

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 488/TT/2019**

**Coram:**

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

**Date of Order: 19.02.2021**

**In the Matter of:**

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing up of transmission tariff of the 2014-19 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 of Chamera Stage-I Transmission System associated with the Northern Region.

**And in the matter of:**

Power Grid Corporation of India Ltd.,  
"Saudamini", Plot No. 2,  
Sector 29, Gurgaon-122001

**....Petitioner**

**Vs**

1. Rajasthan Rajya Vidyut Prasaran Nigam Ltd.,  
Vidyut Bhawan, Vidyut Marg,  
Jaipur-302 005.
2. Ajmer Vidyut Vitran Nigam Ltd.,  
132 KV, GSS RVPNL Sub-Station Building,  
Jaipur-302 017.
3. Jaipur Vidyut Vitran Nigam Ltd.,  
132 KV, GSS RVPNL Sub- Station Building,  
Caligiri Road, Malviya Nagar,  
Jaipur-302 017.
4. Jodhpur Vidyut Vitran Nigam Ltd.,  
132 KV, GSS RVPNL Sub- Station Building,  
Caligiri Road, Malviya Nagar,  
Jaipur-302 017.



5. Himachal Pradesh State Electricity Board,  
Vidyut Bhawan, Kumar House Complex Building II,  
Shimla-171 004.
6. Punjab State Electricity Board,  
The Mall, Patiala-147 001.
7. Haryana Power Purchase Centre,  
Shakti Bhawan, Sector-6,  
Panchkula (Haryana)-134 109.
8. Power Development Department,  
Government of Jammu & Kashmir,  
Mini Secretariat, Jammu.
9. Uttar Pradesh Power Corporation Ltd.,  
(Formerly Uttar Pradesh State Electricity Board),  
Shakti Bhawan, 14, Ashok Marg,  
Lucknow-226 001.
10. Delhi Transco Ltd.,  
Shakti Sadan, Kotla Road,  
New Delhi-110 002.
11. BSES Yamuna Power Ltd.,  
BSES Bhawan, Nehru Place,  
New Delhi.
12. BSES Rajdhani Power Ltd.,  
BSES Bhawan, Nehru Place,  
New Delhi.
13. Tata Power Delhi Distribution Ltd.,  
33 kV Sub-Station, Building,  
Hudson Lane, Kingsway Camp,  
North Delhi-110 009
14. Chandigarh Administration,  
Sector-9, Chandigarh.
15. Uttarakhand Power Corporation Ltd.,  
Urja Bhawan, Kanwali Road,  
Dehradun.



16. North Central Railway  
Allahabad.
17. New Delhi Municipal Council  
Palika Kendra, Sansad Marg,  
New Delhi-110 002.

...Respondents

**For Petitioner** : Shri S. S. Raju, PGCIL  
Shri Ved Prakash Rastogi, PGCIL

**For Respondents** : None

### ORDER

The instant petition has been filed by Power Grid Corporation of India Limited (hereinafter referred to as “the Petitioner”), a deemed transmission licensee, for truing up of tariff in respect of Chamera Stage-I Transmission System associated in Northern Region (herein after referred to as “the transmission asset”) for the period from 1.4.2014 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 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”).

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

*“1) Approve the trued up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 7 and 8 above.*

*2) 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 regulations 2014 and tariff regulation '19 as per para 9.0 & 10 above for respective block.*

*Further it is submitted that deferred tax liability before 01.04.2009 shall be recoverable from the beneficiaries or long term customers /DIC as the case may be, as and when the same is materialized as per regulation 49 of 2014 and regulation 67 of 2019 tariff regulation. The petitioner may be allow to recover the deferred tax liability materialised*



*directly without making any application before the commission as provided in the regulation .*

*3) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 70 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure ( if any) in relation to the filing of petition.*

*4) Allow the petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.*

*5) 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 9.5 above.*

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

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

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

### **Background**

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

(a) Approval of the Central Government for setting up of the transmission asset was accorded vide Ministry of Power's letter dated 6.4.1984. Subsequently, the revised cost estimate was approved by the Ministry of Power vide letter dated 19.10.1995, for a total capital investment of ₹28598.00 lakh, including IDC of ₹6907.00 lakh. The scope of the transmission asset was completed and it has been declared under commercial operation with effect from 1.5.1994.

(b) The transmission tariff for the transmission asset from 1.4.2014 to 31.3.2019 was determined vide order dated 15.2.2016 in Petition No. 196/TT/2014 as per the 2014 Tariff Regulations. The tariff allowed in case of the transmission asset during the 2014-19 tariff period in order dated 15.2.2016 is being tried up in the instant petition.



(c) The transmission assets covered in the instant petition are part of Chamera Stage-I Transmission System in Northern Region. The transmission assets covered in the Chamera Stage-I Transmission System are as follows:

- (i) 400 kV D/C (Twin conductor) Chamera-Moga Transmission Line (235.74 Ckt. km).
- (ii) 400 kV D/C Chamera-Jallandhar Transmission Line Ckt I & II (2 bays) and 250 MVA ICT-I and-II (2 bays) at Moga Sub-station.

