

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 24/TT/2023

Coram:

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

Date of Order: 22.11.2023

In the matter of:

Determination of transmission tariff for the 2019-24 tariff period for the Stage-II transmission assets of the transmission system associated with Mahan Thermal Power Plant (MTPP) of EPTCL.

And in the matter of:

Essar Power Transmission Company Limited,
Lower Ground Floor,
Hotel Conclave Boutique,
A-20, Kailash Colony,
New Delhi-110048.

.....Petitioner

Vs

1. Central Transmission Utility of India Limited,
Plot No. 2, Near IFFCO Chowk Metro Station,
Sector 29, Gurugram-122001.
2. Power Grid Corporation of India Limited,
B-9, Qutub Institutional Area,
Katwaria Sarai, New Delhi-110016.
3. Power System Operation Corporation Limited,
National Load Despatch Centre,
B-9, Qutub Institutional Area,
Katwaria Sarai, New Delhi-110016.
4. Western Region Power Committee,
F-3, MIDC Area, Marol, Opp. SEEPZ,
Central Road, Andheri East,
Mumbai-400093.
5. M. P. Power Management Company Limited,
Block No.11, Shakti Bhawan,



Vidyut Nagar, Jabalpur-482008.

6. Western Regional Load Despatch Centre,
F-3, Krantiveer Lakhuj Salve Marg, SEEPZ,
Andheri East, Mumbai, Maharashtra-400096.
7. Mahan Energen Limited (formerly Essar Power M.P. Limited),
Adani House, C-105,
Anand Niketan, New Delhi-110021.

...Respondents

For Petitioner: Ms. Swapna Seshadri, Advocate, EPTCL
Ms. Shivani Verma, Advocate, EPTCL
Shri Paritosh Bhasin, Advocate, EPTCL

For Respondent: Shri Hemant Singh, Advocate, MEL
Shri Robin Kumar, Advocate, MEL

ORDER

The present petition has been filed by Essar Power Transmission Company Limited (EPTCL) for the determination of transmission tariff for the 2019-24 tariff period for the Stage-II transmission assets of the transmission system associated with Mahan Thermal Power Plant (MTPP) of EPTCL.

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

I. Admit the application for determination of transmission tariff / provisional transmission tariff (annual fixed cost) for the mentioned assets in the petition i.e. Stage - 2 of Essar Power Transmission Company Limited (EPTCL), which shall form part of the inter-state transmission system for FY-2019-20 to FY 2034-24

II. Determine the Annual fixed cost and transmission tariff / provisional transmission tariff for the mentioned assets in the petition i.e. Stage - 2 of Essar Power Transmission Company Limited (EPTCL) for FY 2019-20 to FY 2023-24.

III. Direct EPMPL/MEL to provide letter of credit for the portion of tariff to be borne by EPMPL/MEL.

IV. Without prejudice to the Petitioner's case in Appeal No. 71/2023 before the Hon'ble Tribunal to direct that MEL's portion of the tariff be paid out of the PoC pool in the event that MEL succeeds in Appeal No. 71/2023;

V. Condone any inadvertent omissions, errors, short comings and permit the petitioner to add/ change/ modify/ alter this filing and make further submissions as may be required at a future date; and



Vi. Pass such order and further orders as are deemed fit and proper in the facts and circumstances of the case.”

Background

3. EPTCL was granted a transmission licence by the Commission vide order dated 10.4.2008 in Petition No. 157 of 2007 to develop the transmission system associated with MTPP. The scope of work under the transmission system as per the order dated 10.4.2018 in Petition No. 157/2007 is as follows:

Transmission Lines

- i) 400 kV D/C (quad conductor) transmission line from Mahan to Sipat Pooling Sub-station
- ii) LILO of existing 400 kV S/C Vindyanchal-Korba transmission line of PGCIL at Mahan
- iii) 400 kV D/C (twin conductor) transmission line from Gandhar NTPC switch yard to Hazira

Sub-stations

- i) 3X500 MVA, 400/220 kV sub-station at Hazira
- ii) 2x50 MVAR line reactors at Sipat pooling sub-station
- iii) 2x50 MVAR line reactors at Mahan
- iv) 1x80 MVAR, 420 kV Switchable bus reactors at Mahan TPS along with its associated 400 kV bay
- v) 2 numbers 400 kV line bays at Sipat pooling sub-station
- vi) 2 numbers 400 kV line bays at Gandhar (NTPC) switchyard
- vii) 4 numbers 400 kV line bays at Mahan TPS

4. The transmission licence was amended on the request of the Petitioner in order to accommodate the proposed third unit of 600 MW of its subsidiary company, i.e. Essar Power Madhya Pradesh Ltd. (EPMPL), at Mahan TPP. Accordingly, the configuration of the Mahan-Sipat Transmission Line was upgraded from 400 kV D/C triple moose conductor to 400 kV D/C quad moose conductor vide order dated 15.9.2009 by the Commission on the condition that the increased cost on account of the upgradation shall not be passed on to the consumers. The relevant portion of the order dated 15.9.2009



is as follows:

“2. The licensee vide its affidavit dated 29.8.2009 has submitted that one of its group company, namely Essar Power M.P. Limited (EPMPL) is in the process of setting up 2 x 600 MW pit head coal fired thermal power project in the State of M.P. for which licensee is constructing the transmission system. The licensee has further submitted that at the request of EPMPL, it has decided to change the configuration of 400 kV D/C Triple, Mahan-Sipat transmission line from Triple conductor to Quad Moose conductor, keeping in view future expansion for the following reasons, namely:

- (i) To minimize the usage of forest area; and*
- (ii) To optimize the right of way (ROW).*

3. According to the licensee, the Central Transmission Utility vide letter No.C/ENG/SEF/W/06/MAHAN, dated 8.5.2009 has conveyed it's no objection to the change of configuration from Triple conductor to Quad Moose conductor. EPMPL vide letter dated 21.8.2009 has confirmed that the additional tariff on account of increase in the construction cost of the transmission system because of change in configuration from Triple conductor to Quad Moose conductors shall not be passed on the consumers in the State of Madhya Pradesh, for transmission of power allocated from the generating station.

