CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

<u>Petition No. 137/TT/2020</u>

Coram:

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

Date of Order: 16.07.2020

In the Matter of:

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations 1999 and truing up of transmission tariff for the 2014-19 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff for the 2019-24 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations 2019 for Combined Asset consisting of **Asset-1(i):** LILO of 400 kV D/C Bina-Nagda at Shujalpur Sub-station along with 50 MVAr Line Reactor at Shujalpur and new Sub-station at Shujalpur; **Asset-1(ii):** Switchable Scheme for Reactor at Nagda Sub-station; **Asset-1(iii):** Switchable Scheme for Reactor at Bina Sub-station; **Asset-2:** 400 kV, 63 MVAr Bus Reactor at Shujalpur along with associated bay; **Asset-3:** 400/220 kV ICT I at Shujalpur along with associated bays; **Asset-4:** ICT II at Shujalpur along with associated bays under the WRSS IX Transmission Scheme in the Western Region.

And in the Matter of:

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

Versus

1. Madhya Pradesh Power Management Company Ltd.
   Shakti Bhawan, Rampur
   Jabalpur - 482 008

2. Madhya Pradesh Power Transmission Company Ltd.
   Shakti Bhawan, Rampur
   Jabalpur - 482 008

3. Madhya Pradesh Audyogik Kendra
   Vikas Nigam (Indore) Ltd.
   3/54, Press Complex, Agra-Bombay Road, Indore-452 008

4. Maharashtra State Electricity Distribution Co. Ltd.
   Hongkong Bank Building, 3rd Floor
   M.G. Road, Fort, Mumbai-400 001.

5. Maharashtra State Electricity Transmission Co. Ltd.
   Prakashganga, 6th Floor, Plot No. C-19, E-Block,
   Bandra Kurla Complex, Bandra (East) Mumbai-400 051.

6. Gujarat Urja Vikas Nigam Ltd.
   Sardar Patel Vidyut Bhawan,
   Racecourse Road, Vadodara - 390 007

7. Electricity Department
   Government of Goa, Vidyut Bhawan, Panaji,
   Near Mandvi Hotel, Goa - 403 001

8. Electricity Department
   Administration of Daman & Diu
   Daman - 396 210

9. DNH Power Distribution Corporation Limited.
   Vidyut Bhawan, 66kV Road, Near Secretariat Amli,
   Silvassa - 396 230

10. Chhattisgarh State Power Transmission Co. Ltd.
    State Load Despacth Building,
    Dangania, Raipur – 492 013

11. Chhattisgarh State Power Distribution Co. Ltd.
    P.O. Sunder Nagar, Dangania, Raipur
    Chhattisgarh-492 013 **...Respondent(s)**

Parties present

For Petitioner: Shri A.K. Verma, PGCIL
Shri S.S. Raju, PGCIL
Shri B. Dash, PGCIL

For Respondent: None

ORDER

The present 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 the tariff of the 2014-19 tariff period from 1.4.2014 to 31.3.2019 under 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 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as "the 2019 Tariff Regulations") in respect of Combined Asset consisting of **Asset-1(i):** LILO of 400 kV D/C Bina-Nagda at Shujalpur Sub-station along with 50 MVAr Line Reactor at Shujalpur and new Sub-station at Shujalpur; **Asset-1(ii):** Switchable Scheme for Reactor at Nagda Sub-station; **Asset-1(iii):** Switchable Scheme for Reactor at Bina Sub-station; **Asset-2:** 400 kV, 63 MVAr Bus Reactor at Shujalpur along with associated bay; **Asset-3:** 400/220 kV ICT I at Shujalpur along with associated bays; and **Asset-4:** ICT II at Shujalpur along with associated bays (hereinafter referred to as "the transmission assets/ Combined Asset") under WRSS IX Transmission Scheme in the Western Region (hereinafter referred to as the "transmission project").

2. The Petitioner has made the following prayers:

"1)Allow the addcap for 2014-19 and 2019-24 tariff block as claimed as per Para 5 and 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 5 and 6 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 the Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 10.2 and 11.0 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 respondents 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 respondents.

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 6.6 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 respondents, if GST on transmission is levied at any rate 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) The Investment Approval for the instant transmission project was accorded by the Board of Directors of the Petitioner Company vide their letter no. C/CP/WRSSS-IX dated 25.4.2008 at an estimated cost of ₹23089 lakh including IDC of ₹1761 lakh (based on 1st Quarter 2008 price level). The scheduled COD of the instant assets was 1.2.2011.

b) The tariff from the date of commercial operation (COD) to 31.3.2014 for the instant assets was allowed vide order dated 15.5.2014 in Petition No. 88/TT/2011 in accordance with the 2009 Tariff Regulations. The tariff from the COD to 31.3.2014 period was trued up and tariff for 2014-19 period was determined vide order dated 11.3.2016 in Petition No. 7/TT/2015.

c) The entire scope of the instant transmission project is covered under the instant petition. The scheduled COD of the instant assets was 1.2.2011. The details of the dates of commercial operation and time over-run in case of the instant assets are as under:

Asset	COD	Time over-run	Time over-run condoned
Asset-1(i)	1.6.2011	4 Months	4 Months
Asset-1(ii)	1.6.2013	28 Months	Nil
Asset-1(iii)	1.10.2013	32 Months	Nil
Asset-2	1.4.2012	14 Months	9 Months
Asset-3	1.10.2011	8 Months	8 Months
Asset-4	1.12.2011	10 Months	9 Months

d) The details of the transmission tariff allowed for the instant assets for the 2014-19 period vide order dated 11.3.2016 in Petition No. 7/TT/2015 and the Petitioner's claim of trued-up tariff for the instant assets for the 2014-19 period are as under:

(₹ in lakh)

Particulars	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Annual Fixed Charges(AFC) approved vide order dated 11.3.2016 in Petition No. 7/TT/2015	3024.62	3084.70	3057.96	3032.29	3007.73
AFC claimed by the Petitioner based on truing up	2987.28	3035.38	3069.53	3050.88	3030.98

4. The respondents are distribution licensees and power departments, who are procuring transmission service from the Petitioner, mainly beneficiaries of the Western Region.

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has been published in the newspaper in accordance with Section 64 of the Electricity Act, 2003. No comments/ objections have been received from the general public in response to the aforesaid notice published in the newspapers by the Petitioner. Reply to the petition has been filed by Madhya Pradesh Power Management Company Limited (MPPMCL), Respondent No.1, vide affidavit dated 13.2.2020, wherein MPPMCL has raised the issue of grossing up of RoE and Initial Spares. Maharashtra State Electricity Distribution Company Ltd. (MSEDCL), Respondent No. 4, in its reply vide affidavit dated 19.3.2020, has raised the issues like grossing up of RoE, proposed ACE (additional capital expenditure) for 2019-24, calculation of IoL (interest on loan) and the effect of GST and additional taxes. The Petitioner vide affidavit dated 13.5.2020 has filed a rejoinder to the reply of MSEDCL and vide affidavit dated 15.5.2020 has filed a rejoinder to the reply of MPPMCL. The issues raised by MPPMCL and MSEDCL, and the clarification given by the Petitioner

are considered in the relevant portions of this order. The hearing in this matter was held on 22.5.2020 and the order was reserved.

