

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 697/TT/2020

Coram:

**Shri P. K. Pujari, Chairperson
Shri I. S. Jha, Member
Shri Pravas Kumar Singh, Member**

Date of Order: 20.09.2021

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing up of transmission tariff of the 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for Jhajjar-Mundka 400 kV Double Circuit ISTS Line in Northern Region.

And in the matter of:

Aravali Power Company Private Limited,
NTPC Bhawan, Core-7, Scope Complex,
7, Institutional Area, Lodhi Road,
New Delhi-110003.

.....Petitioner

Versus

1. Haryana Power Purchase Centre,
Shakti Bhawan, Sector-VI, Panchkula,
Haryana-134109.
2. Tata Power Delhi Distribution Limited,
Grid Sub-station, Hudson Road,
Kingsway Camp, Delhi-110009.
3. BSES Rajdhani Power Limited,
BSES Bhawan, Nehru Place,
New Delhi-110019.
4. BSES Yamuna Power Limited,
Shakti Kiran Building, Karkardooma,
Delhi-110092.

.....Respondent(s)



For Petitioner : Ms. Poorva Saigal, Advocate, APCPL
Ms. Tanya Sareen, Advocate, APCPL
Shri Anjum Zargar, APCPL

For Respondents : Shri R. B. Sharma, Advocate, BRPL
Ms. Megha Bajpeyi, BRPL

ORDER

The Petitioner, Aravali Power Company Private Limited (APCPL), a transmission licensee, has filed the present petition for truing up of the transmission tariff of the 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and for determination of transmission tariff for the period from 1.4.2019 to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) for Jhajjar-Mundka 400 kV Double Circuit ISTS in Northern Region (hereinafter referred to as “the transmission asset”).

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

- “1) Approve revised Transmission Charges of Jhajjar–Mundka 400 KV D/C line for the tariff period 2014-19 as per provision of Regulation 8(1) of Tariff Regulations 2014.*
- 2) Approve transmission charges of Jhajjar–Mundka 400 KV D/C line for the tariff period 1.4.2019 to 31.3.2024.*
- 3) Allow the recovery of filing fees as & when paid to the Hon’ble Commission and publication expenses from the beneficiaries.*
- 4) Pass any other order as it may deem fit in the circumstances mentioned above.”*

3. **Backdrop of the case**

a) The Petitioner company has been incorporated under the provisions of the Companies Act, 2013 as a Joint Venture of (i) NTPC Limited (NTPC), a Government of India (GoI) Undertaking, (ii) Indraprastha Power Generation Company Limited (IPGCL), a Government of Delhi Enterprise and (iii) Haryana Power Generation Company Limited (HPGCL), a



Government of Haryana Enterprise - holding 50%, 25% and 25% respectively of the equity share capital of the Petitioner.

b) The Petitioner, being a generating company, as defined under the Electricity Act, 2003 (hereinafter referred to as "the 2003 Act") had set up its first power station/ project namely Indira Gandhi Super Thermal Power Project (IGSTPP) in district Jhajjar of Haryana having an installed capacity of 1500 MW (3x500 MW).

c) The transmission system related to IGSTPP was finalized by CEA, CTU and Ministry of Power (MoP) at a meeting dated 25.7.2007 as follows:

Jhajjar-Mundka 400 kV D/C line	Jhajjar-Mundka line to benefit Delhi for enabling its drawal of power from Jhajjar
Jhajjar-Daulatabad 400 kV D/C line	HVPNL shall construct Jhajjar-Daulatabad and Daulatabad-Gurgaon line

d) The Petitioner set up Jhajjar-Mundka 400 kV Double Circuit Transmission Line since 1.3.2011 through Power Grid Corporation of India Limited, as a dedicated transmission line, connecting 400 kV IGSTPP, Jhajjar bus-bar to 400/220 kV Mundka sub-station at Delhi as per the directions of MoP, Gol vide MoM dated 12.12.2007.

e) The Investment Approval pertaining to the transmission asset was accorded by the Board of Directors (BOD) of the Petitioner's company in 14th Meeting held on 1.5.2008 at a cost of ₹7863.90 lakh (based on 1st Quarter, 2008 price level). Approval for the Revised Cost Estimate was accorded by BOD of the Petitioner's company in 54th Meeting of held on 31.10.2014 at a cost of ₹ 8536.00 lakh.

f) The Petitioner had filed Petition No. 239/2010 for determination of tariff for the transmission line from Date of Commercial Operation (COD) to 31.3.2014 with prayer to declare transmission line as 'deemed ISTS'. The Commission vide order dated 8.6.2013 in Interlocutory Application Nos. 10/2011 & 57/2010 in Petition No. 239/2010 directed the Petitioner to file appropriate application for grant of transmission license for the transmission line. Accordingly, the Petitioner filed Petition No. 169/TL/2013 and was



granted a transmission license vide order dated 7.11.2013 and the transmission line was considered as an ISTS line from 7.11.2013 onwards.

