

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 303/TT/2022

Coram:

**Shri Jishnu Barua, Chairperson
Shri Arun Goyal, Member
Shri P. K. Singh, Member**

Date of Order: 18.03.2024

In the matter of:

Determination of transmission tariff (Annual Fixed Cost) for the 2 x 400 kV Bays at Jhanor Gandhar GPS of NTPC Limited.

And in the matter of:

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

....Petitioner

Vs.

1. NTPC Limited,
NTPC Bhawan, Scope Complex,
Institutional Area, Lodhi Road,
New Delhi-110003.
2. Essar Steel India Limited,
27th km on Surat-Hazira Road,
Hazira, District-Surat-394270.
3. Government of State of Madhya Pradesh,
Mantralaya 435, Vallabh Bhavan,
Bhopal-462004.
4. Essar Power M.P. Limited,
11th Floor, 11 KK Marg,
Opp Racecourse,
Mahalaxmi, Mumbai-400034,
Maharashtra.
5. Power Grid Corporation of India Limited,
Saudamini, Plot No. 2,
Sector-29, Near IFFCO Chowk,



Gurgaon (Haryana)-122001.

6. Western Regional Power Committee,
F-3, MIDC Area, Marol,
Opposite SEEPZ, Central Road,
Andheri (East), Mumbai-400093.
7. Power Systems Operation Corporation Limited,
B-9, Qutab Institutional Area,
Katwaria Sarai,
New Delhi-110016.

....Respondent(s)

For Petitioner : Shri Rohan Talwar, Advocate, EPTCL

For Respondents : Shri Vivek Kumar, NTPC

ORDER

The instant petition has been filed by Essar Power Transmission Company Limited for true up of the tariff of the period from COD to 31.3.2014 and the 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as “2009 Tariff Regulations”) and the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “2014 Tariff Regulations”) respectively, and the determination of transmission tariff (Annual Fixed Cost) for the 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of 2 x 400 kV Bays at Jhanor Gandhar GPS of NTPC Limited (hereinafter referred to as “transmission asset”).

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

“I. Admit the application for determination of transmission tariff (annual fixed cost) for the 2 x 400 kV Bays at Jhanor Gandhar GPS of NTPC Ltd which form part of the inter-state transmission system and are already under COD.

II. True-up of Tariff for 2013-14; 2014-19 Tariff Block and determine the Annual fixed cost and transmission tariff/provisional transmission tariff for the 2 x 400 kV Bays at Jhanor Gandhar GPS of NTPC Ltd for the period FY 2019-24.



III. Approve the reimbursement of service tax paid by the petitioner to NTPC on the monthly payments of usage charges of the assets in the petition from COD.

IV. Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of applicable Regulations.

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. The brief facts of the case are as follows:

(a) The Petitioner was granted a transmission licence by the Commission, vide order dated 10.4.2008 in Petition No. 157/2007, which was subsequently modified vide order dated 15.9.2009, to establish and operate transmission infrastructure from Mahan to Sipat and Gandhar to Hazira.

(b) The scope of work as per the licence granted to the Petitioner vide order dated 10.4.2008 and 15.9.2009 in Petition No. 157/2007 is as follows:

A. 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 Powergrid at Mahan
- iii. 400 kV D/C (twin conductor) transmission line from Gandhar NTPC switch yard to Hazira

B. 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.
- (c) The transmission 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 Stage-II are as follows:

Stage-I

I	Transmission Lines	Length (in km)
1	400 kV D/C (twin conductor) transmission line from Gandhar (NTPC) switchyard to Hazira	104.60
2	LILO of 400 kV S/C Vindhyaachal-Korba transmission line of Powergrid at Mahan	22.40
II	400/220 kV GIS Sub-station at Hazira	Number of bays
1	500 MVA Transformers	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

Stage-II

I	Transmission Lines	Length (in km)
1	400 kV (Quad Moose Conductor) D/C transmission line from Mahan Thermal Power plant to Sipat Pooling Sub-station	336.50
II	Line Bays	Units (in Number)
1	400 kV line bays at Mahan and Sipat	4
III	Reactors	Units (in Number)
1	50 MVAR line reactor at Sipat Pooling Sub-Station	2
2	50 MVAR line reactors at Mahan TPP	2
3	80 MVAR bus reactor at Mahan TPP	1

- (d) The Petitioner claimed the transmission tariff for Stage-I transmission assets from the COD to 31.3.2014 in Petition No.173/TT/2013 and truing-up of the 2009-14 tariff period in Petition No.111/TT/2015. Both the petitions were disposed of by the Commission vide combined order dated 15.6.2016, granting tariff of the transmission assets under Stage-I. Further, the Petitioner and NTPC were directed to approach jointly to approve the tariff of two 400 kV line bays at the Gandhar (NTPC) switchyard. 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 filed Appeal No. 397 of 2018 against the order dated 28.2.2018 in Review Petition No. 33/RP/2016 before the APTEL, which is pending adjudication.

- (e) As per the directions in the order dated 15.6.2016 in Petition No.173/TT/2013 and Petition No.111/TT/2015, the Petitioner filed Petition No. 102/TT/2018 along with Interlocutory Application bearing No.60/IA/2018 on behalf of NTPC for the determination of tariff of two bays at Gandhar switchyard owned by NTPC for the period i.e. 23.2.2013 to 31.3.2014 under the 2009 Tariff Regulations and for 2014-19 tariff period under the 2014 Tariff Regulations. The Commission, vide order dated 2.5.2019 in Petition No. 102/TT/2018, approved the tariff for the transmission assets and directed for modification of the Petitioner's licence by hiving off the bays at Gandhar. The Commission also disallowed ₹19.69 lakh from the capital cost of the transmission asset in the 2013-14 period. Being aggrieved, NTPC filed Review Petition No. 12/RP/2019 in Petition No. 102/TT/2018, and the Commission vide order dated 11.12.2019 in Review Petition No. 12/RP/2019 allowed ₹19.69 lakh, which was disallowed earlier.
- (f) The Commission vide order 14.3.2022 in Petition No. 145/TT/2018 granted tariff from COD to 31.3.2019 for Stage-II of transmission assets.
- (g) The details of petitions filed under the project for the 2014-19 tariff period are as follows:

