CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI

Petition No. 678/TT/2020

Coram:

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

Date of Order: 07.07.2022

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing up of transmission tariff of the 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for **Asset-I:** Unified Real Time Dynamic State Measurement (URTDSM) System (Control Center Equipment, PMU's and associated equipment) integrated and commissioned at ERLDC Kolkata, SLDCs WBSETCL & DVC, **Asset-II:** URTDSM System (Control Center Equipment, PMU's and associated equipment) integrated and commissioned at SLDCs of OPTCL of the Eastern Region under "Phase-I- Unified Real Time Dynamic State Measurement (URTDSM)".

And in the matter of:

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

Versus

- 1. Grid Corporation of Orissa Limited, Shahid Nagar, Bhubaneswar-751007.
- 2. Bihar State Power (Holding) Company Limited, (Formerly Bihar State Electricity Board-BSEB), Vidyut Bhavan, Bailey Road, Patna-800001.
- West Bengal State Electricity Distribution Company Limited, Bidyut Bhawan, Bidhan Nagar, Block DJ, Sector-II, Salt Lake City, Calcutta -700091.
- 4. Jharkhand State Electricity Board,

Order in Petition No. 678/TT/2020

.....Petitioner

In Front of Main Secretariat, Doranda, Ranchi -834002.

- Damodar Valley Corporation, DVC Tower, Maniktala, Civic Centre, VIP Road, Calcutta-700054.
- 6. Power Department Government of Sikkim, Gangtok-737101.Respondent(s)
- For Petitioner : Shri S. S. Raju, PGCIL Shri D. K. Biswal, PGCIL Shri A. K. Verma, PGCIL Shri V. P. Rastogi, PGCIL

For Respondents : Shri Manish Kumar Choudhary, Advocate, BSPHCL

<u>ORDER</u>

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

Asset-I: URTDSM System (Control Center Equipment, PMU's and associated equipment) integrated and commissioned at ERLDC Kolkata, SLDCs WBSETCL & DVC, and

Asset-II: URTDSM System (Control Center Equipment, PMU's and associated equipment) integrated and commissioned at SLDCs of OPTCL of the Eastern Region.

2. The Petitioner has made the following prayers:

"1) Approve the Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition.

2) Allow tariff as 90% of the Annual Fixed Charges in accordance with clause 7 (i) of Regulation 7 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for purpose of inclusion in the PoC charges.

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

4) Tariff may be allowed as claimed based on 30% of the cost considered as equity after adjustment of grant.

5) Tariff may be allowed on the estimated completion cost, since few elements of the project are yet to be completed, the completion cost for the assets covered under instant Petition are within the overall project cost.

6) 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 under clause 25 of the Tariff regulations 2014 and Tariff regulations 2019.

7) Allow the Petitioner to bill and adjust impact on Interest on Loan due to change in interest rate on account of floating rate of interest applicable during 2014-19 and 2019-24 period, if any, from the Respondents.

8) Allow the Petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 8.7 above.

9) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and 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.

10) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, and other expenditure (if any) in relation to the filing of petition.

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

12) Allow the Petitioner to bill and recover Licensee fee and RLDC fees and Charges, separately from the Respondents in terms of Regulation 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.



13)Allow the initial spare as procured in the current petition in full as given in para-6.1 under Regulation 54 of the CERC (Terms and Condition of Tariff) Regulation, 2014, "Power to Relax".

14) Allow the Petitioner to bill tariff from actual DOCO and allow tariff for 2019-24.

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

Background

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

a. The Investment Approval (IA) of the project was accorded by Board of Directors of the Petitioner's Company vide the Memorandum No. C/CP/URTDSM Ph-1, dated 21.1.2014 with an estimated cost of ₹37463 lakh including Interest During Construction (IDC) of ₹2954 lakh based on October, 2013 price level, in its 297th meeting dated 13.1.2014.

b. The scope of the scheme was discussed and agreed in Standing Committee Meeting (SCM) of all five Regions held on 5.3.2012 and further in 27th ERPC meeting held on 30.5.2014 and 31.5.2014. Further, it was decided that the Petitioner would implement the URTDSM Scheme as approved in the joint meeting of all five Regional SCM on Power System Planning held on 5.3.2012.

c. After deliberation in the above said SCM, members of Regional Standing Committees on Power System Planning agreed that subject scheme is to be implemented by the Petitioner as system strengthening scheme and the cost shall be added in the National Pool Account and to be shared by all DICs as per POC mechanism under the Sharing Regulations. It was also agreed that the Petitioner shall file the petition before the Central Commission for getting Regulatory Approval for subject project. d. Accordingly, the Petitioner had filed Petition No. 129/MP/2012 before the Commission for grant of Regulatory Approval of URTDSM project wherein, the Commission granted Regulatory Approval vide order dated 6.9.2013 in Petition No. 129/MP/2012.

e. The scope of work covered under the Transmission Project broadly includes:

Phase-I:

- 1. Installation of approximately 1186 numbers of PMUs at the sub-stations and power plants of all utilities of the Country based upon following criterion.
 - a. Sub-stations of 400 kV and above
 - b. Generating Stations of 220 kV and above
 - c. HVDC terminals
 - d. Important inter-regional and inter-national connection points
- 2. The data flow hierarchy similar to that being followed for ULDC system is being adopted for URTDSM. Accordingly, Phasor Data Concentrators (PDCs) which shall acquire data from PMUs to be installed is as follows.
 - a. Super PDCs at Main and Backup NLDCs (2 Sets)
 - b. Super PDCs at all the five RLDCs. (5 sets) and NTAMC
 - c. Master PDCs at SLDCs (25 sets) and strategic locations.
 - d. Visualisation software & Data archiving server at all PDC locations at including NTAMC and NLDC.
 - e. Router/Switches and miscellaneous items.
 - f. Communication interfaces, cables etc.
 - g. Remote Consoles at each RPC, Union Territories, CEA, CTU and other identified locations.
- 3. The hardware and software proposed to be installed at Control Centers to accommodate all the PMUs under Phase-I with provision for future expansion of about 50%.
- 4. The FO based communication system existing and being established by Petitioner's Company and Constituents shall meet the requirement of Phase-I.
- 5. Analytical Software
- f. The status of the transmission assets covered under the transmission project

and the details of the petitions in which they are covered are as follows:



SI. No	Asset Name	SCOD	Actual COD	Petition No.
1	URTDSM System (Control Center Equipment, PMU's and associated equipment) integrated and commissioned at SRLDC & SLDCs of Southern Region		28.9.2018	254/TT/2019
2	PHASE-I URTDSM for NRLDC & SLDCs of Northern Region		30.6.2018	486/TT/2019
3	URTDSM Systems (Control Center Equipment's, PMU's and associated equipment's) integrated and commissioned at ERLDC, Kolkata; SLDC, WBSETCL and SLDC, DVC		12.12.2018	Covered in the
4	URTDSM Systems (Control Center Equipment's, PMU's and associated equipment's) integrated and commissioned at SLDC, OPTCL.	13.4.2016	2.1.2019	instant petition
5	URTDSM Systems (PDCs & its associated parts) supplied and installed at NERLDC and SLDCs of Assam, Meghalaya and Tripura and PMUs along with 51 PMUs & its associated items (in 14 stations)		1.1.2020	Yet to be filed
6	URTDSM System (Control Center Equipment, PMU's and associated equipment's) integrated and commissioned at WRLDC, Mumbai & SLDCs of Madhya Pradesh and Gujarat		31.5.2019	

g. As per IA, the scheduled COD of the transmission project was 13.4.2016 against which the actual COD of Asset-I and Asset-II were 12.12.2018 and

2.1.2019 respectively.

h. Seven numbers of RTUs in Eastern Region are yet to achieve COD.

4. The Petitioner has claimed determination and true up of tariff of 2014-19 tariff period as per the 2014 Tariff Regulations and determination of transmission tariff of

2019-24 tariff period as per the 2019 Tariff Regulations in the instant petition.

5. We have considered the submissions of the Petitioner. Usually, tariff is initially approved for the transmission assets put into commercial operation during a tariff period on the basis of the estimates and later at the end/ after the tariff period the tariff is trued up after the accounts are finalised. In the instant case, it is observed that the transmission assets were put into commercial operation during the last six months of 2014-19 tariff period. It is now 2022 and it appears that the accounts for the 2014-19 tariff period have been finalised and the Petitioner has the actual final figures. Thus, there is no need to file two petitions, one for initial determination of tariff and one more petition for truing up. To avoid duplicity of petitions, we approve the tariff for the 2014-19 tariff period based on the actuals as per the 2014 Tariff Regulations and determine the tariff for the 2019-24 tariff period as per the 2019 Tariff Regulations in the instant petition. However, the Petitioner is directed to submit the grant receipt papers/ details at the time of true up.

6. The Respondents are distribution licensees, power departments, power utilities and transmission licensees, which are procuring transmission services from the Petitioner, mainly beneficiaries of the Eastern Region.

