

**CENTRAL ELECTRICITY REGULATORY COMMISSION  
NEW DELHI**

**Petition No. 165/TT/2020**

**Coram:**

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

**Date of Order: 21.07.2020**

**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 Combined Asset consisting of **Asset-1**:LILO of Nalagarh-Kaithal Line at Patiala along with associated bays, **Asset-2**:400/220 kV 500 MVA ICT-III at Patiala Sub-station, **Asset-3**:400 kV 125 MVAR Bus Reactor at Patiala Sub-station along with associated bays at Patiala Sub-station, **Asset-4**: 400/220 kV 500 MVA ICT-III at Malerkotla Sub-station under "Northern Region System Strengthening Scheme-XIV (NRSS-XIV)" in Northern Region.

**And in the matter of:**

Power Grid Corporation of India Limited,  
"Saudamini", Plot No. 2,  
Sector 29, Gurgaon-122001  
(Haryana)

**Vs**

**....Petitioner**

1. Rajasthan Rajya Vidyut Prasaran Nigam Limited.  
Vidyut Bhawan, Vidyut Marg,  
Jaipur – 302005.  
(Rajasthan).
2. Ajmer Vidyut Vitran Nigam Ltd.,  
132 KV, GSS RVPNL Sub- Station Building,  
Caligiri Road, Malviya Nagar,  
Jaipur-302017,  
(Rajasthan).
3. Jaipur Vidyut Vitran Nigam Ltd.,  
132 KV, GSS RVPNL Sub- Station Building.



Caligiri Road, Malviya Nagar,  
Jaipur-302017,  
(Rajasthan).

4. Jodhpur Vidyut Vitran Nigam Ltd.,  
132 KV, GSS RVPNL Sub-station Building,  
Caligiri Road, Malviya Nagar,  
Jaipur-302017.  
(Rajasthan).
5. Himachal Pradesh State Electricity Board,  
Vidyut Bhawan, Kumar House Complex Building II,  
Shimla-171004,  
(Himachal Pradesh).
6. Punjab State Electricity Board,  
Thermal Shed Tia, Near 22 Phatak,  
Patiala-147001,  
(Punjab).
7. Haryana Power Purchase Centre,  
Shakti Bhawan, Sector-6.  
Panchkula-134109,  
(Haryana).
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 – 226001,  
(Uttar Pradesh).
10. Delhi Transco Ltd.,  
Shakti Sadan, Kotla Road,  
New Delhi-110002.
11. BSES Yamuna Power Ltd.  
B-Block, ShaktiKiran, Bldg,  
(Near Karkadooma Courte),  
Karkadooma, 2nd Floor,  
New Delhi-110092.
12. BSES Rajdhani Power Ltd,  
BSES Bhawan, Nehru Place,  
New Delhi-110019.



13. North Delhi Power Limited  
Power Trading & Load Dispatch group,  
Cennet Building,  
Adjacent to 66/11 kV Pitampura-3,  
Grid Building, Near PP Jewellers,  
Pitampura,  
New Delhi-110034,
14. Chandigarh Administration,  
Sector -9,  
Chandigarh,
15. Uttarakhand Power Corporation Ltd.  
Urja Bhawan,  
Kanwali Road, Dehradun,  
(Uttarakhand),
16. North Central Railway,  
Allahabad,  
(Uttar Pradesh).
17. New Delhi Municipal Council,  
Palika Kendra, Sansad Marg,  
New Delhi-110002.

...Respondents

**Parties present**

**For Petitioner** : Shri A.K. Verma, PGCIL  
Shri B. Dash, PGCIL  
Shri V.P. Rastogi, PGCIL

**For Respondents** : Shri R.B. Sharma, Advocate, BRPL

**ORDER**

The instant petition has been filed by Power Grid Corporation of India Ltd. (hereinafter referred to as “the Petitioner”), a deemed transmission licensee, for truing up of the transmission tariff of Asset-1: LILO of Nalagarh-Kaithal Line at Patiala along with associated bays, Asset-2: 400/220 kV 500 MVA ICT-III at Patiala Sub-station, Asset-3: 400 kV 125 MVAR Bus Reactor at Patiala Sub-station along with associated bays at Patiala Sub-station, Asset-4: 400/220 kV 500 MVA ICT-III



at Malerkotla Sub-station (hereinafter referred to as “the transmission assets/ Combined Asset”) of the 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and for tariff determination of 2019-24 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) under “Northern Region System Strengthening Scheme-XIV (NRSS-XIV)” in Northern Region (hereinafter referred to as “ the transmission project”).

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

*“1) Allow the Add Cap for 2014-19 tariff block as claimed as per Para 6 above.*

*2) 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 7.1 and 9.2 above.*

*3) 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 Hon’ble Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 7.1 and 9.2 above for respective block.*

*4) 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.*

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

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

7) 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 9.8 above.

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

9) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the beneficiaries, 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.”

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

### **Background**

4. The Investment Approval (IA) and expenditure sanction for the transmission project was accorded by the Board of Directors of the Petitioner vide Memorandum No. C/CP/NRSS-XIV dated 16.2.2009 with an estimated cost of ₹13219 lakh, including IDC of ₹893 lakh based on 4<sup>th</sup> Quarter, 2008 price level. The scope of work covered under the project “Northern Region System Strengthening Scheme-XIV (NRSS-XIV)” is as under:-

#### **A. Transmission Line:**

- (i) LILO of second circuit of Nalagarh-Kaithal 400 kV line (Triple Bundle) at Patiala – 11 km.

#### **B. Sub-stations:**

- (i) Patiala 400/200 kV (POWERGRID) Sub-station (Extension)-1X500 MVA, 400/220 kV transformer,
- (ii) Malerkotla 400/200 kV (POWERGRID) Sub-station (Extension)-1X500 MVA, 400/220 kV transformer.



**C. Reactive Compensation:**

(i) 125 MVAR Bus Reactor at Patiala.

