

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 662/TT/2020

Coram:

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

Date of Order: 05.07.2022

In the matter of:

Approval under Regulation 86 of the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and determination of transmission tariff from COD to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 in respect of **Asset 1:** Installation of +/- 200 MVAR Dynamic Compensation (STATCOM) along with 2x125 MVAR Mechanically Switched Reactor (MSR) and 1x125 MVAR Mechanically Switched Capacitor (MSC) and co-ordinated control mechanism of MSCs and MSRs at 400 kV Hyderabad Sub-station, **Asset 2:** Installation of +/- 200 MVAR STATCOM along with 2x125 MVAR Mechanically Switched Reactor (MSR) and 1x125 MVAR Mechanically Switched Capacitor (MSC) and co-ordinated control mechanism of MSCs and MSRs at 400/230 kV Udumalpet Sub-station, **Asset 3:** Installation of +/- 200 MVAR STATCOM along with 2x125 MVAR Mechanically Switched Reactor (MSR) and 1x125 MVAR Mechanically Switched Capacitor (MSC) and co-ordinated control mechanism of MSCs and MSRs at 400/230 kV Trichy Sub-station under "System Strengthening in Southern Region XXI" in Southern Region.

And in the matter of:

Power Grid Corporation of India Limited,
"Saudamini", Plot No. 2, Sector 29,
Gurgaon-122001 (Haryana).

.... Petitioner

Vs.

1. Karnataka Power Transmission Corporation Limited (KPTCL),
Kaveri Bhavan, Bangalore-560009.
2. Transmission Corporation of Andhra Pradesh Limited (APTRANSCO),
Vidyut Soudha, Hyderabad-500082.
3. Kerala State Electricity Board (KSEB),
Vaidyuthi Bhavanam, Pattom,
Thiruvananthapuram-695004.



4. Tamil Nadu Electricity Board (TNEB)
NPKRR Maaligai, 800, Anna Salai,
Chennai-600002.
5. Electricity Department,
Government of Goa,
Vidyuti Bhawan, Panaji, Goa-403001.
6. Electricity Department,
Govt of Pondicherry, Pondicherry-605001.
7. Eastern Power Distribution Company of Andhra Pradesh Limited (APEPDCL), P&T
Colony,
Seethmmadhara, Vishakhapatnam, Andhra Pradesh.
8. Southern Power Distribution Company of Telangana Limited (TSSPDCL),
Corporate Office, Mint Compound, Hyderabad-500063,
Telangana.
9. Central Power Distribution Company of Andhra Pradesh Limited (APCPDCL),
Corporate Office, Mint Compound,
Hyderabad-500063, Andhra Pradesh.
10. Northern Power Distribution Company of Telangana Limited (TSNPDCL),
Opp. NIT Petrol Pump, Chaitanyapuri, Kazipet, Warangal-506004,
Telangana.
11. Bangalore Electricity Supply Company Limited (BESCOM),
Corporate Office, K. R. Circle, Bangalore-560 001, Karnataka.
12. Gulbarga Electricity Supply Company Limited (GESCOM),
Station Main Road, GULBURGA, Karnataka.
13. Hubli Electricity Supply Company Limited (HESCOM),
Navanagar, PB Road, HUBLI, Karnataka.
14. MESCOM Corporate Office,
Paradigm Plaza, AB Shetty Circle,
Mangalore-575001, Karnataka.
15. Chamundeswari Electricity Supply Corporation Limited (CESC),
927, L J Avenue, ground Floor, New Kantharaj Urs Road,
Saraswathipuram, Mysore - 570 009, Karnataka.
16. Transmission Corporation of Telangana Limited,
Vidhyut Sudha, Khairatabad, Hyderabad, 500082.

...Respondent(s)



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

For Respondents : Shri S. Vallinayagam, Advocate, TANGEDCO
Dr. R. Kathiravan, TANGEDCO
Shri R. Ramalakshmi, TANGEDCO
Shri R. Srinivasan, TANGEDCO

ORDER

The instant petition has been filed by Power Grid Corporation of India Limited, a deemed transmission licensee, for determination of transmission tariff for the period from the date of commercial operation to 31.3.2024 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 (hereinafter referred to as “the 2019 Tariff Regulations”) in respect of **Asset 1:** Installation of +/- 200 MVAR Dynamic Compensation (STATCOM) along with 2x125 MVAR Mechanically Switched Reactor (MSR) and 1x125 MVAR Mechanically Switched Capacitor (MSC) and co-ordinated control mechanism of MSCs and MSRs at 400 kV Hyderabad Sub-station, **Asset 2:** Installation of +/- 200 MVAR STATCOM along with 2x125 MVAR Mechanically Switched Reactor (MSR) and 1x125 MVAR Mechanically Switched Capacitor (MSC) and co-ordinated control mechanism of MSCs and MSRs at 400/230 kV Udumalpet Sub-station, **Asset 3:** Installation of +/- 200 MVAR STATCOM along with 2x125 MVAR Mechanically Switched Reactor (MSR) and 1x125 MVAR Mechanically Switched Capacitor (MSC) and co-ordinated control mechanism of MSCs and MSRs at 400/230 kV Trichy Sub-station (hereinafter referred to as “the transmission assets’) under “System Strengthening in Southern Region XXI” in Southern Region (hereinafter referred to as “the transmission project”).



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

“1) Approve the Transmission Tariff for the tariff block 2019-24 block for the asset covered under this petition, as per para –8.3 above.

2) Admit the capital cost as claimed in the Petition and approve the Additional Capitalisation incurred / projected to be incurred.

3) Admit the capital structure of the project as grant and equity as per the PSDF sanction letter and allow ROE as claimed maximum to 30% of the capital cost before adjustment of grant.

4) 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 2019 as per para 8.3 above for respective block.

5) 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.

6) 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.

7) 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 beneficiaries.

8) 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.

9) Allow interim tariff in accordance with Regulation 10 (3) of Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 for purpose of inclusion in the PoC charges.

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 (hereinafter referred to as "IA") for implementation of Powergrid work associated with “System Strengthening in Southern Region XXI”



under Southern Region was accorded by the Board of Directors of the Petitioner in 333rd meeting held on 16.9.2016 for ₹56225 lakh including IDC of ₹3347 lakh based on June, 2016 price level.

(b) The scope of the transmission project was discussed and agreed in the 35th and 36th meeting of the Standing Committee on Power System Planning of Southern Region held on 19.2.2013 and 27.9.2013 respectively.

(c) The scope of work covered under the transmission project is as follows:

Sub-station:

Installation of STATCOMs along with Mechanically Switched Reactor (MSR) and Mechanically Switched Capacitor (MSC) and co-ordinated control mechanism of MSCs and MSRs in Southern Region is as follows:

Sub-station	Mechanically Switched Compensation		Dynamic Compensation (STATCOM) +/-MVAR
	Reactor	Capacitor	
1. Hyderabad	2*125 MVAR	1*125 MVAR	200
2. Udumalpet	2*125 MVAR	1*125 MVAR	200
3. Trichy	2*125 MVAR	1*125 MVAR	200

(d) The Petitioner has submitted that the entire scope of the transmission project has been implemented. The details of the transmission assets covered under the transmission project are as follows:

Name of Asset	Actual COD
Asset-1: Installation of +/- 200 MVAR Dynamic Compensation (STATCOM) along with 2x125 MVAR Mechanically Switched Reactor (MSR) and 1x125 MVAR Mechanically Switched Capacitor (MSC) and co-ordinated control mechanism of MSCs and MSRs at 400 kV Hyderabad Sub-station.	4.9.2019
Asset-2: Installation of +/- 200 MVAR STATCOM along with 2x125 MVAR Mechanically Switched Reactor (MSR) and 1x125 MVAR Mechanically Switched Capacitor (MSC) and co-ordinated control mechanism of MSCs and MSRs at 400/230 kV Udumalpet Sub-station	20.12.2019
Asset-3: Installation of +/- 200 MVAR STATCOM along with 2x125 MVAR Mechanically Switched Reactor (MSR) and 1x125 MVAR Mechanically Switched Capacitor (MSC) and co-ordinated control mechanism of MSCs and MSRs at 400/230 kV Trichy Sub-station	28.12.2019



(e) As per IA dated 16.9.2016, the transmission assets were scheduled to be put into commercial operation within 30 months from the date of approval of Board of Directors (16.9.2016) i.e. by 16.3.2019. However, as per clause 3(vii), of the PSDF grant sanction letter by Government of India (GoI) dated 22.5.2017, the project was to be completed within 30 months from the date of release of first instalment. The first instalment of ₹3780.00 lakh was received by the Petitioner from NLDC on 23.11.2017. Accordingly, the scheduled date of completion of Project comes to be 22.5.2020 against which Asset-1, Asset-2 and Asset-3 were put under commercial operation as given below in the next paragraph.

