CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 118/TT/2020

Coram:

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

Date of order: 22.12.2021

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and determination of transmission tariff of 2014-19 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for **Asset-I:** 02 numbers of 400 kV line bays at Neemrana Sub-station for termination of 400 kV D/C Neemrana-Dhanonda Transmission Line under " ICTs and Bays Associated with Northern Region System Strengthening Scheme (NRSS-XXXVIII)"**.**

And in the matter of:

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

Versus

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited,
   Vidyut Bhawan, Vidyut Marg,
   Jaipur - 302 005 (Rajasthan).

2. Ajmer Vidyut Vitran Nigam Limited,
   132 kV, GSS RVPNL Sub-station Building,
   Caligiri Road, Malviya Nagar,
   Jaipur - 302 017 (Rajasthan).

3. Jaipur Vidyut Vitran Nigam Limited,
   132 kV, GSS RVPNL Sub-station Building,
   Caligiri Road, Malviya Nagar,
   Jaipur - 302 017 (Rajasthan).

4. Jodhpur Vidyut Vitran Nigam Limited,
   132 KV, GSS RVPNL Sub-station Building,
   Caligiri Road, Malviya Nagar,
   Jaipur - 302 017 (Rajasthan).

5. Himachal Pradesh State Electricity Board,
   Vidyut Bhawan, Kumar House Complex Building II,
   Shimla - 171 004 (Himachal Pradesh).

6. Punjab State Electricity Board,
   Thermal Shed Tia, Near 22 Phatak,
   Patiala - 147 001 (Punjab).

7. Haryana Power Purchase Centre,
   Shakti Bhawan, Sector – 6,
   Panchkula - 134 109 (Haryana).

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 - 226 001 (Uttar Pradesh).

10. Delhi Transco Limited,
    Shakti Sadan, Kotla Road,
    New Delhi - 110 002.

11. BSES Yamuna Power Limited,
    B-Block,Shakti Kiran, Building (Near Karkadooma Court)
    Karkadooma 2nd Floor,
    New 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 - 110009.

14. Chandigarh Administration,
    Sector - 9,
    Chandigarh.

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

16. North Central Railway,
Allahabad (Uttar Pradesh).

17. New Delhi Municipal Council,
Palika Kendra, Sansad Marg,
New Delhi - 110 002. **...Respondents**

For Petitioner : Shri S. S. Raju, PGCIL
Shri A. K. Verma, PGCIL
Shri D. K. Biswal, PGCIL
Shri Ved Prakash Rastogi, PGCIL

For Respondents : None

<u>ORDER</u>

The Petitioner, Power Grid Corporation of India Limited, a deemed transmission licensee, has filed the instant petition for determination of transmission tariff for the period from 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") and for determination of transmission tariff for the period from 1.4.2019 to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as "the 2019 Tariff Regulations") in respect of **Asset-I:** 02 numbers of 400 kV line bays at Neemrana Sub-station for termination of 400 kV D/C Neemrana-Dhanonda Transmission Line (hereinafter referred to as "the transmission asset") under "ICTs and Bays Associated with Northern Region System Strengthening Scheme (NRSS-XXXVIII)" (hereinafter referred to as "the transmission project").

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

"1) Approve the Transmission Tariff for 2014-19 block and transmission tariff for

2019-24 block for the assets covered under this petition, as per para 8.3 and 13.2 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 the 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 recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 9 and 10 above for respective block.

6) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 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.

7) 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 and Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.

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

9) 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 13.7 above.

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

11) Allow the petitioner to bill and recover GST on Transmission charges separately from the respondents, if GST on Transmission of electricity is withdrawn from the exempted (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."

Background

3. The brief background of the matter is as follows:

a) The Investment Approval (IA) for the transmission project was accorded by the Board of Directors of the Petitioner company vide Memorandum dated 29.3.2017, at an estimated cost of ₹33775 lakh including an IDC of ₹2146 lakh based on October 2016 price level.

b) The scope of the scheme was discussed and agreed in the 35th Standing Committee meeting held on 3.11.2014; 34th meeting of Empowered Committee on Transmission held on 13.4.2015; and 33rd and 36th NRPC meeting on Transmission for Northern Region held on 11.11.2014 and 24.12.2015 respectively.

c) The detailed scope of works covered under the transmission project is as follows:

a. Creation of 400 kV level at Aligarh (PG) 765 kV GIS switching Station – Extension

i. Provision of 2x1500 MVA 765/400 kV ICTs along with associated bays

ii. Provision of 2 Numbers of 400 kV line bays for termination of Aligarh - Prithla 400 kV D/C line under TBCB.

b. 400 kV Neemara (PG) Sub-station Extension

i. Provision of 2 Numbers of 400 kV line bays for termination of Neemrana – Dhanonda 400 kV D/C line under TBCB.

d) Details of petitions filed under the transmission project are as follows:

Sl. No.	Scope as per Investment Approval	COD Status	Remarks
1.	**Asset-I:** 02 numbers of 400 kV line bays at Neemrana Sub-station for termination of 400 kV D/C Neemrana–Dhanonda transmission line	26.2.2019	Instant Petition
2.	**Creation of 400 kV level at Aligarh (PG) 765 kV GIS switching Station – Extension:**	Yet to be commissioned	Separate Petition shall be filed as per

Sl. No.	Scope as per Investment Approval	COD Status	Remarks
	Provision of 2x1500 MVA 765/400 kV ICTs along with associated bays And Provision of 2 Numbers of 400 kV line bays for termination of Aligarh - Prithla 400 kV D/C line under TBCB		the Tariff Regulation 2019

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

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has 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. Uttar Pradesh Power Corporation Limited (UPPCL) i.e. Respondent No. 9 has filed its reply vide affidavit dated 23.1.2020 and has raised the issues of Petitioner's claim in respect of Cost over-run, Initial Spares, Additional Capital Expenditure (ACE), power to relax, IoL, depreciation, grossing up of RoE, license fee, security expenses and IWC, etc. In response to the issues raised by UPPCL, the Petitioner has filed rejoinder vide affidavit dated 2.8.2021. The issues raised by UPPCL and the clarifications given by the Petitioner are dealt in the relevant paragraphs of this order.

6. The hearing in this matter was held on 3.8.2021 through video conference and the order was reserved.

7. This order is issued considering the submissions made in the Petitioner's affidavit dated 28.10.2019 and 28.6.2021, the reply of UPPCL vide affidavit dated 23.1.2020 and the rejoinder filed by the Petitioner vide affidavit dated 2.8.2021.

8. Since the transmission asset is claimed to be put into commercial operation during 2014-19 tariff period, the transmission tariff for the period 2014-19 and 2019-24 period is discussed separately in the succeeding paragraphs.

