CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 288/TT/2022

Coram:

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

Date of order: 04.05.2023

In the matter of:

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for revised petition, as directed vide order dated 24.12.2021 in Petition No. 135/TT/2020 for truing up of transmission tariff for the 2014-19 tariff period and determination of transmission tariff for the 2019-24 tariff period for **Asset-I:** 400 kV D/C Solapur (STPP) - Solapur (PG) Transmission Line along with bay extension at Solapur (PG) Sub-station & **Asset-II:** Extension of 400/220 kV Solapur Sub-station - Augmentation of Sub-station by 500 MVA (3rd) Transformer (by Shifting of 500 MVA Transformer from Wardha to Solapur) under "Transmission System for Solapur STPP (2x660 MW)" in the Western Region.

And in the matter of:

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

.....Petitioner

Vs

- Madhya Pradesh Power Management Company Limited, Shakti Bhawan, Rampur, Jabalpur - 482008
- Madhya Pradesh Power Transmission Company Limited, Shakti Bhawan, Rampur, Jabalpur – 482008



- Madhya Pradesh Audyogik Kendra, Vikas Nigam (Indore) Limited,
 3/54, Press Complex, Agra-Bombay Road, Indore – 452008
- Maharashtra State Electricity Distribution Company Limited, Hongkong Bank Building, 3rd Floor, M.G. Road, Fort, Mumbai – 400001
- Maharashtra State Electricity Transmission Company Limited, Prakashganga, 6th Floor, Plot No. C-19, E-Block, Bandra Kurla Complex, Bandra (East) Mumbai – 400051
- Gujarat Urja Vikas Nigam Limited, Sardar Patel Vidyut Bhawan, Race Course Road, Vadodara – 390007
- Electricity Department, Government of Goa, Vidyut Bhawan, Panaji Near Mandvi Hotel, Goa – 403001
- Electricity Department, Administration of Daman & Diu Daman – 396210
- DNH Power Distribution Corporation Limited, Vidyut Bhawan, 66 kV Road, Near Secretariat Amli, Silvassa – 396230
- Chhattisgarh State Power Transmission Company Limited, Office of the Executive Director (C&P), State Load Despatch Building, Dangania, Raipur – 492013
- 11. Chhattisgarh State Power Distribution Company Limited,
 P.O. Sunder Nagar, Dangania, Raipur,
 Chhattisgarh 492013Rei

...Respondent(s)

For Petitioner : Shri Zafrul Hasan, PGCIL Shri D.K. Biswal, PGCIL Shri Ranjeet K. Pandey, PGCIL



Page 2 of 65

<u>ORDER</u>

The instant petition has been filed by Power Grid Corporation of India Limited (hereinafter referred to as "the Petitioner"), a deemed transmission licensee, for truing up of transmission tariff for the period from COD to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations") and determination of tariff under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as "the 2019 Tariff Regulations") of the 2019-24 period in respect of Asset-I: 400 kV D/C Solapur (STPP)-Solapur (PG) Transmission Line along with bay extension at Solapur (PG) Sub-station & Asset-II: Extension of 400/220 kV Solapur Sub-station - Augmentation of Sub-station by 500 MVA (3rd) Transformer (by Shifting of 500 MVA Transformer from Wardha to Solapur) under "Transmission System for Solapur STPP (2x660 MW)" the Western in Region.(hereinafter referred as " the transmission system)

- 2. The Petitioner has made the following prayers in this Petition
 - "1) Condone the delay in filing of the instant petition.
 - 2) Allow the entire initial spares claimed under instant petition as the excess initial spares have already been reduced from capital cost while calculation of tariff.
 - 3) Allow the add cap for 2014-19 and 2019-24 tariff block as claimed as per Para 5 and 7 above.
 - 4) Allow the de-capitalization of 500 MVA, 400/220 kV ICT at Wardha from WRSS VI and re-capitalization under instant project and also allow the carrying cost between the date of de-capitalization and date of re-capitalization as the same has been done due to system requirement taking due concurrence of the beneficiaries and not suo-moto.

- 5) 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 6 and 7 above.
- 6) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before Hon'ble Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 6 and 7 above for respective block.
- 7) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 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.
- 8) 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.
- 9) 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.
- 10) Allow the Petitioner to claim the overall security expenses and consequential IOWC on that security expenses separately.
- 11) Allow the petitioner to claim the capital spares at the end of tariff block as per actual.
- 12) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the beneficiaries, if GST on transmission is levied at any time in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries

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

Background

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



- a) The Investment Approval (IA) for the transmission project was accorded by the Board of Directors of Petitioner Company vide their letter C/CP/Investment/Solapur dated 31.10.2013 at an estimated cost of ₹6332.00 lakh including IDC of ₹318.00 lakh based on June 2013 price level. The total approved apportioned cost for Asset-I and Asset-II is ₹4850.89 lakh and ₹1480.85 lakh respectively.
- b) The scope of the work covered under the Transmission Project is as follows:

Transmission Line

Solapur (STPP)- Solapur (PG) 400 kV D/C (Quad); line-12 km.

Sub Station

Extension of 400/220 kV Solapur Sub-station- Augmentation of Sub-station by 1x315 MVA (3^{rd})

4. The complete scope of the works as per the Investment Approval has been completed and put put into commercial operation. The Commission vide order dated 30.5.2016 in Petition No. 415/TT/2014 determined the tariff for 2014-19 tariff period subsequently the tariff for 2014-19 tariff period was trued-up and tariff for 2019-24 tariff period was determined vide order dated 11.2.2021 in Petition No. 167/TT/2020.

5. The Respondents are distribution licensees and power departments which are procuring transmission service from the Petitioner mainly the beneficiaries of the Western Region.

6. The Petitioner has served the petition on the Respondents and notice 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 newspaper by the Petitioner.

Madhya Pradesh Power Management Company Limited (MPPMCL), Respondent No. 11, has filed a reply to the instant petition vide affidavit dated 21.11.2022 in which it has raised issues of Return on Equity (RoE) and CGST. The Petitioner, vide affidavit dated 15.12.2022, has filed rejoinder to the reply of MPPMCL.

7. It has been placed before us that MPPMCL has been raising the same issues in other petitions as well despite clear findings of the Commission rejecting the contentions of MPPMCL. The contentions of MPPMCL have been rejected by the Commission in other petitions including Petition No. 215/TT/2020. As MPPMCL has not challenged the findings, the same have attained finality. In view of this, the pleas raised by MPPMCL are rejected. Further, MPPMCL's submissions, Petitioner's clarifications thereto and the Commission's findings on the said issues have not been repeated herein for the sake of brevity.

8. The hearing in this matter was held on 20.12.2022 and the Commission reserved the order.

9. This order is issued considering the submissions made by the Petitioner vide affidavits dated 25.3.2022, 16.8.2022 and 15.12.2022.

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

11. The Petitioner has prayed to condone the delay in filing of the instant petition. The Petitioner has submitted that Commission vide order dated 24.12.2021 in Petition No. 135/TT/2020 while declining to grant tariff for Asset C2 i.e 500 MVA ICT at Wardha Sub-station directed the Petitioner to decapitalize the cost of 500 MVA ICT at Wardha Sub-station and recapitalise the cost of 500 MVA ICT at Solapur Sub-station. The Commission directed the Petitioner to decapitalise Asset C2 and remove the same from Combined Asset in Petition No. 135/TT/2020 and file a fresh petition within 30 days of passing of order dated 24.12.2021. The relevant extracts of the order dated 24.12.2021 is as follows:

"6. As per Form-5 submitted by the Petitioner, the capital cost of the 500 MVA ICT at Wardha sub-station (Asset-C2) is covered under present petition. The Petitioner has not claimed the cost of the 500 MVA ICT at Solapur sub-station (Asset-II) in Petition No. 167/TT/2020. The Commission vide order dated 11.2.2021 in Petition No. 167/TT/2020 granted tariff only for the ICT bays wherein the cost of the 500 MVA ICT is not included. As regards the O&M Expenses of 500 MVA ICT, the Petitioner has claimed O&M Expenses at Solapur sub-station and has not claimed any O&M Expenses for 500 MVA ICT at Wardha sub-station. Therefore, we are of the view that the Petitioner should decapitalise the cost of 500 MVA ICT at Wardha sub-station. The Petitioner has not submitted the written down value of Asset C2 to adjust the capital cost of the Combined Asset. Therefore, we are not inclined to grant tariff for the Combined Asset as prayed by the Petitioner in the present petition. The Petitioner is directed to decapitalise Asset C2 and remove the same from the instant Combined Asset and file a fresh petition within 30 days from issue of this order."

12. Pursuant to the directions of the Commission, the Petitioner filed the instant

petition on 25.3.2022. The Petitioner has submitted that due to outbreak of Covid-19

wave-III, the offices of the Petitioner remained functional only with the limited staff for

substantial periods of time. Hence, there has been delay in filing of the instant petition

and accordingly the Petitioner has prayed to condone the same.

13. We have considered the submissions of the Petitioner. The Petitioner has

submitted that the delay in filing of the instant petition due to outbreak of Covid-19

Pandemic. Taking into consideration the Covid-19 Pandemic and the consequent

lockdown, the delay in filing of the instant petition is condoned.

TRUING UP OF ANNUAL FIXED CHARGES OF THE 2014-19 PERIOD

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

(₹ in lakh)

	Asset-I					
Particulars	2015-16 (Pro-rata 364 days)	2016-17	2017-18	2018-19		
Depreciation	182.23	217.93	233.50	237.44		
Interest on Loan	207.41	228.47	222.26	205.66		
Return on Equity	206.00	247.33	265.50	270.82		
Interest on Working Capital	21.22	23.78	24.67	24.77		
O&M Expenses	136.11	141.40	146.10	150.94		
Total	752.97	858.91	892.03	889.63		

(₹ in lakh)

	Asset-II (a)					
Particulars	2015-16 (Pro-rata 151 days)	2016-17	2017-18	2018-19		
Depreciation	14.56	47.09	55.43	61.02		
Interest on Loan	18.13	54.98	55.90	55.79		
Return on Equity	16.66	54.03	63.57	70.11		
Interest on Working Capital	5.54	14.62	15.41	16.07		
O&M Expenses	79.67	199.55	206.16	213.01		
Total	134.56	370.27	396.47	416.00		

				(₹ in lakh)		
	Asset-II (b)					
Particulars	2015-16 (Pro-rata 151 days)	2016-17	2017-18	2018-19		
Depreciation	22.67	54.96	54.96	54.96		
Interest on Loan	18.57	41.53	36.60	31.68		
Return on Equity	25.39	61.54	61.54	61.70		
Interest on Working Capital	1.53	3.64	3.52	3.41		
O&M Expenses	0.00	0.00	0.00	0.00		
Total	68.16	161.67	156.62	151.75		

15. The details of the trued-up Interest on Working Capital (IWC) claimed by the

Petitioner in respect of the transmission asset are as follows:

				(₹ in lakh)		
	Asset-I					
Particulars	2015-16 (Pro-rata 364 days)	2016-17	2017-18	2018-19		
O&M Expenses	11.40	11.78	12.18	12.58		
Maintenance Spares	20.53	21.21	21.92	22.64		