g) The provisional tariff of the transmission asset from 7.11.2013 to 31.3.2014 was allowed by the Commission vide order dated 13.5.2014 in Petition No. 239/2010 and the final tariff of the transmission asset (line length 65.66 km) for the period from 7.11.2013 to 31.3.2014 was allowed vide order dated 28.1.2015 in Petition No. 239/2010.

h) The Petitioner in Petition No. 239/2010 had claimed COD of the transmission asset as 1.3.2011 and claimed tariff from that date. However, tariff was allowed for the transmission asset from 7.11.2013 since the Petitioner was granted transmission license w.e.f. 7.11.2013. For the period from COD (1.3.2011) of the transmission asset to 6.11.2013, it was decided that transmission tariff will be considered at the time of grant of generation tariff to IGSTPP as dedicated transmission line is part of IGSTPP.

i) In Petition No. 229/2010, transmission tariff for the transmission asset was granted w.e.f. 5.3.2011 as Unit-I of the Petitioner's generating station was put under commercial operation only on 5.3.2011. The Annual Transmission Charges (ATC) for the period from 5.3.2011 to 6.11.2013 were allowed for the transmission asset, in Petition No. 229/2010 (petition for determination of generation tariff for IGSTPP), considering the transmission asset as a dedicated transmission line for evacuation of power from IGSTPP to Delhi. While truing-up of generating station tariff vide order dated 17.1.2017 read with corrigendum dated 14.2.2017 in Petition No. 437/GT/2014, annual fixed charges for the transmission asset for the period from 5.3.2011 to 6.11.2013 were excluded.

j) The Commission vide order dated 15.3.2017 in Petition No. 439/TT/2014 had allowed truing-up of transmission tariff of:

- The transmission line for the period from 5.3.2011 to 6.11.2013 (that was earlier determined in Petition No. 229/2010); and
- The transmission asset (ISTS line) for the period from 7.11.2013 to 31.3.2014 (that was earlier determined in Petition No. 239/2010).



k) The transmission tariff of the transmission asset for the period from 1.4.2014 upto 31.3.2019 was allowed vide order dated 15.3.2017 in Petition No. 439/TT/2014 and Petition No. 438/TT/2014. The trued-up tariff of the 2014-19 tariff period claimed by the Petitioner in the instant petition is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015 - 16	2016 -17	2017-18	2018-19
Allowed vide order dated 15.3.2017 in Petition No. 438/TT/2014 and 439/TT/2014	1466.65	1419.22	1371.79	1324.44	1277.15
As claimed by the Petitioner	1467.01	1419.58	1370.80	1259.48	1227.45

4. The Respondents are distribution licensees of Delhi and HPPC (representing distribution licensees of Haryana) which are procuring transmission services from the Petitioner.

5. The Petitioner has served the petition on the Respondents and notice of this petition has been published in the newspapers in accordance with Section 64 of the 2003 Act. No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers. BSES Rajdhani Power Limited (BRPL), Respondent No. 3, has filed its reply vide affidavit dated 14.6.2021 and has raised the issues of use of Optical Ground Wire (OPGW), Return on Equity (RoE), Additional Capital Expenditure (ACE) during the 2019-24 tariff period, annual truing up of grossed-up rate of RoE, tax on transmission business, impact of GST, recovery of application filing fee, publication expenses, over payment of income tax, appointment of an officer or any other person to represent consumer's interest and annual truing up of tariff by transmission licensee during the 2019-24 tariff period. The Petitioner vide affidavit dated 5.7.2021 has filed its rejoinder to the reply of BRPL.

6. It has been placed before us that BRPL has been raising the same issues in other petitions as well despite clear findings of the Commission rejecting the



contentions of BRPL. The contentions of BRPL have been rejected by the Commission in other petitions including Petition No. 136/TT/2020. As BRPL has not challenged the findings, the same have attained finality. In view of these, the pleas raised by BRPL are rejected. The issues which are specific to the instant petition and not dealt by the Commission earlier are considered in the relevant paragraphs of this order.

7. The hearing in this matter was held on 15.6.2021 through video conference and the order was reserved.

8. Having heard the learned counsels for the Petitioner, BRPL and after perusal of the materials on record, we proceed to dispose of the petition.

Re: Information on OPGW

9. BRPL has submitted that information regarding usage of OPGW as earth wire on the assets mentioned in the petition is to be provided by the Petitioner.

10. In response, the Petitioner has submitted that the Petitioner has installed OPGW as earth wire as per Regulation 4 of the Central Electricity Regulatory Commission (Communication System for Inter State Transmission of Electricity) Regulations, 2017 which states that these regulations provide for planning, implementation, operation, maintenance and upgradation of National Grid. CEA has further notified the Central Electricity Authority (Technical Standards For Communication System In Power System Operations) Regulations, 2020 laying down the requirements for planning, implementation, operation, maintenance and upgradation of reliable communication system for all communication requirements including exchange of data and installation of Optic Fibre Communication system, as envisaged in Regulation 26. The said Regulations are binding on the Petitioner in its capacity as a 'user' defined under Regulation 2(1)(t). Therefore, the Petitioner has installed OPGW cables in the transmission asset.