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

DETERMINATION OF ANNUAL FIXED CHARGES FOR THE 2014-19 TARIFF PERIOD

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

(₹ in lakh)

Asset – I	
Particulars	**2018-19**
Depreciation	4.90
Interest on Loan	4.95
Return on equity	5.04
Interest on Working Capital	0.94
O&M Expenses	12.68
Total	**28.51**

11. The details of Interest on Working Capital (IWC) claimed by the Petitioner are as follows:

(₹ in lakh)

Asset – I	
Particulars	**2018-19**
O&M expenses	11.45
Maintenance Spares	20.61
Receivables	51.50
Total	83.56
Rate of Interest (in %)	12.20
Interest	10.19
Pro-rate interest on working capital	**0.94**

Date of commercial operation ("COD")

12. The Petitioner has claimed the actual date of commercial operation of the transmission asset as 26.2.2019 matching with 400 kV D/C Neemrana–Dhanonda Transmission Line (in the scope of Sterlite Power under TBCB route). The Petitioner has submitted the Auditor's Certificate dated 2.8.2019 on the basis of actual COD of the asset covered in the instant petition along with CEA clearance certificate dated 29.12.2018, RLDC charging certificate dated 11.4.2019, self-declaration COD letter dated 12.4.2019 and CMD certificate in support of COD of the transmission asset.

13. Taking into consideration the CEA energisation certificate, RLDC charging certificate, self-declaration COD certificate and CMD certificate as required under Grid Code, COD of the transmission asset covered under the instant petition is approved as 26.2.2019.

Capital Cost

14. Regulation 9(1)(2) of the 2014 Tariff Regulations provides 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;
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."

15. The Petitioner vide Auditor’s Certificate dated 2.8.2019 has submitted the capital cost as on COD and estimated ACE incurred or projected to be incurred in respect of the transmission asset. The details submitted by the Petitioner are as follows:

(₹ in lakh)

Particulars	Apportioned Approved cost	Expenditure up to COD	Projected ACE			Estimated Completion Cost
			2018-19	2019-20	2020-21	
Asset-I	1013.84	913.38	16.85	297.65	127.56	1355.44

Cost Over-run/Variation

16. The Petitioner has submitted that the completion cost of the transmission asset exceeds the apportioned approved cost by ₹341.60 lakh which is mainly due to high award price.

17. The Petitioner has submitted that it started the work just after the Investment Approval (as per Form 5A, award was placed on 31.3.2017). The Petitioner has further submitted that increase/ decrease in award cost received in competitive bidding with respect to initial estimates (FR cost) is mainly due to open competitive bidding route which is followed by providing equal opportunity to all eligible firms, wherein lowest possible market prices for required products/ services is obtained and contracts are awarded on the basis of lowest evaluated eligible bidder. The best competitive bid prices against tenders may happen to be lower or higher than the cost estimate depending upon prevailing market conditions.

18. The Petitioner further submitted that it follows a robust and time-tested system of preparing cost estimates before obtaining IA. After IA, the award letters are placed on the executing agencies on the basis of tendering process as per best industry practices and due diligence including justification of bid prices vis-à-vis estimated cost

before placing the awards is undertaken. Further, the cost control measures are taken during execution of the transmission project and only under unavoidable situations caused by the actual soil/ terrain conditions, crossing requirements (river, Power line, Railway line, forest stretches and any other compelling technical reason), the cost may undergo change.

19. The Petitioner has submitted that the basis of cost estimate is recorded in the Board of Directors approval which states that "*the estimated cost of the project as on October 2016 price level works out to ₹33775 lakh including an IDC of ₹2146 lakh. Unit rates for 765/400 kV Sub-station works have been taken from Schedule of Rates (which has been prepared based on the average of unit rates of latest LOAs/ Bids and/ or from raw material prices) for October, 2016 Price level. Further, the cost estimate is inclusive of Excise Duty - which has been considered @ 12.50% for all equipment - and CST @ 2% (as funding for supply of equipment is proposed to be done through domestic borrowings/bonds/External Commercial borrowings). F&I @ 4% have been considered in the Estimate for plain terrain*". The Petitioner has submitted that the schedule of rates was prepared on the basis of average of unit rates of latest three bids/ LOAs/ raw material prices in order to achieve the cost efficiency by estimating the capital cost of transmission assets covered under the instant petition. The Petitioner has submitted that the bid prices are invited for the complete scope of work on overall basis and justification of item-wise cost variation is provided in Form 5 in the instant petition

20. UPPCL has submitted that the completion cost exceeds the apportioned approved cost by ₹341.60 lakh which is mainly due to high award price. UPPCL has requested to direct the Petitioner to submit the Revised Cost Estimates as approved

by BOD or Ministry of Power, as the case may be and confirm whether the guidelines issued by the funding agencies provided for e-reverse auction in procurement of equipment/ transmission lines.

21. In response, the Petitioner has reiterated its submissions made in the petition and has submitted the copy of Revised Cost Estimate (RCE) vide affidavit dated 28.6.2021. The Petitioner has submitted that the completed cost of Asset-I is within the RCE apportioned cost and has prayed to allow the capital cost as claimed in the instant petition. The Petitioner has confirmed that e-reverse auction was introduced for all equipment/ transmission line procurements except where it is not permitted as per the guidelines of funding agency.

22. We have considered the submission of the Petitioner and UPPCL. The Petitioner in compliance to the Commission's direction, has submitted RCE with respect to the transmission asset vide affidavit dated 28.6.2021 approved by the Board of directors of the Petitioner's company vide Memorandum No. C/CP/PA1920-12-0AP-RCE011 dated 16.3.2020. Cost as per RCE of the transmission asset is as follows:

(₹ in lakh)

Particulars	Apportioned Approved cost as per FR	Apportioned Cost as per RCE	Expenditure up to COD	Proposed ACE			Estimated Completion Cost
				2018-19	2019-20	2020-21	
Asset-I	1013.84	1360.00	913.38	16.85	297.65	127.56	1355.44

23. As compared to FR cost, the capital cost is higher by about ₹346.16 lakh as per RCE. The Petitioner has submitted that the capital cost has increased due to increase of cost towards items like Switchgear (CT, PT, Circuit Breaker, Isolator etc.), Control, Relay & Protection Panel, IT Equipment, PLCC, structure for switchyard. The estimated completion cost including ACE during 2018-19, 2019-20, 2020-21 is

₹1355.44 lakh. As the estimated completion cost is lower than the revised approved apportioned cost as per RCE, the same is allowed.

Time Over-run

24. The transmission asset was scheduled to be commissioned (SCOD) on 28.6.2019 as per I.A. dated 29.3.2017. The transmission asset having been put under commercial operation on 26.2.2019, there is no time over-run.