5. The project was scheduled to be put into commercial operation within 30 months from the date of IA i.e. by 16.8.2011.

6. The dates of commercial operation of the assets covered in the instant petition are as follows:

<b>Asset</b>	<b>SCOD</b>	<b>COD</b>	<b>Time over-run</b>
Asset-1	16.8.2011	1.9.2011	Nil
Asset-2	16.8.2011	1.9.2011	Nil
Asset-3	16.8.2011	1.10.2011	1 month
Asset-4	16.8.2011	1.10.2011	1 month

7. The transmission tariff of all the assets covered in the instant petition from their respective COD to 31.3.2014 was determined vide order dated 10.4.2013 in Petition No. 96/TT/2011 as per the 2009 Tariff Regulations. The transmission charges of all the assets covered in the instant petition were tried up for 2009-14 period and tariff for the 2014-19 tariff period was determined for the Combined Asset vide order dated 29.2.2016 in Petition No. 565/TT/2014. There was no time over-run in case of COD of Assets-1 and 2, while Assets-3 and 4 were put into commercial operation with a time over-run of one month. The time over-run in the case of Assets-3 and 4 was condoned by the Commission vide order dated 10.4.2013 in Petition No. 96/TT/2011.

8. The Petitioner has served the petition on the Respondents and Public Notice regarding filing of this petition has also been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003 (hereinafter referred to as "the Act"). 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), Respondent No. 9, has filed its reply vide an affidavit dated 18.3.2020 and has raised issues like cumulative depreciation upto 31.3.2014, Interest on Loan (IoL), grossing up of RoE (Return on Equity) with regard to 2014-19 period. With regard to 2019-24 period, it has raised issues like cumulative depreciation upto 31.3.2019, IoL, grossing up of RoE and O&M Expenses. BSES Rajdhani Power Limited (BRPL), Respondent No. 12, has also filed its reply vide affidavit dated 12.3.2020 and has raised issues like deferred tax liability for the period 2014-19, grossing up of RoE, effects of GST, security expenses, capital spares, filing fees and expenses incurred for publication of notice. The Petitioner vide affidavits dated 5.6.2020 has filed its rejoinder in response to the reply filed by UPPCL and BRPL.

9. The hearing in this matter was held on 9.6.2020 and the order was reserved.

10. This order is issued after considering the submissions made by the Petitioner in the petition dated 1.1.2020 and the reply of UPPCL and BRPL and the Petitioner's rejoinders.

11. Having heard the representative of the Petitioner and perused the material on record, we proceed to dispose of the petition.

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

12. The details of the transmission charges claimed by the Petitioner in respect of the Combined Asset are as follows:-



(₹ in lakh)

Combined Asset					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	442.43	443.09	443.09	443.09	443.09
Interest on Loan	413.44	374.92	335.42	295.87	256.30
Return on Equity	498.30	501.32	501.07	501.07	502.42
Interest on working capital	64.59	64.90	65.13	65.40	65.75
O & M Expenses	604.99	625.06	645.83	667.25	689.39
<b>Total</b>	<b>2023.75</b>	<b>2009.29</b>	<b>1990.54</b>	<b>1972.68</b>	<b>1956.95</b>

13. The details of the interest on working capital (IWC) claimed by the Petitioner in respect of the Combined Asset is as under:-

(₹ in lakh)

Combined Asset					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M expenses	50.42	52.09	53.82	55.60	57.45
Maintenance Spares	90.75	93.76	96.87	100.09	103.41
Receivables	337.29	334.88	331.76	328.78	326.16
<b>Total</b>	<b>478.46</b>	<b>480.73</b>	<b>482.45</b>	<b>484.47</b>	<b>487.02</b>
Rate of Interest	13.50	13.50	13.50	13.50	13.50
<b>Interest on Working Capital</b>	<b>64.59</b>	<b>64.90</b>	<b>65.13</b>	<b>65.40</b>	<b>65.75</b>

#### Effective Date of Commercial Operation (E-COD)

14. The Petitioner has claimed E-COD of the Combined Asset as 1.9.2011. Based on the trued up admitted capital cost and actual COD of all the assets, the E-COD has been worked out as follows:-

(₹ in lakh)

Computation of Effective COD						
Asset	Actual COD	Admitted Capital Cost as on 31.3.2019	Weight of the cost (%)	No. of Days from last COD	Weighted Days	Effective COD (Latest COD – Total weighted Days)
Asset-1	1-9-2011	2711.56	32.08	30	9.63	<b>10.9.2011</b>
Asset-2	1-9-2011	2956.70	34.99	30	10.50	
Asset-3	1-10-2011	1019.58	12.06	-	-	
Asset-4	1-10-2011	1763.35	20.87	-	-	
<b>Total</b>		<b>8451.19</b>	<b>100.00</b>		<b>20.12</b>	





15. The E-COD has been used to determine the lapsed life of the project as a whole, which works out as two (2) years as on 1.4.2014 (i.e. the number of completed years as on 1.4.2014 from E-COD).

**Weighted Average Life (WAL)**

16. The life as defined in Regulation 27 of the 2014 Tariff Regulations has been considered for determination of Weighted Average Life.

17. The Combined Asset may have multiple elements such as land, building, transmission line, sub-station and PLCC and each element may have different span of life. Therefore, the concept of Weighted Average Life (WAL) has been used as the useful life of the project as a whole.