Truing up of Annual Fixed Charges for the 2014-19 Tariff Period

11. The details of the trued-up transmission charges claimed by the Petitioner in respect of 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
Depreciation	434.75	434.46	434.46	434.46	434.46
Interest on Loan	466.95	417.23	367.93	256.76	219.02
Return on Equity	484.42	486.44	486.44	486.44	487.73
Interest on working capital	34.47	33.45	32.40	29.95	29.28
O&M Expenses	46.42	48.00	49.57	51.21	52.92
Total	1467.01	1419.58	1370.80	1258.82	1223.40

12. The details of the trued-up Interest on Working Capital (IWC) claimed by the Petitioner in respect of 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
O&M expenses	3.87	4.00	4.13	4.27	4.41
Maintenance Spares	6.96	7.20	7.44	7.68	7.94
Receivables	244.50	236.60	228.47	209.91	204.58
Total	255.33	247.80	240.03	221.86	216.92
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	34.47	33.45	32.40	29.95	29.28

Capital Cost

13. The capital cost of ₹8239.36 lakh as 31.3.2014 allowed vide order dated 15.3.2017 in Petition No. 438/TT/2014 and Petition No. 439/TT/2014 has been considered as opening capital cost as on 1.4.2014 for truing-up of tariff for the 2014-19 tariff period.

Additional Capital Expenditure

14. The Petitioner has not claimed any ACE for the 2014-19 tariff period in the instant petition. We have observed that there is a cost adjustment of (-) ₹11.04 lakh during 2014-15 corresponding to allowed works which will be deducted from capital cost.



Initial Spares

15. The Petitioner has not submitted any claim towards Initial Spares in the instant petition and hence no Initial Spares have been allowed for the 2014-19 tariff period.

Capital Cost for the 2014-19 Tariff Period

16. The Capital Cost considered for true up of transmission tariff of the transmission asset for the 2014-19 tariff period after including ACE is as follows:

(₹ in lakh)

Capital Cost allowed as on 1.4.2014	ACE allowed during 2014-19					Capital Cost allowed as on 31.3.2019
	2014-15	2015-16	2016-17	2017-18	2018-19	
8239.36	-11.04	0.00	0.00	0.00	0.00	8228.32

17. The details of capital cost allowed for the transmission asset vide order dated 15.3.2017 in Petition No. 438/TT/2014 and Petition No. 439/TT/2014, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)

Particulars	Capital cost as on 1.4.2014	ACE	Total Capital cost including ACE as on 31.3.2019
		2014-19	
Allowed vide order dated 15.3.2017 in Petition No. 438/TT/2014 and Petition No. 439/TT/2014	8239.36	0.00	8239.36
As claimed by the Petitioner in the instant petition	8239.36	(-) 11.04	8228.32
Allowed after truing up in this order	8239.36	(-) 11.04	8228.32

Debt-Equity Ratio

18. The debt-equity ratio as on 31.3.2014 of 70:30 was admitted vide order dated 15.3.2017 in Petition No. 438/TT/2014 and Petition No. 439/TT/2014. The Petitioner has claimed the debt-equity ratio of 70:30 as on 1.4.2014. Further, for the purpose of ACE, debt-equity ratio has been considered in accordance with Regulation 19(3) of the 2014 Tariff Regulations. Since no ACE has been claimed



during the 2019-24 period, the debt-equity ratio as on 31.3.2019 also remains the same (i.e. 70:30). Accordingly, the details of the debt-equity ratio considered on 1.4.2014 and 31.3.2019 for the transmission asset is as follows:

Funding	Capital Cost as (on 1.4.2014)		Capital Cost (as on 31.3.2019)	
	Amount (₹ in lakh)	(in %)	Amount (₹ in lakh)	(in %)
Debt	5767.55	70.00	5759.82	70.00
Equity	2471.81	30.00	2468.50	30.00
Total	8239.36	100.00	8228.32	100.00

Depreciation

19. The depreciation has been allowed out as per the methodology provided in Regulation 27 of the 2014 Tariff Regulations. COD of the transmission asset was in 2010-11. Accordingly, the transmission asset will complete 12 years beyond 2013-14 and, thus, depreciation has been calculated annually based on Straight Line Method on the admitted capital expenditure upto 31.3.2014.

20. Depreciation has been allowed considering capital expenditure as on 1.4.2014 and approved ACE during the 2014-19 tariff period. The Gross Block during the 2014-19 tariff period has been depreciated at Weighted Average Rate of Depreciation (WAROD). WAROD at Annexure-I has been worked out after taking into account the depreciation rates of the assets as prescribed in the 2014 Tariff Regulations and the trued-up depreciation allowed for the 2014-19 tariff period is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	8239.36	8228.32	8228.32	8228.32	8228.32
Additional Capitalisation	-11.04	0.00	0.00	0.00	0.00
Closing Gross Block	8228.32	8228.32	8228.32	8228.32	8228.32
Average Gross Block	8233.84	8228.32	8228.32	8228.32	8228.32
Weighted Average Rate of Depreciation (WAROD) (%)	5.28	5.28	5.28	5.28	5.28
Balance useful life of the asset at the beginning of the year (Year)	32	31	30	29	28
Lapsed life of the asset at the beginning of the year (Year)	3	4	5	6	7



