

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 19/TT/2022

Coram:

**Shri I. S. Jha, Member
Shri Arun Goyal, Member
Shri P. K. Singh, Member**

Date of Order : 05.12.2022

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 2014-19 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and determination of transmission tariff of 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 in respect of **Asset-1:** Kalpakkam PFBR-Sirucheri 230 kV D/C Line; **Asset-2:** Kalpakkam PFBR-Arani 230 kV D/C Line under Transmission System associated with Kalpakkam PFBR (500 MW) and **Asset-3:** Kalpakkam PFBR–Kanchipuram 230 kV D/C Line under “Transmission system associated with Kalpakkam PFBR (500 MW) project” in the Southern 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 Karnataka Power Transmission Corporation Limited,
Kaveri Bhavan, Bangalore-560009.
- 2 Transmission Corporation of Andhra Pradesh Limited (APTRANSCO),
Vidyut Soudha, Gunadala, Eluru Road,
Vijayawada-520004.
- 3 Kerala State Electricity Board (KSEB),
Vaidyuthi Bhavanam,
Pattom, Thiruvananthapuram-695004.
- 4 Tamil Nadu Generation and Distribution Corporation Limited,
(Formerly Tamil Nadu Electricity Board -TNEB),
NPKRR Maaligai, 800, Anna Salai, Chennai-600002.



- 5 Electricity Department,
Government of Pondicherry, Pondicherry-605001.
- 6 Eastern Power Distribution Company of Andhra Pradesh Limited (APEPDCL),
P&T Colony,
Seethmmadhara, Vishakhapatnam, Andhra Pradesh.
- 7 Southern Power Distribution Company of Andhra Pradesh Limited (APSPDCL),
Srinivasasa Kalyana Mandapam Backside,
Tiruchanoor Road, Kesavayana Gunta,
Tirupati-517503,
Chittoor District, Andhra Pradesh.
- 8 Southern Power Distribution Company of Telangana Limited (TSSPDCL),
6-1-50, Corporate Office, Mint Compound,
Hyderabad-500063, Telangana.
- 9 Northern Power Distribution Company of Telangana Limited (TSNPDCL),
H. No. 2-5-3 1/2, Vidyut Bhawan, Corporate Office, Nakkal Gutta,
Hanamkonda,
Warangal-506001, Telangana.
- 10 Bangalore Electricity Supply Company Limited (BESCOM),
Corporate Office, K. R. Circle,
Bangalore-560001, Karnataka.
- 11 Gulbarga Electricity Supply Company Limited (GESCOM),
Station Main Road, Gulbarga, Karnataka.
- 12 Hubli Electricity Supply Company Limited (HESCOM),
Navanagar, PB Road, Hubli, Karnataka.
- 13 MESCOM Corporate Office,
Paradigm Plaza, AB Shetty Circle,
Mangalore-575001, Karnataka.
- 14 Chamundeswari Electricity Supply Corporation Limited (CESC),
927, L J Avenue, Ground Floor, New Kantharaj Urs Road,
Saraswatipuram, Mysore-570 009, Karnataka.
- 15 Electricity Department,
Government of Goa,
Vidyuti Bhawan, Panaji, Goa-403001.
- 16 Transmission Corporation of Telangana Limited,
Vidhyut Sudha, Khairatabad,
Hyderabad-500082.
- 17 Tamil Nadu Transmission Corporation,
NPKRR Maaligai, 800, Anna Salai,



Chennai-600002.

18 Bharatiya Nabhikiya Vidyut Nigam Limited (BHAVINI),
Bhavini Station Building, Kalpakkam- 603102.

...Respondent(s)

For Petitioner : Shri S. S. Raju, PGCIL
Shri D. K. Biswal, PGCIL
Shri V. P. Rastogi, PGCIL
Shri A. K. Verma, PGCIL

For Respondent : Shri S. Vallinyagam, Advocate, TANGEDCO
Dr. R. Kathiravan, TANGEDCO
Ms. R. Ramalakshmi, TANGEDCO
Shri R. Srinivasan, TANGEDCO
Ms. R. Kumutha, TANGEDCO

ORDER

The instant petition has been filed by Power Grid Corporation of India Limited, a deemed transmission licensee, for truing up of transmission tariff based on capital expenditure of 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) and for determination of transmission tariff for 2019-24 period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of the following assets under Kalpakkam PFBR (500 MW) project in the Southern Region (hereinafter referred to as “the transmission project”):

Asset-1: Kalpakkam PFBR-Sirucheri, 230 kV D/C Line;

Asset-2: Kalpakkam PFBR-Arani 230 kV D/C Line; and

Asset-3: Kalpakkam PFBR-Kanchipuram 230 kV D/C Line;

2. The Petitioner has made the following prayers in the instant 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, also allow the projected additional capitalization during 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 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 12.0 above.

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

9) 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 Hon'ble 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 follows:

- a. The Investment Approval (IA) for implementation of transmission project under “Transmission system associated with Kalpakkam PFBR (500 MW) project” in Southern Region was accorded by the Board of Directors (BoD) of the Petitioner in 234th meeting held on 16.3.2010 (communicated vide



- Memorandum No. C/CP/KPFBR dated 17.3.2010) at an estimated cost of ₹13858 lakh including IDC of ₹799 lakh based on 3rd quarter, 2009 price level.
- b. The approval of Revised Cost Estimate (RCE) was accorded by the Board of Directors (BoD) of the Petitioner with an estimated cost of ₹13622 lakh including IDC of ₹1315 lakh based on March, 2019 price level (communicated vide Ref. No. C/CP/PA 1920-06-0N-RCE003 dated 27.9.2019).
- c. The scope of the scheme was discussed and agreed in 21st meeting of Standing Committee on Power System Planning in Southern Region held on 22.9.2005.
- d. The scope of work under the transmission project is as follows:

Transmission Lines

- i) Kalpakkam PFBR-Sirucheri 230 kV D/C Line.
 ii) Kalpakkam PFBR-Arani 230 kV D/C Line
 iii) Kalpakkam PFBR-Kanchipuram 230 kV D/C Line

Sub-stations

- i) Extension of existing 230 kV TNEB Sub-stations at Kanchipuram, Arani and Sirucheri Sub-station.
- e. The complete scope of the works as per the IA has been executed and covered under instant petition. The details of COD of the transmission assets under the transmission project is as follows:

Assets	COD	Remarks
Asset-1	1.12.2011	Covered under order dated 29.4.2015 in Petition No. 105/TT/2012 (tariff of 2009-14 period) and order dated 29.1.2019 in Petition No. 99/TT/2018 (true up for 2009-14 period and tariff for 2014-19 period).
Asset-2	1.4.2012	
Asset-3	1.4.2014*	Tariff for 2014-19 has been granted vide order dated 4.3.2021 in petition No. 148/TT/2019

** COD of Asset-3 has been approved as 1.4.2014 under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations.*

- f. True-up of 2009-14 and tariff for 2014-19 for Asset-1 and Asset-2 was allowed vide order dated 29.1.2019 in Petition No. 99/TT/2018 and tariff for



2014-19 for Asset-3 was allowed vide order dated 4.3.2021 in Petition No. 148/TT/2019.

g. Asset-1 and Asset-2 were combined vide order dated 29.1.2019 in Petition No. 99/TT/2018 and are referred to as Combined Asset-1&2 from 2014-19 tariff period and onwards.

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

5. The Petitioner has served a copy of the petition upon 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/ objections have been received from the general public in response to the notices published by the Petitioner. Reply to the petition has been filed by TANGEDCO (Respondent No. 4), vide affidavit dated 30.7.2022 and written submission dated 25.8.2022 raising the issue of sharing of transmission charges. The Petitioner vide affidavit dated 16.8.2022 filed its rejoinder to the reply of TANGEDCO. The issues raised by TANGEDCO and the clarifications given by the Petitioner are considered in the relevant portions of this order.

6. Virtual hearing in this matter was held on 1.8.2022 and the order was reserved by the Commission.

7. This order has been issued after considering the main Petition dated 16.8.2021, Petitioner's affidavits dated 9.5.2022 and 16.8.2022 and reply of TANGEDCO dated 30.7.2022 and a written submission dated 25.8.2022.



8. Having heard the representatives of the Petitioner and the learned counsel for the Respondent and perused the material on record, we proceed to dispose of the petition.

TRUING UP OF ANNUAL FIXED CHARGES OF 2014-19 PERIOD

9. The details of the trued-up transmission charges claimed by the Petitioner in respect of the transmission assets are as follows:

Combined Asset-1&2

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	421.00	421.90	421.90	421.90	421.90
Interest on Loan	413.98	376.28	337.24	298.12	259.20
Return on Equity	466.85	470.12	470.12	470.12	471.36
O&M Expenses	254.83	263.33	272.08	281.05	290.45
Interest on Working Capital	44.04	43.74	43.32	42.92	42.57
Total	1600.70	1575.37	1544.66	1514.11	1485.48

Asset-3

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	251.66	252.55	252.55	252.55	252.55
Interest on Loan	298.26	275.94	252.28	228.52	204.94
Return on Equity	279.30	281.65	281.65	281.65	282.39
O&M Expenses	141.23	145.96	150.78	155.77	160.96
Interest on Working Capital	26.89	26.71	26.43	26.16	25.92
Total	997.34	982.81	963.69	944.65	926.76

10. The details of the Interest on Working Capital (IWC) claimed by the Petitioner in respect of the transmission assets are as follows:

Combined Asset-1&2

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	21.24	21.94	22.67	23.42	24.20
Maintenance Spares	38.22	39.50	40.81	42.16	43.57
Receivables	266.78	262.56	257.44	252.35	247.58
Total Working Capital	326.24	324.00	320.93	317.93	315.35
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	44.04	43.74	43.33	42.92	42.57



Asset-3

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses	11.77	12.16	12.57	12.98	13.41
Maintenance Spares	21.18	21.89	22.62	23.37	24.14
Receivables	166.22	163.80	160.61	157.44	154.46
Total Working Capital	199.17	197.85	195.79	193.79	192.02
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	26.89	26.71	26.43	26.16	25.92

Effective Date of Commercial Operation (“E-COD”)

11. E-COD has been considered as 24.2.2012 as per previous order dated 29.1.2019 in Petition No. 99/TT/2018.

12. The lapsed life of Combined Asset-1&2 works out as 2 (two) years as on 1.4.2014 (i.e. the number of completed years as on 1.4.2014 from E-COD).