18. The WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2014 and their respective life as stipulated in the 2014 Tariff Regulations. The element-wise life as defined in the 2009 Tariff Regulations prevailing at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in the 2014 Tariff Regulations has been considered for determination of WAL. Accordingly, the Weighted Average Life (WAL) of the Combined Asset has been worked out as 27 years as shown below:-

<b>Particulars</b>	<b>Admitted Capital Cost as on 31. 3.2014 (₹ in lakh) (a)</b>	<b>Life as per 2014 Tariff Regulation (Years) (b)</b>	<b>Weight (a) x (b)</b>
Freehold Land	102.95	-	-
Leasehold Land	0.00	25	0.00
Building & Other Civil Works	0.00	25	0.00
Transmission Line	1947.30	35	68155.50
Sub-Station Equipment	6307.89	25	157697.25
PLCC	93.05	15	1395.75
<b>Total</b>	<b>8451.19</b>		<b>227248.50</b>
<b>WAL = Total Weight/ Capital cost of the project</b>		<b>27 years</b>	



19. WAL as on 1.4.2014 as determined above is applicable prospectively (i.e. for 2014-19 tariff period onwards) and no retrospective adjustment of depreciation in previous tariff period is required to be done. As discussed at para 14 and 15 above, the Effective COD of the assets is 10.9.2011 and the lapsed life of the project as a whole, works out as two (2) years as on 1.4.2014 (i.e. the number of completed years as on 1.4.2014 from Effective COD). Accordingly, the WAL has been used to determine the remaining useful life as on 31.3.2014 to be 25 years.

#### **Capital Cost as on 1.4.2014**

20. The Commission vide order dated 29.2.2016 in Petition No. 565/TT/2014 admitted the capital cost of ₹2711.56 lakh, ₹2956.70 lakh, ₹1019.58 lakh and ₹1763.35 lakh for Asset-1, Asset-2, Asset-3 and Asset-4 respectively as on 31.3.2014 for determination of tariff for the 2014-19 period.

21. The Petitioner vide Auditor's Certificates dated 30.7.2019 for Asset-2 and Asset-4 and Auditor's Certificates dated 18.9.2014 for Asset-1 and Asset-3 has submitted the capital cost upto COD, Additional Capital Expenditure (ACE) upto 31.3.2019 and estimated ACE during the period from 1.4.2019 to 31.3.2020. The details of approved apportioned capital cost, capital cost as on COD, ACE incurred upto 31.3.2019 as claimed by the Petitioner for the Combined Asset are as under:

(₹ in lakh)			
FR Apportioned Approved Capital Cost	Capital cost as on 31.3.2014	Additional capitalisation (claimed)	Total Capital Cost as on 31.3.2019 (claimed)
		2014-15	
13218.19	8451.19	25.00	8476.19
<b>13218.19</b>	<b>8451.19</b>	<b>25.00</b>	<b>8476.19</b>



22. The Petitioner has claimed capital cost of ₹8451.19 lakh for the Combined Asset as on 31.3.2014.

### **Cost Over-run**

23. The completion cost including ACE is within the FR approved apportioned capital cost as mentioned in the table under para 21 above, in respect of the instant Combined Asset. Therefore, there is no cost over-run in respect of the instant Combined Asset.

24. The capital cost of ₹8451.19 lakh admitted by the Commission as on 31.3.2014 has been considered as opening capital cost as on 1.4.2014 for determination of tariff in accordance with Regulation 9 of the 2014 Tariff Regulations.

### **Initial Spares**

25. The Petitioner has not claimed any adjustment of Initial Spares for the transmission assets covered in the instant petition. Initial Spares claimed by the Petitioner were allowed vide order dated 10.4.2013 in Petition No. 96/TT/2011 and further trued up vide order dated 29.2.2016 in Petition No. 565/TT/2014. The Petitioner had earlier claimed excess Initial Spares and the same were disallowed by the Commission in the said orders.

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

26. The Petitioner has claimed ACE of ₹25 lakh during the year 2014-15 for the instant Combined Asset and submitted the Auditor's Certificate in support of the same. The Petitioner has submitted that ACE incurred for the instant Combined Asset is on account of undischarged liability towards final payment/ withheld



payment due to contractual exigencies for works executed within the cut-off date. The Additional Capitalization for the year 2014-15 for the Combined Asset has been claimed under Regulation 14(3)(v) (liabilities after cut-off date) of 2014 Tariff Regulations.

27. It is observed that total estimated completion cost including ACE from 2014-15 to 2018-19 for the Combined Asset is within the FR apportioned approved capital cost.

28. The cut-off date for Combined Asset is 31.3.2014. The actual audited ACE claimed by the Petitioner for 2014-15 period is beyond cut-off date. Based on the submissions made by the Petitioner, the same has been considered for computation of total capital cost as on 31.3.2019. The ACE claimed for the 2014-19 tariff period is allowed under Regulation 14(3)(v) of the 2014 Tariff Regulations.

29. The capital cost allowed as on 31.3.2019 after including ACE in respect of the instant assets is as under:-

Combined Asset	Capital cost as on 31.3.2014	Additional Capitalization	Total capital cost including Additional Capitalization as on 31.3.2019
		2014-15	
Allowed earlier in order dated 29.2.2016 in Petition No. 565/TT/2014	8451.19	25.00	8476.19
As claimed by the Petitioner in the instant petition	8451.19	25.00	8476.19
Allowed after truing up in this order	8451.19	25.00	8476.19

30. There is no difference in the total capital cost claimed by the Petitioner and approved in this order.



### **Debt-Equity Ratio**

31. The Petitioner has considered debt-equity ratio of 70:30 as on 31.3.2014 and for Additional Capitalization post 31.3.2014. The debt-equity ratio of 70:30 has been considered for capital cost as on 31.3.2014 and Additional Capitalization during 2014-19 tariff period as provided under Regulation 19 of the 2014 Tariff Regulations. The same has been summarised as under:-

<b>Combined Asset</b>	<b>Amount as on 31.3.2014 (₹ in lakh)</b>	<b>(%)</b>	<b>Amount as on 31.3.2019 (₹ in lakh)</b>	<b>(%)</b>
Debt	5915.83	70.00	5933.33	70.00
Equity	2535.36	30.00	2542.86	30.00
<b>Total</b>	<b>8451.19</b>	<b>100.00</b>	<b>8476.19</b>	<b>100.00</b>

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

32. The Petitioner has claimed IoL based on actual interest rates for each year during the 2014-19 period. The Petitioner has prayed for change in interest rates prevailing as on 1.4.2019 for respective loans. We have considered the submissions of the Petitioner and accordingly calculated IoL based on actual interest rate, in accordance with Regulation 26 of the 2014 Tariff Regulations.

