CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 486/TT/2019

Coram:

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

Date of Order: 08.07.2022

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for determination of transmission tariff from the date of commercial operation (COD) to 31.3.2019 in respect of "Unified Real Time Dynamic State Measurement (URTDSM)" for NRLDC and SLDCs of Northern Region under "Phase-I- Unified Real Time Dynamic State Measurement (URTDSM)" in Northern Region.

And in the matter of:

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

Vs

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited,
Vidyut Bhawan, Vidyut Marg,
Jaipur – 302005.

2. Ajmer Vidyut Vitran Nigam Limited,
400 kV, GSS Building (Ground Floor),
Ajmer Road, Heerapura,
Jaipur.

3. Jaipur Vidyut Vitran Nigam Limited,
400 kV, GSS Building (Ground Floor),
Ajmer Road, Heerapura,
Jaipur.

4. Jodhpur Vidyut Vitran Nigam Limited,
400 kV, GSS Building (Ground Floor),
Ajmer Road, Heerapura, Jaipur.

5. Himachal Pradesh State Electricity Board,
Vidyut Bhawan, Kumar House Complex Building II,
Shimla–171004.

6. Punjab State Electricity Board,
Thermal Shed Tia, Near 22 Phatak,
Patiala – 147001.

7. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-6,
Panchkula – 134109.

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

9. Uttar Pradesh Power Corporation Limited,
(Formerly Uttar Pradesh State Electricity Board),
Shakti Bhawan, 14, Ashok Marg,
Lucknow – 226001.

10. Delhi Transco Limited,
Shakti Sadan, Kotla Road,
New Delhi – 110002.

11. BSES Yamuna Power Limited,
B-Block, Shakti Kiran, Bldg.(Near Karkardooma Court),
Karkardooma, 2nd Floor,
Delhi – 110092.

12. BSES Rajdhani Power Limited,
BSES Bhawan, Nehru Place,
New Delhi – 110019.

13. TATA Power Delhi Distribution Limited,
NDPL House, Hudson Lines Kingsway Camp,
Delhi – 110 009.

14. Chandigarh Administration,
Sector -9, Chandigarh.

15. Uttarakhand Power Corporation Limited,
Urja Bhawan,
Kanwali Road, Dehradun.

16. North Central Railway,
Allahabad.

17. New Delhi Municipal Council,

Palika Kendra, Sansad Marg,
New Delhi -110002. ....**Respondent(s)**

For Petitioner : Shri S.S. Raju, PGCIL
Shri D.K. Biswal, PGCIL
Shri Ved Prakash Rastogi, PGCIL
Shri Amit Yadav, PGCIL

For Respondents : None

ORDER

The instant petition has been filed by Power Grid Corporation of India Limited, a deemed transmission licensee, for determination transmission tariff from the date of commercial operation (COD) to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) in respect of "Unified Real Time Dynamic State Measurement (URTDSM)" for NRLDC and SLDCs of Northern Region (hereinafter referred to as “the transmission asset”) under “Phase-I-Unified Real Time Dynamic State Measurement (URTDSM)” in Northern Region (hereinafter referred to as “the transmission project”).

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

“1) Approve the Transmission Tariff for the tariff block 2014-19 block for the assets covered under this petition, as per para –8.2 above.

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 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.

5) Allow the Petitioner to approach Hon’ble Commission for suitable revision in the *norms for O&M expenditure for claiming the impact of wage hike, if any, during period 2014-19.*

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.

7) 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 in relation to the filing of petition.

8) 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.

9) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if at any time GST on transmission is withdrawn from negative list at any time in future. Further, any taxes and duties including cess etc. imposed by any statutory/Govt/municipal authorities shall be allowed to be recovered from the beneficiaries.

10) 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".

11) Allow the petitioner to bill tariff from actual DOCO

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) Investment Approval ("IA") and expenditure sanction for the transmission project was accorded by the Board of Directors of the Petitioner's Company vide Memorandum No. C/CP/URTDSM Ph-1 dated 13.1.2014 at an estimated cost of ₹37463 lakh which included IDC of ₹2954 lakh, based on 3rd quarter, 2013 price level.

(b) The scope of the transmission project was discussed and agreed in Joint Standing Committee Meeting (SCM) of all five Regions held on 5.3.2012 and further in 26th and 27th NRPC meeting held on 13.7.2012 & 30.11.2012 respectively. It was decided that the Petitioner would implement Phase-I URTDSM as approved in the Joint meeting of all five Regions - SCM on Power System Planning held on 5.3.2012.

(c) After deliberation in the above said SCM, Members of Regional Standing Committee on Power System Planning agreed that the transmission project is to be implemented by Powergrid as a System Strengthening Scheme and cost shall be added in the National Pool Account and to be shared by all DICs as per PoC mechanism under the Commission's Regulations.

(d) It was also agreed that the Petitioner shall file petition before the Commission for getting regulatory approval for the transmission project. Accordingly, the Petitioner filed Petition No. 129/MP/2012 for grant of regulatory approval of URTDSM project. The Commission vide order dated 6.9.2013 in Petition No.129/MP/2012 granted regulatory approval.

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

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

Phase-I:

1. Installation of approximately 1186 number of PMUs at the sub-stations and power plants of all utilities of the country based on the following criterion:
    i. Sub-station of 400 kV and above
    ii. Generating Stations of 220 kV and above
    iii. HVDC terminals
    iv. Important inter-regional and inter-national connection points
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.

i. Super PDCs at main and back-up NLDCs (2 sets)

ii. Super PDCs at all the five RLDCs (5 sets) and NTAMC

iii. Master PDCs at SLDCs (25 sets) and strategic locations.

iv. Visualisation software & data archiving server at all PDC locations including at NTAMC and NLDC.

v. Router/switches and miscellaneous items.

vi. Communication interfaces, cables etc.

vii. Remote Consoles at each RPC, Union Territories, CEA, CTU and other identified locations.