4. We have considered the request of the applicant and approve the modification in the configuration from Triple conductor to Quad Moose conductor for 400 kV D/C Mahan-Sipat transmission line.”

5. The assets covered in the transmission licence were put into commercial operation by the Petitioner in two stages i.e. Stage-I and Stage-II. The details of the transmission assets under Stage-I and the transmission assets under Stage-II are given in the following table. The Petitioner has filed the instant petition for the determination of the tariff for Stage-II transmission assets for the 2019-24 tariff period.

Stage-I

I	Transmission Lines	Units (in km)
1	400 kV D/C (twin conductor) transmission line from Gandhar (NTPC) switchyard to Hazira	104.60
II	400/220 kV GIS Sub-station at Hazira	Units (in numbers)
1	500 MVA (400 kV / 220 kV) transformers at Hazira	3*
2	220 kV Bays at Hazira	2
3	400 kV Sub-station and line bays (GIS) at Hazira	5
4	400 kV line bays (GIS) at Gandhar	2#
5	400 kV LILO line Bays at Mahan	2

**2 out of 3 transformers commissioned*

#2 Bays at Gandhar developed, owned and maintained by NTPC Ltd.



Stage-II

I	Transmission Lines	Units (in km)
1	400 kV D/C Quad Moose transmission line from Mahan TPP to Sipat Substation	336.70
II	Line Bays	Units (in Numbers)
1	400 kV line bays at Mahan and Sipat	4
III	Reactors	Units (in Numbers)
1	400 kV 80 MVAR switchable bus reactor at EPMPL	1
2	50 MVAR switchable line reactors at MPMPL	2
3	50 MVAR line reactors at Sipat PS	2

6. The transmission assets under Stage-I were put into commercial operation on 1.4.2013, and the Petitioner claimed its tariff from COD to 31.3.2014 in Petition No.173/TT/2013 and truing-up of the same for the 2009-14 period was done in Petition No.111/TT/2015. Both the petitions were disposed of vide combined order dated 15.6.2016, granting tariff for the transmission assets under Stage-I. Aggrieved with the order dated 15.6.2016, the Petitioner filed Review Petition No. 33/RP/2016 and the Commission vide order dated 28.2.2018 disposed of the Review Petition No. 33/RP/2016. The Petitioner has filed an appeal against the order dated 28.2.2018 before the Appellate Tribunal for Electricity (APTEL) and the same is pending adjudication.

7. The instant tariff petition covers transmission assets of Stage-II which are as follows:

Stage-II

I	Transmission Lines	Units (in km)
1	400 kV D/C Quad Moose transmission line from Mahan TPP to Sipat Substation	336.70
II	Line Bays	Units (in Numbers)
1	400 kV line bays at Mahan and Sipat	4
III	Reactors	Units (in Numbers)
1	400 kV 80 MVAR switchable bus reactor at EPMPL	1
2	50 MVAR switchable line reactors at MPMPL	2
3	50 MVAR line reactors at Sipat PS	2



8. As per the Commission's order dated 10.4.2008 in Petition No. 157/2007, the instant transmission system was scheduled to be put into commercial operation in October 2010. Accordingly, the scheduled COD of the transmission assets under Stage-II was 1.11.2010 (the first day of the next month in terms of the 2009 Tariff Regulations). However, the transmission assets under Stage-II were put into commercial operation on 22.9.2018.

9. The Commission vide order dated 14.3.2022 in Petition No. 145/TT/2018 granted a tariff from COD on 22.9.2018 to 31.3.2019 for the Stage-II of transmission assets. The Commission, in an order dated 14.3.2022, taking into consideration EPMPL's letter dated 21.8.2009, wherein EPMPL had agreed to bear the additional tariff on account of change in the conductor configuration of the Mahan-Sipat Transmission Line, held that the additional tariff on account of increase in the cost of Mahan Sipat Transmission Line due to change in conductor configuration from triple moose conductor to quad moose conductor will be exclusively borne by EPMPL. The relevant portion of the order dated 14.3.2022 is as follows:

"45. We, thus, note that vide letter dated 21.8.2009, EPMPL had agreed to bear additional tariff on account of change in conductor configuration (from triple moose to quad moose) of the 400 kV Mahan-Sipat Transmission Line. The Commission, taking cognizance of the said letter dated 21.8.2009 of EPMPL as well as taking into consideration no objection of CTU vide letter dated 8.5.2009, approved amendment to the transmission license of the Petitioner vide order dated 15.9.2009. Therefore, additional tariff on account of change in the configuration of conductor is required to be borne by EPMPL as committed by EPMPL in its letter dated 21.8.2009."

10. In terms of the Commission's order dated 14.3.2022, the transmission charges in respect of 76% of the capital cost (referred to as "Part-A of the tariff") of the Stage-II transmission assets are included in PoC computation and liability corresponding to the remaining 24% of the capital cost (referred to as "Part-B of the tariff") is not included in the PoC computation and has to be borne by EPMPL/Mahan Energy Limited (MEL).



11. Annual Fixed Charges (AFC) approved by the Commission in respect of the transmission assets under Stage-II for the 2014-19 tariff period in the order dated 14.3.2022 in Petition No. 145/TT/2018 are as follows:

Part-A of the tariff

(₹ in lakh)

Particulars	2018-19 (pro-rata for 191 days)
Depreciation	3256.96
Interest on Loan	6626.56
Return on Equity	3120.83
O & M Expenses	413.61
Interest on Working Capital	290.51
Total	13708.47

Part-B of the tariff

(₹ in lakh)

Particulars	2018-19 (pro-rata for 191 days)
Depreciation	933.29
Interest on Loan	1898.85
Return on Equity	894.28
O & M Expenses	51.14
Interest on Working Capital	79.89
Total	3857.44

12. The Petitioner has served the copy of the petition upon the Respondents, and notice regarding the filing of this tariff application has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the notices published by the Petitioner under Section 64 of the Electricity Act, 2003. Reply to the petition has been filed by MEL, Respondent No. 7.