Weighted Average Life (WAL) of the Project

13. The life as defined under the Tariff Regulations has been considered for determination of Weighted Average Life.

14. The Combined Asset-1&2 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. WAL has been determined based on the admitted capital cost of individual elements as on 31.3.2014 and their respective life as specified in the 2014 Tariff Regulations. The element-wise life as defined in the 2009 Tariff Regulations prevailing at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in the 2014 Tariff Regulations has been considered for determination of WAL. Accordingly, WAL of all the transmission assets executed during 2009-14 and 2014-19 period has been worked out as follows:



Combined Asset-1&2

Particulars	Life (in years) (1)	Capital Cost as on 31.3.2014 (₹ in lakh) (2)	Weighted Cost (₹ in lakh) (3) = (1) X (2)	Weighted Avg. Life of Asset (in years) (4) = (3) / (2)
Building & Civil Works	25.00	0.00	0.00	
Transmission Line	35.00	7010.32	245361.20	33.61 years (rounded off to 34 years)
Sub-Station	25.00	715.50	17887.50	
PLCC	15.00	192.30	2884.50	
IT Equipment including software	6.67	0.00	0.00	
Total		7918.12	266133.20	

15. WAL as on 1.4.2014 as determined above is applicable prospectively (i.e. for 2014-19 tariff period onwards) and no retrospective adjustment of depreciation in previous tariff period is required to be done. As discussed above, the E-COD of the Combined Asset-1&2 is 24.2.2012 and elapsed life of the project as a whole works out as 2 (two) years as on 1.4.2014 (i.e. the number of completed years as on 1.4.2014 from E-COD). Accordingly, WAL has been used to determine the remaining useful life of the Combined Asset-1&2 as on 31.3.2014 to be 32 years.

Asset-3

Particulars	Life (in years) (1)	Capital cost as on 31.3.2014 (₹ in lakh) (2)	Weighted cost (₹ in lakh) (3) = (1) * (2)	Weighted average life of asset (in years) (4) = (3) / (2)
Building & Civil Works	25.00	0.00	0.00	
Transmission Line	35.00	4388.61	153601.22	33.8438 years (rounded off to 34 years)
Sub-Station	25.00	364.25	9106.21	
PLCC	15.00	98.31	1474.65	
IT Equipment including software	6.67	0.00	0.00	
Total		4851.16	164182.07	

Capital Cost

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



17. The Commission vide order dated 29.1.2019 in Petition No. 99/TT/2018 allowed the capital cost as on COD for Combined Asset-1&2 and admitted Additional Capital Expenditure (ACE) for determination of tariff for 2014-19 period. The Commission vide order dated 4.3.2021 in Petition No. 148/TT/2019 allowed the capital cost as on COD for Asset-3 and admitted Additional Capital Expenditure (ACE) for determination of tariff for 2014-19 period in respect of the transmission assets covered in the instant petition. The details of the same are as follows:

Assets	FR approved cost as per	RCE approved cost as per	Capital cost upto COD	(₹ in lakh)	
				ACE 2014-19	Capital cost as on 31.3.2019
Asset-1	2605.00	2408.56	2381.34	10.71	2392.05
Asset-2	6747.00	5589.30	5536.78	23.48	5560.26
Combined Asset 1 & 2	9352.00	7997.86	7918.12	34.19	7952.31
Asset-3	4507.00	5623.74	4730.37[#]	33.71	4764.08

(#)The capital cost on COD (1.4.2014) has been deducted on account of IDC and IEDC w.r.t. non condonation of time over-run (from SCOD: 1.4.2012) amounting ₹666.08 lakh and ₹179.12 lakh respectively.

18. The Petitioner in the instant true-up petition has submitted the capital cost as on COD and actual ACE incurred in respect of the transmission assets which are as follows:

Assets	FR approved cost as per	RCE approved cost as per	Capital cost upto COD	(₹ in lakh)	
				ACE 2014-15	Capital cost as on 31.3.2019
Asset-1	2605.00	2408.56	2381.34	10.71	2392.05
Asset-2	6746.00	5589.30	5536.79	23.48	5560.27
Combined Asset 1 & 2	9351.00	7997.86	7918.13	34.19	7952.32
Asset-3	4507.00	5623.74	5575.57	33.71	5609.28

19. The estimated completion cost as on 31.3.2019 is within the RCE approved cost.



Time over-run

20. The transmission project was scheduled to be put into commercial operation within 24 months from the date of IA. Accordingly, the Scheduled Date of Commercial Operation (SCOD) is 1.4.2012. Asset-1 and Asset-2 have been put into commercial operation on 1.12.2011 and 1.4.2012 respectively, hence, there is no time over-run.

20. The Commission, vide order dated 4.3.2021 in Petition No. 148/TT/2019 approved the COD of Asset-3 under Regulation 4(3) of the 2014 Tariff Regulations. The time over-run of 745 days in case of Asset-3 was not condoned. The relevant portion of the order dated 4.3.2021 is as follows:

“32. As per IA dated 16.3.2010, the scheduled COD of the instant asset was 1.4.2012 against which COD of the instant asset is approved as 1.4.2014 under proviso (ii) of Regulation 4(3) of 2014 Tariff Regulations. Therefore, there is a time over-run of 745 days in case of the instant asset.

33. The Petitioner has claimed COD of instant asset as 1.4.2014 under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations. The Petitioner has submitted that the instant asset was ready on 1.9.2012 as the same was test charged on 31.8.2012. However, the Petitioner has not submitted the reasons for time over-run from the scheduled COD of 1.4.2012 to 1.9.2012. As the Petitioner has not submitted the reasons for time over-run, we are not in a position to assess whether the time overrun is attributable to the Petitioner or not. Therefore, the time over-run from 1.4.2012 to 31.8.2012 is not condoned. Accordingly, IDC and IEDC for this period have not been capitalised.

34. Further, as the Petitioner has prayed for COD of 1.4.2014 by invoking proviso (ii) to Regulation 4(3) of the 2014 Tariff Regulations as already mentioned above, COD of the subject asset has been approved as 1.4.2014 under proviso (ii) to Regulation 4(3) of the 2014 Tariff Regulations as both the generation project of BHAVINI and the sub-station of TANTRANSCO were not ready on 31.3.2014. Therefore, as the Petitioner itself has claimed the COD of 1.4.2014, we are not inclined to allow IDC and IEDC from 1.9.2012 to 31.3.2014. Accordingly, IDC and IEDC from 1.9.2012 to 31.3.2014 have not been capitalized. However, the Petitioner is at liberty to claim compensation in terms of LDs, IDC or IEDC from BHAVINI and TANTRANSCO as per the arrangement/ agreement entered into with them, if any.”



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

21. The Petitioner has claimed IDC in respect of the transmission assets and has submitted statement showing IDC claim, discharge of IDC liability as on date of commercial operation and thereafter which is as follows:

(₹ in lakh)

Assets	IDC as per Auditor’s Certificate	IDC discharged upto COD	Accrual IDC discharged	
			2014-15	2015-16
Combined Asset-1&2	462.65	462.65	0.00	0.00
Asset-3	852.63	852.63	0.00	0.00

22. The Petitioner has submitted IDC statement which consists of name of the loan, drawl date, loan amount, interest rate and interest claimed. IDC is worked out based on the details given in IDC statement, and Form-9C.

23. We have considered the submissions of the Petitioner. IDC considered in respect of the transmission assets as on COD and thereafter for the purpose of tariff determination is as follows:

(₹ in lakh)

Assets	IDC as per Auditor’s Certificate	IDC disallowed due to time over-run not condoned	IDC allowed in instant order	IDC discharged upto COD	Accrual IDC discharged	
					2014-15	2015-16
Combined Asset-1&2	462.65	0.00	462.65	462.65	0.00	0.00
Asset-3	852.63	595.50	257.13	257.13	0.00	0.00

24. The Petitioner has claimed IEDC in respect of the transmission assets as per the Auditor’s Certificate. The Petitioner has submitted that entire IEDC mentioned in the Auditor’s Certificate is on cash basis and was paid upto COD. For Asset-3, the IEDC allowed vide order dated 4.3.2021 in Petition No. 148/TT/2019 has been considered IEDC claimed as per Auditor’s Certificate, IEDC considered and discharged up to COD in respect of the transmission assets is as follows:



(₹ in lakh)

Assets	IEDC claimed as per Auditor's certificate	IEDC disallowed due to time over-run not condoned	IEDC allowed	IEDC discharged upto COD
Combined Asset-1&2	219.43	0.00	219.43	219.43
Asset-3	260.82	128.91	131.91	131.91

Initial Spares

25. No initial spares have been claimed for the transmission assets.

Additional Capital Expenditure ("ACE")

26. The Commission allowed the following ACE in respect of the Combined Asset-1&2 vide order dated 29.1.2019 in Petition No. 99/TT/2018 and Asset-3 vide order dated 4.3.2021 in Petition No. 148/TT/2019 for 2014-19 tariff period:

Assets	ACE
	2014-15
Combined Asset-1&2	34.19
Asset-3	33.71

27. The Petitioner has claimed the same ACE as allowed for Combined Asset-1&2 vide order dated 29.1.2019 in Petition No. 99/TT/2018 and Asset-3 vide order dated 4.3.2021 in Petition No. 148/TT/2019.

28. We have considered the submissions of the Petitioner. ACE claimed by the Petitioner has been allowed under Regulation 14(1)(i) (undischarged liabilities recognized to be payable at a future date) and Regulation 14(1)(ii) (works deferred for execution) of the 2014 Tariff Regulations. The details of capital cost allowed as on COD and ACE (including undischarged IDC) approved upto 31.3.2019 in respect of the transmission assets covered in the instant petition are as follows:



(₹ in lakh)

Assets	Apportioned approved Cost as per RCE	Capital cost allowed as on COD	ACE	Capital cost allowed as on 31.3.2019
			2014-15	
Combined Asset-1&2	7918.12	7918.12	34.19	7952.31
Asset-3	5575.57	4851.16	33.71	4884.87

Debt-Equity ratio

29. The Petitioner has claimed debt-equity ratio of 70:30 as on COD and for ACE. Debt-equity ratio of 70:30 has been considered for capital cost as on COD and ACE during 2014-19 tariff period as provided under Regulation 19 of the 2014 Tariff Regulations. The details of debt-equity ratio in respect of the transmission assets as on COD and 31.3.2019 are as follows:

Combined Asset-1&2

Funding	Capital cost as on COD (₹ in lakh)	(in %)	ACE during 2014-19 (₹ in lakh)	(in %)	Capital cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	5542.68	70.00	23.94	70.00	5566.62	70.00
Equity	2375.44	30.00	10.25	30.00	2385.69	30.00
Total	7918.12	100.00	34.19	100.00	7952.31	100.00

Asset-3

Funding	Capital cost as on COD (₹ in lakh)	(in %)	ACE during 2014-19 (₹ in lakh)	(in %)	Capital cost as on 31.3.2019 (₹ in lakh)	(in %)
Debt	3395.81	70.00	23.60	70.00	3419.41	70.00
Equity	1455.35	30.00	10.11	30.00	1465.46	30.00
Total	4851.16	100.00	33.71	100.00	4884.87	100.00