(f) The details of the instant transmission assets including SCOD, COD and time over-run are as follows:

Assets	SCOD as per IA	COD claimed	Time over-run as per IA (days)
Asset-1	16.3.2019	4.9.2019	172
Asset-2		20.12.2019	279
Asset-3		28.12.2019	287

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

5. The Petitioner has served the petition on the Respondents and notice of this petition has also been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003. No comments or suggestions have been received from the general public in response to the aforesaid notices published in the newspapers by the Petitioner. Tamil Nadu Generation and Distribution Corporation Ltd. (TANGEDCO), Respondent No. 17 has filed its reply vide affidavit dated 28.10.2021 and has raised issues like time over-run, IEDC, imprudent claim of equity and sharing of transmission charges. The



Petitioner vide affidavit dated 25.11.2021 has filed rejoinder to the reply of TANGEDCO. The issues raised by TANGEDCO, and the clarifications given by the Petitioner are considered in relevant portions of the order. The hearing in this matter was held on 29.10.2021 through video conference and order was reserved. However, the order could not be issued before Shri P.K. Pujari, former Chairperson, demitted the office. Therefore, the matter was heard again on 23.6.2022.

6. During the hearing on 23.6.2022, the representative of the Petitioner submitted that all the information for determination of tariff has been submitted and the same may be considered for determination of transmission tariff. Learned counsel for TANGEDCO submitted that the submissions made by TANGEDCO on the previous date of hearing i.e. 29.10.2021 may be considered while allowing claims of the Petitioner. He further prayed for a week's time to file written note of submissions against rejoinder of the Petitioner. The Commission directed TANGEDCO to submit its written note of submissions on or before 1.7.2022 with an advance copy to the Petitioner and the Petitioner may file response to the same by 9.7.2022. The Commission further directed the parties to adhere to the timelines and observed that no extension of time shall be granted. However, TANGEDCO has not filed the written note as stated on the hearing on 23.6.2022. Therefore, the petition is disposed of on the basis of the information already on record. This order is issued considering the main petition dated 18.5.2020, submissions made by the Petitioner vide affidavit dated 1.2.2021 and 15.9.2021, reply filed by TANGEDCO and rejoinder filed by the Petitioner.

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



DETERMINATION OF ANNUAL FIXED CHARGES FOR 2019-24 TARIFF PERIOD

8. The Annual Fixed Charges (AFC) claimed by the Petitioner in respect of the transmission assets for 2019-24 tariff period are as follows:

(₹ in lakh)

Asset-1	2019-20 (Pro-rata for 210 days)	2020-21	2021-22	2022-23	2023-24
Depreciation	94.38	178.11	180.11	180.11	180.11
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	303.05	567.70	570.44	570.44	570.44
Interest on working capital	11.65	21.50	21.93	22.30	22.65
O&M Expenses	130.28	235.03	243.27	251.82	260.65
Total	539.36	1002.34	1015.75	1024.67	1033.85

(₹ in lakh)

Asset-2	2019-20 (Pro-rata for 103 days)	2020-21	2021-22	2022-23	2023-24
Depreciation	54.74	219.88	238.96	238.96	238.96
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	178.21	673.34	693.94	693.94	693.94
Interest on working capital	6.84	25.73	26.76	27.21	27.62
O&M Expenses	76.44	281.16	291.01	301.24	311.80
Total	316.23	1200.11	1250.67	1261.35	1272.32

(₹ in lakh)

Asset-3	2019-20 (Pro-rata for 95 days)	2020-21	2021-22	2022-23	2023-24
Depreciation	42.10	180.28	193.96	193.96	193.96
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	137.24	556.67	571.49	571.49	571.49
Interest on working capital	5.23	21.24	22.02	22.39	22.73
O&M Expenses	58.21	232.14	240.27	248.72	257.44
Total	242.78	990.33	1027.74	1036.56	1045.62

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

(₹ in lakh)

Asset-1	2019-20 (Pro-rata for 210 days)	2020-21	2021-22	2022-23	2023-24
O&M Expenses	18.92	19.59	20.27	20.99	21.72
Maintenance Spares	34.06	35.25	36.49	37.77	39.10



Receivables	115.58	123.58	125.23	126.33	127.11
Total	168.56	178.42	181.99	185.09	187.93
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	11.65	21.50	21.93	22.30	22.65

(₹ in lakh)

Asset-2	2019-20 (Pro-rata for 103 days)	2020-21	2021-22	2022-23	2023-24
O&M Expenses	22.64	23.43	24.25	25.10	25.98
Maintenance Spares	40.74	42.17	43.65	45.19	46.77
Receivables	138.16	147.96	154.19	155.51	156.43
Total	201.54	213.56	222.09	225.80	229.18
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	6.84	25.73	26.76	27.21	27.62

(₹ in lakh)

Asset-3	2019-20 (Pro-rata for 95 days)	2020-21	2021-22	2022-23	2023-24
O&M Expenses	18.69	19.35	20.02	20.73	21.45
Maintenance Spares	33.64	34.82	36.04	37.31	38.62
Receivables	115.00	122.10	126.71	127.80	128.56
Total	167.33	176.27	182.77	185.84	188.63
Rate of Interest (in %)	12.05	12.05	12.05	12.05	12.05
Interest on Working Capital	5.23	21.24	22.02	22.39	22.73

Date of Commercial Operation (COD)

10. The Petitioner has claimed COD in respect of the transmission assets under Regulation 9 (1) of the 2019 Tariff Regulations as follows:

Asset	SCOD for the transmission asset	Completion of Trial run	COD claimed for the transmission asset
Asset-1	16.3.2019	3.9.2019	4.9.2019
Asset-2		19.12.2019	20.12.2019
Asset-3		27.12.2019	28.12.2019

11. In support of actual COD of the transmission assets, the Petitioner has submitted CEA Energisation Certificate dated 15.5.2019, 10.7.2019 and 16.5.2019, RLDC charging certificate dated 27.9.2019, 22.1.2020, 22.1.2020 certifying that trial operation completed on 3.9.2019, 19.12.2019 and 27.12.2019 and CMD certificate as required under Grid Code.



12. Taking into consideration CEA energisation certificate, RLDC charging certificate and CMD certificate as required under the Grid Code, COD of the transmission assets is approved as 4.9.2019, 20.12.2019 and 28.12.2019 for Asset-1, Asset-2 and Asset-3, respectively.

Capital Cost

13. Regulation 19 of the 2019 Tariff Regulations provides as follows:

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

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

- (a) *The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- (b) *Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*
- (c) *Any gain or loss on account of foreign exchange risk variation pertaining to the loan amount availed during the construction period;*
- (d) *Interest during construction and incidental expenditure during construction as computed in accordance with these regulations;*
- (e) *Capitalised Initial Spares subject to the ceiling rates in accordance with these regulations;*
- (f) *Expenditure on account of additional capitalization and de-capitalisation determined in accordance with these regulations;*
- (g) *Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the date of commercial operation as specified under Regulation 7 of these regulations;*
- (h) *Adjustment of revenue earned by the transmission licensee by using the Asset-before the date of commercial operation;*
- (i) *Capital expenditure on account of ash disposal and utilization including handling and transportation facility;*
- (j) *Capital expenditure incurred towards railway infrastructure and its augmentation for transportation of coal upto the receiving end of the generating station but does not include the transportation cost and any other appurtenant cost paid to the railway.*
- (k) *Capital expenditure on account of biomass handling equipment and facilities, for co-firing;*
- (l) *Capital expenditure on account of emission control system necessary to meet the revised emission standards and sewage treatment plant;*
- (m) *Expenditure on account of fulfilment of any conditions for obtaining environment clearance for the project;*



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

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

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

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

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

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

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

Provided that in case replacement of transmission Asset-is recommended by Regional Power Committee, such Asset-shall be decapitalised only after its redeployment.

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

- (c) In case of hydro generating stations, any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State Government by following a transparent process;
- (d) Proportionate cost of land of the existing project which is being used for generating power from generating station based on renewable energy; and



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

14. The Petitioner vide Auditor Certificate dated 15.11.2019 for Asset-1 and Auditor Certificate dated 20.2.2020 for Asset-2 and Asset-3 has claimed the following capital cost incurred as on COD and Additional Capital Expenditure (ACE) projected to be incurred during 2019-24 tariff period, in respect of the transmission assets:

Asset	Approved apportioned cost as per FR	Capital Cost claimed as on COD	Projected ACE		Estimated completion cost
			2019-20	2020-21	
Asset-1	18587.77	13081.54	1958.05	97.55	15137.14
Asset-2	18645.09	16338.32	1038.44	731.24	18108.00
Asset-3	18992.00	13726.72	697.59	526.36	14950.67
Total	56224.86	43146.58	3694.08	1355.15	48195.81

Cost Over-run

15. The estimated completion cost of the transmission assets based on the Auditors' certificates works out to be ₹48195.81 lakh including IEDC and IDC. Therefore, there is no cost over-run as per FR approved cost of ₹56224.86 lakh.