(d) The AFC approved by the Commission vide order dated 15.2.2016 in Petition No. 196/TT/2014 and the trued-up tariff claimed by the Petitioner in respect of the transmission asset for the 2014-19 tariff period are as under:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Fixed Charges (AFC) approved vide order dated 15.2.2016 in Petition No. 196/TT/2014	3328.33	3342.74	3357.44	3372.70	3388.45
AFC claimed by the Petitioner based on truing up in the instant petition	3330.17	3355.67	3369.15	3384.40	3406.69

4. The Respondents are the distribution licensees, power departments and transmission utilities 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 of this application has also been published in newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers by the Petitioner. Uttar Pradesh Power Corporation Ltd. (UPPCL), i.e. Respondent No. 9, has filed its reply vide an affidavit dated 28.12.2019 and has raised issues like cumulative depreciation for 2014-15 and grossing up of RoE for the 2019-24 period. BSES Rajdhani Power Limited (BRPL), i.e. Respondent No. 12, has filed its reply vide an affidavit dated 6.2.2020 and has raised issues like deferred tax liability for the 2014-19



tariff period, effective tax rate, security expenses and consequential Interest on Working Capital (IWC) and filing fees. In response the Petitioner has filed rejoinder dated 21.8.2020 to the reply of UPPCL and BRPL respectively.

6. This order is issued after considering the submissions made by the Petitioner in the petition dated 27.8.2019, the Petitioner's affidavits dated 23.6.2020 and 14.9.2020, the reply of UPPCL and BRPL and the Petitioner's rejoinder thereto.

7. The hearing in this matter was held on 24.8.2020 through video conference and the order was reserved. Having heard the representatives of the Petitioner and perused the material on record, we proceed to dispose of the petition.

#### **Truing up of Annual Fixed Charges for the 2014-19 Tariff Period**

8. The details of the trued-up transmission charges claimed by the Petitioner in respect of the transmission asset are as under:

	(₹ in lakh)				
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Depreciation	470.37	470.37	470.38	470.37	470.38
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	2364.15	2374.99	2373.79	2373.79	2380.17
Interest on working capital	87.78	88.78	89.52	90.32	91.29
O & M Expenses	407.87	421.53	435.46	449.92	464.85
<b>Total</b>	<b>3330.17</b>	<b>3355.67</b>	<b>3369.15</b>	<b>3384.40</b>	<b>3406.69</b>

9. The details of the trued-up Interest on Working Capital (IWC) claimed by the Petitioner in respect of the transmission asset are as under:

	(₹ in lakh)				
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
O&M expenses	33.99	35.13	36.29	37.49	38.74
Maintenance Spares	61.18	63.23	65.32	67.49	69.73
Receivables	555.03	559.28	561.53	564.07	567.78
<b>Total</b>	<b>650.20</b>	<b>657.64</b>	<b>663.14</b>	<b>669.05</b>	<b>676.25</b>
Rate of Interest (%)	13.50%	13.50%	13.50%	13.50%	13.50%
<b>Interest on Working Capital</b>	<b>87.78</b>	<b>88.78</b>	<b>89.52</b>	<b>90.32</b>	<b>91.29</b>



### **Capital Cost**

10. The capital cost allowed vide order dated 15.2.2016 in Petition No. 196/TT/2014 is ₹24629.96 lakh for transmission asset as on 31.3.2014. The Petitioner has not claimed any ACE during the 2014-19 tariff period. Accordingly, the capital cost of ₹24629.96 lakh has been considered for the purpose of truing up of the tariff for the 2014-19 tariff period.

### **Debt-Equity Ratio**

11. The debt-equity ratio has been allowed in accordance with Regulation 19(3) of the 2014 Tariff Regulations. As per Regulation 19(3) of the 2014 Tariff Regulations, the debt-equity ratio allowed by the Commission for determination of tariff for the period ending on 31.3.2014 shall be considered. Accordingly, the debt-equity ratio of 51.09:48.91 has been considered for the purpose of truing up of the tariff of the transmission asset for the 2014-19 tariff period. The details of the debt-equity ratio as on 1.4.2014 and 31.3.2019 of the transmission asset are as follows:

<b>Particulars</b>	<b>Amount as on 1.4.2014 (₹ in lakh)</b>	<b>(%)</b>	<b>Amount as on 31.3.2019 (₹ in lakh)</b>	<b>(%)</b>
Debt	12583.33	51.09	12583.33	51.09
Equity	12046.63	48.91	12046.63	48.91
<b>Total</b>	<b>24629.96</b>	<b>100.00</b>	<b>24629.96</b>	<b>100.00</b>

### **Interest on Loan (IoL)**

12. In the present petition, as the loan has already been repaid prior to 31.3.2014, the Petitioner has not claimed any IoL.

### **Return on Equity (RoE)**

13. The Petitioner has claimed RoE for the transmission asset in terms of Regulations 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that it is liable



to pay income tax at MAT rates and has claimed the following effective tax rates for the 2014-19 tariff period:

<b>Year</b>	<b>Claimed effective tax (in %)</b>	<b>Grossed up RoE (Base Rate/1-t) (in %)</b>
2014-15	21.018	19.624
2015-16	21.382	19.715
2016-17	21.338	19.704
2017-18	21.337	19.704
2018-19	21.549	19.757

14. UPPCL has submitted that the Petitioner has over-claimed ₹ 49.4512 crore from the beneficiaries by adopting equity of 48.9% instead of 30%. In response, the Petitioner has submitted that the debt-equity ratio approved vide order dated 15.2.2016 in Petition No. 196/TT/2014 has been considered for calculation of tariff.

15. We have considered the submissions of UPPCL and the clarification given by the Petitioner. The Petitioner has claimed debt-equity ratio of 51.10:48.90 approved vide order dated 15.2.2016 in Petition No. 196/TT/2014 as per provisions of the 2014 Tariff Regulations. Hence, the Petitioner's claim is allowed.

16. BRPL has submitted that deferred tax is being billed by transmission companies post March 2009. As per the 2014 Tariff Regulations, generating and transmission companies are entitled to bill deferred tax liability up to 31<sup>st</sup> March, 2009 as and when the same materializes. BRPL also submitted that Regulation 49 of the 2014 Tariff Regulations, restricts the claim of tax amount only to deferred tax liabilities up to 31.3.2009. Further, BRPL has requested that the Petitioner should submit the details of deferred tax liability claimed during the 2014-19 tariff period. BRPL has further contended that the Petitioner may clarify the grossing up of the deferred tax amount while billing to beneficiaries, and if so, the same is required to be refunded to beneficiaries.





