completion cost vis-à-vis the FR cost of the aforementioned items. Therefore, the Petitioner is directed to submit the reasons for such cost variation for review at the time of truing up. Further, we observe that as compared to the apportioned FR cost for Asset-1 of ₹7420.62 lakh and RCE cost of ₹7645.35 lakh, the estimated completion cost as on 31.2024 is ₹7653.89 lakh. Thus, there is a slight cost overrun of ₹8.54 lakh w.e.t RCE-I cost and a considerable cost variation of ₹233.27 lakh with respect to FR cost. Additionally, the



Petitioner has submitted that the RCE-II is being prepared and shall be submitted at the time of truing up of the 2019-24 tariff Period.

27. In view of the above, the capital cost of Asset-1 is hereby restricted to the apportioned approved RCE-I cost, with the liberty to the Petitioner to submit the RCE-II to review the same at the time of truing up.

Time Overrun

28. As per the IA dated 13.1.2014, the transmission assets were scheduled to be put into commercial operation within 27 months from the date of the IA. Accordingly, the SCOD of the transmission assets was 12.4.2016, against which the Asset-1 was put into commercial operation w.e.f. 5.3.2021, and therefore, there is a time overrun of 1788 days. The reasons for the time overrun with respect to Asset-1, as submitted by the Petitioner, are as under:

- a) The Wide Area Measurement System (WAMS) under Unified Real Time Dynamic State Measurement (URTDSM) Project is one of the first projects in the world for real time measurement, monitoring, and visualization of the power system, as well as taking preventive/corrective action in the regime of grid management with improved efficiency. In the Northern Region, 326 PMUs were to be installed across 618 transmission lines and 116 sub-stations as a part of the transmission project.
- b) PMUs of the IEEE C37.118.1-2011 standard were available at the time of IA dated 13.1.2014, while IEEE's new C37.118.1-2014 standard was still pending. When the transmission project was awarded and put into action, PMUs were expected to adhere to the new IEEE C37.118.1-2014 standard. Later, in May 2014, the updated IEEE C 37.118-1a-2014 standard on PMUs was published. However, at that time, there was no authorized test laboratory in India or elsewhere for evaluating PMU features (IEEE Synchro Phasor Certification Program).



- c) After the approval of the Consumer Energy Laboratory Service, USA, for testing of PMUs for IEEE certification on 1.5.2015, PMUs were tested in the said Lab from 14.6.2015 to 24.6.2015, and the type test was completed on 7.7.2015 for the supply, installation and commissioning of PMUs at various sub-stations in Central and State Sector Constituents. Therefore, the delay from the IA dated 12.1.2014 to 7.7.2015 was mainly due to the delay in the release of IEEE C 37.118-1a-2014 Standard and the non-availability of the competent labs for testing of PMUs. Further, the time overrun from 7.7.2015 to 1.1.2020 was mainly due to the delay in commissioning of PMUs and associated sub-systems at various RLDCs and SLDCs. Assets pertaining to the various RLDCs/ SLDCs and PMUs at different locations were commissioned from 30.6.2018 to 1.1.2020.
- d) The time overrun beyond 1.1.2020 was due to space constraints at NLDC, New Delhi and Backup NLDC (in ERLDC premises). The issue regarding the space was raised several times by the Petitioner with NLDC and ERLDC; the same has been recorded in "TeST Sub-committee Meeting" of NRPC, "SCADA O&M Meeting" of the Eastern Region, "ER-TeST Meeting" of ERPC.
- e) With regard to the NLDC System to be commissioned, space issues were brought to the notice of NLDC and ERLDC in a number of forums. Initially, there was not enough space in the NLDC building. However, following multiple rounds of discussion and in order to finish the work, the Petitioner and POSOCO decided to temporarily place the NLDC and PDC System at the NRLDC premises. Once the space at NLDC or the NLDC building was renovated, the system would be moved from NRLDC to NLDC.
- f) The space problem at the ERLDC premises for the backup control center in Kolkata caused a significant delay. The problem was repeatedly brought to the notice in all



of the ER's ERPC and SCADA O&M meetings, but no tangible solution could be found. Initially, the space issue was intimated to NLDC in September 2014 while conducting a site study. The A/C system, new UPS room, and cable trenches would be built by ERLDC within a year, as was explicitly stated. However, the issues persisted for several years, despite being brought to the notice at the highest levels of ERLDC, NLDC, and nearly every ERPC meeting.

- g) ERLDC and POSOCO received many letters dated 28.11.2018, 13.3.2019, and 26.6.2019 requesting space for an A/C system, a new UPS room, and cable trenches. POSOCO notified ERLDC that the room would be ready by November 2019, vide letter dated 30.5.2019. However, the same could not be ready by November 2019, and a request was made vide letter dated 15.10.2019 to expedite the readiness of the room for batteries or to provide temporary space, as erection & charging of batteries is required for its healthiness, as the batteries were supplied long back and were kept idle at the nearby Sub-station.
- h) In response to the ERLDC's letter dated 26.2.2020, the Petitioner, vide its letter dated 11.3.2020, informed the ERLDC regarding the temporary space and the infrastructure requirement for setting temporary aux. power system for backup- NLDC. Once the temporary space was finalised, a permit was obtained from ERLDC on 15.7.2020, to shift and install the materials on their premises. ERLDC vide letter dated 13.7.2020 informed ERPC that work for the temporary set-up for battery installation for necessary charging has started.
- i) Further, the issue was raised at the 24th SCADA O&M meeting of ER held on 14.8.2019, wherein ERLDC confirmed space readiness by November 2019. It was brought to the notice again at the 1st TeST meeting and then 3rd TeST meeting on 20.12.2019, wherein ERLDC mentioned that it needed some more time and the



building shall be ready by February 2020. The matter was brought to notice once again during the 5th TeST meeting on 24.2.2020. Due to the UPS room's unpreparedness, an alternative solution was determined to commission the UPS and battery banks in a temporary room that the Petitioner would build on the ERLDC premises, and ERLDC agreed to provide space. The issue was further deliberated in the 6th TeST meeting on 08.04.2020 to provide the temporary space for UPS and battery bank installation, or otherwise make the allotted room ready to carry out the work. After several rounds of discussions with higher-ranking ERPC, ERLDC, and NLDC authorities, temporary space was provided in July 2020. After that, the Petitioner's renovated room and 120 kVA UPS installation were ready. Subsequently, the complete backup PDC system was turned on, and Site Acceptance Tests (SAT) were conducted with the support of the NLDC and ERLDC team. SAVT (1000 hours test – 42 days) was completed in 1st week of March 2021, and the entire system was commissioned and put under commercial operation on 5.3.2021.

j) The brief chronology of the events as submitted by the Petitioner is as under:

Particular	Remarks
Survey on 1.9.2014	Initially, the space issue was intimated to NLDC in Sept 2014 during the site survey. It was clearly mentioned that the A/C system, the new UPS room and cable trenches would be constructed by ERLDC within one year, but the issue lingered for several years.
Letter dated 28.11.2018 to ERLDC	To ready the UPS room as a top priority.
Letter dated 13.3.2019 to ERLDC	To expedite the space issue at the back-up NLDC(ERLDC).
Letter dated 26.6.2019 to Director(operations), NLDC	To expedite the space issue at the back-up NLDC(ERLDC).
Letter dated 1.5.2019 to POSOCO	To provide Workfront to complete the project.
Letter dated 30.5.2019 from POSOCO	In reply to the letter dated 01.05.2019, POSOCO intimated that renovation of the room will be completed by Nov'19.
Meeting dated 14.8.2019	The issue was raised in the 24th SCADA O&M meeting ER, wherein ERLDC confirmed space readiness by Nov' 2019.