16. The Petitioner has submitted Form-5 and justification for cost reduction from FR cost of ₹56224.86 lakh to completion cost of ₹48195.81 lakh as on 31.3.2024.

17. The Petitioner has submitted that the overall estimated completion cost of the transmission assets is within the apportioned approved cost. Further, regarding variation in cost of individual item, the Petitioner has submitted that the packages under subject scope of works comprise of a large number of items and the same are awarded through open competitive bidding. In the said bidding process, bids are received from multiple parties quoting different rates for various BOQ items under the said package. The lowest bidder can be arrived at/ evaluated on overall basis only. Hence, item-wise unit prices in



contracts and its variation over unit rate considered in FR estimates are beyond the control of the Petitioner. Being a Government enterprise, the Petitioner has been following a well laid down procurement policy which ensures both transparency and competitiveness in the bidding process. Through this process, lowest possible market prices for required product/ services are obtained and contracts are awarded on the basis of lowest evaluated eligible bidder. The best competitive bid prices against tenders may vary as compared to the cost estimate depending upon prevailing market forces, bidder's perception and site requirements. Whereas, the estimates, are prepared by the Petitioner as per well-defined procedures. The FR cost estimate is broad indicative cost worked out generally on the basis of average unit rates of recently awarded contracts/general practice.

18. We have considered the submissions of the Petitioner. As compared with the total apportioned approved cost as per FR of ₹56224.86 lakh, the estimated completion cost is ₹48195.81 lakh as on 31.3.2024, which is within the apportioned approved cost. The individual asset wise cost also within FR cost. Therefore, there is no cost over-run in declaring the commercial operation of the transmission assets.

Time Over-run

19. As per the Investment Approval dated 16.9.2016, the transmission assets covered in the transmission project were schedule to be put into commercial operation within 30 months from the date of IA. Accordingly, the scheduled COD was 16.3.2019 against which the transmission assets were declared into commercial operation as follows:



Sl. No.	Name of Asset	SCOD as per IA	COD claimed	Time over-run as per IA (days)
1	Asset-1	16.3.2019	4.9.2019	172
2	Asset-2		20.12.2019	279
3	Asset-3		28.12.2019	287

20. The Petitioner has made the following submissions with respect to time over- run for the transmission assets:

- The Petitioner applied for PSDF grant vide letter dated 7.1.2016 for installation of STATCOM in Southern Region at an estimated cost of ₹47255 lakh (Based on the initial DPR cost at August' 2015 price level). Appraisal Committee and ED, NLDC vide letter dated 23.6.2016 had referred to funding of the schemes of the Petitioner under PSDF for installation of STATCOM in Northern and Southern Region submitted by the Petitioner at an estimated cost of ₹36770 lakh and ₹47255 lakh, respectively. As per the said letter, the schemes were deliberated by the Appraisal Committee headed by Chairperson, CEA in the Meeting held on 31.5.2016. The Committee was of the view that approval of the concerned RPC may be taken for further valuation.
- In the Special TCC Meeting held on 2.8.2016, TCC had recommended the proposal for funding through PSDF. It was decided that the Petitioner could take up the project by itself in case proposal was not approved through PSDF. However, all efforts should be made by the Petitioner for PSDF funding. SRPC approved the TCC recommendations in 30th SRPC meeting held on 27.8.2016.
- Subsequently, MoP vide its letter dated 22.5.2017 sanctioned PSDF Grant of ₹37804 lakh (80% of estimated cost of ₹47255 lakh at August, 2015 price level) under the subject project. As per the said sanction letter, the project was to be completed within 30 months from the date of release of first instalment. The said



sanction was conveyed by NLDC vide its letter dated 24.5.2017.

- After compliance of requisite formalities e.g., signing of agreement etc. of above said sanction from Ministry of Power (MoP), the Petitioner vide letter dated 11.10.2017 requested NLDC for release of the first instalment of PSDF grant. The first instalment of ₹3780.00 lakh was received by POWERGRID from NLDC on 23.11.2017.
- Accordingly, as per the sanction letter, the project was to be completed within 30 months from the date of release of first instalment (MoP letter dated 22.5.2017). The scheduled date of completion of Project comes to be 22.5.2020 against which the Project has been executed till 28.12.2019, which is 5 months before time.
- There is no time over-run in implementing the projects as all the transmission assets have been put into commercial operation within the schedule date as per PSDF grant approval letter. However, the reason of delay in declaring the commercial operation of the transmission assets with respect to IA is mainly attributable to delay in release of PSDF Funds, being provided by MoP.
- Subsequently, the Petitioner requested NLDC on 6.6.2018 for release of the second instalment of above said sanctioned PSDF grant. However, the release of funds was delayed for the project from MoP, due to which after September, 2018. The Petitioner was not in a position to release the payments both to offshore and onshore agencies.
- The bills were raised by the contractor as per the progress of the project. The Petitioner tried to clear the bills from time to time through its 20% portion of the estimated cost.



- However, due to non- availability of PSDF Grant from MoP/ NLDC, progress of the project was affected, especially during period from July, 2018 to February, 2019 when significant amounts of Bills had to be paid to the Contractor.
- The matter was taken up with the top management. Accordingly, in first week of January, 2019 there was a meeting in MoP (CMD & Director (F), PGCIL had participated) and it was noted they would authorize the Petitioner to raise the funds and the transactions would be taken care of. Finally, after persuasion, MoP granted authorization for raising Extra Budgetary Resources (EBR) by the Petitioner for PSDF vide letter dated 21.1.2019.
- In accordance with the MoP letter, the Petitioner raised funds through issue of Gol fully service bonds. On 14.2.2019, admissible amount (as part of 2nd and 3rd instalment requests dated 6.6.2018 and 1.2.2019 respectively) was sanctioned by NLDC for allocation from EBR raised.
- Thus, in view of the above, the completion schedule of the project was delayed for about 9 months beyond the original approved schedule as per IA. The Petitioner has also submitted the detailed chronology of events which led to the time over-run for about 9 months beyond the original approved schedule as per IA and the same is as follows:

Sl. No.	Item	Date
(i)	MoP letter for sanction of grant from PSDF	22.5.2017
(ii)	NLDC intimation regarding sanction of PSDF	24.5.2017
(iii)	Bilateral agreement with NLDC	11.9.2017
(iv)	Request for release of first instalment (10% of sanctioned PSDF) to NLDC	11.10.2017
(v)	Receipt of first instalment by POWERGRID from NLDC	23.11.2017
(vi)	Request for release of second instalment (20% of sanctioned PSDF) to NLDC	6.6.2018



Sl. No.	Item	Date
(vii)	NLDC letter intimating admissibility of second instalment of PSDF and release of funds to POWERGRID subject to receipt of PSDF from MoP	17.7.2018
(viii)	MoP/ MoF authorization for raising Extra Budgetary Resources (EBR) by POWERGRID for PSDF during the year 2018-19	21.1.2019
(ix)	Request for release of third instalment (<i>60% of sanctioned PSDF</i>) to NLDC	1.2.2019
(x)	POWERGRID raised funds amounting to ₹3,487.50 crore through issue of GoI Fully Serviced Bonds	14.2.2019
(xi)	Admissible amount (<i>as part of 2nd & 3rd instalment requests at Sl. Nos. (vi) & (ix) above</i>) sanctioned by NLDC for allocation from EBR raised	14.2.2019
(xii)	POWERGRID's claim for PSDF towards actual taxes incurred till 31.12.2018	20.2.2019
(xiii)	Claim for PSDF towards actual taxes (<i>Sl. No. (xii) above</i>) sanctioned for allocation from EBR	20.3.2019

21. TANGEDCO vide its affidavit dated 28.10.2021 has contended that the reasons stated by the Petitioner for the delay in declaring the commercial operation of the transmission assets does not fall under uncontrollable factors for deciding time over-run as per Regulation 22(2) of the 2019 Tariff Regulations. Hence, the reason provided by the Petitioner is not acceptable and the time over-run may not be condoned.

22. In response, the Petitioner has submitted that as per Clause 3(vii) of the PSDF sanction letter dated 22.5.2017 issued by the Central Government, the project was to be completed within 30 months from the date of release of first instalment of the grant and the first instalment of ₹3780 lakh was received from NLDC only on 23.11.2017. Therefore, the scheduled COD is 22.5.2020. Hence, there is no delay in COD of the transmission assets.

