

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 511/TT/2019

Coram:

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

Date of Order: 01.02.2021

In the Matter of:

Approval under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and truing-up of transmission tariff of the 2014-19 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of the 2019-24 period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 in respect of 400 kV D/C Sagardighi-Behrampur Transmission Line and associated bays at Sagardighi TPS (WBPDCL) and Behrampur Sub-station under Transmission System for "Eastern Strengthening Scheme-X" in the Eastern Region.

And in the Matter of:

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

.....**Petitioner**

Versus

1. Bihar State Power (Holding) Company Ltd.,
Vidyut Bhawan, Bailey Road, Patna-800001.
2. West Bengal State Electricity Distribution Company Ltd.,
Bidyut Bhawan, Bidhan Nagar, Block DJ, Sector-II,
Salt Lake City, Kolkata-700091.
3. Grid Corporation of Orissa Ltd.,
Shahid Nagar, Bhubaneswar-751007.
4. Jharkhand State Electricity Board,
In front of Main Secretariat Doranda, Ranchi-834002.
5. Damodar Valley Corporation,
DVC Tower, Maniktala Civic Centre, VIP Road, Kolkata-700054.



6. Power Department,
Government of Sikkim, Gangtok-737101

...Respondent(s)

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

For Respondents: None

ORDER

The instant petition has been filed by Power Grid Corporation of India Limited (hereinafter referred to as “the Petitioner”), a deemed transmission licensee, for truing up of the tariff for the period from COD, i.e. 26.12.2014 to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and for determination of 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”) in respect of the 400 kV D/C Sagardighi-Bhrampur Transmission Line and associated bays at Sagardighi TPS (WBPDCL) and Bhrampur Sub-station (hereafter referred to as “transmission asset”) under Transmission System for “Eastern Strengthening Scheme-X” in the Eastern Region (hereinafter referred to as “the transmission project”).

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

“1) Approve the trued up Transmission Tariff for 2014-19 block and transmission tariff for 2019-24 block for the assets covered under this petition, as per para 10.2 and 11.0 above.

2) Approve the Completion cost and additional capitalization incurred during 2014-19 & 2019-24.

3) Allow the petitioner to recover the shortfall or refund the excess Annual Fixed Charges, on account of Return on Equity due to change in applicable Minimum



Alternate/Corporate Income Tax rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission as provided in Tariff Regulation 2014 and Tariff regulations 2019 as per para 10.2 and 11.0 above for respective block.

4) Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 70 (1) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019, and other expenditure (if any) in relation to the filing of petition.

5) Allow the petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the respondents in terms of Regulation 70 (3) and (4) Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019.

6) Allow the petitioner to bill and adjust impact on Interest on Loan due to change in Interest rate on account of floating rate of interest applicable during 2019-24 period, if any, from the respondents.

7) Allow the petitioner to claimed initial spares project as whole.

8) Allow the petitioner to file a separate petition before Hon'ble Commission for claiming the overall security expenses and consequential IOWC on that security expenses as mentioned at para 11.6 above.

9) Allow the petitioner to claim the capital spares at the end of tariff block as per actual.

10) Allow the Petitioner to bill and recover GST on Transmission Charges separately from the respondents, if GST on transmission is levied at any rate in future. Further, any taxes including GST and duties including cess etc. imposed by any statutory/Govt./municipal authorities shall be allowed to be recovered from the beneficiaries.

and pass such other relief as Commission deems fit and appropriate under the circumstances of the case and in the interest of justice.”

Background

3. The brief facts of the case are as under:-

a. The Investment Approval for the transmission project was accorded by Board of Directors of the Petitioner Company vide Memorandum No. C/CP/ERSS-X dated 23.12.2013 at an estimated cost of ₹14394 lakh, including IDC of ₹763 lakh.

b. The scope of the transmission project includes 400 kV D/C line from Sagardighi (TPS) (West Bengal) to Baharampur with high capacity HTLS conductor.



c. As per the investment approval, the transmission assets were scheduled to be put into commercial operation within 24 months from the date of investment approval. The investment approval was accorded on 23.12.2013 and hence the scheduled date of commercial operation (COD) was 23.12.2015. The date of the commercial operation of the transmission asset was 26.12.2014 and hence there is no time over-run.

d. The transmission tariff based on admitted capital cost of ₹8645.66 lakh as on COD and projected Additional Capital Expenditure (ACE) of ₹3875.14 lakh was approved by the Commission for the period from 26.12.2014 to 31.3.2019 *vide* order dated 21.3.2016 in Petition No. 436/TT/2014.

e. The Petitioner has claimed the following trued up tariff for the transmission asset for the 2014-19 period :

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Annual Fixed Charges (AFC) approved <i>vide</i> order dated 21.3.2016 in Petition No.436/TT/2014	516.17	2277.20	2427.56	2377.25	2327.23
AFC claimed by the Petitioner based on truing up in the instant petition	516.29	2136.77	2208.07	2339.29	2430.43

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

5. The Petitioner has served the petition on the Respondents and notice of this petition has been published in the newspaper in accordance with Section 64 of the Electricity Act, 2003. No comments/ objections have been received from the general public in response to the aforesaid notice published in the newspaper in the Petitioner. General Notice dated 14.1.2020 directing the beneficiaries/ Respondents



to file reply in the matter was also posted on the Commission's website. None of the Respondents have filed reply to the petition.

6. This order is issued considering the submissions made in the Petition dated 16.10.2019 and Petitioner's affidavits dated 29.5.2020 and 18.9.2020.