Aggregated Depreciable Value	7410.46	7405.49	7405.49	7405.49	7405.49
Depreciation during the year	434.75	434.46	434.46	434.46	434.46
Cumulative Depreciation at the end of the year	1759.93	2194.38	2628.84	3063.29	3497.75
Remaining Aggregated Depreciable Value at the beginning of the Year	6085.28	5645.56	5211.11	4776.65	4342.20

21. The details of depreciation allowed vide order dated 15.3.2017 in Petition No. 438/TT/2014 and Petition No. 439/TT/2014, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 15.3.2017 in Petition No. 438/TT/2014 and Petition No. 439/TT/2014	435.04	435.04	435.04	435.04	435.04
Claimed by the Petitioner in the instant petition	434.75	434.46	434.46	434.46	434.46
Approved after true-up in this order	434.75	434.46	434.46	434.46	434.46

Interest on Loan (IoL)

22. IoL has been worked out as per the provisions of Regulation 26 of the 2014 Tariff Regulations as follows:

- a) Gross amount of loan, repayment of instalments and rate of interest on actual average loan have been considered;
- b) The yearly repayment for the 2014-19 tariff period has been considered to be equal to the depreciation allowed for that period; and
- c) Weighted Average Rate of Interest on actual average loan worked out as per (a) above is applied on the notional average loan during the year to arrive at IoL.

23. The Weighted Average Rate of Interest on actual loan provided by the Petitioner, the total net loan opening is ₹5379.73 lakh during 2014-15. The Commission vide order dated 15.3.2017 in Petition No. 438/TT/2014 and Petition No. 439/TT/2014 had allowed the total net loan opening as ₹5218.29 lakh. There



is a mismatch in loan portfolio between 2013-14 and 2014-15. Accordingly, IoL has been calculated based on the loan portfolio and the interest rate allowed during 2013-14 in order dated 15.3.2017.

24. The details of IoL allowed for the transmission asset are as follows:

(₹ in lakh)					
Particular	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	5767.55	5767.55	5767.55	5767.55	5767.55
Cumulative Repayments upto Previous Year	1325.18	1759.93	2194.38	2628.84	3063.29
Net Loan-Opening	4442.47	4007.72	3573.27	3138.81	2704.36
Addition due to Additional Capitalization	-7.73	0.00	0.00	0.00	0.00
Repayment during the year	434.75	434.46	434.46	434.46	434.46
Net Loan-Closing	4000.00	3573.27	3138.81	2704.36	2269.90
Average Loan	4221.13	3790.40	3355.94	2921.49	2487.03
Weighted Average Rate of Interest on Loan (in %)	10.8201	10.8201	10.8201	8.7169	8.7169
Interest on Loan	456.743	410.13	363.12	254.66	216.79

25. The details of IoL allowed vide order dated 15.3.2017 in Petition No. 438/TT/2014 and Petition No.439/TT/2014, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)					
Particulars	15-2014	16-2015	2016-17	2017-18	2018-19
Allowed vide order dated 15.3.2017 in Petition No. 438/TT/2014 and Petition No. 439/TT/2014	466.00	418.02	370.03	322.05	274.06
Claimed by the Petitioner in the instant petition	456.74	410.14	363.13	254.67	216.80
Allowed after true-up in this order	456.73	410.13	363.12	254.66	216.79

Return on Equity

26. The Petitioner has claimed RoE for the transmission asset in terms of Regulations 24 and 25 of the 2014 Tariff Regulations. The Petitioner has submitted that it is liable to pay income tax at Minimum Alternate Tax (MAT) rates and has claimed the effective tax rates for 2014-19 tariff period as follows:



Year	Claimed effective tax (in %)	Grossed-up RoE (in %) [(Base Rate)/(1-t)]
2014-15	20.961	19.611
2015-16	21.342	19.706
2016-17	21.342	19.706
2017-18	21.342	19.706
2018-19	21.549	19.758

27. The Commission vide order dated 27.4.2020 in Petition No. 274/TT/2019 had arrived at the effective tax rate for PGCIL based on the notified MAT rates and the same is as follows:

Year	Notified MAT rates (in %) (inclusive of surcharge & cess)	Effective tax (in %)
2014-15	20.961	20.961
2015-16	21.342	21.342
2016-17	21.342	21.342
2017-18	21.342	21.342
2018-19	21.549	21.549

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

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

29. Accordingly, RoE allowed in respect of the transmission asset is as follows:

Particulars	₹ in lakh				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	2471.81	2468.50	2468.50	2468.50	2468.50
Addition due to Additional Capitalization	-3.31	0.00	0.00	0.00	0.00
Closing Equity	2468.50	2468.50	2468.50	2468.50	2468.50
Average Equity	2470.15	2468.50	2468.50	2468.50	2468.50
Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50