7. The Petitioner has served the petition on the Respondents and notice of this petition has been published in the newspaper in accordance with Section 64 of the Electricity Act, 2003. No comments/ objections have been received from the general public in response to the aforesaid notice published in the newspaper by the Petitioner. Bihar State Power (Holding) Company Limited (BSPHCL), Respondent No. 2, *vide* affidavit dated 8.11.2021 has filed its reply and has raised the issues of mismatch between COD of Asset-II, time over-run, Initial Spares, grossing up of RoE, O&M Expenses, GST, filing fee and expenses, floating rate of interest, security expenses and

capital spares. The Petitioner *vide* affidavit dated 22.11.2021 has filed the rejoinder to the reply of BSPHCL.

8. BSPHCL has raised the issue of MAT rate and grossing up of RoE in this petition. BSPHCL has raised the same issue in other petitions earlier. The Commission in order dated 28.5.2021 in Petition No. 476/TT/2019 considered the submissions of BSPHCL and gave clear findings rejecting the contention of BSPHCL. As BSPHCL has not challenged those findings, the same have attained finality. In view of this, the contention of BSPHCL pertaining to grossing up of RoE is rejected. The issues which are specific to the instant petition and not dealt by the Commission earlier are considered in the relevant paragraphs of this order.

9. This order is issued considering the submissions made by the Petitioner in its affidavits dated 20.10.2020, 8.7.2021, BSPHCL's reply dated 8.11.2021 and Petitioner's rejoinder dated 22.11.2021.

10. The hearing in this matter was held on 2.11.2021 through video conference and the Commission reserved the order in the matter. However, the order could not be issued before Shri P.K. Pujari, former Chairperson, demitted office. Therefore, the matter was heard again on 23.6.2022.

11. During the hearing on 23.6.2022, the representative of the Petitioner submitted that as directed by the Commission vide RoP dated 2.11.2021, BSPHCL has filed reply in the matter on 8.11.2021 and the Petitioner has filed rejoinder to the reply of BSPHCL vide affidavit dated 21.11.2021. Learned counsel for BSPHCL submitted that the reply already filed in the matter may be considered.

12. Having heard the representatives of the Petitioner and after perusal of the materials on record, we proceed to dispose of the petition.

TRUING UP OF ANNUAL FIXED CHARGES FOR THE 2014-19 TARIFF PERIOD

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

		(₹ in lakh)
Particulars	Asset-I	Asset-II
Farticulars	2018-19 (Pro-rata)	2018-19 (Pro-rata)
Depreciation	15.77	1.68
Interest on Loan	0.00	0.00
Return on Equity	59.01	6.29
O&M Expenses	0.00	0.00
Interest on Working Capital	1.55	0.17
Total	76.33	8.14

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

		(₹ in lakh)
Particulars	Asset-I	Asset-II
	2018-19 (Pro-rata)	2018-19 (Pro-rata)
O&M Expenses	0.00	0.00
Maintenance Spares	0.00	0.00
Receivables	42.22	5.56
Total Working Capital	42.22	5.56
Rate of Interest (%)	12.20	12.20
Interest on Working Capital	1.55	0.17

Date of Commercial Operation ("COD")

15. The Petitioner has claimed actual date of commercial operation in respect of

Asset-I and Asset-II as 12.12.2018 and 2.1.2019 respectively.

16. Regulation 4 (4) of the 2014 Tariff Regulations provides as follows:

"(4) Date of commercial operation in relation to a communication system or element thereof shall mean the date declared by the transmission licensee from 0000 hour of which a communication system or element is put into service after completion of site acceptance test including transfer of voice and data to respective control centre as certified by the respective Regional Load Dispatch Centre."



17. BSPHCL has submitted that the Petitioner has submitted different CODs for Asset-II in different parts of the Petition. In response, the Petitioner has submitted that the COD for Asset-II is 2.1.2019.

18. In support of actual COD of Asset-I and Asset-II, the Petitioner has submitted RLDC charging certificate issued by ERLDC, DVC, WBSETCL for Asset-I and OPTCL for Asset-II.

19. We have considered the submissions of the Petitioner and BSPHCL. Taking into consideration the RLDC Charging Certificate dated 23.9.2019, self-declaration of COD letter dated 1.7.2020 and the commissioning certificate dated 19.3.2019 and 22.8.2019 from DVC and WBSETCL respectively, the COD of the Asset-I is approved as 12.12.2018. Taking into consideration the self-declaration of COD letter dated 1.7.2020 and commissioning certificate dated 19.8.2019 from OPTCL, the COD of the Asset-II is approved as 2.1.2019.

Capital Cost

20. The Petitioner has claimed the capital cost based on actual expenditure and after adjusting Power System Development Fund (PSDF) grant received towards installation of the transmission assets during the 2014-19 tariff period. The capital cost claimed as on COD and the ACE for 2014-19 tariff period is as follows:

				(₹ in lakh)
Asset	Approved FR Cost	Capital Cost claimed as on COD	ACE claimed for 2018-19	Capital Cost claimed as on 31.3.2019
Asset-I	5859.82	3288.57	29.59	3318.16
Asset-II	750.13	431.86	6.82	438.68
Total	6609.95	3720.43	36.41	3756.84

21. The estimated completion cost of the transmission assets is within the FR apportioned approved cost and, therefore, there is no cost over-run.



<u>Time Over-run</u>

22. As per the IA, the scheduled COD of the transmission assets under the transmission scheme was 13.4.2016 against which the actual COD for Asset-I and Asset-II was 12.12.2018 and 2.1.2019 respectively. Accordingly, there is time over-run of 973 days and 994 days in case of Asset-I and Asset-II respectively. The Petitioner has submitted the reasons for time over-run as follows:

a. Wide Area Measurement System (WAMS) under URTDSM Project is first of its kind project in the world for real time measurement, monitoring and visualization of power system as well as taking preventive/corrective action in the regime of grid management with improved efficiency. Under the Project, 281 numbers of Phasor Measurement Units (PMUs) were to be installed covering 544 transmission lines and 82 sub-stations in the Eastern Region. In the scope of work to be executed, under the subject project, PMU is first and most important building block of the project. At the time of IA dated 13.1.2014, PMUs of IEEE C37.118.1-2011 standard was applicable whereas the new standard of IEEE C37.118.1-2014 was awaited from IEEE. During award and implementation of this project, PMUs were supposed to be complying with new IEEE C37.118.1-2014 standard. Though new standard, IEEE C 37.118-1a-2014 on PMUs was released in May 2014 but no approved test laboratory was available in India or abroad for testing of PMU features (IEEE Synchro phasor Certification Program) at that time. The Physical Progress of URTDSM Project was affected due to non-availability of test laboratories worldwide for type testing of PMU in accordance with the latest IEEE C37.118 Standard as per the Specifications. In this regard, the manufacturing clearance for PMU was linked to successful completion of Type Testing. The said bottleneck has resulted in the rescheduling of entire Project. After Consumer Energy Laboratory Service, USA was approved 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 completed on 7.7.2015 for supply, installation and commissioning of PMUs at various substation in Central and State Sector Constituents. The Petitioner has submitted the copies of relevant test reports and competition certificate of Type tests along with the Petition.

- b. Therefore, delay from IA dated 13.1.2014 to 31.5.2015 was mainly due to delay in release of IEEE C 37.118-1a-2014 standard and non-availability of competent labs for testing of PMUs.
- c. The scope of project involves hardware and software installation at State sector control centers/ Central sector control sectors/ SLDCs. In this regard, the Petitioner has submitted that it had started communicating to constituents to provide space/ basic civil structure/ fronts etc. However, there was significant delay by the constituents in providing requisite infrastructure. Accordingly, the work was delayed due to space constraint and non-availability of basic infrastructure/ fronts/ work permission for connection at various state utilities sub-stations and generating stations as follows:
 - i) Delay due to non-readiness of ERLDC Control Room The delay from 1.9.2014 to 15.2.2018 (approximately 41 months) is due to nonreadiness of ERLDC Control Room. Initially, the renovation / civil work for communication room/ control room were to be done by ERLDC but the work was finally not done by them. The work was finally carried out by the Petitioner based on request of ERLDC during meeting dated 13.11.2017. Based on this meeting's outcome and clearance received from ERLDC,

the Petitioner awarded the civil renovation work on 15.2.2018. The Petitioner has submitted the joint survey report of RLDC and MoM with ERLDC and mail along with the Petition.

ii) Delay due to non-availability of air-conditioning and illumination at SLDC, Howrah (WBSDCL)- The delay from 7.11.2014 to 26.6.2018 is mainly due to non-readiness of the AC and illumination which led to delay in testing of PDC system at SLDC, West Bengal. Initially, the requirement of AC and lighting was intimated to West Bengal during the survey on 7.11.2014, but WBSETCL, in 22nd SCADA O&M meeting, intimated that the air-conditioning and lighting will be provided by 26.2.2018 and the same was finally provided on 26.6.2018. The Petitioner has submitted the joint survey report signed by WBSETCL, OCC, RPC and SCADA subcommittee along with the Petition.

iii) Delay due to non-availability of air-conditioning in server room and pending civil renovation work in UPS/DCPS Room- The delay from 25.8.2014 to 15.5.2018 is mainly due to non-readiness of the AC and Civil work which led to delay in testing of PDC system at SLDC, OPTCL. Initially, the requirement of AC and lighting was intimated to West Bengal during survey on 25.8.2014, but the air-conditioning and civil work has been completed on 15.5.2018. The Petitioner has submitted the joint survey report signed by OTCL, and letter to OPTCL along with the Petition.