Stage-I

	Details of the Asset	Petition details
I	Transmission Lines	
1	400 kV D/C (twin conductor) transmission line from Gandhar (NTPC) switchyard to Hazira	Tariff for 2009-14 tariff period was approved vide order dated 15.6.2016 in Petition Nos. 173/TT/2013 and 111/TT/2015.
2	LILO of 400 kV S/C Vindhyaachal-Korba transmission line of Powergrid at Mahan	
II	400/220 kV GIS Sub-station at Hazira	



1	500 MVA Transformers	The Petitioner is yet to file petition for true-up of 2009-14 and for 2014-19 tariff periods.
2	220 kV Bays at Hazira	
3	400 kV Sub-station and line bays (GIS) at Hazira	
4	400 kV line bays (GIS) at Gandhar	Covered in the instant petition

Stage-II

	Details of the Asset	Petition details
I	Transmission Lines	
1	400 kV (Quad Moose Conductor) D/C transmission line from Mahan Thermal Power plant to Sipat Pooling Sub-station	Tariff for 2014-19 was approved vide order dated 14.3.2022 in Petition No. 145/TT/2018.
II	Line Bays	
1	400 kV line bays at Mahan and Sipat	Tariff for the 2019-24 tariff period was approved vide order dated 22.11.2023 in Petition No. 24/TT/2023.
III	Reactors	
1	50 MVAR line reactor at Sipat Pooling Sub-Station	
2	50 MVAR line reactors at Mahan TPP	
3	81 MVAR bus reactor at Mahan TPP	

- (h) The instant petition covers 2 Numbers of 400 kV bays at Gandhar (NTPC) switchyard. The COD of the transmission asset has been approved as 23.2.2013 vide order dated 2.5.2019 in Petition No.102/TT/2018. The Commission also approved the tariff for the period from COD to 31.3.2014 and the 2019-24 tariff period for the transmission asset vide order dated 2.5.2019.
- (i) The bays are installed in the NTPC station at Gandhar. As per the Commercial Agreement dated 11.2.2010, entered into between the Petitioner and NTPC, the bays would be owned, controlled and maintained by NTPC at the Gandhar Switchyard as a part of Jhanor Gandhar Gas Power Station, and the Petitioner would pay the annual transmission charges to NTPC as per the Tariff Regulations. As per the said agreement, the capital cost of the bays as capitalized in the books of accounts of NTPC, would be considered for the purpose of calculation of tariff.

4. As per the Tariff Regulations, capital cost and debt-equity ratio are determined based on the capital cost incurred by the licensee, and, in the same way, the tax rate for grossing



up of rate the Return on Equity (RoE) and weighted average rate of interest of actual loan portfolio for servicing the normative loan is computed by applying the rates applicable to the concerned transmission licensee. However, the instant case is different from the other cases, where the asset is funded and owned by NTPC, but the licence was granted to the Petitioner. Therefore, in the instant case, we are considering the capital cost pertaining to the transmission asset as per the books of account of NTPC duly certified by the Auditor. Further, as the asset covered in the instant petition is part of Jhanor Gandhar GPS, the debt-equity ratio, tax rate for grossing up of RoE and WAROI (Weighted Average Rate of Interest) of actual loan for servicing interest on normative loan, as applicable to NTPC's Jhanor Gandhar GPS are considered to determine the AFC for the transmission asset in view of the peculiar facts of the case.

5. The Respondents are distribution licensees, power departments, power utilities and transmission licensees, who are procuring transmission services from the Petitioner, mainly beneficiaries of the Western Region.

6. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition 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. None of the Respondents has filed the reply.

7. This order is being issued considering the submissions made by the Petitioner in the petition vide affidavit dated 31.1.2020, and subsequent replies to RoP vide affidavits dated 17.8.2023 and 2.11.2023, and NTPC reply and additional submissions vide affidavit dated 9.8.2023.



8. The hearing in this matter was held on 27.9.2023, and the order was reserved.

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

TRUING UP OF ANNUAL FIXED CHARGES FOR THE 2009-14 TARIFF PERIOD

10. The details of the trued-up transmission charges claimed by the Petitioner for the 2009-14 tariff period are as follows:

(₹ in lakh)		
Particulars	2012-13	2013-14
Depreciation	74.28	74.98
Interest on Loan	94.54	82.23
Return on Equity	96.83	100.03
Interest on working capital	12.96	13.15
O&M Expenses	123.84	130.92
Total	402.45	401.31
Pro-rata	33.54	401.31

11. The details of the trued-up Interest on Working Capital (IWC) claimed by the Petitioner for the 2009-14 tariff period are as follows:

(₹ in lakh)		
Particulars	2012-13	2013-14
O&M Expenses	10.32	10.91
Maintenance Spares	18.58	19.64
Receivables	67.00	67.00
Total	96.00	97.00
Rate of Interest (in %)	13.50	13.50
Interest on Working Capital	12.96	13.15
Pro-rata	1.08	13.15

Capital Cost

12. The Commission vide order dated 2.5.2019 in Petition No. 102/TT/2018 has approved the capital cost from COD and ACE up to 31.3.2019, and the same are as follows:



(₹ in lakh)

Capital cost as on COD	Additional Capitalization for 2013-14	Total estimated completion cost up to 31.3.2014
1406.73	6.96	1413.69

13. The Petitioner has claimed the following capital cost as on COD:

(₹ in lakh)

Capital cost as on COD	ACE for 2013-14	Capital cost as on 31.3.2014
1406.73	26.65	1433.38

14. We have considered the submissions of the Petitioner. The capital cost as on COD is considered as ₹1406.73 lakh.

Additional Capital Expenditure (ACE)

15. NTPC filed Review Petition No. 12/RP/2019 against the order dated 2.5.2019 in Petition No. 102/TT/2018, wherein the ACE amounting to ₹19.69 lakh during the 2013-14 period was disallowed. The Commission vide order dated 11.12.2019 in Review Petition No. 12/RP/2019 allowed the total ACE of ₹26.65 lakh, and the capital cost allowed as on 31.3.2019 is ₹1435.72 lakh. The Commission further observed that the tariff of the instant bays, on account of the revision of the capital cost allowed in the review petition, will be given effect at the time of truing up of the tariff of the 2014-19 period.