IoL has been worked out as under: -

- (i) Gross amount of loan, repayment of instalments and weighted average rate of interest on actual average loan have been considered as per the petition.
- (ii) The repayment for the tariff period 2014-19 has been considered to be equal to the depreciation allowed for that period.

33. UPPCL has submitted that the Petitioner has claimed wrong figure of cumulative repayment allowed upto 31.3.2014 that was allowed in the earlier order dated 29.2.2016 in Petition No. 565/TT/2014. In response, the Petitioner vide affidavit dated 5.6.2020 has submitted that it has claimed the cumulative



repayment as allowed by the Commission in para 44 of the order dated 29.2.2016 in Petition No. 565/TT/2014.

34. We have considered the submissions of the Petitioner and UPPCL. The details of IoL is as follows: -

(₹ in lakh)					
<b>Combined Asset</b>					
<b>Particular</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Gross Normative Loan	5915.83	5933.33	5933.33	5933.33	5933.33
Cumulative Repayments upto Previous Year	1088.94	1531.36	1974.45	2417.53	2860.62
Net Loan-Opening	4826.89	4401.97	3958.89	3515.80	3072.72
Addition due to Additional Capitalization	17.50	0.00	0.00	0.00	0.00
Repayment during the year	442.42	443.08	443.08	443.08	443.08
Net Loan-Closing	4401.97	3958.89	3515.80	3072.72	2629.63
Average Loan	4614.43	4180.43	3737.34	3294.26	2851.18
Weighted Average Rate of Interest on Loan (%)	8.95	8.96	8.96	8.96	8.97
<b>Interest on Loan</b>	<b>412.88</b>	<b>374.36</b>	<b>334.86</b>	<b>295.31</b>	<b>255.74</b>

Accordingly, IoL claimed by the Petitioner, allowed and trued up in respect of the Combined Asset is shown in the table below:-

(₹ 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>
Allowed earlier in order dated 29.2.2016 in Petition No. 565/TT/2014	413.41	374.87	335.37	295.82	256.26
As claimed by the Petitioner in the instant petition	413.44	374.92	335.42	295.87	256.30
Allowed after truing up in this order	412.88	374.36	334.86	295.31	255.74

IoL allowed in this order is less than the IoL allowed in order dated 29.6.2016 in Petition No. 565/TT/2014 due to difference in cumulative repayment as allowed as on 31.3.2014.

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

35. The Petitioner is entitled to RoE for the Combined Asset in terms of Regulations 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted



that they are liable to pay income tax at MAT rates and has claimed 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

36. UPPCL has submitted that the Petitioner's claim of effective tax rate for the period from 2016-17 to 2018-19 is not based on MAT rates. In response, the Petitioner, vide affidavit dated 5.6.2020, has submitted that for 2016-17, it has claimed effective tax rate on the basis of Assessment Order issued by the Income Tax Authorities and for 2017-18 and 2018-19, the claim is based on Income tax return filed.

37. BRPL has submitted that the Petitioner has claimed effective tax rate based on the consolidated income of the company, whereas the income from other business activities of the Petitioner like consulting, communication, planning and design of projects are required to be excluded from the computation of effective rate. BRPL has further submitted that the deferred tax liability (DTL) relevant to the aforesaid other business should not be considered in the computation of effective tax rate. In response, the Petitioner vide affidavit dated 5.6.2020 has submitted that it has claimed deferred tax liability during the period 2009-14 only for the deferred tax liability upto 31.3.2009 and materialised. Further, the DTL amount billed/ materialised is not considered while grossing up the RoE.



38. We have considered the submissions of the Petitioner and the Respondents, UPPCL and BRPL. The Commission in order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the effective tax rate based on the notified MAT rates for the Petitioner and the same is given in the table below. The same MAT rates are considered for the purpose of grossing up of rate of RoE for truing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations.

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

39. Accordingly, RoE allowed for the Combined Asset is as follows:-

(₹ in lakh)

Combined Asset					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	2535.36	2542.86	2542.86	2542.86	2542.86
Addition due to Additional Capitalization	7.50	0.00	0.00	0.00	0.00
Closing Equity	2542.86	2542.86	2542.86	2542.86	2542.86
Average Equity	2539.11	2542.86	2542.86	2542.86	2542.86
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>497.92</b>	<b>501.07</b>	<b>501.07</b>	<b>501.07</b>	<b>502.42</b>

RoE claimed by the Petitioner, allowed and trued up in respect of the Combined Asset is shown in the table below:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed earlier in order dated 29.2.2016 in Petition No. 565/TT/2014	497.93	498.67	498.67	498.67	498.67
As claimed by the Petitioner in the instant petition	498.30	501.32	501.07	501.07	502.42





Allowed after truing up in this order	497.92	501.07	501.07	501.07	502.42
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RoE allowed in the instant order is higher than that allowed earlier vide order dated 29.2.2016 in Petition No. 565/TT/2014 on account of change in the applicable tax rate for the purpose of grossing up of base rate of return on equity.

### **Depreciation**

40. The Petitioner has claimed depreciation considering capital expenditure of ₹8451.19 lakh as on 31.3.2014 for the Combined Asset and additional capitalization of ₹25 lakh during 2014-15 for the Combined Asset.

41. UPPCL has submitted that the Petitioner has wrongly claimed cumulative depreciation allowed upto 31.3.2014 as allowed in the order dated 29.2.2016 in Petition No. 565/TT/2014. In response, the Petitioner vide affidavit dated 5.6.2020 has submitted that it has claimed the cumulative depreciation as allowed by the Commission in para 46 of the order dated 29.2.2016 in Petition No. 565/TT/2014.