	Asset-I						
Particulars	2015-16 (Pro-rata 364 days)	2016-17	2017-18	2018-19			
Receivables	126.18	143.15	148.67	148.27			
Total Working Capital	158.11	176.14	182.77	183.49			
Rate of Interest (in %)	13.50	13.50	13.50	13.50			
Interest on Working Capital	21.22	23.78	24.67	24.77			

(₹ in lakh)

	Asset-II (a)					
Particulars	2015-16 (Pro-rata 151 days)	2016-17	2017-18	2018-19		
O&M Expenses	16.09	16.63	17.18	17.75		
Maintenance Spares	28.97	29.93	30.92	31.95		
Receivables	54.36	61.71	66.08	69.33		
Total Working Capital	99.42	108.27	114.18	119.03		
Rate of Interest (in%)	13.50	13.50	13.50	13.50		
Interest on Working Capital	5.54	14.62	15.41	16.07		

(₹ in lakh)

	Asset-II (b)						
Particulars	2015-16 (Pro-rata 151 days)	2016-17	2017-18	2018-19			
O&M Expenses	0.00	0.00	0.00	0.00			
Maintenance Spares	0.00	0.00	0.00	0.00			
Receivables	27.54	26.95	26.10	25.29			
Total Working Capital	27.54	26.95	26.10	25.29			
Rate of Interest (in %)	13.50	13.50	13.50	13.50			
Interest on Working Capital	1.53	3.64	3.52	3.41			

Date of Commercial Operation (COD)

16. The Commission vide order dated 30.5.2016 in Petition No. 415/TT/2014 has

already approved the COD of the transmission assets as follows:

Asset	Asset details	COD approved
Asset-1	400 kV D/C Solapur (STPP) - Solapur (PG) T/L along with bay extension at Solapur (PG) Sub-station.	3.4.2015
Asset-2	Extension of 400/220 kV Solapur sub-station - Augmentation of Substation by 1 x 315 MVA (3rd) Transformer (by Shifting of 500 MVA Transformer from Wardha to Solapur)	2.11.2015



Page 9 of 65

17. The Commission vide order dated 11.2.2021 in Petition No.167/TT/2021 had trued-up tariff for 2014-19 period and granted tariff for 2019-24 period for the transmission assets.

18. The Petitioner has shifted the 500 MVA ICT from Wardha Sub-station and installed at Solarpur Sub-station without de-capitalisation of 500 MVA ICT at Wardha Sub-station. The Commission vide order dated 24.12.2021 in Petition No 135/TT/2020 has observed as follows::

"6. As per Form-5 submitted by the Petitioner, the capital cost of the 500 MVA ICT at Wardha sub-station (Asset-C2) is covered under present petition. The Petitioner has not claimed the cost of the 500 MVA ICT at Solapur sub-station (Asset-II) in Petition No. 167/TT/2020. The Commission vide order dated 11.2.2021 in Petition No. 167/TT/2020 granted tariff only for the ICT bays wherein the cost of the 500 MVA ICT is not included. As regards the O&M Expenses of 500 MVA ICT, the Petitioner has claimed O&M Expenses at Solapur sub-station and has not claimed any O&M Expenses for 500 MVA ICT at Wardha sub-station. Therefore, we are of the view that the Petitioner should decapitalise the cost of 500 MVA ICT at Wardha sub-station. The Petitioner has not submitted the written down value of Asset C2 to adjust the capital cost of the Combined Asset. Therefore, we are not inclined to grant tariff for the Combined Asset as prayed by the Petitioner in the present petition. The Petitioner is directed to decapitalise Asset C2 and remove the same from the instant Combined Asset and file a fresh petition within 30 days from issue of this order"

19. As per the above direction of the Commission, the Petitioner has filed the instant

tariff petition and has claimed re-capitalization of 500 MVA 400/220 kV ICT-III at Solapur

Sub-station (only ICT) on 2.11.2015 as Asset-II(b). The details of the assets covered under

transmission project is summarized below:

Asset	Description	COD
Asset-I	400 kV D/C Solapur (STPP) - Solapur (PG) Transmission Line along with bay extension at Solapur (PG) Sub- station	3.4.2015
Asset-II(a)	Associated bays of 500 MVA 400/220 kV ICT-III at Solapur Sub-station (Excluding ICT)	2.11.2015
Asset-II(b)	500 MVA 400/220 kV ICT-III at Solapur Sub-station (Only ICT)	2.11.2015*

*500 MVA ICT-III has been shifted from Wardha substation under WRSS- VI Project to Solapur Substation (Asset-II) under Transmission System for Solapur STPP (2x660 MW).

20. The cost of ICT and their bays will be re-capitalized in that project wherein it is

utilized. The details of project have been tabulated below:

Project WRSS VI Asset C2 (*)	Transmission System for Solapur STPP (2x660 MW)	WRSS XXXIII
De-capitalization: 500MVA,ICT III along with 400 kV & 220 kV bay at Wardha Sub-station	Re-capitalization: 500 MVA ICT III at Solapur Sub-station	Re-capitalization: 400 kV & 220 kV bays meant for ICT III at Wardha Sub- station
₹1440.03 lakh	₹1040.90 lakh	₹399.13 lakh
Filed as revised petition No. 297/TT/2022 linked with earlier Petition No. 135/TT/2020	Covered under Instant petition	Filed under petition No.332/TT/2022. Date of utilization: 19.2.2022.

21. We have considered the submissions of the Petitioner. As stated above, Asset-II(b), the 500 MVA ICT-III shifted from Wardha Sub-station under WRSS- VI Project to Solapur Sub-station. Taking into consideration the submission of the Petitioner for claiming separate tariff for Asset-II(a) and Asset-II(b) and the fact that the remaining useful life of the transmission assets is not the same, separate tariff is allowed for Asset-II(a) and Asset-II(b).

Capital Cost

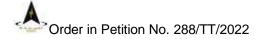
22. The capital cost of the transmission project has been calculated in accordance with the Regulation 9(3) and Regulation 9(6) of the 2014 Tariff Regulation.

23. The Petitioner has submitted that the Commission vide order dated 30.5.2016 in Petition No. 415/TT/2014 has allowed the capital cost of ₹3519.75 lakh as on COD and projected ACE of ₹2340.33 lakh during 2014-19 period for the Asset-I and Asset-II and the same is as follows:

							(₹ in lakh)
Asset Apportioned Admitted			Add Cap				Total
	Approved cost (FR)	cost as on COD	2015-16	2016-17	2017-18	2018-19	cost as on 31.3.2019
Asset-I	4850.89	3012.75*#	899.59	562.11	25.00	0.00	4499.45
Asset-II	1480.85	507.00*	352.07	501.56	0.00	0.00	1360.63

* After adjustment of accrual IDC discharged after COD.

after adjustment of excess initial spares of ₹41.03 lakh under transmission line head.



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24. The Petitioner has submitted that the Commission vide order dated 11.2.2021 in Petition No. 167/TT/2020 trued-up the tariff of 2014-19 tariff period and allowed the following capital cost as on COD and ACE for 2014-19 period and the same is as follows:

							(₹ in lakh)
Asset	FR	Admitted		Add	Сар		Total cost
	apportioned approved cost (FR)	cost as on COD	2015-16	2016-17	2017-18	2018-19	as on 31.3.2019
Asset-I	4850.89	3053.78	861.36	460.33	153.83	2.07	4531.37#
Asset-II	1480.85	506.99	352.06	109.89	212.63	2.61	1184.18

After adjustment of initial spares of ₹38.63 lakh under transmission line head.

25. The Petitioner in the instant petition has submitted the capital cost as on COD and ACE for 2014-19 tariff period and the same is as follows:

	(₹ in										
	FR	Capital		A	ACE						
Asset	Apportioned Approved Cost	cost as on COD	2015-16	2016-17	2017-18	2018-19	Capital cost as on 31.3.2019				
Asset-I	4850.89	3085.78	867.59	499.37	153.83	2.07	4608.64				
Asset-II (a)	1480.85*	512.64	352.03	104.29	212.63	2.61	1184.20				
Asset-II (b)	-	1040.90*	0.00	0.00	0.00	0.00	1040.90				

* The apportioned approved cost of ₹1480.85 lakh does not include the cost of ICT-III. Against the approved cost of ₹6331.74 lakh w.r.t. FR, the total cost as on 31.3.2019 is ₹5792.84 lakh.

26. We have considered the submissions of the Petitioner. It is observed that against the FR apportioned approved cost of Asset-I and Asset-II(a), the estimated completion cost including ACE is within the FR approved apportioned cost. Thus, there is no cost over-run.

27. As regards Asset-II(b), the Petitioner has shifted the 500 MVA ICT from Wardha Sub-station and the Commission vide order dated 29.4.2023 in Petition No.

297/TT/2022 has de-capitalised the ICT alongwith bays at Wardha Sub-station. The

relevant extracts of the order is as follows:

"28. As per the Regulation 14(4) of the 2014 Tariff Regulations, the ICT-III alongwith bays was decapitalized from 20.11.2014 and accordingly it is being removed from the gross block form the actual date of decapitalisation."

28. The Petitioner in Petition No. 297/TT/20222, vide affidavit dated 19.12.2022, has

submitted the following details regarding decapitalization and recapitalization:

							(₹ in lakh)
Equipment/ Asset	Year of capital- sation of asset/ equipment being de- capitalise d	Actual date of decapitali- sation claimed in the instant petition	being decapita-	Debt- Equity ratio at the time of capital -sation (in %)	Cumula-tive deprecia-tion corres-ponding to actual date of decapitalisatio n (₹ in lakh)	Cumula-tive repay-ment of loan corres- ponding actual date of decapitalisatio n (₹ in lakh)	Date of recapitalisa- tion claimed in the respec- tive petitions
Α	В	С	D	Е	F	G	н
500 MVAR ICT and associa-ted bays	2011-12	20.11.2014	1440.03	70:30	222.96	222.96	2.11.2015

29. The Petitioner vide affidavit dated 16.8.2022 has submitted the decapitalisation details of ICT in the instant petition and it is as follows:

					(₹ in lakh)
Equipment/ Asset	Original book value of the asset being decapita- lised (₹ in lakh)	Debt-Equity ratio at the time of capitalisa- tion (in %)	Cumulative depreciation correspond- ing to actual date of decapitali- sation (₹ in lakh)	Cumulative repayment of Ioan correspond- ding actual date of decapitalisa- tion (₹ in lakh)	Date of recapitalisation claimed in the respective petitions
A	D	E	F	G	Н
500 MVAR ICT	1040.90	70:30	215.89	215.89	2.11.2015

30. Accordingly, we have considered the date of de-capitalisation in respect of Asset-II(b) as 20.11.2014 in Petition No. 297/TT/2020 and date of re-capitalisation as

Order in Petition No. 288/TT/2022

Page 13 of 65

2.11.2015 in the instant petition. The capital cost of the shifted ICT from Wardha Substation to Solapur Sub-station is considered as ₹1040.90 lakh.