16. The Petitioner, in the instant true-up petition, has claimed ACE amounting to ₹26.65 lakh during the 2013-14 period towards the balance work.

Capital cost allowed as on 31.3.2014

17. The capital cost allowed as on COD and as on 31.3.2014 is as follows:

(₹ in lakh)

Capital cost as on COD	ACE for 2013-14	Capital cost as on 31.3.2014
1406.73	26.65	1433.38



Debt-Equity Ratio

18. The Petitioner has considered a debt-equity ratio of 70:30 as on COD and for ACE. The debt-equity ratio of 70:30 has been considered as provided under Regulation 12 of the 2009 Tariff Regulations and the same is as follows:

Particulars	Capital cost (as on COD) (₹ in lakh)	(in %)	Capital cost (as on 31.3.2014) (₹ in lakh)	(in %)
Debt	984.71	70.00	1003.37	70.00
Equity	422.02	30.00	430.01	30.00
Total	1406.73	100.00	1433.38	100.00

Depreciation

19. The Gross Block during the 2009-14 tariff period has been depreciated at the weighted average rate of depreciation (WAROD). WAROD has been worked out considering the depreciation rates of the transmission assets as prescribed in the 2009 Tariff Regulations. Depreciation allowed during the 2009-14 tariff period is as follows:

		(₹ in lakh)	
Particulars		2012-13 (pro-rata for 37 days)	2013-14
A	Opening Gross Block	1406.73	1406.73
B	ACE	0.00	26.65
C	Closing Gross Block (A+B)	1406.73	1433.38
D	Average Gross Block (A+C)/2	1406.73	1420.05
E	Weighted average rate of Depreciation (WAROD) (in %)	4.9851	4.9697
F	Depreciable Value	1266.06	1278.05
G	Depreciation during the year (D*E)	5.84	70.57
H	Cumulative depreciation at the end of the year	5.84	76.42
I	Remaining Depreciable Value at the end of the year	1260.21	1201.63

20. The details of depreciation for the transmission asset as claimed by the Petitioner in the instant petition and allowed after truing up in the instant order are as follows:



Particulars	(₹ in lakh)	
	2012-13 (pro-rata for 37 days)	2013-14
Trued up depreciation claimed by the Petitioner in the instant petition.	6.19	74.98
Trued up depreciation approved in the instant order.	5.84	70.57

Interest on Loan (“IoL”)

21. The Petitioner has claimed the weighted average rate of IoL based on its actual loan portfolio and rate of interest. Accordingly, IoL is calculated based on the actual interest rate in accordance with Regulation 16 of the 2009 Tariff Regulations. The details of IoL allowed are as follows:

Particulars		(₹ in lakh)	
		2012-13 (pro-rata for 37 days)	2013-14
A	Opening Normative Loan	984.71	984.71
B	Cumulative Repayments up to Previous Year	0.00	5.84
C	Net Loan-Opening (A-B)	984.71	978.87
D	Addition due to ACE	0.00	18.66
E	Repayment during the year	5.84	70.57
F	Net Loan-Closing (C+D-E)	978.87	926.95
G	Average Loan (C+F)/2	981.79	952.91
H	Weighted Average Rate of Interest on Loan (in %)	9.6380	8.6642
I	Interest on Loan (G*H)	7.89	82.56

22. The details of IoL claimed by the Petitioner for the transmission asset in the instant petition and allowed after truing up in the instant order are as follows:

Particulars	(₹ in lakh)	
	2012-13 (pro-rata for 37 days)	2013-14
Trued up IoL claimed by the Petitioner in the instant petition.	8.07	82.23
Trued up IoL approved in the instant order.	7.89	82.56

Return on Equity (“RoE”)

23. The Petitioner has claimed RoE for the 2009-14 period after grossing up the RoE @15.50% with effective tax rates (based on MAT rates) each year as per the 2009 Tariff



Regulations. RoE is trued-up on the basis of MAT rates applicable in the respective years and is approved for the transmission project for the 2009-14 tariff period as follows:

(₹ in lakh)

Particulars		2012-13 (pro-rata for 37 days)	2013-14
A	Opening Equity	422.02	422.02
B	Addition due to ACE	0.00	8.00
C	Closing Equity(A+B)	422.02	430.01
D	Average Equity(A+C)/2	422.02	426.02
E	Return on Equity (Base Rate) (in %)	15.50	15.50
F	Tax Rate for the Year (in %)	32.45	33.99
G	Rate of Return on Equity (in %)	22.944	23.481
H	Return on Equity for the year(D*G) (Pre Tax)	8.07	100.03

24. The details of RoE claimed by the Petitioner for the transmission asset in the instant petition and allowed after truing up in the instant order are as follows:

(₹ in lakh)

Particulars	2012-13 (pro-rata for 37 days)	2013-14
Trued up RoE claimed by the Petitioner in the instant petition	8.07	100.03
Trued up RoE approved in the instant order	8.07	100.03

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

25. The details of O&M Expenses claimed by the Petitioner for the transmission asset in the instant petition and allowed after truing up in the instant order are as follows:

(₹ in lakh)

Particulars	2012-13 (pro-rata for 37 days)	2013-14
Trued up O&M Expenses claimed by the Petitioner in the instant petition	10.32	130.92
Trued up O&M Expenses approved in the instant order	10.32	130.92

Interest on Working Capital (“IWC”)

26. IWC has been worked out as per the methodology provided in Regulation 18 of the 2009 Tariff Regulations. The trued-up IWC allowed for the transmission asset is as follows:



(₹ in lakh)

Particulars		2012-13 (pro-rata for 37 days)	2013-14
A	Working Capital for O&M Expenses	10.32	10.91
B	Working Capital for Maintenance Spares (15% of O&M)	18.58	19.64
C	Working Capital for Receivables	66.38	66.19
D	Total Working Capital (A+B+C)	95.28	96.74
E	Rate of Interest on working capital (in %)	13.50	13.50
F	Interest of working capital (D*E)	1.07	13.06