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 Powergrid and Constituents shall meet the requirement of Phase-I.
5. Analytical software, though the process shall be initiated under Phase-I but completion may be possible under Phase-II.

(g) The entire scope of work under the transmission project has been completed. Other assets, in addition to the transmission asset covered in the present petition, are covered under different petitions.

(h) As per IA dated 13.1.2014, transmission asset was scheduled to be put into commercial operation within 27 months from the date of IA. Accordingly, the scheduled COD of the transmission asset was 13.4.2016 against which the transmission asset was put under commercial operation on 30.6.2018 with time over-run of 808 days (26 months and 17 days).

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

5. The Petitioner has served the petition on Respondents and notice regarding filing of this petition has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers by the Petitioner. Uttar Pradesh Power Corporation Limited (UPPCL), Respondent No. 9 has filed its reply vide affidavit dated 28.12.2019 and has raised issues of time over-run, cost over-run, excess Initial Spares, justification for claimed O&M Expenses, certificate of completion and pilot project. BSES Rajdhani Power Limited (BRPL), Respondent No. 12 has filed its reply vide affidavit dated 11.2.2020 and has raised issues of capital cost, time over-run, Initial Spares, effective tax rate, GST and filing fees. The Petitioner has submitted its

rejoinder to the reply of UPPCL and BRPL vide affidavits dated 12.2.2020 and 12.10.2020 respectively.

6. Hearing in this matter was held on 2.11.2021 through video conference and order was reserved. 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.

7. During the hearing on 23.6.2022, the representative of the Petitioner submitted that all the information for determination of tariff has been submitted and the same may be considered while determining transmission tariff.

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

9. This order is issued considering the submissions made by the Petitioner in the petition vide affidavits dated 25.7.2019, 20.2.2020, 4.5.2020, 12.11.2020 and 3.9.2021, reply affidavit of UPPCL dated 28.12.2019, and reply affidavit of BRPL dated 11.2.2020 and the Petitioner's rejoinder thereto.

10. BRPL has raised the issue of grossing up of RoE and MAT rate in the instant petition and few petitions in the past. The Commission has considered and rejected said submissions of BRPL in various petitions including in Petition No. 25/TT/2021 and Petition No. 476/TT/2019. No Appeal was preferred by BRPL against the said orders of the Commission. The said orders of the Commission have thus attained finality. Accordingly, the issues raised by BRPL with regard grossing up of RoE and MAT rates are not being dealt in the instant order. However, issues specific to the

instant petition have been dealt in the relevant portions of this order.

11. BRPL has submitted that the Commission recognizes the need and permits association/forum or other body corporates or any group of consumers to participate in any proceedings before it in terms of Regulation 18 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 read with Section 94(3) of the Electricity Act, 2003. BRPL has further submitted that one of such agencies may be asked to represent the interest of the consumers in the present case.

12. The Petitioner vide affidavit dated 30.9.2019 has submitted that notice of the tariff application was published by it in newspapers. Subsequent to the publication of the tariff application in newspapers by the Petitioner, no representation was received by the Commission for engagement of any association to represent the interests of consumers. However, the Commission in the cases, wherever need be, allows consumer representation. In the facts and circumstances of the present case, participation by consumer association was not felt necessary. Accordingly, the prayer of BRPL for allowing a consumer association to participate the interests of consumer in the present case is rejected.

ANNUAL FIXED CHARGES FOR 2014-19 TARIFF PERIOD

13. The details of the transmission charges claimed by the Petitioner in respect of the transmission asset are as follows:

(₹ in lakh)

Particulars	**2018-19 (Pro-rata for 275 days)**
Depreciation	220.58
Interest on Loan	0.00
Return on Equity	290.55

Interest on working capital	12.15
O&M Expenses	31.03
Total	**554.31**

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

(₹ in lakh)

Particulars	**2018-19 (Pro-rata for 275 days)**
O&M Expenses	3.43
Maintenance Spares	6.18
Receivables	122.62
Total	132.23
Rate of Interest (in%)	12.20
Interest on Working Capital	**12.15**

Commercial Operation Date ("COD")

15. The Petitioner has claimed actual COD of the transmission asset as 30.6.2018.

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. UPPCL has submitted that the Petitioner has claimed actual COD as 30.6.2018 which is not validated by certificate of completion given by Board of Directors, POSOCO and CEA. Accordingly, UPPCL has requested the Commission to direct the Petitioner to submit the requisite certificates.

18. In response, the Petitioner has submitted that CMD/CEO/MD certificates are not applicable in the instant case and the same is in line with the Commission's order dated 7.7.2017 in Petition No. 53/TT/2016 which is as follows:

"As regards BSP(H)CL's contention regarding non-submission of approval of CMD for the instant assets, it is observed that as per the 2014 Tariff Regulations, the CMD's approval is not required in the case of communication system."