Depreciation

30. Depreciation has been dealt with in line of Regulation 27 of 2014 Tariff Regulations. The calculation of weighted average rate of depreciation (WAROD) is at Annexure-I. The Gross Block during 2014-19 tariff period has been depreciated at WAROD. WAROD has been worked out considering the depreciation rates of assets as



specified in the 2014 Tariff Regulations and depreciation allowed during tariff period 2014-19 in respect of the transmission assets is as follows:

Combined Asset-1&2

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation					
Opening Gross Block (A)	7918.12	7952.31	7952.31	7952.31	7952.31
ACE(B)	34.19	0.00	0.00	0.00	0.00
Closing Gross Block (C) = A+B	7952.31	7952.31	7952.31	7952.31	7952.31
Average Gross Block (D) = (A+C)/2	7935.22	7952.31	7952.31	7952.31	7952.31
Weighted Average Rate of Depreciation (WAROD) (in %)	5.31	5.31	5.31	5.31	5.31
Balance useful life of the asset at the beginning of the year (Year)	32	31	30	29	28
Lapsed Life of the asset at the beginning of the year (Year)	2	3	4	5	6
Depreciable Value	7141.69	7157.08	7157.08	7157.08	7157.08
Combined Depreciation during the year	421.00	421.90	421.90	421.90	421.90
Cumulative Depreciation at the end of the year	1278.30	1700.20	2122.10	2544.00	2965.90
Remaining Depreciable Value at the end of the year	5863.39	5456.88	5034.98	4613.08	4191.18

31. The details of depreciation allowed in respect of Combined Asset-1&2 vide order dated 29.1.2019 in Petition No. 99/TT/2018, claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 29.1.2019 in Petition No. 99/TT/2018	421.00	421.90	421.90	421.90	421.90
Claimed by Petitioner in the instant petition	421.00	421.90	421.90	421.90	421.90
Approved after true-up in this order	421.00	421.90	421.90	421.90	421.90



Asset-3

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation					
Opening Gross Block (A)	4851.16	4884.87	4884.87	4884.87	4884.87
ACE(B)	33.71	0.00	0.00	0.00	0.00
Closing Gross Block (C) = A+B	4884.87	4884.87	4884.87	4884.87	4884.87
Average Gross Block (D) = (A+C)/2	4868.02	4884.87	4884.87	4884.87	4884.87
Weighted Average Rate of Depreciation (WAROD) (in %)	5.30	5.30	5.30	5.30	5.30
Balance useful life of the asset at the beginning of the year(Year)	34	33	32	31	30
Lapsed Life of the asset at the beginning of the year (Year)	0	1	2	3	4
Depreciable Value	4381.22	4396.39	4396.39	4396.39	4396.39
Combined Depreciation during the year	258.06	258.95	258.95	258.95	258.95
Cumulative Depreciation at the end of the year	258.06	517.02	775.97	1034.92	1293.88
Remaining Depreciable Value at the end of the year	4123.15	3879.37	3620.42	3361.46	3102.51

32. The details of depreciation allowed in respect of Asset-3 vide order dated 4.3.2021 in Petition No. 148/TT/2019, claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 4.3.2021 in Petition No. 148/TT/2019	251.66	252.55	252.55	252.55	252.55
Claimed by Petitioner in the instant petition	251.66	252.55	252.55	252.55	252.55
Approved after true-up in this order	258.06	258.95	258.95	258.95	258.95

Interest on Loan ("IoL")

33. The Petitioner has claimed the weighted average rate of IoL based on its actual loan portfolio and rate of interest. Accordingly, IoL is calculated based on actual interest



rate in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of IoL allowed in respect of the transmission assets are as follows:

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Interest on Loan					
Gross Normative Loan	5542.68	5566.62	5566.62	5566.62	5566.62
Cumulative Repayments up to Previous Year	857.30	1278.30	1700.20	2122.10	2544.00
Net Loan-Opening	4685.38	4288.33	3866.42	3444.52	3022.62
Additions	23.94	0.00	0.00	0.00	0.00
Repayment during the year	421.00	421.90	421.90	421.90	421.90
Net Loan-Closing	4288.33	3866.42	3444.52	3022.62	2600.72
Average Loan	4486.85	4077.37	3655.47	3233.57	2811.67
Weighted Average Rate of Interest on Loan (in %)	9.2266	9.2284	9.2257	9.2194	9.2188
Interest on Loan	413.98	376.28	337.24	298.11	259.20

34. The details of IoL allowed in respect of Combined Asset-1&2 vide order dated 29.1.2019 in Petition No. 99/TT/2018, claimed by the Petitioner in the instant petition and as trued-up in the instant order is as follows:

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated 29.1.2019 in Petition No. 99/TT/2018	413.99	376.45	337.57	298.67	259.78
Claimed by Petitioner in the instant petition	413.98	376.28	337.24	298.12	259.20
Approved after true-up in this order	413.98	376.28	337.24	298.11	259.20

Asset-3

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Interest on Loan					
Gross Normative Loan	3395.81	3419.41	3419.41	3419.41	3419.41
Cumulative Repayments up to Previous Year	0.00	258.06	517.02	775.97	1034.92
Net Loan-Opening	3395.81	3161.35	2902.39	2643.44	2384.49
Additions	23.60	0.00	0.00	0.00	0.00
Repayment during the year	258.06	258.95	258.95	258.95	258.95



Net Loan-Closing	3161.35	2902.39	2643.44	2384.49	2125.53
Average Loan	3278.58	3031.87	2772.92	2513.96	2255.01
Weighted Average Rate of Interest on Loan (in %)	9.3285	9.3318	9.3283	9.3203	9.3185
Interest on Loan	305.84	282.93	258.66	234.31	210.13

35. The details of IoL allowed in respect of Asset-3 vide order dated 4.3.2021 in Petition No. 148/TT/2019, claimed by the Petitioner in the instant petition and as trued-up in the instant order is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 4.3.2021 in Petition No. 148/TT/2019	298.48	276.48	252.93	229.36	205.78
Claimed by Petitioner in the instant petition	298.26	275.94	252.28	228.52	204.94
Approved after true-up in this order	305.84	282.93	258.66	234.31	210.13

Return on Equity (“RoE”)

36. The Petitioner has claimed RoE in respect of the transmission assets in terms of Regulation 24 and Regulation 25 of the 2014 Tariff Regulations. The Petitioner has submitted that they are liable to pay income tax at MAT rates and has claimed the following effective tax rates for 2014-19 tariff period:

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

37. We have considered the submissions 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 and the same are as follows:

Year	Notified MAT rates (in %) (inclusive of surcharge & cess)	Effective tax (in %)
2014-15	20.961	20.961



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

38. MAT rates as allowed vide order dated 27.4.2020 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 2014-19 tariff period in terms of the provisions of the 2014 Tariff Regulations and the same are as follows:

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

39. The Petitioner has claimed RoE for 2014-19 tariff period after grossing up RoE of 15.50% with Effective Tax rates (based on MAT rates) each year as per the above said Regulation. RoE is trued-up on the basis of the MAT rate applicable in the respective years and is allowed in respect of the transmission assets and the same is as follows:

Combined Asset-1&2

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity					
Opening Equity (A)	2375.44	2385.69	2385.69	2385.69	2385.69
Additions (B)	10.25	0.00	0.00	0.00	0.00
Closing Equity (C) = A+B	2385.69	2385.69	2385.69	2385.69	2385.69
Average Equity (D) = (A+C)/2	2380.56	2385.69	2385.69	2385.69	2385.69
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
Return on Equity	466.83	470.10	470.10	470.10	471.36



40. RoE allowed in respect of Combined Asset-1&2 vide order dated 29.1.2019 in Petition No. 99/TT/2018, claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated 29.1.2019 in Petition No. 99/TT/2018	466.83	467.84	467.84	467.84	467.84
Claimed by the Petitioner in the instant petition	466.85	470.12	470.12	470.12	471.36
Approved after true-up in this order	466.83	470.10	470.10	470.10	471.37

Asset-3

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity					
Opening Equity (A)	1455.35	1465.46	1465.46	1465.46	1465.46
Additions (B)	10.11	0.00	0.00	0.00	0.00
Closing Equity (C) = A+B	1465.46	1465.46	1465.46	1465.46	1465.46
Average Equity (D) = (A+C)/2	1460.41	1465.46	1465.46	1465.46	1465.46
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (in %)	20.961	21.342	21.342	21.342	21.549
Rate of Return on Equity (in %)	19.610	19.705	19.705	19.705	19.758
Return on Equity	286.39	288.77	288.77	288.77	289.55

41. RoE allowed in respect of Asset-3 vide order dated 4.3.2021 in Petition No. 148/TT/2019, claimed by the Petitioner in the instant petition and trued -up in the instant order is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated 4.3.2021 in Petition No. 148/TT/2019	279.28	281.63	281.63	281.63	282.39
Claimed by the Petitioner in the instant petition	279.30	281.65	281.65	281.65	282.39
Approved after true-up in this order	286.39	288.77	288.77	288.77	289.55



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

42. O&M Expenses claimed by the Petitioner in respect of the transmission assets for 2014-19 period are as follows:

Combined Asset-1&2

(₹ in lakh)

Particulars	Combined Asset-1&2				
	2014-15	2015-16	2016-17	2017-18	2018-19
Transmission line					
(i) 220 kV D/C (Single) Kalpakkam-Sirucheri Transmission Line (1 Sub-conductor) (36.176 km)					
(ii) 220 kV D/C (Twin) Kalpakkam-Arani Transmission Line (2 Sub-conductors) (106.12 km)					
D/C Bundled (Single Sub-Conductor) (km)	36.176	36.176	36.176	36.176	36.176
Norms (₹ lakh/km)	0.303	0.313	0.324	0.334	0.346
D/C Bundled (Twin/Triple Sub-Conductor) (km)	106.12	106.12	106.12	106.12	106.12
Norms (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
220 kV bays of:					
(i) Sirucheri:Bhavini 1-Tantransco-Sirucheri-Sriperumbudur [1 number of bay(s)]					
(ii) Sirucheri:Bhavini 2-Tantransco- Sirucheri-Sriperumbudur [1 number of bay(s)]					
(iii) Arani:Bhavini 1-Tantransco-Arani-Sriperumbudur [1 number of bay(s)]					
(iv) Arani:Bhavini 1-Tantransco-Arani-Sriperumbudur [1 number of bay(s)]					
220 kV Bays	4	4	4	4	4
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.10
Total O&M Expense (₹ in lakh)	254.83	263.33	272.08	281.05	290.45

Asset-3

(₹ in lakh)

Particulars	Asset-3				
	2014-15	2015-16	2016-17	2017-18	2018-19
Transmission line					
(i) 220 kV D/C (Twin) Kalpakkam PFBR-Kanchipuram D/C 230 kV D/C Lines (2 Sub-conductors) (80.35 km)					
D/C Bundled (Twin/Triple Sub-Conductor) (km)	80.35	80.35	80.35	80.35	80.35
Norms (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
220 kV bays of:					
(i) Kancheepuram:Bhavini 1 & 2-Tantransco-Kanchipuram-Sriperumbudur [2 number of bay(s)]					
220 kV Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.10
Total O&M Expense (₹ in lakh)	141.23	145.96	150.78	155.77	160.96