13. The hearing in this matter was held on 26.7.2023 and the order was reserved.

14. This order is being issued considering the submissions made by the Petitioner in the petition, the Petitioner's affidavits dated 20.4.2023, 7.6.2023 and the reply filed by MEL, Respondent No. 7 vide affidavit dated 17.5.2023 and the Petitioner's rejoinder



vide affidavit dated 15.6.2023 and Written Submissions dated 17.8.2023.

15. Having heard the learned counsels of the Petitioner and the Respondents and having perused the material on record, we proceed to dispose of the petition.

16. The Commission, vide order dated 14.3.2022 in Petition No. 145/TT/2018 allowed the tariff in respect of Stage-II transmission assets from COD to 31.3.2019 period subject to truing up on the following tariff parameters:

- i) Debt-Equity ratio of 74.39:25.61 as on COD and as on 31.3.2019
- ii) Weighted Average rate of Depreciation (WAROD) of 5.28%. Further, the Stage-II assets will complete 12 years beyond the 2019-24 tariff period.
- iii) Weighted Average rate of Interest on Loan of 14.71%.
- iv) RoE as per Base Rate of 15.50%, MAT rate (2018-19) of 21.549% and Rate of RoE (pre-tax) of 19.758%.
- v) O&M Expenses for 336.50 km Mahan-Sipat double circuit (bundled conductor with four or more sub-conductors), 3 numbers of 400 kV reactor bays and 4 numbers of line bays.

17. The Commission directed the Petitioner to submit a petition for truing up of the transmission charges allowed *vide* order dated 14.3.2022 in Petition No. 145/TT/2018 for the period from COD to 31.3.2019 and determination of tariff for the 2019-24 tariff period as per the applicable tariff regulations within a period of 60 days, impleading all the beneficiaries and the DICs as Respondents. Accordingly, the Petitioner has filed the instant petition for the determination of the transmission tariff of the transmission assets under Stage-II for the 2019-24 tariff period in accordance with the 2019 Tariff Regulations.



18. The Petitioner has made the following submissions in the instant petition:

a) The Commission vide order dated 14.3.2022 divided the tariff payments between PoC pool (76% of the capital cost approved) and EPMPPL (24%) of the capital cost approved. Accordingly, the present petition has been filed for (a) tariff to be recovered through PoC and (b) tariff recoverable from EPMPPL. EPMPPL has since been renamed as MEL.

b) The details of the actual project cost and other details sought by the Commission were submitted during the adjudication of Petition No. 145/TT/2018. Accordingly, the tariff was determined in an order dated 14.3.2022 in Petition No. 145/TT/2018 on the basis of actuals and not on the basis of projections. Since there are no new costs associated with the Stage-II transmission assets, there is no need for true-up of the tariff determined vide order dated 14.3.2022 in Petition No. 145/TT/2018.

c) The capital cost of Stage-II of the transmission system claimed from the common pool is ₹117879.26 lakh and from EPML (now MEL) is ₹33776.98 lakh, as determined vide order dated 14.3.2022 as on COD.

d) Debt-Equity of 74.39:25.61, i.e. same as the 2014-19 period, is as follows:

Particulars	(₹ in lakh)	
	PoC Part	EPMPPL/MEL Part
Debt	87694.60	25129.39
Equity	30184.66	8649.59
Total	117879.26	33778.98

e) The Return on Equity (RoE) has been calculated @18.872% after grossing up the RoE with a MAT rate of 17.472% based on the formula given in Regulation 31(2) of the 2019 Tariff Regulations for the 2019-24 tariff period.



f) Interest on the loan for the 2019-24 tariff period has been calculated based on the actual rate of interest on the term applicable for the year and the Auditor's Certificate certifying the interest rate on the term loan has been attached.

g) Depreciation has been calculated as specified under Regulation 33 of the 2019 Tariff Regulations on the value base of the order dated 14.3.2022. Depreciation has been calculated annually based on the Straight Line Method and at rates specified in Appendix-I to the said Regulations.

h) O&M Expenses for the 2019-24 period have been claimed as per line length and a number of bays allowed in an order dated 14.3.2022 and norms as per Regulation 35(3)(a) of the 2019 Tariff Regulations. The Petitioner has claimed the insurance expenses for the Stage-II assets under the O&M head and has submitted document proof in support of the same.

19. Accordingly, following tariff has been claimed by the Petitioner for the 2019-24 period:

Part-A of the tariff		(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24	
Depreciation	6224.02	6224.02	6224.02	6224.02	6224.02	
Interest on Loan	11792.22	10889.73	9987.25	9084.77	8182.28	
Return on Equity	5669.13	5669.13	5669.13	5669.13	5669.13	
Interest on Working Capital	385.99	383.97	373.27	344.12	330.07	
O & M Expenses	683.76	926.19	992.80	636.63	646.33	
Total	24755.12	24093.04	23246.47	21958.67	21051.83	

Part-B of the tariff		(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24	
Depreciation	1783.53	1783.53	1783.53	1783.53	1783.53	
Interest on Loan	3379.13	3120.52	2861.90	2603.29	2344.68	
Return on Equity	1624.52	1624.52	1624.52	1624.52	1624.52	
Interest on Working Capital	106.72	103.27	99.54	95.82	91.85	
O & M Expenses	106.76	110.48	114.36	118.39	122.51	
Total	7000.66	6742.32	6483.85	6225.56	5967.09	

20. As stated above, the COD of the transmission assets under Stage-II is approved



as 22.9.2018. Further, the Commission has already condoned the time over-run of 2314 days out of 2882 days in order dated 14.3.2022 in Petition No. 145/TT/2018.

Capital Cost

21. Regulations 19 of the 2019 Tariff Regulations provides as follows:

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

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

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

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

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

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

(e) Capitalised initial spares subject to the ceiling rates in accordance with these regulations;

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

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

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

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

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

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

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

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

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

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

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

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



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

(4) The capital cost in case of existing or new hydro generating station shall also include:
(a) cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and
(b) cost of the developer's 10% contribution towards Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) and Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) project in the affected area.