23. We have considered the submissions of the Petitioner and TANGEDCO. It is observed that MoP issued the sanction of grant from PSDF for installation of the instant transmission asset on 22.5.2017. As per Clause 3(vii) of the sanction order dated



22.5.2017, the project was to be completed within 30 months from the date of release of first instalment. The relevant portion of the order dated 22.5.2017 is quoted below.

“3. The terms and conditions for implementation of the aforesaid scheme shall be as below:

.....

(vii) PGCIL shall ensure that as assured by PGCIL in the scheme, the project gets completed within 30 months from the date of release of first instalment”

24. As per the documents submitted by the Petitioner, it is observed that the first instalment was released on 23.11.2017. Accordingly, the scheduled completion date of the transmission assets is 21.5.2020. Hence, there is no time over-run in implementation of the transmission assets.

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

25. The Petitioner has submitted that the entire project is funded through PSDF grant up to 80% of accepted Estimated Cost.

26. The remaining 20% balance left is through the internal resources and there is no deployment of loan. Accordingly, Petitioner has claimed “NIL” IDC for the instant assets and has submitted the Auditor certificates in support of the same.

27. TANGEDCO has submitted that IEDC for the delayed period can only be allowed if the delay is regarding uncontrollable factors, which is not the case in the present matter, hence IEDC in respect of all the assets ought to be disallowed.

28. In response, the Petitioner has reiterated its submissions on account of time over-run and has submitted that the delay in declaring the commercial operation of the transmission assets with respect to IA was mainly attributable to the delay in release of PSDF Funds, being provided by MoP and the chronological delay reasons along with



delay documents has been submitted in the instant petition and affidavit dated 15.9.2021. Thus, the time over-run was beyond the control of the Petitioner.

29. The Petitioner has claimed IEDC of ₹206.02 lakh, ₹420.98 lakh and ₹332.29 lakh in respect of Asset-1, Asset-2 and Asset-3 and has submitted Auditors Certificate in support of same. The Petitioner has further submitted that, in the IA, 10.75% and 3% of Equipment cost and Civil Works has been considered for IEDC and Contingency respectively, whereas based on the actual/ anticipated expenditure under the subject head, IEDC has been considered in the Auditor Certificate.

30. The details of claimed and allowed IEDC are as follows: -

Particulars	(₹ in lakh)		
	IEDC Claimed (As per Auditor Certificate)	IEDC disallowed due to time overrun not condoned	IEDC allowed as on COD
	1	2	3=(1-2)
Asset-1	206.02	0.00	206.02
Asset-2	420.98	0.00	420.98
Asset-3	332.29	0.00	332.29

31. However, it is observed that, the Petitioner has not submitted any justification as to why entire IEDC has not been funded through internal sources or covered in grants. The Petitioner is directed to submit proper justification for the claimed IEDC at the time of truing up and the same will be reviewed at the time of truing up.

Initial Spares

32. Regulation 23(d) of the 2019 Tariff Regulations provides as follows:

“23. Initial Spares: Initial spares shall be capitalised as a percentage of the Plant and Machinery cost, subject to the following ceiling norms:

*....
(d) Transmission system*

(i) Transmission line - 1.00%

(ii) Transmission Sub-station



- Green Field - 4.00%
- Brown Field - 6.00%

- (iii) Series Compensation devices and HVDC Station - 4.00%
- (iv) Gas Insulated Sub-station (GIS)
 - Green Field - 5.00%
 - Brown Field - 7.00%
- (v) Communication system - 3.50%
- (vi) Static Synchronous Compensator 6.00%

33. The Petitioner has claimed the Initial Spares in respect of the transmission assets as follows:

Particulars	Plant & Machinery cost (excluding IDC/IEDC, Land cost and cost of civil works) (A)	Initial Spares Claimed (B)	Ceiling Limit (in %) (C)	Initial Spares Worked Out	Excess Initial Spares
				$D = \frac{(A-B)C}{100-C}$	
Asset-1	14931.12	839.96	6.00	899.44	0.00
Asset-2	17043.30	954.42	6.00	1026.95	0.00
Asset-3	13821.09	773.98	6.00	832.79	0.00

34. We have considered the submission of the Petitioner. The Initial Spares are allowable subject to the ceiling specified in Regulation 23(d)(vi) of the 2019 Tariff Regulations. The Petitioner's claim of Initial Spares is within the ceiling limit specified in Regulation 23(d)(vi) of the 2019 Tariff Regulations. Accordingly, the details of the Initial Spares allowed in respect of the transmission assets for 2019-24 tariff period are as follows:

Static synchronous

Asset	P&M cost considered as on cut-off date	Initial Spares claimed	Norms as per 2019 Tariff Regulations (in %)	Initial Spares allowable as per 2019 Tariff Regulations	Initial Spares allowed
Asset-1	14931.12	839.96	6.00	899.44	839.96
Asset-2	17043.30	954.42	6.00	1026.95	954.42
Asset-3	13821.09	773.98	6.00	832.79	773.98



Treatment of PSDF Grant

35. The MoP, Government of India vide sanction letter dated 22.5.2017, sanctioned an amount of ₹37804 lakh as grant from PSDF towards the transmission project. The sanction letter dated 22.5.2017, *inter-alia*, stated the terms and conditions for the implementation of the transmission project as follows:

“3.....

(ii) No tariff shall be claimed by PGCIL for the portion of the scheme funded from PSDF.

.....

(vi) Expenditure beyond of ₹378.04 crore shall be provided by PGCIL from their own resources.

.....”

36. The Petitioner has submitted that the total grant of ₹37494 lakh towards STATCOM project has been received and the details of grant adjustment is as follows:

(₹ in lakh)

Asset	Grant adjusted at COD	Grant adjusted at Add-Cap 2019-20	Grant adjusted at Add-Cap 2020-21	Grant Received
Asset-1	10465.23	1566.45	22.06	12053.74
Asset-2	13070.66	830.75	0.00	13901.41
Asset-3	10981.38	558.07	0.00	11539.45
Total	34517.27	2955.27	22.06	37494.60

37. Proviso (iii) of Regulation 18(1) of the 2019 Tariff Regulations provides as follows:

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

38. In line with the 2019 Tariff Regulations, the entire grant received under PSDF has been reduced from the allowable cost as on COD and allowable ACE for the purpose of computation of tariff and the same has been considered in the relevant paragraph of the order.

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



(₹ in lakh)

Asset	Capital Cost as on COD (A)	Less: PSDF Grant received as on COD (B)	Capital Cost allowed as (C)= (A-B)
Asset-1	13081.54	10465.23	2616.31
Asset-2	16338.32	13070.66	3267.66
Asset-3	13726.72	10981.37	2745.35

Additional Capital Expenditure (ACE)

40. Regulation 24 and Regulation 25 of the 2019 Tariff Regulations provide as follows:

"24. Additional Capitalisation within the original scope and up to the cut-off date:

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

(a) Undischarged liabilities recognized to be payable at a future date;

(b) Works deferred for execution;

(c) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 23 of these regulations;

(d) Liabilities to meet award of arbitration or for compliance of the directions or order of any statutory authority or order or decree of any court of law;

(e) Change in law or compliance of any existing law; and

(f) Force Majeure events:

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

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

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

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



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

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

(a) The useful life of the assets is not commensurate with the useful life of the project and such assets have been fully depreciated in accordance with the provisions of these regulations.

(b) The replacement of the asset or equipment is necessary on account of change in law or Force Majeure conditions;

(c) The replacement of such asset or equipment is necessary on account of

(d) The replacement of such asset or equipment has otherwise been allowed by the Commission.”