Email dated 4.9.2019 to ERLDC	Requested to provide temporary space for charging the battery required for its health.
Letter dated 15.10.2019 to POSOCO	Requested to expedite the readiness of the room for batteries or provide a temporary space for charging the battery required for its health.
1 st Test Meeting on 24.10.2019	ERLDC mentioned that they need some more time, and the building shall be ready by February 2020.
3 rd Test Meeting on 20.12.2019	ERLDC mentioned that they need some more time, and the building shall be ready by February 2020.
Letter dated 19.2.2020 to POSOCO	The issue of first-time charging of the battery has been discussed several times. Please provide confirmation for any temporary space.
5 th Test Meeting on 24.2.2020	Again, the issue was raised and in view of the non-readiness of the UPS room, alternatively, solution was found to commission UPS and Battery banks in a temporary room to be constructed by POWERGRID at ERLDC premises, for t which ERLDC agreed to provide space.
Letter dated 26.2.2020 from ERLDC	ERLDC said they have space at the old AC plant; however, shifting of items is to be done.
Letter dated 11.3.2020 to ERLDC	Infrastructure requirements for setting up a temporary auxiliary. power system for backup-NLDC
6 th Test Meeting on 8.4.2020	The issue was further deliberated to provide temporary space for UPS and battery bank installation or to otherwise make room ready.
Letter dated 15.7.2020 to POSOCO	Informed ERLDC about material shifting to ERLDC premises.
Letter dated 13.7.2020 to ERPC	In line with the discussion held in the 4th TeST meeting, ERLDC have provided the temporary space, and Battery setup work has been started.

29. In response to the technical validation letter dated 15.4.2024, the Petitioner, vide affidavit dated 26.4.2024, has submitted the following activity-wise details:

Activity	As per Planned		As per Actual		Delays (in Days)
	Start Date	Finish Date	Start Date	Finish Date	
NOA	15.1.2014	15.1.2014	15.1.2014	15.1.2014	0
Supplies	15.9.2014	27.4.2015	15.9.2014	15.10.2020	1998
Installation	3.11.2014	29.1.2016	20.9.2014	30.11.2020	1767
Testing and Commissioning	29.1.2016	12.4.2016	20.1.2021	05.3.2021	1788



Analysis and Decision

30. According to the IA dated 13.1.2014, the transmission asset was scheduled to be put into commercial operation within 27 months from the date of IA, i.e., by 12.4.2016, against which the Asset-1 had been put into commercial operation on 5.3.2021 with a time delay of 1788 days. The Petitioner has submitted the following main reasons for the delay in commissioning Asset-1:

- a) Delay in release of IEEE C 37.118- 1a-2014 Standard & non-availability of competent labs for testing of PMUs as per the latest standard;
- b) Delay in commissioning of PMUs and associated sub-systems at various RLDCs and SLDCs;
- c) Due to space constraints at NLDC, New Delhi and Backup NLDC (in ERLDC premises).

The item-wise time delay in commissioning the Asset-1 is analysed and which is as follows:

a) Due to the release of the IEEE standard and non-availability of competent labs for testing PMUs as per the latest standards:

31. According to the Petitioner, the PMUs were expected to adhere to IEEE C 37.118-1-2014 when the instant transmission project was awarded. However, the new IEEE C 37.118-1a-2014 standard on PMUs was published in May 2014, and the laboratory for testing PMUs for IEEE certification was authorised on 1.5.2015. Subsequently, PMUs were tested in the aforementioned Lab from 14.6.2015 to 24.6.2015, and the type test was completed on 7.7.2015 for the supply, installation, and commissioning of PMUs at various sub-stations in Central and State Sector Constituents. Therefore, the Petitioner has claimed a time delay of 540 days from 13.1.2014 to 7.7.2015, mainly due to the delay in the release of IEEE C 37.118-1a-2014 Standard and subsequently the non-availability of competent labs for testing PMUs for IEEE certification as per the new IEEE standard.



32. We have considered the Petitioner's submissions and have gone through the documents placed on record. The Commission, vide order dated 8.07.2022 in Petition No. 254/TT/2019, vide order dated in Petition No. 486/TT/2019, vide order dated 07.07.2022 in Petition No. 678/TT/2020, and vide order dated 11.07.2022 in Petition No. 189/TT/2021 has already condoned the delay on account of release of IEEE standard and non-availability of competent labs for testing PMUs as per the latest standards

33. The relevant extract of the order dated 8.7.2022 in Petition No. 486/TT/2019 is as under:

"35. It is observed that delay from the date of IA i.e. 13.1.2014 to 31.5.2015 was mainly due to delay in release of IEEE C 37.118-1a-2014 new Standard and non-availability of competent labs for testing of PMUs which was not in control of the Petitioner. Accordingly, we condone delay from the date of IA i.e. 13.1.2014 to 31.5.2015 (504 days) in respect of the transmission asset"

34. Taking into consideration the decision of the Commission in the above-mentioned orders, we are of the view that the time overrun from 13.01.2014 to 07.07.2015 in the release of IEEE C 37.118-1a-2014 new standard and the non-availability of competent labs for testing of PMUs was not in the control of the Petitioner. Therefore, we condone the 540-day delay, i.e., from IA dated 13.1.2014 to 7.7.2015.