6. This order is issued considering submissions made by the Petitioner dated 8.1.2020 and 12.3.2020, the replies filed by MPPMCL and MSEDCL and the clarification given by the Petitioner in its rejoinder. 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 (AFC) of the 2014-19 Period

7. The details of the trued up transmission charges claimed by the Petitioner in respect of the instant Combined Asset are as under:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	638.39	658.84	676.78	678.40	678.92
Interest on Loan	606.01	573.15	534.52	476.51	417.17
Return on Equity	714.15	741.68	762.74	766.83	771.05
Interest on Working Capital	96.58	98.63	100.41	101.03	101.66
O&M Expenses	932.15	963.08	995.08	1028.11	1062.18
Total	**2987.28**	**3035.38**	**3069.53**	**3050.88**	**3030.98**

8. The details of the trued up IWC (interest on working capital) claimed by the Petitioner in respect of the instant Combined Asset are as under:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	77.68	80.26	82.92	85.68	88.52
Maintenance Spares	139.82	144.46	149.26	154.22	159.33
Receivables	497.88	505.90	511.59	508.48	505.16
Total Working Capital	715.38	730.62	743.77	748.38	753.01
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on working capital	**96.58**	**98.63**	**100.41**	**101.03**	**101.66**

Effective Date of Commercial Operation (E-COD)

9. The Petitioner has stated that the E-COD of the Combined Asset is considered as 1.10.2011. However, based on the capital cost admitted as on 31.3.2014 and actual dates of commercial operation of the individual assets, the E-COD has been worked out as 20.8.2011 as shown below:

Asset	Capital Cost as on 31.3.2014 (₹ in lakh)	COD	No. of days from COD of Asset from COD of Project	Weight of cost	Weighted days
Asset-1(i)	6956.62	1.6.2011	853	58%	494.04
Asset-1(ii)	130.53	1.6.2013	122	1%	1.33
Asset-1(iii)	91.4	1.10.2013	0	1%	0.00
Asset-2	637.4	1.4.2012	548	5%	29.08
Asset-3	2824.5	1.10.2011	731	24%	171.90
Asset-4	1370.63	1.12.2011	670	11%	76.46
Total	**12011.08**				**772.81**
				Effective COD	**20.8.2011**

Weighted Average Life (WAL) of the Assets

10. 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. Accordingly, the WAL of the assets put into commercial operation during 2009-14 period have been worked out as 27 years as shown below:

Particulars	Capital Cost as on 31.3.2014 (₹ in lakh)#	Life (in years)	Weighted Cost (₹ in lakh)
Land	164.48	Not defined	-
Building Civil Works & Colony	1123.99	25	28099.75
Transmission Line	2100.38	35	73513.30
Sub Station*	8444.02	25	211100.50
PLCC	178.21	15	2673.15

Particulars	Capital Cost as on 31.3.2014 (₹ in lakh)#	Life (in years)	Weighted Cost (₹ in lakh)
IT Equipment (Incl. Software)*		6	0.00
Total	**11846.60**		**315386.70**
Weighted Average Life of Asset			**27**

*IT Equipment has been considered as a part of sub-station in the 2014-19 tariff period as discussed in para 25 of this order.
Total Capital Cost as on 31.3.2014 is ₹12011.08 lakh and includes cost of land of ₹164.48 lakh which is not considered for weighted average life of the assets.

Capital Cost

11. The capital cost of the instant assets has been calculated in accordance with Regulations 9(3) of the 2014 Tariff Regulations. The Commission vide order dated 11.3.2016 in Petition No. 7/TT/2015 approved the transmission tariff for the instant assets for the 2014-19 period based on the admitted capital cost of ₹12011.08 lakh as on 31.3.2014 and projected Additional Capital Expenditure (ACE) of ₹965.64 lakh during the 2014-19 period for the Combined Asset as shown as under:

(₹ in lakh)

Asset	Apportioned Approved Capital Cost	Admitted Capital Cost as on 1.4.2014	ACE 2014-19	Total Capital Cost as on 31.3.2019
Combined Asset	**17963.69**	**12011.08***	**965.64**	**12976.72**

*After disallowance of IDC and IEDC of ₹74.94 lakh on account of time over-run and ₹163.38 lakh on account of excess Initial Spares.

Initial Spares

12. The Initial Spares claimed by the Petitioner are as under:

Particulars	Estimated Completion Cost (A) (₹ in lakh)	Initial Spares Claimed (B) (₹ in lakh)	Ceiling Limit (C) (in %)	Initial Spares Worked out by petitioner D = [(A-B)*C /(100-C)] (₹ in lakh)	Excess [B-D] If B>D (₹ in lakh)
Transmission Line	2100.38	0.00	0.75	15.87	0.00
Sub-station	11233.80	402.47	2.5	277.73	124.74

The Petitioner has submitted that in order dated 11.3.2016 in Petition No. 7/TT/2015, the Initial Spares was restricted to the capital cost of the individual assets and in the case of the sub-stations, an amount of ₹163.38 lakh was disallowed. The Petitioner has further submitted that in view of the APTEL's judgment in Appeal No. 74 of 2017, out of the amount of ₹163.38 lakh disallowed, ₹38.64 lakh (₹163.38 lakh *less* ₹124.74 lakh) has been added to the capital cost of the Combined Asset as on 31.3.2014.

13. MPPMCL has submitted that as per Regulation 8 of the 2009 Tariff Regulations, the Initial Spares shall be capitalized as a percentage of original project cost subject to ceiling norms provided in sub-para (iv) of Regulation 8 of the 2014 Tariff Regulations. The APTEL judgment dated 14.9.2019 in Appeal No. 74 of 2017 does not apply as the facts in the instant case are different from the facts in Appeal No.74 of 2017. MPPMCL has further submitted that the Initial Spares claimed by the Petitioner are beyond the ceiling limit specified in the Regulations and therefore the excess Initial Spares claimed should not be allowed. In response, the Petitioner vide affidavit dated 15.5.2020 has submitted that APTEL, in its judgment in Appeal No. 74 of 2017, has directed that the calculation of Initial Spares pertaining to 2009-14 period shall be based on total project cost. Accordingly, the disallowed Initial Spares of ₹38.64 lakh in order dated 11.3.2016 in Petition No. 7/TT/2015 has been added to the capital cost of the Combined Asset upto 31.3.2014.

14. We have considered the submissions of Petitioner and MPPMCL. As per APTEL's judgement dated 14.9.2019 in Appeal No. 74 of 2017, the Initial Spares are

to be allowed as a percentage of the project cost as a whole as on the cut-off date. Regulation 3(29) of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as the "2009 Tariff Regulations") defines "project cost" as under:

> *"3 (29) `original project cost' means the capital expenditure incurred by the generating company or the transmission licensee, as the case may be, within the original scope of the project up to the cut-off date as admitted by the Commission;"*

15. The instant assets were put into commercial operation in the 2009-14 period. Accordingly, the 2009 Tariff Regulations are applicable for the instant assets. Regulation 8(iv) of the 2009 Tariff Regulations specifies the norms for the Initial Spares for the transmission systems as under:

> *"(iv) Transmission system*
>
> *(a) Transmission line - 0.75%*
> *(b) Transmission Sub-station - 2.5%*
> *(c) Series Compensation devices and HVDC Station - 3.5%*
> *(d) Gas Insulated Sub-station (GIS) - 3.5%"*

16. As per the 2009 Tariff Regulations, the allowable Initial Spares for transmission line and sub-station are 0.75% and 2.5% respectively. As all the assets of the instant transmission project have been put into commercial operation, the Initial Spares for the instant assets (in this case Sub-station) are allowed at respective percentages (in this case 2.5%) of the total capital cost as on the cut-off date as per APTEL's judgement vis-à-vis individual asset wise Initial Spares approved in order dated 11.3.2016 in Petition No. 7/TT/2015. The Initial Spares allowed for the instant assets are as under:

<table>
<tr><th rowspan="2">Asset</th><th rowspan="2">Type</th><th>Capital Cost (₹ in lakh)</th><th>Initial Spares Claimed (₹ in lakh)</th><th>Limit</th><th>Initial Spares Allowable (₹ in lakh)</th><th rowspan="2">Initial Spares allowed in previous order
E</th><th rowspan="2">Excess Initial Spares (₹ in lakh)
F=B-D</th><th rowspan="2">Initial Spares now allowed
G=D</th></tr>
<tr><th>A</th><th>B</th><th>C</th><th>D=(A-B)*C/(100-C)</th></tr>
<tr><td>Asset-1(i)</td><td>Sub-station</td><td>4856.24</td><td>211.4</td><td>2.50%</td><td>119.10</td><td>121.41</td><td rowspan="6">155.35</td><td rowspan="6">247.12</td></tr>
<tr><td>Asset-1(ii)</td><td>Sub-station</td><td>186.63</td><td>29.67</td><td>2.50%</td><td>4.02</td><td>3.00</td></tr>
<tr><td>Asset-1(iii)</td><td>Sub-station</td><td>148.36</td><td>28.45</td><td>2.50%</td><td>3.07</td><td>2.32</td></tr>
<tr><td>Asset-2</td><td>Sub-station</td><td>653.98</td><td>7.59</td><td>2.50%</td><td>16.57</td><td>7.59</td></tr>
<tr><td>Asset-3</td><td>Sub-station</td><td>2824.50</td><td>89.26</td><td>2.50%</td><td>70.13</td><td>70.61</td></tr>
<tr><td>Asset-4</td><td>Sub-station</td><td>1370.63</td><td>36.1</td><td>2.50%</td><td>34.22</td><td>34.16</td></tr>
<tr><td colspan="2">Total</td><td>10040.34</td><td>402.47</td><td>2.50%</td><td>247.12</td><td>239.09</td><td>155.35</td><td>247.12</td></tr>
</table>

17. In order dated 11.3.2016 in Petition No. 7/TT/2015, ₹239.09 lakh was allowed as Initial Spares, whereas, the Initial Spares allowable for the instant assets as per norms specified in the 2014 Tariff Regulations and APTEL judgement 14.9.2019 is ₹247.12 lakh. Accordingly, to allow total Initial Spares of ₹247.12 lakh an additional amount of ₹8.03 lakh (₹247.12 lakh *less* ₹239.09 lakh) is added to the earlier admitted capital cost as on 31.3.2014. Accordingly, the capital cost considered as on 1.4.2014 after the aforementioned adjustment is as follows:

(₹ in lakh)

Asset	Admitted Capital Cost as on 31.3.2014 in order dated 11.3.2016 in Petition No. 7/TT/2015 (A)	Adjustment towards Initial Spares as per Norms and APTEL judgement dated 14.9.2019 (B)	Capital Cost considered after allowing balance Initial Spares as on 1.4.2014 (C=A+B)
Combined Asset	**12011.08**	**8.03**	**12019.11**

Additional Capital Expenditure (ACE)

18. The Commission vide order dated 11.3.2016 in Petition No. 7/TT/2015 had allowed projected ACE of ₹965.64 lakh for the instant assets during 2014-19 mainly towards balance and retention payments.

19. The Petitioner has claimed the following ACE based on actual expenditure: -

(₹ in lakh)

Year	ACE claimed by Petitioner					Total ACE
	2014-15	2015-16	2016-17	2017-18	2018-19	
Combined Asset	160.52	659.65	65.43	72.95	0	958.55

20. The Petitioner has submitted that ACE incurred during 2014-19 is on account of balance and retention payments due to undischarged liability for works executed within the cut-off date which is claimed under Regulation 14(1)(i) and 14(1)(ii) of the 2014 Tariff Regulations and ACE incurred (balance and retention payments) after cut-off date is claimed under Regulation 14(3)(v) of the 2014 Tariff Regulations. The cut-off date for Asset 1(i), Asset 3 and Asset 4 was 31.3.2014; for Asset 2 was 31.3.2015; and for Asset 1(ii), Asset 1(iii) was 31.3.2016. The break-up of the ACE claimed for the 2014-19 period is as under:

Year	Incidence of ACE	ACE claimed by Petitioner					Total ACE
		2014-15	2015-16	2016-17	2017-18	2018-19	
Combined Asset	ACE within the cut-off date	16.58	113.07	0	0	0	129.65
	ACE after the cut-off date	143.94	546.58	65.43	72.95	0	828.90
		160.52	**659.65**	**65.43**	**72.95**	**0**	**958.55**

21. The Petitioner has provided asset-wise details of ACE of ₹828.90 lakh incurred after cut-off date which are as under:

a. Asset 1(i): LILO of 400 kV D/C Bina-Nagda at Shujalpur Sub-station along with 50 MVAr Line Reactor at Shujalpur and New 400/220 kV Sub-station at Shujalpur.

Year	Parties	Amount (₹ in lakh)
2014-15	Eci Engineering & Construction Company Ltd.	56.64
2014-15	Mann Construction Company.	32.36
2014-15	Hi Tech Engineers	8.79
2014-15	Balance payment for civil works	5.71
	Total 2014-15	**103.50**
2015-16	Eci Engineering & Construction Company Ltd.	192.59
2015-16	Mann Construction Company.	30.03
2015-16	KEC International Ltd.	28.01
	Total 2015-16	**250.63**
2016-17	KEC International Ltd.	23.34
2016-17	Balance payment for civil works	42.09
	Total 2016-17	**65.43**
2017-18	Balance payment for civil works	2.07
2017-18	CG Power & Industrial Solution	18.62
2017-18	Land compensation	52.26
	Total 2017-18	**72.95**

b. Asset-2: 400 kV, 63 MVAr Bus Reactor at Shujalpur along with associated bay:

Year	Parties	Amount (₹ in lakh)
2015-16	Eci Engineering & Construction Company Ltd.	12.87
2015-16	BHEL	9.60
	Total 2015-16	**22.47**

c. Asset-3: 400/220 kV ICT I at Shujalpur along with associated bays:

Year	Parties	Amount (₹ in lakh)
2014-15	Eci Engineering & Construction Company Ltd.	33.36
2015-16		116.60
	Total	**149.96**

d. Asset-4: ICT II at Shujalpur along with associated bays:

Year	Parties	Amount (₹ in lakh)
2014-15	Eci Engineering & Construction Company Ltd	7.08
	Total 2014-15	**7.08**
2015-16	Bharat Heavy Electricals Limited - LOA 2854	103.3
2015-16	Eci Engineering & Construction Company Ltd - ECI-2781&2872	26.32
2015-16	BHEL-2582&2583	27.26
	Total 2015-16	**156.88**

22. The Petitioner has further submitted that the Commission vide order dated 11.3.2016 in Petition No. 7/TT/2015 disallowed IDC and IEDC to the tune of ₹74.94 lakh on account of time over-run and reduced it from the capital cost as on the date of commercial operation. Subsequently, an amount of ₹91.11 lakh was recovered as Liquidated Damages (LD) from the executing agency(ies) and reduced from capital cost as per accounting procedures. The Petitioner has submitted that LD recovered to the extent of disallowed IDC and IEDC is added back as ACE as mentioned in footnote of the Auditor's Certificate submitted by the Petitioner. In response to the Commission's query, vide letter dated 3.3.2020, as to why the Liquidated Damages (LD) recovered has been added to the capital cost as ACE during 2015-16, the Petitioner has submitted that LD towards time over-run has been levied on contractor(s) amounting to ₹33.38 lakh for Asset-1(ii), ₹27.75 lakh for Asset-1(iii),

₹22.14 lakh for Asset-2 and ₹7.84 lakh for Asset-4 which has been reduced from the ACE [amount payable to contractor(s)] for 2015-16 as the LD levied on the contractor reduced the amount payable to the contractor(s) and the gross block in the books of accounts. Further, in order to allow the Petitioner to retain LD to the extent of the IDC and IEDC disallowed on account of time over-run, the original ACE (payable amount to contractor) for 2015-16 has been restored to the extent of disallowed IDC and IEDC of ₹33.38 lakh for Asset-1(ii), ₹27.75 lakh for Asset-1(iii), ₹9.60 lakh for Asset-2 and ₹4.21 lakh for Asset-4 in line with the APTEL judgement in Appeal No. 72 of 2010 and the Commission's orders.