42. We have considered the submissions of the Petitioner and UPPCL. The Gross Block during the tariff period 2014-19 has been depreciated at weighted average rate of depreciation (WAROD) and working of WAROD is at Annexure-I. The weighted average rate of depreciation (WAROD) has been worked out after taking into account the depreciation rates of assets as prescribed in the 2014 Tariff Regulations and depreciation allowed during tariff period 2014-19 is as under:

(₹ in lakh)

<b>Combined Asset</b>					
<b>Particulars</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>	<b>2018-19</b>
Opening Gross Block	8451.19	8476.19	8476.19	8476.19	8476.19
Additional Capitalisation	25.00	0.00	0.00	0.00	0.00
Closing Gross Block	8476.19	8476.19	8476.19	8476.19	8476.19
Average Gross Block	8463.69	8476.19	8476.19	8476.19	8476.19
Weighted average rate of	5.23	5.23	5.23	5.23	5.23



Depreciation (WAROD) (%)					
Balance useful life of the asset at the beginning of the year	25	24	23	22	21
Aggregated Depreciable Value	7524.67	7535.92	7535.92	7535.92	7535.92
<b>Combined Depreciation during the year</b>	<b>442.42</b>	<b>443.08</b>	<b>443.08</b>	<b>443.08</b>	<b>443.08</b>
Remaining Aggregated Depreciable Value	6435.73	6004.55	5561.47	5118.39	4675.30

Accordingly, the depreciation claimed by the Petitioner, allowed and trued up in respect of the Combined Asset is shown in the table below:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed earlier in order dated 29.2.2016 in Petition No. 565/TT/2014	442.42	443.08	443.08	443.08	443.08
As claimed by the Petitioner in the instant petition	442.43	443.09	443.09	443.09	443.09
Allowed after truing up in this order	442.42	443.08	443.08	443.08	443.08

There is no difference in depreciation allowed in the earlier order dated 29.2.2016 in Petition No. 565/TT/2014 and as allowed after truing up in this order.

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

43. The details of the O&M Expenses claimed by the Petitioner for the Combined Asset and allowed under Regulation 29(4)(a) of the 2014 Tariff Regulations for purpose of tariff are as under:

(₹ in lakh)					
Combined Asset					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
<b>Norm (₹ lakh/bay)</b>					
400 kV Bay	301.50	311.50	321.85	332.55	343.55
220 kV Bay	295.47	305.27	315.42	325.85	336.70
<b>AC &amp; HVDC Lines</b>					
D/C Twin/Triple Conductor	8.02	8.29	8.56	8.85	9.14
<b>Total O&amp;M Expenses</b>	<b>604.99</b>	<b>625.06</b>	<b>645.83</b>	<b>667.25</b>	<b>689.39</b>

Accordingly, the O&M Expenses claimed by the Petitioner, allowed and trued up in respect of the Combined Asset are shown in the table below:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed earlier in order dated 29.2.2016 in Petition No. 565/TT/2014	604.99	625.06	645.83	667.25	689.39
As claimed by the Petitioner in the instant petition.	604.99	625.06	645.83	667.25	689.39
Allowed after truing up in this order	604.99	625.06	645.83	667.25	689.39

There is no difference in O&M Expenses allowed in the earlier order dated 29.2.2016 in Petition No. 565/TT/2014 and as allowed after truing up in this order.

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

44. The Petitioner is entitled to claim 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 IWC is considered on normative basis in accordance with Clause (3) of Regulation 28 of the 2014 Tariff Regulations.

45. IWC allowed for the Combined Asset is as under:-



(₹ in lakh)

Combined Asset					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	50.42	52.09	53.82	55.60	57.45
Maintenance Spares	90.75	93.76	96.87	100.09	103.41
Receivables	337.13	334.74	331.66	328.68	326.06
<b>Total</b>	<b>478.29</b>	<b>480.59</b>	<b>482.35</b>	<b>484.37</b>	<b>486.92</b>
Rate of Interest on working capital(%)	13.50	13.50	13.50	13.50	13.50
<b>Interest of working Capital</b>	<b>64.57</b>	<b>64.88</b>	<b>65.12</b>	<b>65.39</b>	<b>65.73</b>

Accordingly, the IWC claimed by the Petitioner, allowed and trued up in respect of the Combined Asset is shown in the table below:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed earlier in order dated 29.2.2016 in Petition No. 565/TT/2014	64.58	64.83	65.07	65.34	65.66
As claimed by the Petitioner in the instant petition	64.59	64.90	65.13	65.40	65.75
Allowed after truing up in this order	64.57	64.88	65.12	65.39	65.73

There is marginal difference in IWC allowed in order dated 29.2.2016 in Petition No. 565/TT/2014 and as allowed in this order on account of variation in receivables due to variation in components of tariff.

### **APPROVED ANNUAL FIXED CHARGES FOR 2014-19 TARIFF PERIOD**

46. Accordingly, the annual fixed charges in respect of the Combined Asset after truing up for the 2014-19 tariff period are as under: -

(₹ in lakh)

Combined Asset					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	442.42	443.08	443.08	443.08	443.08
Interest on Loan	412.88	374.36	334.86	295.31	255.74
Return on Equity	497.92	501.07	501.07	501.07	502.42
Int. on Working Capital	64.57	64.88	65.12	65.39	65.73
Op. and Maintenance	604.99	625.06	645.83	667.25	689.39
<b>Total</b>	<b>2022.78</b>	<b>2008.46</b>	<b>1989.96</b>	<b>1972.10</b>	<b>1956.36</b>



The annual fixed charges in respect of the Combined Asset as approved earlier vide order dated 29.2.2016 in Petition No. 565/TT/2014, as claimed by the Petitioner and as trued up in respect of the Combined Asset are shown in the table below:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed earlier in order dated 29.2.2016 in Petition No. 565/TT/2014	2023.33	2006.52	1988.02	1970.16	1953.05
As claimed by the Petitioner in the instant petition	2023.75	2009.29	1990.54	1972.68	1956.95
Allowed after truing up in this order	2022.78	2008.46	1989.96	1972.10	1956.36

The difference in the annual fixed charges claimed by the Petitioner and as allowed after truing up in the instant order is due to difference in cumulative repayment, rate of tax claimed by the Petitioner and allowed by the Commission.