B. Delay in commissioning of PMUs and associated subsystems at various RLDCs and SLDCs:

35. According to the Petitioner, the delay from 7.7.2015 to 1.1.2020 was mainly due to the delay in commissioning of PMUs and associated subsystems at various RLDCs and SLDCs. Assets pertaining to various RLDCs/ SLDCs and PMUs at different locations were commissioned from 30.6.2018 to 1.1.2020. The Petitioner submitted the details of commissioning various assets covered under the instant transmission project, and the same are as under:



Sl. No.	Asset Name	Actual DOCO	Petition	Delay remarks
1	URTDSM System (Control Centre Equipment, PMUs and associated equipments) integrated and commissioned at SRLDC & SLDCs of Southern Region	28.9.2018	254/TT/2019 (True up petition filed vide Dairy No. 4/2023)	The Commission, vide its order dated 8.7.2022, condoned the delay up to 31.5.2015 and directed the submission of further justification at the true-up. Additional justification has been submitted in the True-up petition (Dairy No. 4/2023)
2	PHASE-I "UNIFIED REAL TIME DYNAMIC STATE MEASUREMENT (URTDSM)" for NRLDC & SLDCs of Northern Region.	30.6.2018	486/TT/2019 (True up petition filed vide Dairy No. 4/2023)	The Commission, vide its order dated 08.07.2022, condoned the delay up to 31.05.2015 and directed the submission of further justification at the true-up. Additional justification has been submitted in the True-up petition (Dairy No. 4/2023)
3	URTDSM Systems (Control Center Equipment, PMUs and associated equipment) integrated and commissioned at ERLDC, Kolkata; SLDC, WBSETCL and SLDC, DVC	12.12.2018	678/TT/2020	The Commission, vide its order dated 07.07.2022, condoned the delay up to 31.5.2015 and directed the submission of further justification at the true-up. Additional justification will be submitted in the True-up petition of 2019-24.
4	URTDSM Systems (Control Centre Equipment, PMU, and associated equipment) integrated and commissioned at SLDC, OPTCL.	2.1.2019		
5	URTDSM Systems (PDCs & their associated parts) supplied and installed at NERLDC and SLDCs of Assam, Meghalaya and Tripura and PMUs along with 51 PMUs & their	1.1.2020	189/TT/2021	The Commission vide order dated 11.7.2022 condoned the delay up to 31.5.2015 and directed to submit further justification at true-up. Additional justification will be submitted in the True-up petition of 2019-24.

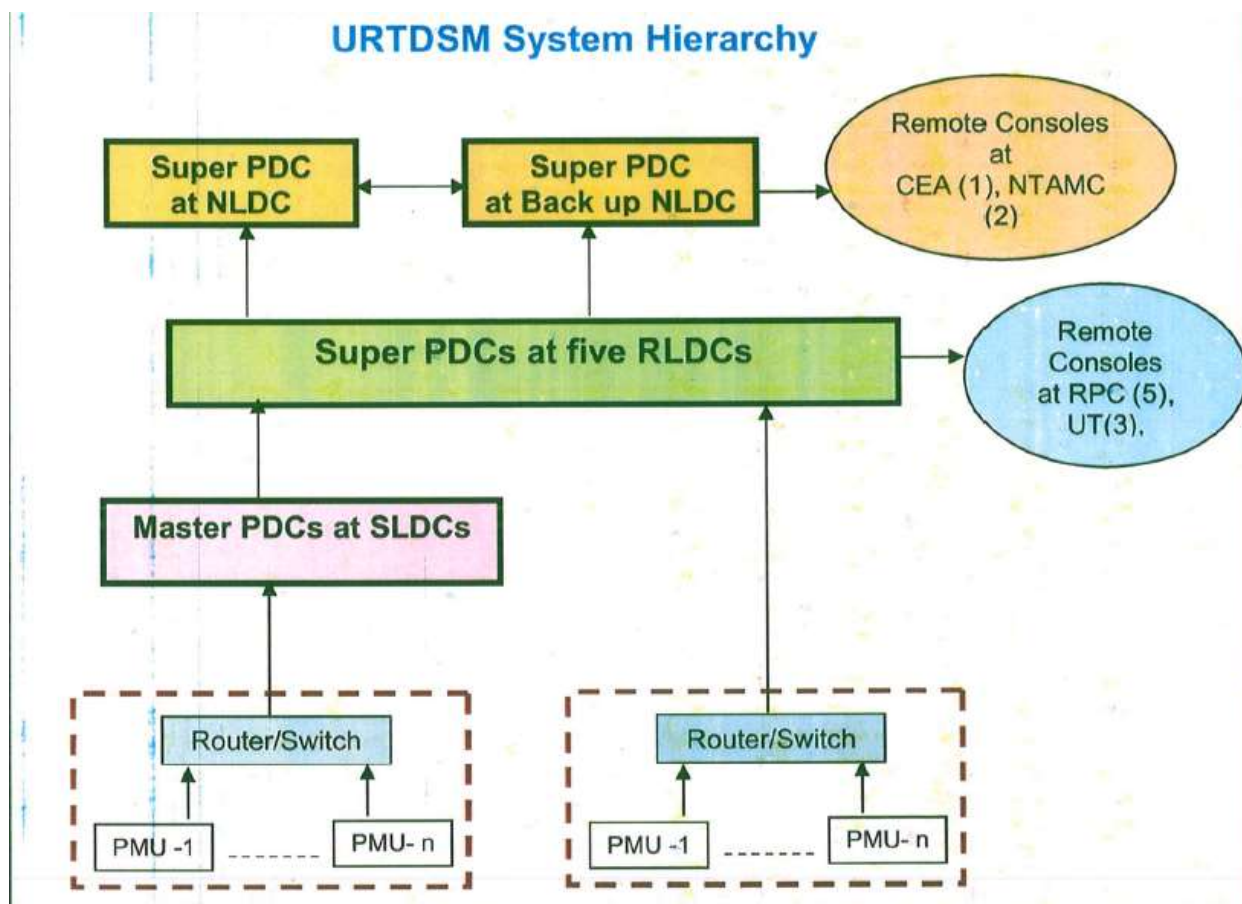


	associated items (in 14 stations)			
6	URTDMS System (Control Center Equipment, PMU's and associated equipment) integrated and commissioned at WRLDC, Mumbai & SLDCs of Madhya Pradesh and Gujarat	31.5.2019		

36. We have considered the Petitioner's submissions and perused the documents on record. In the aforesaid tariff Petitions, the Commission condoned the time overrun for the period from 13.01.2014 to 31.05.2015 on account of the delay in the release of the IEEE C 37.118-1a-2014 standard and the non-availability of competent laboratories for testing of PMUs, which were factors beyond the control of the Petitioner. Further, the Commission granted liberty, in the said tariff Petitions, for consideration of the time overrun from 31.05.2015 up to the respective CODs of the assets covered therein.

37. We observed that the Petitioner has claimed the time delay of 1639 days from 7.7.2015 to 1.1.2020 in commissioning the Asset-1 on account of the time delay in completion of PMUs and other associated sub-systems at different locations and RLDCs/SLDCs. The hierarchy of the URTDMS is as follows:





38. The Petitioner is required to install Nodal PDCs at strategic substations, Master PDCs at all SLDCs, Super PDCs at the five RLDCs, and Main & Backup PDCs at the NLDC. It is observed that the PMUs installed at various substations/generating stations are connected to the Master PDCs at SLDCs, which, in turn, are connected with the Super PDCs at the RLDCs, and further integrated with the Super PDC at the NLDC. The Petitioner has implemented the scheme on a regional basis and has claimed COD accordingly.

