

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 658/TT/2020

Coram:

Shri P. K. Pujari, Chairperson

Shri I. S. Jha, Member

Shri P. K. Singh, Member

Date of Order: 18.10.2021

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 **Combined Asset** comprising of **Asset-I:** STATCOM System (+/-) 300 MVAR complete in all respect including Coupling transformer, Mechanically switched compensation (2x125 MVAR reactor), cooling system and STATCOM protection/ controller etc. at Rourkela Sub-station, **Asset-II:** STATCOM System (+/-) 200 MVAR complete in all respect including Coupling transformer, Mechanically switched compensation (2x125 MVAR reactor and 2x125 MVAR Capacitor), cooling system and STATCOM protection/ controller etc. at Jeypore Sub-station, **Asset-III:** STATCOM System (+/-) 300 MVAR complete in all respect including Coupling transformer, Mechanically switched compensation (2x125 MVAR reactor), cooling system and STATCOM protection/ controller etc. at Ranchi Sub-station and **Asset-IV:** STATCOM System (+/-) 200 MVAR complete in all respect including Coupling transformer, Mechanically switched compensation (2x125 MVAR reactor and 2x125 MVAR Capacitor), cooling system and STATCOM protection/ controller etc. at Kishanganj Sub-station under Eastern Region Strengthening Scheme-XI in Eastern Region.

And in the matter of:

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

.....Petitioner

Versus

1. Bihar State Power (Holding) Company Limited,
(Formerly Bihar State Electricity Board-BSEB),
Vidyut Bhavan, Bailey Road,
Patna-800001.
2. West Bengal State Electricity Distribution Company Limited,
Bidyut Bhawan, Bidhan Nagar,
Block DJ, Sector-II, Salt Lake City,
Calcutta -700091.



3. Grid Corporation of Orissa Limited,
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,
Calcutta-700054.
6. Power Department
Govt. of Sikkim,
Gangtok-737101.

.....Respondent(s)

For Petitioner : Shri S. S. Raju, PGCIL
Shri D. K. Biswal, PGCIL
Shri A. K. Verma, PGCIL
Shri Ved Prakash Rastogi, PGCIL

For Respondents : None

ORDER

The Petitioner, Power Grid Corporation of India Limited, a deemed transmission licensee, has filed the instant petition for truing up of the transmission tariff for the period from 1.4.2014 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 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”) in respect of the following transmission assets forming part of the Combined Asset under Eastern Region Strengthening Scheme-XI in Eastern Region (hereinafter referred to as “the transmission scheme”):

Asset-I: STATCOM System (+/-) 300 MVAR complete in all respect including Coupling transformer, Mechanically switched compensation (2x125 MVAR reactor), cooling system and STATCOM protection / controller etc at Rourkela Sub-station;



Asset-II: STATCOM System (+/-) 200 MVAR complete in all respect including Coupling transformer, Mechanically switched compensation (2x125 MVAR reactor and 2x125 MVAR Capacitor), cooling system and STATCOM protection / controller etc at Jeypore Sub-station;

Asset-III: STATCOM System (+/-) 300 MVAR complete in all respect including Coupling transformer, Mechanically switched compensation (2x125 MVAR reactor), cooling system and STATCOM protection / controller etc at Ranchi Sub-station; and

Asset-IV: STATCOM System (+/-) 200 MVAR complete in all respect including Coupling transformer, Mechanically switched compensation (2x125 MVAR reactor and 2x125 MVAR Capacitor), cooling system and STATCOM protection / controller etc at Kishanganj Sub-station.

2. The Petitioner has made the following prayers:

- “1) Approve the tried 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 the Hon'ble Commission deems fit and appropriate under the circumstances of the case and in the interest of justice"

3. **Backdrop of the case**

a) An enquiry committee was constituted by Ministry of Power to analyse the causes of grid disturbances in NEW Grid in July 2012 under the chairmanship of Chairperson, CEA. The Committee, *inter-alia*, recommended installation of adequate static and dynamic reactive power compensators to provide voltage support under steady state and dynamic conditions.

b) In view of the above, system studies were carried out jointly by CEA and the Petitioner to identify/ estimate the dynamic reactive power support requirement. Study results were discussed in various Standing Committee Meetings on Power System Planning of Eastern Region (SCM), TCC and ERPC wherein it was decided to provide dynamic reactive compensation at 4 (four) sub-stations in Eastern Region viz. Rourkela, Ranchi (New), Kishanganj and Jeypore in Eastern Region.

c) The scope of the transmission scheme was discussed and agreed in the 14th and 15th SCM held on 5.1.2013 and 27.8.2013 respectively and 25th meeting of TCC and ERPC held on 20.9.2013 and 21.9.2013 respectively. Further, the transmission scheme was also discussed and agreed in 28th meeting of TCC and ERPC held on 12.9.2014 and 13.9.2014 respectively.

d) The Investment Approval (I.A.) for implementation of the transmission scheme was accorded by the Board of Directors of the Petitioner Company vide Memorandum No. C/CP/ERSS-XI dated 9.5.2016 in 328th meeting held on 5.5.2016 for ₹76621.00 lakh having nil IDC component (based on October 2015 price level).



e) The scope of work covered under the transmission scheme is as follows:

Sub-station	Mechanically Switched Compensation		Dynamic Compensation (STATCOM)
	Reactor x 125 MVAR	Capacitor x 125 MVAR	+/- MVAR
Rourkela	2	0	±300
Ranchi (new)	2	0	±300
Kishanganj	2	2	±200
Jeypore	2	2	±200

f) As per I.A., the Scheduled Commercial Operation Date (SCOD) of the transmission scheme was 5.11.2018 against which the actual COD for Asset-I, Asset-II, Asset-III and Asset-IV were 30.3.2018, 1.7.2018, 16.7.2018 and 16.3.2019 respectively.

g) The transmission tariff of (Asset-I and Asset-II) and (Asset-III and Asset-IV) for the period from their respective COD to 31.3.2019 was allowed by the Commission vide orders dated 1.11.2019 and 29.3.2020 in Petition No. 173/TT/2018 and Petition No.272/TT/2018 respectively.

h) The entire scope of work under the transmission scheme is complete and is covered in the instant petition.

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

5. The Petitioner has served the petition on the Respondents and notice regarding filing of this petition has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers. None of the Respondents have filed their reply in the matter.



6. The hearing in this matter was held on 8.6.2021 and the Commission reserved the order in the matter.

7. This order is issued considering the submissions made by the Petitioner in the petition vide affidavit dated 25.6.2020, the Petitioner's affidavits dated 10.2.2021 and 17.6.2021 filed in response to technical validation letter dated 28.1.2021 and Record of Proceedings dated 8.6.2021 respectively. Having heard the representatives of the Petitioner and after perusal of the materials on record, we proceed to dispose of the petition.