7. The hearing in this matter was held on 24.8.2020 through video conference and the order was reserved and the Petitioner was directed to submit certain information and the same was filed by the Petitioner vide affidavit dated 18.9.2020.

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

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

9. The details of the trued up transmission charges claimed by the Petitioner in respect of the transmission asset is as under:

(₹ in lakh)					
Particulars	2014-15 (Pro-rata for 96 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	131.14	554.25	585.64	641.67	684.97
Interest on Loan	156.76	630.12	618.05	618.05	603.47
Return on Equity	146.23	627.21	668.38	731.10	781.68
Interest on Working Capital	13.77	56.54	58.43	61.67	64.02
O&M Expenses	68.39	268.65	277.57	286.80	296.29
Total	516.29	2136.77	2208.07	2339.29	2430.43

10. The details of the trued-up Interest on Working Capital (IWC) claimed by the Petitioner in respect of the transmission asset are as under:

(₹ in lakh)					
Particulars	2014-15 (Pro-rata for 96 days)	2015-16	2016-17	2017-18	2018-19
O&M Expenses	21.67	22.39	23.13	23.90	24.69
Maintenance spares	39.00	40.30	41.64	43.02	44.44
Receivables	327.16	356.13	368.01	389.88	405.07
Total working capital	387.83	418.82	432.78	456.80	474.20



Particulars	2014-15 (Pro-rata for 96 days)	2015-16	2016-17	2017-18	2018-19
Rate of interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	13.77	56.54	58.43	61.67	64.02

11. The Commission *vide* order dated 21.3.2016 in Petition No. 436/TT/2014 approved the capital cost and the projected ACE during the period from COD to 31.3.2019 as under:

(₹ in lakh)

Apportioned Approved Capital Cost	Admitted Capital Cost as on COD	Projected ACE 2014-19	Total Capital Cost as on 31.3.2019
14395.55	8645.66*	3875.14	12520.80

* Excludes accrual IDC of ₹135.68 lakh and the same was added in the respective year of discharge [2014-15: ₹2.95 lakh and 2015-16: ₹132.73 lakh]

Interest During Construction (IDC) and Incidental Expenditure During Construction (IEDC)

12. The Commission *vide* order dated 21.3.2016 in Petition No. 436/TT/2014 approved the IDC of ₹164.46 lakh. The details of IDC allowed earlier are as under:

(₹ in lakh)

IDC admitted	IDC discharged as on COD	Un- discharged as on COD	IDC discharged during the year 2014-15 and considered as ACE for the respective year	IDC discharged during the year 2015-16 and considered as ACE for the respective year
164.46	28.78	135.68	2.95	132.73

13. The Petitioner has claimed the same amount of IDC in the instant petition. Accordingly, earlier approved IDC has been allowed.

14. The Commission *vide* order dated 21.3.2016 in Petition No. 436/TT/2014 has approved IEDC of ₹96.96 lakh. The Petitioner in the instant petition has claimed the same amount of IEDC. Accordingly, earlier approved IEDC has been considered.



Initial Spares

15. The Petitioner had claimed Initial Spares of ₹191.26 lakh pertaining to sub-station and ₹84.55 lakh pertaining to transmission line corresponding to capital cost of ₹3496.93 lakh and ₹9295.38 lakh (excluding IDC, IEDC, land cost and cost of civil works) respectively as on the cut-off date of 31.3.2017. The total Initial Spares claimed by the Petitioner were within the limits prescribed under Regulation 13 of the 2014 Tariff Regulations and, therefore, the Commission *vide* order dated 21.3.2016 in Petition No. 436/TT/2014 had allowed the same. The Petitioner has claimed the same amount of Initial Spares in the instant petition and, therefore, the same has been allowed.

Capital Cost as on COD

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

17. The details of the capital cost as on COD approved are as under:

(₹ in lakh)

Capital Cost as per Auditors Certificate dated 31.7.2019	IDC undischarged as on COD	Capital Cost allowed as on COD
A	B	C=A-B
8781.34	135.68	8645.66

Additional Capital Expenditure (ACE)

18. The Commission *vide* order dated 21.3.2016 in Petition No. 436/TT/2014 had allowed ACE of ₹3875.14 lakh for the transmission asset during the 2014-19 tariff period.

19. The Petitioner has now claimed ACE of ₹4639.07 lakh as against approved ACE of ₹3875.14 lakh and also has submitted Auditor Certificate dated 31.7.2019 regarding the same. The details of ACE on cash basis are as under:



Period	ACE claimed (₹ in lakh)	Regulation
2014-15	1595.12	14(1)(i)& 14(1)(ii)
2015-16	727.61	
2016-17	676.14	
2017-18	1445.71	14(2)(iv)
2018-19	194.49	
Total ACE claimed in 2014-19 period	4639.07	

20. The Petitioner has submitted that COD of the transmission asset was 26.12.2014. Accordingly, cut-off date of the transmission asset was 31.3.2017. Therefore, ACE claimed upto 2016-17 for the transmission asset is within cut-off date. However, ACE claimed during 2017-18 and 2018-19 is beyond the cut-off date. The same has been covered under Regulation 14(1)(i) (within cut-off date) and 14(2)(iv) (after cut-off date) of the 2014 Tariff Regulations. The Petitioner has further submitted that ACE incurred is on account of un-discharged liability towards final payment/ withheld payment due to contractual exigencies for works executed within the cut-off date and details of underlying reasons for ACE are given in Form-7. The Petitioner has prayed to allow the entire ACE incurred during the 2014-19 tariff period.