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

47. The Petitioner has submitted the tariff forms for the Combined Asset as a single asset. Accordingly, as per proviso (i) of Regulation 8(1) of the 2019 Tariff Regulations, single tariff for the Combined Asset has been worked out for the 2019-24 tariff period.

48. The Petitioner has claimed the following transmission charges for the Combined Asset for 2019-24 tariff period:-

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	443.09	443.09	443.09	443.09	443.09
Interest on Loan	216.71	177.10	137.48	97.81	58.05
Return on Equity	477.60	477.60	477.60	477.60	477.60

Interest on Working Capital	47.10	47.64	48.13	48.68	49.13
Operation and Maintenance	688.17	712.70	737.65	763.96	789.75
<b>Total</b>	<b>1,872.67</b>	<b>1,858.13</b>	<b>1,843.95</b>	<b>1,831.14</b>	<b>1,817.62</b>

49. The Petitioner has claimed the following 'Interest on Working Capital' for the Combined Asset for the 2019-24 tariff period:-

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M expenses	57.35	59.39	61.47	63.66	65.81
Maintenance Spares	103.23	106.91	110.65	114.59	118.46
Receivables	230.25	229.08	227.34	225.76	223.48
<b>Total</b>	<b>390.83</b>	<b>395.38</b>	<b>399.46</b>	<b>404.01</b>	<b>407.75</b>
Rate of Interest	12.05	12.05	12.05	12.05	12.05
<b>Interest on Working Capital</b>	<b>47.10</b>	<b>47.64</b>	<b>48.13</b>	<b>48.68</b>	<b>49.13</b>

### **Capital Cost**

50. Regulation 19(3) and Regulation 19(5) of the 2019 Tariff Regulations provide as follows:-

*“19 Capital Cost*

*(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 renovation and modernisation as admitted by this Commission in accordance with these regulations;*
- (d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and*
- (f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*

*(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.”*

51. The Petitioner has claimed capital cost of the Combined Asset as ₹8476.19 lakh as on 31.3.2019. Accordingly, the admitted capital cost of ₹8476.19 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)**

52. The Petitioner has not claimed any ACE during 2019-24 period.

### **Debt-Equity Ratio**

53. Regulation 18(3), (4) and (5) of the 2019 Tariff Regulations provide as under:-

*“18. Debt-Equity Ratio: (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.”

54. The details of the debt-equity considered for the purpose of computation of tariff for 2019-24 tariff period is as follows:-

(₹ in lakh)				
Combined Asset	Capital Cost as on 1.4.2019 (₹ in lakh)	(%)	Total Capital Cost as on 31.3.2024 (₹ in lakh)	(%)
Debt	5933.33	70.00	5933.33	70.00
Equity	2542.86	30.00	2542.86	30.00
<b>Total</b>	<b>8476.19</b>	<b>100.00</b>	<b>8476.19</b>	<b>100.00</b>

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

55. Regulation 30 and Regulation 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.

(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.”*

56. UPPCL has submitted that the gross rate of RoE submitted by the Petitioner is not authentic because it has been based on presumptive value of MAT rate that has not been approved by the Income Tax Authorities. In response, the Petitioner vide affidavit dated 5.6.2020 has submitted that the gross rate of RoE has been calculated with revised MAT rate as per the Taxation Laws (Amendment) Ordinance, 2019 published in the Gazette dated 20.9.2019.

57. We have considered the submissions of the Petitioner and UPPCL. The Petitioner has submitted that MAT rate is applicable to the Petitioner's Company. Accordingly, 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. The RoE worked out and allowed is as follows:-

(₹ in lakh)

<b>Combined Asset</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Opening Equity	2542.86	2542.86	2542.86	2542.86	2542.86
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Closing Equity	2542.86	2542.86	2542.86	2542.86	2542.86
Average Equity	2542.86	2542.86	2542.86	2542.86	2542.86
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>477.60</b>	<b>477.60</b>	<b>477.60</b>	<b>477.60</b>	<b>477.60</b>

**Interest on Loan (IoL)**

58. Regulation 32 of the 2019 Tariff Regulations provides as under:-



*“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 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 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”.*

59. UPPCL has submitted that the cumulative repayment of normative loan upto previous year claimed by the Petitioner is not correct. UPPCL has further submitted that the Petitioner has negotiated loan portfolios having fixed rate of yearly interest. Therefore, adjustment of IoL due to floating rate of interest applicable during 2019-24 is premature.

60. In response, the Petitioner vide affidavit dated 5.6.2020 has submitted that the cumulative repayment claimed upto 31.3.2014 is taken from para 44 of order



dated 29.2.2016 vide Petition No. 565/TT/2014 and cumulative repayment upto 31.3.2019 has been calculated thereafter. Further, the Petitioner has prayed to be allowed to bill and adjust the impact of IoL due to change in interest rate on account of floating rate of interest applicable during 2019-24 period.

61. We have considered the submissions of the Petitioner and UPPCL. The weighted average rate of IoL has been considered on the basis of 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. The floating rate of interest, if any, shall be considered at the time of true up. Accordingly, IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed is follows:-

(₹ in lakh)

<b>Combined Asset</b>					
<b>Particular</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Gross Normative Loan	5933.33	5933.33	5933.33	5933.33	5933.33
Cumulative Repayments upto Previous Year	3303.70	3746.78	4189.87	4632.95	5076.04
Net Loan-Opening	2629.63	2186.55	1743.47	1300.38	857.30
Addition due to Additional Capitalization	0.00	0.00	0.00	0.00	0.00
Repayment during the year	443.08	443.08	443.08	443.08	443.08
Net Loan-Closing	2186.55	1743.47	1300.38	857.30	414.21
Average Loan	2408.09	1965.01	1521.92	1078.84	635.76
Weighted Average Rate of Interest on Loan (%)	8.976	8.985	8.997	9.014	9.043
<b>Interest on Loan</b>	<b>216.15</b>	<b>176.55</b>	<b>136.92</b>	<b>97.25</b>	<b>57.49</b>

### **Depreciation**

62. Regulation 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.”*

63. UPPCL has submitted that the Petitioner has claimed the cumulative depreciation at the beginning of the 2019-20 period as ₹3297.49 lakh which is not correct and that it should be ₹4166.54 lakh. In response, the Petitioner vide affidavit dated 5.6.2020 has submitted that the cumulative depreciation claimed upto 31.3.2014 is taken from para 46 of the order dated 29.2.2016 vide Petition No. 565/TT/2014 and cumulative depreciation upto 31.3.2019 has been calculated thereafter.