Treatment of IDC and IEDC

25. The Petitioner has claimed IDC in respect of the transmission assets and in support of the same, it has submitted the Auditor's Certificate. The Petitioner has submitted a statement showing IDC claim, discharge of IDC liability as on COD and thereafter as follows:

(₹ in lakh)

Particulars	IDC as per Auditor's Certificate	IDC discharge up to COD	IDC Discharge during 2018-19
Asset-I	2.73	1.59	1.14

26. IDC is computed based on the information submitted by the Petitioner. Further, the loan amount as on COD has been mentioned in Form 6 and Form 9C. IDC has been worked out based on the available information and relying on loan amount as given in Form 9C. Accordingly, the details of IDC considered for tariff computation, subject to revision at the time of true up is as follows:

(₹ in lakh)

Particulars	IDC as per Auditor's Certificate	IDC allowed	IDC allowed up to COD on Cash basis	IDC discharge during 2018-19
Asset-I	2.73	2.73	1.59	1.14

27. The Petitioner has also claimed IEDC in respect of the transmission asset as per the table given below. The Petitioner has claimed IEDC as on COD, which is within the percentage of the hard cost as indicated in the abstract cost estimate in respect of

the transmission asset. Accordingly, IEDC details considered for the purpose of tariff calculation are as follows:

(₹ in lakh)

Particulars	IEDC claimed by Petitioner (as per Auditor's Certificate)	IEDC disallowed due to time over-run /excess claim	IEDC allowed on cash basis as on COD
Asset-I	3.35	0.00	3.35

Initial Spares

28. Regulation 13 of the 2014 Tariff Regulations specifies ceiling norms for capitalization of initial spares in respect of transmission system as follows:

> *"**13. Initial Spares***
>
> *Initial spares shall be capitalised as a percentage of the Plant and Machinery cost upto cut-off date, subject to following ceiling norms:*
>
> *(d) Transmission system*
> *(i) Transmission line-1.00%*
> *(ii) Transmission Sub-station (Green Field)-4.00%*
> *(iii) Transmission Sub-station (Brown Field)-6.00%*
> *(iv) Series Compensation devices and HVDC Station-4.00%*
> *(v) Gas Insulated Sub-station (GIS)-5.00%*
> *(vi) Communication system-3.5%*
>
> *Provided that:*
>
> *(i) where the benchmark norms for initial spares have been published as part of the benchmark norms for capital cost by the Commission, such norms shall apply to the exclusion of the norms specified above:*
>
> *(ii) where the generating station has any transmission equipment forming part of the generation project, the ceiling norm for initial spares for such equipments shall be as per the ceiling norms specified for transmission system under these regulations:*
>
> *(iii) once the transmission project is commissioned, the cost of initial spares shall be restricted on the basis of plant and machinery cost corresponding to the transmission project at the time of truing up:*
>
> *(iii) once the transmission project is commissioned, the cost of initial spares shall be restricted on the basis of plant and machinery cost corresponding to the transmission project at the time of truing up:*
>
> *(iv) for the purpose of computing the cost of initial spares, plant and machinery cost shall be considered as project cost as on cut-off date excluding IDC, IEDC, Land Cost and cost of civil works. The transmission licensee shall submit the breakup of head wise IDC & IEDC in its tariff application."*

29. The Petitioner has claimed initial spares of ₹92.10 lakh which is exceeding the ceiling specified in the 2014 Tariff Regulations as follows:

(₹ in lakh)

Particulars	Plant and Machinery cost	Initial Spares as claimed	Ceiling Limit (in %) (Sub-station)	Initial Spares worked out	Excess Initial Spares
Asset-I	1157.70	92.10	6	68.02	24.08

30. The Petitioner has submitted that initial spares procured are essential spares for smooth running of the grid and has prayed to allow the same under Regulation 54 (Power to Relax) of the 2014 Tariff Regulations.

31. The statement of liability discharge of initial spares in respect of the transmission asset is as follows:

Particulars	Cost of Initial Spares (₹ in lakh)
Spares Discharged up to COD	76.86
Spares to be discharged (COD to 31.3.19)	0.00
Spares to be discharged (2019-20)	15.24
Total Spares discharged as per Auditor's Certificate	**92.10**

32. UPPCL has submitted that the plant and machinery cost is ₹1157.70 lakh and the spares claimed is ₹92.10 lakh which means that the initial spares are 7.95% of the total claim of plant and machinery. The ceiling of initial spares in case of brown-field sub-stations is 6%. UPPCL has further submitted that the Petitioner has ignored the fact that the Regulations are framed by the Commission keeping in view the smooth operation of grid. Therefore, the Petitioner's claim that the initial spares have exceeded the permissible limit to ensure smooth operation of the grid is liable to be rejected.

33. In response, the Petitioner has reiterated its submissions and prayed that the Commission may invoke its Power to Relax under Regulation 54 of the 2014 Tariff Regulations to allow the excess claim of initial spares.

34. We have considered the submissions of the Petitioner and UPPCL. The Petitioner has prayed for excess initial spares under Regulation 54 of the 2014 Tariff Regulations, i.e., “Power to Relax”. The Petitioner has not submitted any reason for invoking provisions of Regulation 54 of the 2014 Tariff Regulations. The initial spares have been allowed for the purpose of tariff calculation considering the Plant and Machinery cost excluding IDC, IEDC and land expenses up to 31.3.2019, subject to ceiling as specified in the 2014 Tariff Regulations. Accordingly, initial spares allowed are as follows:

Particulars	**Asset Type**	**Estimated Completion Cost (A) (₹ in lakh)**	**Initial Spares claimed (B) (₹ in lakh)**	**Ceiling limit (%) (C)**	**Initial Spares worked out**	**Excess Initial Spares E = B-D (₹ in lakh)**	**Initial Spares allowed (₹ in lakh)**	**Initial Spares disallowed from Capital cost (₹ in lakh)**	**Initial Spares to be disallowed in 2019-20 (₹ in lakh)**
					D = [(A-B)*C /(100-C)] (₹ in lakh)				
Asset-I	. Sub-station	1157.70	. 92.10	6	68.02	24.08	. 68.02	8.84	15.24

Additional Capital Expenditure (“ACE”)

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

> *“(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."

36. Regulation 3(13) of the 2014 Tariff Regulations defines "cut-off" date as follows:

> ***"(13) 'Cut-off Date'*** *means 31st March of the year closing after two years of the year of commercial operation of whole or part of the project, and in case the whole or part of the project is declared under commercial operation in the last quarter of the year, the cut-off date shall be 31st March of the year closing after three years of the year of commercial operation:*
>
> *Provided that the cut-off date may be extended by the Commission if it is proved on the basis of documentary evidence that the capitalisation could not be made within the cut-off date for reasons beyond the control of the project developer.*

37. The cut-off date of the transmission asset covered under the instant petition is 31.3.2022. The Petitioner has submitted that ACE incurred during 2018-19 is on account of un-discharged liability towards final payment/ withheld payment due to contractual exigencies for works executed within the cut-off date and work to be executed within the cut-off date. The Petitioner has claimed the same under Regulation 14(1)(i) (un-discharged liabilities recognized to be payable at a future date) of the 2014 Tariff Regulations. The break-up of ACE claimed by the Petitioner is as follows:

(₹ in lakh)

Particulars	**ACE Claimed**
Asset – I	**2018-19**
Balance and Retention payment 14 (1)(i)	17.99*

**Includes IDC discharges after COD of ₹ 1.14 lakh*

38. UPPCL submitted that the Petitioner has claimed ACE of ₹17.99 lakh for 2014-19 tariff period and has not submitted the details of the same. Hence, the Petitioner may be directed to submit item-wise and year-wise liability flow statement so that the veracity of figures of ACE could be examined.