23. We have considered the submissions made by the Petitioner. APTEL in judgement dated 27.4.2011 in Appeal 72/2010 has laid down the following principles for dealing with the issue of time over-run in execution of projects.

> *"7.4. The delay in execution of a generating project could occur due to following reasons:*
>
> > *i) due to factors entirely attributable to the generating company, e.g., imprudence in selecting the contractors/suppliers and in executing contractual agreements including terms and conditions of the contracts, delay in award of contracts, delay in providing inputs like making land available to the contractors, delay in payments to contractors/suppliers as per the terms of contract, mismanagement of finances, slackness in project management like improper co-ordination between the various contractors, etc.*
> > *ii) due to factors beyond the control of the generating company e.g. delay caused due to force majeure like natural calamity or any other reasons which clearly establish, beyond any doubt, that there has been no imprudence on the part of the generating company in executing the project.*
> > *iii) situation not covered by (i) & (ii) above.*
>
> *In our opinion in the first case the entire cost due to time over run has to be borne by the generating company. However, the Liquidated Damages (LDs) and insurance proceeds on account of delay, if any, received by the generating company could be*

retained by the generating company. In the second case the generating company could be given benefit of the additional cost incurred due to time over-run. However, the consumers should get full benefit of the LDs recovered from the contractors/suppliers of the generating company and the insurance proceeds, if any, to reduce the capital cost. In the third case the additional cost due to time overrun including the LDs and insurance proceeds could be shared between the generating company and the consumer. It would also be prudent to consider the delay with respect to some benchmarks rather than depending on the provisions of the contract between the generating company and its contractors/suppliers. If the time schedule is taken as per the terms of the contract, this may result in imprudent time schedule not in accordance with good industry practices."

24. As per the above judgement of APTEL, when the time over-run is attributable to the project developer (in the instant case, PGCIL), or its contractors, the cost of the time over-run, i.e. the IDC and the IEDC has to be borne by the project developer and the Liquidated Damages (LD) if any recovered can be retained by the Petitioner. In the instant case, the time over-run in case of Assets-1(ii) and 1(iii) was not condoned and it was partly condoned in case of Assets-2 and 4. Accordingly, the IDC and IEDC for the period of time over-run not condoned in case of Assets-1(ii), 1(iii), 2 and 4 is not capitalised and the LD recovered by the Petitioner can be retained by the Petitioner. The capital cost of the said two assets is allowed in accordance with the observations made by the APTEL in judgement dated 27.4.2011. IDC and IEDC disallowed in case of the said assets is deducted from the capital cost as on their respective dates of commercial operation and the additional capital expenditure incurred by the Petitioner after the COD is added to the capital cost. The adjustment of the LD recovered as claimed by the Petitioner is not allowed and the Petitioner is allowed to retain the same.

25. The details of asset-wise adjustments made, as per the Auditor's Certificate are as under:

(₹ in lakh)

Asset	Capital Cost claimed as on 31.3.2014	IDC and IEDC disallowed vide order dated	Excess Initial Spares disallowed in order dated	Capital Cost admitted as on 31.3.2014 after IDC and IEDC and Initial Spares adjustment	LD recovered deducted from ACE in 2015-16	LD allowed to be retained during 2015-16 upto IDC and IEDC disallowed
	Order dated 11.3.2016 in Petition No. 7/TT/2015				**Instant petition**	
Asset-2	647.00	9.60	0.00	637.40	22.14	9.60
Asset-1(iii)	145.29	27.75	26.13	91.41	27.75	27.75
Asset 4	1376.78	4.21	1.94	1370.63	7.84	4.21
Asset-1(ii)	190.58	33.38	26.67	130.53	33.38	33.38
Total	**2359.65**	**74.94**	**54.74**	**2229.97**	**91.11**	**74.94**

This ACE for 2015-16 has been derived as under:

Particulars		Amount (₹ in lakh)
ACE book value	A	675.82
LD recovered deducted	B	91.11
LD allowed to be retained to the extent of IDC and IEDC disallowed	C	74.94
ACE claimed	**D=A - B + C**	**659.65**

26. The ACE claimed by the Petitioner within the cut-off date has been allowed under Regulation 14(1)(i) and 14(1)(ii) of the 2014 Tariff Regulations as it is towards balance and retention payments and balance work deferred for execution, whereas, the ACE after the cut-off date pertains to balance and retention payments, as described in the details submitted by the Petitioner, and such expenditure has been allowed under Regulation 14(3)(v) of the 2014 Tariff Regulations.

(₹ in lakh)

Asset	Apportioned Approved Capital Cost	Capital Cost as on 31.3.2014	Allowed ACE					Total Capital Cost as on 31.3.2019
			2014-15	2015-16	2016-17	2017-18	2018-19	
Combined Asset	**17963.69**	**12019.11**	**160.52**	**659.65**	**65.43**	**72.95**	**0**	**12977.66**

Debt-Equity ratio

27. The Petitioner has claimed Debt-Equity ratio of 70:30 as on the date of commercial operation. Debt-Equity ratio of 70:30 is considered as provided in Regulation 19 of the 2014 Tariff Regulations. The details of Debt-Equity ratio in respect of the instant assets as on 1.4.2014 and as on 31.3.2019 are as under:

Funding	Capital Cost as on 1.4.2014 (₹ in lakh)	(%)	ACE 2014-19 (₹ in lakh)	(%)	Total Capital Cost as on 31.3.2019 (₹ in lakh)	(%)
Debt	8413.38	70.00	670.99	70.00	9084.37	70.00
Equity	3605.73	30.00	287.57	30.00	3893.30	30.00
Total	**12019.11**	**100.00**	**958.55**	**100.00**	**12977.66**	**100.00**

Interest on Loan (IoL)

28. The Petitioner has claimed the weighted average rate of IoL, based on its actual loan portfolio and rate of interest. Accordingly, IoL has been calculated based on actual interest rate, in accordance with Regulation 26 of the 2014 Tariff Regulations. IoL allowed for the Combined Asset is as under:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	8413.38	8525.74	8987.50	9033.30	9084.37
Cumulative Repayments upto Previous Year	1454.23	2063.82	2693.85	3341.83	3991.43
Net Loan-Opening	6959.15	6461.93	6293.65	5691.47	5092.94
Additions	112.36	461.76	45.80	51.07	0.00
Repayment during the year	609.59	630.03	647.98	649.60	650.12
Net Loan-Closing	6461.93	6293.65	5691.47	5092.94	4442.81
Average Loan	6710.54	6377.79	5992.56	5392.20	4767.87
Weighted Average Rate of Interest on Loan (%)	9.0213	9.0175	8.9957	8.9691	8.9528
Interest on Loan	**605.37**	**575.12**	**539.07**	**483.63**	**426.86**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 11.3.2016 in Petition No. 7/TT/2015	628.98	601.91	542.77	483.60	424.44
Claimed by the Petitioner in the instant petition	606.01	573.15	534.52	476.51	417.17
Allowed after true-up in this order	605.37	575.12	539.07	483.63	426.86

The difference in IoL allowed in the instant order and allowed vide order dated 11.3.2016 in Petition No. 7/TT/2015 is due to lower ACE, spread of ACE over the period, difference in allowance of Initial Spares, and change in depreciation on IT assets.