Tax Rate applicable (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (Pre-tax) (in %)	19.610	19.705	19.705	19.705	19.758
Return on Equity (Pre-tax)	484.40	486.42	486.42	486.42	487.73

30. The details of RoE allowed vide order dated 15.3.2017 in Petition No. 438/TT/2014 and Petition No. 39/TT/2014, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)					
Particulars	15-2014	16-2015	2016-17	2017-18	2018-19
Allowed earlier in order dated 15.3.2017 in Petition No. 438/TT/2014 and Petition No. 439/TT/2014	484.72	484.72	484.72	484.72	484.72
Claimed by the Petitioner in the instant petition	484.42	486.44	486.44	486.44	487.73
Approved after true-up in this order	484.40	486.42	486.42	486.42	487.73

Operation & Maintenance Expenses (O&M Expenses)

31. The details of O&M Expenses claimed by the Petitioner in respect of the transmission asset and allowed under Regulation 29(4)(a) of the 2014 Tariff Regulations for the purpose of tariff are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses Calculation (Transmission Line)					
Asset: 400 kV Double Circuit Jhajjar-Mundka transmission line (Double Circuit line twin and triple conductor)					
Line Length (Km)	65.66	65.66	65.66	65.66	65.66
Norms (₹ lakh/Km)	0.707	0.731	0.755	0.780	0.806
Total O&M Expenses	46.42	48.00	49.57	51.21	52.92

32. The details of O&M Expenses allowed vide order dated 15.3.2017 in Petition No. 438/TT/2014 and Petition No. 439/TT/2014, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 15.3.2017 in Petition No. 438/TT/2014 and Petition No. 439/TT/2014	46.42	48.00	49.57	51.22	52.92
Claimed by the Petitioner in the	46.42	48.00	49.57	51.21	52.92



instant petition					
Approved after true-up in this order	46.42	48.00	49.57	51.21	52.92

Interest on Working Capital

33. IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and the trued-up IWC 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
O&M Expenses (O&M Expenses for 1 month)	3.87	4.00	4.13	4.27	4.41
Maintenance Spares (15% of O&M Expenses)	6.96	7.20	7.44	7.68	7.94
Receivables (Equivalent to 2 months of annual fixed cost / annual transmission charges)	242.75	235.38	227.64	209.44	203.50
Total	253.58	246.58	239.21	221.39	215.85
Rate of Interest on working capital (in %)	13.50	13.50	13.50	13.50	13.50
Interest of Working Capital	34.23	33.29	32.29	29.89	29.14

34. The details of IWC allowed vide order dated 15.3.2017 in Petition No. 438/TT/2014 and Petition No. 439/TT/2014, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed earlier in order dated 15.3.2017 in Petition No. 438/TT/2014 and Petition No. 439/TT/2014	34.46	33.44	32.43	31.41	30.40
Claimed by the Petitioner in the instant petition	34.47	33.45	32.40	29.95	29.28
Approved after true-up in this order	34.23	33.29	32.29	29.89	29.14

Approved Annual Fixed Charges for the 2014-19 Tariff Period

35. The trued-up Annual Fixed Charges (AFC) approved for the transmission asset for the 2014-19 period are as follows:



(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	434.75	434.46	434.46	434.46	434.46
Interest on Loan	456.73	410.13	363.12	254.66	216.79
Return on Equity	484.40	486.42	486.42	486.42	487.73
Interest on Working Capital	34.23	33.29	32.29	29.89	29.14
O&M Expenses	46.42	48.00	49.57	51.21	52.92
Total	1456.53	1412.29	1365.85	1256.63	1221.03

36. Accordingly, ATC allowed vide order dated 15.3.2017 in Petition No. 438/TT/2014 and Petition No. 439/TT/2014, claimed by the Petitioner in the instant petition and approved after trueing up in the instant order are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed earlier in order dated 15.3.2017 in Petition No. 438/TT/2014 and Petition No. 439/TT/2014	1466.64	1419.22	1371.79	1324.44	1277.14
Claimed by the Petitioner in the instant petition	1467.01	1419.58	1370.80	1258.82	1223.40
Allowed after true-up in this order	1456.53	1412.29	1365.85	1256.63	1221.03

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

37. The Petitioner has claimed the transmission charges for the transmission asset for the 2019-24 tariff period as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	201-22	2022-23	2023-24
Depreciation	434.46	434.46	434.46	434.46	94.64
Interest on Loan	180.98	142.88	104.67	66.30	42.93
Return on Equity	463.62	463.62	463.62	463.62	463.62
Interest on Working Capital	18.75	18.31	17.83	17.34	11.93
Operation and Maintenance	57.85	59.88	61.98	64.15	66.38
Total	1155.66	1119.15	1082.56	1045.87	679.50

38. The Petitioner has claimed IWC for the transmission asset for the 2019-24 tariff period as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	4.82	4.99	5.17	5.35	5.53
Maintenance Spares	8.68	8.98	9.30	9.62	9.96
Receivables	142.09	137.98	133.47	128.94	83.55



Total	155.59	151.95	147.93	143.91	99.04
Rate of Interest	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	18.75	18.31	17.83	17.34	11.93

Capital Cost

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



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

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

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

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

- (a) *The 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.”*



40. The Petitioner has claimed capital cost of ₹8228.32 lakh as on 31.3.2019 for the transmission asset. The same has been worked out as on 31.3.2019 and considered as the opening capital cost as on 1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

41. The Petitioner has not projected any ACE during the 2019-24 tariff period. Accordingly, the capital cost considered for the 2019-24 tariff period is as follows:

(₹ in lakh)		
Capital Cost (as on 1.4.2019)	ACE for the 2019-24 period	Capital Cost (as on 31.3.2024)
8228.32	0.00	8228.32

Debt-Equity Ratio

42. 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.”