39. However, the Petitioner has not submitted any justification and failed to substantiate the impact of the time delay in the completion of PMUs at different RLDCs/SLDCs, on commissioning the Asset-1.



40. Accordingly, we are not inclined to consider the reasons submitted by the Petitioner for the time delay of 1639 days from 7.7.2015 to 1.1.2020 without verifying the impact of the delay in completion of other PMUs on commissioning the Asset-1 and thus the time delay of 1639 days, i.e., from 7.7.2015 to 1.1.2020 claimed by the Petitioner for the aforementioned reasons is not condoned. The Petitioner is directed to clarify whether, with the independent commissioning of the Super PDC at NLDC, the URTDSM scheme is capable of serving its intended purpose. Further, the Petitioner shall explain how the commissioning of PMUs at various locations has impacted the commissioning of the instant transmission asset at the time of truing-up, and accordingly, the same will be reviewed.

C. Due to space constraints at the NLDC in New Delhi and the Backup NLDC in the ERLDC Premises.

41. The Petitioner has submitted that the time overrun beyond 1.1.2020 was mainly due to space constraints at NLDC at New Delhi and Backup NLDC (in ERLDC premises) at Kolkata, and claimed a 429-day delay from 1.1.2020 to 5.3.2021. The Petitioner has further submitted that the issue of space was raised several times with NLDC and ERLDC, in various TeST sub-committee meetings of NRPC, SCADA O&M meeting of Eastern Region, ER-TeST meetings of ERPC. Initially, the space was not available in the NLDC building. However, after several rounds of discussions and to facilitate the completion of work, the Petitioner and POSOCO mutually agreed to temporarily locate the NLDC PDC system at the ERLDC premises. Once the space at the NLDC or the NLDC building becomes available when it is renovated, the system will be moved from ERLDC to NLDC.

42. The Petitioner has further submitted that the major reason for the delay was the lack of space on the ERLDC premises for the establishment of a backup control center in Kolkata. Initially, the space issue was brought to NLDC's attention during a site survey in



September 2014. However, the issue of space availability for the A/C system, the new UPS room, and cable trenches remained unresolved, and it was extended by 5-6 months in each meeting. After the commissioning of all the RLDC sub-systems, pressure was mounted on ERLDC and NLDC to provide space, but all efforts turned unsuccessful.

43. In response to various letters dated 28.11.2018, 13.3.2019, 26.6.2019, the Petitioner to ERLDC and POSOCO regarding non-availability of space vide letter dated 30.5.2019, informed that the room would be ready by November 2019. However, the same was not available till November 2019. Furthermore, it was requested vide letter dated 15.10.2019, to expedite the readiness of the room for batteries or to provide a temporary space, since the batteries had been supplied a long time ago and kept idle at a nearby sub-station. The erection and charging of batteries is required for their health. Accordingly, the Petitioner had begun work on the temporary setup for battery installation for required charging after finalisation of the temporary space.

44. The Petitioner has also submitted that the issue of space was also discussed in the 24th SCADA O&M meeting of ER held on 14.8.2019, 1st TeST meeting and followed by the 3rd TeST meeting held on 20.12.2019, in the 5th TeST meeting held on 24.2.2020 and in the 6th TeST meeting on 8.4.2020. Accordingly, the Petitioner was granted temporary space in July 2020, after several rounds of discussions in ERPC and involvement of higher authorities from ERLDC & NLDC. After that, the Petitioner renovated the said room and made it ready for the 120kVA UPS installation. Following a successful installation, the entire backup PDC system was powered on, and with the support of the NLDC and ERLDC teams, Site Acceptance Tests (SAT) were conducted. SAVT (1000 hours test – 42 days) was completed in 1st week of March 2021, and the entire system was commissioned and put into commercial operation on 5.3.2021.



45. We have considered the Petitioner's submission and have gone through the documents placed on record. After perusing all the documents, we observe that during the meeting held between the Petitioner and the executing agency on 2.3.2015, the issue regarding the non-availability of space at NLDC was discussed. As per the MoM dated 2.3.2015, the survey was conducted on 2.3.2015, and as per the survey report, there was not enough space in the current NLDC server room, and the Petitioner was required to explore the possibilities to either shift the existing NLDC servers to another room near the NLDC building or a new room may be modified. Additionally, as per the MoM, NLDC lacked space for a UPS, ACDB, and battery bank. The executing agency asked the Petitioner to confirm the space availability during the meeting and make all other required arrangements, such as trenches, air conditioning, and an earth pit. Subsequently, the Petitioner chose to install the servers, communication equipment, the UPS system, etc. that were provided under the URTDSM package at NRLDC instead of NLDC due to space constraints, and the same was intimated to the executing agency vide the email dated 10.12.2016 and requested to survey at NRLDC for the NLDC part.

46. We observe that the issue of providing space for installation of the 120 kVA UPS for the backup of the NLDC PDS system at ERLDC was taken up by the Petitioner vide letters dated 28.11.2018, 13.3.2019, 1.5.2019, 30.5.2019, 15.10.2019 and 19.2.2020. The Petitioner had also taken up the matter with NLDC vide letter dated 26.06.2019, to intervene in the matter and expedite the renovation work for providing space for the UPS installation at ERLDC. In light of this, ERLDC Kolkata vide letter dated 26.2.2020, provided a temporary space for charging UPS battery sets (2 x 125 kVA) and requested that the arrangements be made for battery storage and charging. The Petitioner, vide letter dated 15.7.2020, requested the Power Source required for charging the battery



system and carried out the requisite work at the temporary space provided by the ERLDC, stating that the work is expected to be completed before 18.7.2020.

47. Therefore, we are of the view that the time overrun beyond 1.01.2020 up to 5.03.2021 (430 days) has been impacted due to space constraints at NLDC at New Delhi, and backup NLDC in ERLDC premises, which was beyond the control of the Petitioner. Hence, we condone the time overrun of 430 days due to the non-availability of the space.