41. The Petitioner has claimed ACE on account of balance and retention payments in accordance with Regulation 24 of the 2019 Tariff Regulations as follows:

(₹ in lakh)			
Asset	Particulars	ACE claimed for 2019-20	ACE claimed for 2020-21
Asset-1	Expenditure as per Auditor Certificate	1958.06	97.55
	Less: Grant received during the year	1566.45	22.06
Asset-2	Expenditure as per Auditor Certificate	1038.44	731.24
	Less: Grant received during the year	830.76	0.00
Asset-3	Expenditure as per Auditor Certificate	697.59	526.36
	Less: Grant received during the year	558.07	0.00

42. We have considered the submissions of the Petitioner. ACE claimed by the



Petitioner towards balance and retention payments is allowed under Regulation 24 of the 2019 Tariff Regulations. ACE allowed for 2019-24 tariff period in respect of transmission assets is as follows:

(₹ in lakh)			
Asset	Particulars	ACE claimed for 2019-20	ACE claimed for 2020-21
Asset-1	Expenditure as per Auditor Certificate	1958.06	97.55
	Less: Grant received during the year	1566.45	22.06
Asset-2	Expenditure as per Auditor Certificate	1038.44	731.24
	Less: Grant received during the year	830.76	0.00
Asset-3	Expenditure as per Auditor Certificate	697.59	526.36
	Less: Grant received during the year	558.07	0.00

43. Accordingly, the capital cost considered for the 2019-24 tariff period is as follows:

(₹ in lakh)			
Asset	Admitted Capital Cost (as on COD)	ACE allowed (2019-24)	Total Capital Cost (as on 31.3.2024)
Asset-1	2616.31	467.10	3083.41
Asset-2	3267.66	938.92	4206.58
Asset-3	2745.35	665.88	3411.23
Total	8629.32	2071.9	10701.22

Debt-Equity Ratio

44. Regulations 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.”

45. TANGEDCO has submitted that the claim of the Petitioner is not in line with the Regulations, the Commission may negate the imprudent claim of the Petitioner and the grant received shall not be considered as part of capital structure for the purpose of debt-equity ratio. TANGEDCO has further submitted that as per 2019 Tariff Regulations, in



the capital cost arrived after the grant adjustment, the equity in excess of 30% shall be treated as normative loan. The IoL and RoE should be allowed accordingly in the loan: Equity portion arrived after deducting the grant from the capital structure. In support of its submissions, TANGEDCO has placed reliance on the Commission's order dated 14.4.2020 in Petition No. 34/TT/2019 wherein the Commission had observed that the CFA grant received for an amount of ₹153 lakh as per the debt: equity as 70:30.

46. In response, the Petitioner has submitted that the Petitioner applied for PSDF fund for SRSS-XXI vide letter dated 7.1.2016 wherein 80% of the equity was to be procured through PSDF and the rest 20% was to be contributed from internal resources of PGCIL. The Petitioner has submitted the following details of the proposed financial implication of the scheme applied by it:

S. No	Item	Amount in ₹
1	Total Cost Estimate	472.55 crore
2	Funding Proposed from PSDF	80% (₹ 378.04 Crore)
3	Contribution from internal Sources	20%
4	External Borrowings	Nil

47. The Petitioner has submitted that the PSDF grant was sanctioned vide letter dated 22.5.2017 wherein it was mentioned that "*expenditure beyond ₹378.04 crore shall be provided by PGCIL from their own resources*". The Petitioner has further submitted that in the instant petition, the received grant is considered as part of the debt portion for funding and the balance amount of capital cost is considered as the Equity portion. Accordingly, the Petitioner has submitted that the contentions of the TANGEDCO is without any merit and has prayed to the Commissions to admit the capital structure of the project as grant and equity as per the PSDF grant letter and allow RoE as claimed to 30% of the capital cost before the adjustment of grant.



48. We have considered the submissions of the Petitioner and TANGEDCO. It is observed that, the Petitioner has not considered any loan considering the PSDF grant. Further, the Commission vide order dated 18.10.2021 in Petition No. 658/TT/2020 has considered PSDF grant and determined the debt:equity ratio as follows:

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

Asset	Funding	Capital Cost as on COD (₹ in lakh)	(in %)	Total Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Asset-I	Debt	0.00	0	0.00	0
	Equity	1051.04	100	1449.66	100
	Total	1051.04	100	1449.66	100
Asset-II	Debt	0.00	0	0.00	0
	Equity	885.47	100	1487.63	100
	Total	885.47	100	1487.63	100
Asset-III	Debt	0.00	0	0.00	0
	Equity	983.00	100	1613.90	100
	Total	983.00	100	1613.90	100
Asset-IV	Debt	0.00	0	0.00	0
	Equity	1206.07	100	1420.87	100
	Total	1206.07	100	1420.87	100

49. Accordingly, we have determined the debt:equity ratio in line with the above order.

50. The Petitioner has submitted that grant is considered as part of debt portion for funding at COD and the balance amount is considered as the equity portion as follows:

Asset-1

(₹ in lakh)				
Expenditure	Grant adjustment	Expenditure Excluding Grant	Equity considered	Equity as % of Capital cost
13081.54	10465.23	2616.31	2616.31	20
Est. Expenditure 2019-20				
Expenditure	Grant adjustment	Expenditure Excluding Grant	Equity considered	Equity as % of Capital cost
1958.06	1566.45	391.61	391.61	20
Est. Expenditure 2020-21				



Expenditure	Grant adjustment	Expenditure Excluding Grant	Equity considered	Equity as % of Capital cost
97.55	22.06	75.49*	29.27	30

*The Balance amount of ₹46.22 lakh (₹75.49 lakh – ₹29.27 lakh) will be included in the debt portion and Grant/ Loans will be adjusted as applicable at the time of Truing up.

Asset-2

(₹ in lakh)

Expenditure upto COD				
Expenditure	Grant adjustment	Expenditure Excluding Grant	Equity considered	Equity as % of Capital cost
16338.32	13070.66	3267.66	3267.66	20
Est. Expenditure 2019-20				
Expenditure	Grant adjustment	Expenditure Excluding Grant	Equity considered	Equity as % of Capital cost
1038.44	830.76	207.68	207.68	20
Est. Expenditure 2020-21				
Expenditure	Grant adjustment	Equity considered	Equity as % of Capital cost	
731.24	-	219.37	30 *	

*The Balance amount of ₹511.87 lakh (70% Estimated Expenditure) will be included in the debt portion and will be adjusted at the time of Truing up.

Asset-3

(₹ in lakh)

Expenditure upto COD				
Expenditure	Grant adjustment	Expenditure Excluding Grant	Equity considered	Equity as % of Capital cost
13726.72	10981.38	2745.34	2745.34	20
Est. Expenditure 2019-20				
Expenditure	Grant adjustment	Expenditure Excluding Grant	Equity considered	Equity as % of Capital cost
697.59	558.07	139.52	139.52	20
Est. Expenditure 2020-21				
Expenditure	Grant adjustment	Equity considered	Equity as % of capital cost	
526.36	-	157.91	30 *	

*The Balance amount of ₹368.45 lakh (70% Estimated Expenditure) will be included in the debt portion and will be adjusted at the time of Truing up.

51. The Petitioner has claimed that capital cost was met from the grant to the extent of 80% i.e. ₹37804 lakh and balance through internal resources as per with the terms and conditions of the MoP letter dated 27.5.2020. We have considered equity in ACE in line with the Petitioner's submission. Accordingly, the details of the debt-equity ratio as



on COD and as on 31.3.2024 for the transmission assets are as follows:

Asset	Funding	Capital Cost as on COD (₹ in lakh)	(in %)	Total Capital Cost as on 31.3.2024 (₹ in lakh)	(in %)
Asset-1	Debt	0.00	0.00	46.22	1.50
	Equity	2616.31	100.00	3037.19	98.50
	Total	2616.31	100.00	3083.41	100.00
Asset-2	Debt	0.00	0.00	511.87	12.17
	Equity	3267.66	100.00	3694.71	87.83
	Total	3267.66	100.00	4206.58	100.00
Asset-3	Debt	0.00	0.00	368.45	10.80
	Equity	2745.35	100.00	3042.78	89.20
	Total	2745.35	100.00	3411.23	100.00

Depreciation

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

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

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

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

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

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

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



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

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

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

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

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

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

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

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

53. We have considered the submissions of the Petitioner. The IT equipment has been considered as part of the Gross Block and depreciated using Weighted Average Rate of Depreciation (WAROD). WAROD at Annexure-I has been worked out after considering the depreciation rates of IT and non-IT assets as specified in the 2019 Tariff Regulations. The salvage value of IT equipment has been considered nil, i.e. IT asset has been considered as 100% depreciable. The depreciation allowed for the transmission assets for the 2019-24 tariff period is as follows:

(₹ in lakh)

Asset-1						
	Particulars	2019-20 (Pro-rata for 210 days)	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	2616.31	3007.92	3083.41	3083.41	3083.41
B	Addition during the year 2019-24 due to projected ACE	391.61	75.49	0.00	0.00	0.00
C	Closing Gross Block (A+B)	3007.92	3083.41	3083.41	3083.41	3083.41
D	Average Gross Block (A+C)/2	2812.12	3045.67	3083.41	3083.41	3083.41
E	Average Gross Block (90% depreciable assets)	2647.33	2867.70	2905.44	2905.44	2905.44
F	Average Gross Block (100% depreciable assets)	164.79	177.97	177.97	177.97	177.97
G	Depreciable value (excluding IT equipment and software) (E*90%)	2382.60	2580.93	2614.90	2614.90	2614.90
H	Depreciable value of IT equipment and software	164.79	177.97	177.97	177.97	177.97
I	Total Depreciable Value (G+H)	2547.38	2758.90	2792.87	2792.87	2792.87
J	Weighted average rate of Depreciation (WAROD) (in %)	5.85	5.85	5.84	5.84	5.84
K	Elapsed useful life at the beginning of the year (Year)	0.00	0.00	1.00	2.00	3.00
L	Balance useful life at the beginning of the year (Year)	24.00	24.00	23.00	22.00	21.00
M	Depreciation during the year(D*J)	94.38	178.11	180.10	180.10	180.10