(5) The following shall be excluded from the capital cost of the existing and new projects:
(a) The assets forming part of the project, but not in use, as declared in the tariff petition;
(b) De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:

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

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

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

(d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and

(e) Any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment.”

22. The Petitioner has claimed the following capital cost of Stage-II transmission assets for the 2019-24 period and has submitted an Auditor certificate dated 2.5.2022 in support of its claim:

(₹ in lakh)

	Particulars	Incurred upto 31.3.2020	Incurred for the period 2020-21	Incurred upto 31.3.2021
A	Direct cost (Hard cost)			
	a) Hard cost capitalised after COD	109537.08	319.57	109856.65
	b) Hard cost (Right of Way	4772.51	-	4772.51



	and Forest Clearance Expenses capitalised up to 31.3.2014			
B	Interest during construction paid to Bank/Financial institutions	77567.21	-	77567.21
C	Finance Charges	710.62	-	710.62
D	Incidental Expenditure during Construction	4420.25	-	4420.25
	Total	197007.07	319.57	197326.64

23. The Petitioner has submitted that 76% of the capital cost of the transmission assets under Stage-II as on 31.3.2019 and 31.3.2024 has to be recovered from common pool, which is about ₹117879.26 lakh and the details of the same is as follows:

(₹ in lakh)

	Capital cost as on 31.3.2019	Projected ACE					Estimated completion cost as on 31.3.2024
		2019-20	2020-21	2021-22	2022-23	2023-24	
Notional Loan	87694.60	-	-	-	-	-	87694.60
Notional Equity	30184.66	-	-	-	-	-	30184.66
Total	117879.26	-	-	-	-	-	117879.26

24. The Petitioner has submitted that 24% of the capital cost of the transmission assets under Stage-II as on 31.3.2019 and 31.3.2024 has to be recovered from EPMP/L/MEL, which is about ₹33778.98 lakh and the details of the same is as follows:

(₹ in lakh)

	Capital cost as on 31.3.2019	Projected ACE					Estimated completion cost as on 31.3.2024
		2019-20	2020-21	2021-22	2022-23	2023-24	
Notional Loan	25129.40	-	-	-	-	-	25129.40
Notional Equity	8649.58	-	-	-	-	-	8649.58
Total	33778.98	-	-	-	-	-	33778.98

25. We have considered the submissions of the Petitioner. The capital cost has been dealt with in line with Regulation 19(3) of the 2019 Tariff Regulations. The capital cost as admitted by the Commission as on 31.3.2019 for the transmission assets is considered for the transmission assets as on 1.4.2019 and the same is as follows:

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(₹ in lakh)

Particulars	Capital cost for considered as on 31.3.2019
a) Capital cost of Stage-II of the transmission system to be part of PoC	117879.26
b) Capital cost of Stage-II of the transmission system to be claimed from EPMP/MEL	33778.98

26. As stated above, taking into consideration EPMP's letter dated 21.8.2009, wherein EPMP had agreed to bear the additional tariff on account of change in the conductor configuration of the Mahan-Sipat Transmission Line, the Commission in order dated 14.3.2022 in Petition No. 145/TT/2018 held that the additional tariff on account of increase in cost of Mahan Sipat Transmission Line due to change in conductor configuration from triple moose conductor to quad moose conductor will be exclusively borne by EPMP. The relevant portions of the Commission's order dated 14.3.2022 is as follows:

“45. We, thus, note that vide letter dated 21.8.2009, EPMP had agreed to bear additional tariff on account of change in conductor configuration (from triple moose to quad moose) of the 400 kV Mahan- Sipat Transmission Line. The Commission, taking cognizance of the said letter dated 21.8.2009 of EPMP as well as taking into consideration no objection of CTU vide letter dated 8.5.2009, approved amendment to the transmission license of the Petitioner vide order dated 15.9.2009. Therefore, additional tariff on account of change in the configuration of conductor is required to be borne by EPMP as committed by EPMP in its letter dated 21.8.2009.

46. In terms of above, additional tariff on account of increase in cost of Mahan Sipat Transmission Line due to change in conductor configuration from triple moose conductor to quad moose conductor, is required to be determined that will be borne by EPMP.”

“48. It is observed that the difference between the cost of D/C transmission lines with quad moose conductor and D/C transmission lines with triple moose conductor is about ₹38 lakh in 2018-19, i.e. the year in which the Mahan-Sipat Transmission Line achieved COD (it is about ₹39 lakh in January 2022). Thus, the capital cost of D/C quad moose conductor is about 24% more than D/C triple moose conductor. Accordingly, in order to arrive at the capital cost corresponding to transmission line having configuration of triple conductor, 24% of the capital cost is required to be further reduced. Tariff corresponding to this 24% of capital cost is to be borne by EPMP. Tariff corresponding to the remaining 76% of the capital cost thus arrived shall be included in POC.”

27. MEL filed Review Petition No. 27/RP/2022 in Petition No. 145/TT/2018. The Commission vide order dated 16.1.2023 rejected the Review Petition No. 27/RP/2022 and the relevant portion of the order is as follows:



“28. We have considered the above contentions of the parties and have perused the impugned order. The Review Petitioner’s contention is that it cannot be saddled with any new liability after completion of CIRP. As stated above, the additional cost pertaining to quad moose conductor was agreed to be borne by EPMPL vide letter date 21.8.2009, on the basis of which the transmission licence of EPTCL was amended. Perusal of record reflects that there is categorical admission on the part of erstwhile EPMPL to bear the additional tariff on account of change in conductor configuration from triple moose conductor to quad moose conductor of 400 kV Mahan-Sipat Transmission Line through letter dated 21.8.2009 and CTUIL had also approved the amendment of the transmission licence vide letter dated 8.5.2009. Accordingly, the Commission had rightly arrived at the finding that ‘additional tariff on account of increase in cost of Mahan-Sipat Transmission Line due to change in conductor configuration from triple moose conductor to quad moose conductor, is required to be determined that will be borne by EPMPL’.