Return on Equity (RoE)

29. The Petitioner is entitled for RoE for the instant assets in terms of Regulation 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 following effective tax rates for the 2014-19 period:

Year	Claimed effective tax (in %)	Grossed up RoE (Base Rate/1-t) (in %)
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

30. MPPMCL has submitted that the Petitioner has grossed up RoE on the basis of actual taxes paid during 2016-17 and 2017-18 and has not placed on record the assessment orders for 2016-17 and 2017-18. For 2018-19, it has grossed up the RoE and has not claimed the effective tax rate based on actual taxes paid for 2018-19. In response, the Petitioner vide affidavit dated 15.5.2020 has submitted that effective rates of tax considered for 2014-15 and 2015-16 are based on Assessment Order issued by Income Tax authorities, for the purpose of grossing up of RoE rate and that the effective rates of tax considered for 2016-17 and 2017-18 are based on the Income-tax returns filed, for the purpose of grossing up of RoE rate of respective years. Further, for 2018-19, effective tax rate is calculated based the applicable MAT rate (i.e. MAT 18.50% + Surcharge 12.00% + Cess 4%), for the purpose of grossing up of RoE rate. The Assessment Orders of 2014-15 and 2015-16 had already been submitted in reply to Technical Validation (TV) letter for Petition No. 20/TT/2020 and a copy of Assessment Order for the financial year 2016-17 was submitted along with the instant rejoinder.

31. MSEDCL has submitted that Petitioner has mentioned the effective tax rate only for 2014-15 and 2015-16. However, the actual tax paid on income from other business activities of the Petitioner are required to be excluded for the computation of the effective tax rate which has not been done by the Petitioner. Thus, in accordance with Regulation 25(1) of the 2014 Tariff Regulations, income from other business stream during the tariff block 2014-19 should not be considered in calculation of effective tax rate. MSEDCL has further submitted that the Petitioner had submitted grossed up RoE on the basis of actual taxes paid during 2016-17 and 2017-18 and that the Petitioner had not submitted the Assessment Orders for 2014-15, 2015-16, 2016-17 and 2017-18. For 2018-19, the claimed grossed up RoE is not on the basis of actual taxes paid for the year.

32. In response to MSEDCL's reply, the Petitioner, vide affidavit dated 13.5.2020, has clarified that it had submitted effective tax rates for all the years during the 2014-19 period. The Petitioner has submitted that from 2014-15 to 2018-19, the Petitioner was liable to pay tax under the provisions of section 115JB of the Income Tax Act, 1961, i.e., the entire income of the Petitioner was liable to be taxed at Minimum Alternate Tax ('MAT') rate. Therefore, the incomes from all streams of business were taxable at a uniform tax rate. The Petitioner has submitted that while computing the adjusted book profits liable to be taxed as income under the MAT provisions, no specific deduction/ exemption/ relief was claimed/ allowable for any specific stream of income. Hence, inclusion/ exclusion of non-transmission income does not impact the

computation of effective tax rate used for the purpose of grossing up ROE. The Petitioner has submitted that the Income Tax assessment of the Petitioner had been completed and Assessment Orders had been issued by the Income Tax Department in case of financial years of 2014-15, 2015-16 and 2016-17 and that the Income Tax returns have been filed with the Income Tax Department for the financial years 2017-18 and 2016-17. The basis of year-wise effective tax rate and grossed up RoE applied for the 2014-19 period has been mentioned in the instant petition. Further, the Assessment Orders of 2014-15 and 2015-16 have been submitted in Petition No. 20/TT/2020 and a copy of Assessment Order of financial year 2016-17 has been submitted vide affidavit dated 13.5.2020.

33. We have considered the submissions of the Petitioner, MPPMCL and MSEDCL. The Commission in order dated 27.4.2020 in Petition No. 274/TT/2019 had arrived at the effective tax rate rates for the Petitioner based on the notified MAT rate 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	**Notified MAT rates (inclusive of surcharge & cess) (in %)**	**Base rate of RoE (in %)**	**Grossed up RoE (Base Rate/1-t) (in %)**
2014-15	20.9605	15.50	19.611
2015-16	21.3416	15.50	19.705
2016-17	21.3416	15.50	19.705
2017-18	21.3416	15.50	19.705
2018-19	21.5488	15.50	19.758

34. The Petitioner has claimed RoE for the 2014-19 period after grossing up the RoE of 15.50% with Effective Tax rates (based on MAT rates) each year as per the above said Regulation. The RoE is trued up on the basis of the MAT rate applicable in the respective years and is allowed for the Combined Asset as under:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity					
Opening Equity	3605.73	3653.89	3851.79	3871.41	3893.30
Additions	48.16	197.90	19.63	21.89	0.00
Closing Equity	3653.89	3851.79	3871.41	3893.30	3893.30
Average Equity	3629.81	3752.84	3861.60	3882.36	3893.30
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (%)	19.610	19.705	19.705	19.705	19.758
Return on Equity	**711.82**	**739.51**	**760.95**	**765.04**	**769.22**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 11.3.2016 in Petition No. 7/TT/2015	735.01	763.42	763.42	763.42	763.42
Claimed by the Petitioner in the instant petition	714.15	741.68	762.74	766.83	771.05
Allowed after true-up in this order	711.82	739.51	760.95	765.04	769.22

The RoE allowed in the instant order for 2014-15, 2015-16, and 2016-17 is less than the RoE allowed vide order dated 11.3.2016 in Petition No. 7/TT/2015, due to lower ACE, spread of ACE over the period from 2014-2017 and difference in allowance of initial spares. The RoE allowed in the instant order for 2017-18 and 2018-19 is higher than the RoE allowed vide order dated 11.3.2016 in Petition No. 7/TT/2015 due to change in the applicable MAT rate for the purpose of grossing up of base rate of RoE.

Depreciation

35. The Petitioner's claim towards depreciation in this petition was found to be higher than the depreciation allowed for the instant assets in order dated 11.3.2016 in Petition No. 7/TT/2015. The Petitioner has neither given any justification for claiming higher depreciation than that allowed earlier in order dated 11.3.2016 nor made any specific prayer for allowing higher depreciation in this petition.

36. The instant assets were put into commercial operation during the 2009-14 period and the tariff from the respective dates of commercial operation to 31.3.2014 was allowed vide order dated 15.5.2014 in Petition No. 88/TT/2011. Further, the tariff of the 2009-14 period was trued up and tariff for the 2014-19 period was allowed vide order dated 11.3.2016 in Petition No. 7/TT/2015. The Petitioner did not claim any capital expenditure towards "IT Equipment" in the above said petitions where tariff for the instant assets for the 2009-14 period was allowed, tariff of the 2009-14 period was trued up and tariff for the 2014-19 period was allowed even though there was a clear provision in the 2009 Tariff Regulations and the 2014 Tariff Regulations providing depreciation @ 15% for IT Equipment. Having failed to make a claim as per the 2009 Tariff Regulations (the period during which COD of assets was achieved), the Petitioner has now, at the time of truing up of the tariff claimed for the 2014-19 period, apportioned a part of the capital expenditure to "IT Equipment". It is observed that the Petitioner has for the first time apportioned a part of the capital expenditure towards IT Equipment and has claimed depreciation under the head "IT Equipment" @15% at the

time of truing up of the tariff of the 2014-19 period. Regulation 8(1) of the 2014 Tariff Regulations provides for truing up of the capital expenditure including the ACE, incurred upto 31.3.2019, admitted by the Commission after prudence check. We are of the view that scope of truing up exercise is restricted to truing up of the capital expenditure already admitted and apportionment or reapportionment of the capital expenditure cannot be allowed at the time of truing up. Therefore, we are not inclined to consider the Petitioner's prayer for apportionment of capital expenditure towards IT Equipment and allowing depreciation @15% from 1.4.2014 onwards. Accordingly, the depreciation @5.28% has been considered for IT Equipment as part of the sub-station upto 31.3.2019 while truing up the capital expenditure for the 2014-19 period. During the 2019-24 tariff period, the IT Equipment has been considered separately and depreciation has been allowed @15% for the balance depreciable value of IT Equipment in accordance with Regulation 33 read with Sr. No. (p) of the Appendix-I (Depreciation Schedule) of the 2019 Tariff Regulations. The Gross Block during the tariff period 2014-19 has been depreciated at weighted average of depreciation (WAROD). The WAROD has been worked out (as placed in Annexure-I) after taking into account the depreciation rates of assets as prescribed in the 2014 Tariff Regulations and the depreciation allowed for the Combined Asset is as under:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation					
Opening Gross Block	12019.11	12179.63	12839.28	12904.71	12977.66
Additional Capitalisation	160.52	659.65	65.43	72.95	0.00
Closing Gross Block	12179.63	12839.28	12904.71	12977.66	12977.66