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

Funding	Capital Cost (as on 1.4.2019) (₹ in lakh)	(in %)	Total Capital Cost (as on 31.3.2024) (₹ in lakh)	(in %)
Debt	5759.82	70.00	5759.82	70.00
Equity	2468.50	30.00	2468.50	30.00
Total	8228.32	100.00	8228.32	100.00

Depreciation

44. 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 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 upto 31.3.2019 from the gross depreciable value of the assets.

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

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



45. Depreciation has been dealt with in accordance with Regulation 33 of the 2019 Tariff Regulations. The transmission asset was put under commercial operation during 2010-11. Accordingly, it will complete 12 years beyond the 2014-19 tariff period. Depreciation has been calculated annually based on Straight Line Method on the admitted capital expenditure upto 31.3.2023. Thereafter, the depreciation is allowed by spreading balance depreciable value as on 1.4.2023.

46. The calculation of WAROD for the 2019-24 period is placed at Annexure-II. 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:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	8228.32	8228.32	8228.32	8228.32	8228.32
Additional Capitalisation	0.00	0.00	0.00	0.00	0.00
Closing Gross Block	8228.32	8228.32	8228.32	8228.32	8228.32
Average Gross Block	8228.32	8228.32	8228.32	8228.32	8228.32
Weighted Average Rate of Depreciation (WAROD) (in %)	5.2800	5.2800	5.2800	5.2800	1.1466%
Balance useful life of the asset at the beginning of the year (Year)	27	26	25	24	23
Lapsed life of the asset at the beginning of the year (Year)	8	9	10	11	12
Aggregated Depreciable Value	7405.49	7405.49	7405.49	7405.49	7405.49
Depreciation during the year	434.46	434.46	434.46	434.46	94.34
Cumulative Depreciation at the end of the year	3932.21	4366.66	4801.12	5235.57	5329.92
Remaining Aggregated Depreciable Value at the beginning of the Year	3907.74	3473.28	3038.83	2604.37	2169.92

Interest on Loan

47. 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 upto the date of de-capitalisation of such asset.

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered;

Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

(7) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.”

48. IoL is allowed on the basis of the rate prevailing as on 1.4.2019. IoL is allowed considering all the loans submitted in Form-9C. The Petitioner is directed to reconcile the loan statement, which would be reviewed at the time of true-up. The details of IoL allowed for the transmission asset are as follows:

	(₹ in lakh)				
Particular	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	5759.82	5759.82	5759.82	5759.82	5759.82
Cumulative Repayments up to Previous Year	3497.75	3932.21	4366.66	4801.12	5235.57
Net Loan-Opening	2262.07	1827.62	1393.16	958.71	524.25
ACE	0.00	0.00	0.00	0.00	0.00



Repayment during the year	434.46	434.46	434.46	434.46	94.34
Net Loan-Closing	1827.62	1393.16	958.71	524.25	429.91
Average Loan	2044.85	1610.39	1175.94	741.48	477.08
Weighted Average Rate of Interest on Loan (%)	8.7169	8.7169	8.7169	8.7169	8.7169
Interest on Loan	178.25	140.38	102.51	64.63	41.59

Return on Equity

49. Regulations 30 and 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 due to Change in Law, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system;

Provided further that:

i. In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC;

ii. in case of existing generating station, as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC, rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;

iii. in case of a thermal generating station, with effect from 1.4.2020:

a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;

b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:

Provided that the detailed guidelines in this regard shall be issued by National Load Dispatch Centre by 30.6.2019.”



“31. Tax on Return on Equity: (1) The base rate of return on equity as allowed by the Commission under Regulation 30 of these regulations shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax paid on income from other businesses including deferred tax liability (i.e. income from business other than business of generation or transmission, as the case may be) shall be excluded for the calculation of effective tax rate.

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

$$\text{Rate of pre-tax return on equity} = \text{Base rate} / (1-t)$$

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

Illustration-

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

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

(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.”