29. As regards relinquishment, EPMPL relinquished the entire LTA of 750 MW and 450 MW vide its letters dated 10.4.2017 and 30.4.2018 respectively. the said relinquishment was duly accepted by CTUIL vide its letters dated 19.5.2017 and 30.5.2018 for 750 MW (with effect from 12.4.2017 and 450 MW with effect from 4.5.2018, respectively). The amount claimed by CTUIL as dues in IBC proceedings pertained to relinquishment charges for triple moose conductor in terms of order dated 8.3.2019 in Petition No. 92/MP/2015.

30. Had the facts relating to execution of TSA dated 20.8.2008 alongwith its amendments, execution of fresh TSA dated 17.8.2012 on promulgation of the 2010 Sharing Regulations, termination of earlier TSA dated 20.8.2008 with amendments Order in Review Petition No. 27/RP/2022 Page 28 of 29 by deed of termination on 29.3.2014 or the fact that EPMPL was before the NCLT in CIRP, would have come in our knowledge at the time when we were adjudicating Petition No. 145/TT/2018, no material change would have been there in our findings as the Commission imposed liability on the erstwhile EPMPL based on the consent letter dated 21.8.2009 given by EPMPL to EPTCL. Further, the payment liability for period prior to culmination of IBC proceedings in terms of the impugned order dated 14.3.2022 is beyond the scope of the review jurisdiction.”

Additional Capital Expenditure

28. The Petitioner has claimed an amount of ₹15.17 lakh of ACE in 2019-20. The Petitioner was directed to submit the details of ACE and justification of the proposed ACE. The Petitioner has neither submitted the details of the ACE claimed for 2019-20 nor any justification for the proposed ACE. Therefore, ACE of ₹15.17 lakh of ACE in 2019-20 claimed by the Petitioner is disallowed.

Capital Cost for the 2019-24 tariff period

29. In view of the above, the capital cost considered with respect to the transmission assets for determination of the tariff for the 2019-24 tariff period is as follows:



Part-A of the tariff		(₹ in lakh)	
Particulars	Capital cost (as on COD)	Capital allowed as on 31.3.2024	cost as on
Notional Loan	87694.60	87694.60	
Notional Equity	30184.66	30184.66	
Total	117879.26	117879.26	

Part-B of the tariff		(₹ in lakh)	
	Capital cost (as on COD)	Capital allowed as on 31.3.2024	cost as on
Notional Loan	25129.40	25129.40	
Notional Equity	8649.58	8649.58	
Total	33778.98	33778.98	

Debt-Equity Ratio

30. 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, 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.”

31. The debt-equity considered for the purpose of computation of tariff for the 2019-24 tariff period in respect of Part-A of the tariff is as follows:

Funding	Capital cost as on COD (₹ in lakh)	(in %)	ACE during 2019-24 (₹ in lakh)	Capital cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	87694.60	74.39	-	87694.60	74.39
Equity	30184.66	25.61	-	30184.66	25.61
Total	117879.26	100.00	-	117879.26	100.00

32. The debt-equity considered for the purpose of computation of tariff for 2019-24 tariff period in respect of Part-B of the tariff is as follows:

Funding	Capital cost as on COD (₹ in lakh)	(in %)	ACE during 2019-24 (₹ in lakh)	Capital cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	25129.40	74.39	-	25129.40	74.39
Equity	8649.58	25.61	-	8649.58	25.61
Total	33778.98	100.00	-	33778.98	100.00

Depreciation

33. 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 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 de-capitalized 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.”

34. We have considered the submissions of the Petitioner. The depreciation has been worked out considering the admitted capital expenditure as on COD as per the rates of depreciation prescribed in the 2019 Tariff Regulations as per the details given in Annexure. Depreciation allowed in respect of the transmission assets for 2019-24 tariff period is as follows:

Part-A of the tariff						(₹ in lakh)
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Depreciation					
A	Opening Gross Block	117879.26	117879.26	117879.26	117879.26	117879.26
B	Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	117879.26	117879.26	117879.26	117879.26	117879.26
E	Average Gross Block (A+C)/2	117879.26	117879.26	117879.26	117879.26	117879.26
D	Freehold Land	0.00	0.00	0.00	0.00	0.00



	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
F	Weighted average rate of Depreciation (WAROD) (in %)	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%
G	Balance useful life of the asset	35	34	33	32	31
H	Elapsed life at the beginning of the year (Year)	0	1	2	3	4
I	Aggregate Depreciable Value	106091.33	106091.33	106091.33	106091.33	106091.33
J	Depreciation during the year	6224.02	6224.02	6224.02	6224.02	6224.02
K	Cumulative depreciation at the end of the year	9480.98	15705.01	21929.03	28153.06	34377.08
L	Remaining Depreciation value at the end of the year (I-K)	96610.35	90386.32	84162.30	77938.27	71714.25

Part-B of the tariff

(₹ in lakh)

	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Depreciation					
A	Opening Gross Block	33778.98	33778.98	33778.98	33778.98	33778.98
B	Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	33778.98	33778.98	33778.98	33778.98	33778.98
E	Average Gross Block (A+C)/2	33778.98	33778.98	33778.98	33778.98	33778.98
D	Freehold Land	0.00	0.00	0.00	0.00	0.00
F	Weighted average rate of Depreciation (WAROD) (in %)	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%
G	Balance useful life of the asset	35	34	33	32	31
H	Elapsed life at the beginning of the year (Year)	0	1	2	3	4
I	Aggregate Depreciable Value	30401.08	30401.08	30401.08	30401.08	30401.08
J	Depreciation during the year	1783.53	1783.53	1783.53	1783.53	1783.53
K	Cumulative depreciation at the end of the year	2716.82	4500.35	6283.88	8067.41	9850.94
L	Remaining Depreciation value at the end of the year (I-K)	27684.26	25900.73	24117.20	22333.67	20550.14

Interest on Loan (IoL)

35. 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 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.”