21. The details of ACE claimed by the Petitioner beyond cut-off date is as under:

Party Name	Package	Year	Balance & retention amount (₹ in lakh)
KEC	Transmission Line	2017-18	1244.24
Techno	Sub-station	2017-18	201.27
Total			1445.71
KEC	Transmission Line	2018-19	20.00
Techno	Sub-station	2018-19	174.49
Total			194.49

22. We have considered the submissions of the Petitioner. ACE claimed in respect of the transmission asset is on account of undischarged liability towards final payment/ withheld payment due to contractual exigencies for works executed within the cut-off date and has been approved as claimed.



23. The total capital cost allowed as on 31.3.2019 is as under:

Capital Cost as on COD	Approved ACE					(₹ in lakh)
	2014-15	2015-16	2016-17	2017-18	2018-19	Total Capital Cost as on 31.3.2019
8645.66	1595.12	727.61	676.14	1445.71	194.49	13284.73

Debt-Equity ratio

24. The Petitioner has claimed debt-equity ratio of 70:30 as on the date of commercial operation. Debt-equity ratio of 70:30 is considered as provided under Regulation 19 of the 2014 Tariff Regulations. The details of the debt and equity as on the date of commercial operation and upto 31.3.2019 in respect of the transmission asset considered for the purpose of tariff of the 2014-19 period is as under:

Funding	Capital Cost as on COD (₹ in lakh)	(%)	ACE during 2014-19 (₹ in lakh)	(%)	Total cost as on 31.3.2019 (₹ in lakh)	(%)
Debt	6051.96	70.00	3247.35	70.00	9299.31	70.00
Equity	2593.70	30.00	1391.72	30.00	3985.42	30.00
Total	8645.66	100.00	4639.07	100.00	13284.73	100.00

Interest on Loan (IoL)

25. The Petitioner has claimed the weighted average rate of IoL, based on its actual loan portfolio and rate of interest. Accordingly, IoL has been calculated based on actual interest rate submitted by the Petitioner, in accordance with the Regulation 26 of the 2014 Tariff Regulations. IoL allowed for the transmission asset for the 2014-19 tariff period is as under:

Particulars	(₹ in lakh)				
	2014-15 (Pro-rata for 96 days)	2015-16	2016-17	2017-18	2018-19
Interest on Loan					
Gross Normative Loan	6051.96	7168.55	7677.87	8151.17	9163.17
Cumulative Repayments upto Previous Year	0.00	131.14	685.39	1271.04	1912.70



Net Loan-Opening	6051.96	7037.41	6992.48	6880.13	7250.47
Additions	1116.58	509.33	473.30	1012.00	136.14
Repayment during the year	131.14	554.25	585.65	641.66	684.96
Net Loan-Closing	7037.41	6992.48	6880.13	7250.47	6701.65
Average Loan	6544.68	7014.94	6936.31	7065.30	6976.06
Weighted Average Rate of Interest on Loan (%)	9.1066	8.9826	8.9104	8.7476	8.6506
Interest on Loan	156.76	630.13	618.05	618.05	603.47

26. The details of IoL approved *vide* order 21.3.2016 in Petition No. 436/TT/2014, claimed by the Petitioner in the instant petition and trued up in the instant order are shown in the table as under:

Particular	(₹ in lakh)				
	2014-15 (Pro-rata for 96 days)	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 21.3.2016 in Petition No. 436/TT/2014	156.76	680.82	696.68	637.99	579.30
Claimed by Petitioner in the instant petition	156.76	630.12	618.05	618.05	603.47
Allowed after true-up in this order	156.76	630.13	618.05	618.05	603.47

Return on Equity (RoE)

27. 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 MAT rates and has claimed following effective tax rates for the 2014-19 tariff period:

Year	Claimed effective tax rate (in %)	Grossed up RoE (Base Rate/1-t) (in %)
2014-15	21.018	19.624
2015-16	21.382	19.715
2016-17	21.338	19.704
2017-18	21.337	19.704
2018-19	21.549	19.757



28. We have considered the submission of the Petitioner. The Commission vide order dated 27.4.2020 in Petition No. 274/TT/2019 has arrived at the effective tax rate for the Petitioner based on the notified MAT rates. The relevant extract of the order dated 27.4.2020 is as under:

“26. We are conscious that the entities covered under MAT regime are paying Income Tax as per MAT rate notified for respective financial year under IT Act, 1961, which is levied on the book profit of the entity computed as per the Section 115JB of the IT Act, 1961. The Section 115JB(2) defines book profit as net profit in the statement of Profit & Loss prepared in accordance with Schedule-III of the Companies Act, 2013, subject to some additions and deductions as mentioned in the IT Act, 1961. Since the Petitioner has been paying income tax on income computed under Section 115JB of the IT Act, 1961 as per the MAT rates of the respective financial year, the notified MAT rate for respective financial year shall be considered as effective tax rate for the purpose of grossing up of RoE for truing up of the tariff of the 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations. Interest imposed on any additional income tax demand as per the Assessment Order of the Income Tax authorities shall be considered on actual payment. However, penalty (for default on the part of the Assessee) if any imposed shall not be taken into account for the purpose of grossing up of rate of return on equity. 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 transmission customers / DICs as the case may be on year to year basis.