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

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

(₹ in lakh)

Particulars	Asset-I		Asset-II
	2017-18 (Pro-rata)	2018-19	2018-19 (Pro-rata)
Depreciation	0.34	72.51	52.10
Interest on Loan	0.00	0.00	0.00
Return on Equity	1.13	247.04	175.99
Interest on Working Capital	0.07	13.93	9.87
O&M Expenses	0.73	137.42	103.16
Total	2.27	470.90	341.12

(₹ in lakh)

Particulars	Asset-III	Asset-IV
	2018-19 (Pro-rata)	2018-19 (Pro-rata)
Depreciation	52.99	3.30
Interest on Loan	0.00	0.00
Return on Equity	182.05	11.38
Interest on Working Capital	9.74	0.60
O&M Expenses	97.51	6.02
Total	342.29	21.30

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



(₹ in lakh)

Particulars	Asset-I		Asset-II
	2017-18 (Pro-rata)	2018-19	2018-19 (Pro-rata)
O&M Expenses	11.09	11.45	11.45
Maintenance Spares	19.95	20.61	20.61
Receivables	68.98	78.48	75.74
Total Working Capital	100.02	110.54	107.80
Rate of Interest (%)	12.60	12.60	12.20
Interest on Working Capital	0.07	13.93	9.87

(₹ in lakh)

Particulars	Asset-III	Asset-IV
	2018-19 (Pro-rata)	2018-19 (Pro-rata)
O&M Expenses	11.45	11.45
Maintenance Spares	20.61	20.61
Receivables	80.40	81.02
Total Working Capital	112.46	113.08
Rate of Interest (%)	12.20	12.20
Interest on Working Capital	9.74	0.60

Capital Cost

10. The Commission vide orders dated 1.11.2019 and 29.3.2020 in Petition No. 173/TT/2018 and Petition No.272/TT/2018 respectively had allowed the following capital cost for the transmission assets for the 2014-19 tariff period:

(₹ in lakh)

Asset	Capital Cost (allowed as on COD after adjusting PSDF grant)	ACE (for 2018-19 after adjusting PSDF grant)	Capital Cost (allowed as on 31.3.2019 after adjusting PSDF grant)
Asset-I	795.55	708.89	1504.69
Asset-II	521.08	967.35	1488.43
Asset-III	514.67	877.80	1392.47
Asset-IV	874.38	217.35	1091.73
Total	2705.68	2771.39	5477.07

11. The Petitioner has claimed the capital cost based on actual expenditure and after adjusting Power System Development Fund (PSDF) grant received towards installation of the transmission assets during the 2014-19 tariff period:



(₹ in lakh)

Asset	Apportioned Approved Cost (as per FR)	Capital Cost (claimed as on COD)	ACE (claimed for 2018-19)	Capital Cost (claimed as on 31.3.2019)
Asset-I	20705.06	1051.04	398.62	1449.65
Asset-II	17936.37	885.47	602.16	1487.63
Asset-III	20971.11	983.00	630.901	1613.91
Asset-IV	17008.46	1206.07	214.803	1420.87
Total	76621.00	4125.58	1846.48	5972.06

Cost Over-run

12. The estimated completion cost in respect of the transmission assets is within the apportioned approved FR cost and, therefore, there is no cost over-run.

Time Over-run

13. As per IA, SCOD of the transmission assets under the transmission scheme was 5.11.2018 against which the actual COD for Asset-I, Asset-II, Asset-III and Asset-IV was 30.3.2018, 1.7.2018, 16.7.2018 and 16.3.2019 respectively. The Commission vide order dated 29.3.2020 in Petition No. 272/TT/2018 had condoned the time over-run of 131 days in the commissioning of Asset-IV. There is no time over-run in case of Asset-I, Asset-II and Asset-III.

Interest During Construction (IDC)

14. The Petitioner has submitted that the transmission scheme was funded through PSDF grant up to 90% of the capital cost. The balance was funded through the internal resources and there is no deployment of loan. Accordingly, the Petitioner has not claimed any IDC for the transmission assets and has submitted the Auditor certificates in support of the same.

Incidental Expenditure During Construction (IEDC)

15. The Petitioner has claimed IEDC for the transmission assets as allowed by the Commission vide orders dated 1.11.2019 and 29.3.2020 in Petition No. 173/TT/2018 and Petition No.272/TT/2018 respectively in the instant petition and has submitted



Auditor Certificates in support of the same. The Petitioner has also submitted that entire IEDC is on cash basis and has been discharged up to COD for the transmission assets. Hence, the amount of IEDC as claimed has been allowed and the same is as follows:

(₹ in lakh)			
Asset	IEDC claimed (as per Auditors Certificates)	IEDC considered (as on COD)	IEDC discharged (up to COD)
Asset-I	298.14	298.14	298.14
Asset-II	297.41	297.41	297.41
Asset-III	201.71	201.71	201.71
Asset-IV	674.54	674.54	674.54

Initial Spares

16. Regulation 13 of the 2014 Tariff Regulations specifies ceiling norms for capitalization of Initial Spares in respect of a transmission system as follows:

“13. Initial Spares

Initial spares shall be capitalised as a percentage of the Plant and Machinery cost upto cut-off date, subject to following ceiling norms:

....

(d) Transmission system

(i) Transmission line - 1.00%

(ii) Transmission Sub-station (Green Field) - 4.00%

(iii) Transmission Sub-station (Brown Field) - 6.00%

(iv) Series Compensation devices and HVDC Station - 4.00%

(v) Gas Insulated Sub-station (GIS): 5.00%

.....”

17. The Petitioner has prayed to revise the Initial Spares allowed earlier in light of the judgment of the Appellate Tribunal for Electricity (APTEL) dated 14.9.2019 in Appeal No. 74 of 2017, as follows:

(₹ in lakh)				
Asset	Plant and Machinery excluding IDC, IEDC, Land cost and cost of Civil works as on cut-off date (A)	Initial Spares Claimed by the Petitioner (B)	Ceiling limit (in %) (C)	Initial Spares worked out by the Petitioner (D) = [(A-B)*C/(100-C)]
For Sub-station (Brown Field)				
Asset-I	14787.38	840.00	6.0	890.26
Asset-II	15825.50	890.00	6.0	953.33
Asset-III	17191.37	687.65	6.0	1053.43
Asset-IV	14786.30	591.45	6.0	906.05
Total	62590.55	3009.10		3803.07



18. The Petitioner has submitted that the discharge of Initial Spares has been considered on cash basis in the Auditor Certificates. The discharge statement of Initial Spares as submitted is as follows:

(₹ in lakh)					
Asset	Particulars	Total Spares Claimed	Initial Spares discharged up to COD	Initial Spares discharged in 2018-19	Initial Spares discharged in 2019-20
Asset-I	Substation (Brown Field)	840.00	679.71	160.29	0.00
Asset-II	Substation (Brown Field)	890.00	634.01	255.99	0.00
Asset-III	Substation (Brown Field)	687.65	238.34	397.66	51.65
Asset-IV	Substation (Brown Field)	591.45	529.76	2.55	59.15

19. The APTEL in its judgment dated 14.9.2019 in Appeal No. 74 of 2017 observed that the Commission for the purpose of prudence check may restrict the Initial Spares to the cost of the individual asset and later at the time of truing up allow Initial Spares as per the ceiling on the overall project cost.

20. However, we note that as per the Petitioner's submission, asset-wise Initial Spares claimed are within the ceiling as per the provisions of the 2014 Tariff Regulations. Accordingly, the Initial Spares computed and allowed as per the 2014 Tariff Regulations are as follows:

(₹ in lakh)						
Asset	Plant and Machinery excluding IDC, IEDC, Land cost and cost of Civil works as on cut-off date (A)	Initial Spares Claimed by the Petitioner (B)	Ceiling limit (%) (C)	Initial Spares worked out by the Petitioner D = [(A-B)*C/(100-C)]	Initial Spares Allowed (E)	Excess Initial Spares Disallowed F = B-E
For Sub-station (Brown Field)						
Asset-I	14787.38	840.00	6.0	890.26	840.00	0.00
Asset-II	15825.50	890.00	6.0	953.33	890.00	0.00
Asset-III	17191.37	687.65	6.0	1053.43	687.65	0.00
Asset-IV	14786.30	591.45	6.0	906.05	591.45	0.00



Treatment of PSDF Grant

21. The Ministry of Power (MoP), Government of India vide sanction letter dated 5.1.2016 has sanctioned an amount of ₹63028.00 lakh as grant from PSDF towards the transmission scheme. The sanction order dated 5.1.2016, *inter-alia*, states the terms and conditions for the implementation of the transmission scheme as follows:

"
(ii) No tariff shall be claimed by POWERGRID for the portion of the scheme funded from PSDF.
.....
(vi) Expenditure beyond Rs.630.28 Crores shall be provided by POWERGRID from their own resources.
....."