50. The MAT rate applicable in 2019-20 has been considered for the purpose of RoE, which shall be trued-up with actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. Accordingly, RoE allowed for the transmission asset for the 2019-24 tariff period is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	2468.50	2468.50	2468.50	2468.50	2468.50
ACE	0.00	0.00	0.00	0.00	0.00
Closing Equity	2468.50	2468.50	2468.50	2468.50	2468.50
Average Equity	2468.50	2468.50	2468.50	2468.50	2468.50
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
Tax Rate applicable (in %)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (Pre-tax)	18.782	18.782	18.782	18.782	18.782
Return on Equity (Pre-tax)	463.63	463.63	463.63	463.63	463.63

Operation & Maintenance Expenses

51. The O&M Expenses claimed by the Petitioner 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
400 kV Double Circuit Jhajjar-Mundka transmission Line (km) (A)	65.66	65.66	65.66	65.66	65.66
Norms D/C twin & triple conductor (₹ lakh per km) (B)	0.881	0.912	0.944	0.977	1.011
Total O&M Expenses (A*B)	57.85	59.88	61.98	64.15	66.38

52. 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>					



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
Norms for AC and HVDC lines (₹ Lakh per km)					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

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

Provided further that:

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



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

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

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

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

53. The O&M Expenses claimed by the Petitioner for the transmission line are in accordance with the 2014 Tariff Regulations. Accordingly, the O&M Expenses allowed for the transmission asset is as follows:

(₹ in lakh)					
Element	2019-20	2020-21	2021-22	2022-23	2023-24
Transmission Line O&M Expenses					
400 kV Double Circuit Jhajjar-Mundka line (twin and triple conductor) (length 65.66 km)	57.85	59.88	61.98	64.15	66.38
Total O&M Expenses	57.85	59.88	61.98	64.15	66.38



Interest on Working Capital

54. Regulations 34(1)(c), 34(3) and 34(4) and Regulation 3(7) of the 2019 Tariff Regulations provide 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 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;”

55. The Petitioner has submitted that it has computed IWC for the 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. 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 and 11.25% (SBI 1 year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21 and 10.50% (SBI 1 year



MCLR applicable as on 1.4.2023 of 7.00% plus 350 basis points) for 2021-22 onwards. The components of the working capital and interest allowed thereon is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O & M Expenses (O&M expenses for 1 month)	4.82	4.99	5.17	5.35	5.53
Maintenance Spares (15% of O&M expenses)	8.68	8.98	9.30	9.62	9.96
Receivables (Equivalent to 45 days of annual fixed cost/ annual transmission charges)	142.14	137.51	132.91	128.46	83.38
Total	155.64	151.48	147.37	143.42	98.87
Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
Interest of Working Capital	18.75	17.04	15.47	15.06	10.38

Annual Fixed Charges for the 2019-24 Tariff Period

56. The transmission charges allowed 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
Depreciation	434.46	434.46	434.46	434.46	94.34
Interest on Loan	178.25	140.38	102.51	64.63	41.59
Return on Equity	463.63	463.63	463.63	463.63	463.63
Interest on Working Capital	18.75	17.04	15.47	15.06	10.38
O&M Expenses	57.85	59.88	61.98	64.15	66.38
Total	1152.94	1115.39	1078.05	1041.93	676.33

Filing Fee and the Publication Expenses

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



Goods and Services Tax (GST)

58. The Petitioner has submitted that GST Act came into force w.e.f. 1.7.2017 because of which many taxes/ cess/ duties like Central Exercise Duty, Service Tax, Value Added Tax, Sales Tax etc. got subsumed in GST and the Petitioner was required to pay the change in rate of tax to the vendors for the Operation & Maintenance activities carried out with respect to the transmission asset. With GST, the net taxes paid by the Petitioner have increased for carrying out O&M activities.

59. The Petitioner has submitted that O&M norms as per the 2014 Tariff Regulations were based on the actuals for the period (2008-13) where the total taxes, duties etc. payable were less when compared with GST. Accordingly, the Petitioner has incurred increased expenditure due to increased taxes w.e.f. 1.7.2017 for the O&M activities. Also, the Commission in various orders has declared the promulgation of GST Act as a Change in Law event.

60. The Petitioner has submitted that during the consultation process of formulation of the 2019 Tariff Regulations, various stakeholders suggested that there was significant impact on O&M Expenses w.e.f. 1.7.2017 due to implementation of GST. Accordingly, the Commission incorporated the impact on account of GST in O&M Expenses norms for transmission system. The impact of increase in rate of indirect tax from 15% to 18% has been calculated on all taxable services and being claimed for the period 1.7.2017 to 31.3.2019. The impact has been calculated on actual O&M incurred during the said period.

61. The Petitioner has prayed to allow the additional financial burden due to GST in the tariff as additional O&M Expenses in order to restore the Petitioner to same economic condition as prior to implementation of GST. The details of impact of GST claimed by the Petitioner are as follows:



(₹ in lakh)	
2017-18 (1.7.2017 to 31.3.2018)	2018-19
0.66	4.05

62. BRPL in its reply has submitted that Petitioner's assessment on GST claim from 1.7.2017 to 31.3.2018 and 2018-19 period may be rejected as the claim is based on the impact of increase in indirect tax from 15% to 18% on all taxable service on actual O&M Expenses.