27. Accordingly, following effective tax rates based on notified MAT rates are considered for the purpose of grossing up of rate of return on equity:

Year	Notified MAT rates (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

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

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



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

(₹ in lakh)					
Particulars	2014-15 (Pro-rata for 96 days)	2015-16	2016-17	2017-18	2018-19
Return on Equity					
Opening Equity	2593.70	3072.23	3290.52	3493.36	3927.07
Additions	478.54	218.28	202.84	433.71	58.35
Closing Equity	3072.23	3290.52	3493.36	3927.07	3985.42
Average Equity	2832.97	3181.38	3391.94	3710.22	3956.25
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (%)	19.610	19.705	19.705	19.705	19.758
Return on Equity	146.12	626.89	668.38	731.10	781.67

31. The details of RoE approved *vide* order 21.3.2016 in Petition No. 436/TT/2014, claimed by the Petitioner in the instant petition and trued up in the instant order is shown in the table as under:

(₹ in lakh)					
Particular	2014-15 (Pro-rata for 96 days)	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 21.3.2016 in Petition No. 436/TT/2014	146.12	672.79	740.18	740.18	740.18
Claimed by Petitioner in the instant petition	146.23	627.21	668.38	731.10	781.68
Allowed after true-up in this order	146.12	626.89	668.38	731.10	781.67

Depreciation

32. The Gross Block during the 2014-19 tariff period has been depreciated at weighted average of depreciation (WAROD) (as placed in Annexure-I). WAROD has been allowed after taking into account the depreciation rates of assets as prescribed



in the 2014 Tariff Regulations. The trued up depreciation approved for the transmission asset for the 2014-19 tariff period is as under:

(₹ in lakh)

Particulars	2014-15 (Pro-rata for 96 days)	2015-16	2016-17	2017-18	2018-19
Depreciation					
Opening Gross Block	8645.66	10240.78	10968.39	11644.53	13090.24
Additional Capitalisation	1595.12	727.61	676.14	1445.71	194.49
Closing Gross Block	10240.78	10968.39	11644.53	13090.24	13284.73
Average Gross Block	9443.22	10604.59	11306.46	12367.39	13187.49
Freehold land	0.00	200.00	200.00	200.00	200.00
Weighted Average Rate of Depreciation (WAROD) (%)	5.28	5.23	5.18	5.19	5.19
Balance useful life of the asset at the beginning of year	33	33	32	31	30
Elapsed life of the asset	0	0	1	2	3
Depreciable Value	8498.90	9232.99	9310.42	9679.61	9776.04
Depreciation during the year	131.14	554.25	585.65	641.66	684.96
Cumulative Depreciation	131.14	685.39	1271.04	1912.70	2597.66
Remaining Depreciable Value	8367.76	8678.73	8724.78	9037.95	9091.07

33. The details of depreciation approved *vide* order 21.3.2016 in Petition No. 436/TT/2014, claimed by the Petitioner in the instant petition and trued up in the instant order is shown in the table as under:

(₹ in lakh)

Particulars	2014-15 (Pro-rata) 96 days	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 21.3.2016 in Petition No. 436/TT/2014	131.14	595.24	649.76	649.76	649.76
Claimed by Petitioner in the instant petition	131.14	554.25	585.64	641.67	684.97
Allowed after true-up in this order	131.14	554.25	585.65	641.66	684.96

Operation & Maintenance Expenses (O&M Expenses)

34. O&M Expenses claimed by the Petitioner in respect of the transmission asset for the 2014-19 tariff period is as under:



(₹ in lakh)

O&M Expenses	2014-15 (Pro-rata for 96 days)	2015-16	2016-17	2017-18	2018-19
Sub-station Bays 400 kV					
Sagardighi:400 kV Line Bays	2	2	2	2	2
Behrampur:400 kV Line Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
400 kV D/C Sagardighi- Behrampur Transmission lines					
Multi Ckt Twin/Triple (km)	0.60	0.60	0.60	0.60	0.60
Norms (₹ lakh/km)	1.24	1.282	1.324	1.368	1.413
D/C Twin/Triple Conductor (km)	25.56	25.56	25.56	25.56	25.56
Norms (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
Total O&M Expense (₹ in lakh)	68.39	268.65	277.57	286.80	296.29

35. Regulation 29(3) of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. Norms specified in respect of the elements covered in the transmission asset are as under:

O&M Expenses	2014-15	2015-16	2016-17	2017-18	2018-19
400 kV bay					
Norms (₹ lakh/Bay)	60.30	62.30	64.37	66.51	68.71
Transmission line					
Multi Ckt Twin/Triple Norms (₹ lakh/km)	1.24	1.282	1.324	1.368	1.413
D/C Twin/Triple Conductor Norms (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806

36. We have considered the submission of the Petitioner. The O&M Expenses are allowed for the transmission asset as per the norms specified in the 2014 Tariff Regulations and are as under:

(₹ in lakh)

O&M Expenses	2014-15 (Pro-rata for 96 days)	2015-16	2016-17	2017-18	2018-19
Sub-station Bays 400 kV					
Sagardighi:400 kV Line Bays	2	2	2	2	2
Behrampur:400 kV Line Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	60.3	62.3	64.37	66.51	68.71
400 kV D/C Sagardighi- Behrampur Transmission lines					



O&M Expenses	2014-15 (Pro-rata for 96 days)	2015-16	2016-17	2017-18	2018-19
Multi Ckt Twin/Triple (km)	0.6	0.6	0.6	0.6	0.6
Norms (₹ lakh/km)	1.24	1.282	1.324	1.368	1.413
D/C Twin/Triple Conductor (km)	25.56	25.56	25.56	25.56	25.56
Norms (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
Total O&M expense (₹ in lakh)	68.39	268.65	277.57	286.80	296.29

37. The details of the O&M Expenses approved *vide* order 21.3.2016 in Petition No. 436/TT/2014, claimed by the Petitioner in the instant petition and trued up in the instant order is shown in the table under:

Particulars	(₹ in lakh)				
	2014-15 (Pro-rata for 96 days)	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 21.3.2016 in Petition No. 436/TT/2014	68.39	268.65	277.57	286.80	296.29
Claimed by Petitioner in the instant petition	68.39	268.65	277.57	286.80	296.29
Allowed after true-up in this order	68.39	268.65	277.57	286.80	296.29

Interest on Working Capital (IWC)

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

Particulars	(₹ in lakh)				
	2014-15 (Pro-rata for 96 days)	2015-16	2016-17	2017-18	2018-19
Interest on Working Capital					
O&M Expenses	21.67	22.39	23.13	23.90	24.69
Maintenance Spares	39.00	40.30	41.64	43.02	44.44
Receivables	327.09	356.08	368.01	389.88	405.07
Total Working Capital	387.76	418.76	432.78	456.80	474.20
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	13.77	56.53	58.43	61.67	64.02



39. The details of IWC approved *vide* order 21.3.2016 in Petition No. 436/TT/2014, claimed by the Petitioner in the instant petition and trued up in the instant order is shown in the table under:

(₹ in lakh)

Particulars	2014-15 (Pro-rata for 96 days)	2015-16	2016-17	2017-18	2018-19
Approved <i>vide</i> order dated 21.3.2016 in Petition No. 436/TT/2014	13.77	59.70	63.36	62.52	61.69
Claimed by Petitioner in the instant petition	13.77	56.54	58.43	61.67	64.02
Allowed after true-up in this order	13.77	56.53	58.43	61.67	64.02

Approved Annual Fixed Charges for the 2014-19 Period

40. Accordingly, the annual transmission charges allowed for the transmission asset after truing-up for the 2014-19 tariff period are as under:

(₹ in lakh)

Particulars	2014-15 (Pro-rata for 96 days)	2015-16	2016-17	2017-18	2018-19
Depreciation	131.14	554.25	585.65	641.66	684.96
Interest on Loan	156.76	630.13	618.05	618.05	603.47
Return on Equity	146.12	626.89	668.38	731.10	781.67
Interest on Working Capital	13.77	56.53	58.43	61.67	64.02
O & M Expenses	68.39	268.65	277.57	286.80	296.29
Total	516.17	2136.46	2208.08	2339.27	2430.42

41. Accordingly, the Annual Transmission Charges as approved *vide* order 21.3.2016 in Petition No. 436/TT/2014, as claimed by the Petitioner in the instant petition and approved after truing up in the instant order is shown as under:

(₹ in lakh)

Particulars	2014-15 (Pro-rata for 96 days)	2015-16	2016-17	2017-18	2018-19
Approved earlier <i>vide</i> order dated 21.3.2016 in Petition No. 436/TT/2014	516.17	2277.20	2427.56	2377.25	2327.23



Particulars	2014-15 (Pro-rata for 96 days)	2015-16	2016-17	2017-18	2018-19
Claimed by the Petitioner in the instant petition	516.29	2136.77	2208.07	2339.29	2430.43
Allowed after true-up in this order	516.17	2136.46	2208.08	2339.27	2430.42

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

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

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	690.34	690.58	690.58	690.58	690.58
Interest on Loan	548.26	486.17	427.56	368.82	309.69
Return on Equity	748.80	749.05	749.05	749.05	749.05
Interest on Working Capital	36.51	35.91	35.26	34.63	33.91
O&M Expenses	152.05	157.39	162.92	168.64	174.54
Total	2175.96	2119.10	2065.37	2011.72	1957.77

43. The Petitioner has claimed the following IWC for the transmission asset for the 2019-24 period:

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	12.67	13.12	13.58	14.05	14.55
Maintenance Spares	22.81	23.61	24.44	25.30	26.18
Receivables	267.54	261.26	254.63	248.02	240.71
Total Working Capital	303.02	297.99	292.65	287.37	281.44
Rate of Interest (%)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	36.51	35.91	35.26	34.63	33.91

Capital Cost

44. Regulation 19 of the 2019 Tariff Regulations provide as under:

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

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

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

(b) *Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of*



the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(b) Additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with these regulations;

(c) Capital expenditure on account of renovation and modernisation as admitted by this Commission in accordance with these regulations;

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

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

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



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

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

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

- (a) The assets forming part of the project, but not in use, as declared in the tariff petition;
- (b) De-capitalised Assets after the date of commercial operation on account of replacement or removal on account of obsolescence or shifting from one project to another project:

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

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

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

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

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

45. The Petitioner has claimed capital cost of ₹13284.73 lakh as on 31.3.2019 for transmission asset *vide* Auditor Certificate dated 31.7.2019 and the same has been approved by the Commission and considered as the opening capital cost as on 1.4.2019 for determination of tariff in accordance with Regulation 19 of the 2019 Tariff Regulations.

Additional Capital Expenditure (ACE)

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

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

(1) The additional capital expenditure in respect of a new project or an existing project incurred or projected to be incurred, on the following counts within the original scope of



work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

- (a) Undischarged liabilities recognized to be payable at a future date;
- (b) Works deferred for execution;
- (c) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23 of these regulations;
- (d) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority or order or decree of any court of law;
- (e) Change in law or compliance of any existing law; and
- (f) Force Majeure events:

Provided that in case of any replacement of the assets, the additional capitalization shall be worked out after adjusting the gross fixed assets and cumulative depreciation of the assets replaced on account of de-capitalization.

(2) The generating company or the transmission licensee, as the case may be shall submit the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution.

25. Additional Capitalisation within the original scope and after the cut-off date:

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

- (a) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority, or order or decree of any court of law;
- (b) Change in law or compliance of any existing law;
- (c) Deferred works relating to ash pond or ash handling system in the original scope of work;
- (d) Liability for works executed prior to the cut-off date;
- (e) Force Majeure events;
- (f) Liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments; and
- (g) Raising of ash dyke as a part of ash disposal system.