N	Aggregate Cumulative Depreciation at the end of the year	94.38	272.49	452.60	632.70	812.80
O	Remaining Aggregate Depreciable Value at the end of the year(I-N)	2453.00	2486.40	2340.27	2160.17	1980.06

(₹ in lakh)

Asset-2						
	Particulars	2019-20 (Pro-rata for 103 days)	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	3267.66	3475.34	4206.58	4206.58	4206.58
B	Addition during the year 2019-24 due to projected ACE	207.68	731.24	0.00	0.00	0.00
C	Closing Gross Block (A+B)	3475.34	4206.58	4206.58	4206.58	4206.58
D	Average Gross Block (A+C)/2	3371.50	3840.96	4206.58	4206.58	4206.58
E	Average Gross Block (90% depreciable assets)	3177.94	3637.48	4003.10	4003.10	4003.10
F	Average Gross Block (100% depreciable assets)	193.57	203.48	203.48	203.48	203.48
G	Depreciable value (excluding IT equipment and software)(E*90%)	2860.14	3273.73	3602.79	3602.79	3602.79
H	Depreciable value of IT equipment and software	193.57	203.48	203.48	203.48	203.48
I	Total Depreciable Value (G+H)	3053.71	3477.21	3806.27	3806.27	3806.27
J	Weighted average rate of Depreciation (WAROD) (in %)	5.77	5.72	5.68	5.68	5.68
K	Elapsed useful life at the beginning of the year (Year)	0.00	0.00	1.00	2.00	3.00
L	Balance useful life at the beginning of the year (Year)	24.00	24.00	23.00	22.00	21.00
M	Depreciation during the year(D*J)	54.74	219.88	238.96	238.96	238.96
N	Aggregate Cumulative Depreciation at the end of the year	54.74	274.62	513.59	752.55	991.51
O	Remaining Aggregate Depreciable Value at the end of the year(I-N)	2998.97	3202.59	3292.68	3053.72	2814.76



Asset-3						
	Particulars	2019-20 (Pro-rata for 95 days)	2020-21	2021-22	2022-23	2023-24
A	Opening Gross Block	2745.35	2884.87	3411.23	3411.23	3411.23
B	Addition during the year 2019-24 due to projected ACE	139.52	526.36	0.00	0.00	0.00
C	Closing Gross Block (A+B)	2884.87	3411.23	3411.23	3411.23	3411.23
D	Average Gross Block (A+C)/2	2815.11	3148.05	3411.23	3411.23	3411.23
E	Average Gross Block (90% depreciable assets)	2645.16	2969.31	3232.49	3232.49	3232.49
F	Average Gross Block (100% depreciable assets)	169.96	178.74	178.74	178.74	178.74
G	Depreciable value (excluding IT equipment and software)(E*90%)	2380.64	2672.38	2909.24	2909.24	2909.24
H	Depreciable value of IT equipment and software	169.96	178.74	178.74	178.74	178.74
I	Total Depreciable Value (G+H)	2550.59	2851.12	3087.98	3087.98	3087.98
J	Weighted average rate of Depreciation (WAROD) (in %)	5.76	5.73	5.69	5.69	5.69
K	Elapsed useful life at the beginning of the year (Year)	0.00	0.00	1.00	2.00	3.00
L	Balance useful life at the beginning of the year (Year)	24.00	24.00	23.00	22.00	21.00
M	Depreciation during the year(D*J)	42.09	180.29	193.96	193.96	193.96
N	Aggregate Cumulative Depreciation at the end of the year	42.09	222.38	416.34	610.30	804.26
O	Remaining Aggregate Depreciable Value at the end of the year(I-N)	2508.50	2628.74	2671.64	2477.68	2283.72

Interest on Loan (IoL)

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

Return on Equity (RoE)

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

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

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating



station, transmission system including communication system and run-of-river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run-of-river generating station with pondage:

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

Provided further that:

- i. In case of a new project, the rate of return on equity shall be reduced by 1.00% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO) or Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system based on the report submitted by the respective RLDC;*
- ii. in case of existing generating station, as and when any of the requirements under (i) above of this Regulation are found lacking based on the report submitted by the concerned RLDC, rate of return on equity shall be reduced by 1.00% for the period for which the deficiency continues;*
- iii. in case of a thermal generating station, with effect from 1.4.2020:*
 - a) rate of return on equity shall be reduced by 0.25% in case of failure to achieve the ramp rate of 1% per minute;*
 - b) an additional rate of return on equity of 0.25% shall be allowed for every incremental ramp rate of 1% per minute achieved over and above the ramp rate of 1% per minute, subject to ceiling of additional rate of return on equity of 1.00%:*

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

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

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



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

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

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

Illustration-

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

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

(ii) In case of a generating company or a transmission licensee paying normal corporate tax including surcharge and cess:

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

(b) Estimated Advance Tax for the year on above is Rs 240 crore;

(c) Effective Tax Rate for the year 2019-20 = Rs 240 Crore / Rs 1000 Crore = 24%;

(d) Rate of return on equity = $15.50 / (1 - 0.24) = 20.395\%$.

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2019-24 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee, as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after trueing up, shall be recovered or refunded to beneficiaries or the long term customers, as the case may be, on year to year basis.”

56. The Petitioner has submitted that it is liable to pay Income Tax at MAT rate specified under the Taxation laws (Amendment) Ordinance, 2019. Further, RoE has been calculated @18.782% after grossing up RoE with MAT rate of 17.472% (Base Rate 15% + Surcharge 12% + Cess 4%) based on the formula given in Regulation 31(2) of the 2019 Tariff Regulations for 2019-24 tariff period. As per Regulation 31(3) of the 2019 Tariff Regulations, the grossed-up rate of RoE at the end of every financial year shall be



trued-up based on actual tax paid together with any additional tax demand including interest thereon duly adjusted for any refund of tax including interest received from the IT authorities pertaining to 2019-24 tariff period on actual gross income. However, if any penalty arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the Petitioner. Any under-recovery or over-recovery of grossed-up rate on RoE after truing up shall be recovered or refunded to beneficiaries or the long term customers on yearly basis. The Petitioner has further submitted that any adjustment due to additional tax demand including interest duly adjusted for any refund of tax including interest received from IT authorities shall be recoverable/ adjustable during 2019-24 tariff period on yearly basis on receipt of Income Tax assessment order.

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

(₹ in lakh)

		Asset-1				
	Particulars	2019-20 (Pro-rata for 210 days)	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	2616.31	3007.92	3037.19	3037.19	3037.19
B	Addition due to ACE	391.61	29.27	0.00	0.00	0.00
C	Closing Equity (A+B)	3007.92	3037.19	3037.19	3037.19	3037.19
D	Average Equity(A+B)/2	2812.12	3022.56	3037.19	3037.19	3037.19
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (Pre-tax)	18.782	18.782	18.782	18.782	18.782
H	Return on Equity (Pre-tax)	303.05	567.70	570.45	570.45	570.45



(₹ in lakh)

Asset-2						
	Particulars	2019-20 (Pro-rata for 103 days)	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	3267.66	3475.34	3694.71	3694.71	3694.71
B	Addition due to ACE	207.68	219.37	0.00	0.00	0.00
C	Closing Equity (A+B)	3475.34	3694.71	3694.71	3694.71	3694.71
D	Average Equity(A+B)/2	3371.50	3585.03	3694.71	3694.71	3694.71
E	Return on Equity (Base Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (Pre-tax)	18.782	18.782	18.782	18.782	18.782
H	Return on Equity (Pre-tax)	178.21	673.34	693.94	693.94	693.94

(₹ in lakh)

Asset-3						
	Particulars	2019-20 (Pro-rata for 95 days)	2020-21	2021-22	2022-23	2023-24
A	Opening Equity	2745.35	2884.87	3042.78	3042.78	3042.78
B	Addition due to ACE	139.52	157.91	0.00	0.00	0.00
C	Closing Equity (A-B)	2884.87	3042.78	3042.78	3042.78	3042.78
D	Average Equity(A+B)/2	2815.11	2963.82	3042.78	3042.78	3042.78
E	Return on Equity (Rate) (in %)	15.500	15.500	15.500	15.500	15.500
F	Tax Rate applicable (in %)	17.472	17.472	17.472	17.472	17.472
G	Rate of Return on Equity (Pre-tax)	18.782	18.782	18.782	18.782	18.782
H	Return on Equity (Pre-tax)	137.24	556.67	571.49	571.49	571.49