Interest During Construction ("IDC")

31. The Petitioner has claimed IDC in respect of the transmission assets covered in the instant petition and has submitted statement showing IDC claim, discharge of IDC liability as on date of commercial operation and thereafter which is as follows:

				(₹ in lakh)
	IDC as per	IDC Discharged	Accrual IDC	Discharged
Asset	Auditor's Certificate	upto COD	2015-16	2016-17
Asset-I	32.00	0.00	32.00	0.00
Asset-II(a)	29.00	23.36	0.04	5.60

32. We have considered the submissions of the Petitioner. The IDC has been computed as per the submissions made in the petition. IDC considered in respect of the transmission assets as on COD and summary of discharge of IDC liability up to COD and thereafter for the purpose of tariff determination is as follows:

						(₹ in lakh)
	IDC as	IDC	IDC	IDC		I IDC
		disallowed	allowed	IDC	Discha	rged
Asset	per Auditor's Certificate	due to computational difference	in instant order	Discharged upto COD	2015-16	2016-17
Asset-I	32.00	0.00	32.00	0.00	32.00	0.00
Asset-II (a)	29.00	3.43	25.57	23.36	0.04	2.17

Incidental Expenditure During Construction ("IEDC")

33. The Petitioner has claimed IEDC in respect of the transmission assets as per the Auditor's Certificate. The Petitioner has submitted that entire IEDC mentioned in the Auditor's Certificate is on cash basis and was paid upto COD. The IEDC has been computed as per the submissions in the petition. IEDC claimed as per Auditor's

Certificate, IEDC considered and discharged up to COD in respect of the transmission asset is as follows:

			(₹ in lakh)
Asset	IEDC claimed as per Auditor's certificate	IEDC Allowed	IEDC discharged upto COD
Asset-I	23.00	23.00	23.00
Asset-II (a)	63.39	63.39	63.39

Initial Spares

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

"(d) Transmission System Transmission line: 1.00% Transmission sub-station (Green Field): 4.00% Transmission sub-station (Brown Field): 6.00% Gas Insulated sub-station :5.00% Communication System: 3.5%"

35. Petitioner has not claimed initial spares for Asset-II(b). Initial Spares claimed by

the Petitioner are as follows:

	Asset-I						
	Plant and Machinery cost	Initial spares claimed (B)					
Asset	for calculation of initial spares (A) (₹ in lakh)	Amount (₹ in lakh)					
Transmission line	3491.98	73.16					
Sub-station	753.14	10.61					
PLCC	81.24	0.00					
	Asset-	·II(a)					
	Plant and Machinery cost	Initial spares claimed (B)					
Asset	for calculation of initial spares (A) (₹ in lakh)	Amount (₹ in lakh)					
Sub-station	966.79	40.27					
PLCC	35.61	0.00					

36. Madhya Pradesh Power Management Company Limited (MPPMCL) has

submitted vide affidavit dated 21.11.2022 that the Petitioner has raised the issue of a

double deduction of ₹38.63 lakh under the Transmission line head in Asset-I and made the adjustment in the instant petition. MPPMCL has prayed to the make a prudence check of the same before allowing adjustment and has requested to allow Initial Spares strictly as per the norms.

37. In response, the Petitioner has submitted that in case of Asset-I under Petition No. 167/TT/2020, initial spares were excess to the extent of ₹38.63 lakh. Therefore, the Petitioner had reduced ₹38.63 lakh from the ACE of 2016-17 while calculation of transmission tariff of 2014-19 tariff period. But, due to inadvertent error, the same was not reflected in Form 7 of Asset-I. Consequently, vide order dated 11.2.2021 in Petition No. 167/TT/2020, the Commission again reduced ₹38.63 lakh from the cost claimed by the Petitioner resulting in double deduction of ₹38.63 lakh in Asset-I. The Petitioner filed Review Petition No. 12/RP/2021 to resolve the issue of double deduction of excess Initial Spares from the ACE in 2016-17.

38. The Petitioner during the course of hearing in Review Petition No. 12/RP/2021 submitted that there was double deduction of excess initial spares of ₹38.63 lakh from the ACE in 2016-17. The Review Petitioner contended that an amount of ₹38.63 lakh has already been deducted by the Review Petitioner from the ACE during 2016-17. Therefore, further deduction of ₹38.63 lakh by the Commission from the ACE was an error apparent on the face of record.

39. The Commission vide order dated 8.6.2022 in Petition No. 12/RP/2021 held as follows:

"12. The Review Petitioner has sought review on the ground that there is an "apparent error" in order dated 11.2.2021. The above discussion shows that there is no "apparent error" in the order dated 11.2.2021 as it was passed on the basis of the information submitted by the Review Petitioner. The error, if any, is on the part of the Review Petitioner. In this regard, we tend to agree with the submissions of MPPMCL that there is no error in the order as contended by the Review Petitioner and the error was made by the Review Petitioner at the time of filing of tariff petition. We are of the view that the Review Petitioner is trying to re-agitate the matter on merits by submitting revised corrected Form-7, which is not allowable at the stage of Review.

13. In view of above discussions, we are of the view that no ground is made out by the Review Petitioner to review the decision in order dated 11.2.2021."

40. The Petitioner has further submitted that the error in the Form-7 has been rectified on its end and filed with the instant petition.

41. We have considered the submissions of the Petitioner and MPPMCL. The initial spares claimed by the Petitioner for Asset-I towards Sub-station is within ceiling limit of 6% and transmission line is restricted to 1% of ceiling limit.

42. As regards Asset-II(a), the Petitioner has claimed Initial Spares separately for transmission asset for PLCC under "Communication System" in the instant petition. The Commission vide order dated 24.1.2021 in Petition No. 126/TT/2020 observed that PLCC is a part of sub-station and accordingly, did not allow separate O&M Expenses for PLCC. In view of the findings of the Commission recorded vide order dated 24.1.2021 in Petition No. 126/TT/2020 is a part of sub-station. Therefore, cost of the view that PLCC has to be considered as a part of sub-station. Therefore, cost of PLCC has been clubbed with the cost of sub-station while computing the Initial Spares.

43. The Initial Spares allowed in respect of the transmission assets as percentage specified in the 2014 Tariff Regulations is as follows:

Asset	Particulars	cost for (B)		Ceiling limit as per Regulations	Allowable Initial Spares worked out	Initial spares allowed
A3301		of initial spares (A) (₹ in lakh)	Amount (₹ in lakh)	(in%) (C)	D = [(A- B)*C/(100- C)] (₹ in lakh)	in this order
Asset-I	Sub-station	834.38	10.61	6.00	52.58	10.61
Asset-II (a)	Sub-station	1002.40	40.27	6.00	61.41	40.27



Page 17 of 65

Asset	sset Particulars	Plant and Machinery cost for calculation		Ceiling limit as per Regulations	Allowable Initial Spares worked out	Excess initial	Initial spares allowed
		of initial spares (A) (₹ in lakh)	Amount (₹ in lakh)	(in%) (C)	D = [(A- B)*C/(100- C)] (₹ in lakh)	spares claimed	in this order
Asset-I	Transmission line	3491.98	73.16	1.00%	34.53	38.63	34.53

44. The excess initial spares of ₹38.63 lakh in case of Asset-I have been deducted from ACE based on discharge of initial spares. The deduction of excess initial spares is carried out as ₹38.22 lakh in 2015-16 and ₹0.41 lakh in 2016-17.

Re-capitalisation of 500 MVA ICT:

45. The Petitioner has submitted that 500 MVA ICT-III has been shifted from Wardha Sub-station under WRSS- VI Project to Solapur Sub-station (Asset-II) under Transmission System for Solapur STPP (2x660 MW). As agreed in the 34th SCM, MSETCL intimated that due to many generation projects coming up around Wardha area, they would not be able to draw additional power from Wardha at 220 kV level. Therefore, the ICT-III along with associated bays at Wardha would have remained unutilized and payment of transmission charges for the same would have been undue burden on Maharashtra. The issue was further deliberated and it was decided that the Petitioner would shift the 400/220kV ICT-III at Wardha to Solapur Sub-station. It was also agreed by the members that the applicable transmission charges would continue to be paid to the Petitioner during the shifting period of the ICT and further, the additional expenditure to be incurred by the Petitioner towards dismantling, shifting of the said ICT may be capitalized as ACE under the said assets.

46. The Petitioner has further submitted that the capital cost of 500 MVA ICT-III at Solapur Sub-station under Petition No. 167/TT/2020 was ₹1184.20 lakh. Aforementioned cost includes 400 kV (1 number) and 220 kV (3 number) bays and the cost of shifting, dismantling and erection of the ICT at Solapur Sub-station. The cost of dismantling and erection is ₹49.83 lakh. Transformer cost was not included in above cost. Transformer cost along with already constructed bays at Wardha Sub-station remained in Petition No. 135/TT/2020.

47. The Petitioner has further submitted that new associated transformer bays were constructed at Solapur for the transformer shifted from Wardha towards which cost was submitted in the present petition. However, it was also considered prudent to retain the bay equipment at Wardha itself because shifting of 400 kV equipment at Wardha would have required the shut-down of bus/transmission line connected to this diameter (I-type) to facilitate their de-commissioning. In order to maintain the continuity of power supply these equipments were retained at this sub-station itself. Even if this equipment had been shifted from Wardha to Solapur, it would have required construction of tie-bay to complete the breaker and half scheme. Under such circumstances, the 400 kV bay equipment at Wardha were retained at Wardha itself and required equipment at Solapur (complete the diameter) were considered in the scope along with associated cost.

Shifted Asset	COD	Date of replacement (COD of new ICT)	Utilization
500 MVA, 400/220 kV ICT at Wardha	1.1.2012	2.11.2015	Will be installed at Solapur Sub-station

48. As discussed above, the Commission vide order dated 29.4.2023 in Petition No. 297/TT/2022 has already approved the date of de-capitalisation of 500 MVA ICT at Wardha Sub-station as 20.11.2014 and the Gross Block of replaced 500 MVA ICT at

Wardha sub-station was de-capitalized on 20.11.2014 from WRSS VI and is being capitalized from 2.11.2015 under instant petition.

Capital cost

49. Capital cost as on COD after the adjustments of IDC, IEDC, and Initial Spares, where applicable, is as follows:

					(₹ in lakh)
Asset	Capital cost as per Auditor's Certificate (A)	IDC disallowed (B)	IDC undischarged as on COD (C)	Excess Initial Spares as on COD (D)	Capital cost allowed as on COD (E=A-B-C- D)
Asset-I	3085.78	0.00	32.00	0.00	3053.78
Asset-II (a)	512.64	3.43	2.21	0.00	507.00

(₹ in lakh)

Equipment/ Asset	Original book value of the asset being decapita- lised (₹ in lakh)	Debt-Equity ratio at the time of capitalisa- tion (in %)	Cumulative depreciation correspond- ing to actual date of decapitali- sation (₹ in lakh)	Cumulative repayment of Ioan correspond- ding actual date of decapitalisa- tion (₹ in lakh)	Date of recapitalisation claimed in the respec-tive petitions
A	D	E	F	G	Н
500 MVAR ICT	1040.9	70:30	215.89	215.89	2.11.2015

Additional Capital Expenditure (ACE)

50. As per Clause (13) of Regulation 3 of the 2014 Tariff Regulations, the cut-off date for the transmission assets is 31.3.2018. The Petitioner has claimed the following ACE and has submitted Auditor's Certificate in support of ACE in 2015-16, 2016-17,2017-18 and 2018-19 for Asset-I, Asset-II(a):

Asset	et Additional Capital Expenditure (ACE)							
	2015-16	2015-16 2016-17 2017-18 2018-19						
Asset-I	867.59	499.37	153.83	2.07	1522.86			
Asset-II (a)	352.03	104.29	212.63	2.61	671.56			



51. The Petitioner has further submitted that ACE incurred during the year 2015-16, 2016-17 and 2017-18 is on account of balance and retention payments due to undischarged liability for works executed within cut-off date and has been claimed under Regulation 14(1)(i) and Regulation 14(1)(ii) of the 2014 Tariff Regulations. Further, ACE incurred during the year 2018-19 is on account of balance and retention payments due to undischarged liability for works executed within cut-off date and has been claimed under to undischarged liability for works executed within cut-off date and has been claimed under to undischarged liability for works executed within cut-off date and has been claimed under Regulation 14(2)(iv) of the 2014 Tariff Regulations.