64. We have considered the submissions of the Petitioner and UPPCL. The IT equipment has been considered as a part of the Gross Block and depreciated using weighted average rate of depreciation (WAROD). The weighted average rate of depreciation (WAROD) has been worked out (Annexure-II) after taking into account the depreciation rates of IT and non-IT assets as prescribed in the 2019 Tariff Regulations. The salvage value of IT equipment has been considered nil, i.e.

IT asset has been considered as 100 per cent depreciable. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. The depreciation allowed for the instant asset is as follows:-

(₹ in lakh)

<b>Combined Asset</b>					
<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
Opening Gross Block	8476.19	8476.19	8476.19	8476.19	8476.19
Addition during the year 2019-24 due to projected Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	8476.19	8476.19	8476.19	8476.19	8476.19
Average Gross Block	8476.19	8476.19	8476.19	8476.19	8476.19
Weighted average rate of Depreciation (WAROD) (%)**	5.23	5.23	5.23	5.23	5.23
Balance useful life at the beginning	20	19	18	17	16
Aggregated Depreciable Value	7535.92	7535.92	7535.92	7535.92	7535.92
<b>Combined Depreciation during the year</b>	<b>443.08</b>	<b>443.08</b>	<b>443.08</b>	<b>443.08</b>	<b>443.08</b>
Remaining Aggregate Depreciable Value	4232.22	3789.13	3346.05	2902.96	2459.88

\*\*Refer Annexure-II of this Order.

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

65. Regulation 35(3) and (4) of the 2019 Tariff Regulations provide 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



<b>Particulars</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
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
<b>Norms for HVDC stations</b>					
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  $\pm 800$  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  $\pm 800$  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.”

66. UPPCL has submitted that the O&M Expenses claimed by the Petitioner for the ICTs in Patiala and Malerkotla are in excess of the specified norms and should be allowed only as per the norms specified in the 2019 Tariff Regulations. In response, the Petitioner vide affidavit dated 5.6.2020 has submitted that the O&M Expenses is calculated as per Regulation 35(3)(a) of the 2019 Tariff Regulations.

67. We have considered the submissions of the Petitioner and UPPCL. The O&M Expenses are allowed for the instant assets in accordance with Regulation 35(3)(a) of the 2019 Tariff Regulations as under:-

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Norm (₹ lakh/bay)</b>					
400 kV Bay	160.75	166.40	172.25	178.30	184.55





220 kV Bay	157.57	163.10	168.84	174.72	180.88
<b>O&amp;M for transformers (as per norms)</b>					
400 kV	358.00	371.00	384.00	398.00	411.00
<b>AC &amp; HVDC Lines</b>					
D/C Twin/Triple Conductor	9.99	10.34	10.70	11.08	11.46
<b>Communication System</b>					
PLCC	1.86	1.86	1.86	1.86	1.86
<b>Total O&amp;M Expenses</b>	<b>688.17</b>	<b>712.70</b>	<b>737.66</b>	<b>763.96</b>	<b>789.76</b>

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

68. Regulation 34(1)(c), (3) and (4) and Regulation 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;”*

69. The Petitioner has submitted that it has computed IWC for the 2019-24 period considering the bank rate as on 1.4.2019.



70. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of interest on working capital considered is 12.05%. The components of working capital and interest allowed thereon are as under:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses	57.35	59.39	61.47	63.66	65.81
Maintenance Spares	103.23	106.91	110.65	114.59	118.46
Receivables	230.18	229.02	227.27	225.69	223.41
<b>Total</b>	<b>390.75</b>	<b>395.31</b>	<b>399.39</b>	<b>403.94</b>	<b>407.68</b>
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
<b>Interest of working capital</b>	<b>47.09</b>	<b>47.64</b>	<b>48.13</b>	<b>48.68</b>	<b>49.13</b>

### **ANNUAL FIXED CHARGES FOR THE 2019-24 TARIFF PERIOD**

71. The various components of the annual fixed charges allowed for the instant Combined Asset for the 2019-24 tariff period is summarized below: -

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	443.08	443.08	443.08	443.08	443.08
Interest on Loan	216.15	176.55	136.92	97.25	57.49
Return on Equity	477.60	477.60	477.60	477.60	477.60
Interest on Working Capital	47.09	47.64	48.13	48.68	49.13
Operation and Maintenance	688.17	712.70	737.66	763.96	789.76
<b>Total</b>	<b>1872.09</b>	<b>1857.57</b>	<b>1843.39</b>	<b>1830.57</b>	<b>1817.05</b>

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

72. BRPL has submitted that though the Commission can allow filing fee and publication expenses at its discretion under Regulation 70(1) of the 2019 Tariff Regulations, the exercise of such a discretion is judicial in nature. However, no justification has been given by the Petitioner for claiming the same and hence the same cannot be allowed. BRPL also referred to the Commission's order dated



11.9.2008 in Petition No. 129 of 2005 wherein it declined the claim of Central Power Sector undertakings for allowing the reimbursement of the application filing fee. In response, the Petitioner has submitted that it has requested for the reimbursement of expenditure by the beneficiaries towards petition filing fee and publication expense, in terms of Regulation 70(1) of the 2019 Tariff Regulations. Further, the Petitioner also referred to the Commission's order dated 28.3.2016 in Petition No. 137/TT/2015 wherein it allowed the recovery of petition filing fee and expenditure for publication of notices from beneficiaries on pro-rata basis.