19. With regard to CEA certificate/Report of Electrical Inspector, the Petitioner has submitted that it is not applicable in the instant case. This is in line with CEA Regulation 2010 which provides that minimum 650 V is required for inspection. The Central Government has specified the notified voltage for the purpose of self-certification under Regulation 30 and Regulation 43 of the 2010 CEA Regulations and the same is 11 kV, meaning thereby that up to 11 kV, no inspection is required by CEA Inspector. Since the Communication System under ULDC projects comprising of Fiber Optic & Microwave Systems was established for providing communication connectivity between Control Centers and from data concentrator nodes for handling large data volumes, the operation voltage for Communication System operation is 24/48 Volt DC supply. Hence, CEA clearance letter is not applicable in case of Communication System of the Petitioner.

20. The Petitioner has submitted self-declaration COD certificate and RLDC charging certificate issued by POSOCO in support of the actual COD.

21. We have considered the submissions of the Petitioner and UPPCL. Considering RLDC charging certificate and the self declaration of COD certificate, the COD of the transmission asset is approved as 30.6.2018.

Capital cost

22. Regulation 9(1) and Regulation 9(2) of the 2014 Tariff Regulations provide as follows:

(1)The Capital cost as determined by the Commission after prudence check in

accordance with this regulation shall form the basis of determination of tariff for existing and new projects.

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

(a) The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;
(b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;
(bi) Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period shall form part of the capital cost.
(c) Increase in cost in contract packages as approved by the Commission;
(d) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 11 of these regulations;
(e) capitalised Initial spares subject to the ceiling rates specified in Regulation 13 of these regulations;
(f) expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 14 of these regulations;
(g) adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD as specified under Regulation 18 of these regulations; and
(h) adjustment of any revenue earned by the transmission licensee by using the assets before COD.

23. Capital cost claimed as on COD and projected ACE for 2014-19 tariff period in respect of the transmission asset is as follows:

(₹ in lakh)

FR Approved Cost	Capital Cost claimed as on COD	ACE claimed for 2018-19	ACE claimed for 2019-20	Total estimated cost
9074.88	5994.70	1022.59	265.75	7283.04

24. UPPCL has submitted that against the approved cost of ₹9074.88 lakh, the total estimated capital cost is ₹7283.04 lakh. However, the Petitioner has not given reference of the approved cost. In response, the Petitioner has submitted that Investment Approval for the transmission project has already been submitted in the petition and the approved cost of the transmission project is ₹37463 lakh.

25. BRPL has submitted that the Petitioner's contribution in this project is 30% (₹7283 lakh) and the Petitioner has shown capital cost entirely towards equity

which is unreasonable. BRPL has submitted that entire contribution of the Petitioner should be in debt as grant of ₹26224 lakh sanctioned by the Ministry of Power (MoP) is on long term basis. Once the debt invested by the Petitioner is over, the entire project will not entail any tariff except the provision for O&M Expenses. BRPL has further submitted that entire money in PSDF had been contributed by the Discoms and, therefore, it is entirely their own money which is now invested for the transmission project. Therefore, treating entire contribution from the Petitioner as equity would result unreasonable tariff and will be against Section 61(d) of the Electricity Act, 2003 .

26. In response, the Petitioner has submitted that as per terms and conditions mentioned in clause 3(vi) of sanction letter dated 31.12.2014 issued by MoP, expenditure beyond 70% of the cost shall be provided by the Petitioner from its own resources. Accordingly, remaining 30% is being claimed as equity, as no further loan has been sanctioned for the transmission asset.

27. We have considered the submissions of the Petitioner, UPPCL and BRPL. The estimated completion cost of the transmission asset is within the FR cost. Therefore, there is no cost over-run. The capital cost claimed by the Petitioner in respect of the transmission asset based on Auditor's Certificate dated 13.3.2019 is as follows:

(₹ in lakh)

Approved Cost	Capital Cost as on COD	ACE 2018-19	Total Capital Cost as on 31.3 2019
9074.88	5994.70	1022.59	7017.29

Time Over-run

28. As per IA dated 13.1.2014, the transmission asset was scheduled to be put under commercial operation within 27 months from the date of IA. Accordingly, the scheduled COD of the transmission asset was 13.4.2016 against which it was put into commercial operation w.e.f. 30.6.2018. Accordingly, there is time over-run of 808 days (26 months and 17 days) in the case of transmission asset. The Petitioner has furnished the following reasons for the delay in execution of the transmission asset:

a) The Wide Area Measurement System (WAMS) under Unified Real Time Dynamic State Measurement (URTDSM) Project is one of the first projects in the world for real time measurement, monitoring and visualization of power system as well as taking preventive/corrective action in the regime of grid management with improved efficiency. Under the project, 326 number of Phasor Measurement Units (PMUs) were to be installed in Northern Region on 618 transmission lines covering 116 sub-stations in Northern Region.

b) At the time of IA dated 13.1.2014, PMUs of IEEE C37.118.1-2011 standard was available and upcoming/new standard of IEEE C37.118.1-2014 was almost finalized and awaited from IEEE. In the award of this project, PMUs was supposed to be complied with IEEE C37.118.1-2014 standard.

c) Subsequently, new standard i.e. to 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 Synchrophasor Certification Program) at that time.

d) After 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 14.6.2016 to 24.6 2015 and the type test completed on 7.7 2015 for supply, installation and execution of PMUs at various sub-station in Central and State Sector Constituents.

e) Therefore, delay form IA dated 13.1.2014 to 1.5.2015 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.

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

g) Accordingly, the works were 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. Termination of CT/PT and DI cables can be done in live line conditions. However, State utilities did not agree on the same and shut-down was arranged for CT/PT and DI termination for various sub-stations in real time conditions from NRLDC. No space was provided by NTPC-Dadri for installation of PMU due to space constraint. Phasor Data Concentrator was to be installed in respective SLDC and NRLDC in Northern Region. However, due to space constraint, installation and execution was delayed. The issue of space was raised in every TeST sub-committee meeting of NRPC.