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation					
Average Gross Block	12099.37	12509.46	12872.00	12941.19	12977.66
Freehold Land	164.48	164.48	164.48	190.61	216.74
Weighted Average Rate of Depreciation (%)	5.04	5.04	5.03	5.02	5.01
Balance useful life of the asset	25	24	23	22	21
Elapsed life	2	3	4	5	6
Aggregate Depreciable Value	10741.41	11110.48	11436.77	11475.52	11484.83
Combined Depreciation during the year	**609.59**	**630.03**	**647.98**	**649.60**	**650.12**
Cumulative Depreciation upto PY	1454.23	2063.82	2693.85	3341.83	3991.43
Total Cumulative Depreciation	2063.82	2693.85	3341.83	3991.43	4641.55
Remaining Aggregate Depreciable Value	8677.59	8416.63	8094.94	7484.09	6843.28

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 11.3.2016 in Petition No. 7/TT/2015	631.06	656.55	656.55	656.55	656.55
Claimed by the Petitioner in the instant petition	638.39	658.84	676.78	678.40	678.92
Allowed after true-up in this order	609.59	630.03	647.98	649.60	650.12

The depreciation allowed in the instant order for the 2014-19 period is less than the depreciation allowed vide order dated 11.3.2016 in Petition No. 7/TT/2015 due to lower ACE, spread of ACE over the period and change in depreciation on IT assets.

Operation & Maintenance Expenses (O&M Expenses)

37. Regulation 29(3) of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. The O&M Expenses claimed by the Petitioner for the instant assets are as under:

O&M Expenses					
Sub-station Bays					
400 kV					
	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
No. of bays	11	11	11	11	11
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
220 kV					
No. of bays	6	6	6	6	6
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.1
Transmission line					
D/C Twin/Triple Conductor (km)	22.05	22.05	22.05	22.05	22.05
Norms (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
Total O&M Expense (₹ in lakh)	**932.15**	**963.08**	**995.08**	**1028.11**	**1062.18**

The O&M Expenses claimed by the Petitioner are as per the norms specified in the 2014 Tariff Regulations and hence, they are allowed as claimed.

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 11.3.2016 in Petition No. 7/TT/2015	932.15	963.08	995.08	1028.11	1062.18
Claimed by the Petitioner in the instant petition	932.15	963.08	995.08	1028.11	1062.18
Allowed after true-up in this order	932.15	963.08	995.08	1028.11	1062.18

The O&M Expenses trued-up in the instant order are same as approved vide order dated 11.3.2016 in Petition No. 7/TT/2015.

Interest on Working Capital (IWC)

38. IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and allowed for the Combined Asset are as under:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	77.68	80.26	82.92	85.68	88.52
Maintenance Spares	139.82	144.46	149.26	154.22	159.33
Receivables	492.46	500.95	507.15	504.48	501.59
Total Working Capital	709.96	725.67	739.33	744.37	749.44
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	**95.85**	**97.97**	**99.81**	**100.49**	**101.17**

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 11.3.2016 in Petition No. 7/TT/2015	97.42	99.74	100.15	100.61	101.13
Claimed by the Petitioner in the instant petition	96.58	98.63	100.41	101.03	101.66
Allowed after true-up in this order	95.85	97.97	99.81	100.49	101.17

The variation in the IWC allowed in the instant order as compared to the IWC allowed vide order dated 11.3.2016 in Petition No. 7/TT/2015 is due to lower ACE, spread of ACE over the period, difference in the Initial Spares allowed and change in depreciation rate on IT assets.

Approved Annual Fixed Charges of the 2014-19 Period

39. The trued up annual fixed charges for the Combined Asset for the tariff period 2014-19 are as under:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Transmission Charges					
Depreciation	609.59	630.03	647.98	649.60	650.12
Interest on Loan	605.37	575.12	539.07	483.63	426.86
Return on Equity	711.82	739.51	760.95	765.04	769.22
Interest on Working Capital	95.85	97.97	99.81	100.49	101.17
O&M Expenses	932.15	963.08	995.08	1028.11	1062.18
Total	**2954.78**	**3005.71**	**3042.89**	**3026.86**	**3009.56**

Determination of Annual Fixed Charges for the 2019-24 Period

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

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	677.98	647.59	647.59	647.59	647.59
Interest on Loan	362.65	309.49	251.41	193.35	135.32
Return on Equity	738.63	744.30	744.30	744.30	744.30
Interest on Working Capital	58.89	58.95	59.24	59.58	59.83
O&M Expenses	737.24	763.28	789.97	817.86	845.83
Total	**2575.39**	**2523.61**	**2492.51**	**2462.68**	**2432.87**

41. The Petitioner has claimed the following IWC for the for the instant transmission assets for the 2019-24 period:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	61.44	63.61	65.83	68.16	70.49
Maintenance Spares	110.59	114.49	118.50	122.68	126.87
Receivables	316.65	311.13	307.30	303.62	299.12
Total Working Capital	488.68	489.23	491.63	494.46	496.48
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
Interest on working capital	**58.89**	**58.95**	**59.24**	**59.58**	**59.83**

Capital Cost as on 1.4.2019

42. Regulation 19 of 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 trued up by excluding liability, if any, as on 1.4.2019;
(b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;
(c) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
(d) Capital expenditure on account of ash disposal and utilization including handling and transportation facility;
(e) Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal up to the receiving end of generating station but does not include the transportation cost and any other appurtenant cost paid to the railway; and
(f) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT)

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

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

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

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

(a) The 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 decapitalised only after its redeployment;

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

43. The Petitioner vide Auditor's Certificate dated 31.7.2019 has claimed capital cost of ₹13008.29 lakh as on 31.3.2019 for the Combined Asset. The capital cost of ₹12977.66 lakh as on 31.3.2019 has been worked out for the Combined Asset in the instant order and the same has been considered as opening capital cost as on

1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

Additional Capital Expenditure (ACE)

44. Regulation 24 and Regulation 25 of the 2019 Tariff Regulations provides as under:

> *"24. Additional Capitalisation within the original scope and upto the cut-off date*
>
> *(1) The ACE 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.*
>
> *25. Additional Capitalisation within the original scope and after the cut-off date:*
>
> *(1) The ACE incurred or projected to be incurred in respect of an existing project or a new project on the following counts within the original scope of work and after the cut-off date may be admitted by the Commission, subject to prudence check:*
>
> > *a) 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;*
> > *b) Change in law or compliance of any existing law;*

c) Deferred works relating to ash pond or ash handling system in the original scope of work;
d) Liability for works executed prior to the cut-off date;
e) Force Majeure events;
f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and
g) Raising of ash dyke as a part of ash disposal system.

(2) In case of replacement of assets deployed under the original scope of the existing project after cut-off date, the additional capitalization may be admitted by the Commission, after making necessary adjustments in the gross fixed assets and the cumulative depreciation, subject to prudence check on the following grounds:

(a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations;
(b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;
(c) The replacement of such asset or equipment is necessary on account of obsolescence of technology; and

(d) The replacement of such asset or equipment has otherwise been allowed by the Commission."