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

Element	2014-15	2015-16	2016-17	2017-18	2018-19
Sub-station: 220 kV bay (₹ in lakh per bay)	42.21	43.61	45.06	46.55	48.10
400 kV Sub-station	60.30	62.30	64.37	66.51	68.71
Double circuit (Twin & Triple conductor) (₹ in lakh per km)	0.707	0.731	0.755	0.78	0.806
Double circuit (Single conductor) (₹ in lakh per km)	0.303	0.313	0.324	0.334	0.346

44. We have considered the submissions of the Petitioner. O&M Expenses allowed in respect of the transmission assets as per norms specified in the 2014 Tariff Regulations are as follows:

Combined Asset-1&2

(₹ in lakh)

Particulars	Combined Asset-1&2				
	2014-15	2015-16	2016-17	2017-18	2018-19
Transmission line					
(i) 220 kV D/C (Single) Kalpakkam-Sirucheri Transmission Line (1 Sub-conductors) (36.176 km)					
(ii) 220 kV D/C (Twin) Kalpakkam-Arani Transmission Line (2 Sub-conductors) (106.12 km)					
D/C Bundled (Single Sub-Conductor) (km)	36.176	36.176	36.176	36.176	36.176
Norms (₹ lakh/km)	0.303	0.313	0.324	0.334	0.346
D/C Bundled (Twin/Triple Sub-Conductor) (km)	106.12	106.12	106.12	106.12	106.12
Norms (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
220 kV bays of:					
(i) Sirucheri:Bhavini 1-Tantransco-Sirucheri-Sriperumbudur [1 number of bay(s)]					
(ii) Sirucheri:Bhavini 2_Tantransco-Sirucheri-Sriperumbudur [1 number of bay(s)]					
(iii) Arani:Bhavini 1-Tantransco-Arani-Sriperumbudur [1 number of bay(s)]					
(iv) Arani:Bhavini 1-Tantransco-Arani-Sriperumbudur [1 number of bay(s)]					
220 kV Bays	4	4	4	4	4
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.10
Total O&M Expense (₹ in lakh)	254.83	263.34	272.08	281.06	290.45



45. The details of O&M Expenses allowed in respect of Combined Asset-1&2 vide order dated 29.1.2019 in Petition No. 99/TT/2018, claimed by the Petitioner in the instant petition and trued-up in the instant order are as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 29.1.2019 in Petition No. 99/TT/2018	254.83	263.34	272.08	281.06	290.45
Claimed by the Petitioner in the instant petition	254.83	263.33	272.08	281.05	290.45
Approved after true-up in this order	254.83	263.34	272.08	281.06	290.45

Asset-3

(₹ in lakh)					
Particulars	Asset-3				
	2014-15	2015-16	2016-17	2017-18	2018-19
Transmission line					
(i) 220 kV D/C (Twin) Kalpakkam PFBR-Kanchipuram D/C 230 kV D/C Lines (2 Sub-conductors) (80.35 km)					
D/C Bundled (Twin/Triple Sub-Conductor) (km)	80.35	80.35	80.35	80.35	80.35
Norms (₹ lakh/km)	0.707	0.731	0.755	0.78	0.806
220 kV bays of:					
(i) Kancheepuram:Bhavini 1 & 2-Tantransco-Kanchipuram-Sriperumbudur [2 number of bay(s)]					
220 kV Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	42.21	43.61	45.06	46.55	48.10
Total O&M Expense (₹ in lakh)	141.23	145.96	150.78	155.77	160.96

46. The details of O&M Expenses allowed in respect of Asset-3 vide order dated 4.3.2021 in Petition No. 148/TT/2019, claimed by the Petitioner in the instant petition and trued up in the instant order is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 4.3.2021 in Petition No. 148/TT/2019	141.23	145.96	150.78	155.77	160.96
Claimed by the Petitioner in the instant petition	141.23	145.96	150.78	155.77	160.96
Approved after true-up in this order	141.23	145.96	150.78	155.77	160.96



Interest on Working Capital (“IWC”)

47. IWC has been worked out as per the methodology provided in Regulation 28 of the 2014 Tariff Regulations in respect of the transmission assets and the same is as follows:

Combined Asset-1&2

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses (O&M Expenses for one month)	21.24	21.94	22.67	23.42	24.20
Maintenance Spares (15% of O&M Expenses)	38.22	39.50	40.81	42.16	43.57
Receivables (Equivalent to two months of annual fixed cost)	266.78	262.56	257.44	252.35	247.58
Total Working Capital	326.24	324.00	320.93	317.93	315.35
Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	44.04	43.74	43.33	42.92	42.57

48. The details of IWC allowed in respect of Combined Asset-1&2 vide order dated 29.1.2019 in Petition No. 99/TT/2018, claimed by the Petitioner in the instant petition and trued up in the instant order is as follows:

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed <i>vide</i> order dated 29.1.2019 in Petition No. 99/TT/2018	44.04	43.69	43.28	42.88	42.50
Claimed by the Petitioner in the instant petition	44.04	43.74	43.32	42.92	42.57
Approved after true-up in this order	44.04	43.74	43.33	42.92	42.57

Asset-3

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses (O&M Expenses for one month)	11.77	12.16	12.57	12.98	13.41
Maintenance Spares (15% of O&M Expenses)	21.18	21.89	22.62	23.37	24.14
Receivables (Equivalent to two months of annual fixed cost)	169.82	167.30	164.01	160.74	157.66
Total Working Capital	202.77	201.35	199.19	197.08	195.22



Rate of Interest (in %)	13.50	13.50	13.50	13.50	13.50
Interest on Working Capital	27.37	27.18	26.89	26.61	26.35

49. The details of IWC allowed in respect of Asset-3 vide order dated 4.3.2021 in Petition No. 148/TT/2019, claimed by the Petitioner in the instant petition and trued-up in the instant order is as follows:

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Allowed vide order dated 4.3.2021 in Petition No. 148/TT/2019	26.89	26.72	26.45	26.18	25.94
Claimed by the Petitioner in the instant petition	26.89	26.71	26.43	26.16	25.92
Approved after true-up in this order	27.37	27.18	26.89	26.61	26.35

Approved Annual Fixed Charges for 2014-19 Period

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

Combined Asset-1&2

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	421.00	421.90	421.90	421.90	421.90
Interest on Loan	413.98	376.28	337.24	298.11	259.20
Return on Equity	466.83	470.10	470.10	470.10	471.36
O&M Expenses	254.83	263.34	272.08	281.06	290.45
Interest on Working Capital	44.04	43.74	43.33	42.92	42.57
Total	1600.68	1575.36	1544.65	1514.09	1485.48

51. Accordingly, the Annual Transmission Charges allowed in respect of Combined Asset-1&2 vide order dated 29.1.2019 in Petition No. 99/TT/2018, claimed by the Petitioner in the instant petition and approved after truing up in the instant order is as follows:



(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 29.1.2019 in Petition No. 99/TT/2018	1600.69	1573.22	1542.67	1512.35	1482.47
Claimed by the Petitioner in the instant petition	1600.70	1575.37	1544.66	1514.11	1485.48
Allowed after true-up in this order	1600.68	1575.36	1544.65	1514.09	1485.48

Asset-3

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	258.06	258.95	258.95	258.95	258.95
Interest on Loan	305.84	282.93	258.66	234.31	210.13
Return on Equity	286.39	288.77	288.77	288.77	289.55
O&M Expenses	141.23	145.96	150.78	155.77	160.96
Interest on Working Capital	27.37	27.18	26.89	26.61	26.35
Total	1018.89	1003.79	984.05	964.41	945.94

52. Accordingly, the Annual Transmission Charges allowed in respect of Asset-3 vide order dated 4.3.2021 in Petition No. 148/TT/2019, claimed by the Petitioner in the instant petition and approved after trueing up in the instant order is as follows:

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Approved vide order dated 4.3.2021 in Petition No. 148/TT/2019	997.54	983.34	964.34	945.49	927.61
Claimed by the Petitioner in the instant petition	997.34	982.81	963.69	944.65	926.76
Allowed after true-up in this order	1018.89	1003.79	984.05	964.41	945.94

DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD

53. The Petitioner has claimed the following transmission charges in respect of the transmission assets for 2019-24 tariff period:

Combined Asset-1&2

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	421.90	421.90	421.90	421.90	421.90
Interest on Loan	220.45	181.64	142.81	103.95	65.03
Return on Equity	448.08	448.08	448.08	448.08	448.08



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses	197.17	204.12	211.28	218.68	226.31
Interest on Working Capital	24.99	24.76	24.49	24.23	23.92
Total	1312.59	1280.50	1248.56	1216.84	1185.24

Asset-3

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	252.55	252.55	252.55	252.55	252.55
Interest on Loan	181.49	157.99	134.50	111.00	87.50
Return on Equity	268.44	268.44	268.44	268.44	268.44
O&M Expenses	115.81	119.88	124.09	128.42	132.91
Interest on Working Capital	15.61	15.47	15.30	15.13	14.94
Total	833.90	814.33	794.88	775.54	756.34

54. The Petitioner has claimed the following IWC in respect of the transmission assets for 2019-24 tariff period:

Combined Asset-1&2

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for 1 month)	16.43	17.01	17.61	18.22	18.86
Working Capital for Maintenance Spares (15% of O&M Expenses)	29.58	30.62	31.69	32.80	33.95
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost/ annual transmission charges)	161.38	157.87	153.93	150.02	145.73
Total Working Capital	207.39	205.50	202.23	201.04	198.54
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	24.99	24.76	24.49	24.23	23.92

Asset-3

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for 1 month)	9.65	9.99	10.34	10.70	11.08
Working Capital for Maintenance Spares (15% of O&M Expenses)	17.37	17.98	18.61	19.26	19.94



Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost/ annual transmission charges)	102.53	100.40	98.00	95.61	92.99
Total Working Capital	129.55	128.37	126.95	125.57	124.01
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	15.61	15.47	15.30	15.13	14.94

Capital Cost

55. 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 tried 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.”*

56. The Petitioner has claimed capital cost of ₹7952.31 lakh as on 31.3.2019 in respect of Combined Asset-1&2 and ₹4764.13 lakh as on 31.3.2019 in respect of Asset-3. The capital cost as on 31.3.2019 has been worked out as ₹7952.31 lakh for Combined Asset-1&2 and ₹4884.87 lakh for Asset-3.