22. The Petitioner's I.A. dated 9.5.2016 pertaining to the transmission scheme states as follows:

"the above funding may undergo changes during project execution considering that the grant component of ₹63028.00 lakh has been worked out on the basis of 90% of the estimated cost of the project submitted to NLDC for PSDF grant".

23. The Petitioner has further submitted that the Petitioner has received a total grant of ₹57764.00 lakh as on 22.1.2021, out of which ₹53751.05 lakh were used up to 31.3.2019 and the remaining grant will be utilized during 2019-20. The Petitioner has submitted the details of total grant adjustment in the capital cost of the transmission scheme as follows:

(₹ in lakh)			
Asset	Grant utilized up to COD	Grant utilized in ACE for 2018-19	Total grant
Asset-I	9461.83	3587.54	13049.38
Asset-II	7969.26	5419.44	13388.70
Asset-III	8847.04	5678.11	14525.15
Asset-IV	10854.60	1933.23	12787.83
Total	37132.73	16618.32	53751.05

24. Proviso to Regulation 9(6)(d) and Proviso (iii) to Regulation 19(1) of the 2014 Tariff Regulations respectively provide as follows:

"Provided that 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 shall be excluded from the Capital Cost for the purpose of computation of interest on loan, return on equity and depreciation.”

“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.”

25. We have considered the submissions of the Petitioner and note that in line with the above provisions, funding through grant is not required to be considered for debt-equity ratio. The Commission vide orders dated 1.11.2019 and 29.3.2020 in Petition No. 173/TT/2018 and Petition No.272/TT/2018 respectively had reduced PSDF grant received from the capital cost of the transmission assets and the same is as follows:

(₹ in lakh)

Asset	Grant reduced from Capital Cost as on COD	Grant reduced from ACE of 2018-19	Total grant Reduced as on 31.3.2019
Asset-I	9461.83	4080.60	13542.43
Asset-II	7969.26	5426.65	13395.91
Asset-III	8847.04	1749.20	10596.24
Asset-IV	10854.60	1933.23	12787.83
Total	37132.73	13189.68	50322.41

26. In line with the 2014 Tariff Regulations, the entire grant received under PSDF has been reduced from the allowable capital cost as on COD and allowable ACE for the purpose of computation of tariff and the same has been considered in the relevant paragraph of this order.

27. The details of the capital cost as on COD approved in the instant order are as follows:

(₹ in lakh)

Asset	Capital Cost claimed as on COD on accrual basis (A)	Less: PSDF Grant received as on COD (B)	Capital Cost allowed as on COD on cash basis (C) = (A-B)
Asset-I	10512.87	9461.83	1051.04
Asset-II	8854.73	7969.26	885.47
Asset-III	9830.04	8847.04	983.00
Asset-IV	12060.67	10854.60	1206.07
Total	41258.31	37132.73	4125.58



Additional Capital Expenditure (ACE)

28. The Commission vide orders dated 1.11.2019 and 29.3.2020 in Petition No. 173/TT/2018 and Petition No.272/TT/2018 respectively had allowed ACE for the 2014-19 tariff period on account of balance and retention payments, works deferred for execution, discharge of Initial Spares liability and net of grant received during the year as follows:

(₹ in lakh)		
Asset	ACE admitted for 2018-19	Total ACE admitted
Asset-I	708.89	708.89
Asset-II	967.35	967.35
Asset-III	1749.20	1749.20
Asset-IV	1933.23	1933.23

29. The Petitioner has claimed ACE on account of balance and retention payments in accordance with Regulation 14(1)(i) of the 2014 Tariff Regulations as follows:

(₹ in lakh)		
Asset	Particulars	ACE claimed for 2018-19
Asset-I	Expenditure as per Auditor Certificate	3986.16
	Less: Grant received during the year	3587.54
	Total ACE claimed	398.62
Asset-II	Expenditure as per Auditor Certificate	6021.60
	Less: Grant received during the year	5419.44
	Total ACE claimed	602.16
Asset-III	Expenditure as per Auditor Certificate	6309.01
	Less: Grant received during the year	5678.11
	Total ACE claimed	630.90
Asset-IV	Expenditure as per Auditor Certificate	2148.03
	Less: Grant received during the year	1933.23
	Total ACE claimed	214.80

30. We have considered the submissions of the Petitioner. ACE claimed by the Petitioner towards balance and retention payments has been allowed under Regulation 14(1)(i) of the 2014 Tariff Regulations. The un-discharged Initial Spares as on COD has been allowed as ACE during the year of its discharge. ACE allowed for the 2014-19 tariff period in respect of the transmission asset is as follows:



(₹ in lakh)

Asset	Particulars	ACE claimed for 2018-19
Asset-I	Expenditure as per Auditor Certificate	3986.16
	Less: Grant received during the year	3587.54
	Total ACE claimed	398.62
Asset-II	Expenditure as per Auditor Certificate	6021.60
	Less: Grant received during the year	5419.44
	Total ACE claimed	602.16
Asset-III	Expenditure as per Auditor Certificate	6309.01
	Less: Grant received during the year	5678.11
	Total ACE claimed	630.90
Asset-IV	Expenditure as per Auditor Certificate	2148.03
	Less: Grant received during the year	1933.23
	Total ACE claimed	214.80

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

(₹ in lakh)

Asset	Admitted Capital Cost (as on COD)	ACE allowed (2018-19)	Total Capital Cost (as on 31.3.2019)
Asset-I	1051.04	398.62	1449.66
Asset-II	885.47	602.16	1487.63
Asset-III	983.00	630.90	1613.90
Asset-IV	1206.07	214.80	1420.87
Total	4125.58	1846.48	5972.06

Debt-Equity Ratio

32. The Petitioner has claimed that capital cost was met from the grant to the extent of 90% and balance 10% through internal sources in line with the terms and conditions of the MoP letter dated 5.1.2016 and observation of the Commission vide orders dated 1.11.2019 and 29.3.2020 in Petition No. 173/TT/2018 and Petition No.272/TT/2018 respectively. Accordingly, the details of the debt-equity ratio as on COD and as on 31.3.2019 for the transmission assets are as follows:

Asset	Funding	Capital Cost (as on COD) (₹ in lakh)	(in %)	Capital Cost (as on 31.3.2019) (₹ in lakh)	(in %)
Asset-I	Debt	0.00	0.00	0.00	0.00
	Equity	1051.04	100.00	1449.66	100.00
	Total	1051.04	100.00	1449.66	100.00
Asset-II	Debt	0.00	0.00	0.00	0.00



	Equity	885.47	100.00	1487.63	100.00
	Total	885.47	100.00	1487.63	100.00
Asset-III	Debt	0.00	0.00	0.00	0.00
	Equity	983.00	100.00	1613.90	100.00
	Total	983.00	100.00	1613.90	100.00
Asset-IV	Debt	0.00	0.00	0.00	0.00
	Equity	1206.07	100.00	1420.87	100.00
	Total	1206.07	100.00	1420.87	100.00

Depreciation

33. The Petitioner's claim towards depreciation in this petition was found higher than the depreciation allowed for the transmission assets vide orders dated 1.11.2019 and 29.3.2020 in Petition No. 173/TT/2018 and Petition No.272/TT/2018 respectively. The Petitioner has neither given any justification for claiming higher depreciation than that was allowed earlier nor made any specific prayer for allowing higher depreciation in this petition. A similar issue had come up in Petition No. 19/TT/2020 which was dealt by the Commission vide order dated 9.5.2020.