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

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



47. The Petitioner vide Auditor Certificate 31.7.2019 has claimed ACE of ₹9.00 lakh during 2019-24 for the transmission asset under Regulation 25(1)(d) of the 2019 Tariff Regulations. The Petitioner has claimed ACE on account of undischarged liability towards final payment/ withheld payment due to compensation for works executed within the cut-off date as under:

Period	ACE claimed (₹ in lakh)	Regulation
2019-20	9.00	25(1)(d)
Total ACE claimed in 2019-24 period	9.00	

48. The Petitioner has submitted the details of ACE claimed in 2019-20 in the instant petition as under:

Party Name	Package	Year	Balance & retention amount (₹ in lakh)
KEC	Transmission Line	2019-20	9.00

49. We have considered the submission made by the Petitioner. ACE claimed by the Petitioner has been allowed under Regulation 25(1)(d) of the 2019 Tariff Regulations as it is on account of undischarged liability towards final payment/ withheld payment due to compensation for works executed within the cut-off date. Accordingly, the capital cost considered for the tariff period 2019-24 is as under:

Capital Cost as on 1.4.2019	Admitted ACE	Total Capital Cost as on 31.3.2024
	2019-24	
13284.73	9.00	13293.73

Debt-Equity ratio

50. Regulation 18 of the 2019 Tariff Regulations provides as under:

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

- i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:
- ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:



- iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.

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

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

(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, debt: equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2019 shall be considered:

Provided that in case of a generating station or a transmission system including communication system which has completed its useful life as on or after 1.4.2019, if the equity actually deployed as on 1.4.2019 is more than 30% of the capital cost, equity in excess of 30% shall not be taken into account for tariff computation;

Provided further that in case of projects owned by Damodar Valley Corporation, the debt: equity ratio shall be governed as per sub-clause (ii) of clause (2) of Regulation 72 of these regulations.

(4) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2019, but where debt: equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2019, the Commission shall approve the debt: equity ratio in accordance with clause (1) of this Regulation.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 as may be admitted by the Commission as 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.”

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

Particulars	Capital cost as on 1.4.2019 (₹ in lakh)	%	ACE for 2019-24 (₹ in lakh)	%	Capital cost as on 31.3.2024 (₹ in lakh)	%
Debt	9299.31	70.00	6.30	70.00	9305.61	70.00
Equity	3985.42	30.00	2.70	30.00	3988.12	30.00
Total	13284.73	100.00	9.00	100.00	13293.73	100.00



Return on Equity (RoE)

52. Regulation 30 and Regulation 31 of the 2019 Tariff Regulations specify as under:

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

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

Provided that return on equity in respect of additional capitalization after cut-off date beyond the original scope excluding additional capitalization due to Change in Law, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system;

Provided further that:

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

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

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

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

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

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

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



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

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

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

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.

(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.”

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

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	3985.42	3988.12	3988.12	3988.12	3988.12
Additions	2.70	0.00	0.00	0.00	0.00
Closing Equity	3988.12	3988.12	3988.12	3988.12	3988.12
Average Equity	3986.77	3988.12	3988.12	3988.12	3988.12
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
MAT Rate for respective year (%)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (%)	18.782	18.782	18.782	18.782	18.782
Return on Equity	748.79	749.05	749.05	749.05	749.05



Interest on Loan (IoL)

54. Regulation 32 of the 2019 Tariff Regulations provides that:

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

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

(3) The repayment for each of the year of the tariff period 2019-24 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalisation of such asset.

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

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

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

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

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

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

55. The weighted average rate of IoL has been considered on the basis of rate prevailing as on 1.4.2019. The Petitioner has prayed that the change in interest rate due to floating rate of interest applicable, if any, during 2019-24 tariff period will be adjusted. Accordingly, the floating rate of interest, if any, shall be considered at the time of true up. Therefore, the IoL has been worked out in accordance with Regulation



32 of the 2019 Tariff Regulations. The IoL allowed for the transmission asset as under:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	9299.31	9305.61	9305.61	9305.61	9305.61
Cumulative Repayments upto Previous Year	2597.66	3288.00	3978.57	4669.14	5359.72
Net Loan-Opening	6701.65	6017.61	5327.04	4636.47	3945.89
Additions	6.30	0.00	0.00	0.00	0.00
Repayment during the year	690.34	690.57	690.57	690.57	690.57
Net Loan-Closing	6017.61	5327.04	4636.47	3945.89	3255.32
Average Loan	6359.63	5672.33	4981.75	4291.18	3600.61
Weighted Average Rate of Interest on Loan (%)	8.6209	8.5709	8.5825	8.5949	8.6011
Interest on Loan	548.26	486.17	427.56	368.82	309.69

Depreciation

56. Regulation 33 of the 2019 Tariff Regulations provide that:

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

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

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

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

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

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



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

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

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

(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-I to these regulations for the assets of the generating station and transmission system:

Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.