57. The Petitioner has not claimed any ACE during 2019-24 tariff period.

58. The Petitioner has claimed the following capital cost in respect of the transmission assets as on 31.3.2024:

(₹ in lakh)

Assets	FR apporportioned approved cost as per	RCE apporportioned approved, cost as per	Capital cost as on 31.3.2019	Projected ACE	Capital cost as on 31.3.2024
				2019-22	
Combined Asset-1&2	9351.00	7997.86	7952.32	0.00	7952.32
Asset-3	4507.00	5623.74	4764.07	0.00	4764.07

59. We have considered the submissions of the Petitioner. the capital cost of the transmission assets considered for the purpose of computation of tariff of 2019-24 tariff period is allowed as follows:

(₹ in lakh)

Assets	Approved cost as per RCE	Capital cost allowed as on 31.3.2019	ACE	Capital cost allowed as on 31.3.2024
			2019-22	
Combined Asset-1&2	7997.86	7952.31	0.00	7952.31
Asset-3	5623.74	4884.87	0.00	4884.87



Debt-Equity ratio

60. Regulation 18 of the 2019 Tariff Regulations provides as follows:

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

Provided that:

- i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:*
- ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*
- iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt: equity ratio.*

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

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

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

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

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

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

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2019 as may be admitted by the Commission as additional capital expenditure for determination of tariff,



and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this Regulation.”

(6) Any expenditure incurred for the emission control system during the tariff period as may be admitted by the Commission as additional capital expenditure for determination of supplementary tariff, shall be serviced in the manner specified in clause (1) of this Regulation.”

61. Debt-equity ratio for 2019-24 period is allowed as per Regulation 18(3) of the 2019 Tariff Regulations. Debt-equity considered for the purpose of computation of tariff for 2019-24 tariff period is as follows:

Combined Asset-1&2

Particulars	Capital cost as on 1.4.2019 (₹ in lakh)		ACE during 2019-24 (₹ in lakh)		Capital cost as on 31.3.2024 (₹ in lakh)	
	(in %)	(in %)	(in %)	(in %)	(in %)	(in %)
Debt	5566.62	70.00	0.00	NA	5566.62	70.00
Equity	2385.69	30.00	0.00	NA	2385.69	30.00
Total	7952.31	100.00	0.00	NA	7952.31	100.00

Asset-3

Particulars	Capital cost as on 1.4.2019 (₹ in lakh)		ACE during 2019-24 (₹ in lakh)		Capital cost as on 31.3.2024 (₹ in lakh)	
	(in %)	(in %)	(in %)	(in %)	(in %)	(in %)
Debt	3419.41	70.00	0.00	NA	3419.41	70.00
Equity	1465.46	30.00	0.00	NA	1465.46	30.00
Total	4884.87	100.00	0.00	NA	4884.87	100.00

Depreciation

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

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

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



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

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

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

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

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

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

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

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

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

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

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

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

(9) *Where the emission control system is implemented within the original scope of the*



generating station and the date of commercial operation of the generating station or unit thereof and the date of operation of the emission control system are the same, depreciation of the generating station or unit thereof including the emission control system shall be computed in accordance with Clauses (1) to (8) of this Regulation.

(10) Depreciation of the emission control system of an existing or a new generating station or unit thereof where the date of operation of the emission control system is subsequent to the date of commercial operation of the generating station or unit thereof, shall be computed annually from the date of operation of such emission control system based on straight line method, with salvage value of 10%, over a period of-

a) twenty five years, in case the generating station or unit thereof is in operation for fifteen years or less as on the date of operation of the emission control system; or

b) balance useful life of the generating station or unit thereof plus fifteen years, in case the generating station or unit thereof is in operation for more than fifteen years as on the date of operation of the emission control system; or

c) ten years or a period mutually agreed by the generating company and the beneficiaries, whichever is higher, in case the generating station or unit thereof has completed its useful life.”

63. Depreciation has been worked out considering the admitted capital expenditure as on 31.3.2019 and accumulated depreciation up to 31.3.2019. WAROD has been worked out as Annexure-II as per the rates of depreciation specified in 2019 Tariff Regulations. Depreciation allowed in respect of the Combined Asset-1&2 is as follows:

Combined Asset-1&2

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block (A)	7952.31	7952.31	7952.31	7952.31	7952.31
Projected ACE (B)	0.00	0.00	0.00	0.00	0.00
Closing Gross Block (C) = A+B	7952.31	7952.31	7952.31	7952.31	7952.31
Average Gross Block (D) = (A+C)/2	7952.31	7952.31	7952.31	7952.31	7952.31
Weighted average rate of Depreciation (WAROD) (%)	5.31	5.31	5.31	5.31	5.31
Balance useful life of the asset at the beginning of the year (Year)	27	26	25	24	23
Lapsed life of the asset at the beginning of the year (Year)	7	8	9	10	11
Depreciable Value	7157.08	7157.08	7157.08	7157.08	7157.08
Depreciation during the year	421.90	421.90	421.90	421.90	421.90
Cumulative Depreciation	3387.80	3809.70	4231.60	4653.50	5075.40
Remaining Depreciable Value	3769.28	3347.38	2925.48	2503.58	2081.68

Asset-3



(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Gross Block (A)	4884.87	4884.87	4884.87	4884.87	4884.87
Projected ACE (B)	0.00	0.00	0.00	0.00	0.00
Closing Gross Block (C) = A+B	4884.87	4884.87	4884.87	4884.87	4884.87
Average Gross Block (D) = (A+C)/2	4884.87	4884.87	4884.87	4884.87	4884.87
Weighted average rate of Depreciation (WAROD) (%)	5.30	5.30	5.30	5.30	5.30
Balance useful life of the asset at the beginning of the year (Year)	29	28	27	26	25
Lapsed life of the asset at the beginning of the year (Year)	5	6	7	8	9
Depreciable Value	4396.39	4396.39	4396.39	4396.39	4396.39
Depreciation during the year	258.95	258.95	258.95	258.95	258.95
Cumulative Depreciation	1552.83	1811.78	2070.73	2329.68	2588.63
Remaining Depreciable Value	2843.56	2584.61	2325.66	2066.71	1807.76

Interest on Loan (“IoL”)

64. Regulation 32 of the 2019 Tariff Regulations provides as follows:

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

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

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

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

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

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

Provided further that if the generating station or the transmission system, as



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

(5a) The rate of interest on loan for installation of emission control system shall be the weighted average rate of interest of actual loan portfolio of the emission control system or in the absence of actual loan portfolio, the weighted average rate of interest of the generating company as a whole shall be considered.

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

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

65. The weighted average rate of interest of IoL has been considered on the basis of the rates prevailing as on 1.4.2019. The Petitioner has prayed that 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 truing-up. In view of above, IoL has been worked out in accordance with Regulation 32 of the 2019 Tariff Regulations. IoL allowed in respect of the transmission assets is as follows:

Combined Asset-1&2

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	5566.62	5566.62	5566.62	5566.62	5566.62
Cumulative Repayments up to Previous Year	2965.90	3387.80	3809.70	4231.60	4653.50
Net Loan-Opening	2600.72	2178.82	1756.92	1335.02	913.12
Additions	0.00	0.00	0.00	0.00	0.00
Repayment during the year	421.90	421.90	421.90	421.90	421.90
Net Loan-Closing	2178.82	1756.92	1335.02	913.12	491.22
Average Loan	2389.77	1967.87	1545.97	1124.07	702.17
Weighted Average Rate of Interest on Loan (in %)	9.2248	9.2302	9.2375	9.2478	9.2615
Interest on Loan	220.45	181.64	142.81	103.95	65.03



Asset-3

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Gross Normative Loan	3419.41	3419.41	3419.41	3419.41	3419.41
Cumulative Repayments up to Previous Year	1293.88	1552.83	1811.78	2070.73	2329.68
Net Loan-Opening	2125.53	1866.58	1607.63	1348.68	1089.73
Additions	0.00	0.00	0.00	0.00	0.00
Repayment during the year	258.95	258.95	258.95	258.95	258.95
Net Loan-Closing	1866.58	1607.63	1348.68	1089.73	830.78
Average Loan	1996.06	1737.11	1478.16	1219.21	960.26
Weighted Average Rate of Interest on Loan (in %)	9.3227	9.3255	9.3293	9.3346	9.3427
Interest on Loan	186.09	161.99	137.90	113.81	89.71

Return on Equity (“RoE”)

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

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

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

Provided that return on equity in respect of additional capitalization after cut-off date beyond the original scope, excluding additional capitalization on account of emission control system, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system or in the absence of actual loan portfolio of the generating station or the transmission system, the weighted average rate of interest of the generating company or the transmission licensee, as the case may be, as a whole shall be considered, subject to ceiling of 14%.

Provided further that:

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



- shall be reduced by 1.00% for the period for which the deficiency continues;
- iii. in case of a thermal generating station, with effect from 1.4.2020:
- rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;
 - an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:

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

(3) The return on equity in respect of additional capitalization on account of emission control system shall be computed at the base rate of one-year marginal cost of lending rate (MCLR) of the State Bank of India as on 1st April of the year in which the date of operation (ODE) occurs plus 350 basis point, subject to ceiling of 14%;”

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

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

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

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:

- Estimated Gross Income from generation or transmission business for FY 2019-20 is Rs 1,000 crore;
- 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.”

67. The Petitioner has submitted that MAT rate is applicable to it. Accordingly, MAT rate applicable in 2019-20 has been considered for the purpose of RoE which will be trued-up with actual tax rate in accordance with Regulation 31(3) of the 2019 Tariff Regulations. RoE allowed in respect of the transmission assets has been worked out as follows:

Combined Asset-1&2

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity (A)	2385.69	2385.69	2385.69	2385.69	2385.69
Additions (B)	0.00	0.00	0.00	0.00	0.00
Closing Equity (C) = A+B	2385.69	2385.69	2385.69	2385.69	2385.69
Average Equity (D) = (A+C)/2	2385.69	2385.69	2385.69	2385.69	2385.69
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
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	448.08	448.08	448.08	448.08	448.08

Asset-3

(₹ in lakh)

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Opening Equity (A)	1465.46	1465.46	1465.46	1465.46	1465.46
Additions (B)	0.00	0.00	0.00	0.00	0.00
Closing Equity (C) = A+B	1465.46	1465.46	1465.46	1465.46	1465.46
Average Equity (D) = (A+C)/2	1465.46	1465.46	1465.46	1465.46	1465.46
Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
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	275.24	275.24	275.24	275.24	275.24



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

68. O&M Expenses claimed by the Petitioner in respect of transmission assets for 2019-24 period are as follows:

Combined Asset-1&2

(₹ in lakh)