17. In response, the Petitioner has submitted that as per Regulation 49 of the 2014 Tariff Regulations, the deferred tax liability before 1.4.2009 only shall be recoverable directly from the beneficiaries as grossing up of RoE with effective tax rates is allowed w.e.f. 1.4.2009. Accordingly, the Petitioner submitted that it is eligible for claiming the deferred tax liabilities for the period up to 31.3.2009 on materialisation on subsequent period i.e. 2009-10 onwards. The Petitioner has submitted that deferred tax liability for the 2014-19 tariff period is yet to be claimed. The Petitioner has submitted that all required documents regarding deferred tax liability have been submitted with the bills. The Petitioner has further clarified that deferred tax liability billed/ materialised is not considered while grossing up of the RoE.

18. BRPL has also submitted that the Petitioner has to exclude the income from other business activities for the computation of the effective tax rate which has not been done by the Petitioner and the Petitioner should furnish the details.

19. In response, the Petitioner has submitted that it is one single entity and has one single Permanent Account Number and hence being a company registered in India, it is required to file single income tax return against its business income under the PAN allotted to it and it does not file separate income tax for separate businesses. Further, the Petitioner also submitted that all relevant documents regarding the same have been filed by the Petitioner before this Commission vide affidavit dated 10.8.2020 in Petition No. 24/TT/2020.

20. We have considered the submissions of the Petitioner and the BRPL. The Commission in order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the



effective tax rate for the Petitioner based on the notified MAT rates. The relevant portion of the order dated 27.4.2020 is as under:-

*“26. We are conscious that the entities covered under MAT regime are paying Income Tax as per MAT rate notified for respective financial year under IT Act, 1961, which is levied on the book profit of the entity computed as per the Section 115JB of the IT Act, 1961. The Section 115JB(2) defines book profit as net profit in the statement of Profit & Loss prepared in accordance with Schedule-III of the Companies Act, 2013, subject to some additions and deductions as mentioned in the IT Act, 1961. Since the Petitioner has been paying income tax on income computed under Section 115JB of the IT Act, 1961 as per the MAT rates of the respective financial year, the notified MAT rate for respective financial year shall be considered as effective tax rate for the purpose of grossing up of RoE for truing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations. Interest imposed on any additional income tax demand as per the Assessment Order of the Income Tax authorities shall be considered on actual payment. However, penalty (for default on the part of the Assessee) if any imposed shall not be taken into account for the purpose of grossing up of rate of return on equity. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long term transmission customers/ DICs as the case may be on year to year basis.*

*27. Accordingly, following effective tax rates based on notified MAT rates are considered for the purpose of grossing up of rate of return on equity:*

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

”

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

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



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

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	12046.63	12046.63	12046.63	12046.63	12046.63
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	12046.63	12046.63	12046.63	12046.63	12046.63
Average Equity	12046.63	12046.63	12046.63	12046.63	12046.63
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (%)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax)	19.610	19.705	19.705	19.705	19.758
<b>Return on Equity (Pre-tax)</b>	<b>2362.34</b>	<b>2373.79</b>	<b>2373.79</b>	<b>2373.79</b>	<b>2380.17</b>

23. RoE allowed in order dated 15.2.2016 in Petition No. 196/TT/2014, claimed by the Petitioner in the instant petition and as trued up in the instant order is shown in the table as under:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed earlier in order dated 15.2.2016 in Petition No. 196/TT/2014	2362.34	2362.34	2362.34	2362.34	2362.34
Claimed by the Petitioner in the instant petition	2364.15	2374.99	2373.79	2373.79	2380.17
Allowed after true-up in this order	2362.34	2373.79	2373.79	2373.79	2380.17

### **Depreciation**

24. UPPCL has submitted that the Petitioner has failed to substantiate the figure of cumulative depreciation of ₹15400.50 lakh for the year 2014-15 and hence requested to direct the Petitioner to submit details of the said cumulative depreciation. In response, the Petitioner in its rejoinder to the reply of UPPCL has submitted that the cumulative depreciation as on 1.4.2014 has been taken as per the order dated 15.2.2016 in Petition No. 196/TT/2014.

25. The depreciation has been worked out as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations. As the entire loan for the transmission



lines covered in the present petition has already been repaid, the depreciation has been worked out by spreading the depreciable value over the remaining useful life of the asset. Accordingly, the depreciation for the entire 2014-19 tariff period has been allowed by spreading the remaining depreciable value as on 1.4.2014 over its balance useful life.

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	24629.96	24629.96	24629.96	24629.96	24629.96
Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	24629.96	24629.96	24629.96	24629.96	24629.96
Average Gross Block	24629.96	24629.96	24629.96	24629.96	24629.96
Weighted average rate of Depreciation (WAROD) (%)	Spreading	Spreading	Spreading	Spreading	Spreading
Balance useful life of the asset at the beginning of the year	14.00	13.00	12.00	11.00	10.00
Aggregated Depreciable Value	21985.77	21985.77	21985.77	21985.77	21985.77
<b>Combined Depreciation during the year</b>	470.38	470.38	470.38	470.38	470.38
<b>Cumulative Depreciation at the end of the year</b>	15870.88	16341.25	16811.63	17282.00	17752.38
Remaining Aggregated Depreciable Value	6114.89	5644.51	5174.14	4703.76	4233.39