27. The details of IWC claimed by the Petitioner for the transmission asset in the instant petition and allowed after truing up in the instant order are as follows:

(₹ in lakh)

Particulars	2012-13 (pro-rata for 37 days)	2013-14
Trued up IWC claimed by the Petitioner in the instant petition.	1.08	13.15
Trued up IWC approved in the instant order.	1.07	13.06

Approved Annual Fixed Charges for 2009-14 Tariff Period

28. The trued-up Annual Fixed Charges (AFC) allowed for the transmission asset for the 2009-14 tariff period are as follows:

(₹ in lakh)

Particulars		2012-13 (pro-rata for 37 days)	2013-14
A	Depreciation	5.84	70.57
B	Interest on Loan	7.89	82.56
C	Return on Equity	8.07	100.03
D	O&M Expenses	10.32	130.92
E	Interest on Working Capital	1.07	13.06
F	Total	33.19	397.14

29. Accordingly, the Annual Transmission Charges claimed by the Petitioner in the instant petition and allowed after truing up in the instant order are as follows:

(₹ in lakh)

Particulars	2012-13 (pro-rata for 37 days)	2013-14
Trued up AFC claimed by the Petitioner in the instant petition	33.54	401.31
Trued up AFC approved in this order	33.19	397.14



TRUING UP OF THE TARIFF OF THE 2014-19 TARIFF PERIOD

30. The details of the trued-up transmission charges claimed by the Petitioner for the 2014-19 tariff period are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	75.74	75.81	75.81	75.81	75.81
Interest on Loan	74.21	66.05	56.88	46.44	42.96
Return on Equity	84.40	84.87	84.87	84.87	85.10
Interest on working capital	12.06	12.10	12.12	12.12	12.28
O&M Expenses	120.60	124.60	128.74	133.02	137.42
Total	367.01	363.43	358.42	352.26	353.57

31. The details of the trued-up Interest on Working Capital (IWC) claimed by the Petitioner for the 2014-19 tariff period are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	10.05	10.38	10.73	11.09	11.45
Maintenance Spares	18.09	18.69	19.31	19.95	20.61
Receivables	61.00	61.00	59.00	59.00	58.00
Total	89.14	90.07	89.00	90.00	90.00
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	12.06	12.10	12.12	12.12	12.28

Capital cost

32. The capital cost of ₹1433.38 lakh approved as on 31.3.2014 is considered as opening capital cost as on 1.4.2014.

Additional Capital Expenditure (ACE)

33. The Commission vide order dated 2.5.2019 in Petition No. 102/TT/2018 has allowed ACE amounting to ₹2.34 lakh during 2014-15 towards undischarged liability. Further, the Petitioner vide affidavit dated 17.8.2023 has submitted that the AFC claimed for the 2014-19 truing up period has been revised in line with the weighted average rate of interest on the actual loan portfolio provided by NTPC vide affidavit dated 9.12.2020 in the 2014-19 truing up generation petition for the Gandhar GPS (Petition No. 301/GT/2020) and effective tax rate relevant for RoE calculations as provided by NTPC in the said petition. Further, the Petitioner vide affidavit dated 2.11.2023 has submitted the Auditor's Certificate dated



26.10.2023 certifying the amount capitalized in the books of accounts of the Petitioner's company as on 31.3.2014 in respect of the construction of 2 numbers 400 kV Gandhar-Hazira bay at NTPC Jhanor Gandhar.

34. We have considered the submission of the Petitioner. The Petitioner, in the instant true-up petition, as per the Auditor's Certificate dated 4.8.2023, has claimed an amount of ₹2.34 lakh during the 2014-15 period towards undischarged liability and the same has been allowed.

35. Accordingly, the capital cost allowed as on 31.3.2019 is as follows:

(₹ in lakh)		
Capital cost as on 1.4.2014	ACE allowed for 2014-15	Capital cost allowed as on 31.3.2019
1433.38	2.35	1435.73

Debt-Equity Ratio

36. The Petitioner has considered a debt-equity ratio of 70:30 as on COD and for ACE. The debt-equity ratio of 70:30 has been considered as provided under Regulation 19 of the 2014 Tariff Regulations and the same is as follows:

Particulars	Amount as on COD (₹ in lakh)	(in %)	Amount as on 31.3.2019 (₹ in lakh)	(in %)
Debt	1003.37	70.00	1005.00	70.00
Equity	430.01	30.00	430.72	30.00
Total	1433.38	100.00	1435.72	100.00

Depreciation

37. The Gross Block during the 2014-19 tariff period has been depreciated at the weighted average rate of depreciation (WAROD). WAROD has been worked out considering the depreciation rates of the transmission assets as prescribed in the 2014 Tariff Regulations. The depreciation approved for the transmission asset for the 2014-19 tariff period is as follows:



(₹ in lakh)

Particulars		2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Gross Block	1433.38	1435.72	1435.72	1435.72	1435.72
B	Addition during 2014-19 due to Projected ACE	2.34	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	1435.72	1435.72	1435.72	1435.72	1435.72
D	Average Gross Block (A+C)/2	1434.55	1435.72	1435.72	1435.72	1435.72
E	Weighted average rate of Depreciation (WAROD) (in %)	4.9548	4.9550	4.9550	4.9550	4.9550
F	Depreciable Value	1291.09	1292.15	1292.15	1292.15	1292.15
G	Combined Depreciation during the year (D*E)	71.08	71.14	71.14	71.14	71.14
H	Cumulative depreciation at the end of the year	147.50	218.64	289.78	360.92	432.06
I	Remaining Depreciable Value at the end of the year	1143.60	1073.51	1002.37	931.23	860.09

38. The details of the trued-up depreciation claimed by the Petitioner for the transmission asset and approved by the Commission for the 2014-19 tariff period are as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Trued up depreciation claimed by the Petitioner	75.74	75.81	75.81	75.81	75.81
Trued up depreciation approved in the instant order	71.08	71.14	71.14	71.14	71.14

Interest on Loan (“IoL”)

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

40. NTPC vide affidavit dated 9.8.2023 has submitted the copy of Petition No. 301/GT/2020 (for truing up of tariff for the 2014-19 period for Gandhar GPS) along with the additional submission filed vide affidavits dated 9.12.2020 and 29.6.2021. NTPC has submitted that vide affidavit dated 9.12.2020, NTPC has submitted the revised Form-13 in support of the weighted average rate of interest on the actual loan portfolio along with additional loan related details has been provided.