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

58. The Petitioner has considered the capital cost as on cut-off date for claiming O&M Expenses for the transmission assets which are Static Synchronous Compensators (STATCOM). The O&M Expenses claimed by the Petitioner for the transmission assets for 2019-24 period are as follows:

(₹ in lakh)

Asset-1						
	Particulars	2019-20 (Pro-rata for 210 days)	2020-21	2021-22	2022-23	2023-24
STATCOM at Hyderabad						
	Project Cost Considered by the Petitioner	15137.14	15137.14	15137.14	15137.14	15137.14



Norms (in %)	1.5000	1.5527	1.6071	1.6636	1.7219
Total O&M Expenses (₹ in lakh)	130.28	235.03	243.27	251.82	260.65

(₹ in lakh)

Asset-2					
Particulars	2019-20 Pro-rata for 103 days	2020-21	2021-22	2022-23	2023-24
STATCOM at Udumalpet					
Project Cost Considered by the Petitioner	18108.00	18108.00	18108.00	18108.00	18108.00
Norms (in %)	1.5000	1.5527	1.6071	1.6636	1.7219
Total O&M Expenses (₹ in lakh)	76.44	281.16	291.01	301.24	311.80

(₹ in lakh)

Asset-3					
Particulars	2019-20 (Pro-rata for 95 days)	2020-21	2021-22	2022-23	2023-24
STATCOM at Trichy					
Project Cost Considered by the Petitioner	14950.67	14950.67	14950.67	14950.67	14950.67
Norms (in %)	1.5000	1.5527	1.6071	1.6636	1.7219
Total O&M Expenses (₹ in lakh)	58.21	232.14	240.27	248.72	257.44

59. We have considered the submissions made by the Petitioner. Regulation 35(3)(a) and Regulation 35(4) of the 2019 Tariff Regulations provide as follows:

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

Particulars	2019-20	2020-21	2021-22	2022-23	2023-24
Norms for sub-station Bays (₹ Lakh per bay)					
765 kV	45.01	46.60	48.23	49.93	51.68
400 kV	32.15	33.28	34.45	35.66	36.91
220 kV	22.51	23.30	24.12	24.96	25.84
132 kV and below	16.08	16.64	17.23	17.83	18.46
Norms for Transformers (₹ Lakh per MVA)					
765 kV	0.491	0.508	0.526	0.545	0.564
400 kV	0.358	0.371	0.384	0.398	0.411
220 kV	0.245	0.254	0.263	0.272	0.282
132 kV and below	0.245	0.254	0.263	0.272	0.282



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

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

Provided further that:

- i. the operation and maintenance expenses for new HVDC bi-pole schemes commissioned after 1.4.2019 for a particular year shall be allowed pro-rata on the*



basis of normative rate of operation and maintenance expenses of similar HVDC bi-pole scheme for the corresponding year of the tariff period;

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

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

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

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

(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.”*

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

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



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

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

“3(45) ‘Operation and Maintenance Expenses’ or ‘O&M expenses’ means the expenditure incurred for operation and maintenance of the project, or part thereof, and includes the expenditure on manpower, maintenance, repairs and maintenance spares, consumables, insurance and overheads and fuel other than used for generation of electricity:

Provided that for integrated mine(s), the Operation & Maintenance Expenses shall not include the mining charge paid to the Mine Developer and Operator, if any, engaged by the generating company and the mine closure expenses.”

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

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



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

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

66. Accordingly, the O&M Expenses allowed for the transmission assets are as follows:

(₹ in lakh)					
Asset-1					
Particulars	2019-20 (Pro-rata for 210 days)	2020-21	2021-22	2022-23	2023-24
STATCOM at Hyderabad					
Plant and Machinery cost upto cut-off date	14091.16	14091.16	14091.16	14091.16	14091.16
Norms (in %)	1.5000	1.5527	1.6071	1.6636	1.7219
Total O&M Expenses (₹ in lakh)	121.28	218.79	226.46	234.42	242.64

(₹ in lakh)					
Asset-2					
Particulars	2019-20 (Pro-rata for 103 days)	2020-21	2021-22	2022-23	2023-24
STATCOM at Udumalpet					
Plant and Machinery cost upto cut-off date	16088.88	16088.88	16088.88	16088.88	16088.88
Norms (in %)	1.5000	1.5527	1.6071	1.6636	1.7219
Total O&M Expenses (₹ in lakh)	67.92	249.81	258.56	267.65	277.03



Asset-3					
Particulars	2019-20 (Pro-rata for 95 days)	2020-21	2021-22	2022-23	2023-24
STATCOM at Trichy					
Plant and Machinery cost upto cut-off date	13047.11	13047.11	13047.11	13047.11	13047.11
Norms (in %)	1.5000	1.5527	1.6071	1.6636	1.7219
Total O&M Expenses (₹ in lakh)	50.80	202.58	209.68	217.05	224.66

Interest on Working Capital (“IWC”)

67. Regulation 34(1)(c), Regulation 34(3) and Regulation 34(4) and Regulation 3(7) of the 2019 Tariff Regulations provide 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. Definition - *In these regulations, unless the context otherwise requires:-*

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



68. The Petitioner has submitted that it has computed IWC for 2019-24 period considering the SBI Base Rate plus 350 basis points as on 1.4.2019. The Petitioner has considered the rate of IWC as 12.05%. IWC is worked out in accordance with Regulation 34 of the 2019 Tariff Regulations. The rate of IWC considered is 12.05% (SBI 1-year MCLR applicable as on 1.4.2019 of 8.55% plus 350 basis points) for 2019-20, 11.25% (SBI 1-year MCLR applicable as on 1.4.2020 of 7.75% plus 350 basis points) for 2020-21, 10.50% (SBI 1-year MCLR applicable as on 1.4.2021 of 7.00% plus 350 basis points) for 2021-22 and 10.60% (SBI 1-year MCLR applicable as on 1.4.2022 of 7.10% plus 350 basis points) for 2022-24. The components of the working capital and interest allowed thereon is as follows:

(₹ in lakh)

Asset-1					
Particulars	2019-20 (Pro-rata for 210 days)	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for one month)	17.61	18.23	18.87	19.54	20.22
Working Capital for Maintenance Spares (15% of O&M Expenses)	31.71	32.82	33.97	35.16	36.40
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost / annual transmission charges)	113.57	121.31	122.73	123.77	124.47
Total Working Capital	162.88	172.37	175.57	178.46	181.09
Rate of Interest for working capital (in %)	12.05	11.25	10.50	10.60	10.60
Interest of working capital	11.26	19.39	18.43	18.92	19.20

(₹ in lakh)

Asset-2					
Particulars	2019-20 (Pro-rata for 103 days)	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for one month)	20.11	20.82	21.55	22.30	23.09



Working Capital for Maintenance Spares (15% of O&M Expenses)	36.20	37.47	38.78	40.15	41.56
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost /annual transmission charges)	134.27	143.72	149.61	150.80	151.58
Total Working Capital	190.58	202.01	209.94	213.25	216.22
Rate of Interest for working capital (in %)	12.05	11.25	10.50	10.60	10.60
Interest of working capital	6.46	22.73	22.04	22.60	22.92

(₹ in lakh)

Asset-3					
Particulars	2019-20 (Pro-rata for 95 days)	2020-21	2021-22	2022-23	2023-24
Working Capital for O&M Expenses (O&M Expenses for one month)	16.31	16.88	17.47	18.09	18.72
Working Capital for Maintenance Spares (15% of O&M Expenses)	29.36	30.39	31.45	32.56	33.70
Working Capital for Receivables (Equivalent to 45 days of annual fixed cost /annual transmission charges)	111.33	118.13	122.44	123.41	124.04
Total Working Capital	157.00	165.40	171.37	174.05	176.46
Rate of Interest for working capital (in %)	12.05	11.25	10.50	10.60	10.60
Interest of working capital	4.91	18.61	17.99	18.45	18.70

Annual Fixed Charges for the 2019-24 Tariff Period

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

(₹ in lakh)

Asset-1					
Particulars	2019-20 (Pro-rata for 210 days)	2020-21	2021-22	2022-23	2023-24
Depreciation	94.38	178.11	180.10	180.10	180.10
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	303.05	567.70	570.45	570.45	570.45
Operation and Maintenance Expense	121.28	218.79	226.46	234.42	242.64
Interest on Working Capital	11.26	19.39	18.43	18.92	19.20
Total	529.97	983.99	995.44	1003.89	1012.38