52. We have considered the submissions of the Petitioner. The ACE incurred during the year 2015-16, 2016-17 and 2017-18 is allowed account of balance and retention payments due to undischarged liability for works executed within cut-off date under Regulation 14(1)(i) and Regulation 14(1)(ii) of 2014 Tariff Regulations. Further, ACE incurred during the year 2018-19 is allowed account of balance and retention payments due to undischarged liability for works executed within cut-off date and has been claimed under Regulation 14(2)(iv) of the 2014 Tariff Regulations. The details of the approved capital cost is as follows:

(₹ in lal						
Asset	A	dditional Cap	ital Expenditu	ire (ACE)		Total ACE
		2015-16	2016-17	2017-18	2018-19	
	ACE as per	007.50	400.07	450.00	0.07	1522.86
	auditor certificate	867.59	499.37	153.83	2.07	1522.00
Asset-I	Add: IDC and	22.00	0.00	0.00	0.00	32.00
Assel-I	IEDC discharge	32.00			0.00	32.00
	Less: Excess	38.22	0.41	0.00	0.00	38.63
	Initial Spares	30.22				
		861.37	498.96	153.83	2.07	1516.23
	ACE as per	252.02	104.00	4.29 212.63	0.01	671.56
Accet II(c)	auditor certificate	352.03	104.29		2.61	071.00
Asset-II(a)	Add: IDC and	0.04	0.47	0.00	0.00	2.21
	IEDC discharge	0.04	2.17	0.00	0.00	2.21
Net ACE allowed		352.07	106.46	212.63	2.61	673.77
Asset-II (b)		0.00	0.00	0.00	0.00	0.00
ACE allowed		0.00	0.00	0.00	0.00	0.00

. . . .

Capital cost for tariff period 2014-19

53. Accordingly, the capital cost considered for the tariff period 2014-19 is as follows:

Asset	Capital	Additie	onal Capital	Expenditure	(ACE)	(₹ in lakh) Total	
	Cost as on COD considered for tariff calculation	2015-16	2016-17	2017-18	2018-19	Estimated Completion Cost up to 31.3.2019	
Asset-I	3053.78	861.37	498.96	153.83	2.07	4570.01	
Asset-II(a)	507.00	352.07	106.46	212.63	2.61	1180.77	
Asset-II(b)	1040.90	0.00	0.00	0.00	0.00	1040.90	

Debt-Equity ratio

54. The debt-equity ratio has been allowed in accordance with Regulation 19(3) of the 2014 Tariff Regulations. As per Regulation 19(3) of the 2014 Tariff Regulations, the debt-equity ratio allowed by the Commission for determination of tariff for the period ending on 31.3.2014 for transmission assets. The details of the debt-equity ratio as on 1.4.2014 and 31.3.2019 are as follows:

	Asset-I							
Particulars	Capital Cost as on 1.4.2014	(in %)	ACE 2014- 19	(in %)	Capital Cost as on 31.3.2019	(in %)		
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)			
Debt	2160.04	70.73	1061.36	70.00	3221.40	70.49		
Equity	893.74	29.27	454.87	30.00	1348.61	29.51		
Total	3053.78	100.00	1516.23	100.00	4570.01	100.00		

	Asset-II (a)							
Particulars	Capital Cost as on 1.4.2014	(in %)	ACE 2014-19	(in %)	Capital Cost as on 31.3.2019	(in %)		
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)			
Debt	358.84	70.78	471.64	70.00	830.48	70.33		
Equity	148.16	29.22	202.13	30.00	350.29	29.67		
Total	507.00	100.00	673.77	100.00	1180.77	100.00		

[®]Order in Petition No. 288/TT/2022

	Asset-II (b)							
Particulars	Capital Cost as on 1.4.2014	(in %)	ACE 2014-19	ACE 2014-19	(in %)	Capital Cost as on 31.3.2019	(in %)	
	(₹ in lakh)		(₹ in lakh)		(₹ in lakh)			
Debt	728.63	70.00	0.00	N/A	728.63	70.00		
Equity	312.27	30.00	0.00	N/A	312.27	30.00		
Total	1040.90	100.00	0.00	N/A	1040.90	100.00		

Depreciation

55. The Gross Block during the tariff period 2014-19 has been depreciated at weighted average of depreciation (WAROD). The WAROD at Annexure-I has been worked out after taking into account the depreciation rates of assets as prescribed in the 2014 Tariff Regulations and depreciation allowed is as follows:

					(₹ in lakh)
			Asse	et-l	
	Particulars	2015-16 (Pro-rata 364 days)	2016-17	2017-18	2018-19
А	Opening Gross Block	3053.78	3915.15	4414.11	4567.94
В	ACE	861.37	498.96	153.83	2.07
С	Closing Gross Block(A+B)	3915.15	4414.11	4567.94	4570.01
D	Average Gross Block (A+C)/2	3484.47	4164.63	4491.03	4568.98
F	Weighted Average Rate of Depreciation (in%)	5.23	5.21	5.20	5.20
G	Balance useful life of the asset (year)	34	34	33	32
Н	Elapsed life (year)	0	0	1	2
Ι	Depreciable value	3136.02	3748.17	4041.93	4112.08
J	Depreciation during the year	181.23	216.93	233.50	237.45
κ	Cumulative depreciation	181.23	398.16	631.67	869.12
L	Remaining Depreciable Value	2954.79	3350.01	3410.26	3242.96

<u>(₹ in lakh)</u>

		Asset-II (a)					
	Particulars	2015-16 (Pro-rata 151 days)	2016-17	2017-18	2018-19		
А	Opening Gross Block	507.00	859.07	965.53	1178.16		
В	ACE	352.07	106.46	212.63	2.61		
С	Closing Gross Block(A+B)	859.07	965.53	1178.16	1180.77		
D	Average Gross Block (A+C)/2	683.04	912.30	1071.85	1179.47		
F	Weighted Average Rate of Depreciation (in %)	5.17	5.15	5.15	5.16		



Page 23 of 65

		Asset-II (a)					
	Particulars	2015-16 (Pro-rata 151 days)	2016-17	2017-18	2018-19		
G	Balance useful life of the asset (year)	25	25	24	23		
Н	Elapsed life (year)	0	0	1	2		
Ι	Depreciable value	614.73	821.07	964.66	1061.52		
J	Depreciation during the year	14.56	46.99	55.25	60.84		
Κ	Cumulative depreciation	14.56	61.56	116.80	177.64		
L	Remaining Depreciable Value	600.17	759.52	847.86	883.88		

(₹ in lakh)

			Asset-	ll (b)	(*
	Particulars	2015-16 (Pro-rata 151 days)	2016-17	2017-18	2018-19
А	Opening Gross Block	1040.90	1040.90	1040.90	1040.90
В	ACE	0.00	0.00	0.00	0.00
С	Closing Gross Block(A+B)	1040.90	1040.90	1040.90	1040.90
D	Average Gross Block (A+C)/2	1040.90	1040.90	1040.90	1040.90
F	Weighted Average Rate of Depreciation (in%)	5.28	5.28	5.28	5.28
G	Balance useful life of the asset (year)	22	21	20	19
Н	Elapsed life (year)	3	4	5	6
Ι	Depreciable value	936.81	936.81	936.81	936.81
J	Depreciation during the year	22.67	54.96	54.96	54.96
Κ	Cumulative depreciation	238.56	293.52	348.48	403.44
L	Remaining Depreciable Value	698.25	643.29	588.33	533.37

56. The details of depreciation approved vide order dated 30.5.2016 in Petition No. 415/TT/2014, claimed by the Petitioner in the instant petition and trued up in the instant order are as follows:

(₹ in lakh)

Assets	Particular	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
	Approved vide order dated 30.5.2016 in Petition No. 415/TT/2014	180.57	218.41	233.12	233.53
Asset-I	Claimed by the Petitioner in the instant petition	185.12	220.85	236.42	240.36
	Allowed after true-up in this order	181.23	216.93	233.50	237.45



Page 24 of 65

Assets	Particular	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
	Approved vide order dated 30.5.2016 in Petition No. 415/TT/2014	14.60	57.15	70.05	70.05
Asset-II(a)	Claimed by the Petitioner in the instant petition	15.92	50.37	58.74	64.33
	Allowed after true-up in this order	14.56	46.99	55.25	60.84
Asset-II(b)	Claimed by the Petitioner in the instant petition	22.67	54.96	54.96	54.96
A3961-11(D)	Allowed after true-up in this order	22.67	54.96	54.96	54.96

Interest on Loan ("IoL")

57. The Petitioner has claimed the weighted average rate of IoL based on its actual loan portfolio and rate of interest. We have considered the submissions of the Petitioner. IoL has been calculated based on actual interest rate submitted by the Petitioner in accordance with Regulation 26 of the 2014 Tariff Regulations. The trued-up IoL allowed in respect of the transmission assets is as follows:

					(₹ in lakh)
			Ass	et-l	
	Particulars	2015-16 (Pro-rata 364 days)	2016-17	2017-18	2018-19
	Interest on Loan				
А	Gross Normative Loan	2160.04	2763.00	3112.27	3219.95
В	Cumulative Repayments upto Previous Year	0.00	181.23	398.16	631.67
С	Net Loan-Opening	2160.04	2581.77	2714.11	2588.29
D	Additions	602.96	349.27	107.68	1.45
Е	Repayment during the year	181.23	216.93	233.50	237.45
F	Net Loan-Closing	2581.77	2714.11	2588.29	2352.29
G	Average Loan	2370.91	2647.94	2651.20	2470.29
н	Weighted Average Rate of Interest on Loan (in%)	8.8314	8.6625	8.4611	8.4082
Ι	Interest on Loan	208.24	229.38	224.32	207.71

(₹ in lakh)

			Asse	t-II(a)	· · · ·
	Particulars	2015-16 (Pro-rata 151 days)	2016-17	2017-18	2018-19
	Interest on Loan				
А	Gross Normative Loan	358.84	605.29	679.81	828.65
В	Cumulative Repayments upto Previous Year	0.00	14.56	61.56	116.80
С	Net Loan-Opening	358.84	590.73	618.26	711.85
D	Additions	246.45	74.52	148.84	1.83
Е	Repayment during the year	14.56	46.99	55.25	60.84
F	Net Loan-Closing	590.73	618.26	711.85	652.84
G	Average Loan	474.78	604.49	665.05	682.35
н	Weighted Average Rate of Interest on Loan (in%)	9.3350	9.1365	8.4266	8.2018
Ι	Interest on Loan	18.29	55.23	56.04	55.96