48. The details regarding the same as submitted by the Petitioner are as under:

Particulars	Time delay claimed			Effective Time Delay (in days) with respect to SCOD, i.e., 12.4.2016	Time delay Condoned			Remarks
	From	To	Total (in days)		From	To	Total (in days)	
Due to the release of the IEEE standard and the non-availability of testing labs for PMUs as per the latest standards	13.1.2014	7.7.2015	540	NIL	13.1.2014	7.7.2015	540	Considering the cascading effect of the delay in the supply of material
Due to the delay in commissioning of PMUs and associated subsystems at various RLDCs and SLDCs	7.7.2015	1.1.2020	1639	1358	NIL	NIL	NIL	
Due to space constraints at the NLDC in New Delhi and the Backup NLDC in the ERLDC Premises	1.1.2020	5.3.2021	430	430	1.1.2020	5.3.2021	430	Considering the cascading effect of delay in testing and commissioning activities
Total time Delay			2609	1788			970	

49. In light of the above, the details of the time overrun claimed by the Petitioner and the time overrun condoned/not condoned are as under:



Asset	Schedule COD as per IA	Actual COD	Time over-run	Time over-run condoned	Time overrun not Condoned
Asset-1	12.4.2016	5.3.2021	1788 days	970 days	818 days

D. Power System Development Fund Grant (PSDF)

50. The Ministry of Power (MoP) vide letter dated 31.12.2014, had communicated the sanction of grant from PSDF towards the scheme of PGCIL for the Transmission Project. The sanction was issued subsequent to the Commission's order dated 6.9.2013 in Petition No. 129/MP/2013. The sanction was equivalent to ₹26224.00 lakh (being 70% of the project cost), which the Commission granted vide letter dated 4.7.2014, and the Monitoring Committee's approval vide its meeting dated 8.10.2014. It will be governed in accordance with the approved guidelines/procedures for funding from PSDF. The Commission, vide its order dated 6.9.2013 in Petition No. 129/MP/2012, made the following observation:

*"28. BRPL and BSEB have suggested that the funding for the scheme should be met through Power System Development Fund (PSDF). We are in agreement with the said suggestion. In our view, the projects should be funded through debt and equity in the ratio of 70:30. PGCIL shall contribute the equity and **the debt portion shall be funded from the PSDF**. PGCIL shall make an application before the Managing Committee of PSDF for reimbursement of funds equivalent to the loan. Since there is a possibility of time lag between making of the application by PGCIL to PSDF and actual reimbursement of the fund, PGCIL shall arrange for loan for the matching amount, which shall be repaid on receipt of the funds from PSDF. It is clarified that the execution of the scheme should not be affected in any way on account of the time taken for getting the funds from PSDF. The tariff of the URTDSM scheme shall be worked out accordingly. "*

51. The Petitioner has not claimed the IDC in the instant Petition.

Incidental Expenditure During Construction (IEDC)

52. In accordance with the Auditor Certificate dated 2.11.2021, the Petitioner has claimed the IEDC for the transmission assets. The Petitioner has also submitted that the



entire IEDC has been discharged as on COD with respect to the transmission asset. The IEDC has been disallowed proportionately, since the time overrun for the instant transmission assets has not been condoned. The IEDC claimed, as per the Auditor's Certificate, IEDC allowed and discharged up to the COD as follows:

(₹ in lakh)			
Asset	IEDC Claimed as per the Auditor Certificate (A)	IEDC Disallowed due to Time Overrun not Condoned (B)	IEDC Allowed (A-B)
Asset-1	355.21	111.41	243.80

Initial Spares

53. Regulation 23(d) of the 2019 Tariff Regulations provides as under:

“(d) Transmission System

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

54. In accordance with the Auditor Certificate dated 2.11.2021, the Initial Spares as claimed by the Petitioner are as under:

(₹ in lakh)					
Asset	Capital Cost for the Calculation of Initial Spares	Initial Spares Claimed	Ceiling Limit as mentioned as per Regulation (%)	Allowable Initial Spares Worked Out	Excess Initial Spares
Asset-1	7298.68	326.24	3.50%	252.89	73.35

55. The Petitioner has submitted that it has procured Initial Spares to ensure the transmission assets operate smoothly and reliably. Additionally, the Petitioner has submitted that the Indian Power System has been using PMUs/PDCs on such a large



scale for the first time in order to ensure reliable and secure grid operation, which is of national importance. The Petitioner has prayed to allow the Initial Spares in full under Regulation 76 of the 2019 Tariff Regulations.

56. We have considered the Petitioner's submissions. The Petitioner has claimed excess Initial Spares under Regulation 76 ("Power to Relax") of the 2019 Tariff Regulation. We are not inclined to allow an excess of Initial Spares by relaxing the provisions of the 2019 Tariff Regulation as prayed by the Petitioner. The Initial Spares claimed by the Petitioner are restricted as per the norm of 3.5% provided under Regulation 23(d) of the 2019 Tariff Regulations, and the same have been allowed as follows:

(₹ in lakh)

Asset	Plant and Machinery Cost (excluding IDC/IEDC, Land Cost and Cost of Civil Works) (₹ in lakh)	Initial Spares Claimed (₹ in lakh)	Norms as per 2019 Tariff Regulations (%)	Initial Spares Allowable (₹ in lakh)	Excess Initial Spares Disallowed (₹ in lakh)	Initial Spares Allowed (₹ in lakh)
	A	B	C	$D=(A-B)*C/(100-C)$	$E=B-D$	
Asset-1	7298.68	326.24	3.5%	252.89	73.35	252.89

57. Accordingly, the capital cost allowed with respect to the transmission asset as on COD is as follows:

(₹ in lakh)

Asset	Capital Cost Claimed as on COD as per the Auditor Certificate (A)	IEDC Disallowed (B)	Excess Initial Spares (C)	Less: PSDF Grant Received (D)	Capital Cost as on COD for the purpose of Tariff Determination (E) = (A-B-C-D)
Asset-1	5175.97	111.41	73.35	3623.17	1368.03

Additional Capital Expenditure (ACE)

58. Regulations 24 and 25 of the 2019 Tariff Regulations provide as under:



“24. Additional Capitalisation within the original scope and up to the cut-off date

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

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

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

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

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

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

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

59. The Petitioner has claimed the ACE on account of the Balance/Retention Payments for the transmission asset covered in the instant Petition under Regulation 24(1)(a) and Regulation 24(1)(b) of the 2019 Tariff Regulations is as under:

Assets	ACE 2019-24		
	2020-21	2021-22	2022-23
Asset-1	394.00	2083.92	0.00

(₹ in lakh)



60. The Liability Flow Statement submitted by the Petitioner is as under:

(₹ in lakh)

Head-wise/Party-wise	Particulars	Outstanding Liability as on COD	Discharge			Outstanding Liability as on 31.3.2024
			2020-21	2021-22	Total (2019-24)	
M/s GE & T& D India Ltd.	WAMS	1875.19	273.73	1601.46	1875.19	0.00
	Auxiliary Power Supply	33.23	17.29	15.94	33.23	0.00
	PMU	33.55	17.77	15.78	33.55	0.00
Total		1941.97	308.79	1633.18	1941.97	0.00

61. The Petitioner has further submitted the ACE with respect to the transmission asset during the 2019-24 tariff period, works deferred for execution, and the same have been claimed under Regulation 24 (1)(b) of the 2024 Tariff Regulations is as under:

(₹ in lakh)

Party-wise	Particulars	Works Deferred for Execution	
		2020-21	2021-22
M/s GE & T& D India Ltd.	WAMS	75.54	441.98
	Auxiliary Power Supply	4.77	4.40
	PMU	4.90	4.36
Total		85.21	450.74