26. The details of the depreciation allowed for the transmission asset vide order dated 15.2.2016 in Petition No. 196/TT/2014, claimed by the Petitioner in the instant petition and trued up in the instant order is as under:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed earlier in order dated 15.2.2016 in Petition No. 196/TT/2014	470.38	470.38	470.38	470.38	470.38
Claimed by the Petitioner in the instant petition	470.37	470.37	470.38	470.37	470.38
Allowed after true-up in this order	470.38	470.38	470.38	470.38	470.38



### **Operation & Maintenance Expenses (O&M Expenses)**

27. The details of the O&M Expenses claimed by the Petitioner for the transmission asset are as per provisions of Regulation 29(4)(a) of the 2014 Tariff Regulations and the same has been allowed for the purpose of tariff as under:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Sub-station Bays</b>					
400kV Moga Bay of Chamera – Jalandhar Ckt – I & II	2	2	2	2	2
400kV Moga 250 MVA ICT – I & II bay	2	2	2	2	2
<b>Norm (₹ lakh/bay)</b>					
400kV	60.30	62.30	64.37	66.51	68.71
<b>Total Sub-station O&amp;M</b>	<b>241.20</b>	<b>249.20</b>	<b>257.48</b>	<b>266.04</b>	<b>274.84</b>
<b>AC &amp; HVDC Lines</b>					
400kV Double Circuit Chamera Moga Line	235.74	235.74	235.74	235.74	235.74
<b>Norm (₹ lakh/KM)</b>					
Double Circuit Twin / Triple conductor	0.707	0.731	0.755	0.780	0.806
<b>Total Transmission Line</b>	<b>166.67</b>	<b>172.33</b>	<b>177.98</b>	<b>183.88</b>	<b>190.01</b>
<b>Total O&amp;M Expenses</b>	<b>407.87</b>	<b>421.53</b>	<b>435.46</b>	<b>449.92</b>	<b>464.85</b>

28. O&M Expenses approved vide order dated 15.2.2016 in Petition No. 196/TT/2014, O&M Expenses claimed by the Petitioner in the instant petition and true up O&M Expenses allowed in the instant order are shown in the table below:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed earlier in order dated 15.2.2016 in Petition No. 196/TT/2014	407.87	421.53	435.46	449.92	464.85
Claimed by the Petitioner in the instant petition	407.87	421.53	435.46	449.92	464.85
Allowed after true-up in this order	407.87	421.53	435.46	449.92	464.85

### **Interest on Working Capital (IWC)**

29. The Petitioner has claimed IWC as per Regulation 28(1)(c) of the 2014 Tariff Regulations as under:-

**i. Maintenance spares:**

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

**ii. O & M Expenses:**

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

**iii. Receivables:**

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

**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.

30. The trued-up IWC allowed for the transmission asset is as under:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	33.99	35.13	36.29	37.49	38.74
Maintenance Spares	61.18	63.23	65.32	67.49	69.73
Receivables	554.72	559.07	561.53	564.07	567.78
<b>Total</b>	<b>649.89</b>	<b>657.43</b>	<b>663.13</b>	<b>669.05</b>	<b>676.25</b>
Rate of Interest on working capital (%)	13.50	13.50	13.50	13.50	13.50
<b>Interest of working Capital</b>	<b>87.74</b>	<b>88.75</b>	<b>89.52</b>	<b>90.32</b>	<b>91.29</b>

31. The details of IWC approved vide order dated 15.2.2016 in Petition No. 196/TT/2014, trued up IWC claimed by the Petitioner and trued up IWC allowed in the instant order is shown in the table below:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed earlier in order dated 15.2.2016 in Petition No. 196/TT/2014	87.74	88.49	89.26	90.06	90.88
Claimed by the Petitioner in the instant petition	87.78	88.78	89.52	90.32	91.29
Allowed after true-up in this order	87.74	88.75	89.52	90.32	91.29

### Approved Annual Fixed Charges for the 2014-19 Tariff Period

32. The trued up annual fixed charges allowed for the transmission asset for the 2014-19 tariff period are as under:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	470.38	470.38	470.38	470.38	470.38
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	2362.34	2373.79	2373.79	2373.79	2380.17
Int. on Working Capital	87.74	88.75	89.52	90.32	91.29
Op. and Maintenance	407.87	421.53	435.46	449.92	464.85
<b>Total</b>	<b>3328.32</b>	<b>3354.44</b>	<b>3369.15</b>	<b>3384.40</b>	<b>3406.69</b>

33. The Annual Transmission Charges approved vide order dated 15.2.2016 in Petition No. 196/TT/2014, trued up AFC claimed by the Petitioner in the instant petition and trued up AFC allowed in the instant order are shown in the table below:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed earlier in order dated 15.2.2016 in Petition No. 196/TT/2014	3328.33	3342.74	3357.44	3372.70	3388.45
Claimed by the Petitioner in the instant petition	3330.17	3355.67	3369.15	3384.40	3406.69
Allowed after true-up in this order	3328.32	3354.44	3369.15	3384.40	3406.69

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

34. The Petitioner has claimed the following transmission charges for the transmission asset for the 2019-24 tariff period:

(₹ in lakh)					
Particulars	2019-20	2020-21	201-22	2022-23	2023-24
Depreciation	470.37	470.38	474.51	490.60	518.98
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	2262.60	2262.60	2262.89	2266.55	2273.44
Interest on Working Capital	59.71	60.50	61.25	62.25	63.35
Operation and Maintenance	427.13	442.20	457.68	473.80	490.06
<b>Total</b>	<b>3219.81</b>	<b>3235.68</b>	<b>3256.33</b>	<b>3293.20</b>	<b>3345.83</b>