(₹ in lakh) Asset-II(b) 2015-16 **Particulars** (Pro-rata 2016-17 2017-18 2018-19 151 days) **Interest on Loan** 728.63 A Gross Normative Loan 728.63 728.63 728.63 B Cumulative Repayments upto Previous Year 215.89 238.56 293.52 348.48 C Net Loan-Opening 512.74 490.07 435.11 380.15 D Additions 0.00 0.00 0.00 0.00 E Repayment during the year 54.96 54.96 54.96 22.67 435.11 380.15 325.19 F Net Loan-Closing 490.07 407.63 462.59 G Average Loan 501.40 352.67 Weighted Average Rate of Interest on Loan Н 8.9764 8.9774 8.9798 8.9828 (in%) 18.57 41.53 Interest on Loan 36.60 31.68 Т

58. The details of IoL approved *vide* order dated 30.5.2016 in Petition No. 415/TT/2014, claimed by the Petitioner in the instant petition and trued up in the instant order are as follows:

(₹ in lakh)

Asset	Particular	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
Asset-I	Approved vide order dated 30.5.2016 in Petition No. 415/TT/2014	209.70	236.49	234.70	215.31

Page 26 of 65

Asset	Particular	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
	Claimed by the Petitioner in the instant petition	207.28	228.09	221.64	204.80
	Allowed after true-up in this order	208.24	229.38	224.32	207.71
	Approved vide order dated 30.5.2016 in Petition No. 415/TT/2014	18.34	68.87	79.32	72.79
Asset-II(a)	Claimed by the Petitioner in the instant petition	18.11	54.70	55.37	55.00
	Allowed after true-up in this order	18.29	55.23	56.04	55.96
Asset-II(b)	Claimed by the Petitioner in the instant petition	18.57	41.53	36.60	31.68
	Allowed after true-up in this order	18.57	41.53	36.60	31.68

Return on Equity ("RoE")

59. The Petitioner has claimed RoE for the transmission assets 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 the following effective tax rates for 2014-19 tariff period:

Year	Claimed effective tax rate (in %)	Grossed up RoE [(Base Rate)/(1-t)] (in %)
2014-15	21.018	19.624
2015-16	21.382	19.716
2016-17	21.338	19.705
2017-18	21.337	19.704
2018-19	21.549	19.758

60. The Commission in order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the effective tax rate for the Petitioner based on the notified MAT rates as follows:

Year	Notified MAT rates (in %) (inclusive of surcharge & cess)	Effective tax (in %)
2014-15	20.961	20.961
2015-16	21.342	21.342

Page 27 of 65

2016-17	21.342	21.342
2017-18	21.342	21.342
2018-19	21.549	21.549

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

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

62. Trued-up RoE is allowed on the basis of the MAT rate applicable in the respective

years for 2014-19 tariff period and it is as follows:

					(₹ in lakh)
			As	set-l	
	Particulars	2015-16 (Pro-rata 364 days)	2016-17	2017-18	2018-19
	Return on Equity				
А	Opening Equity	893.74	1152.15	1301.84	1347.99
В	Additions	258.41	149.69	46.15	0.62
С	Closing Equity (A+B)	1152.15	1301.84	1347.99	1348.61
D	Average Equity (A+C)/2	1022.95	1227.00	1324.91	1348.30
Е	Return on Equity (Base Rate) (in%)	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in%)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in%)	19.705	19.705	19.705	19.758
Н	Return on Equity(D*G)	200.47	241.78	261.07	266.40

(₹ in lakh)

			Asset-II(a)				
	Particulars	2015-16 (Pro-rata 151 days)	2016-17	2017-18	2018-19		
	Return on Equity						
А	Opening Equity	148.16	253.78	285.72	349.51		



Page 28 of 65

			Asse	et-II(a)	
	Particulars	2015-16 (Pro-rata 151 days)	2016-17	2017-18	2018-19
В	Additions	105.62	31.94	63.79	0.78
С	Closing Equity (A+B)	253.78	285.72	349.51	350.29
D	Average Equity (A+C)/2	200.97	269.75	317.61	349.90
Е	Return on Equity (Base Rate) (in%)	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in%)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in%)	19.705	19.705	19.705	19.758
Η	Return on Equity (D*G)	16.34	53.15	62.59	69.13

(₹ in lakh)

			Asse	et-II(b)	
	Particulars	2015-16 (Pro-rata 151 days)	2016-17	2017-18	2018-19
	Return on Equity				
А	Opening Equity	312.27	312.27	312.27	312.27
В	Additions	0.00	0.00	0.00	0.00
С	Closing Equity (A+B)	312.27	312.27	312.27	312.27
D	Average Equity (A+C)/2	312.27	312.27	312.27	312.27
Е	Return on Equity (Base Rate) (in%)	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in%)	21.342	21.342	21.342	21.549
G	Rate of Return on Equity (in%)	19.705	19.705	19.705	19.758
Н	Return on Equity (D*G)	25.39	61.53	61.53	61.70

63. The details of RoE allowed *vide* order dated 30.5.2016 in Petition No. 415/TT/2014, claimed by the Petitioner in the instant petition and trued up in the instant order are as follows:

					(₹ in lakh)
Asset	Particular	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
	Approved vide order dated 30.5.2016 in Petition No. 415/TT/2014	199.79	243.54	260.90	261.64
Asset-I	Claimed by the Petitioner in the instant petition	206.09	247.32	265.49	270.82
	Allowed after true-up in this order	200.47	241.78	261.07	266.40
Asset-II(a)	Approved vide order dated 30.5.2016 in Petition No. 415/TT/2014	16.30	64.83	79.66	79.66
	Claimed by the Petitioner in the instant petition	16.67	54.03	63.56	70.11

Order in Petition No. 288/TT/2022

Page 29 of 65

	Allowed after true-up in this order	16.34	53.15	62.59	69.13
Asset-II(b)	Claimed by the Petitioner in the instant petition	25.39	61.53	61.53	61.70
	Allowed after true-up in this order	25.39	61.53	61.53	61.70

Operation & Maintenance Expenses (O&M Expenses)

64. The Petitioner has not claimed any O&M Expenses for Asst-II(b). The O&M

Expenses claimed by the Petitioner for the transmission asset are as follows:

Particulars	Asset-I						
Particulars	2015-16	2016-17	2017-18	2018-19			
Transmission line							
(i) Solapur (PG) - Sola	our (NTPC) D/c	Transmission lin	e (11.170 km)				
Bay(s)							
(i) 400 kV Bays: Solapi	ur: Solapur (NTF	PC) Bay I and II					
400 kV Bays	2	2	2	2			
D/C 4 or more sub conductors (km)	11.170	11.170	11.170	11.170			
Total O&M Expenses claimed (₹ in lakh)	136.11	141.40	146.10	150.94			

Particulars		Asse	t-II(a)	
Particulars	2015-16	2016-17	2017-18	2018-19
Bay(s) (i) 400 kV Bays: Solapur: ICT III bay (ii) 220 kV bays: Solapur: ICT III bay Solapur: Seb Bay-5	(Downstream)			
Solapur: Seb Bay-6				
400 kV Bays	1	1	1	1
220 kV Bays	3	3	3	3
Total O&M Expenses claimed (₹ in lakh)	79.67	199.55	206.16	213.01

65. The applicable norms for the O&M Expenses as per the 2014 Tariff Regulations

is as follows:

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
D/C Bundled Conductor with four or more sub conductors					
Norms (₹ lakh/km)	1.062	1.097	1.133	1.171	1.21

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
D/C Twin/Triple Conductor					
Norms (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
D/C Single Conductor					
Norms (₹ lakh/km)	0.303	0.313	0.324	0.334	0.346
S/C Bundled Conductor with four sub conductors					
Norms (₹ lakh/km)	0.606	0.627	0.647	0.669	0.691
765 kV Bays					
Norms (₹ lakh/Bay)	84.42	87.22	90.12	93.11	96.20
400 kV Bays					
Norms (₹ lakh/Bay)	60.3	62.30	64.37	66.51	68.71
220 kV Bays					
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.1

66. We have considered the submission of the Petitioner. The O&M Expenses allowed for the transmission assets as per norms specified in the 2014 Tariff Regulations are as follows:

Particulars	Asset-I							
Particulars	2015-16	2016-17 2017-18		2018-19				
Transmission line	Transmission line							
(ii) Solapur (PG) - Sola	pur (NTPC) (11.	170 km)						
Bay(s)								
(ii) 400 kV Bays:	00 kV Bays:							
Solapur:Solapur (NT	PC) Bay I and I	l						
400 kV Bays	2	2	2	2				
D/C 4 or more sub- conductors (km)	11.170	11.170	11.170	11.170				
Total O&M Expenses (₹ in lakh)	136.11	141.40	146.10	150.94				

Dertieulere		Asset-II(a)					
Particulars	2015-16	2016-17	2017-18	2018-19			
Bay(s)							
(i) 400 kV Bays:							
Solapur:ICT III bay							
(ii) 220 kV bays:							
Solapur:ICT III bay							
Solapur:Seb Bay-5	(Downstream)						
Solapur:Seb Bay-6	(Downstream)						
400 kV Bays	1	1	1	1			
220 kV Bays	3	3	3	3			
Total O&M Expenses (₹ in lakh)	79.68	199.55	206.16	213.01			

Order in Petition No. 288/TT/2022

Page 31 of 65

67. The details of O&M Expenses allowed *vide* order dated 30.5.2016 in Petition No. 415/TT/2014, claimed by the Petitioner in the instant petition and trued up in the instant order are as follows:

					(₹ in lakh)
Assets	Particular	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
	Approved vide order dated 30.5.2016 in Petition No. 415/TT/2014	136.48	141.40	146.10	150.94
Asset-I	Claimed by the Petitioner in the instant petition	136.11	141.40	146.10	150.94
	Allowed after true-up in this order	136.11	141.40	146.10	150.94
	Approved vide order dated 30.5.2016 in Petition No. 415/TT/2014	79.90	199.55	206.16	213.01
Asset-II(a)	Claimed by the Petitioner in the instant petition	79.67	199.55	206.16	213.01
	Allowed after true-up in this order	79.68	199.55	206.16	213.01
Asset-II(b)	Claimed by the Petitioner in the instant petition	0.00	0.00	0.00	0.00
	Allowed after true-up in this order	0.00	0.00	0.00	0.00

Interest on Working Capital (IWC)

68. The IWC has been worked out for the transmission assets as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and is allowed as follows:

(₹ in lakh<u>)</u>

		Asset-I				
		2015-16 (Pro-rata 364 days)	2016-17	2017-18	2018-19	
	Interest on Working Capital					
А	Working Capital for O&M Expenses (O&M Expenses for 1 month)	11.40	11.78	12.18	12.58	
В	Working Capital for Maintenance Spares (15% of O&M Expenses)	20.53	21.21	21.92	22.64	