23. The Petitioner has further submitted that despite facing various challenges and delays beyond control, the Petitioner was able to put the instant assets into commercial operation on 12.12.2018 and 2.1.2019 and that the delay was beyond the control of

Petitioner. The Petitioner has requested to condone the time over-run as it was due to uncontrollable factors and beyond the control of the Petitioner in accordance with Regulation 12(2)(i) of 2014 Tariff Regulations.

24. In response to Commission's query the details of time over-run for each activity/event supported by legible copies of PERT/CPM charts, the Petitioner vide affidavit dated 8.7.2021 has submitted the details of activity wise time over-run as follows:

Activity	Schedule dates		Actua	l date	Reason
NOA	14.1.2014	10.2.2014	14.1.2014	11.2.2014	No delay
Supply	23.9.2014	14.12.2015	1.6.2015	31.8.2016	Delay from IA dated 13.1.2014 to 31.5.2015 was mainly due to delay in release of IEEE C 37.118-1a-2014 standard and non- availability of competent labs for testing of PMUs
Installation	16.12.2014	8.2.2016	10.7.2017	1.6.2018	Delay due to non- availability of control center.
SAT & SAVT	2.6.2015	12.4.2016	27.4.2018	10.12.2018	No delay

For Asset-I:

For Asset-II:

Activity	Schedu	le dates	Actual date		Reason	
NOA	14.1.2014	10.2.2014	14.1.2014	11.2.2014	No delay	
Supply	23.9.2014	14.12.2015	1.6.2015	31.8.2016	Delay from IA dated 13.1.2014 to 31.5.2015 was mainly due to delay in release of IEEE C 37.118-1a- 2014 standard and non-availability of competent labs for testing of PMUs	
Installation	16.12.2014	8.2.2016	10.7.2017	1.6.2018	Delay due to non- availability of control center.	

Order in Petition No. 678/TT/2020

SAT &	2 6 2015	12 4 2016	27 4 2019	10.12.2018	No dolov
SAVT	2.0.2015	12.4.2010	27.4.2010	10.12.2010	NO delay

25. BSPHCL has submitted that the justification given by the Petitioner are not cogent, incorrect and baseless and hence cannot be accepted. The Petitioner has attributed the time over-run to release of IEEE C 37.118-1a-2014 standard and nonavailability of competent labs for testing of PMUs. This delay from 13.1.2014 to 31.5.2015 and actual COD of Asset-I and Asset-II are 11.12.2018 and 1.1.2019 respectively which means that even after 31.5.2015, it took the Petitioner almost threeand-a-half years to achieve the COD and therefore this ground cannot be accepted for condoning the delay. BSPHCL has submitted that the other three reasons are alleged to be non-readiness of ERLDC Control room for about 41 months, non-availability of air-conditioning and illumination at SLDC, Howrah (WBSDCL) from 7.11.2014 to 26.6.2018 and non-availability of air-conditioning in server room and pending civil renovation work in UPS/DCPS room from 25.8.2014 to 15.5.2018 in West Bengal. BSPHCL has claimed that these reasons are totally incorrect and unsustainable as the Petitioner has not provided any proof/ supporting evidence that these small problems continued for about 4 years leading to delay and that the Petitioner has been making regular and repeated efforts to solve the issues but could not rectify them and its solution was beyond their control. BSPHCL has further submitted that no evidence has been brought on record and hence the time over-run cannot be condoned.

26. In response, the Petitioner has submitted that the reasons for delay are already submitted along with the Petition and has requested to consider the same.

27. We have considered the submissions of the Petitioner and BSPHCL. As per the IA, the SCOD of the transmission assets under the transmission scheme was 13.4.2016 against which the Asset-I and Asset-II are put into commercial operation on 12.12.2018 and 2.1.2019 with a delay of about 973 days and 994 days respectively. The main

reasons for the delay in commissioning of the Asset-I and Asset-II is delay in release of IEEE C 37.118-1a-2014 standard and non-availability of competent labs for testing of PMUs, non-readiness of ERLDC Control Room, non-availability of air-conditioning and illumination at SLDC, Howrah (WBSDCL) and non-availability of air-conditioning in server room and pending civil renovation work in UPS/DCPS Room.

28. It is observed that the delay from IA dated 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, the time over-run from the IA (13.1.2014) to 31.5.2015 (503 days) in case of Asset-I and Asset-II is condoned.

29. The Petitioner has further submitted that Asset-I and Asset-II were further delayed due to non-availability of Control Rooms of ERLDC and SLDCs. As such the time over-run from 1.6.2015 to 26.6.2018 is not being condoned. Accordingly, out of the total delay of 973 days and 994 days, we condone the time over-run of 503 days in case of Asset-I and Asset-II and the balance time over-run of 470 days and 491 days in case of Asset-I and Asset-II respectively is not condoned. However, the Petitioner is granted liberty to approach the Commission along with relevant supporting documents at the time of true up with regard to the non- condonation of the delay.

Interest During Construction (IDC)

30. The Petitioner has submitted that the transmission scheme was funded through PSDF grant up to 70% of the capital cost. The balance was funded through the internal resources and there is no deployment of loan. Accordingly, the Petitioner has not claimed any IDC for the transmission assets and has submitted the Auditor Certificates in support of the same.

Incidental Expenditure During Construction (IEDC)

31. The Petitioner has claimed IEDC and submitted Auditor Certificates in support of

the same. The Petitioner has also submitted that entire IEDC is on cash basis and has

been discharged up to COD for the transmission assets.

32. We have considered the submissions of the Petitioner. The time over-run of 470

days and 491 days in case of Asset-I and Asset-II respectively has not been condoned.

Accordingly, the amount of IEDC as claimed and as allowed is as follows:

Asset	IEDC claimed (as per Auditors Certificates)	IEDC disallowed due to time over- run not condoned	IEDC allowed
Asset-I	147.04	38.52	108.52
Asset-II	16.76	4.53	12.23

Initial Spares

33. Regulation 13(d) of the 2014 Tariff Regulations provides that Initial Spares shall

be capitalized as a percentage of plant and machinery cost up to cut-off date, subject

to the following ceiling norms:

"(d) Transmission System Transmission line: 1.00% Transmission sub-station (Green Field): 4.00% Transmission sub-station (Brown Field): 6.00% Gas Insulated sub-station :5.00% Communication System: 3.5%"

34. The Initial Spares claimed by the Petitioner are as follows:

					(₹ in lakh
Asset	Plant and	Initial	Ceiling	Initial Spares	Excess
	Machinery	Spares	limit	worked out by	Initial
	excluding IDC,	claimed by	(in %)	the Petitioner	Spares
	IEDC, land cost and cost of civil works as on cut-	the Petitioner (B)	(C)	D = [(A- B)*C/(100-C)]	E=B-D
	off date				
	(A)				
For sub-st	ation				
Asset-I	4311.04	282.74	3.50	146.10	136.64
Asset-II	551.86	21.70	3.50	19.23	2.47
Total	4862.90	304.44		165.33	139.11

Order in Petition No. 678/TT/2020

35. The Petitioner has submitted that the discharge of Initial Spares has been considered on cash basis in the Auditor Certificates. The discharge statement of Initial Spares as submitted is as follows:

Asset	Particulars	Total Initial Spares claimed	Initial Spares discharged up to COD	Initial Spares discharged in 2019-20	Initial Spares discharged in 2020-21
Asset-I	Communication Equipment	282.74	263.72	14.79	4.23
Asset-II	Communication Equipment	21.70	20.46	1.24	0.00

36. The Petitioner has further submitted that the Initial Spares for the transmission project exceeds the ceiling limit prescribed in 2014 Tariff Regulations. However, the Petitioner has procured Initial Spares for smooth and reliable operation of subject transmission assets. The Petitioner has further submitted that PMUs/PDCs are being used for the first time at such a large scale in the Indian power system for reliable and secured grid operation which is of national interest and the Initial Spares procured are essential spares for smooth running of the grid. The Petitioner has prayed that the Initial Spares may be allowed in full under Regulation 54 ("Power to Relax") of 2014 Tariff Regulations.