39. In response, the Petitioner has submitted that ACE details along with liability flow statement have been submitted vide affidavit dated 28.6.2021.

40. We have considered the submissions made by the Petitioner and UPPCL. ACE claimed for 2018-19 is allowed under Regulation 14(1)(i) (un-discharged liabilities recognized to be payable at a future date) of the 2014 Tariff Regulations. Accordingly, ACE allowed for the 2014-19 tariff period is as follows:

(₹ in lakh)

Particulars	**ACE allowed**
Asset - I	**2018-19**
Balance and Retention payment 14 (1)(i)	17.99*

**Includes IDC discharges after COD of ₹ 1.14 lakh*

Capital Cost as on COD and 31.3.2019

41. Accordingly, capital cost considered for the purpose of tariff calculation is as follows:

(₹ in lakh)

Particulars	**Apportioned Approved Cost**	**Apportioned Cost as per RCE**	**Capital Cost claimed as on COD**	**Disallowed as on COD**		**IDC undischarged up to COD**	**Initial Spares disallowed**	**Capital Cost considered for the purpose of tariff (as on COD)**
				IDC	**IEDC**			
Asset-I	1013.84	1360.00	913.38	0.00	0.00	1.14	8.84	903.40

42. Therefore, the total estimated completion cost in respect of the transmission asset as on 31.3.2019 is as follows:

(₹ in lakh)

Particulars	**Capital Cost allowed (as on COD)**	**ACE**	**Total Estimated Completion Cost (up to 31.3.2019)**
		2018-19	
Asset-I	903.40	17.99	921.39

Debt-Equity Ratio

43. Regulation 19(1)(5) of the 2014 Tariff Regulations specify as follows:

> *"**19. 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."*

"(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 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."

44. The Petitioner has claimed debt-equity ratio of 70:30 as on COD. Debt-equity ratio of 70:30 is considered as provided in Regulation 19 of the 2014 Tariff Regulations. The details of debt-equity ratio in respect of the transmission asset as on COD and as on 31.3.2019 is as follows:

Funding	Capital Cost (as on COD) (₹ in lakh)	(in %)	Total Capital Cost (as on 31.3.2019) (₹ in lakh)	(in %)
Debt	632.38	70.00	644.98	70.00
Equity	271.02	30.00	276.41	30.00
Total	**903.40**	**100.00**	**921.39**	**100.00**

Depreciation

45. Regulation 27 of the 2014 Tariff Regulations with regard to depreciation specifies as follows:

*"**27. 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.

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."

46. UPPCL has submitted that the capital cost for 2018-19 period is ₹912.24 lakh and ACE is ₹17.99 lakh. Therefore, the average capital cost is ₹921.54 lakh. It has submitted that the transmission asset covers sub-station and PLCC (life of 25 years), sub-station (life of 15 years), PLCC (life of 15 years) and, therefore, if the rate of depreciation is taken as 5.28%, 5.28 and 6.33% respectively, the total weighted average life of the transmission asset works out to be 23.82 years while the Petitioner has calculated depreciation by considering the life of the transmission asset as 23 years. Since the weighted average life of the transmission asset is 23.82 years, the rate of depreciation should be 90/23.85% i.e. 3.77%. Against this, the Petitioner has applied rate of depreciation as 0.531892 which appears to be inconsistent. Depreciation has been worked out to be ₹34.73 lakh against which the Petitioner has taken depreciation as ₹4.90 lakh which will adversely affect the figures of Interest on Loan (IoL), wherein the repayment of loan is done through depreciation. Therefore, the Petitioner may be directed to submit the revised figures of depreciation for 2018-19 period.

47. In response, the Petitioner submitted that it has claimed depreciation as per the 2014 Tariff Regulations and details of depreciation have been submitted in tariff forms (Form 10 A, Form 8, Form 9E and Form 1 and 2) along with the petition.

48. We have considered the submissions of the Petitioner and UPPCL. Depreciation has been allowed in accordance with Regulation 27 of the 2014 Tariff Regulations. The transmission asset was put under commercial operation during 2018-19 period. Accordingly, the transmission asset will complete 12 years after 2018-19. As such,

depreciation has been calculated annually based on Straight Line Method at the rates specified in Appendix-II of the 2014 Tariff Regulations. The gross block during 2018-19 has been depreciated at weighted average rate of depreciation (WAROD). WAROD at Annexure-1 has been worked out taking into account the depreciation rates as specified in the 2014 Tariff Regulations. Details of depreciation allowed in respect of the transmission asset is as follows:

(₹ in lakh)

Particulars	**2018-19 (Pro-rata for 34 days)**
Opening Gross Block	903.40
Addition during the year 2018-19 due to projected ACE	17.99
Closing Gross Block	921.39
Average Gross Block	912.39
Weighted average rate of Depreciation (WAROD) (in %)	5.43
Balance useful life at the beginning (Year)	23.00
Aggregated Depreciable Value	821.15
Depreciation during the year	**4.62**
Remaining Aggregate Depreciable Value at the end of the year	816.53
Aggregate Cumulative Depreciation at the end of the year	**4.62**

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

49. Regulation 26 of the 2014 Tariff Regulations provides as follows:

> ***"26. Interest on loan capital:*** *(1) The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.*
>
> *(2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.*
>
> *(3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered up to the date of de-capitalisation of such asset.*
>
> *(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.*

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

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

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

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

(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

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

(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:

Provided that the beneficiaries or the long term transmission customers /DICs shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan.

50. UPPCL has submitted that pro-rated IoL should be ₹4.84 lakh, whereas the Petitioner has claimed ₹4.95 lakh as IoL. UPPCL has further requested that the Petitioner should be directed to revise the value of IoL for 2018-19 period on the basis of proper data.

51. In response, the Petitioner has submitted that the details of IoL have already been provided along with the petition and the claim has been made in accordance with the 2014 Tariff Regulations. The Petitioner has also submitted that it may be allowed

to bill and adjust impact on IoL due to change in interest due to floating rate of interest applicable, if any, directly from the Respondents/ beneficiaries.