35. The Petitioner has claimed the following Interest on Working Capital for the transmission asset for the 2019-24 tariff period:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	43.05	44.58	46.14	47.78	49.40
Maintenance Spares	77.49	80.24	83.05	86.00	88.92
Receivables	422.04	425.57	427.98	430.50	431.81
<b>Total</b>	<b>542.58</b>	<b>550.39</b>	<b>557.17</b>	<b>564.28</b>	<b>570.13</b>
Rate of Interest	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>65.38</b>	<b>66.32</b>	<b>67.14</b>	<b>68.00</b>	<b>68.70</b>

### **Capital Cost**

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

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

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

- (a) *The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- (b) *Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*
- (c) *Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*
- (d) *Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*
- (e) *Capitalised Initial Spares subject to the ceiling rates in accordance with these regulations;*
- (f) *Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;*
- (g) *Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;*
- (h) *Adjustment of revenue earned by the transmission licensee by using the assets before the date of commercial operation;*
- (i) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (j) *Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;*
- (k) *Capital expenditure on account of biomass handling equipment and facilities, for co-firing;*





(l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;  
(m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;  
(n) Expenditure on account of change in law and force majeure events; and  
(o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.

- (3) The Capital cost of an existing project shall include the following:
- (a) Capital cost admitted by the Commission prior to 1.4.2019 duly tried 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 assets forming part of the project, but not in use, as declared in the tariff petition;
  - (b) De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:

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

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

- (c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;



(d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and  
(e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment.”

37. The admitted capital cost of ₹24629.96 lakh as on 31.3.2019, as trued up in above paragraphs is considered as the capital cost as on 1.4.2019 for the purpose of determination of tariff for the 2019-24 tariff period.

### **Additional Capital Expenditure (ACE)**

38. Regulation 24 of the 2019 Tariff Regulations provides as under:-

*“24. Additional Capitalization within the original scope and upto the cut-off date*

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

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

39. The Petitioner has not claimed any ACE during the 2019-24 period in the instant petition. However, the Petitioner vide affidavit dated 23.6.2020 has claimed estimated ACE and decapitalisation during the 2019-24 period towards replacement/ demolition of building in Moga Sub-station and submitted the Auditor’s certificate in support of same.



40. The Petitioner has submitted that quarters and stores at Moga Sub-station are of load bearing (non-RCC framed) type and are in use since 1994. Subsequent to automation and remote operation of Moga sub-station from NTAMC, there is reduction in manpower posted at Moga sub-station. In view of that, some of the quarters are presently not occupied. The vacant quarters are in dilapidated and inhabitable condition. The store is also in dilapidated condition. The condition of the structures will not only cause damage to stored materials but may also cause harm to the workers. Repairing of buildings at this stage will result in huge financial losses and will not provide any significant structural strength. Thus, repairing of these building at this stage is not viable. Further, these old quarters are not required for the use of employee due to reduction in employee strength. These un-occupied dilapidated quarters are a major safety threat in sub-station. In order to prevent the accidental collapse of any or part of the building and to ensure safety of the occupants or working staff, it is required to demolish the existing structure and construct the new store as per existing building code and the Petitioner's standard practices. Further, no new quarters are required for use of employee. Hence, no new quarters are proposed for construction. The additional capital expenditure is proposed on account of expenditure for demolition of existing quarters and store and construction of new store.

41. The details of ACE and decapitalisation proposed by the Petitioner are as under:

<b>Particulars</b>	<b>(₹ in lakh)</b>	
	<b>Amount</b>	
Estimated ACE during 2021-22	43.91	
Estimated De-capitalization during 2021-22	-20.57	
Estimated ACE during 2022-23	163.74	
Estimated De-capitalization during 2022-23	-27.07	
Estimated ACE during 2023-24	158.43	
Estimated De-capitalization during 2023-24	-20.57	
Net estimated ACE for 2019-24 (deducting de-capitalization)	297.87	



42. The Petitioner was directed, vide ROP of the hearing dated 24.8.2020, to specify the competent authority to approve the ACE and mention whether such authority has approved the projected ACE and to submit copy of the approvals. In response, the Petitioner has submitted that in-principle technical approval for add-cap/ de-cap for replacement/ removal of equipment is obtained from Director (Operation) before submitting proposal to the Commission. The Petitioner has submitted a letter in this regard from Executive Director (Asset Management).

43. In response to a query as to whether the proposed replacement/ demolition of building was approved by the beneficiaries. The Petitioner has submitted that that the proposed replacement/ demolition of building is claimed under Regulation 25(2) of the 2019 Tariff Regulations which provides for add-cap after the cut-off date. The Petitioner has submitted that Regulation 25(2) of the 2019 Tariff Regulations do not provide for obtaining consent of beneficiaries for replacement of problematic equipment as add-cap after completion of useful life. The Petitioner has further submitted that in the past, replacement of problematic equipment was approved under add-cap without the consent of the beneficiaries/ long term customers. In this regard, the Petitioner has referred to orders dated 7.10.2010 in Petition No. 143/2010, dated 28.1.2016 in Petition No. 133/TT/2015, dated 20.9.2016 in Petition No. 543/TT/2014 and dated 9.2.20.16 in Petition No. 35/TT/2015.

44. The Petitioner has submitted that the Petitioner has long experience in operation and maintenance of EHV transmission system and follows the best practices. The decision on replacement of equipment is taken keeping in view the reliability of the system and based on difficulties being faced by the Petitioner during maintenance. The Petitioner has submitted that detailed justification for replacement/ demolition of



building has been submitted vide affidavit dated 23.7.2020 and requested to allow the proposed add-cap/ de-cap for safe working environment which will ensure smooth operation of the sub-station.