37. BSPHCL has submitted that the Petitioner has submitted that the Initial Spares for both the assets has exceeded the ceiling limit prescribed in 2014 Tariff Regulations and has prayed to allow the Initial Spares as claimed. BSPHCL has submitted that no justification has been given for exceeding the limit and on what basis or on whose direction this limit was exceeded. BSPHCL has submitted that this was done knowingly and the onus lies on the Petitioner to disclose the reason for not following the relevant regulation. BSPHCL has further submitted that this appears to be a case of deliberately not following the regulations and in such a case the Petitioner cannot simply ask for invocation of Regulation 54 (Power to Relax) of 2014 Tariff Regulations. 38. In response, the Petitioner has submitted that the URTDSM Project implemented by the Petitioner's Company is first of its kind in the world with more than 1400 numbers of PMUs. The project was conceptualized to support grid operation with intelligent measurements, monitoring, visualization and analysis with aim to improve reliability and efficiency of available resources. It involved application of Wide Area Measurement Technology at ISTS and STU level in a unified manner. The Petitioner has submitted that the URTDSM Project enabled synchronous measurement of real time grid parameters with very fast data transfer to control centres which is very effective in reliable, secure and economical grid operation. The scope of URTDSM Project included establishment of PMUs, Phasor Data Concentrators (PDC) including associated systems and development of analytical software using PMU measurements. Major equipment for URTDSM Project is as follows:

1. Computer System and accessories at Control Centre

2. Phasor Measurement Units and associated accessories at sub-station

3. Uninterruptible Power Supply (UPS) at Control Centre

39. The Petitioner has further submitted that as the URTDSM Project involved technologically intensive systems and taken up simultaneously in all the regions with locations geographically wide spread, implementation was a real challenge. In order to ensure smooth implementation, availability of adequate spares during construction stage was considered essential to meet any contingency. Accordingly, initial spares procured under the project are as follows:

a) One server of each kind utilized in control center was kept as spare so that in case of need the faulty server can be replaced without affecting commissioning of the system. Similarly, other hardware such as historian, switches, LAN (Local

Area Network) and UPS components etc. one of each kind/critical component are kept as spare.

b) At sub-station level, 10% of the total PMUs supplied in the State and for ISTS are kept as spare considering the remote geographical locations of the substations to meet any contingency during commissioning.

Hence, the Initial Spares procured are essential spares for smooth running of the grid and therefore it is prayed that Initial Spares may be allowed in full under Regulation 54 ("Power to Relax") of 2014 Tariff Regulations.

40. We have considered the submissions of the Petitioner and MPPMCL. The Petitioner has claimed excess Initial Spares under Regulation 76 ("Power to Relax") of 2019 Tariff Regulations. We are not inclined to allow excess Initial Spares by relaxing the provisions of the 2014 Tariff Regulations as prayed by the Petitioner.

41. The initial spares claimed by the Petitioner are restricted to ceiling limit of 3.5% under Regulation 13(d) of the 2014 Tariff Regulations. The Initial Spares computed and allowed as per the 2014 Tariff Regulations are as follows:

					(₹ in lakh)
Plant and	Initial	Ceiling	Initial	Initial	Excess
Machinery	Spares	limit	Spares	Spares	Initial
excluding IDC,	claimed	(%) (C)	worked out	allowed	Spares
IEDC, land cost	by the		by the	(E)	disallowed
and cost of civil	Petitioner		Petitioner		(F=B-E)
works as on	(B)		D = [(A-		
cut-off date			B)*C/(100-		
(A)			C)]		
4311.04	282.74	3.50	146.10	146.10	136.64
551.86	21.70	3.50	19.23	19.23	2.47
	Machinery excluding IDC, IEDC, land cost and cost of civil works as on cut-off date (A) 4311.04	Machinery excluding IDC, IEDC, land cost and cost of civil works as on cut-off date (A)Spares claimed by the Petitioner (B)4311.04282.74	Machinery excluding IDC, IEDC, land costSpares claimed by thelimit (%) (C)IEDC, land cost and cost of civil works as on cut-off date (A)Petitioner (B)Imit (%) (C)4311.04282.743.50	Machinery excluding IDC, IEDC, land costSpares claimed by thelimit (%) (C)Spares worked out by theand cost of civil works as on cut-off date (A)PetitionerD = [(A- B)*C/(100- C)]4311.04282.743.50146.10	Machinery excluding IDC, IEDC, land costSpares claimed by thelimit (%) (C)Spares worked out by theSpares allowed (E)and cost of civil works as on cut-off date (A)PetitionerPetitionerD = [(A- B)*C/(100- C)]D = [(A- B)*C/(100- C)]

42. Accordingly, the excess Initial Spares disallowed as per the actual discharge is as follows:

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. . . .

Asset	Initial Spares disallowed as on COD	Initial Spares disallowed in 2019-20	Initial Spares disallowed in 2020-21	Total Initial Spares Disallowed
Asset-I	117.62	14.79	4.23	136.64
Asset-II	1.23	1.24	0.00	2.47

Treatment of PSDF Grant

43. The regulatory approval for execution of subject transmission system was accorded vide order dated 6.9.2013 in Petition No. 129/MP/2012. The Commission

made the following observations in order dated 6.9.2013:

"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."

44. The Petitioner, in accordance with the order, applied for the reimbursement of

the loan before the Management of PSDF. The Ministry of Power vide its O.M.

No.10/1/2014/OM dated 31.12.2014 sanctioned the PSDF grant of ₹26224 lakh (70%

of project cost of ₹37463 lakh).

45. The sanction order dated 31.12.2014, *inter-alia*, states the terms and conditions

for the implementation of the transmission scheme as follows:

"..... (ii) No tariff shall be claimed by POWERGRID for the portion of the scheme funded from PSDF.

(vi) Expenditure beyond Rs.262.24 Crores shall be provided by POWERGRID from their own resources.

46. The Petitioner's IA vide letter dated 21.1.2014 pertaining to the transmission scheme states as follows:

"The project is being funded through domestic borrowings (loans/bonds)/ External

Commercial Borrowing (ECB) etc. and POWERGRID's internal resources with debt: equity ratio of 70:30".

47. The Petitioner has further submitted that the Petitioner has utilised the grant of ₹2629.78 lakh up to 31.3.2019 and the remaining grant will be utilized during 2019-24 period. The Petitioner has submitted the details of total grant adjustment in the capital cost of the transmission scheme as follows:

			(₹ in lakh)
Asset	Grant utilized up to COD	Grant utilized in ACE for 2018-19	Total grant
Asset-I	2302.00	20.71	2322.71
Asset-II	302.30	4.77	307.07
Total	2604.30	25.48	2629.78

48. Proviso to Regulation 9(6)(d) and proviso (iii) to Regulation 19(1) of the 2014

Tariff Regulations respectively provide as follows:

"Provided that any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment shall be excluded from the Capital Cost for the purpose of computation of interest on loan, return on equity and depreciation."

"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."

49. We have considered the submissions of the Petitioner. As per the above provisions, grant is not required to be considered for debt-equity ratio. The Commission in orders dated 1.11.2019 and 29.3.2020 in Petition No. 173/TT/2018 and Petition No.272/TT/2018 respectively had reduced PSDF grant received from the capital cost of the transmission assets.

50. In line with the 2014 Tariff Regulations, the entire grant received under PSDF has been reduced from the allowable capital cost as on COD and allowable ACE for the purpose of computation of tariff and the same has been considered in the relevant paragraph of this order.

51. The details of the capital cost as on COD approved in the instant order are as follows:

					(₹ in lakh)
Asset	Capital Cost claimed as on COD on accrual basis (A)	Less: PSDF Grant received as on COD (B)	Less: IEDC disallowed due time over-run not condoned (C)	Less: Initial Spares disallowed as on COD (D)	Capital Cost allowed as on COD on cash basis (E) = (A-B-C)
Asset-I	3288.57	2302.00	38.52	117.62	830.43
Asset-II	431.86	302.30	4.53	1.23	123.79
Total	3720.43	2604.30	43.05	118.85	954.22

Additional Capital Expenditure (ACE)

52. The Petitioner has claimed ACE on account of balance and retention payments

in accordance with Regulation 14(1)(i) of the 2014 Tariff Regulations as follows:

		(₹ in lakh)
Asset	Particulars	ACE claimed for 2018-19
Asset-I	Expenditure as per Auditor Certificate	29.59
	Less: Grant received during the year	20.71
	Total ACE claimed	8.88
Asset-II	Expenditure as per Auditor Certificate	6.82
	Less: Grant received during the year	4.77
	Total ACE claimed	2.05

53. We have considered the submissions of the Petitioner. ACE claimed by the Petitioner towards balance and retention payments has been allowed under Regulation 14(1)(i) of the 2014 Tariff Regulations. ACE allowed for the 2014-19 tariff period in respect of the transmission asset is as follows:

		(₹ in lakh)
Asset	Particulars	ACE allowed for 2018-19
Asset-I	Expenditure as per Auditor Certificate	29.59
	Less: Grant received during the year	20.71
	Total ACE allowed	8.88
Asset-II	Expenditure as per Auditor Certificate	6.82
	Less: Grant received during the year	4.77
	Total ACE allowed	2.05

54. Accordingly, the capital cost considered for the 2014-19 tariff period is as follows:

			(₹ in lakh)
Asset	Admitted Capital Cost (as on COD)	ACE allowed (2018-19)	Total Capital Cost (as on 31.3.2019)
Asset-I	830.43	8.88	839.31
Asset-II	123.79	2.05	125.84
Total	954.23	10.93	965.15

Debt-Equity Ratio

55. The Petitioner has claimed that capital cost was met from the grant to the extent of 70% and balance 30% through internal sources in line with the terms and conditions of the MoP letter dated 31.12.2014. Accordingly, the details of the debt-equity ratio as on COD and as on 31.3.2019 for the transmission assets are as follows:

Asset	Funding	Capital Cost (as on COD) (₹ in lakh)	(in %)	ACE in 2018-19	(in %)	Capital Cost (as on 31.3.2019) (₹ in lakh)	(in %)
	Debt	0.00	0.00	0.00	0.00	0.00	0.00
Asset-I	Equity	830.43	100.00	8.88	100.00	839.31	100.00
	Total	830.43	100.00	8.88	100.00	839.31	100.00
	Debt	0.00	0.00	0.00	0.00	0.00	0.00
Asset-II	Equity	123.79	100.00	2.05	100.00	125.84	100.00
	Total	123.79	100.00	2.05	100.00	125.84	100.00

Depreciation

The Petitioner vide affidavit dated 8.7.2021 has submitted that the PMUs 56. captured under the instant transmission project comes under the category of IT equipment as per the Tariff Regulations.