45. As per the Auditor's Certificate, the Petitioner has claimed ₹201.15 lakh (to be incurred in 2019-20) as ACE for the instant assets during the 2019-24 period. The Petitioner has claimed the Capital Cost as on 31.3.2024 as under:

(₹ in lakh)

Asset	**Apportioned Approved Capital Cost**	**Total Capital Cost as on 31.3.2019**	**Estimated ACE**	**Total Capital Cost as on 31.3.2024**
			2019-20	
Combined Asset	**17963.69**	**13008.29**	**201.15**	**13209.44**

46. The Petitioner has claimed the following estimated ACE for the 2019-24 period in respect of

Asset-3: 400/220 kV ICT I at Shujalpur along with associated bays:

Year	Party	Amount (₹ in lakh)
2019-20	BHEL - 2582-83 Retention	201.15

47. The Petitioner further submitted that presently no undischarged liability is envisaged or pending other than claimed in the instant petition.

48. MSEDCL has submitted that the ACE of ₹201.15 lakh proposed for 2019-20 is without proper details and needs justification. In response, the Petitioner vide affidavit dated 13.5.2020 has submitted that estimated ACE of ₹201.15 lakh has been envisaged for 2019-20 under Regulation 25(1)(a) of the 2019 Tariff Regulations. Further, the said amount is a liability against balance/ retention payment, pending reconciliation/ contract closure for the work executed within cut-off date for Asset-3, details of which are given in the petition.

49. We have considered the submissions made by the Petitioner and MSEDCL. It is observed that ACE claimed for 2019-24 pertains to balance and retention payment to BHEL. Hence, ACE claimed by the Petitioner has been allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations as it is towards liability for works executed prior to the cut-off date to be payable at a future date.

50. Accordingly, ACE for 2019-24 and Capital Cost as on 31.3.2024 is allowed as under:

(₹ in lakh)

Asset	Admitted Capital Cost as on 1.4.2019	Admitted ACE	Total Capital Cost as on 31.3.2024
		2019-20	
Combined Asset	**12977.66**	**201.15**	**13178.81**

The total Capital Cost as on 31.3.2024 of ₹13178.81 lakh is within the apportioned approved Capital Cost of ₹ 17963.69 lakh.

Debt-Equity ratio

51. Regulation 18 of the 2019 Tariff Regulations provides 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 ACE 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."

52. The details of the debt and equity considered for the purpose of tariff for 2019-24 tariff period is as under: -

Particulars	**Capital Cost as on 1.4.2019 (₹ in lakh)**	**%**	**ACE for 2019-24 (₹ in lakh)**	**%**	**Capital Cost as on 31.3.2024 (₹ in lakh)**	**%**
Debt	9084.37	70.00	140.81	70.00	9225.17	70.00
Equity	3893.30	30.00	60.35	30.00	3953.64	30.00
Total	**12977.66**	**100.00**	**201.15**	**100.00**	**13178.81**	**100.00**

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

53. Regulation 30 and Regulation 31 of the 2019 Tariff Regulations specify 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:

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

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

(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."

54. The Petitioner has submitted that MAT rate is applicable to the Petitioner's company. Accordingly, the MAT rate applicable in 2019-20 has been considered for the purpose of RoE, which shall be trued up with actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. The RoE allowed for the Combined Asset is as under:

(₹ in lakh)

Particulars	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Opening Equity	3893.30	3953.64	3953.64	3953.64	3953.64
Additions	60.35	0.00	0.00	0.00	0.00
Closing Equity	3953.64	3953.64	3953.64	3953.64	3953.64
Average Equity	3923.47	3953.64	3953.64	3953.64	3953.64
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (%)	18.782	18.782	18.782	18.782	18.782
Return on Equity	**736.89**	**742.55**	**742.55**	**742.55**	**742.55**

Interest on Loan (IoL)

55. 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."

56. 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. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up. Therefore, IoL has been allowed in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed for the Combined Asset is as under:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	9084.37	9225.17	9225.17	9225.17	9225.17
Cumulative Repayments upto Previous Year	4641.55	5324.17	6012.10	6700.02	7387.95
Net Loan-Opening	4442.81	3901.00	3213.07	2525.15	1837.22
Additions	140.81	0.00	0.00	0.00	0.00
Repayment during the year	682.62	687.93	687.93	687.93	687.93
Net Loan-Closing	3901.00	3213.07	2525.15	1837.22	1149.29
Average Loan	4171.91	3557.04	2869.11	2181.18	1493.26
Weighted Average Rate of Interest on Loan (%)	8.9507	8.9465	8.9416	8.9346	8.9232
Interest on Loan	**373.42**	**318.23**	**256.54**	**194.88**	**133.25**

Depreciation

57. 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 project or element thereof including communication project. In case of the tariff of all the units of a generating station or all elements of a transmission project including communication project 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 project 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 project, 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 project, weighted average life for the generating station of the transmission project 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 project:

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."

58. The IT equipment has been considered as a part of the Gross Block and depreciated using WAROD. The WAROD has been worked out (as placed in 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)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation					
Opening Gross Block	12977.66	13178.81	13178.81	13178.81	13178.81
Additional Capitalisation	201.15	0.00	0.00	0.00	0.00
Closing Gross Block	13178.81	13178.81	13178.81	13178.81	13178.81
Average Gross Block	13078.24	13178.81	13178.81	13178.81	13178.81
Freehold Land	216.74	216.74	216.74	216.74	216.74
Weighted Average Rate of Depreciation (%)	5.22	5.22	5.22	5.22	5.22
Balance useful life of the asset	20.00	19.00	18.00	17.00	16.00
Elapsed life	7.00	8.00	9.00	10.00	11.00
Aggregate Depreciable Value	11603.31	11693.83	11693.83	11693.83	11693.83

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Combined Depreciation during the year	**682.62**	**687.93**	**687.93**	**687.93**	**687.93**
Cumulative Depreciation upto PY	4641.55	5324.17	6012.10	6700.02	7387.95
Total Cumulative Depreciation	5324.17	6012.10	6700.02	7387.95	8075.87
Remaining Aggregate Depreciable Value	6279.15	5681.74	4993.81	4305.88	3617.95

Operation & Maintenance Expenses (O&M Expenses)

59. 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:

Particulars	*2019-20*	*2020-21*	*2021-22*	*2022-23*	*2023-24*
Norms for sub-station Bays (₹ Lakh per bay)					
765 kV	*45.01*	*46.60*	*48.23*	*49.93*	*51.68*
400 kV	*32.15*	*33.28*	*34.45*	*35.66*	*36.91*
220 kV	*22.51*	*23.30*	*24.12*	*24.96*	*25.84*
132 kV and below	*16.08*	*16.64*	*17.23*	*17.83*	*18.46*
Norms for Transformers (₹ Lakh per MVA)					
765 kV	*0.491*	*0.508*	*0.526*	*0.545*	*0.564*
400 kV	*0.358*	*0.371*	*0.384*	*0.398*	*0.411*
220 kV	*0.245*	*0.254*	*0.263*	*0.272*	*0.282*
132 kV and below	*0.245*	*0.254*	*0.263*	*0.272*	*0.282*
Norms for AC and HVDC lines (₹ Lakh per km)					
Single Circuit (Bundled Conductor with six or more sub-conductors)	*0.881*	*0.912*	*0.944*	*0.977*	*1.011*
Single Circuit (Bundled conductor with four sub-conductors)	*0.755*	*0.781*	*0.809*	*0.837*	*0.867*
Single Circuit (Twin & Triple Conductor)	*0.503*	*0.521*	*0.539*	*0.558*	*0.578*
Single Circuit (Single Conductor)	*0.252*	*0.260*	*0.270*	*0.279*	*0.289*
Double Circuit (Bundled conductor with four or more sub-	*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*

Particulars	*2019-20*	*2020-21*	*2021-22*	*2022-23*	*2023-24*
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."