Page 32 of 65

		Asset-I					
		2015-16 (Pro-rata 364 days)	2016-17	2017-18	2018-19		
с	Working Capital for Receivables (equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)	125.21	142.19	148.27	147.87		
D	Total Working Capital (A+B+C)	157.14	175.18	182.36	183.09		
Е	Rate of Interest (in%)	13.50	13.50	13.50	13.50		
F	Interest on Working Capital (D*E)	21.10	23.65	24.62	24.72		

(₹ in lakh)

		Asset-II(a)				
		2015-16 (Pro-rata 151 days)	2016-17	2017-18	2018-19	
	Interest on Working Capital					
А	Working Capital for O&M Expenses (O&M Expenses for 1 month)	16.09	16.63	17.18	17.75	
В	Working Capital for Maintenance Spares (15% of O&M Expenses)	28.97	29.93	30.92	31.95	
С	Working Capital for Receivables (equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)	54.29	61.59	65.90	69.17	
D	Total Working Capital (A+B+C)	99.36	108.15	114.01	118.87	
Е	Rate of Interest (in%)	13.50	13.50	13.50	13.50	
F	Interest on Working Capital (D*E)	5.53	14.60	15.39	16.05	

(₹ in lakh)

		Asset-II(b)				
		2015-16 (Pro-rata 151 days)	2016-17	2017-18	2018-19	
	Interest on Working Capital					
А	Working Capital for O&M Expenses (O&M Expenses for 1 month)	0.00	0.00	0.00	0.00	
В	Working Capital for Maintenance Spares (15% of O&M Expenses)	0.00	0.00	0.00	0.00	
С	Working Capital for Receivables (equivalent to 2 months of Annual Fixed Charges/Annual Transmission Charges)	27.54	26.94	26.10	25.29	
D	Total Working Capital (A+B+C)	27.54	26.94	26.10	25.29	
Е	Rate of Interest (in%)	13.50	13.50	13.50	13.50	
F	Interest on Working Capital (D*E)	1.53	3.64	3.52	3.41	

69. The details of IWC allowed *vide* order dated 30.5.2016 in Petition No. 415/TT/2014, claimed by the Petitioner in the instant petition and trued up in the instant order are as follows:

Order in Petition No. 288/TT/2022

					(₹ in lakh)
Assets	Particular	2015-16 (Pro-rata)	2016-17	2017-18	2018-19
	Approved vide order dated 30.5.2016 in Petition No. 415/TT/2014	21.07	23.89	24.84	24.69
Asset-I	Claimed by the Petitioner in the instant petition	21.22	23.78	24.67	24.77
	Allowed after true-up in this order	21.10	23.65	24.62	24.72
	Approved vide order dated 30.5.2016 in Petition No. 415/TT/2014	5.55	15.42	16.66	16.89
Asset-II(a)	Claimed by the Petitioner in the instant petition	5.54	14.62	15.41	16.07
	Allowed after true-up in this order	5.53	14.60	15.39	16.05
Asset-II(b)	Claimed by the Petitioner in the instant petition	1.53	3.64	3.52	3.41
	Allowed after true-up in this order	1.53	3.64	3.52	3.41

Approved Annual Fixed Charges for 2014-19 Tariff Period

The trued-up AFC approved for the transmission asset for 2014-19 tariff period 70.

are as follows:

				(₹ in lakh)				
Asset-I								
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19				
Depreciation	181.23	216.93	233.50	237.45				
Interest on Loan	208.24	229.38	224.32	207.71				
Return on Equity	200.47	241.78	261.07	266.40				
O&M Expenses	136.11	141.40	146.10	150.94				
Interest on Working Capital	21.10	23.65	24.62	24.72				
Total	747.15	853.14	889.61	887.22				

(₹ in lakh)

Asset-II(a)								
Particulars 2015-16 2016-17 2017-18 2018-19								
Depreciation	14.56	46.99	55.25	60.84				
Interest on Loan	18.29	55.23	56.04	55.96				



Asset-II(a)								
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19				
Return on Equity	16.34	53.15	62.59	69.13				
O&M Expenses	79.68	199.55	206.16	213.01				
Interest on Working Capital	5.53	14.60	15.39	16.05				
Total	134.40	369.52	395.43	414.99				

(₹ in lakh)

Asset-II(b)								
Particulars	2015-16 (Pro-rata)	2016-17	2017-18	2018-19				
Depreciation	22.67	54.96	54.96	54.96				
Interest on Loan	18.57	41.53	36.60	31.68				
Return on Equity	25.39	61.53	61.53	61.70				
O&M Expenses	0.00	0.00	0.00	0.00				
Interest on Working Capital	1.53	3.64	3.52	3.41				
Total	68.16	161.66	156.61	151.75				

71. The details of AFC allowed *vide* order dated 30.5.2016 in Petition No. 415/TT/2014, claimed by the Petitioner in the instant petition and trued up in the instant order are as follows:

			(₹	in lakh)	
Assets	Particular	2015-16 (Pro- rata)	2016-17	2017-18	2018-19
	Approved vide order dated 30.5.2016 in Petition No. 415/TT/2014	747.62	863.73	899.66	886.11
Asset-I	Claimed by the Petitioner in the instant petition	752.97	858.91	892.03	889.63
	Allowed after true-up in this order	747.14	853.14	889.62	887.21
	Approved vide order dated 30.5.2016 in Petition No. 415/TT/2014	134.69	405.83	451.85	452.40
Asset-II(a)	Claimed by the Petitioner in the instant petition	134.56	370.27	396.47	416.00
	Allowed after true-up in this order	134.40	369.53	395.43	414.99
Asset-II(b)	Claimed by the Petitioner in the instant petition	68.16	161.67	156.62	151.75

Page 35 of 65

Assets	Particular	2015-16 (Pro- rata)	2016-17	2017-18	2018-19
	Allowed after true-up in this order	68.16	161.66	156.61	151.75

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD

72. The Petitioner has claimed combined tariff for the transmission assets for the 2019-24 tariff period and has submitted the tariff forms combining the transmission assets into a single asset. Accordingly, as per proviso (i) of Regulation 8(1) of the 2019 Tariff Regulations, single tariff for the combined asset is allowed for the 2019-24 tariff period.

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

					(₹ in lakh)
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	360.05	360.35	360.35	360.35	360.35
Interest on Loan	282.49	251.87	221.52	191.14	160.66
Return on Equity	383.20	383.52	383.52	383.52	383.52
Interest on Working Capital	360.18	372.95	385.96	399.67	413.12
O&M Expenses	31.12	31.28	31.39	31.53	31.61
Total	1417.04	1399.97	1382.74	1366.21	1349.26

74. The details of the IWC claimed by the Petitioner for the 2019-24 period are as

follows:

					(₹ in lakh
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	30.02	31.08	32.16	33.31	34.43
Maintenance Spares	54.03	55.94	57.89	59.95	61.97
Receivables	174.23	172.60	170.46	168.44	165.89
Total Working Capital	258.28	259.62	260.52	261.70	262.29
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	31.12	31.28	31.39	31.53	31.61



Page 36 of 65

Effective Date of Commercial Operation (E-COD)

75. The Petitioner has claimed the E-COD of the Combined Asset as 6.12.2015. E-COD of the Combined Asset has been worked out based on the trued-up capital cost

and dates of commercial operation of the individual assets which is as follows:

Assets	Capital Cost as on 31.3.2019 (₹ in lakh)	COD	No. of days from COD of Asset from COD of Project	Weight of cost	Weighted days
Asset-1	4570.01	3.4.2015	213	67.29%	143.32
Asset-II(a)	1180.77	2.11.2015	0	17.39%	0.00
Asset-II(b)	1040.90	2.11.2015	0	15.33%	0.00
Total	6791.69			100.00%	143.32
Effective COI	11.6.2015				

76. The E-COD is used to determine the lapsed life of the project as a whole which works out as 3 (three) years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD).

Weighted Average Life (WAL) of the Project

77. The life as defined in Regulation 33 of the 2019 Tariff Regulations has been considered for determination of Weighted Average Life. 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 WAL has been used as the useful life of the project as a whole. WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2019 and their respective life as specified in the 2019 Tariff Regulations. The element-wise life as defined in the regulations prevailing at the time of actual COD of individual assets has been considered for this purpose. The life as defined in the 2019 Tariff Regulations has been considered

for determination of WAL. Accordingly, the WAL of all the transmission assets commissioned during 2014-19 period has been worked out as 31 years as follows:

Particulars	Life (in years) (1)	Capital Cost as on 31.3.2019 (₹ in lakh) (2) [#]	Weighted Cost (₹ in lakh) (3) = (1) * (2)	Weighted Avg. Life of Asset (in years) (4) = (3) / (2)
Building Civil Works & Colony	25.00	335.75	8393.78	
Transmission Line	35.00	3491.65	122207.87	
Sub Station	25.00	2779.02	69475.62	29.79 years (rounded off
PLCC	15.00	121.36	1820.33	to 30 years)
I.T. Equipment	6.67	63.90	426.01	
Total		6791.69	202323.60	

* The 500 MVA ICT III at Solapur Sub-station was capitalised in 2011-12, which is shifted and recapitalised in the instant transmission system on 2.11.2015, has completed 2 years of useful life. The capital cost of 500 MVA ICT III at Solapur Sub-station i.e. ₹1040.90 lakh is included in the capital cost of sub-station for computation of WAL. However, the useful life is considered as 25 years to compute the WAL for the 2019-24 tariff period.

78. WAL as on 1.4.2019 as determined above is applicable prospectively (i.e. for

2019-24 tariff period onwards) and no retrospective adjustment of depreciation in

previous tariff period is required to be done. As discussed above, the Effective COD of

the assets is 11.6.2015 and the elapsed life of the project as a whole works out as 3

years as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from Effective

COD). Accordingly, WAL has been used to determine the remaining useful life as on

31.3.2019 to be 27 years.

Capital Cost

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

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

(2) The Capital Cost of a new project shall include the following:
(a) The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;

Page 38 of 65

(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;

(I) 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 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 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

Order in Petition No. 288/TT/2022

Page 39 of 65

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."

80. The Petitioner has claimed the capital cost of the Combined Asset during 2019-

24 period as follows:

			(₹ in lakh)	
Asset	Capital Cost claimed as on 31.3.2019	ACE Claimed in 2019-24	Capital Cost claimed as on 31.3.2024	
Asset-I	4570.01	11.43	4581.44	
Asset-II(a)	1184.20	0.00	1184.20	
Asset-II(b)	1040.90	0.00	1040.90	
Total	6795.11	11.43	6806.54	



81. The capital cost of ₹6791.69 lakh as on 31.3.2019 has been worked out by the

Commission and considered as the opening capital cost as on 1.4.2019 for

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

Additional Capital Expenditure (ACE)

82. Regulation 24 and 25 of the 2019 Tariff Regulations provide as follows:

"24. Additional Capitalisation within the original scope and upto the cut-off date:

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

- (a) Undischarged liabilities recognized to be payable at a future date;
- (b) Works deferred for execution;
- (c) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23of 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 additional capital expenditure 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.