45. In response to a query regarding the proposed extended life span of the asset along with the reasons for arriving at the same, the Petitioner vide affidavit dated 19.9.2020 has submitted that the transmission asset is completing its useful life in 2029-30 and no life extension is proposed as of now as it is still a few years of useful life left. The proposed add-cap is only for replacement/ demolition of building which forms a small portion of the system.

46. We have considered the submissions of the Petitioner. The Petitioner has proposed ACE of ₹297.87 lakh in 2019-24 tariff period under Regulation 25(2) of the 2019 Tariff Regulations. The Petitioner has dismantled 65 old and dilapidated quarters and one store at Moga Sub-station and planned to construct two stores (for sub-station and line) at Moga Sub-station. The proposed add-cap towards construction of two stores for transmission line and sub-station at Moga Sub-station is of civil and non-critical in nature. Moreover, the dismantled quarters have completed only 25 years of life. Further, the proposed add-cap involves conversion of the dismantled quarters into stores. It is also observed that the Petitioner has not obtained the consent of the beneficiaries. Hence, we are not inclined to allow the proposed add-cap at this stage. However, the Petitioner is given the liberty to obtain the consent of the beneficiaries and to submit the approval of the beneficiaries and the same will be reviewed at the time of truing up.

### **Debt-Equity Ratio**

47. Regulations 18 of the 2019 Tariff Regulations provide as under:-



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

Provided that:

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

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

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

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

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

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

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

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

48. UPPCL has submitted that the Petitioner has considered debt-equity ratio of 51.10:48.90 instead of the normative debt-equity ratio of 70:30. As a result, the Petitioner has claimed ₹46.59 crore due to which the beneficiaries are being over-charged to the extent of ₹46.01 crore. In response, the Petitioner has submitted that the debt-equity ratio approved vide order dated 15.2.2016 in Petition No. 196/TT/2014 has been considered.

49. We have considered the submissions of UPPCL and the clarification given by the Petitioner. The Petitioner has claimed debt-equity ratio of 51.10:48.90 approved vide order dated 15.2.2016 in Petition No. 196/TT/2014 as provided under Regulation 18(3) of the 2019 Tariff Regulations. Hence, the Petitioner's claim is allowed. The details of the debt-equity considered for the purpose of computation of tariff for the 2019-24 tariff period for the transmission asset are as under:

Particulars	Capital Cost as on 1.4.2019 (₹ in lakh)	(%)	Total Capital Cost as on 31.3.2024 (₹ in lakh)	(%)
Debt	12583.33	51.09	12583.33	51.09
Equity	12046.63	48.91	12046.63	48.91
<b>Total</b>	<b>24629.96</b>	<b>100.00</b>	<b>24629.96</b>	<b>100.00</b>

### **Return on Equity (RoE)**

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

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

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

*Provided that return on equity in respect of Additional Capitalization after 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:

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

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

#### **Illustration-**

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

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





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

- (a) Estimated Gross Income from generation or transmission business for FY 2019-20 is 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."*

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

52. UPPCL has submitted that the Petitioner has claimed RoE based on presumptive MAT rates and requested that the Petitioner be directed to claim it based on MAT rates authorised by the Income Tax Authorities. In response, the Petitioner has submitted that the debt-equity ratio approved vide order dated 15.2.2016 in Petition No. 196/TT/2014 has been considered. The Petitioner has further submitted that in absence of IT assessment order pertaining to the 2019-24 period, RoE has been calculated @18.782% after grossing up the RoE with MAT rate of 17.472% based on the illustration provided to Regulation 31(2)(ii) of the 2019 Tariff Regulations. The Petitioner has further submitted that as per Regulation 31(3) of the 2019 Tariff Regulations, the grossed up rate of RoE at the end of every financial year has to be trued up based on actual tax paid together with any additional tax demand including interest thereon for



refund of tax including any interest received from the IT authorities on actual gross income.

53. We have considered the submissions of the Petitioner and UPPCL. The MAT rate applicable during the year 2019-20 has been considered for the purpose of RoE, which shall be trued up with actual tax rate in accordance with Clause (3) of Regulation 31 of the 2019 Tariff Regulations. RoE allowed for the transmission asset for the 2019-24 tariff period is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	12046.63	12046.63	12046.63	12046.63	12046.63
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	12046.63	12046.63	12046.63	12046.63	12046.63
Average Equity	12046.63	12046.63	12046.63	12046.63	12046.63
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (%)	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
<b>Return on Equity (Pre-tax)</b>	<b>2262.60</b>	<b>2262.60</b>	<b>2262.60</b>	<b>2262.60</b>	<b>2262.60</b>

### **Interest on Loan (IoL)**

54. As stated above, the loan availed in case of the transmission asset has already been repaid prior to 31.3.2014. Therefore, the Petitioner has not claimed any IoL.

### **Depreciation**

55. Regulations 33(1), (2) and (5) of the 2019 Tariff Regulations provide as under:-

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

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



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

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

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

56. UPPCL has submitted that the Petitioner has failed to substantiate the figure of cumulative depreciation of ₹15400.50 lakh for the year 2014-15 and hence requested to direct the Petitioner to submit details of the said cumulative depreciation. In response, the Petitioner in its rejoinder has submitted that the cumulative depreciation as on 1.4.2014 has been considered as per the order dated 15.2.2016 in Petition No. 196/TT/2014.