29. Following issues were discussed in various TeST meetings. The Chronology/ details are as follows:

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

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

  i. Control Room (SLDC) survey not carried out in HVPNL, PTCUL, HPSEBL and UPPTCL due to non-availability of manpower at SLDCs.

  ii. Signature on survey reports for 11 number of sites was pending for UPPTCL as sub-station in-Charges informed that they did not receive any communication from their higher officers.

  iii. Space constraint at SLDCs in installation of UPS, to be supplied under URTDSM project

c) 3rd TeST meeting (21.11.2014): The Petitioner raised the issue of space constraint in SLDCs, all the constituents agreed for providing space in SLDCs for installation of PDC system in their premises.

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

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

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

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

h) 8th TeST meeting (26.7.2016): BBMB again raised the issue of space in their Control Centre at Chandigarh. During the meeting, the Petitioner again requested constituents to provide list of Nodal Officers for sub-station so that works can be carried out smoothly which was affecting seriously in absence of any officer involved from sub-station. The Petitioner also mentioned in the meeting that PTCUL did not provide space even for storage of the materials in SLDC Dehradun. The Petitioner, therefore, kept these materials in their Dehradun Sub-station.

i) 10th TeST meeting (22.3. 2017): The Petitioner mentioned in the meeting that PTCUL did not provide space in SLDC Dehradun and this issue was not discussed during the meeting as representative from PTCUL was not available in the meeting.

j) 11th TeST meeting (10.7.2017): The Petitioner requested all the Constituents to ensure space for installation of servers in SLDC Control Rooms and to ensure availability of manpower to implement the project by December, 2017.

k) The Petitioner informed that some of the constituents requested shut-down for CT/PT termination at various stations under URTDSM Project. The Petitioner further informed that for execution of PMUs at site, CT/PT and DI termination was required with existing CR panels. CT/PT termination for most of the stations had been done in live line condition. However, some of the stations specially generating units of NTPC and UPRVUNL were insisting for shut-down for CT/PT termination. After discussion with NRLDC for shut-down, vendor had been deployed 4 times at Obra-BTPS and 3 times at Singrauli Station. However, at last moment shut-down could not be allowed citing grid related issues. Consequently, due to shut-down issues execution hampered at these sites. It was informed that in each sub-station 30-30 minute shut-down was needed for each of the feeder for CT/PT connections. The Petitioner requested NTPC and UPPTCL to co-ordinate for the outages. Both constituents agreed for the same.

l) The representative of the Petitioner informed that PTCUL did not provide space for installation of PDS/PDC at SLDC Dehradun. PDS materials were dispatched to Dehradun in February, 2016. However, PTCUL officials did not take delivery of PDS materials. Even the matter was discussed during 7th TeST meeting. Now PDS is temporarily stored at Dehradun Sub-station of the Petitioner and FAT for PDC is going on and PDC would be dispatched in July, 2017. He informed that that PTCUL may ensure space for PDC at site. It was noted that PTCUL representative was not present in the meeting. The Sub-Committee advised NRPC Secretariat to take up the matter with PTCUL.

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

n) The Petitioner informed that materials for PDC had been supplied in all Control Centers. Installation was completed except for NLDC, Jammu and Dehradun SLDCs which could not be completed due to space issue. All constituents were requested to nominate and post at least 2 number of officials for WAMS System who had taken training on PDC System. The Sub-Committee expressed concern over inordinate delay in implementation of the URTDSM project and advised all concerned utilities to take necessary action for completion of the project in all respect by March, 2018. During the meeting, BBMB raised the issue of pending civil works in their premises for UPS installation which also delayed the Project.

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

p) Further, due to additional requirement of NRLDC, log sheet displays and database validation by other constituents were completed on 30.6.2018.

30. Therefore, based on the above details, the justification of delay in respect of the transmission asset is summarized as follows:

Sl. No.	Months		Reason
	From	**To**	
1	January, 2014	May, 2015	Delay in release of IEEE C 37.118-1a-2014 standard and non-availability of competent labs for testing of PMUs **Total months affected: 14 months**
2	April, 2014	June, 2018	Non-availability of basic infrastructure/ fronts/ work permission for connection at various state utilities sub-stations and generating stations. All the PMUs except at few Control Centers and super PDC at NLDC/Back-up NLDC/NTAMC have been installed/executed by February, 2018. After execution of all the PMUs SAT (Site Assessment Test) was completed in March, 2018. Just after that COD of all the assets covered in the instant petition was declared on 30.6.2018 after taking RLDC certificate from NRLDC. **Total months affected: 48 months**

31. UPPCL has submitted that according to the Petitioner there is delay of 15 months and 19 days and the same was mainly due to delay in release of IEEE/C37.118-la-2014 standard and non-availability of labs for testing of PMUs. UPPCL has further submitted that system availability test (1000 hrs) was completed

on 28.3.2018 whereas COD of the transmission asset is on 30.6.2018. Therefore, time over-run of 3 months and 2 days is not justified.

32. BRPL has submitted that the problems narrated by the Petitioner are covered under Regulation 12(1) of the 2014 Tariff Regulations as delay is entirely attributable to the slackness in project management for which Petitioner is solely responsible. The Petitioner has also not submitted Detailed Project Report, CPM Analysis, PERT Chart and Bar Chart. Without filing these statutory documents in support of its claim, the Petitioner is praying for condonation of time over-run and this failed in justifying the delay as per the 2014 Tariff Regulations.