63. BRPL has questioned the applicability of directions/ provisions contained in the 2014 Tariff Regulations related to "Change in Law" to the Petitioner's case. It is submitted that O&M Expenses provided with respect to IGSTPP are norm based and any change in the norms by including GST will strike at the root of the norm-based tariff and no sanctity will be left in these norms. The Petitioner is seeking the grant of GST without further examination whether the amount provided in the norm-based tariff is adequate or not. Thus, any proposal which has a bearing on the norms can be accepted only if the Petitioner proves that the norms are inadequate to meet the additional expenditure, if any, on account of GST. Without proving the inadequacy of the norms, any change in the O&M norms would amount to grant of unreasonable tariff to the Petitioner which would be against Section 61 of the 2003 Act. It is also not clear whether there was any provision for payment of GST in the agreements which were entered either before or after the date of implementation of GST. BRPL has further submitted that GST on all those services which are norm based may not be allowed by the Commission. Accordingly, BRPL has requested that the claim amounting ₹4.71 lakh may be rejected by the Commission.

64. In response, the Petitioner has submitted that GST laws were notified post issuance of the 2014 Tariff Regulations w.e.f. 1.7.2017 and could not be considered while determining the norms for the period from 1.4.2014 to 31.3.2019



on account of the promulgation of GST Laws. The amounts of ₹0.66 lakh and ₹4.05 lakh for the 2017-18 and 2018-19 respectively, mentioned in the petition are on gross basis towards the O&M/service.

65. We have considered the submission of the Petitioner and BRPL. Since GST is not levied on transmission services at present, we are not inclined to allow expenditure incurred on O&M activities related thereto.

Sharing of Transmission Charges

66. The Commission vide order dated 15.3.2017 in Petition No. 438/TT/2014 and Petition No. 439/TT/2014 held as follows:

“69. The transmission charges of the dedicated transmission line shall be paid by the beneficiaries as per PPA from COD to a day prior to date of transmission licence i.e. 6.11.2013. From the date of transmission licence i.e. 7.11.2013, the billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time.”

67. From the date of obtaining the transmission license i.e. 7.11.2013, transmission charges for inter-State transmission systems were governed by the provisions of the 2010 Sharing Regulations. With effect from 1.11.2020, the 2010 Sharing Regulations has been repealed and sharing of transmission charges is governed by the provisions of the 2020 Sharing Regulations. Accordingly, the liabilities of DICs for arrears of transmission charges determined through this order shall be computed DIC-wise in accordance with the provisions of respective Tariff Regulations and shall be recovered from the concerned DICs through Bills under Regulation 15(2)(b) of the 2020 Sharing Regulations. Billing, collection and disbursement of transmission charges for subsequent period shall be recovered in terms of provisions of the 2020 Sharing Regulations as provided in Regulation 57 of the 2019 Tariff Regulations.



68. No other issues have been pressed upon by the Petitioner in the instant petition.

69. To summarise:

a) The trued-up AFC approved in respect of the transmission asset for the 2014-19 tariff period are as follows:

(₹ in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
1456.53	1412.29	1365.85	1256.63	1221.03

b) AFC allowed in respect of the transmission asset for the 2019-24 tariff period in the instant order are:

(₹ in lakh)				
2019-20	2020-21	2021-22	2022-23	2023-24
1152.94	1115.39	1078.05	1041.93	676.33

70. Annexure-I and Annexure-II given hereinafter shall form part of this order.

71. This order disposes of Petition No. 697/TT/2020 in terms of the above discussion and findings.

sd/-
(Pravas Kumar Singh)
Member

sd/-
(I.S. Jha)
Member

sd/-
(P.K. Pujari)
Chairperson



Annexure-I

2014-19 Capital Expenditure	Admitted Capital Cost as on 1.4.2014 (₹ in lakh)	ACE (₹ in lakh)		Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations				
		2014-15	2015-19			2014-15 (₹ in lakh)	2015-16 (₹ in lakh)	2016-17 (₹ in lakh)	2017-18 (₹ in lakh)	2018-19 (₹ in lakh)
Transmission Line	8239.36	-11.04	0.00	8228.32	5.28	434.75	434.46	434.46	434.46	434.46
TOTAL	8239.36	-11.04	0.00	8228.32		434.75	434.46	434.46	434.46	434.46
Average Gross Block (₹ in lakh)						8233.84	8228.32	8228.32	8228.32	8228.32
Weighted Average Rate of Depreciation (WAROD)						5.28%	5.28%	5.28%	5.28%	5.28%



Annexure-II

2019-24 Capital Expenditure	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	ACE 2019-24 (₹ in lakh)	Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations				
					2019-20 (₹ in lakh)	2020-21 (₹ in lakh)	2021-22 (₹ in lakh)	2022-23 (₹ in lakh)	2023-24 (₹ in lakh)
Transmission Lines	8228.32	0.00	8228.32	5.28	352.47	370.75	370.75	370.75	94.34
TOTAL	8228.32	0.00	8228.32		352.47	370.75	370.75	370.75	94.34
Average Gross Block (₹ in lakh)					8228.32	8228.32	8228.32	8228.32	8228.32
Weighted Average Rate of Depreciation (WAROD)					5.28%	5.28%	5.28%	5.28%	1.1466%