Particulars	Combined Asset-1&2				
	2019-20	2020-21	2021-22	2022-23	2023-24
Transmission line					
(i) 220 kV D/C (Single) Kalpakkam-Sirucheri Transmission Line (1 Sub-conductors) (36.176 km)					
(ii) 220 kV D/C (Twin) Kalpakkam-Arani Transmission Line (2 Sub-conductors) (106.12 km)					
D/C Bundled (Single Sub-Conductor) (km)	36.176	36.176	36.176	36.176	36.176
Norms (₹ lakh/km)	0.377	0.391	0.404	0.419	0.433
D/C Bundled (Twin/Triple Sub-Conductor) (km)	106.12	106.12	106.12	106.12	106.12
Norms (₹ lakh/km)	0.881	0.912	0.944	0.977	1.011
220 kV bays of:					
(i) Sirucheri:BHAVINI 1-Tantransco- Sirucheri-Sriperumbudur [1 number of bay(s)]					
(ii) Sirucheri:BHAVINI 2-Tantransco-Sirucheri-Sriperumbudur [1 number of bay(s)]					
(iii) Arani:BHAVINI 1-Tantransco-Arani-Sriperumbudur [1 number of bay(s)]					
(iv) Arani:BHAVINI 2_Tantransco-Arani-Sriperumbudur [1 number of bay(s)]					
220 kV Bays	4	4	4	4	4
Norms (₹ lakh/Bay)	22.51	23.30	24.12	24.96	25.84
Total O&M Expense (₹ in lakh)	197.17	204.12	211.28	218.68	226.31

Asset-3

(₹ in lakh)

Particulars	Asset-3				
	2014-15	2015-16	2016-17	2017-18	2018-19
Transmission line					
(i) 220 kV D/C (Twin) Kalpakkam PFBR - Kanchipuram D/C 230 kV D/C Lines (2 Sub-conductors) (80.35 km)					
D/C Bundled (Twin/Triple Sub-Conductor) (km)	80.35	80.35	80.35	80.35	80.35
Norms (₹ lakh/km)	0.881	0.912	0.944	0.977	1.011
220 kV bays of:					
(i) Kancheepuram:Bhavini 1 & 2-Tantransco-Kanchipuram-Sriperumbudur [2 number of bay(s)]					
220 kV Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	22.51	23.30	24.12	24.96	25.84
Total O&M Expense (₹ in lakh)	115.81	119.88	124.09	128.42	132.91

69. The norms specified under Regulation 35(3)(a) and Regulation 35(4) of the 2019

Tariff Regulations provide 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 (Rs 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 (Rs 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 (Rs 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
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 (Rs. Lakh per 500 MW)	1,666	1,725	1,785	1,848	1,913
500 kV Rihand-Dadri HVDC bipole scheme (Rs Lakh) (1500 MW)	2,252	2,331	2,413	2,498	2,586
±500 kV Talcher- Kolar HVDC bipole scheme (Rs Lakh) (2000 MW)	2,468	2,555	2,645	2,738	2,834
±500 kV Bhiwadi-Balia HVDC bipole scheme (Rs Lakh) (2500 MW)	1,696	1,756	1,817	1,881	1,947
±800 kV, Bishwanath-Agra HVDC bipole scheme (Rs Lakh) (3000 MW)	2,563	2,653	2,746	2,842	2,942

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

Provided further that:

(i) the operation and maintenance expenses for new HVDC bi-pole



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

(ii) the O&M expenses norms for HVDC bi-pole line shall be considered as Double Circuit quad AC line;

(iii) the O&M expenses of ± 500 kV Mundra-Mohindergarh HVDC bipole scheme (2500 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ± 500 kV Talchar-Kolar HVDC bi-pole scheme (2000 MW);

(iv) the O&M expenses of ± 800 kV Champa-Kurukshetra HVDC bi-pole scheme (3000 MW) shall be on the basis of the normative O&M expenses for ± 800 kV, Bishwanath-Agra HVDC bi-pole scheme;

(v) the O&M expenses of ± 800 kV, Alipurduar-Agra HVDC bi-pole scheme (3000 MW) shall be allowed as worked out by multiplying 0.80 of the normative O&M expenses for ± 800 kV, Bishwanath-Agra HVDC bi-pole scheme; and

(vi) the O&M expenses of Static Synchronous Compensator and Static Var Compensator shall be worked at 1.5% of original project cost as on commercial operation which shall be escalated at the rate of 3.51% to work out the O&M expenses during the tariff period. The O&M expenses of Static Synchronous Compensator and Static Var Compensator, if required, may be reviewed after three years.

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

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

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

(4) Communication system: The operation and maintenance expenses for the communication system shall be worked out at 2.0% of the original project cost related to such communication system. The transmission licensee shall submit the actual operation and maintenance expenses for truing up.”

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



Combined Asset-1&2

(₹ in lakh)

Particulars	Combined Asset-1&2				
	2019-20	2020-21	2021-22	2022-23	2023-24
Transmission line					
(i) 220 kV D/C (Single) Kalpakkam-Sirucheri Transmission Line (1 Sub-conductors) (36.176 km)					
(ii) 220 kV D/C (Twin) Kalpakkam-Arani Transmission Line (2 Sub-conductors) (106.12 km)					
D/C Bundled (Single Sub-Conductor) (km)	36.176	36.176	36.176	36.176	36.176
Norms (₹ lakh/km)	0.377	0.391	0.404	0.419	0.433
D/C Bundled (Twin/Triple Sub-Conductor) (km)	106.12	106.12	106.12	106.12	106.12
Norms (₹ lakh/km)	0.881	0.912	0.944	0.977	1.011
220 kV bays of:					
(i) Sirucheri:BHAVINI 1-Tantransco-Sirucheri-Sriperumbudur [1 number of bay(s)]					
(ii) Sirucheri:BHAVINI 2-Tantransco-Sirucheri-Sriperumbudur [1 number of bay(s)]					
(iii) Arani:BHAVINI 1-Tantransco-Arani-Sriperumbudur [1 number of bay(s)]					
(iv) Arani:BHAVINI 2-Tantransco-Arani-Sriperumbudur [1 number of bay(s)]					
220 kV Bays	4	4	4	4	4
Norms (₹ lakh/Bay)	22.51	23.30	24.12	24.96	25.84
Total O&M Expense (₹ in lakh)	197.17	204.12	211.28	218.68	226.31

Asset-3

(₹ in lakh)

Particulars	Asset-3				
	2014-15	2015-16	2016-17	2017-18	2018-19
Transmission line					
(i) 220 kV D/C (Twin) Kalpakkam PFBR-Kanchipuram D/C 230 kV D/C Lines (2 Sub-conductors) (80.35 km)					
D/C Bundled (Twin/Triple Sub-Conductor) (km)	80.35	80.35	80.35	80.35	80.35
Norms (₹ lakh/km)	0.881	0.912	0.944	0.977	1.011
220 kV bays of:					
(i) Kancheepuram:Bhavini 1 & 2-Tantransco-Kanchipuram-Sriperumbudur [2 number of bay(s)]					
220 kV Bays	2	2	2	2	2
Norms (₹ lakh/Bay)	22.51	23.30	24.12	24.96	25.84
Total O&M Expense (₹ in lakh)	115.81	119.88	124.09	128.42	132.91

Interest on Working Capital (“IWC”)

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

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

.....

(c) For Hydro Generating Station (including Pumped Storage Hydro



Generating Station) and Transmission System:

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

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

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

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

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

‘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;”

72. The Petitioner has submitted that it has computed IWC for 2019-24 period considering SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%.

73. 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, RoI 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) whereas, RoI 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:



Combined Asset-1&2

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses (O&M Expenses for one month)	16.43	17.01	17.61	18.22	18.86
Maintenance Spares (15% of O&M Expenses)	29.58	30.62	31.69	32.80	33.95
Receivables (Equivalent to 45 days of annual transmission charges)	161.38	157.67	153.54	149.63	145.34
Total Working Capital	207.39	205.30	202.83	200.66	198.15
Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
Interest on Working Capital	24.99	23.10	21.30	21.07	20.81

Asset-3

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
O&M Expenses (O&M Expenses for one month)	9.65	9.99	10.34	10.70	11.08
Maintenance Spares (15% of O&M Expenses)	17.37	17.98	18.61	19.26	19.94
Receivables (Equivalent to 45 days of annual transmission charges)	104.75	102.42	99.83	97.37	94.67
Total Working Capital	131.77	130.39	128.78	127.34	125.69
Rate of Interest (in %)	12.05	11.25	10.50	10.50	10.50
Interest on Working Capital	15.88	14.67	13.52	13.37	13.20

Annual Fixed Charges for 2019-24 Tariff Period

74. The transmission charges allowed in respect of the transmissions assets for 2019-24 tariff period are as follows:

Combined Asset-1&2

(₹ in lakh)					
Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	421.90	421.90	421.90	421.90	421.90
Interest on Loan	220.45	181.64	142.81	103.95	65.03
Return on Equity	448.08	448.08	448.08	448.08	448.08
O&M Expenses	197.17	204.13	211.27	218.68	226.31
Interest on Working Capital	24.99	23.10	21.30	21.07	20.81
Total	1312.59	1278.85	1245.36	1213.68	1182.13



Asset-3

Particulars	(₹ in lakh)				
	2019-20	2020-21	2021-22	2022-23	2023-24
Depreciation	258.95	258.95	258.95	258.95	258.95
Interest on Loan	186.09	161.99	137.90	113.81	89.71
Return on Equity	275.24	275.24	275.24	275.24	275.24
O&M Expenses	115.81	119.88	124.09	128.42	132.91
Interest on Working Capital	15.88	14.67	13.52	13.37	13.20
Total	851.97	830.73	809.70	789.79	770.01

Filing Fees and Publication Expenses

75. The Petitioner has sought reimbursement of fees 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 Fees & RLDC Fees and Charges

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

Security Expenses

77. The Petitioner has submitted that security expenses for the transmission assets are not claimed in the instant petition and it would file a separate petition for claiming the overall security expenses and the consequential IWC.

78. We have considered the submissions of the Petitioner. The Petitioner had claimed consolidated security expenses for all the transmission assets owned by it on projected basis for 2019-24 tariff period on the basis of actual security expenses



incurred in 2018-19 in Petition No. 260/MP/2020. The said petition has already been disposed of by the Commission vide order dated 3.8.2021. 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.

Goods and Services Tax

79. The Petitioner has submitted that GST, if 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.

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

Capital Spares

81. 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

82. The Petitioner has submitted that the transmission charges for Combined Asset-1&2 shall be borne by BHAVINI from the date of commercial operation of the assets till the COD of its first unit of generating station in line with Regulation 8(6) of Sharing Regulations; after which, the transmission charges shall be recovered on monthly basis in accordance with Regulation 43 of Central Electricity Regulatory Commission (Terms



and Conditions of Tariff) Regulations, 2014. The Petitioner has further submitted that the transmission charges for Asset-3, from its COD, i.e. 1.4.2014, shall be shared by TANTRANSCO and BHAVINI in equal proportion. After the commissioning of generation by BHAVINI or transmission system by TANTRANSCO, when Asset-3 is put to regular use, the transmission charges of Asset-3 shall be included in the POC computation.