33. In response, the Petitioner has submitted that justification of time over-run has already been furnished by the Petitioner in the petition and the Petitioner has also submitted activity- wise timelines along with corresponding delay justification in the rejoinder. Therefore, based on the unforeseen circumstances, the Petitioner has prayed to condone delay as the same is due to uncontrollable factors, beyond the control of the Petitioner and covered under Regulation 12(2)(i) of the 2014 Tariff Regulations.

34. We have considered the submission made by the Petitioner, UPPCL and BRPL. As per IA, the scheduled COD of the transmission asset was 13.4.2016 against which the transmission asset was put into commercial operation on 30.6.2018 with delay of about 808 days. The main reasons for the delay in execution of the transmission asset was due to delay in release of IEEE C 37.118-1a-2014 standard, due to space constraint and non-availability of basic

infrastructure/ fronts/ work permission for connection at various State Utilities sub-stations and generating stations.

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

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

Power System Development Fund Grant ("PSDF")

37. MoP vide letter dated 31.12.2014, communicated sanction of grant from PSDF towards the scheme of the Petitioner for the transmission project. The sanction was issued subsequent to the Commission's order dated 6.9.2013 in Petition No. 129/MP/2013 and Commission's letter dated 4.7.2014 and approval of Monitoring Committee in its meeting dated 8.10.2014 and sanction is equivalent to

an amount of ₹26224 lakh (70% of the project cost) and shall be governed as per the approved guidelines/procedures for funding from PSDF.

38. The Petitioner vide affidavit dated 4.5.2020 has submitted the details of the grant received and details of year-wise utilisation of grant along with details of capital cost for the transmission asset The details of the grant received are as follows:

(₹ in lakh)

Date of Disbursement	Amount
29.10.2015	5800.00
13.6.2017	11599.00
20.3.2019	1785.40
22.4.2019	1528.50
5.7.2019	1498.20
Total	22211.10

<u>Interest During Construction (“IDC”) and Incidental Expenditure During Construction (“IEDC”)</u>

39. The Petitioner has not claimed any IDC in respect of the transmission asset.

40. The Petitioner has claimed an IEDC of ₹119.39 lakh for the transmission asset and has submitted Auditor’s certificate in support of the same. The Petitioner has also submitted that entire IEDC has been discharged as on COD in respect of the transmission asset. Time over-run of 304 days is not condoned in respect of the transmission asset and, therefore, IEDC of ₹22.28 lakh is not allowed. IEDC allowed in respect of the transmission asset is as follows:

(₹ in lakh)

IEDC Claimed	Less: IEDC disallowed due to time over-run	IEDC allowed
119.39	22.28	97.11

Initial Spares

41. Regulation 13(d) of the 2014 Tariff Regulations provides that Initial Spares shall be capitalized as a percentage of the plant and machinery cost up to the cut-off date, subject to the following ceiling norms:

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

42. The Petitioner has claimed Initial Spares in respect of the transmission asset and has prayed to allow the Initial Spares as per actuals. Initial Spares claimed by the Petitioner are as follows:

Total plant and machinery cost under Sub-station excluding IDC and IEDC, land & civil works (₹ in lakh)	Initial Spares claimed (₹ in lakh)	Ceiling limit (in %)	Initial Spares worked out (₹ in lakh)	Excess Initial Spares (₹ in lakh)
a	**b**	**c**	**d=(a-b)*c/(100-c) in%**	**e=b-d**
6698.01	465.64	3.5	226.05	239.59

43. The Petitioner vide affidavit dated 4.5.2020 has submitted year-wise discharge of Initial spares. The details are as follows:

(₹ in lakh)

Particulars	Amount
Actual expenditure up to COD i.e. 30.6.2018	279.38
Actual ependiture from 1.7.2018 to 31.3.2019	162.97
Balance estimated expenditure during 2019-20	23.29

44. The Petitioner has further submitted that actual capital cost discharged against Initial Spares is included in the capital cost shown in Auditor's Certificate for respective period i.e. cost discharged up to COD is included in COD cost and

cost discharged towards Initial Spares in subsequent period is added in Additional Capital Expenditure (ACE).

45. UPPCL has submitted that excess Initial Spares claimed by the Petitioner may be rejected. UPPCL has further has submitted that total cost of plant and machinery as on cut off date is ₹6698.01 lakh. The ceiling of Initial Spares as per the 2014 Tariff Regulations is 3.5% i.e ₹226.05 lakh against this the Petitioner has claimed Initial Spares of ₹465.64 lakh which means 205.9% over the permissible limit of 3.5%. The UPPCL has requested to reject the excess Initial Spares of ₹239.58 lakh.

46. BRPL has submitted that the Petitioner has claimed Initial Spares at 6.78% in respect of brown field sub-station and the same is beyond the norm prescribed under Regulation 13 of the 2014 Tariff Regulations. The Petitioner has prayed the Commission to invoke the powers under Regulation 54 and Regulation 55 of the 2014 Tariff Regulations. BRPL placing reliance on Hon’ble Supreme Court judgment of Mahadev Upendra Sinai Vs. Union of India wherein the Hon’ble Supreme Court has laid down the scope of exercise of power to remove difficulty provided in a statute submitted that the Petitioner’s request seeking relaxation under Regulation 54 and Regulation 55 of the 2014 Regulations should be limited to parameters laid down by the Hon’ble Supreme Court, otherwise no sanctity in the norm based tariff under cost plus mechanism of tariff determination will be left.