34. In terms of order dated 9.5.2020 in Petition No. 19/TT/2020, depreciation has been considered for IT Equipment @5.28% as part of the sub-station up to 31.3.2019 while truing up the capital expenditure for the 2014-19 period. However, for the 2019-24 tariff period, the IT Equipment has been considered separately and depreciation has been allowed @15% for the balance depreciable value of IT Equipment in accordance with Regulation 33 of the 2019 Tariff Regulations. 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 assets as prescribed in the 2014 Tariff Regulations and depreciation allowed for the respective transmission assets during the 2014-19 tariff period is as follows:



Particulars	Asset-I		Asset-II
	2017-18 (Pro-rata for 2 days)	2018-19	2018-19 (Pro-rata for 274 days)
Opening Gross Block	1051.04	1051.04	885.47
ACE	0.00	398.62	602.16
Closing Gross Block	1051.04	1449.66	1487.63
Average Gross Block	1051.04	1250.35	1186.55
Weighted Average Rate of Depreciation (%)	5.21	5.22	5.22
Balance useful life at the beginning of the year (Year)	24	24	23
Elapsed life at the beginning of the year (Year)	0	0	0
Aggregated Depreciable Value	945.94	1125.32	1067.90
Combined Depreciation during the year	0.30	65.23	46.48
Cumulative Depreciation at the end of the year	0.30	65.53	46.48
Remaining Aggregate Depreciable Value at the end of the year	945.64	1059.79	1021.41

Particulars	Asset-III	Asset-IV
	2018-19 (Pro-rata for 259 days)	2018-19 (Pro-rata for 16 days)
Opening Gross Block	983.00	1206.07
ACE	630.90	214.80
Closing Gross Block	1613.90	1420.87
Average Gross Block	1298.45	1313.47
Weighted Average Rate of Depreciation (%)	5.28	5.28
Balance useful life at the beginning of the year (Year)	24	24
Elapsed life at the beginning of the year (Year)	0	0
Aggregated Depreciable Value	1168.61	1182.12
Combined Depreciation during the year	48.65	3.04
Cumulative Depreciation at the end of the year	48.65	3.04
Remaining Aggregate Depreciable Value at the end of the year	1119.96	1179.08

35. The details of depreciation approved for the transmission assets vide orders dated 1.11.2019 and 29.3.2020 in Petition No. 173/TT/2018 and Petition No.272/TT/2018 respectively, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

Asset	Particulars	(₹ in lakh)	
		2017-18	2018-19
Asset-I	Allowed vide order dated 1.11.2019 in Petition No. 173/TT/2018	0.23	59.92
	Claimed by the Petitioner in the instant petition	0.34	72.51



	Approved after true-up in this order	0.30	65.23
Asset-II	Allowed vide order dated 1.11.2019 in Petition No. 173/TT/2018	Not Applicable	39.28
	Claimed by the Petitioner in the instant petition		52.10
	Approved after true-up in this order		46.48
Asset-III	Allowed vide order dated 29.3.2020 in Petition No. 272/TT/2018		35.73
	Claimed by the Petitioner in the instant petition		52.99
	Approved after true-up in this order		48.65
Asset-IV	Allowed vide order dated 29.3.2020 in Petition No. 272/TT/2018		2.28
	Claimed by the Petitioner in the instant petition		3.30
	Approved after true-up in this order		3.04

Interest on Loan (IoL)

36. The Petitioner has not claimed IoL considering the PSDF grant. As the balance amount after reducing grant is being treated as equity, there shall be no IoL.

Return on Equity (RoE)

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

Year	Claimed effective tax (in %)	Grossed up RoE (in %) [(Base Rate)/(1-t)]	Grossed up RoE where Additional RoE is allowed [(Effective Rate)/(1-t)] (in %)
2017-18	21.337	19.705	20.341
2018-19	21.549	19.758	20.395

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

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

39. MAT rates considered in order dated 27.4.2020 for the purpose of grossing up of rate of RoE for trueing up of the tariff of the 2014-19 tariff period, in terms of the provisions of the 2014 Tariff Regulations, is considered in the instant case which is as follows:

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

40. The Petitioner has claimed RoE for the 2014-19 period after grossing up RoE @15.50% with Effective Tax rates (based on MAT rates) each year as per Regulation 25(3) of the 2014 Tariff Regulations. RoE is trueed-up on the basis of the MAT rate applicable in the respective years and is allowed for the transmission assets as follows:

(₹ in lakh)

Particulars	Asset-I		Asset-II
	2017-18 (Pro-rata for 2 days)	2018-19	2018-19 (Pro-rata for 274 days)
Opening Equity	1051.04	1051.04	885.47
Additions	0.00	398.62	602.16
Closing Equity	1051.04	1449.66	1487.63
Average Equity	1051.04	1250.35	1186.55
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500
MAT Rate for respective year (in %)	21.342	21.549	21.549
Rate of Return on Equity (in %)	19.705	19.758	19.758
Return on Equity	1.13	247.04	175.99

(₹ in lakh)

Particulars	Asset-III	Asset-IV
	2018-19 (Pro-rata for 259 days)	2018-19 (Pro-rata for 16 days)
Opening Equity	983.00	1206.07
Additions	630.90	214.80
Closing Equity	1613.90	1420.87
Average Equity	1298.45	1313.47
Return on Equity (Base Rate) (in %)	15.500	15.500



MAT Rate for respective year (in %)	21.549	21.549
Rate of Return on Equity (in %)	19.758	19.758
Return on Equity	182.04	11.38

41. The details of RoE for the transmission assets as allowed vide orders dated 1.11.2019 and 29.3.2020 in Petition No. 173/TT/2018 and Petition No.272/TT/2018 respectively, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

Asset	Particulars	(₹ in lakh)	
		2017-18	2018-19
Asset-I	Allowed vide order dated 1.11.2019 in Petition No. 173/TT/2018	0.85	225.51
	Claimed by the Petitioner in the instant petition	1.13	247.04
	Approved after true-up in this order	1.13	247.04
Asset-II	Allowed vide order dated 1.11.2019 in Petition No. 173/TT/2018	Not Applicable	147.91
	Claimed by the Petitioner in the instant petition		175.99
	Approved after true-up in this order		175.99
Asset-III	Allowed vide order dated 29.3.2020 in Petition No. 272/TT/2018		132.69
	Claimed by the Petitioner in the instant petition		182.05
	Approved after true-up in this order		182.04
Asset-IV	Allowed vide order dated 29.3.2020 in Petition No. 272/TT/2018		8.45
	Claimed by the Petitioner in the instant petition		11.38
	Approved after true-up in this order		11.38

Operation & Maintenance Expenses (O&M Expenses)

42. The O&M Expenses claimed by the Petitioner for the transmission assets are as follows:

Asset-I		
Particulars	2017-18 (Pro-rata for 2 days)	2018-19
400 kV: Rourkela STATCOM Bays		
Number of bays	2.00	2.00
Norms (₹ lakh/Bay)	66.51	68.71
Total O&M Expenses (₹ in lakh)	0.73	137.42