36. The Petitioner has claimed the weighted average rate of IoL based on its actual loan portfolio and rate of interest.

37. The IoL has been calculated based on the actual interest rate submitted by the Petitioner and in accordance with Regulation 32 of the 2019 Tariff Regulations. The IoL approved for the transmission assets under Stage-II is as follows:

(₹ in lakh)

	Particulars	Part-A of the tariff				
		2019-20	2020-21	2021-22	2022-23	2023-24
	Interest on Loan					
A	Gross Normative Loan	87694.60	87694.60	87694.60	87694.60	87694.60
B	Cumulative Repayment upto Previous Year	3256.96	9480.98	15705.01	21929.03	28153.06



	Particulars	Part-A of the tariff				
		2019-20	2020-21	2021-22	2022-23	2023-24
C	Net Loan-Opening	84437.64	78213.62	71989.59	65765.57	59541.54
D	Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
E	Repayment during the year	6224.02	6224.02	6224.02	6224.02	6224.02
F	Net Loan-Closing	78213.62	71989.59	65765.57	59541.54	53317.52
G	Average Loan	81325.63	75101.60	68877.58	62653.55	56429.53
H	Weighted Average Rate of Interest on Loan (in %)	14.50	14.50	14.50	14.50	14.50
H	Interest on Loan (G*H)	11792.22	10889.73	9987.25	9084.77	8182.28

(₹ in lakh)

	Particulars	Part-B of the tariff				
		2019-20	2020-21	2021-22	2022-23	2023-24
	Interest on Loan					
A	Gross Normative Loan	25129.40	25129.40	25129.40	25129.40	25129.40
B	Cumulative Repayment upto Previous Year	933.29	2716.82	4500.35	6283.88	8067.41
C	Net Loan-Opening	24196.11	22412.58	20629.05	18845.52	17061.99
D	Addition due to Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
E	Repayment during the year	1783.53	1783.53	1783.53	1783.53	1783.53
F	Net Loan-Closing	22412.58	20629.05	18845.52	17061.99	15278.46
G	Average Loan	23304.34	21520.81	19737.28	17953.75	16170.22
H	Weighted Average Rate of Interest on Loan (in %)	14.50	14.50	14.50	14.50	14.50
H	Interest on Loan (G*H)	3379.13	3120.52	2861.91	2603.29	2344.68

Return on Equity (RoE)

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

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

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

Provided that return on equity in respect of additional capitalization after cut-off date beyond the original scope, excluding additional capitalization on 7 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:*
 - 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 other than business of generation or transmission, as the case may be) shall be excluded for the calculation of effective tax rate.

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

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

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



Illustration-

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

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

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

(a) Estimated Gross Income from generation or transmission business for FY 2019-20 is Rs 1,000 crore

(b) Estimated Advance Tax for the year on above is Rs 240 crore;

(c) Effective Tax Rate for the year 2019-20 = Rs 240 Crore/Rs 1000 Crore =24%;

(d) Rate of return on equity = $15.50/(1-0.24) = 20.395\%$.

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

39. The Petitioner has submitted that the 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 will be trued-up with the actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. RoE allowed for the transmission assets under Stage-II is as follows:

(₹ in lakh)

Part-A of the tariff						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Return on Equity					
A	Opening Equity	30184.66	30184.66	30184.66	30184.66	30184.66
B	Additions	0.00	0.00	0.00	0.00	0.00
C	Closing Equity (A+B)	30184.66	30184.66	30184.66	30184.66	30184.66
D	Average Equity (A+C)/2	30184.66	30184.66	30184.66	30184.66	30184.66
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
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
H	Return on Equity (D*G)	5669.28	5669.28	5669.28	5669.28	5669.28

(₹ in lakh)

Part-B of the tariff						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Return on Equity					
A	Opening Equity	8649.58	8649.58	8649.58	8649.58	8649.58



Part-B of the tariff						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
B	Additions	0.00	0.00	0.00	0.00	0.00
C	Closing Equity (A+B)	8649.58	8649.58	8649.58	8649.58	8649.58
D	Average Equity (A+C)/2	8649.58	8649.58	8649.58	8649.58	8649.58
E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
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
H	Return on Equity (D*G)	1624.56	1624.56	1624.56	1624.56	1624.56

Operation & Maintenance Expenses (“O&M Expenses”)

40. The O&M Expenses claimed by the Petitioner is as follows:

Element	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
400 kV D/C (quad moose conductor) transmission line from Mahan TPP to Sipat Pooling Station (line length: 336.50 km)	683.76	926.19	992.80	636.63	646.33
400 kV Line bays at Mahan (2 numbers)					
400 kV Line bays at Sipat (2 numbers)					
400 kV bays of 80 MVAR bus reactor at Mahan (1 number)					

41. The Regulation 35(3)(a) 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
<i>Norms for sub-station Bays (₹ Lakh per bay)</i>					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
<i>Norms for Transformers (₹ Lakh per MVA)</i>					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
<i>Norms for AC and HVDC lines (₹ Lakh per km)</i>					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
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 (2500 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);*
- (iv) the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme;*
- (v) the O&M expenses of ±800 kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative*



O&M expenses for ± 800 kV, Bishwanath-Agra HVDC bi-pole scheme; and
 (vi) the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years.

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

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

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

42. We have considered the submissions of the Petitioner. O&M Expenses have been worked out as per the norms in the 2019 Tariff Regulations and the same are as follows:

Element	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
336.50 km Mahan-Sipat Double circuit (Bundled conductor with four or more sub-conductors) O&M Expenses allowed to the extent of 76%	338.09	349.85	362.13	374.91	387.96
3 number of 400 kV Reactor bays	96.45	99.84	103.35	106.98	110.73
4 number of line bays	128.6	133.12	137.8	142.64	147.64
Total O&M Expenses	563.14	582.81	603.28	624.53	646.33

43. O&M Expenses of 24% payable by EPMPPL is as follows:

Element	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
336.50 km Mahan-Sipat Double circuit (Bundled conductor with four or more sub-conductors) O&M Expenses allowed to the extent of 24% to be borne by EPMPPL.	106.76	110.48	114.36	118.39	122.51

44. The Petitioner has claimed the insurance premium under security expenses in



the 2019-24 tariff period. The details of the same is as follows:

Details	2019-20	2020-21	2021-22	2022-23	2023-24
Insurance premium	121	343	390	12	-

45. We have considered the submissions of the Petitioner. The 2019 Tariff Regulations do not provide for reimbursement for insurance premiums. Accordingly, the Petitioner's claim of insurance premium is disallowed.