57. We have considered the submissions of the Petitioner. The Petitioner has claimed the depreciation of assets by considering the same as IT equipment. It is observed that as per the Auditor Certificate, the transmission assets are Communication System. Accordingly, the Gross Block during the 2014-19 tariff period has been depreciated at Weighted Average Rate of Depreciation (WAROD). WAROD at Annexure-I has been worked out after considering the depreciation rates of assets as prescribed in the 2014 Tariff Regulations and depreciation allowed for the respective

			(₹ in lakh)
		Asset-I	Asset-II
	Particulars	2018-19	2018-19
		(110 days)	(89 days)
А	Opening Gross Block	830.43	123.79
В	Additional Capitalisation	8.88	2.05
С	Closing Gross Block (A+B)	839.31	125.84
D	Average Gross Block (A+C)/2	834.87	124.82
Е	Freehold land	0.00	0.00
F	Weighted Average Rate of Depreciation (%)	6.33	6.33
G	Balance useful life of the asset	15	15
Н	Elapsed life at the beginning of the year	0	0
Ι	Aggregate Depreciable Value	751.39	112.34
J	Combined Depreciation during the year	15.93	1.93
Κ	Aggregate Cumulative Depreciation	15.93	1.93
L	Remaining Depreciable Value (I-K)	735.46	110.41

transmission assets during the 2014-19 tariff period is as follows:

58. The details of depreciation claimed by the Petitioner in the instant petition and

trued-up in the instant order are as follows:

		(₹ in lakh)
Asset	Particulars	2018-19
Asset-I	Claimed by the Petitioner in the instant petition	15.77
ASSEL-I	Approved after true-up in this order	15.93
Accet	Claimed by the Petitioner in the instant petition	1.68
Asset-II	Approved after true-up in this order	1.93

Interest on Loan (IoL)

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

Return on Equity (RoE)

60. The Petitioner has claimed RoE for the transmission assets in terms of Regulations 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that it is liable to pay income tax at Minimum Alternate Tax (MAT) rates and has claimed the effective tax rates for the 2014-19 period as follows:

Year	Claimed effective tax (in %)	Grossed-up RoE (in %) [(Base Rate)/(1-t)]	Grossed-up RoE where Additional RoE is allowed (in %) [(Effective Rate)/(1-t)]
2018-19	21.549	19.758	20.395

61. We have considered the submissions of the Petitioner. The Commission, *vide* order dated 27.4.2020 in Petition No. 274/TT/2019, had arrived at the effective tax rate for the Petitioner based on the notified MAT rates The MAT rates considered in order dated 27.4.2020 in Petition No. 274/TT/2019 are considered for the purpose of grossing up of rate of RoE for truing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations, which are as follows:

Year	Notified MAT rates (inclusive of surcharge & cess) (in %)	Base rate of RoE (in %)	Grossed-up ROE [(Base Rate)/(1-t)] (in %)
2014-15	20.961	15.50	19.610
2015-16	21.342	15.50	19.705
2016-17	21.342	15.50	19.705
2017-18	21.342	15.50	19.705
2018-19	21.549	15.50	19.758

62. RoE is allowed on the basis of the MAT rate applicable in the respective years for the 2014-19 tariff period and it is as follows:

			(₹ in lakh <u>)</u>
	Particulars	Asset-I	Asset-II
		2018-19 (110 days)	2018-19 (89 days)
А	Opening Equity	830.43	123.79
В	Additions	8.88	2.05
С	Closing Equity (A+B)	839.31	125.84
D	Average Equity (A+C)/2	834.87	124.82
Е	Return on Equity (Base Rate) (%)	15.500	15.500
F	MAT Rate for respective year (%)	21.549	21.549
G	Rate of Return on Equity (%)	19.758	19.758
	Return on Equity	49.71	6.01

63. The details of RoE for the transmission assets as claimed by the Petitioner in the

instant petition and trued-up in the instant order are as follows:

Order in Petition No. 678/TT/2020

		(₹ in lakh)
Asset	Particulars	2018-19
Asset-I	Claimed by the Petitioner in the instant petition	59.01
	Approved after true-up in this order	49.71
Asset-II	Claimed by the Petitioner in the instant petition	6.29
	Approved after true-up in this order	6.01

Operation & Maintenance Expenses (O&M Expenses)

64. The Petitioner has submitted that O&M Expenses for the Central Portion has been considered as 7.5% of the capital cost. The wage revision of the employees of the Petitioner company is due and the actual impact of wage hike which will be effective from a future date has also not been factored in fixation of the normative O&M rates prescribed for the 2014-19 tariff period. The Petitioner has further submitted that the scheme of wage revision applicable to CPSUs being binding on the Petitioner, the Petitioner would approach the Commission for suitable revision in the norms for O&M Expenses for claiming the impact of wage hike, if any, during 2014-19 tariff period.

65. BSPHCL has submitted that the O&M Expenses have been claimed for 2018-19 as per actual expenditure and the calculation for the central portion has been considered as 7.5% of the capital cost which will be subject to actual expenditure every year at the time of truing up. BSPHCL has further submitted that as per 2014 Tariff Regulations, the O&M Expenses of communication system forming part of inter-state transmission system shall be derived for the period of 2008-09 to 2012-13 based on audited accounts excluding abnormal variation if any after prudence check by the Commission. The normalised O&M Expenses after prudence check for the years 2008-09 to 2012-13 shall be escalated at the rate of 3.02% for computing base year expenses for 2012-13 and 2013-14 and at the rate of 3.32% for escalation from 2014-15 onwards. BSPHCL has submitted that this shows that the regulations have not been followed while making the claim.

66. In response, the Petitioner vide affidavit dated 22.11.2021 has submitted that actual O&M Expenses are claimed for 2018-19 and requested to allow the same.

67. We have considered the submissions made by the Petitioner and BSPHCL. It is observed that the Petitioner vide auditor certificate date 23.9.2020 has submitted 'NIL' O&M Expenses for the year 2018-19. Accordingly, we have not allowed any O&M Expenses for Asset-I and Asset-II.

68. As regards the impact of wage revision, any application filed by the Petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations.

Interest on Working Capital

69. The IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and is allowed as follows:

		(₹ in lakh)
Particulars	Asset-I	Asset-II
	2018-19 (110 days)	2018-19 (89 days)
O&M Expenses (O&M Expenses for one month)	0.00	0.00
Maintenance Spares (15% of O&M Expenses)	0.00	0.00
Receivables (Equivalent to two months of annual transmission charges)	37.05	5.54
Total Working Capital	37.05	5.54
Rate of Interest (in %)	12.20	12.20
Interest on Working Capital	1.36	0.16

70. The details of IWC for the transmission assets as claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

		(₹ in lakh)
Asset	Particulars	2018-19
Asset-I	Claimed by the Petitioner in the instant petition	1.55
Asset-i	Approved after true-up in this order	1.36



Asset	Particulars	2018-19
Asset-II Claimed by the Petitioner in the instant		0.17
Asset-II	Approved after true-up in this order	0.16

Approved Annual Fixed Charges for the 2014-19 Tariff Period

71. The trued-up AFC approved for the transmission assets for the 2014-19 period

is as follows:

		(₹ in lakh <u>)</u>
Particulars	Asset-I	Asset-II
	2018-19 (110 days)	2018-19 (89 days)
Depreciation	15.93	1.93
Interest on Loan	0.00	0.00
Return on Equity	49.71	6.01
O&M Expenses	0.00	0.00
Interest on Working Capital	1.36	0.16
Total	67.00	8.10

72. Accordingly, the Annual Transmission Charges for the transmission assets claimed by the Petitioner in the instant petition and approved after truing up in the instant order are as follows:

		(₹ in lakh)
Asset	Particulars	2018-19
Asset-I	Claimed by the Petitioner in the instant petition	76.33
ASSel-I	Approved after true-up in this order	67.00
	Claimed by the Petitioner in the instant petition	8.14
Asset-II	Approved after true-up in this order	8.10

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

73. The Petitioner vide affidavit dated 8.7.2021 has submitted that the instant transmission assets are not combined in the 2019-24 tariff period since both the assets are made for different States and for ease of billing. The Petitioner has claimed the transmission charges for the transmission assets for the 2019-24 tariff period as follows:

Asset-I

					(₹ in lakh)
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	155.70	181.35	200.61	200.61	200.61

Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	194.96	227.07	251.20	251.20	251.20
O&M Expenses	54.81	89.16	89.16	89.16	89.16
Interest on Working Capital	7.66	10.05	10.70	10.70	10.68
Total	413.13	507.63	551.67	551.67	551.65

Asset-II

					(₹ in iakn)
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	20.55	23.48	25.59	25.59	25.59
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	25.74	29.40	32.04	32.04	32.04
O&M Expenses	6.99	11.37	11.37	11.37	11.37
Interest on Working Capital	1.00	1.29	1.37	1.37	1.36
Total	54.28	65.54	70.37	70.37	70.36

74. The details of IWC claimed by the Petitioner for the transmission assets for the

2019-24 tariff period are as follows:

Asset-I

					(₹ in lakh)
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	4.57	7.43	7.43	7.43	7.43
Maintenance Spares	8.22	13.37	13.37	13.37	13.37
Receivables	50.79	62.58	68.02	68.02	67.83
Total Working Capital	63.58	83.38	88.82	88.82	88.63
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	7.66	10.05	10.70	10.70	10.68

Asset-II

(₹ in lakh)

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Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	0.58	0.95	0.95	0.95	0.95
Maintenance Spares	1.05	1.71	1.71	1.71	1.71
Receivables	6.67	8.08	8.68	8.68	8.65
Total Working Capital	8.30	10.74	11.34	11.34	11.31
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	1.00	1.29	1.37	1.37	1.36

Capital Cost

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

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



- (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;
 - (I) 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

Order in Petition No. 678/TT/2020

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."

76. The Petitioner has claimed capital cost as on 31.3.2019 excluding the grant as

follows:

				(₹ in lakn)
Asset	Approved FR Cost	Capital Cost claimed as on 1.4.2019	Less: PSDF Grant received upto 1.4.2019	Capital Cost claimed as on 1.4.2019
Asset-I	5859.82	3318.16	2322.71	995.45
Asset-II	750.13	438.68	307.07	131.61
Total	6609.95	3756.34	2629.78	1127.06

Order in Petition No. 678/TT/2020

77. Accordingly, the capital cost excluding the grant and disallowed Initial Spares as

			(₹ in lakh)
Asset	Capital Cost allowed as on COD	ACE allowed in 2014-19 tariff period	Capital Cost allowed as on 1.4.2019
Asset-I	830.43	8.88	839.31
Asset-II	123.79	2.05	125.84
Total	954.22	10.93	965.15

Additional Capital Expenditure

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

"24. Additional Capitalisation within the original scope and upto the cut-off date

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

- (a) Undischarged liabilities recognized to be payable at a future date;
- (b) Works deferred for execution;
- (c) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23of 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."

79. The Petitioner has claimed ACE for the 2019-24 tariff period under Regulations

24(1)(a) of the 2019 Tariff Regulations on account of un-discharged liability towards

final payment for works executed within cut-off date as follows:



					(₹ in lakh)	
Asset	Apportioned Approved	Capital Cost (as on	ACE claimed as per Auditor Certificate		Capital Cost (as on	
ASSEL	Cost (as per FR)	31.3.2019)	2019-20	2020-21	31.3.2024)	
Asset-I	5859.82	3318.16	283.60	856.32	4458.08	
Asset-II	750.13	438.68	36.12	93.82	568.62	
Total	6609.95	3756.84	319.72	950.14	5026.70	

80. The Petitioner has claimed the utilisation of grant as follows:

(₹ in lakh)

Asset	PSDF Grant received upto 1.4.2019	Grant during 2019-20	Estimated Grant for ACE in 2020- 21	Total Grant as on 31.3.2024
Asset-I	2322.71	198.52	599.42	3120.65
Asset-II	307.07	25.28	65.67	398.02
Total	2629.78	223.80	665.09	3518.67

81. The Petitioner has submitted that ACE for the 2019-24 tariff period will be funded with the estimated grant of ₹888.89 lakh (70% of ACE claimed) and equity of ₹380.97 lakh (30% of ACE claimed). ACE claimed by the Petitioner during the 2019-24 tariff period is as follows:

Asset	Apportione d Approved	Capital Cost (as on	ACE claimed after adjustment of grant		(₹ in lakh) Capital Cost (as on
	Cost (as per FR)	31.3.2019 after adjustment of grant)	2019-20	2020-21	31.3.2024)
Asset-I	5859.82	995.45	85.08	256.90	1337.43
Asset-II	750.13	131.61	10.84	28.15	170.60
Total	6609.95	1127.06	95.92	285.05	1508.03

82. The Petitioner has submitted that it has received total grant of ₹2629.78 lakh as on 31.3.2019. The Ministry of Power vide its O.M. No.10/1/2014/OM dated 31.12.2014 sanctioned the PSDF grant of ₹26224 lakh (70% of Project cost of ₹37463 lakh).

83. The ACE claimed by the Petitioner has been allowed under Regulation 24(1)(a) of the 2019 Tariff Regulations as the same is towards un-discharged liabilities recognised to be payable at a future date.

84. We have considered the ACE claimed by the Petitioner during the 2019-24 tariff period for computation of tariff. Accordingly, the ACE allowed for the 2019-24 tariff period excluding the grant and the excess initial spares discharged during the year for the Transmission assets are as follows:

			(₹ in lakh)
Asset	Particulars	ACE allowed for 2019-20	ACE allowed for 2020-21
	Expenditure as per Auditor Certificate	283.60	856.32
	Less: Grant received/ estimated to be received during the year	198.52	599.42
Asset-I	ACE allowed	85.08	256.90
	Less: Excess Initial Spares discharged during the year	14.79	4.23
	Total ACE allowed	70.29	252.67
	Expenditure as per Auditor Certificate	36.12	93.82
	Less: Grant received/ estimated to be received during the year	25.28	65.67
Asset-II	ACE allowed	10.84	28.15
	Less: Excess Initial Spares discharged during the year	1.24	0.00
	Total ACE allowed	9.60	28.15

85. Accordingly, the capital cost as on 31.3.2024 and ACE during 2019-24 tariff

period considered are as follows:

(₹ in lakh)

Asset	FR Apportioned Approved	Capital Cost admitted as			Capital Cost allowed as on
	Cost	on 1.4.2019	2019-20	2020-21	31.3.2024
Asset-I	5859.82	839.31	70.29	252.67	1162.27
Asset-II	750.13	125.84	9.60	28.15	163.59
Total	6609.95	965.15	79.89	280.82	1325.86

Debt-Equity Ratio

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

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

Provided that:

- *i.* where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:
- ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:
- iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.

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

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

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

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

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

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

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

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



87. The debt-equity considered for the purpose of computation of tariff for the 2019-

24 tariff period is as follows:

Asset-I

/₹	in	lakh)
15		ianii)

Funding	Capital Cost (as on 1.4.2019) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2024) (₹ in lakh)	(in %)
Debt	0.00	0.00	0.00	0.00
Equity	839.31	100.00	1162.27	100.00
Total	839.31	100.00	1162.27	100.00

Asset-II

Funding	Capital Cost (as on 1.4.2019) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2024) (₹ in lakh)	(in %)
Debt	0.00	0.00	0.00	0.00
Equity	125.84	100.00	163.59	100.00
Total	125.84	100.00	163.59	100.00

Depreciation

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

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

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

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

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

Provided that the salvage value for IT equipment and software shall be considered as NIL



and 100% value of the assets shall be considered depreciable;

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

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

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

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

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

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

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

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

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

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

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



a) twenty five years, in case the generating station or unit thereof is in operation for fifteen years or less as on the date of operation of the emission control system; or

b) balance useful life of the generating station or unit thereof plus fifteen years, in case the generating station or unit thereof is in operation for more than fifteen years as on the date of operation of the emission control system; or

c) ten years or a period mutually agreed by the generating company and the beneficiaries, whichever is higher, in case the generating station or unit thereof has completed its useful life."