Asset-II	
Particulars	2018-19 (Pro-rata for 274 days)
400 kV: Jeypore STATCOM Bays	
Number of bays	2.00
Norms (₹ lakh/Bay)	68.71
Total O&M Expenses (₹ in lakh)	103.16

Asset-III	
Particulars	2018-19 (Pro-rata for 259 days)
400 kV: Ranchi STATCOM Bays	
Number of bays	2.00
Norms (₹ lakh/Bay)	68.71
Total O&M Expenses (₹ in lakh)	97.51

Asset-IV	
Particulars	2018-19 (Pro-rata for 16 days)
400 kV: Kishanganj STATCOM Bays	
Number of bays	2.00
Norms (₹ lakh/Bay)	68.71
Total O&M Expenses (₹ in lakh)	6.02

43. Regulation 29(3) of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission system. The norms specified in respect of the elements covered in the transmission assets are as follows:

Particulars	2017-18	2018-19
Norms for sub-station Bays (₹ lakh per bay)		
400 kV		
Norms (₹ lakh/Bay)	66.51	68.71

44. The O&M Expenses are allowed for the transmission assets as per the norms specified in the 2014 Tariff Regulations and are as follows:

Asset-I		
Particulars	2017-18 (Pro-rata for 2 days)	2018-19
400 kV: Rourkela STATCOM Bays		
Number of bays	2.00	2.00
Norms (₹ lakh/Bay)	66.51	68.71
Total O&M Expenses (₹ in lakh)	0.73	137.42



Asset-II	
Particulars	2018-19 (Pro-rata for 274 days)
400 kV: Jeypore STATCOM Bays	
Number of bays	2.00
Norms (₹ lakh/Bay)	68.71
Total O&M Expenses (₹ in lakh)	103.16

Asset-III	
Particulars	2018-19 (Pro-rata for 259 days)
400 kV: Ranchi STATCOM Bays	
Number of bays	2.00
Norms (₹ lakh/Bay)	68.71
Total O&M Expenses (₹ in lakh)	97.51

Asset-IV	
Particulars	2018-19 (Pro-rata for 16 days)
400 kV: Kishanganj STATCOM Bays	
Number of bays	2.00
Norms (₹ lakh/Bay)	68.71
Total O&M Expenses (₹ in lakh)	6.02

45. The details of O&M Expenses allowed for the transmission assets vide orders dated 1.11.2019 and 29.3.2020 in Petition No. 173/TT/2018 and Petition No.272/TT/2018 respectively, claimed by the Petitioner in the instant petition and true-up in the instant order are as follows:

(₹ in lakh)			
Asset	Particulars	2017-18	2018-19
Asset-I	Allowed vide order dated 1.11.2019 in Petition No. 173/TT/2018	0.72	137.42
	Claimed by the Petitioner in the instant petition	0.73	137.42
	Approved after true-up in this order	0.73	137.42
Asset-II	Allowed vide order dated 1.11.2019 in Petition No. 173/TT/2018	Not Applicable	103.07
	Claimed by the Petitioner in the instant petition		103.16
	Approved after true-up in this order		103.16
Asset-III	Allowed vide order dated 29.3.2020 in Petition No. 272/TT/2018		97.52
	Claimed by the Petitioner in the instant petition		97.51
	Approved after true-up in this order		97.51
Asset-IV	Allowed vide order dated 29.3.2020 in Petition No. 272/TT/2018		5.91
	Claimed by the Petitioner in the instant petition		6.02
	Approved after true-up in this order		6.02



Interest on Working Capital

46. IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations and the trued-up IWC allowed for the transmission assets for the 2014-19 tariff period are as follows:

Particulars	Asset-I		Asset-II
	2017-18 (Pro-rata for 2 days)	2018-19	2018-19 (Pro-rata for 274 days)
O&M Expenses (O&M Expenses for one month)	11.09	11.45	11.45
Maintenance Spares (15% of O&M Expenses)	19.95	20.61	20.61
Receivables (Equivalent to two months of annual transmission charges)	67.90	77.24	74.46
Total Working Capital	98.93	109.31	106.53
Rate of Interest (in %)	12.60	12.60	12.20
Interest on Working Capital	0.07	13.77	9.76

Particulars	Asset-III	Asset-IV
	2018-19 (Pro-rata for 259 days)	2018-19 (Pro-rata for 16 days)
O&M Expenses (O&M Expenses for one month)	11.45	11.45
Maintenance Spares (15% of O&M Expenses)	20.61	20.61
Receivables (Equivalent to two months of annual transmission charges)	79.35	79.99
Total Working Capital	111.42	112.06
Rate of Interest (in %)	12.20	12.20
Interest on Working Capital	9.65	0.60

47. The details of IWC for the transmission assets as allowed vide orders dated 1.11.2019 and 29.3.2020 in Petition No. 173/TT/2018 and Petition No.272/TT/2018 respectively, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

Asset	Particulars	₹ in lakh	
		2017-18	2018-19
Asset-I	Allowed vide order dated 1.11.2019 in Petition No. 173/TT/2018	0.06	13.20
	Claimed by the Petitioner in the instant petition	0.07	13.93
	Approved after true-up in this order	0.07	13.77



Asset-II	Allowed vide order dated 1.11.2019 in Petition No. 173/TT/2018	Not Applicable	9.02
	Claimed by the Petitioner in the instant petition		9.87
	Approved after true-up in this order		9.76
Asset-III	Allowed vide order dated 29.3.2020 in Petition No. 272/TT/2018		8.35
	Claimed by the Petitioner in the instant petition		9.74
	Approved after true-up in this order		9.65
Asset-IV	Allowed vide order dated 29.3.2020 in Petition No. 272/TT/2018		0.52
	Claimed by the Petitioner in the instant petition		0.60
	Approved after true-up in this order		0.60

Approved Annual Fixed Charges for the 2014-19 Tariff Period

48. The trued-up AFC approved for the transmission assets for the 2014-19 period is as follows:

(₹ in lakh)

Particulars	Asset-I		Asset-II
	2017-18 (Pro-rata for 2 days)	2018-19	2018-19 (Pro-rata for 274 days)
Depreciation	0.30	65.23	46.48
Interest on Loan	0.00	0.00	0.00
Return on Equity	1.13	247.04	175.99
Interest on Working Capital	0.07	13.77	9.76
O&M Expenses	0.73	137.42	103.16
Total	2.23	463.47	335.39

(₹ in lakh)

Particulars	Asset-III	Asset-IV
	2018-19 (Pro-rata for 259 days)	2018-19 (Pro-rata for 16 days)
Depreciation	48.65	3.04
Interest on Loan	0.00	0.00
Return on Equity	182.04	11.38
Interest on Working Capital	9.65	0.60
O&M Expenses	97.51	6.02
Total	337.85	21.04

49. Accordingly, the Annual Transmission Charges for the transmission assets as allowed vide orders dated 1.11.2019 and 29.3.2020 in Petition No. 173/TT/2018 and Petition No.272/TT/2018 respectively, claimed by the Petitioner in the instant petition and approved after truing up in the instant order are as follows:



			(₹ in lakh)	
Asset	Particulars	2017-18	2018-19	
Asset-I	Allowed vide order dated 1.11.2019 in Petition No. 173/TT/2018	1.86	436.05	
	Claimed by the Petitioner in the instant petition	2.27	470.90	
	Approved after true-up in this order	2.23	463.47	
Asset-II	Allowed vide order dated 1.11.2019 in Petition No. 173/TT/2018	Not Applicable	299.27	
	Claimed by the Petitioner in the instant petition		341.12	
	Approved after true-up in this order		335.39	
Asset-III	Allowed vide order dated 29.3.2020 in Petition No. 272/TT/2018		274.29	
	Claimed by the Petitioner in the instant petition		342.29	
	Approved after true-up in this order		337.85	
Asset-IV	Allowed vide order dated 29.3.2020 in Petition No. 272/TT/2018		17.15	
	Claimed by the Petitioner in the instant petition		21.30	
	Approved after true-up in this order		21.04	

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

50. The Petitioner has combined the transmission assets and claimed the transmission charges for the Combined Asset for the 2019-24 tariff period as follows:

						(₹ in lakh)
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24	
Depreciation	467.78	620.18	648.12	651.12	651.12	
Interest on Loan	0.00	0.00	0.00	0.00	0.00	
Return on Equity	1257.78	1420.51	1450.33	1453.53	1453.53	
Interest on Working Capital	68.84	75.21	77.64	79.35	80.88	
O&M Expenses	984.19	1018.77	1054.46	1091.53	1129.79	
Total	2778.59	3134.67	3230.55	3275.53	3315.32	

51. The details of IWC claimed by the Petitioner for the Combined Asset for the 2019-24 tariff period are as follows:

						(₹ in lakh)
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24	
O&M Expenses	82.02	84.90	87.87	90.96	94.15	
Maintenance Spares	147.63	152.82	158.17	163.73	169.47	
Receivables	341.63	386.47	398.29	403.83	407.62	
Total Working Capital	571.28	624.19	644.33	658.52	671.24	
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05	
Interest on Working Capital	68.84	75.21	77.64	79.35	80.88	



Effective Date of Commercial Operation (E-COD)

52. The Petitioner has claimed E-COD of the Combined Asset as 13.8.2018. Based on capital cost as on 31.3.2019, E-COD has been worked out as follows:

Asset	Admitted Capital Cost as on 31.3.2019 (₹ in lakh)	COD	Number of days from last COD	Weightage of cost	Weighted days	Effective COD (Latest COD - Total Weighted days)
Asset-I	1449.66	30.3.2018	351	24.27%	85.20	12.8.2018
Asset-II	1487.63	1.7.2018	258	24.91%	64.27	
Asset-III	1613.90	16.7.2018	243	27.02%	65.67	
Asset-IV	1420.87	16.3.2019	0	23.79%	0.00	
Total	5972.06				215.14	

53. E-COD is used to determine the lapsed life of the project as a whole which works out as 0 (zero) year as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD).

Weighted Average Life (WAL)

54. The life as defined in Regulation 33 of the 2019 Tariff Regulations has been considered for determination of WAL.

55. The Combined Asset may have multiple elements such as land, building, transmission line, sub-station and PLCC and each element may have different span of life. Therefore, the concept of WAL has been used as the useful life of the project as a whole.

56. WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2019 and their respective life as stipulated in the 2019 Tariff Regulations. Accordingly, WAL of the Combined Asset has been worked out as 24 years as follows:



Particulars	Capital Cost as on 31.3.2019 (₹ in lakh) (1)	Life (in years) (2)	Weighted Cost (₹ in lakh) (3) = (1) x (2)	Weighted Average Life of Asset (in years) (4) = (3)/(1)
Building & Civil Works	96.15	25	2403.75	24.152 (rounded off to 24 years)
Transmission Line	0.00	35	0.00	
Sub Station	5599.59	25	139989.75	
PLCC	0.00	15	0.00	
IT Equipment (Including Software)	276.32	6.67	1843.05	
Total	5972.06		144236.55	

57. WAL as on 1.4.2019 as determined above is applicable prospectively (i.e. for 2019-24 tariff period onwards) and no retrospective adjustment of depreciation in previous tariff period is required to be done. As discussed, E-COD of the Combined Asset is 12.8.2018 and the lapsed life of the project as a whole works out as 0 year as on 1.4.2019 (i.e. the number of completed years as on 1.4.2019 from E-COD). Accordingly, WAL has been used to determine the remaining useful life as on 31.3.2019 to be 24 years.

Capital Cost

58. 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 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.”*

59. The Petitioner has claimed capital cost as on 31.3.2019 of ₹5972.06 lakh excluding the grant which has already been admitted. Accordingly, the same capital cost of ₹5972.06 lakh excluding the grant as on 31.3.2019 has been considered.

Additional Capital Expenditure

60. Regulation 24 of the 2019 Tariff Regulations provides as follows:

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

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

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

61. The Petitioner has claimed ACE of ₹5889.41 lakh for the 2019-24 tariff period under Regulations 24(1)(a) and 24(1)(b) of the 2019 Tariff Regulations on account of un-discharged liability towards final payment for works executed and for works deferred for execution within cut-off date.

62. The Petitioner has submitted that ACE for the 2019-24 tariff period will be funded with the estimated grant of ₹4122.59 lakh (70% of ACE claimed) and equity of ₹1766.82 lakh (30% of ACE claimed). The Petitioner has further submitted that the grant will be adjusted up to 90% of actual ACE during the 2019-24 tariff period, after the receipt of final grant amount and the remaining amount will be funded through equity only. ACE claimed by the Petitioner during the 2019-24 tariff period is as follows:

Asset	Apportioned Approved Cost (as per FR)	Capital Cost (as on 31.3.2019) after adjustment of grant	ACE claimed as per Auditor Certificate			Capital Cost (as on 31.3.2024)
			2019-20	2020-21	2021-22	(₹ in lakh)
Asset-I	20705.06	1449.65	1006.03	27.00	0.00	2482.68
Asset-II	17936.37	1487.63	1717	36.00	0.00	3240.63
Asset-III	20971.11	1613.91	1351.28	238.46	0.00	3203.65
Asset-IV	17008.46	1420.87	756.97	643.42	113.55	2934.41
Total	76621.00	5972.06	4831.28	944.58	113.55	11861.77

63. The Petitioner has submitted that it has received total grant of ₹54081.00 lakh as on 31.3.2019. In response to the TV (technical validation) letter, the Petitioner has submitted that it has received a total grant of ₹57764.00 lakh as on 22.1.2021. The Petitioner has further submitted that ₹53751.05 lakh has been utilised up to 31.3.2019



and the remaining grant will be utilized during 2019-20. The Petitioner, vide affidavit dated 17.6.2021 has filed Ministry of Power's letter/ order dated 5.1.2016 approving the grant to the Petitioner.

64. However, the Petitioner has not submitted the details such as the dates of receipt of grant, reasons for not replacing shortfall in grant with the loan till the time requisite grant has been received and reasons for considering the total ACE in gross block for the determination of ACE during the 2019-24 tariff period. The Petitioner is directed to submit these details, including additional grant, if any, at the time of true-up, failing which the Commission may take an appropriate view and restrict the equity portion to 10% of the total ACE claimed during the 2019-24 tariff period.

65. ACE claimed by the Petitioner has been allowed under Regulation 24(1)(a) and 24(1)(b) of the 2019 Tariff Regulations as the same is towards un-discharged liabilities recognised to be payable at a future date and balance work deferred for execution.

66. Proviso (iii) to Regulation 18(1) and Regulation 19(5)(e) of the 2019 Tariff Regulations respectively provide as follows:

“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.”

“19(5) The following shall be excluded from the capital cost of the existing and new Projects:

.....

(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.”