Interest on Working Capital

46. 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

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

"(3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2019 or as on 1st April of the year during the tariff period 2019-24 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later:

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

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

"3. Definitions ...

(7) 'Bank Rate' means the one-year marginal cost of lending rate (MCLR) of the State Bank of India issued from time to time plus 350 basis points;"

47. The Petitioner has submitted that it has computed IWC for the 2019-24 period as provided under Regulation 34(1)(c) of the 2019 Tariff Regulations. The Petitioner has submitted that it has considered the rate of IWC as 12.05% as provided under



Regulation 34(3) of the 2019 Tariff Regulations. 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 are as follows:

(₹ in lakh)

Part-A of the tariff						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Interest on Working Capital					
A	Working Capital for O&M Expenses (O&M Expenses for 1 month)	46.93	48.57	50.27	52.04	53.86
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	84.47	87.42	90.49	93.68	96.95
C	Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	3028.20	2923.15	2810.18	2700.18	2583.07
D	Total Working Capital	3159.60	3059.14	2950.95	2845.90	2733.88
E	Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
F	Interest on Working Capital	380.73	344.15	309.85	298.82	287.06

(₹ in lakh)

Part-B of the tariff						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Interest on Working Capital					
A	Working Capital for O&M Expenses (O&M Expenses for 1 month)	8.90	9.21	9.53	9.87	10.21
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	16.01	16.57	17.15	17.76	18.38
C	Working Capital for Receivables (Equivalent to 45 days of annual transmission charges)	860.74	830.39	797.79	766.00	732.19
D	Total Working Capital	885.65	856.17	824.47	793.62	760.78
E	Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
F	Interest on Working Capital	106.72	96.32	86.57	83.33	79.88



Annual Fixed Charges for the 2019-24 Tariff Period

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

(₹ in lakh)

Part-A of the tariff						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Annual Transmission Charges					
A	Depreciation	6224.02	6224.02	6224.02	6224.02	6224.02
B	Interest on Loan	11792.22	10889.73	9987.25	9084.77	8182.28
C	Return on Equity	5669.28	5669.28	5669.28	5669.28	5669.28
D	O&M Expenses	563.14	582.81	603.28	624.53	646.33
E	Interest on Working Capital	380.73	344.15	309.85	298.82	287.06
F	Total (A+B+C+D+E)	24629.39	23709.99	22793.68	21901.42	21008.97

(₹ in lakh)

Part-B of the tariff						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
	Annual Transmission Charges					
A	Depreciation	1783.53	1783.53	1783.53	1783.53	1783.53
B	Interest on Loan	3379.13	3120.52	2861.91	2603.29	2344.68
C	Return on Equity	1624.56	1624.56	1624.56	1624.56	1624.56
D	O&M Expenses	106.76	110.48	114.36	118.39	122.51
E	Interest on Working Capital	106.72	96.32	86.57	83.33	79.88
F	Total (A+B+C+D+E)	7000.70	6735.41	6470.93	6213.11	5955.16

49. It is observed that the Petitioner has prayed that EPMPL/MEL may be directed to provide a Letter of Credit (LC) for the portion of the tariff to be borne by EPMPL/MEL for the period from September 2018 till October 2021. The Petitioner has also prayed, without prejudice to the Petitioner's case in Appeal No. 71/2023 before the Appellate Tribunal for Electricity (APTEL), to direct that MEL's portion of the tariff be paid out of the PoC pool in the event that MEL succeeds in Appeal No. 71/2023.

50. In this regard, MEL has made the following submissions:

- a) MEL filed Appeal No. 71/2023 against the Commission's order dated 14.3.2022 in Petition No.145/TT/2018, and APTEL vide interim order dated 24.1.2023 in IA No. 1927 of 2022 has stayed the payment towards invoices raised by CTUIL for the period from September 2018 till October 2021. However, MEL was directed to pay the transmission charges from



1.11.2021. Accordingly, MEL is paying the charges. As the matter is sub-judice before the APTEL, EPTCL cannot seek for opening of LC, which has not been allowed by the APTEL.

- b) MEL has relinquished the LTA, and it is neither an LTA nor MTOA customer, and MEL is not required to open LC.
- c) The tariff for the 2019-24 tariff period may be granted at the earliest as MEL is paying a higher tariff determined for the 2018-19 tariff period in 2019-24.

51. In response, the Petitioner has submitted as follows:

- a. The users of transmission services of the inter-State transmission licensees are expected to provide payment security mechanisms by way of LC. Accordingly, the prayer of EPTCL is as per law and not against the interim order passed by the APTEL.
- b. The capital cost recovery by way of transmission charges cannot be compared to open access charges and they are different. Any surrender or relinquishment of an open access capacity by MEL will not affect its liability to pay the transmission charges to EPTCL. The payment security demanded by EPTCL is to secure the recovery of its transmission tariff and not to secure the payment of long-term or medium-term open access charges.
- c. Opening and maintaining of LC is a statutory requirement. As per Rule 6 of the Electricity (Late payment surcharge & Related Matters) Rules, 2022 transmission users and distribution licensees have to maintain unconditional, irrevocable and adequate payment security mechanisms.



d. It is wrong to suggest that MEL is being asked to pay a higher amount of tariff for the 2019-24 tariff period since the billing has to continue on the basis of the tariff determined for the 2018-19 tariff period as per the tariff regulations.