41. The Petitioner, vide affidavit dated 17.8.2023, has submitted the supporting documents for the loans availed for the 2014-19 tariff period.

42. We have considered the submission of the Petitioner and NTPC. Accordingly, IoL is calculated based on the actual interest rate in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of IoL allowed are as follows:

		(₹ in lakh)				
Particulars		2014-15	2015-16	2016-17	2017-18	2018-19
A	Gross Normative Loan	1003.37	1005.00	1005.00	1005.00	1005.00
B	Cumulative Repayments up to Previous Year	76.42	147.50	218.64	289.78	360.92
C	Net Loan-Opening (A-B)	926.95	857.51	786.36	715.22	644.08
D	Addition due to ACE	1.64	0.00	0.00	0.00	0.00
E	Repayment during the year	71.08	71.14	71.14	71.14	71.14
F	Net Loan-Closing (C+D-E)	857.51	786.36	715.22	644.08	572.94
G	Average Loan (C+F)/2	892.23	821.93	750.79	679.65	608.51
H	Weighted Average Rate of Interest on Loan (in %)	7.7604	6.7451	7.7598	7.0657	7.3886
I	Interest on Loan (G*H)	69.24	55.44	58.26	48.02	44.96

43. The details of IoL claimed by the Petitioner and approved by the Commission for the 2014-19 tariff period are as follows:

		(₹ in lakh)				
Particulars		2014-15	2015-16	2016-17	2017-18	2018-19
	Trued up IoL claimed by the Petitioner	74.21	66.05	56.88	46.44	42.96
	Trued up IoL approved in the instant order	69.24	55.44	58.26	48.02	44.96

Return on Equity ("RoE")

44. The Petitioner has claimed RoE for the 2014-19 tariff period after grossing up the RoE @15.50% with effective tax rates (based on MAT rates) each year as per the above said Regulation. RoE is trued-up on the basis of MAT rates applicable in the respective years and is approved for the transmission asset for the 2014-19 tariff period as follows:

		(₹ in lakh)				
Particulars		2014-15	2015-16	2016-17	2017-18	2018-19
A	Opening Equity	430.01	430.72	430.72	430.72	430.72
B	Addition due to ACE	0.70	0.00	0.00	0.00	0.00
C	Closing Equity(A+B)	430.72	430.72	430.72	430.72	430.72
D	Average Equity(A+C)/2	430.36	430.72	430.72	430.72	430.72



E	Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
F	Tax Rate applicable (in %)	20.96	21.342	21.342	21.342	21.564
G	Applicable RoE Rate (in %)	19.611	19.706	19.706	19.706	19.761
H	Return on Equity for the year(D*G)	84.40	84.88	84.88	84.88	85.11

45. The details of RoE claimed by the Petitioner and approved by the Commission for the 2014-19 tariff period are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Trued up RoE claimed by the Petitioner	84.40	84.87	84.87	84.87	85.10
Trued up RoE approved in the instant order	84.40	84.88	84.88	84.88	85.11

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

46. The Commission vide order dated 2.5.2019 in Petition No. 102/TT/2018 has allowed the following O&M Expenses for 2014-19 tariff period and the same O&M Expenses are considered for 2014-19 tariff period:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
2 Numbers 400 kV bays at Gandhar	120.60	124.60	128.74	133.02	137.42

47. The details of O&M Expenses claimed by the Petitioner and approved by the Commission for the 2014-19 tariff period are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Trued up O&M Expenses claimed by the Petitioner	120.60	124.60	128.74	133.02	137.42
Trued up O&M Expenses approved in the instant order	120.60	124.60	128.74	133.02	137.42

Interest on Working Capital (IWC)

48. IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations, and the trued-up IWC allowed for the transmission assets are as follows:



		(₹ in lakh)				
Particulars		2014-15	2015-16	2016-17	2017-18	2018-19
A	Working Capital for O&M Expenses (O&M Expenses for one Month)	10.05	10.38	10.73	11.09	11.45
B	Working Capital for Maintenance Spares (15% of O&M)	18.09	18.69	19.31	19.95	20.61
C	Working Capital for Receivables (Equivalent to two months of annual transmission charges)	59.53	57.97	59.18	58.18	58.48
D	Total Working Capital (A+B+C)	87.67	87.04	89.22	89.22	90.54
E	Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
F	Interest of working capital (D*E)	11.83	11.75	12.04	12.04	12.22

49. The details of IWC claimed by the Petitioner and approved by the Commission for the 2014-19 tariff period are as follows:

		(₹ in lakh)				
Particulars		2014-15	2015-16	2016-17	2017-18	2018-19
	Trued up IWC claimed by the Petitioner	12.06	12.10	12.12	12.12	12.28
	Trued up IWC approved in the instant order	11.83	11.75	12.04	12.04	12.22

Approved Annual Fixed Charges for the 2014-19 Tariff Period

50. The trued-up Annual Fixed Charges (AFC) allowed for the transmission assets for the 2014-19 tariff period are as follows:

		(₹ in lakh)				
Particulars		2014-15	2015-16	2016-17	2017-18	2018-19
A	Depreciation	71.08	71.14	71.14	71.14	71.14
B	Interest on Loan	69.24	55.44	58.26	48.02	44.96
C	Return on Equity	84.40	84.88	84.88	84.88	85.11
D	O&M Expenses	120.60	124.60	128.74	133.02	137.42
E	Interest on Working Capital	11.83	11.75	12.04	12.04	12.22
F	Total	357.15	347.81	355.06	349.10	350.85

51. Accordingly, the Annual Transmission Charges as claimed by the Petitioner in the instant petition and approved by the Commission for the 2014-19 tariff period, are as follows:

		(₹ in lakh)				
Particulars		2014-15	2015-16	2016-17	2017-18	2018-19
	Trued up AFC claimed by the Petitioner	367.01	363.43	358.42	352.26	353.57
	Trued up AFC approved in the instant order.	357.15	347.81	355.06	349.10	350.85



DETERMINATION OF ANNUAL FIXED CHARGES FOR THE 2019-24 TARIFF PERIOD

52. The Petitioner vide affidavit dated 17.8.2023 has submitted that the AFC claimed for the 2019-24 period had been revised in line with the weighted average rate of interest on the actual loan portfolio provided by NTPC vide affidavit dated 9.12.2020 in the 2014-19 truing up generation petition for Gandhar GPS (Petition No. 301/GT/2020) and effective tax rate relevant for RoE calculations as provided by NTPC in the said petition. The details of the transmission charges claimed by the Petitioner for the transmission asset for the 2019-24 tariff period are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	75.81	75.81	75.81	75.81	75.81
Interest on Loan	40.44	35.80	29.51	23.26	16.98
Return on Equity	80.89	80.89	80.89	80.89	80.89
Interest on Working Capital	5.77	5.81	5.81	5.82	5.83
O&M Expenses	64.30	66.56	68.90	71.32	73.82
Total	267.21	264.87	260.92	257.10	253.33

53. The details of IWC claimed by the Petitioner for the transmission asset for the 2019-24 period are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	5.36	5.55	5.74	5.94	6.15
Maintenance Spares	9.65	9.98	10.34	10.70	11.07
Receivables	32.85	32.65	32.17	31.70	31.15
Total Working Capital	47.85	48.18	48.25	48.34	48.37
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	5.77	5.81	5.81	5.83	5.83

Capital Cost

54. 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;*



- (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 asset 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 up to the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway;*
- (k) Capital expenditure on account of biomass handling equipment and facilities, for co-firing;*
- (l) Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;*
- (m) Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;*
- (n) Expenditure on account of change in law and force majeure events; and*
- (o) Capital cost incurred or projected to be incurred by a thermal generating station, on account of implementation of the norms under Perform, Achieve and Trade (PAT) scheme of Government of India shall be considered by the Commission subject to sharing of benefits accrued under the PAT scheme with the beneficiaries.*

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

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

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

- (a) cost of approved rehabilitation and resettlement (R&R) plan of the project in conformity with National R&R Policy and R&R package as approved; and*



(b) cost of the developer's 10% contribution towards Rajiv Gandhi GrameenVidyutikaranYojana (RGGVY) and DeendayalUpadhyaya Gram JyotiYojana (DDUGJY) project in the affected area.

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

(a) The asset forming part of the project, but not in use, as declared in the tariff petition;
(b) De-capitalised Asset 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 asset.

(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.”

55. The Petitioner vide affidavit dated 2.11.2023 has submitted the Auditor's Certificate dated 26.10.2023 certifying the amount capitalized in the books of accounts of the Petitioner's company as on 30.9.2023 in respect of the construction of 2 numbers 400 kV Gandhar-Hazira bay at NTPC Jhanor Gandhar.

56. We have considered the submission of the Petitioner. The capital cost approved as on 31.3.2019 is ₹1435.73 lakh, and the same is considered as the opening capital cost as on 1.4.2019.

57. Petitioner has not claimed any ACE in the 2019-24 tariff period.

58. The Capital cost allowed as on 31.3.2024 is as follows:

(₹ in lakh)		
Capital cost as on 1.4.2019	ACE allowed for 2019-24	Capital cost allowed as on 31.3.2024
1435.73	0.00	1435.73

Debt-Equity Ratio

59. 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.

(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.”

60. The debt-equity ratio for the 2019-24 period is allowed as per Regulation 18(3) of the 2019 Tariff Regulations. The details of the debt-equity ratio considered for the purpose of computation of tariff for 2019-24 tariff period for the transmission asset are as follows:



Particulars	Capital cost as on 1.4.2019 (₹ in lakh)	(in %)	Capital cost as on 31.3.2024 (₹ in lakh)	(in %)
Debt	1005.00	70.00	1005.00	70.00
Equity	430.72	30.00	430.72	30.00
Total	1435.72	100.00	1435.72	100.00

Depreciation

61. 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 asset 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 asset 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 asset 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 asset.

(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 up to 31.3.2019 from the gross depreciable value of the asset.

(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 asset 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.”

62. We have considered the submissions of the Petitioner. The IT equipment has been considered as part of the Gross Block and depreciated using the Weighted Average Rate of Depreciation (WAROD). After taking into account the depreciation rates of IT and non-IT assets as prescribed in the 2019 Tariff Regulations. The salvage value of IT equipment has



been considered nil, i.e. IT assets have been considered as 100% 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 transmission asset for the 2019-24 tariff period is as follows:

(₹ in lakh)						
Asset-1(a)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	1435.72	1435.72	1435.72	1435.72	1435.72
B	ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Gross Block (A+B)	1435.72	1435.72	1435.72	1435.72	1435.72
D	Average Gross Block (A+C)/2	1435.72	1435.72	1435.72	1435.72	1435.72
E	Depreciable Value	1292.15	1292.15	1292.15	1292.15	1292.15
F	Weighted average rate of Depreciation (WAROD) (in %)	4.9550	4.9550	4.9550	4.9550	4.9550
G	Remaining life at the beginning of the year (Year)	19	18	17	16	15
H	Lapsed life at the beginning of the year (Year)	6	7	8	9	10
K	Depreciation during the year (D*F)	71.14	71.14	71.14	71.14	71.14
M	Cumulative Depreciation at the end of the year	503.20	574.34	645.48	716.62	787.76
N	Remaining depreciable value at the end of the year	788.95	717.81	646.67	575.53	504.38

Interest on Loan ("IoL")

63. 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 Asset, 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 up to 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 project, 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”.