57. The depreciation has been worked out as per the methodology provided in Regulation 33 of the 2019 Tariff Regulations. As the entire loan for the transmission lines covered in the present petition has already been repaid, the depreciation has been worked out by spreading the depreciable value over the remaining useful life of the asset. Accordingly, the depreciation for entire 2019-24 has been allowed by spreading the remaining depreciable value as on 1.4.2019 over its balance useful life. The depreciation allowed for the transmission asset is as follows:

	(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	24629.96	24629.96	24629.96	24629.96	24629.96



Addition during the year 2019-24 due to projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	24629.96	24629.96	24629.96	24629.96	24629.96
Average Gross Block	24629.96	24629.96	24629.96	24629.96	24629.96
Weighted average rate of Depreciation (WAROD) (%)	Spreading	Spreading	Spreading	Spreading	Spreading
Balance useful life at the beginning	9.00	8.00	7.00	6.00	5.00
Aggregated Depreciable Value	21985.77	21985.77	21985.77	21985.77	21985.77
Remaining Aggregate Depreciable Value at the end of the year	3763.01	3292.63	2822.26	2351.88	1881.50
<b>Combined Depreciation during the year</b>	<b>470.38</b>	<b>470.38</b>	470.38	470.38	470.38
Aggregate Cumulative Depreciation at the end of the year	18222.76	18693.13	19163.51	19633.89	20104.26

### **Operation & Maintenance Expenses (O&M Expenses)**

58. Regulation 35(3)(a) of the 2019 Tariff Regulations provides as under:

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

<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
<i>Norms for sub-station Bays (₹ Lakh per bay)</i>					
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
<i>Norms for Transformers (₹ Lakh per MVA)</i>					
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
<i>Norms for AC and HVDC lines (₹ Lakh per km)</i>					
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.”

59. The O&M Expenses claimed by the Petitioner for the transmission asset are as under:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Sub-station Bays</b>					
400kV Moga Bay of Chamera – Jalandhar Ckt – I & II	2	2	2	2	2
400kV Moga 250 MVA ICT – I & II bay	2	2	2	2	2
<b>Norm (₹ lakh/bay)</b>					
400kV	32.15	33.28	34.45	35.66	36.91
<b>Total Sub-station O&amp;M</b>	<b>128.60</b>	<b>133.12</b>	<b>137.80</b>	<b>142.64</b>	<b>147.64</b>
<b>Transformer</b>					
400kV Moga ICT – II at Moga	250	250	250	250	250
<b>Norms (₹ lakh / MVA)</b>					
400kV	0.358	0.371	0.384	0.398	0.411
<b>Total Transformer O&amp;M</b>	<b>89.50</b>	<b>92.75</b>	<b>96.00</b>	<b>99.50</b>	<b>102.75</b>
<b>AC &amp; HVDC Lines</b>					
400kV Double Circuit Chamera Moga Line	235.74	235.74	235.74	235.74	235.74
<b>Norm (₹ lakh/KM)</b>					
Double Circuit Twin / Triple conductor	0.881	0.912	0.944	0.977	1.011
<b>Total Transmission Line</b>	<b>207.69</b>	<b>214.99</b>	<b>222.54</b>	<b>230.32</b>	<b>238.33</b>
<b>Communication System</b>					
The Original Project cost	67.05	67.05	67.05	67.05	67.05
Norms	2.00%	2.00%	2.00%	2.00%	2.00%
<b>PLCC (Total Communication System)</b>	<b>1.34</b>	<b>1.34</b>	<b>1.34</b>	<b>1.34</b>	<b>1.34</b>
<b>Total O&amp;M Expenses</b>	<b>427.13</b>	<b>442.21</b>	<b>457.68</b>	<b>473.80</b>	<b>490.06</b>

60. 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 the 2019 Tariff Regulations and the norms for Sub-station have 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. The relevant portions of the order dated 24.1.2021 in Petition No.126/TT/2020 are extracted hereunder:

*"103. Thus, although PLCC equipment is a communication system, it has been considered as a part of sub-station, as it is used both for protection and communication. Therefore, we are of the considered view that rightly, it was not considered for separate O&M Expenses while framing norms of O&M for 2019-24 tariff period. While specifying norms for bays and transformers, O&M Expenses for PLCC have been included within norms for O&M Expenses for sub-station. Norms of O&M Expenses @2% of the capital cost in terms of Regulation 35(4) of the 2019 Tariff Regulations have been specified for communication system such as PMU, RMU, OPGW etc. and not for PLCC equipment."*

*"105. In our view, granting of O&M Expenses for PLCC equipment @2% of its capital cost under Regulation 35(4) of the 2014 Tariff Regulations under the communication system head would tantamount to granting O&M Expenses twice for PLCC equipment as PLCC equipment has already been considered as part of the sub-station. Therefore, the Petitioner's prayer for grant of O&M Expenses for the PLCC equipment @2% of its capital cost under Regulation 35(4) of the 2014 Tariff Regulations is rejected.*

*106. The principle adopted in this petition that PLCC is part of sub-station and accordingly no separate O&M Expenses is admissible for PLCC equipment in the 2019-24 tariff period under Regulation 35(4) of the 2019 Tariff Regulations shall be applicable in case of all petitions where similar claim is made by the Petitioner. As already mentioned, the Commission, however, on the basis of the claim made by the Petitioner has inadvertently allowed O&M Expenses for PLCC equipment @2% of its original project cost, which is applicable for other "communication system", for 2019-24 period in 31 petitions given in Annexure-3 of this order. Therefore, the decision in this order shall also be applicable to all the petitions given in Annexure-3. Therefore, PGCIL is directed to bring this decision to the notice of all the stakeholders in the 31 petitions given in Annexure-3 and also make revised claim of O&M Expenses for PLCC as part of the sub-station at the time of truing up of the tariff allowed for 2019-24 period in respective petitions."*

Therefore, the Petitioner's claim for separate O&M Expenses for PLCC @2% is not allowed.