67. In line with the 2019 Tariff Regulations, the unutilised grant as on 1.4.2019 i.e. ₹4012.95 lakh has to be reduced from the allowable ACE for the purpose of computation of tariff. However, in absence of relevant information regarding grant received such as the date of receipt of grant, sources of funding in case of shortfall in



grant etc., the Commission has allowed only 30% of ACE claimed during the 2019-2024 tariff period for the purpose of computation of tariff. Accordingly, ACE for the 2019-24 tariff period and the capital cost as on 31.3.2024 for the Combined Asset considered are as follows:

Capital Cost admitted as on 1.4.2019	ACE allowed for 2019-24 tariff period			Capital Cost allowed as on 31.3.2024
	2019-20	2020-21	2021-22	
5972.06	1449.38	283.46	34.07	7738.97

(₹ in lakh)

Debt-Equity Ratio

68. 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.”

69. 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 %)	Capital Cost (as on 31.3.2024) (₹ in lakh)	(in %)
Debt	0.00	0.00	0.00	0.00
Equity	5972.06	100.00	7738.97	100.00
Total	5972.06	100.00	7738.97	100.00

Depreciation

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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

71. The IT equipment has been considered as a part of the Gross Block and depreciated using WAROD. WAROD at Annexure-II has been worked out after considering the depreciation rates of IT and non-IT assets as prescribed in the 2019 Tariff Regulations. The salvage value of IT equipment has been considered nil, i.e. IT asset has been considered as 100% depreciable. The depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated



depreciation up to 31.3.2019. The depreciation allowed in respect of the Combined Asset is as follows:

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block	5972.06	7421.44	7704.91	7738.97	7738.97
Addition during the year 2019-24 due to projected ACE	1449.38	283.46	34.07	0.00	0.00
Closing Gross Block	7421.44	7704.91	7738.97	7738.97	7738.97
Average Gross Block	6696.75	7563.18	7721.94	7738.97	7738.97
Weighted average rate of Depreciation (WAROD) (in %)	5.65	5.61	5.60	5.60	5.60
Balance useful life at the beginning of the year (Year)	24	23	22	21	20
Lapsed Life at the beginning of the year (Year)	0	1	2	3	4
Aggregated Depreciable Value	6054.71	6834.49	6977.38	6992.71	6992.71
Combined Depreciation during the year	378.56	424.28	432.66	433.56	433.56
Aggregate Cumulative Depreciation at the end of the year	542.25	966.53	1399.19	1832.75	2266.31
Remaining Aggregated Depreciable Value at the end of the year	5512.45	5867.96	5578.19	5159.96	4726.40

Interest on Loan

72. The Petitioner has not claimed IOL considering PSDF grant. As the balance amount after reducing grant is being treated as equity, there shall be no IoL.

Return on Equity

73. 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 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.”

74. The Petitioner has submitted that MAT rate is applicable to the Petitioner's company. Accordingly, MAT rate applicable in 2019-20 has been considered for the purpose of RoE, which shall be trued-up with actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. RoE allowed for the Combined Asset for the 2019-24 tariff period is as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity	5972.06	7421.44	7704.91	7738.97	7738.97
Additions	1449.38	283.46	34.07	0.00	0.00
Closing Equity	7421.44	7704.91	7738.97	7738.97	7738.97
Average Equity	6696.75	7563.18	7721.94	7738.97	7738.97
Return on Equity (Base Rate) (in %)	15.50	15.50	15.50	15.50	15.50
MAT Rate for respective year (in %)	17.472	17.472	17.472	17.472	17.472
Rate of Return on Equity (in %)	18.782	18.782	18.782	18.782	18.782
Return on Equity	1257.78	1420.52	1450.33	1453.53	1453.53

Operation & Maintenance Expenses

75. The Petitioner has considered the capital cost as on 31.3.2019 for claiming O&M Expenses for the transmission assets which are Static Synchronous



Compensators (STATCOM). The O&M Expenses claimed by the Petitioner for the Combined Asset for the 2019-24 period are as follows:

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
STATCOM at Ranchi, Jeypore, Kishanganj and Rourkela					
Original Project Cost (₹ lakh)	65612.82	65612.82	65612.82	65612.82	65612.82
Norms (in %)	1.50	1.5527	1.6071	1.6636	1.7219
Total O&M Expenses (₹ in lakh)	984.19	1018.77	1054.46	1091.53	1129.79

76. We have considered the submissions made by the Petitioner. 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
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-	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					



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
<i>HVDC Back-to-Back stations (Rs Lakh per 500 MW) (Except Gazuwaka BTB)</i>	834	864	894	925	958
<i>Gazuwaka HVDC Back-to-Back station (₹ Lakh per 500 MW)</i>	1,666	1,725	1,785	1,848	1,913
<i>500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)</i>	2,252	2,331	2,413	2,498	2,586
<i>±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)</i>	2,468	2,555	2,645	2,738	2,834
<i>±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)</i>	1,696	1,756	1,817	1,881	1,947
<i>±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)</i>	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.”

77. The clause (vi) of the second proviso to Regulation 35(3)(a) of the 2019 Tariff Regulations provides for O&M Expenses @ 1.5% of the “original project cost” of the STATCOM as on COD. “Original Project Cost” has been defined in Regulation 3(46) of the 2019 Tariff Regulations as under:

“3(46) ‘Original Project Cost’ means the capital expenditure incurred by the generating company or the transmission licensee, as the case may be, within the original scope of the project up to the cut-off date, and as admitted by the Commission;”

78. While “Original Project Cost” as defined in Regulation 3(46) of the 2019 Tariff Regulations covers capital expenditure/ cost within the original scope of the project up to the cut-off date, clause (vi) of the second proviso to Regulation 35(3)(a) of the 2019 Tariff Regulations refers to the “original project cost” of the STATCOM as on COD for the purpose of determining O&M Expenses.

79. We also observe that “original project cost” includes components of IDC, IEDC, land cost and cost of civil works. However, as per Regulation 3(45) of the 2019 Tariff Regulations extracted hereunder, the O&M Expenses are allowed for operation and maintenance of the project or part thereof and includes the expenditure towards manpower, maintenance, repairs and maintenance etc. but it excludes IDC, IEDC, land cost and cost of civil works:



“(45) ‘Operation and Maintenance Expenses’ or ‘O&M expenses’ means the expenditure incurred for operation and maintenance of the project, or part thereof, and includes the expenditure on manpower, maintenance, repairs and maintenance spares, consumables, insurance and overheads and fuel other than used for generation of electricity;”

80. Therefore, we are of the view that determination of O&M expenses on the basis of Project cost (including IDC, IEDC Land cost and Cost of civil work) will not be consistent with the provisions of the 2019 Tariff Regulations as extracted above.

81. Regulation 76 of the 2019 Tariff Regulations provides for relaxation of any of the provisions of the 2019 Tariff Regulations by recording the reasons for the same. The said Regulation provides as follows.

“76. Power to Relax: The Commission, for reasons to be recorded in writing, may relax any of the provisions of these regulations on its own motion or on an application made before it by an interested person.”

82. To address above issues arising out of the difference in the way in which “original project cost” has been considered in clause (vi) of the second proviso to Regulation 35(3)(a) and Regulation 3(46) of the 2019 Tariff Regulations, we relax clause (vi) of the second proviso to Regulation 35(3)(a) of the 2019 Tariff Regulations under Regulation 76 of the 2019 Tariff Regulations and allow O&M Expenses for the transmission assets @1.5% of the Plant and Machinery cost (excluding IDC, IEDC, Land cost and cost of Civil works) of the STATCOM as on the cut-off date. The same has been escalated at the rate of 3.51% to work out the O&M Expenses for the 2019-24 tariff period.