64. The weighted average rate of interest of IoL has been considered on the basis of the rates prevailing as on 1.4.2019. NTPC vide affidavit dated 9.8.2023 has submitted the copy of Petition No. 420/GT/2020 (for determination of tariff of 2019-24 period for Gandhar GPS) along with the additional submission filed vide affidavit dated 29.6.2021 in Petition No. 420/GT/2020, in support of its submission regarding the revised Form-13 wherein, the weighted average rate of interest on actual loan portfolio along with additional loan related details has been provided.

65. The Petitioner, vide affidavit dated 17.8.2023, has also submitted the supporting documents for the loans availed of for the 2019-24 tariff period.

66. We have considered the submission of the Petitioner and NTPC and have gone through the documents available on record. IoL has been considered as per the order dated 4.6.2022 in Gandhar GPS Petition No. 420/GT/2020. Accordingly, IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed in respect of the transmission asset for the 2019-24 tariff period as follows:



(₹ in lakh)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Gross Normative Loan	1005.00	1005.00	1005.00	1005.00	1005.00
B	Cumulative Repayments upto Previous Year	432.06	503.20	574.34	645.48	716.62
C	Net Loan-Opening (A-B)	572.94	501.80	430.66	359.52	288.38
D	Addition due to ACE	0.00	0.00	0.00	0.00	0.00
E	Repayment during the year	71.14	71.14	71.14	71.14	71.14
F	Net Loan-Closing (C+D-E)	501.80	430.66	359.52	288.38	217.24
G	Average Loan (C+F)/2	537.37	466.23	395.09	323.95	252.81
H	Weighted Average Rate of Interest on Loan (in %)	7.9989	8.3295	8.3355	8.3590	8.3877
I	Interest on Loan (G*H)	42.98	38.83	32.93	27.08	21.21

Return on Equity (“RoE”)

67. 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:

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 follows:

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.”

68. RoE has been calculated @18.782% after grossing up RoE with a MAT rate of 17.472% (Base Rate 15% + Surcharge 12% + Cess 4%) based on the formula given in Regulation 31(2) of the 2019 Tariff Regulations for 2019-24 tariff period. As per Regulation 31(3) of the 2019 Tariff Regulations, the grossed-up rate of RoE at the end of every financial year shall be trued-up 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 IT authorities pertaining to 2019-24 tariff period on actual gross income. However, any penalty arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the Petitioner. Any under-recovery or over-recovery of the grossed-up rate on RoE after truing up shall be recovered or refunded to beneficiaries or the long term customers on a yearly basis. The Petitioner has further submitted that any adjustment due to additional tax demand, including interest duly adjusted for any refund of tax, including interest received from IT authorities shall be recoverable/ adjustable during the 2019-24 tariff period on a yearly basis on receipt of the Income Tax assessment order.

69. We have considered the submissions of the Petitioner. 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 for the 2019-24 tariff period as follows:

(₹ in lakh)

	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	430.72	430.72	430.72	430.72	430.72
B	Additions due to ACE	0.00	0.00	0.00	0.00	0.00
C	Closing Equity (A+B)	430.72	430.72	430.72	430.72	430.72
D	Average Equity (A+C)/2	430.72	430.72	430.72	430.72	430.72
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)	80.90	80.90	80.90	80.90	80.90



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

70. O&M Expenses claimed by the Petitioner are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
2 numbers 400 kV bays at Gandhar	64.30	66.56	68.90	71.32	73.82

71. The norms specified under Regulation 35(3)(a) of the 2019 Tariff Regulations are 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>					
400 kV	32.15	33.28	34.45	35.66	36.91

72. We have considered the submissions of the Petitioner. The O&M Expenses allowed for the transmission asset are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
2 Numbers 400 kV bays at Gandhar	64.30	66.56	68.90	71.32	73.82

Interest on Working Capital (“IWC”)

73. Regulation 34(1)(c), Regulation 34(3) and Regulation 34(4) and Regulation 3(7) of the 2019 Tariff Regulations specify as follows:

“34. Interest on Working Capital

(1)...

(c) **For Hydro Generating Station (including Pumped Storage Hydro Generating Station) and Transmission System:**

- i. Receivables equivalent to 45 days of fixed cost;
- ii. Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and
- iii. Operation and maintenance expenses, including security expenses for one month”

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



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

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

“3.Definitions ...

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

74. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The Rate of Interest 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 2022-23 has been considered as 10.50% (SBI 1 year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) and 12.00% (SBI 1 year MCLR applicable as on 1.4.2023 of 8.50% plus 350 basis points) has been considered for 2023-24.

75. Accordingly, IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations, and the components of the working capital and interest allowed thereon for the transmission asset for the 2019-24 tariff period are as follows:

(₹ in lakh)						
	Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
A	Working Capital for O&M Expenses (O&M Expenses for one month)	5.36	5.55	5.74	5.94	6.15
B	Working Capital for Maintenance Spares (15% of O&M Expenses)	9.65	9.98	10.34	10.70	11.07
C	Working Capital for Receivables (Equivalent to 45 days of annual fixed cost/annual transmission charges)	32.59	32.40	31.92	31.50	31.00
D	Total Working Capital (A+B+C+D)	47.59	47.93	48.00	48.14	48.22
E	Rate of Interest of working capital (in %)	12.05	11.25	10.50	10.50	12.00
F	Interest of working capital (D*E)	5.73	5.39	5.04	5.05	5.80

Annual Fixed Charges for the 2019-24 Tariff Period

76. The transmission charges approved for the transmission asset for the 2019-24 tariff period are as follows:



Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	71.14	71.14	71.14	71.14	71.14
Interest on Loan	42.98	38.83	32.93	27.08	21.21
Return on Equity	80.90	80.90	80.90	80.90	80.90
O&M Expenses	64.30	66.56	68.90	71.32	73.82
Interest on Working Capital	5.73	5.39	5.04	5.05	5.80
Total	265.05	262.82	258.91	255.49	252.87

Filing Fee and Publication Expenses

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

78. The Petitioner has again prayed for reimbursement of service tax paid by the Petitioner to NTPC on the monthly payments of usage charges of the transmission asset from COD. The Petitioner's prayer has already been considered and rejected by the Commission in the order dated 2.5.2019 in Petition No.102/TT/2018. The relevant portion of the order dated 2.5.2019 is extracted hereunder:

“Reimbursement of Service Tax

49. The Petitioner has prayed for the reimbursement of service tax paid by the petitioner to NTPC on the monthly payments of usage charges of the assets in the petition for the period from COD of the assets to June 2016 of ₹162.89 lakh. We have considered the submissions of the Petitioner. As per Clause 8 of the Agreement dated 11.2.2010 between the Petitioner and NTPC, EPTCL is required to pay besides the transmission charges, the taxes including the service tax as applicable. Therefore, the Petitioner's claim for reimbursement of service tax from COD to June, 2016 is not allowed.”