47. In response, the Petitioner has submitted that the Petitioner has procured Initial Spares for smooth and reliable operation of the transmission asset. Further, the Petitioner has mention that the PMUs/PDCs are first time being used at such a

large scale in Indian Power System for reliable and secured grid operation which is of national interest. The Petitioner has prayed to allow Initial Spares in full under Regulation 54 of the 2014 Tariff Regulation.

48. We have considered the submission of the Petitioner, UPPCL and BRPL. The Petitioner has claimed excess Initial Spares under Regulation 54 ("Power to Relax") of the 2014 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.

49. Initial Spares claimed by the Petitioner is restricted to ceiling of 3.5% under Regulation 13(d) of the 2014 Tariff Regulations. Initial Spares allowed in respect of the transmission asset are as follows:

Total plant and machinery cost under sub-station excluding IDC and IEDC, land & civil works (₹ in lakh)	**Initial Spares claimed (₹ in lakh)**	**Ceiling (in%)**	**Initial Spares worked out (₹ in lakh)**	**Excess Initial Spares (₹ in lakh)**	**Initial spares allowed (₹ in lakh)**
a	**b**	**c**	**d=(a-b)*c/(100-c)%**	**e=b-d**	**f**
6698.01	465.64	3.5	226.04	239.59	226.04

<u>Capital Cost allowed as on COD</u>

50. Accordingly, capital cost allowed in respect of the transmission asset as on COD is summarized as follows:

(₹ in lakh)

Capital Cost as on COD as per Auditor's Certificate	**Less: IEDC and Excess Initial Spares disallowed as on COD due to**		**Less: PSDF grant received**	**Capital Cost as on COD (on cash basis)**
	IEDC disallowed due to time over-run	**Excess Initial Spares**		
5994.70	22.28	53.34	4196.29	1722.79

Additional Capital Expenditure ("ACE")

51. Regulation 14(1) of the 2014 Tariff Regulations provides as follows:

> ***"14. Additional Capitalisation and De-capitalisation:***
> *(1) The capital expenditure in respect of the 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:*
>
> *(i) Undischarged liabilities recognised to be payable at a future date;*
> *(ii) Works deferred for execution;*
> *(iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 13;*
> *(iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and*
> *(v) Change in Law or compliance of any existing law:*
>
> *Provided that 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 shall be submitted along with the application for determination of tariff."*

52. The Petitioner has claimed ACE of ₹1022.59 lakh for 2018-19 period in respect of the transmission asset covered in the instant petition:

53. We have considered the submissions of the Petitioner. The ACE allowed in respect of the transmission asset for 2014-19 period is as follows:

(₹ in lakh)

ACE 2018-19	
ACE Claimed	1022.59
Less: Excess Initial Spares disallowed	162.97
Less: PSDF grant received	715.81
ACE allowed	**143.81**

54. The Petitioner has projected an ACE of ₹265.75 lakhs during 2019-20. The projected ACE of ₹265.75 lakh is not allowed at this stage and the projected ACE for 2019-20 shall be dealt as per the 2019 Tariff Regulations.

Debt-Equity Ratio

55. Regulation 19(1) of the 2014 Tariff Regulations provides as follows:

*"**Debt-Equity Ratio:** (1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. 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."*

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

57. We have considered the submissions of the Petitioner. The capital cost claimed by the Petitioner is considered as equity in the instant order.

Depreciation

58. Regulation 27(2), Regulation 27(5) and Regulation 27(6) of 2014 Tariff Regulations provide as follows:

"Depreciation

(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 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.

(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-II 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 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets."

59. Regulation 3(67) of 2014 Tariff Regulations defines 'useful life' as follows:

"(67) 'Useful life' in relation to a unit of a generating station and transmission system from the COD shall mean the following, namely:

(a) Coal/Lignite based thermal generating station	*25 years*
(b) Gas/Liquid fuel based thermal generating station	*25 years*
(c) AC and DC sub-station	*25 years*
(d) Gas Insulated Substation (GIS)	*25 years*
(e) Hydro generating station including pumped Storage hydro generating stations	*35 years*
(f) Transmission line (including HVAC & HVDC)	*35 years*
(g) Communication system	*15 years*

Provided that the useful life for AC and DC substations and GIS for which Notice Inviting Tender is floated on or after 01.04.2014 shall be considered as 35 years.

Provided further that the extension of life of the projects beyond the completion of their useful life shall be decided by the Commission."

60. The Petitioner vide affidavit dated 3.9.2021 by referring to Clause 12.3 of Statement of Reasons (SOR) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) (First Amendment) Regulations, (hereinafter referred to as the "2015 Amendment Regulations") dated 4.12.2015 has placed reliance that communication equipment such as SCADA, WAMS, RTUs etc. are to be considered as IT equipment. Accordingly, the Petitioner has claimed depreciation @ 15%.

61. We have considered the submissions of the Petitioner. URTDSM is an upgradation of SCADA system which has been defined as a "communication system" under Regulation 3(11) of the 2014 Tariff Regulations.

62. Besides this, reference to SCADA in Clause 12.3 of SOR of the 2015 Amendment Regulations is with respect to salvage value and it states that the salvage value applicable to the IT equipment will be applicable to the communication equipment like SCADA, WAMS, RTUs etc. Therefore, reliance placed by the Petitioner on Clause 12.5 of SOR of the 2015 Amendment Regulations is misplaced. Moreover, the definition of "Communication System" in the 2014 Tariff Regulations would prevail over Clause 12.3 of SOR of the 2015 Amendment Regulations. Accordingly, depreciation has been considered for communication equipment such as URTDSM @6.33% as part of PLCC up to 31.3.2019 while computing the capital expenditure for 2014-19 period.