89. The Petitioner has submitted the depreciation of assets by considering the same as IT equipment. As per the Auditor Certificate, the transmission assets are Communication System. Accordingly, the depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019 at Weighted Average Rate of Depreciation (WAROD). WAROD at Annexure-II has been worked out considering the depreciation rates of assets as prescribed in the 2019 Tariff Regulations. The depreciation allowed in respect of the transmission assets is as follows:

Asset-I

						(₹ in iakn)
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Depreciation					
Α	Opening Gross Block	839.31	909.60	1162.27	1162.27	1162.27
В	Additional Capitalisation	70.29	252.67	0.00	0.00	0.00
С	Closing Gross Block (A+B)	909.60	1162.27	1162.27	1162.27	1162.27
Е	Average Gross Block (A+C)/2	874.46	1035.94	1162.27	1162.27	1162.27
D	Freehold Land	0.00	0.00	0.00	0.00	0.00
F	Weighted average rate of Depreciation (WAROD) (%)	6.33	6.33	6.33	6.33	6.33
G	Balance useful life of the asset	15	14	13	12	11
Н	Aggregate Depreciable Value	787.01	932.34	1046.04	1046.04	1046.04
Ι	Depreciation during the year	55.35	65.57	73.57	73.57	73.57
J	Cumulative Depreciation	71.28	136.85	210.43	284.00	357.57
к	Remaining Depreciable Value (H-J)	715.73	795.49	835.62	762.05	688.47

						(₹ in lakh)
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Depreciation					
Α	Opening Gross Block	125.84	135.44	163.59	163.59	163.59
В	Additional Capitalisation	9.60	28.15	0.00	0.00	0.00
С	Closing Gross Block (A+B)	135.44	163.59	163.59	163.59	163.59
Е	Average Gross Block (A+C)/2	130.64	149.52	163.59	163.59	163.59
D	Freehold Land	0.00	0.00	0.00	0.00	0.00
F	Weighted average rate of Depreciation (WAROD) (%)	6.33	6.33	6.33	6.33	6.33
G	Balance useful life of the asset	15	14	13	12	11
Н	Aggregate Depreciable Value	117.58	134.57	147.24	147.24	147.24
I	Depreciation during the year	8.27	9.46	10.36	10.36	10.36
J	Cumulative Depreciation	10.20	19.66	30.02	40.37	50.73
К	Remaining Depreciable Value (H-J)	107.38	114.91	117.22	106.86	96.51

Interest on Loan

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

Return on Equity

91. Regulation 30 and Regulation 31 of the 2019 Tariff Regulations provides as

follows:

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

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating station, transmission system including communication system and run-ofriver 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 runof-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:
 - a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;
 - b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:

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

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

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

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

Rate of pre-tax return on equity = Base rate / (1-t)

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



Illustration-

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

Rate of return on equity = 15.50/(1-0.2155) = 19.758%

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

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

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

92. The Petitioner has submitted that MAT rate is applicable to the Petitioner's

company. Accordingly, the MAT rate applicable in 2019-20 has been considered for the

purpose of RoE, which shall be trued-up with actual tax rate in accordance with

Regulation 31(3) of the 2019 Tariff Regulations. RoE allowed is as follows:

Asset-I

						(₹ in lakh)
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Return on Equity					
А	Opening Equity	839.31	909.60	1162.27	1162.27	1162.27
В	Additions	70.29	252.67	0.00	0.00	0.00
С	Closing Equity (A+B)	909.60	1162.27	1162.27	1162.27	1162.27
D	Average Equity (A+C)/2	874.46	1035.94	1162.27	1162.27	1162.27
Е	Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
F	MAT Rate for respective year (%)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (%)	18.782	18.782	18.782	18.782	18.782
Н	Return on Equity (D*G)	164.24	194.57	218.30	218.30	218.30



. . . .

						(₹ in lakh)
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Return on Equity					
А	Opening Equity	125.84	135.44	163.59	163.59	163.59
В	Additions	9.60	28.15	0.00	0.00	0.00
С	Closing Equity (A+B)	135.44	163.59	163.59	163.59	163.59
D	Average Equity (A+C)/2	130.64	149.52	163.59	163.59	163.59
Е	Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
F	MAT Rate for respective year (%)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (%)	18.782	18.782	18.782	18.782	18.782
н	Return on Equity (D*G)	24.54	28.08	30.73	30.73	30.73

Operation & Maintenance Expenses

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

"35. Operation and Maintenance Expenses

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

94. The O&M Expenses claimed by the Petitioner for the Transmission assets for the

2019-24 period are as follows:

Asset-I

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24		
Communication System at ERLDC Kolkata, SLDCs WBSETCL & DVC							
Original Project Cost (₹ lakh)	4311.04	4311.04	4311.04	4311.04	4311.04		
Norms (in %)	2.00	2.00	2.00	2.00	2.00		
Total O&M Expenses (₹ in lakh)	54.81	89.16	89.16	89.16	89.16		

Asset-II

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24		
Communication System at SLDCs of OPTCL							
Original Project Cost (₹ lakh)	551.86	551.86	551.86	551.86	551.86		
Norms (in %)	2.00	2.00	2.00	2.00	2.00		
Total O&M Expenses (₹ in lakh)	6.99	11.37	11.37	11.37	11.37		

Order in Petition No. 678/TT/2020

95. BSPHCL has submitted that the O&M Expenses have been claimed for 2019-20 and for the remaining 2019-24 period @ 2.0% of the capital cost. BSPHCL has submitted that as per the 2019 Tariff Regulations, the O&M Expenses shall be worked out @ 2.0% of the original project cost related to such communication system. BSPHCL has submitted that the transmission licensee has to submit the actual O&M Expenses for truing up and hence there is variation from the provisions of 2019 Tariff Regulations and therefore the claim cannot be allowed.

96. In response, the Petitioner has submitted that for 2019-20, actual O&M Expenses are claimed and for the remaining 2019-24 period O&M Expenses claimed @ 2.0% of the capital cost.

97. We have considered the submissions made by the Petitioner and BSPHCL. The Petitioner vide Auditor Certificate dated 23.9.2020 has submitted the actual O&M Expenses for 2019-20. Further, the Petitioner has claimed expenditure towards advertisement and publicity charges as expenses under O&M Expenses for 2019-20.

98. As regards the advertisement and publicity charges, the Commission vide order dated 26.4.2022 in Petition No. 272/TT/2020 considered the Petitioner's claim towards and advertisement and publicity charges and disallowed the same. The relevant portion of the said order is as follows:

"32. The Petitioner has also claimed the Advertisement & Publicity charges as part of the O&M Expenses, which is not allowable as O&M Expenses and therefore has been disallowed."

99. In line with above order, the expenditure is not allowable for advertisement and publicity charges as expenses under O&M Expenses, therefore, the proportionate share of advertisement and publicity pertaining to transmission assets covered in the instant petitions have been disallowed. The petitioner filing fee are dealt in paragraph 108 of this order. The advertisement and publicity charges disallowed are as under:

	(₹ in lakh)
Assets	2019-20
Asset-I	0.51
Asset-II	0.06
Total	0.57

100. Accordingly, the Commission has allowed the actual O&M Expenses for 2019-20 after disallowing the advertisement and publicity charges. For the remaining years i.e. 2020-24, O&M Expenses are allowed considering original project cost. Therefore, in accordance with Regulation 35(4) of the 2019 Tariff Regulations, 2.00% of the original project cost has been considered for working out the O&M Expenses of instant communication systems.

101. Accordingly, the O&M Expenses allowed for the transmission assets are as follows:

Asset-I

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24		
Communication System at ERLDC Kolkata, SLDCs WBSETCL & DVC							
Original Project Cost (₹ lakh)	-	4311.04	4311.04	4311.04	4311.04		
Norms (in %)	-	2.00	2.00	2.00	2.00		
Total O&M Expenses (₹ in lakh)	54.30*	86.22	86.22	86.22	86.22		

*(54.81-0.51)

Asset-II

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24					
Communication System at SLDCs of OPTCL										
Original Project Cost (₹ lakh)	-	551.86	551.86	551.86	551.86					
Norms (in %)	-	2.00	2.00	2.00	2.00					
Total O&M Expenses (₹ in lakh)	6.93	11.04	11.04	11.04	11.04					

*(6.99-0.06)

Interest on Working Capital

102. Regulation 34 and Regulation 3(7) of the 2019 Tariff Regulations specifies as

follows:

"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 10daysfor 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:-

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

103. The Petitioner has submitted that it has computed IWC for the 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. The IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest (ROI) considered is 12.05% (SBI 1-year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, 11.25% (SBI 1-year MCLR applicable as on 1.4.2019 of 7.75% plus 350 basis points) for 2020-21 and from 2021-22 onwards has been considered as 10.50%

(SBI 1-year MCLR applicable as on 1.4.2020 of 7.00% plus 350 basis points). The

components of the working capital and interest thereon allowed is as follows:

Asset-I

					(₹ ir	n lakh)
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
А	O&M Expenses (O&M Expenses for one month)	4.53	7.19	7.19	7.19	7.19
В	Maintenance Spares (15% of O&M Expenses)	8.15	12.93	12.93	12.93	12.93
С	Receivables (Equivalent to 45 days of annual transmission charges)	34.37	43.59	47.49	47.49	47.36
D	Total Working Capital (A+B+C)	47.04	63.70	67.61	67.61	67.48
Е	Rate of Interest (%)	12.05	11.25	10.50	10.50	10.50
F	Interest on working capital (D*E)	5.67	7.17	7.10	7.10	7.08