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

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

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

57. The Gross Block during the 2019-24 tariff period has been depreciated at weighted average of depreciation (WAROD) (as placed in Annexure-II). The WAROD has been worked out after taking into account the depreciation rates of assets as prescribed in the 2019 Tariff Regulations and depreciation allowed is as under:

	(₹ in lakh)				
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation					
Opening Gross Block	13284.73	13293.73	13293.73	13293.73	13293.73
Projected ACE	9.00	0.00	0.00	0.00	0.00
Closing Gross Block	13293.73	13293.73	13293.73	13293.73	13293.73
Average Gross Block	13289.23	13293.73	13293.73	13293.73	13293.73
Freehold land	200.00	200.00	200.00	200.00	200.00



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Weighted Average Rate of Depreciation (WAROD) (%)	5.19	5.19	5.19	5.19	5.19
Balance useful life at the beginning of the year	29	28	27	26	25
Elapsed life of the asset	4	5	6	7	8
Aggregated Depreciable Value	9182.64	8496.36	7805.79	7115.21	6424.64
Depreciation during the year	690.34	690.57	690.57	690.57	690.57
Cumulative Depreciation	3288.00	3978.57	4669.14	5359.72	6050.29
Remaining Depreciable Value	8492.31	7805.79	7115.21	6424.64	5734.07

Operation & Maintenance Expenses (O&M Expenses)

58. The O&M norms specified under Regulations 35(3) of the 2019 Tariff

Regulations are as under:

“35. Operation and Maintenance Expenses:

.....“(3) Transmission system: (a) The following normative operation and maintenance expenses shall be admissible for the transmission system:

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Norms for sub-station Bays (₹ Lakh per bay)					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
Norms for Transformers (₹ Lakh per MVA)					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282
Norms for AC and HVDC lines (₹ Lakh per km)					
Single Circuit (Bundled Conductor with six or more sub-conductors)	0.881	0.912	0.944	0.977	1.011
Single Circuit (Bundled conductor with four sub-conductors)	0.755	0.781	0.809	0.837	0.867
Single Circuit (Twin & Triple Conductor)	0.503	0.521	0.539	0.558	0.578
Single Circuit (Single Conductor)	0.252	0.260	0.270	0.279	0.289
Double Circuit (Bundled conductor with four or more sub-conductors)	1.322	1.368	1.416	1.466	1.517
Double Circuit (Twin & Triple Conductor)	0.881	0.912	0.944	0.977	1.011
Double Circuit (Single Conductor)	0.377	0.391	0.404	0.419	0.433
Multi Circuit (Bundled Conductor with four or more sub-conductor)	2.319	2.401	2.485	2.572	2.662



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Multi Circuit (Twin & Triple Conductor)	1.544	1.598	1.654	1.713	1.773
Norms for HVDC stations					
HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)	834	864	894	925	958
Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

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

Provided further that:

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;*
- ii. the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;*
- iii. the O&M expenses of ±500 kV Mundra-Mohindergarh HVDC bipole scheme (2000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);*
- iv. the O&M expenses of ±800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme;*
- v. the O&M expenses of ±800 kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ±800 kV, Bishwanath-Agra HVDC bi-pole scheme; and*
- vi. the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years.*

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



the operation and maintenance expenses per bay, per MVA and per km respectively.

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

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

59. The O&M Expenses claimed by the Petitioner for the transmission asset for the 2019-24 period are as under:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses					
Sub-station Bays 400 kV					
Sagardighi:400 kV Line Bays	2	2	2	2	2
Behrampur:400 kV Line Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
400 kV D/C Sagardighi-Behrampur Transmission lines					
Multi Ckt Twin/Triple (km)	0.60	0.60	0.60	0.60	0.60
Norms (₹ lakh/km)	1.544	1.598	1.654	1.713	1.773
D/C Twin/Triple Conductor (km)	25.56	25.56	25.56	25.56	25.56
Norms (₹ lakh/km)	0.881	0.912	0.944	0.977	1.011
Total O&M Expenses (₹ in lakh)	152.04	157.39	162.92	168.64	174.54

60. We have considered the submission of the Petitioner. The O&M Expenses have been worked out as per the norms specified Regulation 35(3) of the 2019 Tariff Regulations and are as under:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses					
Sub-station Bays 400 kV					
Sagardighi:400 kV Line Bays	2	2	2	2	2
Behrampur:400 kV Line Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	32.15	33.28	34.45	35.66	36.91
400 kV D/C Sagardighi-Behrampur Transmission lines					
Multi Ckt Twin/Triple (km)	0.60	0.60	0.60	0.60	0.60
Norms (₹ lakh/km)	1.544	1.598	1.654	1.713	1.773
D/C Twin/Triple Conductor (km)	25.56	25.56	25.56	25.56	25.56



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses					
Norms (₹ lakh/km)	0.881	0.912	0.944	0.977	1.011
Total O&M Expenses (₹ in lakh)	152.04	157.39	162.92	168.64	174.54

Interest on Working Capital (IWC)

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

“34. Interest on Working Capital: (1) *The working capital shall cover:*

.....

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

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

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

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

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

“3. Definitions. - *In these regulations, unless the context otherwise requires:-*

.....

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

62. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. ROI considered is 12.05% (SBI 1-year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, whereas, ROI for 2020-21 onwards has been considered as 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points). The components of the working capital and interest thereon allowed is as under:-



(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	12.67	13.12	13.58	14.05	14.55
Maintenance Spares	22.81	23.61	24.44	25.30	26.18
Receivables	267.53	260.96	254.34	247.73	240.43
Total Working Capital	303.01	297.68	292.36	287.08	281.15
Rate of Interest (%)	12.05	11.25	11.25	11.25	11.25
Interest on Working Capital	36.51	33.49	32.89	32.30	31.63

Annual Fixed Charges for the 2019-24 Tariff Period

63. The transmission charges allowed for the transmission asset for the 2019-24 tariff period are summarised below:

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	690.34	690.57	690.57	690.57	690.57
Interest on Loan	548.26	486.17	427.56	368.82	309.69
Return on Equity	748.79	749.05	749.05	749.05	749.05
Interest on Working Capital	36.51	33.49	32.89	32.30	31.63
O & M Expenses	152.04	157.39	162.92	168.64	174.54
Total	2175.95	2116.67	2062.99	2009.38	1955.49