Order in Petition No. 288/TT/2022

Page 41 of 65

(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

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

83. The Petitioner has submitted that the ACE projected to be incurred during 2019-

20 is on account of undischarged liability towards final payment/withheld payment due to contractual exigencies for works executed within the cut-off date. The Petitioner has submitted the following ACE for the Asset-I claimed under 25(1)(d) of the 2019 Tariff Regulations:

		(₹ in lakh)
Asset	Asset Type	Projected ACE (2019-24)
Asset-I	Transmission Line	11.43

84. Madhya Pradesh Power Management Company Limited (MPPMCL), Respondent No. 1 has submitted vide affidavit dated 21.11.2022 that the Petitioner has proposed ACE of ₹11.43 lakh on account of land compensation in 400 kV Solapur Transmission Line in 2019-20. The Petitioner has not supported its contention with proper documents and details and has also not justified the same. Accordingly, has prayed that the ACE may be deferred till true up.

85. In response to this, the Petitioner has submitted vide affidavit dated 15.12.2022 that they have submitted the liability flow statement vide affidavit dated 16.8.2022, the ACE of ₹11.43 lakh claimed for 2019-20 pertains to the balance and retention payment

paid to Geoinfosys Technologies towards transmission line package. The details of ACE

incurred/projected after cut-off date is as follows:

	(₹ in lakl					
S. No	Work Description	Agency	ACE in 2019-20	Reasons for expenditure beyond cut-off		
1	Land Compensation in 400 kV Solapur Solapur TL	Farmers	11.43 (as per Regulation 25(1)(a) and (b))	As per GR of Maharashtra State 2010 later revised in 2017, Land compensation for tower base (and for corridor also as per revised GR 2017) has to be paid in case of all the transmission lines. For payment of land compensation, revenue department has to verify the land details and ownership details for each and every tower as per their records and they have to finalize the compensation amount for each farmer as per total area of land and type of land involved. However, land compensation assessment from revenue department not received till date, hence payments could not be made earlier. Presently rigorous follow-ups are being made with revenue department for finalization of land compensation and is expected to complete in 2019- 20 Presently security deposits and few withheld payments against minor punch points are pending which are expected to be disbursed in 2019-20		



86. We have considered the submissions made by the Petitioner and MPPMCL. The ACE claimed by the Petitioner for Asset-I has been allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations on account of liabilities for works executed prior to the cut-off date, subject to true-up as per actuals and on submission of documentary evidence(s). Accordingly, the capital cost considered for the Combined Asset for the 2019-24 tariff period is as follows:

		(₹ in lakh)
Capital Cost as on 1.4.2019	ACE 2019-24	Capital Cost as on 31.3.2024
6791.69	11.43	6803.12

Debt-Equity ratio

87. Regulation 18 of the 2019 Tariff Regulations provides as follows:

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

Provided that:

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

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

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

(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019,



Page 44 of 65

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.

(6) Any expenditure incurred for the emission control system during the tariff period as may be admitted by the Commission as additional capital expenditure for determination of supplementary tariff, shall be serviced in the manner specified in clause (1) of this Regulation."

88. The debt-equity considered for the purpose of computation of tariff for the 2019-

24 tariff period is allowed as per Regulation 18(3) of the 2019 Tariff Regulations. The

debt-equity considered for the purpose of computation of tariff for the 2019-24 tariff

period is as follows:

Particulars	Capital Cost as on 1.4.2019 (₹ in lakh)	(in %)	ACE (2019-24)	(in %)	Capital Cost as on 31.3.2024 (≹ in lakh)	(in %)
Debt	4780.52	70.39	8.00	70.00	4788.52	70.39
Equity	2011.17	29.61	3.43	30.00	2014.60	29.61
Total	6791.69	100.00	11.43	100.00	6803.12	100.00

Depreciation

89. Regulation 33 of the 2019 Tariff Regulations provides as follows:

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

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

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

(3) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset:

Provided that the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable;

Provided further that in case of hydro generating stations, the salvage value shall be as provided in the agreement, if any, signed by the developers with the State Government for development of the generating station:

Provided also that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff:

Provided also that any depreciation disallowed on account of lower availability of the generating station or unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life or the extended life.

(4) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in **Appendix-I** to these regulations for the 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



Page 46 of 65

the station shall be spread over the balance useful life of the assets.

(6) In case of the existing projects, the balance depreciable value as on 1.4.2019 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2019 from the gross depreciable value of the assets.

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

(8) In case of de-capitalization of assets in respect of generating station or unit thereof or transmission system or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the decapitalized asset during its useful services.

(9) Where the emission control system is implemented within the original scope of the generating station and the date of commercial operation of the generating station or unit thereof and the date of operation of the emission control system are the same, depreciation of the generating station or unit thereof including the emission control system shall be computed in accordance with Clauses (1) to (8) of this Regulation.

(10) Depreciation of the emission control system of an existing or a new generating station or unit thereof where the date of operation of the emission control system is subsequent to the date of commercial operation of the generating station or unit thereof, shall be computed annually from the date of operation of such emission control system based on straight line method, with salvage value of 10%, over a period of

a) twenty five years, in case the generating station or unit thereof is in operation for fifteen years or less as on the date of operation of the emission control system; or

b) balance useful life of the generating station or unit thereof plus fifteen years, in case the generating station or unit thereof is in operation for more than fifteen years as on the date of operation of the emission control system; or

c) ten years or a period mutually agreed by the generating company and the beneficiaries, whichever is higher, in case the generating station or unit thereof has completed its useful life."

90. We have considered the submissions of the Petitioner. The IT equipment has

been considered as part of the Gross Block and depreciated using WAROD (as placed

at Annexure-II). WAROD has been worked out 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 as 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 Combined Asset for the 2019-24 tariff period is as follows:

						(₹ in lakh)
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Depreciation					
А	Opening Gross Block	6791.69	6803.12	6803.12	6803.12	6803.12
В	Additional Capitalisation	11.43	0.00	0.00	0.00	0.00
С	Closing Gross Block (A+B)	6803.12	6803.12	6803.12	6803.12	6803.12
D	Average Gross Block (A+C)/2	6797.40	6803.12	6803.12	6803.12	6803.12
Е	Weighted average rate of Depreciation (WAROD) (in %)	5.29	5.29	5.29	5.29	5.29
F	Balance useful life of the asset at the beginning of the year (Year)	27	26	25	24	23
G	Elapsed life at the beginning of the year (Year)	3	4	5	6	7
Н	Aggregate Depreciable Value	6124.05	6129.19	6129.19	6129.19	6129.19
I	Depreciation during the year	359.87	360.17	360.17	360.17	360.17
J	Cumulative Depreciation	1810.07	2170.24	2530.41	2890.58	3250.75
К	Remaining Depreciable Value (H-I)	4313.98	3958.95	3598.78	3238.61	2878.44

Interest on Loan (IoL)

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

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

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

(3) The repayment for each of the year of the tariff period 2019-24 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and



Page 48 of 65

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.

(5a) The rate of interest on loan for installation of emission control system shall be the weighted average rate of interest of actual loan portfolio of the emission control system or in the absence of actual loan portfolio, the weighted average rate of interest of the generating company 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."

92. The weighted average rate of IoL has been considered on the basis of rate

prevailing as on 1.4.2019. Accordingly, the floating rate of interest, if any, shall be

considered at the time of true up. IoL has been allowed in accordance with Regulation

32 of the 2019 Tariff Regulations. IoL allowed for the Combined Asset for 2019-24 tariff

period is as follows:

						(₹ in lakh)
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Interest on Loan					
А	Gross Normative Loan	4780.52	4788.52	4788.52	4788.52	4788.52
В	Cumulative Repayments upto Previous Year	1450.20	1810.07	2170.24	2530.41	2890.58
С	Net Loan-Opening (A-B)	3330.32	2978.45	2618.28	2258.11	1897.94
D	Additions	8.00	0.00	0.00	0.00	0.00



Page 49 of 65

	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Е	Repayment during the year	359.87	360.17	360.17	360.17	360.17
F	Net Loan-Closing (C+D- E)	2978.45	2618.28	2258.11	1897.94	1537.77
G	Average Loan (C+F)/2	3154.38	2798.37	2438.20	2078.03	1717.86
н	Weighted Average Rate of Interest on Loan (in %)	8.4481	8.4303	8.4315	8.4315	8.4263
Ι	Interest on Loan (G*H)	266.48	235.91	205.58	175.21	144.75

Return on Equity (RoE)

93. Regulation 30 and Regulation 31 of the 2019 Tariff Regulations provide as

follows:

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

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

Provided that return on equity in respect of additional capitalization after cutoff date beyond the original scope, excluding additional capitalization on account of emission control system, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%.

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:



Page 50 of 65

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.

(3) The return on equity in respect of additional capitalization on account of emission control system shall be computed at the base rate of one-year marginal cost of lending rate (MCLR) of the State Bank of India as on 1st April of the year in which the date of operation (ODe) occurs plus 350 basis point, subject to ceiling of 14%;"

"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 of generation or transmission, as the case may be) shall be excluded for the calculation of effective tax rate.

(2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:

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

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

Illustration-

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

Rate of return on equity = 15.50/(1-0.2155) = 19.758%

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

- (a) Estimated Gross Income from generation or transmission business for FY 2019-20 is Rs 1,000 crore;
- (b) Estimated Advance Tax for the year on above is Rs 240 crore;

- (c) Effective Tax Rate for the year 2019-20 = Rs 240 Crore/Rs 1000 Crore = 24%;
- (d) Rate of return on equity = 15.50/(1-0.24) = 20.395%.

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2019-24 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee, as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long term customers, as the case may be, on year to year basis."

94. 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. RoE allowed for the Combined Asset for 2019-24 tariff period is as follows:

						(₹ in lakh)
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Return on Equity					
А	Opening Equity	2011.17	2014.60	2014.60	2014.60	2014.60
В	Additions	3.43	0.00	0.00	0.00	0.00
С	Closing Equity (A+B)	2014.60	2014.60	2014.60	2014.60	2014.60
D	Average Equity (A+C)/2	2012.89	2014.60	2014.60	2014.60	2014.60
Е	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
Н	Return on Equity (D*G)	378.06	378.38	378.38	378.38	378.38

Operation & Maintenance Expenses (O&M Expenses)

95. The O&M expenses claimed by the Petitioner for the Combined Asset for 2019-

24 tariff period are as follows:

Dentioulene		Co	mbined Ass	et			
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24		
Transmission line							
(i) D/C 400 kV Solapur (PC	G) – Solapur	(NTPC)					
Bay(s)							
(i) 400 kV Bays: 3 nos.							
(ii) 220 kV Bays: 3 nos.							
(iii) 400 kV Sub-station ICT	: Solapur ICT						
220 kV Bays	3	3	3	3	3		
Norms (₹ lakh/Bay)	22.51	23.3	24.12	24.96	25.84		
400 kV Bays	3	3	3	3	3		
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91		
D/C 4 conductors (km)	11.17	11.17	11.17	11.17	11.17		
Norms (₹ lakh/km)	1.322	1.368	1.416	1.466	1.517		
400 kV ICT (1)	500	500	500	500	500		
Norms (₹ lakh/MVA)	0.358	0.371	0.384	0.398	0.411		
PLCC (2% of Capital Cost)	2.43	2.43	2.43	2.43	2.43		
Total O&M Expenses claimed (₹ in lakh)	360.18	372.95	385.96	399.67	413.12		

96. Regulation 35(3)(a) and Regulation 33(4) of the 2019 Tariff Regulations provides

as follows:

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24							
Norms for sub-station Bays	s (₹ Lakh pe	r 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 lin	nes (₹ Lakh	per km)										
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011							
Single Circuit (Bundled conductor with four sub- conductors)	0.755	0.781	0.809	0.837	0.867							

Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub- conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back- to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath- Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

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

Provided further that:

i. the operation and maintenance expenses for new HVDC bi-pole schemes



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

- *ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;*
- iii. the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2000 MW)shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);
- iv. the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme;
- v. the O&M expenses of ±800 kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme; and
- vi. the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three year

(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."