63. Regulation 27 of the 2014 Tariff Regulations provides as follows:

> *"Depreciation: (1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. 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 or elements thereof. 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 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 in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:

Provided further 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 generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.

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.

(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-II 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 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets.

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

(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 decapitalized asset during its useful services."

64. Depreciation has been allowed as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations. Depreciation has been allowed considering capital expenditure as on COD and approved ACE during 2014- 19

tariff period. The gross block during 2014-19 tariff period has been depreciated at Weighted Average Rate of Depreciation (WAROD) and working of WAROD is given at Annexure-I. WAROD has been worked out after taking into account the depreciation rates of asset as prescribed in the 2014 Tariff Regulations and trued-up depreciation allowed for the transmission asset during 2014-19 tariff period is as follows:

(₹ in lakh)

	Particulars	**2018-19 (Pro-rata for 275 days)**
A	Opening Gross Block	1722.79
B	Additional Capitalisation	143.81
C	Closing Gross Block (A+B)	1866.60
D	Average Gross Block (A+C)/2	1794.70
E	Weighted average rate of Depreciation (WAROD) (in %)	6.33
F	Lapsed useful life of the asset-at the beginning of the year	0.00
G	Balance useful life of the asset at the beginning of the year	15.00
H	Aggregated Depreciable Value (D*90%)	1615.23
I	**Depreciation during the year**	**85.59**
J	Remaining Aggregated Depreciable Value	1529.64

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

65. 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.

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

66. The Petitioner has claimed RoE in respect of transmission asset in terms of Regulation 24 and Regulation 25 of the 2014 Tariff Regulations which provide as follows:

> *"**24. Return on Equity:** (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.*
> *(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of the river hydro generating station, and at the base rate of 16.50% for the storage*

type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:

Provided that:
(i) in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in Appendix-I:
(ii) the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:
(iii) additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:
(iv) the rate of return of a new project shall be reduced by 1% 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)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:
(v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:
(vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers."

25. Tax on Return on Equity:
(1) The base rate of return on equity as allowed by the Commission under Regulation 24 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 the 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 income from other business streams including deferred tax liability (i.e. income on business other than business of generation or transmission, as the case may be) shall not be considered 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 the generating company or the transmission licensee paying Minimum Alternate Tax (MAT) @ 20.96% including surcharge and cess:

Rate of return on equity = 15.50/(1-0.2096) = 19.610%

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

(a) Estimated Gross Income from generation or transmission business for FY 2014-15 is Rs 1000 crore.

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

(c) Effective Tax Rate for the year 2014-15 = 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 2014-15 to 2018-19 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 transmission customers/DICs as the case may be on year to year basis."

67. The Petitioner is entitled to RoE for the transmission asset in terms of Regulations 24 and Regulation 25 of the 2014 Tariff Regulations. The Petitioner has submitted that they are liable to pay income tax at MAT rates and has claimed the following effective tax rates for 2014-19 tariff period:

Year	Claimed effective tax (in %)	Grossed up RoE [(Base Rate)/(1-t)] (in %)
2014-15	21.018	19.625
2015-16	21.382	19.716
2016-17	21.338	19.705
2017-18	21.337	19.704
2018-19	21.549	19.758

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

Year	Notified MAT rates (in %) (inclusive of surcharge & cess)	Effective tax (in %)
2014-15	20.961	20.961
2015-16	21.342	21.342
2016-17	21.342	21.342
2017-18	21.342	21.342
2018-19	21.549	21.549

69. MAT rates as considered in order dated 27.4.2020 in Petition No. 274/TT/2019 are considered for the purpose of grossing up of the rate of RoE for 2014-19 tariff period in terms of the provisions of 2014 Tariff Regulations which are as follows :

Year	MAT Rate (in %)	Grossed up RoE [(Base Rate)/(1-t)] (in %)
2014-15	20.961	19.610
2015-16	21.342	19.705
2016-17	21.342	19.705
2017-18	21.342	19.705
2018-19	21.549	19.758

70. Accordingly, the RoE allowed for the transmission asset is as follows:

(₹ in lakh)

	Particulars	2018-19 (Pro-rata for 275 days)
A	Opening Equity	1722.79
B	Addition due to Additional Capitalization	143.81
C	Closing Equity (A+B)	1866.60
D	Average Equity (A+C)/2	1794.70
E	Return on Equity (Base Rate) (in%)	15.500
F	Tax Rate applicable (in%)	21.549
G	Rate of Return on Equity (Pre-tax)	19.758
H	**Return on Equity (Pre-tax) (D*G)**	**267.16**

Operation & Maintenance Expenses ("O&M Expenses")

71. UPPCL has submitted that the Petitioner has claimed O&M Expense of ₹53.77 lakh without giving justifications.

72. The Petitioner has submitted that actual O&M Expenses claimed is ₹31.03 lakh and Auditor's Certificate is submitted in support of the claim. Further, the Petitioner has submitted that the details of actual O&M Expenses along with the revised forms have already been submitted vide affidavit dated 12.2.2020.

73. We have considered the submissions of the Petitioner and UPPCL. The Petitioner has claimed actual O&M Expenses of ₹31.03 lakh and submitted the Auditor's Certificate dated 24.10.2019 in support of its claim. The actual O&M Expenses of ₹31.03 lakh is allowed subject to truing up on actual basis.