62. The Petitioner, vide affidavit dated 26.4.2024, has submitted for the 2019-24 tariff period add-cap bifurcation with respect to the Asset-1 as under:

(₹ in lakh)

Asset-1					
Financial Year	2019-20	2020-21	2021-22	2022-23	2023-24
Liability payment up to the cut-off date under Regulation 24(1)(a)	0.00	308.79	1633.18	0.00	0.00
Work deferred for execution under regulation 24(1)(b)	0.00	85.21	450.74	0.00	0.00
Total	0.00	394.00	2083.92	0.00	0.00

63. We have considered the Petitioner's submissions. The projected ACE to be incurred is mainly on account of balance/retention payments and works deferred for



execution, hence the same is allowed in accordance with Regulations 24(1)(a) and 24(1)(b) of the 2019 Tariff Regulations. The ACE allowed is as under:

(₹ in lakh)

Particulars	2020-21	2021-22
ACE Allowed	394.00	2083.92
Less: PSDF Grant	275.80	1458.74
Total ACE	118.20	625.18

64. Accordingly, the ACE and the capital cost allowed for the determination of tariff with respect to the transmission asset after adjusting the PSDF grants, for the 2019-24 tariff period, is as follows:

(₹ in lakh)

Assets	Capital Cost as on COD	Admitted Projected ACE 2019-24			Capital Cost as on 31.3.2024
		2020-21	2021-22	2022-23	
Asset-1	1368.03	118.2	625.18	0.00	2111.40

Debt-Equity Ratio

65. Regulation 18 of the 2019 Tariff Regulations provides as under:

“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.”

66. The Petitioner has submitted that in accordance with the terms and conditions mentioned in clause 3(vi) of the sanction letter issued by the MoP, expenditure beyond 70% of the cost shall be provided by the Petitioner from its own resources. Accordingly, the remaining 30% is being claimed as equity.

67. We have considered the Petitioner's submission. The capital cost claimed by the Petitioner has been considered as equity in the instant order.

Depreciation

68. Regulation 33 of the 2019 Tariff Regulations provides as under:



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

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

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

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

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

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

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

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

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

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

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

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



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

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

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

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

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

69. The Petitioner has submitted that since communication equipment like URTDSM is classified as IT equipment, it is accordingly claims to 15% depreciation. URTDSM is an upgrade of the SCADA System, which has been defined as a “communication system” under Regulation 3(11) of the 2014 Tariff Regulations and the same is also incorporated in the 2019 Tariff Regulations.

70. In addition to that, the reference to the SCADA in Clause 12.3 of SOR of the 2015 Amendment Regulations with respect to the salvage value states that the salvage value applicable to the IT equipment will be applicable to the communication equipment, like URTDSM, SCADA, WAMS, and RTUs, etc. Consequently, it is incorrect for the Petitioner



to rely on Clause 12.3 of SOR of 2015. Moreover, Clause 12.3 of SOR of the 2015 Amendment Regulations would be superseded by the definition of "communication system" in the 2014 Tariff Regulations. Accordingly, depreciation has been taken into account for communication equipment such as URTDSM @ 6.33% as part of PLCC up to 31.3.2024, while computing the capital expenditure for the 2019-24 tariff period.

71. We have considered the Petitioner's submissions. Depreciation has been allowed as per the methodology provided in Regulation 33 of the 2019 Tariff Regulations, considering the capital expenditure as on COD and approved ACE during the 2019-24 tariff period. The Gross Block during the 2019-24 tariff period has been depreciated at the Weighted Average Rate of Depreciation (WAROD). WAROD at Annexure-I has been worked out after considering the depreciation rates of assets as specified in the 2019 Tariff Regulations, and depreciation allowed during the 2019-24 tariff period is as follows:

(₹ in lakh)					
	Particulars	2020-21 (pro-rata 27 days)	2021-22	2022-23	2023-24
A	Opening Gross Block	1368.03	1486.23	2111.40	2111.40
B	Addition during the year 2019-24, due to projected ACE	118.20	625.176	0.00	0.00
C	Closing Gross Block (A+B)	1486.23	2111.40	2111.40	2111.40
D	Average Gross Block (A+C)/2	1427.13	1798.81	2111.40	2111.40
E	Average Gross Block (90% depreciable assets)	1427.13	1798.81	2111.40	2111.40
F	Average Gross Block (100% depreciable assets)	0.00	0.00	0.00	0.00
G	Depreciable value (excluding IT equipment and software) (E*90%)	1284.41	1618.93	1900.26	1900.26
H	Depreciable value of IT equipment and software (F*100%)	0.00	0.00	0.00	0.00
I	Total Depreciable Value (G+H)	1284.41	1618.93	1900.26	1900.26
J	Weighted average rate of Depreciation (WAROD) (in %)	6.33	6.33	6.33	6.33
K	Lapsed useful life at the beginning of the year (Year)	0	0	1	2
L	Balance useful life at the beginning of the year (Year)	15	15	14	13



	Particulars	2020-21 (pro-rata 27 days)	2021-22	2022-23	2023-24
M	Depreciation during the year (D*J)	6.68	113.86	133.65	133.65
N	Cumulative Depreciation at the end of the year	6.68	120.55	254.20	387.85
O	Remaining Aggregate Depreciable Value at the end of the year	1277.73	1498.38	1646.06	1512.41

Interest on Loan (IoL)

72. The Petitioner has not claimed any IoL in the instant Petition. Accordingly, IoL has been considered as 'NIL'.

Return on Equity (RoE)

73. Regulations 30 and 31 of the 2019 Tariff Regulations provide as under:

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

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

Provided that return on equity in respect of additional capitalization after cutoff date beyond the original scope, excluding additional capitalization on 7 account of emission control system, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%.

Provided further that:

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



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

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

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

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

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

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

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

Illustration-

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

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

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

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



- (b) Estimated Advance Tax for the year on above is ₹ 240 crore;
(c) Effective Tax Rate for the year 2019-20 = ₹ 240 Crore/₹ 1000 Crore = 24%;
(d) Rate of return on equity = $15.50 / (1 - 0.24) = 20.395\%$.