Transmission charges

79. The Commission, vide order dated 3.6.2022 in Petition No.321/MP/2019, held as follows:

“47. Clause 8 of the Commercial Agreement dated 11.2.2010 signed between Petitioner and NTPC is as follows:



“8. In consideration of the services to be rendered by NTPC, namely, allowing the use of 2 x 400 KV bays to be constructed by NTPC, EPTCL agrees to pay to NTPC monthly fixed charges to be calculated and billed by NTPC as per the terms and conditions contained in the CERC (Terms and Conditions of Tariff) Regulations, 2009 (Inter-State Transmission), as applicable from time to time, from the date of completion of these two bays. The capital cost to be adopted for the calculation of tariff shall be the same as capitalized in the books of accounts of NTPC for these to be constructed additional bays. EPTCL shall accept the capital cost of these bays as furnished by NTPC duly certified by auditors of NTPC. In addition, all taxes including service tax as applicable, levies, charges, royalties, duties, cesses, and outgoings incurred by NTPC from time to time on these 2 X 400 KV bays shall be reimbursed by EPTCL to NTPC.

Losses of 30000 KWh per year in the bay equipment including Current Transformers and Potential Transformers of these two bays have been preagreed as a fair estimate to be compensated by EPTCL to NTPC. Therefore, in addition to the charges billed as above, an additional amount shall be payable by EPTCL for 2500 KWh per month at per KWh cost of the generation at the costliest fuel of the ‘Jhanor Gandhar GPS’ Station applicable during the previous month towards Current Transformers and Potential Transformers losses.”

As per above provisions, it is clear that EPTCL has agreed to pay transmission charges/ fixed charges against the services provided by NTPC for usage of 2 numbers 400kV bays at Gandhar GPS constructed by NTPC, as per the CERC (Terms and Conditions of Tariff) Regulations, 2009 (Inter-State Transmission), as applicable from time to time. In addition, EPTCL has further agreed to pay taxes including service tax, levies, cesses etc as applicable from time to time. Further, EPTCL also has agreed to pay charges towards additional transformer losses @ 2500 kwh/ month.

48. As per above discussions, we find and hold that EPTCL is liable to pay transmission charges against the 2 numbers 400kV bays, along with charges such as taxes including service tax/ GST as applicable, levies, cesses and transformer losses with respect to the said bays to NTPC as per the Commercial Agreement dated 11.2.2010. Therefore, the prayer of the Petitioner for directing NTPC not to raise invoice on EPTCL has no legs to stand.

49. The order dated 11.6.2018 of the Commission in I.A. No. 43/IA/2018 in Petition No. 102/TT/2018 states as under:

“6.we consider it appropriate to issue directions to CTU to make direct payment of the monthly PoC charges to NTPC for the 2 Nos. of 400 kV bays at Jhanoor Gandhar TPS of NTPC till further orders”.

50. Thus, we observe that direction to CTU for direct payment to NTPC was an interim arrangement till further Orders. Now that various issues raised by the Petitioner have been answered in this petition, we find no reason to continue with the said interim arrangement.

51. Further, 2020 Sharing Regulations provide as under:

“‘Yearly Transmission Charges’ or ‘YTC’ means the annual transmission charges as determined or adopted by the Commission for the transmission elements of ISTS which have achieved COD up to the last day of a billing period, and for intra-State transmission lines used for inter-State transmission of electricity as approved by the Commission

.....



20. Collection and Disbursement (1) The Central Transmission Utility shall collect transmission charges on account of the first bill for transmission system covered under Regulations 5 to 8 of these regulations and disburse the amount so collected to inter-State transmission licensees and intra-State transmission licensees in proportion to their Yearly Transmission Charges:

Provided that in case of shortfall in collection of transmission charges, the amount to be disbursed to inter-State transmission licensees and intra-State transmission licensees shall be reduced prorata from their share of Yearly Transmission Charges.”

As per the above provisions of the 2020 Sharing Regulations, the CTU disburses transmission charges to inter-state transmission licensees and intra-State transmission licensees in proportion to their Yearly Transmission Charges. Since NTPC is not an inter-State transmission licensee, transmission charges cannot be disbursed to NTPC.

52. Accordingly, we direct that there shall be no direct payment to NTPC from ISTS charges pool by CTU from the date of issue of this Order. The Petitioner shall obtain the approved transmission charges from the CTU in terms of the 2020 Sharing Regulations. The Petitioner and NTPC shall be bound by all terms and conditions of their mutual Commercial Agreement dated 11.2.2010.”

80. As per the Commission’s directions in the order dated 3.6.2022, the transmission charges approved for the transmission asset in this order will be recovered by the CTUIL in accordance with the 2020 Sharing Regulations and will be disbursed to EPTCL. EPTCL shall disburse the transmission charges to NTPC in accordance with the Commercial Agreement dated 11.2.2010 with NTPC.

81. To summarise:

a. The trued-up AFC approved for the transmission asset for the 2009-14 tariff period are as follows:

(₹ in lakh)		
Particulars	2012-13	2013-14
AFC	33.19	397.14

b. The trued-up AFC approved for the transmission asset for the 2014-19 tariff period are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
AFC	357.15	347.81	355.06	349.10	350.85



c. AFC approved for the transmission asset for 2019-24 tariff period are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
AFC	265.05	262.82	258.91	255.49	252.87

82. This order disposes of Petition No. 303/TT/2022 in terms of the above discussions and findings

sd/-
(P. K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(Jishnu Barua)
Chairperson