52. We have considered the submissions of the Petitioner and UPPCL. Keeping in view the provisions of Regulation 26 of the 2014 Tariff Regulations, the Petitioner's entitlement to IoL has been calculated on the following basis:

a. Gross amount of loan, repayment of instalments and rate of interest and weighted average rate of interest on actual average loan have been considered as per the petition;

b. The repayment for the tariff period 2014-19 has been considered to be equal to the depreciation allowed for that period; and

c. Weighted average rate of interest on actual average loan worked out as per (i) above is applied on the notional average loan during the year to arrive at the interest on loan.

53. Any change in rate of interest subsequent to COD will be considered at the time of truing-up. Based on above, details of IoL calculated are as follows:

(₹ in lakh)

Particulars	**2018-19 (Pro-rata for 34 days)**
Gross Normative Loan	632.38
Cumulative Repayments up to Previous Year	0.00
Net Loan-Opening	632.38
Addition due to ACE	12.60
Repayment during the year	4.62
Net Loan-Closing	640.36
Average Loan	636.37
Weighted Average Rate of Interest on Loan (in %)	8.350
Interest on Loan	**4.95**

Return on Equity (RoE)

54. Regulation 24 and of Regulation 25 of the 2014 Tariff Regulations specify 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 kilometer

“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 on other income stream (i.e., income of non generation or non transmission business, 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%

55. The Petitioner has submitted that RoE has been calculated at the rate of 19.758% after grossing up RoE with MAT rate of 20.961%. The Petitioner has further submitted that the grossed-up RoE is subject to truing up based on the actual tax paid along with any additional tax or interest, duly adjusted for any refund of tax including the interest received from IT authorities, pertaining to 2014-19 tariff period on actual gross income of any financial year. Any under-recovery or over-recovery of grossed-up RoE after truing up shall be recovered or refunded to the beneficiaries on year to year basis.

56. UPPCL has submitted that as per their calculations, the average equity is ₹276.37 lakh and the rate of RoE is ₹5.04 lakh. UPPCL has further submitted that the gross rate of interest adopted by the Petitioner is not based on the approved MAT rates. Therefore, the Commission may direct the Petitioner to adopt the grossed-up rate of RoE based on MAT rates approved by the IT authorities.

57. In response, the Petitioner submitted that the details of RoE have already been provided in the tariff forms and the claim has been made in accordance with the 2014 Tariff Regulations.

58. We have considered the submissions of the Petitioner and UPPCL. Regulation 24 read with Regulation 25 of the 2014 Tariff Regulations provides for grossing up of RoE with the effective tax rate for the purpose of RoE. It further provides that in case the generating company or transmission licensee is paying Minimum Alternative Tax (MAT) which includes surcharge and cess will be considered for the grossing up of RoE. Accordingly, MAT rate applicable during 2017-18 has been considered for the purpose of RoE, which will be trued-up with actual tax rate in accordance with Regulation 25(3) of the 2014 Tariff Regulations. Accordingly, RoE allowed is as follows:

(₹ in lakh)

Particulars	**2018-19 (Pro-rata for 34 days)**
Opening Equity	271.02
Addition due to ACE	5.39
Closing Equity	276.41
Average Equity	273.71
Return on Equity (Base Rate) (in %)	15.500
Tax Rate applicable (in %)	21.549
Rate of Return on Equity (Pre-tax)	19.758
Return on Equity (Pre-tax)	**5.04**

<u>Operation & Maintenance Expenses (“O&M” Expenses)</u>

59. Regulation 29(4)(a) of the 2014 Tariff Regulations specifies the norms for operation and maintenance expenses for the transmission system based on the type of Sub-station and the transmission line. Norm specified in respect of the element covered in the instant petition is as follows:

Element	**2018-19**
400 kV bay (₹ lakh/bay)	68.71

60. UPPCL has submitted that as per their calculations on the basis of the 2014 Tariff Regulations, O&M Expenses works out to be ₹12.80 lakh, whereas the Petitioner is claiming ₹12.66 lakh as O&M Expenses. Hence, the Petitioner may be directed to revise and rectify the figures of O&M Expenses.

61. In response, the Petitioner has submitted that the details of O&M Expenses have been provided in the tariff forms and the claim has been made in accordance with the 2014 Tariff Regulations.

62. We have considered the submissions of the Petitioner and UPPCL. The Petitioner's entitlement to O&M Expenses has been worked out as follows:

(₹ in lakh)

Element	**2018-19 (Pro-rata for 34 days)**
Asset-I: 02 Numbers of 400 kV line bays at Neemrana Sub-station (₹ lakh/bay)	12.80

63. The Petitioner has submitted that O&M Expenses for 2014-19 tariff period has been arrived at on the basis of normalized actual O&M Expenses during the period 2008-09 to 2012-13. The Petitioner has further submitted that the wage revision of the employees is due during 2014-19 period and actual impact of wage hike which will be effective from the future date has not been factored in fixation of the normative O&M rates specified for 2014-19 tariff period. The Petitioner has submitted that wage revision is binding to it, hence, it will approach the Commission for suitable revision in norms for O&M Expenses for claiming the impact of wage hike during 2014-19, if any.

64. We have considered the submissions of the Petitioner. O&M Expenses have been worked out as per the norms specified in the 2014 Tariff Regulations. As regards

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 ("IWC")

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

> ***"28. Interest on Working Capital***
>
> *(1) The working capital shall cover:*
> *…….*
>
> *(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. Definitions and Interpretations:***
> *….*
>
> ***(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;"*

66. The Petitioner is entitled to claim IWC as per the 2014 Tariff Regulations. The components of the working capital and the Petitioner's entitlement to interest thereon are discussed as follows:

(i) Maintenance spares

Regulation 28 of the 2014 Tariff Regulations provides for maintenance spares @ 15% per annum of the O&M expenses. The value of maintenance spares has accordingly been worked out.

(ii) O&M expenses

Operation and maintenance expenses have been considered for one month as a component of working capital. The petitioner has claimed O&M expenses for 1 month of the respective year as claimed in the petition. This has been considered in the working capital.

(iii) Receivables

Receivables as a component of working capital will be equivalent to two months fixed cost. The petitioner has claimed the receivables on the basis of 2 months annual transmission charges. In the tariff being allowed, receivables have been worked out on the basis of 2 months transmission charges.