73. We have considered the submissions of the Petitioner and BRPL. The Petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses. 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 as provided under Clause (1) of Regulation 70 of the 2019 Tariff Regulations.

#### **Licence Fee and RLDC Fees and Charges**

74. The Petitioner has requested to allow it to bill and recover License fee and RLDC fees and charges, separately from the Respondents. UPPCL has contended that the license fee is the onus of the Petitioner. We have considered the submissions of Petitioner and UPPCL. We are of the view that the Petitioner shall be entitled for reimbursement of licence fee and RLDC fees and charges in accordance with Clause (4) and (3), respectively, of Regulation 70 of the 2019 Tariff Regulations.



### **Goods and Services Tax**

75. The Petitioner has sought to recover GST on transmission charges separately from the Respondents, if GST on transmission service is withdrawn from negative list in future.

76. BRPL has submitted that the demand of the Petitioner is premature and need not be considered at this juncture. In response, the Petitioner has submitted that currently transmission of electricity by a transmission utility is exempt from GST. Hence, the transmission charges currently charged are exclusive of GST. Further, if GST is levied at any rate and at any point of time in future, the same shall be borne and additionally paid by the Respondent(s) to the Petitioner and the same shall be charged and billed separately.

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

### **Security Expenses**

78. The Petitioner has submitted that security expenses for the instant assets are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential Interest on Working Capital. 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 shall be filed on a 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 per the audited accounts may be allowed to be recovered from the beneficiaries on a yearly basis.

79. BRPL has submitted that the approach adopted by the Petitioner towards claim of security expenses does not warrant the need for IWC as the same is claimed in advance. The Petitioner, in response has submitted that the expenses are not being claimed in the instant petition and shall be claimed in a separate petition along with other assets.

80. UPPCL has submitted that the security expenses may be allowed subject to the condition of affordability covered under the Office Memorandum of DPE. The Petitioner, in response has submitted that as per Regulation 35(3)(c) of the 2019 Tariff Regulations, the security expenses for transmission system shall be allowed separately after prudence check.

81. We have considered the submissions of the Petitioner and the Respondents, BRPL and UPPCL. We are of the view that the Petitioner should claim security expenses for all the transmission assets in one petition. The Commission observes 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**

82. 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**

83. The billing, collection and disbursement of the transmission charges approved in this order shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time 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.

84. This order disposes of Petition No. 165/TT/2020.

**sd/  
(Arun Goyal)  
Member**

**sd/-  
(I.S. Jha)  
Member**

**sd/-  
(P. K. Pujari)  
Chairperson**



Asset	2014-19	Combined admitted Capital Cost as on 1.4.2014 (₹ in lakh)	Additional Capitalization (₹ in lakh)	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation	Annual Depreciation as per Regulations				
	Capital Expenditure as on 1.4.2014		2014-15			2014-15 (₹ in lakh)	2015-16 (₹ in lakh)	2016-17 (₹ in lakh)	2017-18 (₹ in lakh)	2018-19 (₹ in lakh)
Combined Asset	Land	102.95	0.00	102.95	0.00%	0.00	0.00	0.00	0.00	0.00
	Building	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
	Transmission Line	1947.30	0.00	1947.30	5.28%	102.82	102.82	102.82	102.82	102.82
	Sub Station	6307.89	25.00	6332.89	5.28%	333.72	334.38	334.38	334.38	334.38
	PLCC	93.05	0.00	93.05	6.33%	5.89	5.89	5.89	5.89	5.89
	Leasehold Land	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
	IT Equipment and software	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
	<b>TOTAL</b>	<b>8451.19</b>	<b>25.00</b>	<b>8476.19</b>		<b>442.42</b>	<b>443.08</b>	<b>443.08</b>	<b>443.08</b>	<b>443.08</b>
<b>Average Gross Block (₹ in lakh)</b>						<b>8463.69</b>	<b>8476.19</b>	<b>8476.19</b>	<b>8476.19</b>	<b>8476.19</b>
<b>Weighted Average Rate of Depreciation (₹ in lakh)</b>						<b>5.23%</b>	<b>5.23%</b>	<b>5.23%</b>	<b>5.23%</b>	<b>5.23%</b>



## Annexure - II

Asset	2019-24	Combined admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation	Annual Depreciation as per Regulations				
	Capital Expenditure as on 1.4.2019				2019-20 (₹ in lakh)	2020-21 (₹ in lakh)	2021-22 (₹ in lakh)	2022-23 (₹ in lakh)	2023-24 (₹ in lakh)
Combined Asset	Land	102.95	102.95	0.00%	0.00	0.00	0.00	0.00	0.00
	Building	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
	Transmission Line	1947.30	1947.30	5.28%	102.82	102.82	102.82	102.82	102.82
	Sub Station	6332.89	6332.89	5.28%	334.38	334.38	334.38	334.38	334.38
	PLCC	93.05	93.05	6.33%	5.89	5.89	5.89	5.89	5.89
	Leasehold Land	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
	IT Equipment and software	0.00	0.00	15.00%	0.00	0.00	0.00	0.00	0.00
	<b>TOTAL</b>		<b>8476.19</b>	<b>8476.19</b>		<b>443.08</b>	<b>443.08</b>	<b>443.08</b>	<b>443.08</b>
<b>Average Gross Block (₹ in lakh)</b>					<b>8476.19</b>	<b>8476.19</b>	<b>8476.19</b>	<b>8476.19</b>	<b>8476.19</b>
<b>Weighted Average Rate of Depreciation (₹ in lakh)</b>					<b>5.23%</b>	<b>5.23%</b>	<b>5.23%</b>	<b>5.23%</b>	<b>5.23%</b>