60. The O&M Expenses claimed by the Petitioner for the Combined Asset for the 2019-24 period are as under:

	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses					
Total O&M Expenses (₹ in lakh)	**737.24**	**763.28**	**789.97**	**817.86**	**845.83**

The O&M Expenses allowed as per the norms specified in the 2019 Tariff Regulations for the Combined Asset are as under:

	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses					
Sub-station Bays					
400KV					
No. of bays	11	11	11	11	11
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
220KV					
No. of bays	6	6	6	6	6
Norms (₹ lakh/Bay)	22.51	23.3	24.12	24.96	25.84
Transformer					
400 kV					
Capacity (MVA)	630	630	630	630	630
Norms (₹ lakh/MVA)	0.358	0.371	0.384	0.398	0.411
Transmission line					
D/C Twin/Triple Conductor (kms)	22.05	22.05	22.05	22.05	22.05
Norms (₹ lakh/km)	0.881	0.912	0.944	0.977	1.011
PLCC					
Original Capital Cost	178.21	178.21	178.21	178.21	178.21
Norms (₹ lakh)	2% on Original Capital Cost				
Total O&M Expense (₹ in lakh)	**737.24**	**763.28**	**789.97**	**817.87**	**845.84**

Interest on Working Capital (IWC)

61. Regulation 34(1)(c), Regulation 34(3), Regulation 34(4) and Regulation 3(7) of the 2019 Tariff Regulations provide as under:

> *"34. Interest on Working Capital*
>
> *(1) …*
>
> *(c) For Hydro Generating Station (including Pumped Storage Hydro Generating Station) and Transmission System:*
>
> *(d)*
> *i. Receivables equivalent to 45 days of 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. Definitions …

(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;"

62. 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%.

63. 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). The components of the working capital and interest allowed thereon for the Combined Asset are as under:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	61.44	63.61	65.83	68.16	70.49
Maintenance Spares	110.59	114.49	118.50	122.68	126.88
Receivables	318.35	317.05	312.77	308.64	303.68
Total Working Capital	490.37	495.15	497.09	499.48	501.04
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	**59.09**	**59.67**	**59.90**	**60.19**	**60.38**

Annual Fixed Charges allowed for the 2019-24 Period

64. The transmission charges allowed for the Combined Asset for the 2019-24 tariff period are as follows:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	682.62	687.93	687.93	687.93	687.93
Interest on Loan	373.42	318.23	256.54	194.88	133.25
Return on Equity	736.89	742.55	742.55	742.55	742.55
Interest on Working Capital	59.09	59.67	59.90	60.19	60.38
O & M Expenses	737.24	763.28	789.97	817.87	845.84
Total	**2589.25**	**2571.66**	**2536.89**	**2503.41**	**2469.94**

Filing Fee and the Publication Expenses

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

Licence Fee and RLDC Fees and Charges

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

Goods and Services Tax

67. The Petitioner has submitted that if GST is levied at any rate and at any point of time in future on charges of transmission of electricity, the same shall be borne and additionally paid by the Respondents and the same shall be charged and billed separately by the Petitioner. Further additional taxes, if any, are to be paid by the Petitioner on account of demand from Government/ Statutory authorities, the same may be allowed to be recovered from the beneficiaries.

68. MSEDCL has submitted that the Petitioner has demanded to bill and recover GST on transmission charges separately from the Respondents, if GST on transmission is levied at any rate in future. Further, Petitioner has also demanded that any taxes including GST and duties including cess etc. imposed by any statutory/ Government/ Municipal authorities shall be allowed to be recovered from the beneficiaries. MSEDCL has submitted that the demand of the Petitioner at this stage is pre-mature. In response, the Petitioner has submitted that currently transmission of electricity by a transmission utility is exempted 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 Respondents to the Petition and the same shall be charged and billed separately.

69. We have considered the submission of the Petitioner and MSEDCL. Since, GST is not levied on transmission service at present, 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

70. 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 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 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. We have considered the submissions of the Petitioner. Any application filed by the Petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2019 Tariff Regulations.

Capital Spares

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

Sharing of Transmission Charges

72. The billing, collection and disbursement of the transmission charges approved 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.

73. This order disposes of Petition No. 137/TT/2020.

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

Annexure-I

2014-19	Admitted Opening Capital Cost as on 1.4.2014 / COD (₹ in lakh)	Allowed Additional Capitalization (₹ in lakh)					Allowed Add-cap	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
Capital Expenditure		**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**				**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Land - Freehold	164.48	0.00	0.00	0.00	52.26	0.00	52.26	216.74	-	-	-	-	-	-
Land - Leasehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	-	-	-	-	-
Building Civil Works & Colony	1123.99	66.13	58.04	65.43	2.07	0.00	191.67	1315.66	3.34%	38.65	40.72	42.78	43.91	43.94
Transmission Line	2100.38	0.00	0.00	0.00	0.00	0.00	0.00	2100.38	5.28%	110.90	110.90	110.90	110.90	110.90
Sub Station	8172.40	94.39	601.61	0.00	18.62	0.00	714.62	8887.02	5.28%	433.99	452.37	468.25	468.74	469.23
PLCC	178.21	0.00	0.00	0.00	0.00	0.00	0.00	178.21	6.33%	11.28	11.28	11.28	11.28	11.28
IT Equipment (Incl. Software)	279.65	0.00	0.00	0.00	0.00	0.00	0.00	279.65	15.00%	14.77	14.77	14.77	14.77	14.77
Total	**12019.11**	**160.52**	**659.65**	**65.43**	**72.95**	**0.00**	**958.55**	**12977.66**	**Total**	**609.59**	**630.03**	**647.98**	**649.60**	**650.12**
									Average Gross Block (₹ in lakh)	**12099.37**	**12509.46**	**12872.00**	**12941.19**	**12977.66**
									Weighted Average Rate of Depreciation	**5.04%**	**5.04%**	**5.03%**	**5.02%**	**5.01%**

2019-24	Opening Capital Cost as on 1.4.2014 / COD (₹ in lakh)	Allowed Additional Capitlization (₹ in lakh)					Allowed	Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Depreciation as per Regulation (₹ in lakh)				
Capital Expenditure		**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**				**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Land - Freehold	216.74	0.00	0.00	0.00	0.00	0.00	0.00	216.74	-	-	-	-	-	-
Land - Leasehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	-	-	-	-	-
Building Civil Works & Colony	1315.66	0.00	0.00	0.00	0.00	0.00	0.00	1315.66	3.34%	43.94	43.94	43.94	43.94	43.94
Transmission Line	2100.38	0.00	0.00	0.00	0.00	0.00	0.00	2100.38	5.28%	110.90	110.90	110.90	110.90	110.90
Sub Station	8887.02	201.15	0.00	0.00	0.00	0.00	201.15	9088.17	5.28%	474.55	479.86	479.86	479.86	479.86
PLCC	178.21	0.00	0.00	0.00	0.00	0.00	0.00	178.21	6.33%	11.28	11.28	11.28	11.28	11.28
IT Equipment (Incl. Software)	279.65	0.00	0.00	0.00	0.00	0.00	0.00	279.65	15.00%	41.95	41.95	41.95	41.95	41.95
Total	**12977.66**	**201.15**	**0.00**	**0.00**	**0.00**	**0.00**	**201.15**	**13178.81**	**Total**	**682.62**	**687.93**	**687.93**	**687.93**	**687.93**
									Average Gross Block (₹ in lakh)	**13078.24**	**13178.81**	**13178.81**	**13178.81**	**13178.81**
									Weighted Average Rate of Depreciation	**5.22%**	**5.22%**	**5.22%**	**5.22%**	**5.22%**