83. TANGEDCO, Respondent No. 4 has requested to the Commission to direct the Petitioner to recover the full transmission charges of Asset-3 from BHAVINI from deemed COD till COD of the generating units. The submissions made by TANGEDCO in this regard are as follows:

- a. The reason for the delay in declaring COD of the Asset-3 was due to delay in commissioning of the generating units by BHAVINI. TANGEDCO during the hearing in Petition No.148/TT/2019 prayed to fix the liability of transmission charges of Asset-1 and Asset-2 on BHAVINI alone due to non-commissioning of the generating units. However, the Commission had fixed equal liability on TANTRANSCO and BHAVINI till the commissioning of the Kancheepuram Sub-station despite the fact that the transmission asset was not brought into beneficial use even after commissioning of the Kancheepuram Sub-station.
- b. APTEL in judgment dated 20.9.2018 in Appeal No. 168 of 2015 held that the findings of the Commission pertaining to the COD of Asset-3 as 1.9.2012 are consistent with various judgments and its 2009 Tariff Regulations and the appeal was only partially allowed and limited to determination of tariff with effect from 1.4.2014. There was no observation



on the liability of payment of transmission charges by TANTRANSCO in the absence of generation to be established by BHAVINI and without establishing power flow from the generating station. The relevant portion of the APTEL's judgement is as follows:

"8.10 Keeping all these aspects in view, we are of the considered opinion that the findings of the Central Commission in the impugned order pertaining to the COD of Asset-3 as 01.09.2012 are consistent with various judgments and its Tariff Regulations, 2009. As the Appellant has completed all the works under its scope of work and a considerable time of more than six years has elapsed, the Appellant deserves a liberty to file an application before the Central Commission seeking grant of approval in terms of the Tariff Regulations, 2014 to enable the tariff determination for Asset-3 with capital cost being considered as on 31.03.2014 including admissible IDC /IEDC"

- c. The Petitioner has created an impression that because of the delay in commissioning of the Kancheepuram Sub-station by TANRANSCO, the Petitioner was prevented from bringing the said asset into intended beneficial use. The fact is that even after a lapse of eight years from deemed COD declared by the Commission the asset has not been put into intended beneficial use due to non-commissioning of generating units by BHAVINI. This has caused a huge loss to the public exchequer.
- d. The delayed commissioning of Kancheepuram Sub-station has no way prevented the Petitioner from bringing the assets into beneficial use. Even if the said sub-station was commissioned in time, in the absence of generation and injecting electricity in the transmission system intended for transmission of electricity at the generator end, the asset cannot be put to beneficial use. Therefore, it is the non-commissioning of the generating unit, which has resulted in the assets of Petitioner not being put to beneficial use. The decision of the Commission vide order dated 4.3.2021 in Petition No. 148/TT/2019 fixing the tariff liability on TANTRANSCO from deemed COD



to commissioning of Kancheepuram Sub-station is against the mandate of Supreme Court Judgments and the Regulations of this Commission.

- e. The Supreme Court has held that the Commissions are bound by the Regulations made by them and that no tariff can be granted to an asset, which is not put to beneficial use. The judgments of the Supreme Court have been followed by this Commission in numerous orders passed in various petitions.
- f. The Commission vide order dated 29.4.2015 in Petition No.105/TT/2012 had directed as follows:

“19. It has been observed that Asset-I and Asset-II have been included in PoC charges since 1.4.2012 and Asset-III has been included in PoC charges since 1.9.2012 on the basis of the provisional tariff allowed vide order dated 29.3.2012. As stated in para 17, the transmission charges in case of Assets-I and II shall be borne by BHAVINI and accordingly, NLDC is directed to exclude the tariff for Assets-I and II from the PoC charges. Further, as the date of commercial operation of Asset-III has not been approved, NLDC is also directed to exclude Asset-III from the PoC charges and the transmission charges already collected from the beneficiaries shall be adjusted as provided under Regulation 5 of the 2009 Tariff Regulations.”

- g. Considering the proviso under Regulation 5 of the 2009 Tariff Regulations, since the transmission charges had already been recovered from the beneficiaries, the Petitioner is liable to refund the excess recovery within six months from the date of order along with interest.
- h. TANGEDCO did not file an appeal, since the issue will attain finality only in the true-up petition, when the actual fact pertaining to the commissioning of the generator will come on record for the tariff period. In view of the above, this Commission, considering the fact that the generator



is not commissioned as on date, and will not be commissioned in near future, is required to revisit the earlier order under the present true-up petition and absolve TANTRANSCO from payment of transmission charges under the order, which is sought to be trued up. The Petitioner be directed to bring on record, the details of recovery made from the beneficiaries, interest accrued so far, refund made so far in respect of Asset-1 and Asset-2 and any further directions in line with the regulations.

84. In response, the Petitioner vide affidavit dated 16.8.2022 has submitted as follows:

- a. The Commission has consistently held in cases where the downstream lines/asset were not ready, that the transmission charges are payable by the defaulting party whose lines/assets were not ready (i.e. in case of mismatch) and also that the transmission charges would be included in the POC mechanism under the 2010 Sharing Regulations after the transmission system is ready.
- b. It is a settled position that the existence of regulations is not necessary for exercise of regulatory powers by the Commission. Even in the absence of the Regulations, the Commission has regulatory powers to pass directions by way of orders. [Ref: PTC India Limited case (supra) – (2010) 4 SCC 603 paras 53, 55 and 92 (v)]. The power to regulate is of wide import and would include the power to determine the rates and the liability for the said rates. The Commission in its regulatory powers has the power to decide on the liability to pay the transmission charges. The APTEL in Nuclear Power Corporation of India Limited v. Central Electricity Regulatory



Commission and others in Appeal No. 332 of 2016, has upheld the exercise of the regulatory powers by this Commission in the absence of any specific provisions in the Regulations. By way of exercising its regulatory powers by a way of judicial order(s), the Commission has laid down the principles of payment of transmission charges in such eventuality (Para 10.5). The contentions to the contrary are denied.

- c. That the issues sought to be raised by TANGEDCO cannot be considered in the truing up petition. The truing up petition filed before Commission as per Regulation 12 of 2019 Tariff Regulations. Regulation 8 of 2014 Tariff Regulations provides that the truing up shall be done only on specific ground of capital cost and financing of loans.
- d. The issue of sharing of transmission charges has already been decided by the Commission vide order dated 4.3.2021 in Petition No. 148/TT/2019 and it has attained finality as no review petition or appeal has been filed by any of the Respondents and the contentions sought by TANGEDCO may not be considered in the instant truing up petition.
- e. The billing for the asset has been done on 25.2.2022 (i.e. from 1.4.2014 to 28.2.2019) as per the direction of Commission vide its order dated 4.3.2021 in Petition No. 148/TT/2019.
- f. That the adjustment of amount recovered from beneficiaries has already been passed to beneficiaries in bill of supply for second bill for billing period of October, 2021 to December 2021 on 29.4.2022.



85. TANGEDCO in its written submission dated 25.8.2022 has further submitted as follows:

- a. The Commission vide RoP dated 8.8.2022 directed the Petitioner to confirm the status of the power flow in the transmission lines. The Petitioner has filed a rejoinder dated 16.8.2022 wherein the Petitioner has intentionally avoided to bring on record the power flow status of the transmission lines as on date. Instead, the Petitioner has stated that the Commission in its regulatory powers has the power to decide on the liability to pay the transmission charges in the absence of specific provisions under the Regulations by way of judicial order. TANGEDCO has not raised the Commission's power to exercise its regulatory power to issue such judicial orders. However, the order dated 4.3.2021 in Petition No.148/TT/2019 had been issued based on the wrong and misleading submissions of the Petitioner and suppression of facts (no power flow is established and not brought to beneficial use even after commission of Kancheepuram Sub-station by TANTRANSCO). Hence, the Commission is therefore requested to revise the said order.
- b. The Commission in a similar case of tariff relating to transmission assets, vide order dated 29.1.2015 in Petition No. 165/TT/2013, restricted the capital cost due to non-filing of the RCE. The Petitioner did not file any review petition or appeal against the order of this Commission. Subsequently, in the truing up Petition No. 147/TT/2015 also the Petitioner did not file the RCE and the Commission restricted the capital cost vide its order dated 24.2.2016. However, the Petitioner filed another tariff Petition No. 98/TT/2016 for revision of the trued-up capital expenditure.



The Commission refused to revise the order stating that there is no provision in the Regulations to review the trued-up tariff that has reached finality through another tariff petition. The Petitioner had filed Appeal No. 147 of 2017 against the true-up order of the Commission in Petition No.147/TT/2015. However, during the pendency of the appeal, the Petitioner filed an application before APTEL seeking liberty to withdraw the appeal and file a review before this Commission. APTEL disposed of the appeal granting liberty to the Petitioner to take appropriate step available in law.

- c. Subsequently, the Petitioner filed a review Petition No. 15/RP/2018 seeking revision of trued up tariff which had already attained finality. The Commission vide its order dated 4.4.2019 admitted the review and took the RCE on record and directed that it will be trued up during 2014-19 truing up. The Commission despite strong objections raised by TANGEDCO against reopening the trued-up tariff, observed as below:

“21. We have given our thoughtful consideration to this contention of the respondent. As we have already observed, tariff determination is a continuous process and it cannot be restricted to a particular period of time. Further, detailed submissions on record show that for filing of RCE in Petition No 147/TT/2015, no deadline was fixed in the proceedings by the Commission. The Petition No. 147/TT/2015 was disposed of vide order dated 24.2.2016. We are in agreement with the Review Petitioner’s contention that in view of the APTEL’s judgment dated 15.3.2017 in Appeal No. 127 of 2015, in cases where the Review Petitioner has failed to place on record any documents before the Commission, it must be given a chance to put up its case with complete facts and supporting documents. In our view, in the present case, the Review Petitioner should be given opportunity to place on record the documents alongwith supporting documents. Accordingly, we take on record the RCE submitted by the Review Petitioner and the same will be considered at the time of truing up of the 2014-19 tariff.”

86. We have considered the submission of the Petitioner and TANGEDCO. The main contention of TANGEDCO is that it is not liable to share the liability of transmission



charges of Asset-3 along with BHAVINI as completion of the Kancheepuram Substation is not the reason for non-utilisation of Asset-3. TANGEDCO has contended that Asset-3 is not put to use as BHAVINI has not commissioned its generation and therefore the full liability of the transmission charges of Asset-3 has be on BHAVINI. Before we go consider the contentions of the parties, we feel it is appropriate to go through the sequence of events in the instant case.

87. The Petitioner initially filed Petition No. 105/TT/2012 claiming tariff for Asset-3 along with two other assets and claimed COD of Asset-3 as 1.9.2012 under Regulation 3(12)(c) of the 2009 Tariff Regulations since the associated transmission system under the scope of the TANTRANSCO was not ready and the generating station (BHAVINI) was also not commissioned. However, the Commission disallowed the Petitioner's prayer vide order dated 29.4.2015. The relevant portion of the order is as follows:

"18. As regards Asset-III, i.e. Kalpakkam-Kanchipuram line, the Kanchipuram Substation of TANGEDCO has not yet been commissioned. It is seen that the charging certificate dated 31.8.2012 issued by CEA is for the purpose of only testing Asset-III. Further, it is an admitted fact that the sub-station to which the line is to be connected at the other end is yet to be developed by TANGEDCO. Therefore, Asset-III cannot be put to any regular service even if declared under commercial operation. Considering all these factors we are not inclined to approve declaration of the commercial operation of Asset-III with effect from 1.9.2012 as claimed by the petitioner."