97. We have considered the submission of the Petitioner. The Petitioner has claimed

O&M Expenses separately for PLCC under Regulation 35(4) of the 2019 Tariff

Regulations for the Combined Asset @2% of its cost. The Petitioner has made similar

claim in other petitions as well. Though PLCC is a communication system, it has been

considered as part of the Sub-station in the 2014 Tariff Regulations and the 2019 Tariff

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

Dentiquiane		Co	mbined Ass	et	
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Transmission line					
(i) D/C 400kV Solapur (PG) – Solapur (NTPC)			
Bay(s)					
(i) 400 kV Bays: 3 nos.					
(ii) 220 kV Bays: 3 nos.					
Transformer					
(i) 400 kV Sub-station ICT:	Solapur ICT	. 111			
220 kV Bays	3	3	3	3	3
Norms (₹ lakh/Bay)	22.51	23.3	24.12	24.96	25.84
400 kV Bays	3	3	3	3	3
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
D/C 4 conductors (km)	11.17	11.17	11.17	11.17	11.17
Norms (₹ lakh/km)	1.322	1.368	1.416	1.466	1.517
400 kV ICT (1)	500	500	500	500	500
Norms (₹ lakh/MVA)	0.358	0.371	0.384	0.398	0.411
Total O&M Expenses (₹ in lakh)	357.75	370.52	383.53	397.24	410.69

Interest on Working Capital (IWC)

98. Regulation 34(1)(c), Regulation 34(3), Regulation 34(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

Order in Petition No. 288/TT/2022

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(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. - 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;"

99. 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%. The IWC is worked out in accordance with

Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest (ROI) considered is

12.05% (SBI 1-year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points)

for 2019-20, 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350

basis points) for 2020-21 and from 2021-22 onwards has been considered as 10.50%

(SBI 1-year MCLR applicable as on 1.4.2020 of 7.00% plus 350 basis points). The

components of the working capital and interest thereon allowed is as follows:

						(₹ in lakh)
	Particulars	culars 2019-20 2020-21				2023-24
	Interest on Working Capital					
A	Working Capital for O&M Expenses (O&M expenses for one month)	29.81	30.88	31.96	33.10	34.22
в	Working Capital for Maintenance Spares (15% of O&M expenses)	53.66	55.58	57.53	59.59	61.60



Page 57 of 65

	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Working Capital for Receivables					
С	(Equivalent to 45 days of annual fixed	171.25	169.37	167.00	164.96	162.43
	cost / annual transmission charges)					
D	Total Working Capital (A+B+C)	254.73	255.82	256.49	257.65	258.26
Е	Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
F	Interest on working capital (D*E)	30.69	28.78	26.93	27.05	27.12

Annual Fixed Charges of the 2019-24 Tariff Period

100. The transmission charges allowed for 2019-24 tariff period are summarised as

follows:

					(₹ in lakh)
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	359.87	360.17	360.17	360.17	360.17
Interest on Loan	266.48	235.91	205.58	175.21	144.75
Return on Equity	378.06	378.38	378.38	378.38	378.38
O&M Expenses	357.75	370.52	383.53	397.24	410.69
Interest on Working Capital	30.69	28.78	26.93	27.05	27.12
Total	1392.85	1373.76	1354.59	1338.05	1321.11

Filing Fee and Publication Expenses

101. The Petitioner has prayed reimbursement of fee paid by it for filing the Petition and publication expenses.

102. We have considered the submissions of the Petitioner. 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.

License Fee and RLDC Fees

103. The Petitioner has sought reimbursement of licensee fee in accordance with Regulation 70(4) of the 2019 Tariff Regulations for 2019-24 tariff period. The Petitioner shall be entitled for reimbursement of licence fee in accordance with Regulation 70(4)

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

Goods and Services Tax

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

105. MPPMCL has submitted that GST is not applicable on transmission services, hence the same may be disallowed. In response, the Petitioner reiterated its submissions.

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

Security Expenses

107. The Petitioner has submitted that security expenses for the transmission assets are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and consequential IWC.

108. We have considered the submissions of the Petitioner. The Petitioner has claimed consolidated security expenses on projected basis for 2019-24 tariff period on

the basis of actual security expenses incurred in 2018-19 in Petition No. 260/MP/2020. The Commission vide order dated 3.8. 2021 in Petition No. 260/MP/2020 approved security expenses from 1.4.2019 to 31.3.2024. Therefore, security expenses will be shared in terms of the order dated 3.8.2021 in Petition No. 260/MP/2020. Therefore, the Petitioner's prayer in the instant petition for allowing it to file a separate petition for claiming the overall security expenses and consequential IWC has become infructuous.

Capital Spares

109. 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

110. With effect from 1.7.2011, sharing of transmission charges for inter-State transmission systems was governed by the 2010 Sharing Regulations and with effect from 1.11.2020 (after repeal of the 2010 Sharing Regulations), sharing of transmission charges is governed by the 2020 Sharing Regulations. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of the 2010 Sharing Regulations or the 2020 Sharing Regulations, as applicable, as provided in Regulation 43 of the 2014 Tariff Regulations for the 2014-19 tariff period and Regulation 57 of the 2019 Tariff Regulations for the 2019-24 tariff period.

111. To summarise:

a) The trued-up Annual Fixed Charges (AFC) allowed for 2014-19 tariff period are:

				(₹ in lakh)
Particulars	2015-16	2016-17	2017-18	2018-19
Asset-I	747.15	853.14	889.61	887.22
Asset-II (a)	134.40	369.52	395.43	414.99
Asset-II (b)	68.16	161.66	156.61	151.75

b) AFC allowed for the 2019-24 tariff period in this order is as follows:

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24					
AFC	1392.85	1373.76	1354.59	1338.05	1321.11					

112. Annexure-I and Annexure-II given hereinafter form part of the instant order.

113. This order disposes of Petition No. 288/TT/2022 in terms of above discussions and findings.

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



Annexure-I

Asset-I

2014-19	Admitted Capital Cost as on		ACE (₹ in la			Admitted Capital Cost	Rate of	•	•		eciation as per Regulations (₹ in lakh)	
Capital Expenditure	1.4.2014/COD (₹ in lakh)	2015-16	2016-17	2017-18	Total	as on 31.3.2019 (₹ in lakh)	Depreciation as per Regulations	2015-16	2016-17	2017-18	2018-19	
Building Civil Works & Colony	68.15	92.79	54.85	23.57	171.80	239.95	3.34%	3.83	6.29	7.60	8.00	
Transmission Line	2734.44	377.51	378.91	0.57	757.22	3491.65	5.28%	154.34	174.31	184.33	184.35	
Sub Station	195.48	353.69	59.02	117.39	531.23	726.71	5.28%	19.66	30.55	35.21	38.34	
PLCC	26.04	37.07	6.18	12.30	55.67	81.71	6.33%	2.82	4.19	4.78	5.17	
IT Equipment (Incl. Software)	29.68	0.31	0.00	0.00	0.31	29.99	5.28%	1.58	1.58	1.58	1.58	
Total	3053.78	861.37	498.96	153.83	1516.23	4570.01	Total	182.23	216.93	233.50	237.45	
						•	Gross Block I lakh)	3484.47	4164.63	4491.03	4568.98	
							Average Rate reciation	5.23%	5.21%	5.20%	5.20%	

Asset-II(a)

2014-19	Admitted Capital		ACE (₹ in la			Admitted Capital Cost	Rate of	(₹		tion as per Regulations ^f in lakh)		
Capital Expenditure	Cost as on 1.4.2014/COD (₹ in lakh)	2015-16	2016-17	2017-18	Total	as on 31.3.2019 (₹ in lakh)	Depreciation as per Regulations	2015-16	2016-17	2017-18	2018-19	
Building Civil Works & Colony	33.87	39.63	9.27	12.64	61.93	95.80	3.34%	1.79	2.61	2.98	3.19	
Transmission Line	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	
Sub Station	417.93	302.67	95.00	193.59	593.48	1011.41	5.28%	30.06	40.56	48.17	53.34	
PLCC	21.43	9.76	2.05	6.40	18.21	39.65	6.33%	1.67	2.04	2.31	2.51	
IT Equipment (Incl. Software)	33.76	0.00	0.14	0.00	0.15	33.91	5.28%	1.78	1.79	1.79	1.79	
Total	507.00	352.07	106.46	212.63	673.77	1180.77	Total	35.30	46.99	55.25	60.84	
							Gross Block 1 lakh)	683.04	912.30	1071.85	1179.47	
							Average Rate reciation	5.17%	5.15%	5.15%	5.16%	

Asset-II(b)

2014-19	Admitted Capital Cost as on	ACE (₹ in lakh)				Admitted Capital Cost	Rate of	Annual	Depreciation (₹ in		llations
Capital Expenditure	1.4.2014/COD (₹ in lakh)	2015-16	2016-17	2017-18	Total	as on 31.3.2019 (₹ in lakh)	Depreciation as per Regulations	2015-16	2016-17	2017-18	2018-19
Sub Station	1040.90	-	-	-	-	1040.90	5.28%	54.96	54.96	54.96	54.96
Total	1040.90	-	-	-	-	1040.90	Total	54.96	54.96	54.96	54.96
						•	Gross Block n lakh)	1040.90	1040.90	1040.90	1040.90
						•	Average Rate reciation	5.28%	5.28%	5.28%	5.28%

Annexure-II

Combined Asset

2019-24	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE (₹ in lakh)		Admitted Capital Cost as on	Rate of Depreciation	Annual Depreciation as per Regulations (₹ in lakh)				
Capital Expenditure		2019-20	Total	31.3.2024 (₹ in lakh)	as per Regulations	2019-20	2020-21	2021-22	2022-23	2023-24
Building Civil Works & Colony	335.75	-	-	335.75	3.34%	11.21	11.21	11.21	11.21	11.21
Transmission Line	3491.65	11.43	11.43	3503.08	5.28%	184.66	184.96	184.96	184.96	184.96
Sub Station	2779.02	-	0.00	2779.02	5.28%	146.73	146.73	146.73	146.73	146.73
PLCC	121.36	-	0.00	121.36	6.33%	7.68	7.68	7.68	7.68	7.68
IT Equipment (Incl. Software)	63.90	0.00	0.00	63.90	15.00%	9.59	9.59	9.59	9.59	9.59
Total	6791.69	11.43	11.43	6803.12		359.87	360.18	360.18	360.18	360.18
			Average Gross Block (₹ in lakh)		6797.40	6803.12	6803.12	6803.12	6803.12	
				Weighted Average Rate of Depreciation		5.29%	5.29%	5.29%	5.29%	5.29%