61. The O&M Expenses allowed for the transmission asset are as under:

Particulars	₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24



<b>Sub-station Bays</b>					
400 kV Moga Bay of Chamera – Jalandhar Ckt – I & II	2	2	2	2	2
400 kV Moga 250 MVA ICT – I & II bay	2	2	2	2	2
<b>Norm (₹ lakh/bay)</b>					
400kV	32.15	33.28	34.45	35.66	36.91
<b>Total Sub-station O&amp;M Expenses</b>	<b>128.60</b>	<b>133.12</b>	<b>137.80</b>	<b>142.64</b>	<b>147.64</b>
<b>Transformer</b>					
400 kV Moga ICT – II at Moga	250	250	250	250	250
<b>Norms (₹ lakh / MVA)</b>					
400 kV	0.358	0.371	0.384	0.398	0.411
<b>Total Transformer O&amp;M Expenses</b>	<b>89.50</b>	<b>92.75</b>	<b>96.00</b>	<b>99.50</b>	<b>102.75</b>
<b>AC &amp; HVDC Lines</b>					
400kV Double Circuit Chamera Moga Line	235.74	235.74	235.74	235.74	235.74
<b>Norm (₹ lakh/km)</b>					
Double Circuit Twin / Triple conductor	0.881	0.912	0.944	0.977	1.011
<b>Total Transmission Line</b>	<b>207.69</b>	<b>214.99</b>	<b>222.54</b>	<b>230.32</b>	<b>238.33</b>
<b>Total O&amp;M Expenses</b>	<b>425.79</b>	<b>440.86</b>	<b>456.34</b>	<b>472.46</b>	<b>488.72</b>

### **Interest on Working Capital (IWC)**

62. 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:*

*(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;”

63. The Petitioner has submitted that it has computed IWC for the 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. 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 2020-24. The components of the working capital and interest allowed thereon is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses	35.48	36.74	38.03	39.37	40.73
Maintenance Spares	63.87	66.13	68.45	70.87	73.31
Receivables	395.71	398.25	400.23	402.30	403.27
<b>Total</b>	<b>495.06</b>	<b>501.11</b>	<b>506.71</b>	<b>512.54</b>	<b>517.30</b>
Rate of Interest (%)	12.05	11.25	11.25	11.25	11.25
<b>Interest of working capital</b>	<b>59.65</b>	<b>56.38</b>	<b>57.00</b>	<b>57.66</b>	<b>58.20</b>

### **Annual Fixed Charges for the 2019-24 Tariff Period**

64. The transmission charges allowed for the transmission asset for the 2019-24 tariff period are summarised as under:



Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	470.38	470.38	470.38	470.38	470.38
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	2262.60	2262.60	2262.60	2262.60	2262.60
Interest on Working Capital	59.65	56.38	57.00	57.66	58.20
Operation and Maintenance	425.79	440.86	456.34	472.46	488.72
<b>Total</b>	<b>3218.42</b>	<b>3230.21</b>	<b>3246.32</b>	<b>3263.09</b>	<b>3279.89</b>

### **Filing Fee and Publication Expenses**

65. 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. BRPL has objected to the Petitioner's claim of the filing fee on the ground that the Commission is not bound to allow the filing fee and the same is a discretionary power with the Commission which does not deserve to be utilised in the case at hand.

66. We have considered the submissions of the Petitioner and BRPL. The Petitioner is 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**

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

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

### **Goods and Services Tax**

69. The Petitioner has sought to recover GST on transmission charges separately from the Respondents, if at any time GST on transmission is withdrawn from negative list in future. We have considered the submission of the Petitioner and are of the opinion that GST is not levied on transmission service at present. Therefore, we are of the view that Petitioner's prayer is premature and the Petitioner is at liberty to approach this Commission if GST is levied upon transmission service in future.

### **Security Expenses**

70. The Petitioner has submitted that security expenses for the transmission asset are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential IWC. The Petitioner has requested to consider the actual security expenses incurred during 2018-19 for claiming estimated security expenses for 2019-20 which shall be subject to true up at the end of the year based on the actuals. The Petitioner has submitted that similar petition for security expenses for 2020-21, 2021-22, 2022-23 and 2023-24 will be filed on yearly basis on the basis of the actual expenses of previous year subject to true up at the end of the year on actual expenses. The Petitioner has submitted that the difference, if any, between the estimated security expenses and actual security expenses as the audited accounts may be allowed to be recovered from the beneficiaries on a yearly basis.

71. BRPL has objected to this claim of the Petitioner, in absence of a specific provision in the extant Regulations entitling the Petitioner to make such a claim.

72. We have considered the submissions of the Petitioner. We are of the view that the Petitioner should claim security expenses for all the transmission assets in one



petition. It is observed that the Petitioner has already filed the Petition No. 260/MP/2020 claiming consolidated security expenses on projected basis for the 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19. Therefore, security expenses will be dealt with in Petition No. 260/MP/2020 in accordance with the applicable provisions of the 2019 Tariff Regulations.

### **Capital Spares**

73. 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**

74. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 or the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020, as applicable, as provided in Regulation 43 of the 2014 Tariff Regulations for the 2014-19 tariff period and Regulation 57 of the 2019 Tariff Regulations for the 2019-24 tariff period.

75. To summarise, the trued-up Annual Fixed Charges allowed for the transmission asset for the 2014-19 tariff period are as under:

	(₹ in lakh)				
<b>Asset</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
AFC	3328.32	3354.44	3369.15	3384.40	3406.69

The Annual Fixed Charges allowed for the transmission asset for the 2019-24 tariff period in this order are as follows:

Asset	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	3218.41	3230.21	3246.32	3263.09	3279.89

76. This order disposes of Petition No. 488/TT/2019.

**Sd/  
(Arun Goyal)  
Member**

**Sd/  
(I. S. Jha)  
Member**

**Sd/  
(P. K. Pujari)  
Chairperson**