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

74. The Petitioner has submitted that the MAT rate is applicable to the Petitioner's company. Accordingly, the MAT rate applicable in the 2019-20 tariff period has been considered for the purpose of the RoE, which will be trued-up with the actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. The RoE allowed for the transmission asset has been worked out as follows:

(₹ in lakh)					
	Particulars	2020-21 (pro-rata 27 days)	2021-22	2022-23	2023-24
A	Opening Equity (A)	1368.03	1486.23	2111.41	2111.41
B	Additions (B)	118.20	625.18	0.00	0.00
C	Closing Equity (C) = (A+B)	1486.23	2111.41	2111.41	2111.41
D	Average Equity (D) = (A+C)/2	1427.13	1798.82	2111.41	2111.41
E	Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (%)	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (%)	18.782	18.782	18.782	18.782
H	Return on Equity	19.83	337.85	396.56	396.56

Operation & Maintenance Expenses (O&M Expenses)

75. The Petitioner has claimed the O&M Expenses with respect to the transmission asset for the 2019-24 tariff period are on a basis of the O&M Certificate dated 5.7.2022 as under:



(₹ in lakh)			
Particulars	2021-22	2022-23	2023-24
O&M for PLCC	46.63	300.00	165.00
Total O&M expenses	46.63	300.00	165.00

76. The Petitioner has submitted that the O&M Expenses for the FY 2021-22 has been calculated on an actual basis and for the FY 2022-23 and 2023-24, the O&M Expenses are allowed as per the anticipated charges which will be trued-up at the time of filing the truing up Petition under Regulation 35(3)(a) of the 2019 Tariff Regulations which provides as under:

“35. Operation and Maintenance Expenses:

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

Particulars	2019-20	2020-21	2021-22 (pro-rata 47 days)	2022-23	2023-24
Norms for sub-station Bays (₹ Lakh per bay)					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
Norms for Transformers (₹ Lakh per MVA)					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
Norms for AC and HVDC lines (₹ Lakh per km)					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011



Particulars	2019-20	2020-21	2021-22 (pro-rata 47 days)	2022-23	2023-24
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					
HVDC Back-to-Back stations (₹ Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (₹ Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (₹ Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (₹ Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole scheme (₹ Lakh)(3000 MW)	2,563	2,653	2,746	2,842	2,942

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

- (i) the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;
- (ii) the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;
- (iii) the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2500 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);
- (iv) the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme;
- (v) the O&M expenses of ±800 kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme; and
- (vi) the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial



operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years.

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

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

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

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

77. We have considered the Petitioner's submission, and we observe that the Petitioner has furnished the O&M Certificate dated 5.7.2022 and claimed the O&M Expenses on an actual basis for the FY 2021-22 and anticipated on the basis for the FY 2022-23 & 2023-24.

78. After perusal of the O&M Certificate dated 5.7.2022 submitted by the Petitioner, we are of the view that the O&M Expenses for the FY 2020-21 have not been allowed, since the Petitioner has not claimed the O&M Expenses for the FY 2020-21 (from COD 5.3.2021 to 31.3.2021). Furthermore, as compared to the actual O&M Expenses of ₹46.63 lakh claimed by the Petitioner for the FY 2021-22, the O&M Expenses of ₹300 lakh and ₹165.00 lakh claimed by the Petitioner for the FY 2022-23 & 2023-24 are on the higher side.

79. O&M costs for the communication system will be 2% of the original project cost (₹7653.89 lakhs, as per Auditor's Certificate dated 2.11.2021), as per Regulation 35(4) of 2019 Tariff Regulations. Therefore, the O&M Expenses have been worked out for the



various components of the transmission asset based on the FY 2021-22 actuals and under Regulation 35(4) of the 2019 Tariff Regulations for the FY 2022-23 & 2023-24, are as follows:

(₹ in lakh)			
Particulars	2021-22	2022-23	2023-24
Total Project Cost as per Auditor Certificate dated 2.11.2021	7653.89		
O&M Expenses Claimed	46.63*	300.00 [#]	165.00 [#]
Norms as per Regulation 35(4) of the 2019 Tariff Regulations.	2%	2%	2%
O&M Expenses calculated as per norms	153.08	153.08	153.08
O&M Expenses allowed, subject to truing up	46.63	153.08	153.08

*Claimed on Actual Basis as per O&M Certificate dated 5.7.2022.

[#] Claimed on Anticipated Basis as per O&M Certificate dated 5.7.2022

Interest on Working Capital (IWC)

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

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

(a) For Coal-based/lignite-fired thermal generating stations:

- (i) Cost of coal or lignite and limestone towards stock, if applicable, for 10 days for pit-head generating stations and 20 days for non-pit-head generating stations for generation corresponding to the normative annual plant availability factor or the maximum coal/lignite stock storage capacity whichever is lower;
- (ii) Advance payment for 30 days towards cost of coal or lignite and limestone for generation corresponding to the normative annual plant availability factor;
- (iii) Cost of secondary fuel oil for two months for generation corresponding to the normative annual plant availability factor, and in case of use of more than one secondary fuel oil, cost of fuel oil stock for the main secondary fuel oil;
- (iv) Maintenance spares @ 20% of operation and maintenance expenses including water charges and security expenses;
- (v) Receivables equivalent to 45 days of capacity charge and energy charge for sale of electricity calculated on the normative annual plant availability factor; and
- (vi) Operation and maintenance expenses, including water charges and security expenses, for one month.

(aa) For emission control system of coal or lignite based thermal generating stations:

- (i) Cost of limestone or reagent towards stock for 20 days corresponding to the normative annual plant availability factor;
- (ii) Advance payment for 30 days towards cost of reagent for generation corresponding to the normative annual plant availability factor;



- (iii) Receivables equivalent to 45 days of supplementary capacity charge and supplementary energy charge for sale of electricity calculated on the normative annual plant availability factor;
- (iv) Operation and maintenance expenses in respect of emission control system for one month;
- (v) Maintenance spares @20% of operation and maintenance expenses in respect of emission control system.

(b) For Open-cycle Gas Turbine/Combined Cycle thermal generating stations:

- (i) Fuel cost for 30 days corresponding to the normative annual plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel;
- (ii) Liquid fuel stock for 15 days corresponding to the normative annual plant availability factor, and in case of use of more than one liquid fuel, cost of main liquid fuel duly taking into account mode of operation of the generating stations of gas fuel and liquid fuel;
- (iii) Maintenance spares @ 30% of operation and maintenance expenses including water charges and security expenses;
- (iv) Receivables equivalent to 45 days of capacity charge and energy charge for sale of electricity calculated on normative plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel; and
- (v) Operation and maintenance expenses, including water charges and security expenses, for one month.

(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.

(2) The cost of fuel in cases covered under sub-clauses (a) and (b) of clause (1) of this Regulation shall be based on the landed fuel cost (taking into account normative transit and handling losses in terms of Regulation 39 of these regulations) by the generating station and gross calorific value of the fuel as per actual weighted average for the third quarter of preceding financial year in case of each financial year for which tariff is to be determined:

Provided that in case of new generating station, the cost of fuel for the first financial year shall be considered based on landed fuel cost (taking into account normative transit and handling losses in terms of Regulation 39 of these regulations) and gross calorific value of the fuel as per actual weighted average for three months, as used for infirm power, preceding date of commercial operation for which tariff is to be determined.