(iv) Rate of interest on working capital

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

67. IWC is worked out in accordance with Regulation 28 of the 2014 Tariff Regulations as follows:

(₹ in lakh)

Particulars	**2018-19 (Pro-rata for 34 days)**
Working Capital for O&M Expenses (O&M expenses for one month)	11.45
Working Capital for Maintenance Spares (15% of O&M expenses)	20.61
Working Capital for Receivables (Equivalent to Two months of annual fixedcost / annual transmission charges)	50.72
Total of Working Capital	**82.78**
Rate of Interest onworking capital (in %)	12.20
Interest of Working Capital	**0.94**

<u>Annual Transmission charges for 2014-19 Tariff Period</u>

68. The transmission charges allowed in respect of the transmission asset are as follows:

(₹ in lakh)

Particulars	2018-19 (Pro-rata for 34 days)
Depreciation	4.62
Interest on Loan	4.95
Return on Equity	5.04
O&M Expenses	12.80
Interest on Working Capital	0.94
Total	**28.35**

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD

69. The Petitioner has claimed the following transmission charges in respect of the transmission asset for 2019-24 tariff period:

(₹ in lakh)

Particulars	2019-20	2020-21	201-22	2022-23	2023-24
Depreciation	61.80	73.46	76.94	76.94	76.94
Interest on Loan	60.08	66.86	64.31	57.89	51.46
Return on Equity	63.96	76.56	80.34	80.34	80.34
Interest on Working Capital	5.73	6.31	6.48	6.49	6.49
O&M Expenses	67.38	69.64	71.98	74.40	76.90
Total	**258.95**	**292.83**	**300.05**	**296.06**	**292.13**

70. The Petitioner has claimed the following IWC in respect of the transmission asset for 2019-24 tariff period:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	5.62	5.80	6.00	6.20	6.41
Maintenance Spares	10.11	10.45	10.80	11.16	11.54
Receivables	31.84	36.10	36.99	36.50	35.92
Total	47.57	52.35	53.79	53.86	53.87
Rate of Interest (in %)	12.10	12.10	12.10	12.10	12.10
Interest on Working Capital	5.73	6.31	6.48	6.49	6.49

Capital Cost

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

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

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

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

(b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;

(c) Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;

(d) Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;

(e) Capitalised Initial Spares subject to the ceiling rates in accordance with these regulations;

(f) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;

(g) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;

(h) Adjustment of revenue earned by the transmission licensee by using the asset before the date of commercial operation;

(i) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;

(j) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;

(k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;

(l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;

(m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;

(n) Expenditure on account of change in law and force majeure events; and

(o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

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

(a) Capital cost admitted by the Commission prior to 1.4.2019 duly trued up by excluding liability, if any, as on 1.4.2019;

(b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;

(c) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;

(d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;

(e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and

(f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and

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

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

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

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

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

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

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

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

72. The Petitioner has claimed capital cost of ₹930.26 lakh as on 1.4.2019 in respect of the transmission asset. Against the overall approved capital cost (as per RCE) of ₹1360 lakh, the estimated completion cost including ACE is ₹1355.44 lakh as on 31.3.2024. The Commission has worked out capital cost of ₹921.39 lakh as on 31.3.2019 in preceding paragraphs and it has been considered as the opening capital cost as on 1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

Additional Capital Expenditure ("ACE")

73. 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;

€ Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23 of these regulations;

(d) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority or order or decree of any court of law;

(e) Change in law or compliance of any existing law; and

(f) Force Majeure events:

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

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

74. The Petitioner has claimed ACE of ₹297.65 and ₹127.56 lakh during the year 2019-20 and 2020-21 respectively in respect of the transmission asset on account of undischarged liability towards final payment/ withheld payment due to contractual exigencies for works executed within the cut-off date under Regulation 24(1)(a) and works executed after COD under Regulation 24(1)(b) of the 2019 Tariff Regulations. Capital cost projected by the Petitioner during 2019-24 period is as follows:

(₹ in lakh)

Capital Cost claimed (as on 1.4.2019)	ACE claimed		Capital Cost claimed (as on 31.3.2024)
	2019-20	2020-21	
930.26	297.65	127.56	1355.44

75. We have considered the submissions of the Petitioner. ACE claimed on account of balance and retention payments and deferred works is allowed under Regulation

24(1)(a) and 24(1)(b) of the 2019 Tariff Regulations. This ACE includes initial spares of ₹15.24 lakh which was disallowed as on COD on account of excess initial spares claimed and, hence, the same is reduced from ACE during 2019-20. Therefore, capital cost considered for 2019-24 tariff period is as follows:

(₹ in lakh)

Apportioned approved RCE Cost	Capital Cost (as on 1.4.2019)	ACE allowed		Capital Cost (as on 31.3.2024)
		2019-20	2020-21	
1360	921.39	282.41	127.56	1331.36

Debt-Equity Ratio

76. Regulations 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."

77. The details of debt-equity considered for the purpose of computation of tariff for 2019-24 tariff period in respect of the transmission asset are as follows:

Funding	Capital Cost (as on 1.4.2019) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2024) (₹ in lakh)	(in %)
Debt	644.98	70.00	931.96	70.00
Equity	276.41	30.00	399.39	30.00
Total	**921.39**	**100.00**	**1331.36**	**100.00**

Depreciation

78. 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 asset of the generating station and transmission system:

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

(6) In case of the existing projects, the balance depreciable value as on 1.4.2019 shall be worked out by deducting the cumulative depreciation as admitted by the Commission 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 decapitalized asset during its useful services."

79. UPPCL has submitted that as explained in its submissions for 2014-19 tariff period, the average life of the transmission asset works out to be 23.82 years whereas the Petitioner has calculated depreciation by considering the life of the asset as 23

years and the rate of depreciation as 3.77% instead of 5.727207% as claimed by the Petitioner for 2019-20 period and has, accordingly, claimed higher depreciation of ₹124 lakh from the beneficiaries during 2019-24 tariff period. Hence, the Petitioner may be directed to revise the claim of depreciation.

80. In response, the Petitioner has submitted that the claim of depreciation is as per the 2019 Tariff Regulations and the same may be allowed.

81. We have considered the submissions of the Petitioner and UPPCL. The Commission in the instant order has considered depreciation as per the 2019 Tariff Regulations. IT equipment has been considered as a part of the gross block and depreciated using WAROD. WAROD at Annexure-2 has been worked out after taking into account the depreciation rates of IT and non-IT assets as specified in the 2019 Tariff Regulations. The salvage value of IT equipment has been considered as nil i.e., IT asset has been considered as 100 per cent depreciable. Depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. Depreciation allowed in respect of the transmission asset is as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	921.39	1203.80	1331.36	1331.36	1331.36
Addition during the year 2019-24 due to projected ACE	282.41	127.56	0.00	0.00	0.00
Closing Gross Block	1203.80	1331.36	1331.36	1331.36	1331.36
Average Gross Block	1062.59	1267.58	1331.36	1331.36	1331.36
Weighted average rate of Depreciation (WAROD) (in %)	5.73	5.69	5.68	5.68	5.68
Balance useful life at the beginning (Year)	23.00	22.00	21.00	20.00	19.00
Aggregated Depreciable Value	959.77	1144.59	1202.09	1202.09	1202.09
Depreciation during the year	**60.93**	**72.18**	**75.67**	**75.67**	**75.67**
Remaining Aggregate Depreciable Value at the end of the year	894.22	1006.86	988.68	913.01	837.34

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Cumulative Depreciation at the end of the year	65.55	137.73	213.41	289.08	364.76

Interest on Loan ("IoL")

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

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

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

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

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

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

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

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

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

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

83. The weighted average rate of IoL has been considered by the Petitioner on the basis of the rate prevailing as on 1.4.2019. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during 2019-24 tariff

period will be adjusted. Accordingly, the floating rate of interest, if any, may be considered at the time of true up.