52. We have considered the above contentions of the Petitioner and MEL and have perused the record. The Petitioner has sought directions to MEL to open LC for the portion of the tariff to be borne by EPMP/L/MEL for the period from September 2018 till October 2021. The Petitioner has also requested to direct that MEL's portion of the tariff be paid out of the PoC pool in the event that MEL succeeds in Appeal No. 71/2023. In response, MEL has contended that EPMP/L has relinquished its LTA and that it is neither an LTA nor a MTOA customer and, therefore, it is not required to open any LC. We observe that MEL has filed Appeal No.71 of 2023 before the APTEL against the Commission's order dated 14.3.2022 in Petition No. 145/TT/2018 directing MEL to bear the transmission charges for 24% of the capital cost of the transmission assets for the period from September 2018 to October 2021 and APTEL in its interim order dated 24.1.2023 in I.A No.1927 of 2022 in Appeal No.71 of 2023 granted an interim stay of the invoices raised by CTUIL on MEL for the period from September 2018 till October 2021. However, APTEL directed MEL to pay the transmission charges for the period from 1.1.2021 till the disposal of the Appeal filed by MEL. The relevant portion of the order dated 24.1.2023 is extracted hereunder:

"17. We are satisfied that both the ingredients, apart from a prima facie case being made out, ie the test of balance of convenience and irreparable injury, are satisfied in the present case. The IA is partly allowed, and there shall be interim stay of payment of the invoices raised by CTUIL for the period from September, 2018 till October, 2021. The Appellant shall, however, pay the dues for the period from 01.11.2021 till date, and thereafter till the main appeal is finally disposed of, subject, of course, to the result of the main appeal."

53. APTEL has given an interim stay with regard to the transmission charges in respect of 24% of the capital cost of the transmission assets for the period from



September 2018 to October 2021 till the disposal of the main Appeal. APTEL is already seized of this issue. Therefore, we do not deem it fit for us to intervene in this issue. Accordingly, the Petitioner's prayer for directions to MEL to open an LC for the portion of transmission charges to be borne by EPMPL/ MEL for the period from September 2018 to October 2021 is disallowed.

54. We are of the view that the Petitioner's prayer for issuing directions that the MEL's portion of the tariff to be paid from the common pool in the event that MEL succeeds in Appeal No.71 of 2023 is premature and does not deserve our intervention at this stage. Accordingly, this prayer of the Petitioner is also disallowed.

55. MEL has contended that it has been paying higher transmission charges for the 2019-24 tariff period on the basis of the Commission's order dated 14.3.2022 for the transmission assets for the period from its COD to 31.3.2019. Therefore, a provisional tariff may be granted for the transmission assets for the 2019-24 tariff period so that it is not compelled to pay higher transmission charges. As we are approving the transmission charges for the transmission assets under Stage-II of the transmission system for the 2019-24 tariff period, MEL's prayer for the grant of the provisional tariff has become infructuous.

Sharing of Transmission Charges

56. The tariff approved in this order for 76% of the capital cost of the transmission assets under the Stage-II of the transmission system for the period from 1.4.2019 to 1.11.2020 shall be governed by the Central Electricity Regulatory Commission (Sharing of Transmission Charges and Losses) Regulations, 2010. Thereafter, the billing, collection, and disbursement of transmission charges shall be governed by the provisions of the Central Electricity Regulatory Commission (Sharing of Transmission



Charges and Losses) Regulations, 2020. The tariff corresponding to the remaining 24% of capital cost (including IDC, FC and IEDC) of the transmission assets for the period from the COD to 31.10.2021 shall be as per the decision of APTEL in Appeal No.71 of 2023 and the transmission charges for the transmission assets under the Stage-II of the transmission system approved in this order for the period from 1.11.2021 shall be billed bilaterally on EPMP/MEL as held by the Commission in order dated 14.3.2022 in Petition No.145/TT/2018 and in accordance with the APTEL's order dated 24.1.2023 in IA No.1927 of 2022.

57. To summarise:

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

(₹ in lakh)

Annual Fixed Cost (Part-A of the tariff)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Transmission Charges	24629.39	23709.990	22793.68	21901.42	21008.97

(₹ in lakh)

Annual Fixed Cost (Part-B of the tariff)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Transmission Charges	7000.70	6735.41	6470.93	6213.11	5955.16

58. The Annexure to this order form part of the order.

59. This order disposes of Petition No. 24/TT/2023 in terms of the above discussions and findings.

sd/-
(P. K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I. S. Jha)
Member

sd/-
(Jishnu Barua)
Chairperson



Annexure

(For 76%)										(₹ in lakh)
Capital Expenditures as on COD/ 1.4.2019	Admissible Capital Cost as on 31.3.2019	Projected Additional capitalisation		Estimated Completion Cost as 31.03.2024	Rate of Depreciation as per Regulation 33	Depreciation as per Regulation				
		2019-24	Total			2019-20	2020-21	2021-22	2022-23	2023-24
Freehold Land	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Building & Other Civil Works	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Transmission Line	114018.39	0.00	0.00	114018.39	5.28%	6020.17	6020.17	6020.17	6020.17	6020.17
Sub-Station Equipment	3,860.87	0.00	0.00	3860.87	5.28%	203.85	203.85	203.85	203.85	203.85
PLCC	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00	0.00
IT assets	0.00	0.00	0.00	0.00	15.00%	0.00	0.00	0.00	0.00	0.00
Total	1,17,879.26	0.00	0.00	1,17,879.26		6,224.02	6,224.02	6,224.02	6,224.02	6,224.02
					Average Gross Block	117879.26	117879.26	117879.26	117879.26	117879.26
					Weighted average rate of depreciation	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%



(₹ in lakh)

(For 24%)

Capital Expenditures as on COD/ 1.4.2019	Admissible Capital Cost as on 31.03.2019	Projected Additional capitalisation		Estimated Completion Cost as 31.03.2024	Rate of Depreciation as per Regulation 33	Depreciation as per Regulation				
		2019-24	Total			2019-20	2020-21	2021-22	2022-23	2023-24
Freehold Land	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Building & Other Civil Works	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Transmission Line	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
Sub-Station Equipment	33,778.98	0.00	0.00	33778.98	5.28%	1,783.53	1783.53	1,783.53	1,783.53	1,783.53
PLCC	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00	0.00
IT assets	0.00	0.00	0.00	0.00	15.00%	0.00	0.00	0.00	0.00	0.00
Total	33,778.98	0.00	0.00	33,778.98		1,783.53	1,783.53	1,783.53	1,783.53	1,783.53
					Average gross block	33778.98	33778.98	33778.98	33778.98	33778.98
					Weighted average rate of depreciation	5.2800%	5.2800%	5.2800%	5.2800%	5.2800%