Asset-II

					(₹ in	lakh)
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
А	O & M Expenses (O&M Expenses for one month)	0.58	0.92	0.92	0.92	0.92
В	Maintenance Spares (15% of O&M Expenses)	1.04	1.66	1.66	1.66	1.66
С	Receivables (Equivalent to 45 days of annual transmission charges)	4.98	6.11	6.54	6.54	6.53
D	Total Working Capital (A+B+C)	6.60	8.69	9.12	9.12	9.10
Е	Rate of Interest (%)	12.05	11.25	10.50	10.50	10.50
F	Interest on working capital (D*E)	0.80	0.98	0.96	0.96	0.96

Annual Fixed Charges of the 2019-24 Tariff Period

104. The transmission charges allowed for the transmission assets for the 2019-24

tariff period are as follows:

Asset-I

					(₹ in lakh)
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	55.35	65.57	73.57	73.57	73.57
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	164.24	194.57	218.30	218.30	218.30
O&M Expenses	54.30	86.22	86.22	86.22	86.22
Interest on Working Capital	5.67	7.17	7.10	7.10	7.08
Total	279.57	353.53	385.19	385.19	385.18

Order in Petition No. 678/TT/2020

Asset-II

					(₹ in lakh)
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	8.27	9.46	10.36	10.36	10.36
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	24.54	28.08	30.73	30.73	30.73
O&M Expenses	6.93	11.04	11.04	11.04	11.04
Interest on Working Capital	0.80	0.98	0.96	0.96	0.96
Total	40.53	49.56	53.08	53.08	53.07

Filing Fee and the Publication Expenses

105. The Petitioner has sought reimbursement of fee paid by it for filing the Petition and publication expenses.

106. BSPHCL has submitted that grant of filing fee and expenses incurred is upon the discretion of the Commission and need not necessarily be allowed in all cases. Further, nothing beyond what is contemplated by the 2019 Tariff Regulations may be granted.

107. In response, the Petitioner has submitted that it has prayed for reimbursement of expenditure by the beneficiaries towards petition filing fee and publication expense, in terms of Regulation 70(1) of 2019 Tariff Regulations. The Petitioner has further submitted that the Commission vide order dated 28.3.2016 in Petition No. 137/TT/2015 for determination of tariff for the 2014-19 period allowed the recovery of petition filing fee and publication of notices from the beneficiaries on pro-rata basis.

108. We have considered the submissions of the Petitioner and BSPHCL. The Petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present Petition, directly from the beneficiaries on pro-rata basis in accordance with Regulation 70(1) of the 2019 Tariff Regulations.

Licence Fee & RLDC Fees and Charges

109. The Petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 70(4) of the 2019 Tariff Regulations for 2019-24 tariff period. The

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

Goods and Services Tax

110. BSPHCL has submitted that Petitioner's prayer to bill and receive GST and other statutory charges on transmission charges separately from the Respondents is premature.

111. In response, the Petitioner has submitted that under CGST Act, 2017 implemented w.e.f. 1.7.2017, the Government of India has exempted the charges of transmission of electricity vide Notification No. 12/2017 - Central Tax (Rate) dated 28.6.2017. Hence, the transmission charges as indicated in the instant petition are exclusive of GST. Further, if GST is levied at any rate and at any point of time in future on transmission of electricity, the same shall be borne and additionally paid by the Respondent(s) to the Petitioner and the same shall be charged and billed separately by the Petitioner. Further additional taxes, if any, paid by the Petitioner on account of demand from Government/ Statutory authorities, may also be allowed to be recovered from the beneficiaries.

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

Security Expenses and Capital Spares

113. The Petitioner has submitted that security expenses for the transmission asset are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential IWC. Further, the Petitioner has sought reimbursement of capital spares at the end of tariff block. 114. BSPHCL has submitted that security expenses etc to be recovered from the beneficiaries cannot be allowed and the same is the discretion of the Commission which is to be exercised as per the facts and circumstances of each case and need not necessarily be allowed in all cases. BSPHCL has further submitted that the present case is the one wherein the said prayer should not be granted and it has been held on different occasions that the present consumers cannot and should not be burdened for the past charges.

115. In response, the Petitioner has submitted that as per Regulation 35(3)(c) of 2019 Tariff Regulations, the security expenses and capital spares for transmission system has to be allowed separately after prudence check. A separate Petition No. 260/MP/2020 was filed before the Commission for claiming the overall Security Expenses and consequential IWC on the same wherein it was proposed to consider actual security expenses incurred by the Petitioner for 2018-19.

116. We have considered the submissions of the Petitioner and BSPHCL. The Petitioner has claimed consolidated security expenses on projected basis for 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19 in Petition No. 260/MP/2020. The said petition has already been disposed of by the Commission *vide* order dated 3.8.2021. Therefore, the Petitioner's prayer in the instant petition for allowing it to file a separate petition for claiming the overall security expenses and consequential IWC has become infructuous. Further, the Petitioner's claim pertaining to capital spares, if any, shall be dealt with in accordance with the provisions of the 2019 Tariff Regulations at the time of true up.

Sharing of Transmission Charges

117. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems was governed by the 2010 Sharing Regulations and with effect

from 1.11.2020 (after repeal of the 2010 Sharing Regulations), sharing of transmission charges is governed by the 2020 Sharing Regulations. The transmission charges approved in this order for the 2014-19 tariff period and 2019-24 tariff period shall be shared by the respective States in accordance with the applicable Sharing Regulations as provided under Regulation 43(2) of the 2014 Tariff Regulations and Regulation 57(2) of the 2014 Tariff Regulations respectively.

118. To summarise:

a) The trued-up AFC allowed for the transmission assets for the 2014-19 tariff period are as follows:

(₹ in lakh)

Asset-I	Asset-II
2018-19(Pro-rata for 110 days)	2018-19 (Pro-rata for 89 days)
67.00	8.10

b) AFC allowed for the transmission assets for the 2019-24 tariff period in this order are as follows:

Asset-I

_					(₹ in lakh)
	2019-20	2020-21	2021-22	2022-23	2023-24
	279.57	353.53	385.19	385.19	385.18

Asset-II

				(₹ in lakh)
2019-20	2020-21	2021-22	2022-23	2023-24
40.53	49.56	53.08	53.08	53.07

119. Annexure-I and Annexure-II given hereinafter form part of the order.

120. This order disposes of Petition No. 678/TT/2020 in terms of the above discussions and findings.

sd/-(P.K. Singh) Member sd/-(Arun Goyal) Member sd/-(I. S. Jha) Member



Annexure-I

Asset-I

2014-19	Admitted Capital	ACE	Admitted Capital Cost as	Rate of Depreciation	Annual Depreciations as per Regulations
Particulars	Cost as on COD	2018-19	on 31.3.2019	as per Regulations	2018-19
PLCC	830.43	8.88	839.31	6.33%	52.85
Total	830.43	8.88	839.32		52.85
			Average G	ross Block	834.87
			Weighted A of Depreci	Average Rate ation	6.33%

Asset-II

2014-19	Admitted Capital	ACE	Admitted Capital Cost as	Rate of Depreciation	Annual Depreciations as per Regulations
Particulars	Cost as on COD	2018-19	on 31.3.2019	as per Regulations	2018-19
PLCC	123.79	2.05	125.84	6.33%	7.90
Total	123.79	2.05	125.85		7.90
			Average G	ross Block	124.82
			Weighted of Depreci	Average Rate ation	6.33%

Annexure-II

Asset-I

2019-24	Admitted Capital Cost	Project	ted ACE	Admitted Capital Cost	Rate of	Annual Depreciations as per Regulations					
Particulars	as on 1.4.2019	2019-20	2020-21	as on 31.3.2024	Depreciation as per Regulations	2019-20	2020-21	2021-22	2022-23	2023-24	
PLCC	839.31	70.29	252.67	1162.27	6.33%	55.35	65.57	73.57	73.57	73.57	
Total	839.31	70.29	252.67	1162.27		55.35	65.57	73.57	73.57	73.57	
				Average Gros	s Block	874.46	1035.94	1162.27	1162.27	1162.27	
				Weighted Average Rate of Depreciation		6.33%	6.33%	6.33%	6.33%	6.33%	

Asset-II

2019-24	Admitted Capital Cost	Project	ed ACE	Admitted Capital Cost	Rate of	Annual Depreciations as per Re		er Regulatio	Regulations	
Particulars	as on 1.4.2019	2019-20	2020-21	as on 31.3.2024	Depreciation as per Regulations	2019-20	2020-21	2021-22	2022-23	2023-24
PLCC	125.84	9.60	28.15	163.59	6.33%	8.27	9.46	10.36	10.36	10.36
Total	125.84	9.60	28.15	163.59		8.27	9.46	10.36	10.36	10.36
				Average Depre	ciable Gross Block	130.64	149.52	163.59	163.59	163.59
				Weighted Average Rate of Depreciation		6.33%	6.33%	6.33%	6.33%	6.33%