84. UPPCL has submitted that IoL claimed by the Petitioner is erroneous and the Commission may direct the Petitioner to examine the inconsistency in the figures of IoL. UPPCL has further submitted that the claim of the Petitioner to adjust the impact of IoL due to floating rate of interest is premature as all the loans negotiated by the Petitioner bear a fixed yearly rate of interest.

85. In response, the Petitioner has submitted that the detailed calculation of weighted rate of interest has been provided in the Tariff Form 9E and Tariff Form 9C along with the petition and the claim of depreciation is as per the 2019 Tariff Regulations and the same may be allowed.

86. We have considered the submissions of the Petitioner and UPPCL. IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. The details of weighted average rate of interest for 2019-24 tariff period and IoL allowed is as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	644.98	842.67	931.96	931.96	931.96
Cumulative Repayments up to Previous Year	4.62	65.55	137.73	213.41	289.08
Net Loan-Opening	640.36	777.12	794.23	718.56	642.88
Addition due to ACE	197.69	89.29	0.00	0.00	0.00
Repayment during the year	60.93	72.18	75.67	75.67	75.67
Net Loan-Closing	777.12	794.23	718.56	642.88	567.21
Average Loan	708.74	785.67	756.39	680.72	605.05
Weighted Average Rate of Interest on Loan (in %)	8.350	8.350	8.350	8.350	8.350
Interest on Loan	**59.18**	**65.60**	**63.16**	**56.84**	**50.52**

Return on Equity ("RoE")

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

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

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

Provided that return on equity in respect of Additional Capitalization after cut-off date beyond the original scope excluding Additional Capitalization due to Change in Law, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system;

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.

***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."

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

89. UPPCL has submitted that the gross rate of interest adopted by the Petitioner for the year 2019-20 is same as in the year 2018-19 i.e. 19.758%, which is based on the presumptive value of MAT rate and not on the approved MAT rates. Therefore, the

Commission may direct the Petitioner to submit the figures of RoE based on the grossed-up rate of RoE as per MAT rates approved by the IT authorities.

90. In response, the Petitioner has submitted that the details of RoE have been provided in the tariff forms along with the petition and the claim has been made in accordance with the 2019 Tariff Regulations.

91. We have considered the submissions of the Petitioner and UPPCL. MAT rate applicable in 2019-20 has been considered for the purpose of RoE, which will be trued-up with actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. RoE allowed in respect of the transmission asset under Regulation 30 of the 2019 Tariff Regulations is as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	276.41	361.13	399.39	399.39	399.39
Addition due to ACE	84.72	38.27	0.00	0.00	0.00
Closing Equity	361.13	399.39	399.39	399.39	399.39
Average Equity	318.77	380.26	399.39	399.39	399.39
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (in %)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (Pre-tax)	18.782	18.782	18.782	18.782	18.782
Return on Equity (Pre-tax)	**59.87**	**71.42**	**75.01**	**75.01**	**75.01**

Operation & Maintenance Expenses (O&M Expenses)

92. The Petitioner has claimed O&M expenses for the 2019-24 tariff period as follows:

(₹ in lakh)

O&M Expenses					
Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
2 numbers of bays of 400 kV line bays at Neemrana	64.30	66.56	68.90	71.32	73.82
O&M Expenses for PLCC	3.08	3.08	3.08	3.08	3.08
Total O&M Expense	**67.38**	**69.64**	**71.98**	**74.40**	**76.90**

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

> *"35.* ***Operation and Maintenance Expenses****:* ***(3) Transmission system:*** *(a) The following normative operation and maintenance expenses shall be admissible for the transmission system:*

Particulars	***2019-20***	***2020-21***	***2021-22***	***2022-23***	***2023-24***
Norms for sub-station Bays (₹ Lakh per bay)					
765 kV	*45.01*	*46.60*	*48.23*	*49.93*	*51.68*
400 kV	*32.15*	*33.28*	*34.45*	*35.66*	*36.91*
220 kV	*22.51*	*23.30*	*24.12*	*24.96*	*25.84*
132 kV and below	*16.08*	*16.64*	*17.23*	*17.83*	*18.46*
Norms for Transformers (₹ Lakh per MVA)					
765 kV	*0.491*	*0.508*	*0.526*	*0.545*	*0.564*
400 kV	*0.358*	*0.371*	*0.384*	*0.398*	*0.411*
220 kV	*0.245*	*0.254*	*0.263*	*0.272*	*0.282*
132 kV and below	*0.245*	*0.254*	*0.263*	*0.272*	*0.282*
Norms for AC and HVDC lines (₹ Lakh per km)					
Single Circuit (Bundled Conductor with six or more sub-conductors)	*0.881*	*0.912*	*0.944*	*0.977*	*1.011*
Single Circuit (Bundled conductor with four sub-conductors)	*0.755*	*0.781*	*0.809*	*0.837*	*0.867*
Single Circuit (Twin & Triple Conductor)	*0.503*	*0.521*	*0.539*	*0.558*	*0.578*
Single Circuit (Single Conductor)	*0.252*	*0.260*	*0.270*	*0.279*	*0.289*
Double Circuit (Bundled conductor with four or more sub-conductors)	*1.322*	*1.368*	*1.416*	*1.466*	*1.517*
Double Circuit (Twin & Triple Conductor)	*0.881*	*0.912*	*0.944*	*0.977*	*1.011*
Double Circuit (Single Conductor)	*0.377*	*0.391*	*0.404*	*0.419*	*0.433*
Multi Circuit (Bundled Conductor with four or more sub-conductor)	*2.319*	*2.401*	*2.485*	*2.572*	*2.662*
Multi Circuit (Twin & Triple Conductor)	*1.544*	*1.598*	*1.654*	*1.713*	*1.773*
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	*834*	*864*	*894*	*925*	*958*
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	*1,666*	*1,725*	*1,785*	*1,848*	*1,913*
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	*2,252*	*2,331*	*2,413*	*2,498*	*2,586*
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	*2,468*	*2,555*	*2,645*	*2,738*	*2,834*
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	*1,696*	*1,756*	*1,817*	*1,881*	*1,947*
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	*2,563*	*2,653*	*2,746*	*2,842*	*2,942*

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

Provided further that:

i. *the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;*

ii. *the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;*

iii. *the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2000 MW)shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);*

iv. *the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme;*

v. *the O&M expenses of ±800 kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW)shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme; and*

vi. *the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years.*

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

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

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

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

94. The Petitioner has claimed O&M Expenses separately for PLCC under Regulation 35(4) of the 2019 Tariff Regulations @2% of its original project cost in the instant petition. The Petitioner has made similar claim in other petitions as well.