(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;”

81. The IWC has been worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest (RoI) considered as 11.25% (SBI 1-year MCLR as on 1.4.2020 of 7.75% plus 350 basis points) for the FY 2020-21, 10.50% (SBI 1- year MCLR applicable as on 1.4.2021 and 1.4.2022 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 the transmission asset are as follows:

(₹ in lakh)				
Particulars	2020-21 (pro-rata 27 days)	2021-22	2022-23	2023-24
WC for O&M Expenses (O&M Expenses for 1 month)	0.00	3.89	12.76	12.76
WC for Maintenance Spares (15% of O&M Expenses)	0.00	6.99	22.96	22.96
WC for Receivables (Equivalent to 45 days of annual transmission charges)	44.81	62.39	85.81	85.80
Total Working Capital	44.81	73.27	121.53	121.52
Rate of Interest (%)	11.25	10.50	10.50	12.00
Interest on Working Capital	0.37	7.69	12.76	14.58

Annual Fixed Charges (AFC) for the 2019-24 Tariff Period

82. The transmission charges allowed with respect to the transmission asset for the 2019-24 tariff period are as follows:



(₹ in lakh)				
Particulars	2020-21 (pro-rata 27 days)	2021-22	2022-23	2023-24
Depreciation	6.68	113.86	133.65	133.65
Interest on Loan	0.00	0.00	0.00	0.00
Return on Equity	19.83	337.85	396.56	396.56
O & M Expenses	0.00	46.63	153.08	153.08
Interest on Working Capital	0.37	7.69	12.76	14.58
Total	26.88	506.03	696.05	697.87

83. To summarise, the AFC allowed with respect to the transmission asset for the 2019-24 tariff period are as follows:

(₹ in lakh)				
Particulars	2020-21 (pro-rata 27 days)	2021-22	2022-23	2023-24
AFC Claimed	30.37	553.65	896.94	756.41
AFC Allowed	26.88	506.03	696.05	697.87

Filing Fee and the Publication Expenses

84. The Petitioner has sought reimbursement of the fee paid by it for filing the Petition and publication expenses. The Petitioner shall be entitled to 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.

Licence Fee & RLDC Fees and Charges

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



Goods and Services Tax

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

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

Security Expenses

88. The Petitioner has submitted that security expenses with respect to 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.

89. We have considered the Petitioner's submissions. 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 based on actual security expenses incurred during 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

90. The Petitioner has sought 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

91. The Petitioner has submitted that tariff for the Transmission of Electricity (Annual Fixed Cost) for the 2019-24 shall be recovered on a monthly basis in accordance with Regulation 57 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 and shall be shared by the beneficiaries and long-term transmission customers in the Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 dated 15.6.2010 and amendment to these Regulations issued vide order dated 30.11.2012 or as amended from to time. Additionally, the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2020 (hereinafter referred to as "the 2020 Sharing Regulations") control the sharing of transmission charges w.e.f. 1.11.2020. Accordingly, the liabilities of the DICs for arrears of the transmission charges to be determined through this order shall be computed DIC-wise in accordance with the provisions of the respective Tariff Regulations and shall be recovered from the concerned DICs through Bill 2 under Regulation 15(2)(b) of the 2020 Sharing Regulations. Subsequent to the tariff period, the billing, collection and disbursement of the transmission charges allowed in this order shall be governed by the provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

92. We have considered the Petitioner's submissions. The relevant extracts of the minutes of the joint meeting of all the Regional Standing Committees on Power System



Planning for firming up the transmission project as a part of the Smart Transmission Grid development are as follows:

- 9.0 It was agreed that the scheme would be implemented in the following manner:
- i) The URTDSM scheme will cover placement of PMU at sub-stations and both ends of transmission lines at 400kV and above level including generating stations at 220 kV level under State and Central Sector coming up by 2014-15 time frame.
 - ii) The proposed URTDSM scheme will be implemented in two stages. In the stage-I PMUs will be placed at those locations where fiber optic communication link is either available or would be made available under microwave frequency vacating program and regional strengthening program by 2014-15 along with installation of PDCs at all SLDCs, RLDCs, NLDC, NTAMC, strategic locations in state, remote consoles at RPCs, CEA, CTU and other locations. Nodal PDC shall be provided for collection of data from 40 PMUs in a cluster.

In stage-II, PMUs would be installed at balance locations along with communications links. Summary of the stage wise deployment of PMUs and PDCs is given in Table1 and Table-2 above.
 - iii) For effective utilization of synchrophasor technology national and international level training programs will be arranged for engineers from State utilities, RPCs, CEA, CTU and POSOCO under the URTDSM scheme.
- 10.0 After deliberations, members of regional Standing Committees on Power System Planning agreed that "Unified Real Time Dynamic State Measurement (URTDSM)" scheme to be taken up for implementation. It was also agreed that scheme is to be implemented by POWERGRID as system strengthening and cost shall be added in the National transmission pool account and to be shared by all the Designated ISTS Customers(DICs) as per the POC mechanism under the CERC regulation.
- 11.0 It was agreed that POWERGRID shall file a petition with CERC for getting regulatory approval for this project. It was also requested that all the constituents/States would support POWERGRID in CERC.
- 12.0 As the Analytics are to be developed in parallel with implementation of the URTDSM scheme, it was agreed that these would be developed in association with premier academic institutions (like by IITs) and in consultation with POSOCO, CEA and RPCs and some of the STUs. It was also agreed that cost of development of the Analytics would be added in the National transmission pool account.

93. As per the above, the cost is required to be shared by all the designated ISTS customers (DICs) as per the PoC mechanism under the 2020 Sharing Regulations. Since Asset-1 was commissioned on 5.3.2021, the sharing of the transmission charges is governed by the 2020 Sharing Regulations w.e.f. 1.11.2020. The transmission charges of the instant transmission asset are to be recovered from all the DICs which need to be recovered as a part of the national component.

94. Accordingly, the liabilities of all the DICs for arrears of the transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of the respective Tariff Regulations and shall be recovered from the concerned DICs through Bill 2 under Regulation 15(2)(b) of the 2020 Sharing Regulations. Billing,



collection and disbursement of transmission charges for the subsequent tariff period shall be recovered in terms of the provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

95. The Annexure-I given hereinafter shall form part of the order.

96. This order disposes of Petition No. 96/TT/2024 in terms of the above findings and discussions.

**Sd/-
(Harish Dudani)
Member**

**Sd/-
(Ramesh Babu V.)
Member**

**Sd/-
(Jishnu Barua)
Chairperson**



ANNEXURE-I

2019-24	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE (₹ in lakh)					Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)			
Capital Expenditure		2020-21	2021-22	2022-23	2023-24	Total			2020-21	2021-22	2022-23	2023-24
PLCC	1368.03	118.20	625.18	-	-	743.38	2111.40	6.33%	90.34	113.86	133.65	133.65
Total	1368.03	118.20	625.18	-	-	743.38	2111.40		90.34	113.86	133.65	133.65
								Average Gross Block (₹ in lakh)	1427.13	1798.81	2111.40	2111.40
								Weighted Average Rate of Depreciation	6.33%	6.33%	6.33%	6.33%