Filing Fee and the Publication Expenses

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

Licence Fee & RLDC Fees and Charges

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



Security Expenses

66. The Petitioner has submitted that security expenses for the transmission asset are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential IWC. The Petitioner has requested to consider the actual security expenses incurred during 2018-19 for claiming estimated security expenses for 2019-20 which shall be subject to true up at the end of the year based on the actuals. The Petitioner has submitted that similar petition for security expenses for 2020-21, 2021-22, 2022-23 and 2023-24 will be filed on a yearly basis on the basis of the actual expenses of previous year subject to true up at the end of the year on actual expenses. The Petitioner has submitted that the difference, if any, between the estimated security expenses and actual security expenses as the audited accounts may be allowed to be recovered from the beneficiaries on a yearly basis.

67. We have considered the submissions of the Petitioner. We are of the view that Petitioner should claim security expenses for all the transmission assets in one petition. It is observed that the Petitioner has already filed the Petition No. 260/MP/2020 claiming consolidated security expenses on projected basis for the 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19. Therefore, security expenses will be dealt with Petition No. 260/MP/2020 in accordance with the appropriate provisions of the 2019 Tariff Regulations.

Goods and Services Tax

68. The Petitioner has submitted that, if GST is levied at any point of time in future on charges on transmission of electricity, the same shall be borne and additionally paid by the Respondent(s) and the same shall be charged and billed separately by the Petitioner. Further, additional taxes, if any, are to be paid by the Petitioner on



account of demand from Govt./ Statutory authorities, the same may be allowed to be recovered from the beneficiaries.

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

Capital Spares

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

Sharing of Transmission Charges

71. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, or the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020, as applicable, as provided in Regulation 43 of the 2014 Tariff Regulations for the 2014-19 tariff period and Regulation 57 of the 2019 Tariff Regulations for the 2019-24 tariff period.

72. To summarise, the trued-up Annual Fixed Charges allowed for the transmission asset for the 2014-19 tariff period are as under:

Particulars	(₹ in lakh)				
	2014-15 (Pro-rata for 96 days)	2015-16	2016-17	2017-18	2018-19
Annual Fixed Charges	516.17	2136.46	2208.08	2339.27	2430.42

73. The Annual Fixed Charges allowed for the transmission asset for the 2019-24 tariff period in this order are:



(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Annual Fixed Charges	2175.95	2116.67	2062.99	2009.38	1955.49

74. This order disposes of Petition No. 511/TT/2019.

**Sd/
(Arun Goyal)
Member**

**Sd/
(I.S. Jha)
Member**

**Sd/
(P. K. Pujari)
Chairperson**



ANNEXURE-I

2014-19 Capital Expenditure	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	Additional Capitalization (₹ in lakh)					Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
		2014-15	2015-16	2016-17	2017-18	2018-19			2014-15	2015-16	2016-17	2017-18	2018-19
Land - Freehold	0.00	0.00	200.00	0.00	0.00	0.00	200.00	0.00%	0.00	0.00	0.00	0.00	0.00
Land - Leasehold	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Building Civil Works & Colony	0.00	0.00	40.00	0.00	0.00	0.00	40.00	3.34%	0.00	0.67	1.34	1.34	1.34
Transmission Line	6918.57	574.78	249.96	449.74	1244.44	20.00	9457.50	5.28%	380.47	402.25	420.72	465.45	498.83
Sub Station	1727.09	1020.34	237.65	226.40	201.27	174.49	3587.23	5.28%	118.13	151.34	163.59	174.88	184.80
PLCC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00	0.00
IT Equipment (Incl. Software)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
Total	8645.66	1595.12	727.61	676.14	1445.71	194.49	13284.73	Total	498.60	554.25	585.65	641.66	684.96
Average Gross Block (₹ in lakh)									9443.22	10604.59	11306.46	12367.39	13187.49
Weighted Average Rate of Depreciation									5.28%	5.23%	5.18%	5.19%	5.19%



ANNEXURE-II

2019-24 Capital Expenditure	Combined Admitted Capital Cost as on 1.4.2019 / COD (₹ in lakh)	Additional Capitalization (₹ in lakh) 2019-20	Admitted Capital Cost as on 31.3.2024 (₹ in lakh)	Rate of Depreciation as per Regulations	Annual Depreciation as per Regulations (₹ in lakh)				
					2019-20	2020-21	2021-22	2022-23	2023-24
Land - Freehold	200.00	0.00	200.00	-	0.00	0.00	0.00	0.00	0.00
Land - Leasehold	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Building Civil Works & Colony	40.00	0.00	40.00	3.34%	1.34	1.34	1.34	1.34	1.34
Transmission Line	9457.50	9.00	9466.50	5.28%	499.59	499.83	499.83	499.83	499.83
Sub Station	3587.23	0.00	3587.23	5.28%	189.41	189.41	189.41	189.41	189.41
PLCC	0.00	0.00	0.00	6.33%	0.00	0.00	0.00	0.00	0.00
IT Equipment (Incl. Software)	0.00	0.00	0.00	15.00%	0.00	0.00	0.00	0.00	0.00
Total	13284.73	9.00	13293.73	Total	690.34	690.57	690.57	690.57	690.57
Average Gross Block (₹ in lakh)					13289.23	13293.73	13293.73	13293.73	13293.73
Weighted Average Rate of Depreciation					5.19%	5.19%	5.19%	5.19%	5.19%