88. Aggrieved by this finding of the Commission in order dated 29.4.2015 in Petition No. 105/TT/2012, the Petitioner filed an Appeal No. 168 of 2015 before APTEL. APTEL vide judgment dated 20.9.2018 in Appeal No. 168 of 2015, held as follows:

"Keeping all these aspects in view, we are of the considered opinion that the findings of the Central Commission in the impugned order pertaining to the COD of Asset-3 as 01.09.2012 are consistent with various judgments and its Tariff Regulations, 2009. As the Appellant has completed all the works under its scope of work and a considerable time of more than six years has elapsed, the Appellant deserves a liberty to file an application before the Central Commission seeking grant of approval in terms of the Tariff Regulations, 2014 to enable the tariff determination for Asset-3 with capital cost being considered as on 31.03.2014 including admissible IDC /IEDC."



89. Following this decision of the APTEL, the Commission vide order dated 27.12.2018 directed the Petitioner to file a fresh petition. Accordingly, the Petitioner filed the Petition No.148/TT/2019 claiming therein the COD of the 230 kV D/C Kalpakkam PFBR-Kanchipuram transmission line and 2 numbers of 230 kV Bays at Kanchipuram Sub-station w.e.f. 1.4.2014 under proviso (ii) to Regulation 4(3) of 2014 Tariff Regulations. The Petitioner also claimed the tariff from 1.4.2014. TANGEDCO in its reply in Petition No.148/TT/2019 contended that the transmission system is an evacuation system connecting the generating station (BHAVINI) with the sub-station of TANTRANSCO. The generator has not matched the commissioning of the generating units with the scheduled COD of the Asset-3 to bring the transmission assets into intended beneficial use and hence BHAVINI is liable to compensate the Petitioner.

90. The Commission taking into consideration the submissions of the Petitioner and TANGEDCO and keeping in view the APTEL's observation in judgment dated 20.9.2018 in Appeal No. 168 of 2015 approved the COD of Asset-3 as 1.4.2014 under proviso (ii) of Regulation 4(3) of the 2014 Tariff Regulations. As regards the transmission charges, the Commission taking into consideration that both BHAVINI's generation and the Kancheepuram Sub-station of TANTRANSCO were not ready on the approved COD of 1.4.2014 of Asset-3, held that the transmission charges are to be shared by the BHAVINI and TANTRANSCO since both were not ready on the date of COD of Asset-3. The relevant portion of the order dated 4.3.2021 is as follows:

"24. As BHAVINI and TANTRANSCO were not ready on 1.4.2014, we are of the view that the transmission charges of the instant asset should be shared by BHAVINI and TANTRANSCO. Therefore, the transmission charges from COD of the instant asset i.e. 1.4.2014 shall be shared by TANTRANSCO and BHAVINI in equal proportion. After the commissioning of generation by BHAVINI or transmission system by TANTRANSCO, when the instant asset is put to regular use, the transmission charges of the instant asset shall be included in the POC computation"



91. We do not find any sufficient reason to neither reopen nor deviate from the Commission's earlier decision in order dated 4.3.2021 in Petition No.148/TT/2021. Accordingly, the transmission charges of Asset-3 shall be shared as per the order dated 4.3.2021. Therefore, the transmission charges of Asset-3 from COD i.e. 1.4.2014 shall be shared by TANTRANSCO and BHAVINI in equal proportion. Kanchipuram Sub-station was put into commercial operation by TANTRANSCO on 28.2.2019. Hence, the Petitioner has to recover charges from 1.4.2014 till 28.2.2019 in equal proportion from both TANTRANSCO and BHAVINI and, thereafter, tariff from 1.3.2019 shall be recovered from BHAVINI till commissioning of its first unit of generation.

92. As regards the Combined Asset-1&2, the Commission vide order dated 29.1.2019 in Petition No. 99/TT/2018 held as follows:

"43 (iii) We have considered the submissions of the petitioner and judgment of APTEL vide order dated 4.10.2018 in appeal no. 151 of 2015. The transmission charges for 2009-14 period shall be shared as per order dated 29.4.2015 in petition No 105/TT/2012. The transmission charges for 2014-19 Period shall be borne by BHAVINI from the date of commercial operation of the assets till the COD of its first unit of generating station in line with Regulation 8(6) of Sharing Regulations. Thereafter, the transmission charges shall be recovered on monthly basis in accordance with Regulation 43 of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014."

93. In view of the above, the transmission charges of Combined Asset-1&2 shall be borne by BHAVINI from its date of commercial operation till COD of the first unit of generating station.

94. To summarise:

- a. The trued-up AFC allowed in respect of the transmission assets for 2014-19 period are as follows:



(₹ in lakh)					
Assets	2014-15	2015-16	2016-17	2017-18	2018-19
Combined Asset-1&2	1600.68	1575.36	1544.65	1514.09	1485.48
Asset-3	1018.89	1003.79	984.05	964.41	945.94

- b. AFC allowed in respect of the transmission assets for 2019-24 tariff period in this order are as follows:

(₹ in lakh)					
Assets	2019-20	2020-21	2021-22	2022-23	2023-24
Combined Asset-1&2	1312.59	1278.85	1245.36	1213.68	1182.13
Asset-3	851.97	830.73	809.70	789.79	770.01

95. Annexure-I and Annexure-II to this order form part of the order.

96. This order disposes of Petition No. 19/TT/2022 in terms of the above findings and discussions.

sd/-

(P. K. Singh)
Member

sd/-

(Arun Goyal)
Member

sd/-

(I. S. Jha)
Member



Combined Asset-1&2

2014-19		ACE (₹ in lakh)							Depreciation as per Regulations					
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2014-19	2015-16	2016-17	2017-18	2018-19	Allowed ACE (₹ in lakh)	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Deprn.	2014-15	2015-16	2016-17	2017-18	2018-19
Land - Freehold	0.00	0.00	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	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	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Transmission Line	7010.32	34.19	0.00	0.00	0.00	0.00	34.19	7044.51	5.28%	371.05	371.95	371.95	371.95	371.95
Sub Station	715.50	0.00	0.00	0.00	0.00	0.00	0.00	715.50	5.28%	37.78	37.78	37.78	37.78	37.78
PLCC	192.30	0.00	0.00	0.00	0.00	0.00	0.00	192.30	6.33%	12.17	12.17	12.17	12.17	12.17
IT Equipment (Incl. Software)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.00%	0.00	0.00	0.00	0.00	0.00
Total	7918.12	34.19	0.00	0.00	0.00	0.00	34.19	7952.31		421.00	421.90	421.90	421.90	421.90
Average Gross Block (₹ in lakh)										7935.22	7952.31	7952.31	7952.31	7952.31
Weighted Average Rate of Depreciation										5.31%	5.31%	5.31%	5.31%	5.31%



Asset-3

2014-19		ACE (₹ in lakh)							Depreciation as per Regulations					
Capital Cost	Capital Cost as on 1.4.2014 / COD (₹ in lakh)	2014-19	2015-16	2016-17	2017-18	2018-19	Allowed ACE (₹ in lakh)	Capital Cost as on 31.3.2019 (₹ in lakh)	Rate of Depn.	2014-15	2015-16	2016-17	2017-18	2018-19
Land - Freehold	0.00	0.00	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	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	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00
Transmission Line	4388.61	33.71	0.00	0.00	0.00	0.00	33.71	4422.32	5.28%	232.61	233.50	233.50	233.50	233.50
Sub Station	364.25	0.00	0.00	0.00	0.00	0.00	0.00	364.25	5.28%	19.23	19.23	19.23	19.23	19.23
PLCC	98.31	0.00	0.00	0.00	0.00	0.00	0.00	98.31	6.33%	6.22	6.22	6.22	6.22	6.22
IT Equipment (Incl. Software)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.00%	0.00	0.00	0.00	0.00	0.00
Total	4851.16	33.71	0.00	0.00	0.00	0.00	33.71	4884.87		258.06	258.95	258.95	258.95	258.95
Average Gross Block (₹ in lakh)										4868.02	4884.87	4884.87	4884.87	4884.87
Weighted Average Rate of Depreciation										5.30%	5.30%	5.30%	5.30%	5.30%



Combined Asset-1&2

2019-24 Capital Expenditure	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE (₹ in lakh)						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	Total			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	0.00	0.00	
Land - Leasehold	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00	
Transmission Line	7044.51	0.00	0.00	0.00	0.00	0.00	0.00	7044.51	5.28%	371.95	371.95	371.95	371.95	371.95	
Sub Station	715.50	0.00	0.00	0.00	0.00	0.00	0.00	715.50	5.28%	37.78	37.78	37.78	37.78	37.78	
PLCC	192.30	0.00	0.00	0.00	0.00	0.00	0.00	192.30	6.33%	12.17	12.17	12.17	12.17	12.17	
IT Equipment (Incl. Software)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.00%	0.00	0.00	0.00	0.00	0.00	
Total	7952.31	0.00	0.00	0.00	0.00	0.00	0.00	7952.31	0.00	421.90	421.90	421.90	421.90	421.90	
										Average Gross Block (₹ in lakh)	7952.31	7952.31	7952.31	7952.31	7952.31
										Weighted Average Rate of Depreciation	5.31%	5.31%	5.31%	5.31%	5.31%



Asset-3

2019-24 Capital Expenditure	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	Projected ACE (₹ in lakh)						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	Total			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	0.00	0.00	
Land - Leasehold	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	3.34%	0.00	0.00	0.00	0.00	0.00	
Transmission Line	4422.32	0.00	0.00	0.00	0.00	0.00	0.00	4422.32	5.28%	233.50	233.50	233.50	233.50	233.50	
Sub Station	364.25	0.00	0.00	0.00	0.00	0.00	0.00	364.25	5.28%	19.23	19.23	19.23	19.23	19.23	
PLCC	98.31	0.00	0.00	0.00	0.00	0.00	0.00	98.31	6.33%	6.22	6.22	6.22	6.22	6.22	
IT Equipment (Incl. Software)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.00%	0.00	0.00	0.00	0.00	0.00	
Total	4884.87	0.00	0.00	0.00	0.00	0.00	0.00	4884.87		258.95	258.95	258.95	258.95	258.95	
										Average Gross Block (₹ in lakh)	4884.87	4884.87	4884.87	4884.87	4884.87
										Weighted Average Rate of Depreciation	5.30%	5.30%	5.30%	5.30%	5.30%