83. Accordingly, the O&M Expenses allowed for the Combined Asset are as follows:

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
STATCOM at Ranchi, Jeypore, Kishanganj and Rourkela					
Plant and Machinery cost excluding IDC, IEDC, Land cost and cost of Civil works	62590.55	62590.55	62590.55	62590.55	62590.55



(₹ lakh)					
Norms (%)	1.50	1.5527	1.6071	1.6636	1.7219
Total O&M Expenses (₹ in lakh)	938.86	971.81	1005.92	1041.23	1077.78

Interest on Working Capital

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

“34. Interest on Working Capital:

(1) ...

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

- (i) Receivables equivalent to 45 days of 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;”

85. 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 (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, for 2020-21 has been considered as 11.25% (SBI 1 year MCLR



applicable as on 1.4.2020 of 7.75% plus 350 basis points) and for 2021-22 onwards has been considered as 10.50% (SBI 1 year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points). The components of the working capital and interest allowed thereon are as follows:

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses (O&M Expenses for 1 month)	78.24	80.98	83.83	86.77	89.81
Maintenance Spares (15% of O&M Expenses)	140.83	145.77	150.89	156.18	161.67
Receivables (Equivalent to 45 days of annual transmission charges)	324.68	355.33	363.92	368.95	372.59
Total Working Capital	543.75	582.08	598.63	611.90	624.07
Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
Interest on Working Capital	65.52	65.48	62.86	64.25	65.53

Annual Fixed Charges of the 2019-24 Tariff Period

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

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	378.56	424.28	432.66	433.56	433.56
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	1257.78	1420.52	1450.33	1453.53	1453.53
Interest on Working Capital	65.52	65.48	62.86	64.25	65.53
O&M Expenses	938.86	971.81	1005.92	1041.23	1077.78
Total	2640.72	2882.09	2951.77	2992.57	3030.40

Filing Fee and the Publication Expenses

87. 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.



Licence Fee & RLDC Fees and Charges

88. 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 Regulation 70(3) of the 2019 Tariff Regulations for the 2019-24 tariff period.

Goods and Services Tax

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

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

Security Expenses

91. 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.

92. We have considered the submissions of the Petitioner. The Petitioner has claimed consolidated security expenses for all the transmission assets owned by it on projected basis for the 2019-24 tariff period on the basis of actual security expenses incurred in 2018-19 in Petition No. 260/MP/2020. The Commission vide order dated 3.8.2021 in petition No. 260/MP/2020 approved security expenses from 1.4.2019 to 31.3.2024. Therefore, security expenses will be shared in terms of the order dated



3.8.2021 in Petition No. 260/MP/2020. Therefore, the Petitioner's prayer in the instant petition for allowing it to file a separate petition for claiming the overall security expenses and consequential IWC has become infructuous.

Capital Spares

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

Sharing of Transmission Charges

94. With effect from 1.11.2020, 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.

95. To summarise:

- a) The trued-up AFC approved for the transmission assets for the 2014-19 tariff period are as follows :

(₹ in lakh)		
Asset-I		Asset-II
2017-18 (Pro-rata for 2 days)	2018-19	2018-19 (Pro-rata for 274 days)
2.23	463.47	335.39

(₹ in lakh)	
Asset-III	Asset-IV
2018-19 (Pro-rata for 259 days)	2018-19 (Pro-rata for 16 days)
337.85	21.04



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

(₹ in lakh)				
2019-20	2020-21	2021-22	2022-23	2023-24
2640.72	2882.09	2951.77	2992.57	3030.40

96. Annexure-I and Annexure-II given hereinafter shall form part of the order.

97. This order disposes of Petition No. 658/TT/2020 in terms of the above discussions and findings.

sd/-
(P. K. Singh)
Member

sd/-
(I. S. Jha)
Member

sd/-
(P. K. Pujari)
Chairperson



Annexure-I

Asset-I

2014-19	Admitted Capital Cost as on COD	ACE		Admitted Capital Cost as on 31.3.2019	Rate of Depreciation as per Regulations	Depreciations as per Regulations	
Particulars		2017-18	2018-19			2017-18	2018-19
Building Civil Works & Colony	36.53	0.00	8.26	44.79	3.34%	1.22	1.36
Sub Station	939.65	0.00	390.36	1330.01	5.28%	49.61	59.92
IT Equipment (Incl. Software)	74.86	0.00	0.00	74.86	5.28%	3.95	3.95
Total	1051.04	0.00	398.62	1449.66		54.79	65.23
Average Gross Block						1051.04	1250.35
Weighted Average Rate of Depreciation						5.21%	5.22%

Asset-II

2014-19	Admitted Capital Cost as on COD	ACE	Admitted Capital Cost as on 31.3.2019	Rate of Depreciation as per Regulations	Depreciations as per
Particulars		2018-19			2018-19
Building Civil Works & Colony	24.05	27.31	51.36	3.34%	1.26
Sub Station	784.43	574.85	1359.28	5.28%	56.59
IT Equipment (Incl. Software)	76.99	0.00	76.99	5.28%	4.07
Total	885.47	602.16	1487.63		61.92
Average Gross Block					1186.55
Weighted Average Rate of Depreciation					5.22%



Annexure-I(Continued)

Asset-III

2014-19	Admitted Capital Cost as on COD	ACE	Admitted Capital Cost as on 31.3.2019	Rate of Depreciation as per Regulations	Depreciations as per
Particulars		2018-19			2018-19
Sub Station	920.08	630.90	1550.98	5.28%	65.24
IT Equipment (Incl. Software)	62.92	0.00	62.92	5.28%	3.32
Total	983.00	630.90	1613.90		68.56
Average Gross Block					1298.45
Weighted Average Rate of Depreciation					5.28%

Asset-IV

2014-19	Admitted Capital Cost as on COD	ACE	Admitted Capital Cost as on 31.3.2019	Rate of Depreciation as per Regulations	Depreciations as per
Particulars		2018-19			2018-19
Sub Station	1144.52	214.80	1359.32	5.28%	66.10
IT Equipment (Incl. Software)	61.55	0.00	61.55	5.28%	3.25
Total	1206.07	214.80	1420.87		69.35
Average Gross Block					1313.47
Weighted Average Rate of Depreciation					5.28%



Annexure-II

2019-24	Admitted Capital Cost as on 1.4.2019	Projected ACE			Admitted Capital Cost as on 31.3.2024	Rate of Depreciation as per Regulations	Annual Depreciations as per Regulations				
Particulars		2019-20	2020-21	2021-22			2019-20	2020-21	2021-22	2022-23	2023-24
Land - Freehold	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00
Land - Leasehold	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Building Civil Works & Colony	96.15	2.72	0.00	0.00	98.87	3.34%	3.26	3.30	3.30	3.30	3.30
Transmission Line	0.00	0.00	0.00	0.00	0.00	5.28%	0.00	0.00	0.00	0.00	0.00
Sub Station	5599.59	1446.67	283.46	34.07	7363.79	5.28%	333.85	379.53	387.91	388.81	388.81
PLCC	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)	276.32	0.00	0.00	0.00	276.32	15.00%	41.45	41.45	41.45	41.45	41.45
Total	5972.06	1449.38	283.46	34.07	7738.97		378.56	424.28	432.66	433.56	433.56
Average Gross Block							6696.75	7563.18	7721.94	7738.97	7738.97
Weighted Average Rate of Depreciation							5.65%	5.61%	5.60%	5.60%	5.60%