Though PLCC is a communication system, it has been considered as part of the sub-station in the 2014 Tariff Regulations and 2019 Tariff Regulations and the norms for sub-station has been specified accordingly. Accordingly, the Commission vide order dated 24.1.2021 in Petition No.126/TT/2020 has already concluded that no separate O&M Expenses can be allowed for PLCC under Regulation 35(4) of the 2019 Tariff Regulations even though PLCC is a communication system. Therefore, the Petitioner's claim for separate O&M Expenses for PLCC @2% is not allowed.

95. O&M Expenses allowed in respect of the transmission asset covered in the instant petition are as follows:

(₹ in lakh)

O&M Expenses					
Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
400 kV Conventional					
Number of Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
Total O&M Expense	**64.30**	**66.56**	**68.90**	**71.32**	**73.82**

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

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

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

(1) ….

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

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

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

(iii) Operation and maintenance expenses, including security expenses for one month."

(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1st April of the year during the tariff period 2019-24 in which the generating station or a unit thereof or the transmission

system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later:

Provided that in case of truing-up, the rate of interest on working capital shall be considered at bank rate as on 1st April of each of the financial year during the tariff period 2019-24.

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

***"3. Definition** - 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;"*

97. The Petitioner has submitted that it has computed IWC for 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of IWC considered is 12.05% (SBI 1 year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20 and 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21 and 10.50% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.00% plus 350 basis points) for 2021-22. The components of the working capital and interest allowed thereon are as follows:

(₹ in lakh)

Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Working Capital for O&M Expenses (O&M Expenses for one month)	5.36	5.55	5.74	5.94	6.15
Working Capital for Maintenance Spares (15% of O&M Expenses)	9.65	9.98	10.34	10.70	11.07
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	30.71	34.69	35.53	35.05	34.48
Total of Working Capital	45.72	50.23	51.60	51.69	51.71
Rate of Interest of Working Capital (in %)	12.05	11.25	10.50	10.50	10.50
Interest of working capital	**5.51**	**5.65**	**5.42**	**5.43**	**5.43**

Annual Fixed Charges for 2019-24 Tariff Period

98. The transmission charges allowed in respect of the transmission asset for 2019-24 tariff period is as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	60.93	72.18	75.67	75.67	75.67
Interest on Loan	59.18	65.60	63.16	56.84	50.52
Return on Equity	59.87	71.42	75.01	75.01	75.01
O&M Expenses	64.30	66.56	68.90	71.32	73.82
Interest on Working Capital	5.51	5.65	5.42	5.43	5.43
Total	**249.79**	**281.41**	**288.17**	**284.28**	**280.46**

Filing Fee and Publication Expenses

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

Licence Fee and RLDC Fees and Charges

100. UPPCL has submitted that license fee is the onus of the Petitioner.

101. In response, the Petitioner has submitted that transmission Charges and other related charges is exclusive of incentive, late payment surcharge , any statutory taxes, levies, duties, cess, filing fees, license fee or any other kind of imposition (s) and/ or other surcharges etc. whatsoever imposed/ charged by any Government (Central/State) and/ or any other local bodies/ authorities/ regulatory authorities in relation to transmission of electricity, environmental protection, and/or in respect of any of its installation associated with the Transmission System and is to be borne and additionally paid by the Respondent(s) to the Petitioner and the same will be charged, billed separately by the Petitioner on the Respondents.

102. We have considered the submissions of the Petitioner and UPPCL. 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 2019-24 tariff period.

Goods and Services Tax

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

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

Security Expenses

105. The Petitioner has submitted that security expenses in respect of 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.

106. We have considered the submissions of the Petitioner. The Petitioner has claimed consolidated security expenses for all the transmission assets owned by it on projected basis for 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19 in Petition No. 260/MP/2020. The Commission vide order dated

3.8.2021 in Petition No. 260/MP/2020 approved security expenses from 1.4.2019 to 31.3.2024. Therefore, security expenses will be shared in terms of the order dated 3.8.2021 in Petition No. 260/MP/2020. Accordingly, the Petitioner's prayer in the instant petition for allowing it to file a separate petition for claiming the overall security expenses and consequential IWC has become infructuous.

Capital Spares

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

Sharing of Transmission Charges

108. 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. Accordingly, the liabilities of DICs for arrears of transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of respective Tariff Regulations and Sharing Regulations and shall be recovered from the concerned DICs through Bills under Regulation 15(2)(b) of the 2020 Sharing Regulations. Billing, collection and disbursement of the transmission charges for subsequent period shall be recovered in terms of provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.

109. To summarise:

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

(₹ in lakh)

Particulars	2018-19 (Pro-rata for 34 days)
AFC	28.35

(b) AFC allowed in respect of the transmission asset for 2019-24 tariff period are as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	249.79	281.41	288.17	284.28	280.46

110. Annexure-1 and Annexure-2 given hereinafter shall form part of this order.

111. This order disposes of Petition No. 118/TT/2020 in terms of the above discussions and findings.

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

Asset – I **<u>Annexure – 1</u>**

Capital Expenditure as on COD	Admitted Capital Cost as on COD (₹ in lakh)	ACE (₹ in lakh) 2018-19	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh) 2018-19
Sub Station	737.15	17.70	754.85	5.28	39.39
PLCC	134.16	0.25	134.41	6.33	8.50
IT Equipment and software	32.08	0.04	32.12	5.28	1.69
TOTAL	**903.40**	**17.99**	**921.39**		**49.58**
			Average Gross Block (₹ in lakh)		**912.39**
			Weighted Average Rate of Depreciation (in %)		**5.43**

Asset I

Annexure - 2

2019-24	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	ACE (₹ in lakh)	Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations				
Capital Expenditure as on 1.4.2019		2019-24			2019-20 (₹ in lakh)	2020-21 (₹ in lakh)	2021-22 (₹ in lakh)	2022-23 (₹ in lakh)	2023-24 (₹ in lakh)
Sub-Station	754.85	383.73	1138.58	5.28	46.83	56.96	60.12	60.12	60.12
PLCC	134.41	19.67	154.08	6.33	8.94	9.57	9.75	9.75	9.75
IT Equipment andsoftware	32.12	6.57	38.69	15.00	5.16	5.66	5.80	5.80	5.80
TOTAL	**921.39**	**409.97**	**1331.36**		60.93	72.18	75.67	75.67	75.67
		Average Gross Block(₹ in lakh)			1062.59	1267.58	1331.36	1331.36	1331.36
		Weighted Average Rate of Depreciation (in %)			5.73	5.69	5.68	5.68	5.68