Interest on Working Capital ("IWC")

74. Regulation 28(1)(c), Regulation 28(3) and Regulation 3(5) of the 2014 Tariff Regulations specify as follows:

> ***"28. Interest on Working Capital:*** *(1) The working capital shall cover:*
> *(a) Xxxxx*
> *(b) Xxxxx*
> *(c) Hydro generating station including pumped storage hydro-electric generating station and transmission system including communication system:*
> *(i) Receivables equivalent to two months of fixed cost;*
> *(ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and*
> *(iii) Operation and maintenance expenses for one month*
>
> *(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 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.*
>
> ***3….***
>
> ***(5) "Bank Rate"*** *means the base rate of interest as specified by the State Bank of India from time to time or any replacement thereof for the time being in effect plus 350 basis points;"*

75. The Petitioner is entitled to claim IWC as per Regulation 28(1)(c) of the 2014 Tariff Regulations as follows:-

i. Maintenance Spares :

Maintenance spares have been worked out based on 15% of Operation and Maintenance Expenses.

ii. O & M Expenses :

O&M Expenses have been considered for one month of the allowed O&M Expenses.

iii. Receivables:

The receivables have been worked out on the basis of 2 months of annual transmission charges.

iv. Rate of interest on working capital :

Rate of interest on working capital is considered on normative basis in accordance with Regulation 28(3) of the 2014 Tariff Regulations.

76. Accordingly, IWC allowed for the transmission asset is as follows:

(₹ in lakh)

	Particulars	**2018-19 (Pro-rata for 275 days)**
A	Working Capital for O&M Expenses (O&M Expenses for 1 month)	3.43
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	6.18
C	Working Capital for Receivables (Equivalent to 2 months of annual fixed cost / annual transmission charges)	86.86
D	**Total of Working Capital (A+B+C)**	**96.47**
E	Rate of Interest on Working Capital (in%)	12.20
F	**Interest of working Capital (D*E)**	**8.87**

<u>Approved Annual Fixed Charges for 2014-19 Tariff Period</u>

77. Annual fixed charges allowed for the transmission asset for 2014-19 tariff period are as follows:

(₹ in lakh)

Particulars	**2018-19 (Pro-rata for 275 days)**
Depreciation	85.59
Interest on Loan	0.00
Return on Equity	267.16
Operation and Maintenance Expenses	31.03

Interest on Working Capital	8.87
Total	**392.65**

Filing Fee and Publication Expenses

78. The Petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 52 of the 2014 Tariff Regulations.

79. BRPL has submitted that grant of filing fee and expenses incurred is the discretion of the Commission and the Commission vide order dated 11.9.2008 in Petition No. 129 of 2005 has held that the Central Power Sector Undertakings in furtherance of their business interest are required to approach Central Commission for determination and approval of tariff and hence declined the claim of Central Power Sector undertakings for allowing the reimbursement of the application filing fee.

80. In response, the Petitioner has submitted that it has requested for reimbursement of expenditure towards petition filing fee and publication expenses. The Commission in its order dated 28.3.2016 in Petition No. 137/TT/2015 has rejected the similar contentions on the same issue and allowed the recovery of petition filing fee and publication of notices from the beneficiaries on pro rata basis. Accordingly, the Petitioner may be allowed to claim the filing fee and expenses incurred on publication of notices from the beneficiaries.

81. We have considered the submissions of the Petitioner and BRPL. 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 52(1) of the 2014 Tariff Regulations.

Licence Fee and RLDC Fees and Charges

82. The Petitioner has requested to allow the Petitioner to recover license fee and RLDC fee from the Respondents. The Petitioner shall be entitled for recovery of licence fee and RLDC fee and charges in accordance with Regulations 52 of the 2014 Tariff Regulations.

Goods and Services Tax

83. The Petitioner has sought to recover GST on transmission charges separately from the Respondents, if at any time GST on transmission is withdrawn from negative list in future. BRPL has submitted that the claim of the GST is premature.

84. We have considered the submissions of the Petitioner and BRPL. GST is not levied on transmission service at present. Therefore, we are of the view that Petitioner's prayer is premature and the Petitioner is at liberty to approach this Commission if GST is levied on transmission service in future.

Sharing of Transmission Charges

85. The Petitioner has submitted that tariff for transmission (Communication System) of Electricity (Annual Fixed Cost) shall be shared as per Regulation 43 of the 2014 Tariff Regulations. These charges shall be recovered on monthly basis and billing collection and disbursement of the transmission charges shall be governed by 2010 Sharing Regulations.

86. We have considerd the submisisons of the Petitioner. 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 shall be shared in accordance with the applicable Sharing Regulations as provided under Regulation 43(2) of the 2014 Tariff Regulations.

87. To summarise,

(a) The Annual Fixed Charges allowed for the transmission asset for 2014-19 tariff period are as follows:

(₹ in lakh)

Particulars	**2018-19 (Pro-rata for 275 days)**
AFC	392.65

88. Annexure-I given hereinafter forms part of the order.

89. This order disposes of Petition No. 486/TT/2019 in terms of the above discussions and findings.

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

Asset - 1 **Annexure – I**

2014-19	Admitted Capital Cost as on COD (₹ in lakh)	ACE (₹ in lakh)	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations
Capital Expenditure as on COD		**2014-19**			**2018-19 (₹ in lakh)**
PLCC	1722.79	143.81	1866.60	6.33	113.60
TOTAL	**1722.79**	**143.81**	**1866.60**		**113.60**
			Average Gross Block (₹ in lakh)		**1794.70**
			Weighted Average Rate of Depreciation (in %)		**6.33**