(₹ in lakh)

Asset-2					
Particulars	2019-20 (Pro-rata for 103 days)	2020-21	2021-22	2022-23	2023-24
Depreciation	54.74	219.88	238.96	238.96	238.96
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	178.21	673.34	693.94	693.94	693.94
Operation and Maintenance Expense	67.92	249.81	258.56	267.65	277.03
Interest on Working Capital	6.46	22.73	22.04	22.60	22.92
Total	307.32	1165.76	1213.51	1223.16	1232.86

(₹ in lakh)

Asset-3					
Particulars	2019-20 (Pro-rata for 95 days)	2020-21	2021-22	2022-23	2023-24
Depreciation	42.09	180.29	193.96	193.96	193.96
Interest on Loan	0.00	0.00	0.00	0.00	0.00
Return on Equity	137.24	556.67	571.49	571.49	571.49
Operation and Maintenance Expense	50.80	202.58	209.68	217.05	224.66
Interest on Working Capital	4.91	18.61	17.99	18.45	18.70
Total	235.04	958.14	993.13	1000.96	1008.82

Filing Fee and Publication Expenses

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

Licence Fee and RLDC Fees and Charges

71. The Petitioner shall be entitled for reimbursement of licence fee 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 fee and charges in accordance with Regulations 70(3) of the 2019 Tariff Regulations for 2019-24 tariff period.



Goods and Services Tax

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

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

Security Expenses

74. The Petitioner has submitted that security expenses in respect of transmission asset are not claimed in the instant petition, and it would file a separate petition for claiming the overall security expenses and the consequential IWC.

75. We have considered the above submissions of Petitioner. The Petitioner has 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.

Capital Spares

76. 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

77. TANGEDCO has submitted that in the circumstances of coming into force of 2020 Sharing Regulations, it has become inevitable to segregate the capital cost of the assets in to 2010 Sharing Regulations regime and 2020 Sharing Regulations regime. TANGEDCO has also submitted that the Commission in its order dated 25.7.2016 in Petition No.102/TT/2016, had directed to split the capital cost under two heads viz. Pre-PoC and Post-PoC i.e. up to 30.6.2011 and beyond 30.6.2011 respectively. Further, the components of the tariff had also been reworked based on the splitting of the capital cost based on Pre-PoC and Post-PoC regime.

78. TANGEDCO has submitted that based on the above principle, there is a need to split the capital cost including ACE based on the 2010 Sharing Regulations and the 2020 Sharing Regulations 2020 i.e. up to 31.12.2020 and from 1.1.2021 onwards. The Yearly Transmission Charges (YTC) up to 31.12.2020 and from 1.1.2021 onwards is required to be split and the tariff components for the same needs to be worked out accordingly. This will give correct allocation of the transmission charges as per the 2010 Sharing Regulations and 2020 Sharing Regulations, as amended from time to time as provided in Regulation 43 of the 2014 Tariff Regulations and Regulation 57 of the 2019 Tariff Regulations respectively. Accordingly, TANGEDCO has requested the Commission to direct the Petitioner to split the capital cost of the assets and the tariff components on the basis of the 2010 Sharing Regulations regime and the 2020 Sharing Regulations regime and share the transmission charges accordingly.



79. In response, the Petitioner has submitted that the instant petition is filed for determination of transmission tariff from COD to 31.3.2024 for the transmission assets. After the determination of tariff, sharing of transmission charges for 2019-24 periods up to 31.10.2020 shall be done as per the 2010 Sharing Regulations and from 1.11.2020 onwards shall be shared under the 2020 Sharing Regulations. Tariff determination and sharing of transmission charges are two independent activities and they are not interlinked. After the determination of tariff of the assets by the Commission, the aspects of YTC bifurcation raised by TANGEDCO is taken care by the CTUIL at the time of billing.

80. We have considered the submissions of the Petitioner and TANGEDCO. We agree with the submissions of the Petitioner that tariff determination and sharing of transmission charges are two independent activities and they are not interlinked. The tariff of the transmission assets is determined in accordance with the provisions of the relevant Tariff Regulations and after the determination of tariff by the Commission, the sharing of the YTC amongst DICs are worked out in terms of provisions of the relevant Sharing Regulations and bills are raised accordingly. Therefore, the issue raised by TANGEDCO for splitting the capital cost of the transmission assets and the tariff components on the basis of the 2010 Sharing Regulations and the 2020 Sharing Regulations regimes is not relevant. The concerns raised by TANGEDCO shall be taken care of by the Petitioner at the time of billing by the CUTIL.

81. The billing, collection and disbursement of the transmission charges approved in this order shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations,



2010, and Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 as provided in Regulation 43 of 2014 Tariff Regulations for the 2014-19 tariff period and Regulation 57 of the 2019 Tariff Regulations for the 2019-24 tariff period respectively.

82. To summarise,

(a) AFC allowed in respect of the transmission assets for 2019-24 tariff period in the instant order are as follows:

(₹ in lakh)

Asset-1				
2019-20 (Pro-rata for 210 days)	2020-21	2021-22	2022-23	2023-24
529.97	983.99	995.44	1003.89	1012.38

(₹ in lakh)

Asset-2				
2019-20 (Pro-rata for 103 days)	2020-21	2021-22	2022-23	2023-24
307.32	1165.76	1213.51	1223.16	1232.86

(₹ in lakh)

Asset-3				
2019-20 (Pro-rata for 95 days)	2020-21	2021-22	2022-23	2023-24
235.04	958.14	993.13	1000.96	1008.82

83. Annexure-I given hereinafter form part of the order.

84. This order disposes of Petition No. 662/TT/2020 in terms of the above discussions and findings.

sd/-
(P.K. Singh)
Member

sd/-
(Arun Goyal)
Member

sd/-
(I.S. Jha)
Member



2019-24

Asset-1

Annexure-I

Particulars	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	ACE 2019-24		Admitted Capital Cost as on 1.4.2024 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
		2019-20	2020-21			2019-20 (₹ in lakh)	2020-21 (₹ in lakh)	2021-22 (₹ in lakh)	2022-23 (₹ in lakh)	2023-24 (₹ in lakh)
Sub Station	2464.71	365.24	75.49	2905.44	5.28	139.78	151.41	153.41	153.41	153.41
IT Equipment & Software	151.60	26.37	0.00	177.97	15.00	24.72	26.70	26.70	26.70	26.70
Total	2616.31	391.61	75.49	3083.41		164.50	178.11	180.10	180.10	180.10
Weighted Average Rate of Depreciation (in %)						5.85	5.85	5.84	5.84	5.84
Average Gross Block (₹ in lakh)						2812.12	3045.67	3083.41	3083.41	3083.41



**2019-24
Asset-2**

Particulars	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	ACE 2019-24		Admitted Capital Cost as on 1.4.2024 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
		2019-20	2020-21			2019-20 (₹ in lakh)	2020-21 (₹ in lakh)	2021-22 (₹ in lakh)	2022-23 (₹ in lakh)	2023-24 (₹ in lakh)
Building	111.55	15.89	23.20	150.64	3.34	3.99	4.64	5.03	5.03	5.03
Sub Station	2972.46	171.96	708.04	3852.46	5.28	161.49	184.72	203.41	203.41	203.41
IT Equipment & Software	183.65	19.83	0.00	203.48	15.00	29.03	30.52	30.52	30.52	30.52
Total	3267.66	207.68	731.24	4206.58		194.51	219.88	238.96	238.96	238.96
Weighted Average Rate of Depreciation (in %)						5.77	5.72	5.68	5.68	5.68
Average Gross Block (₹ in lakh)						3371.50	3840.96	4206.58	4206.58	4206.58



2019-24

Asset-3

Particulars	Admitted Capital Cost as on 1.4.2019 (₹ in lakh)	ACE 2019-24		Admitted Capital Cost as on 1.4.2024 (₹ in lakh)	Rate of Depreciation (in %)	Annual Depreciation as per Regulations (₹ in lakh)				
		2019-20	2020-21			2019-20 (₹ in lakh)	2020-21 (₹ in lakh)	2021-22 (₹ in lakh)	2022-23 (₹ in lakh)	2023-24 (₹ in lakh)
Building	150.29	8.40	23.00	181.69	3.34	5.16	5.68	6.07	6.07	6.07
Sub Station	2433.89	113.55	503.36	3050.80	5.28	131.51	147.79	161.08	161.08	161.08
IT Equipment & Software	161.17	17.57	0.00	178.74	15.00	25.49	26.81	26.81	26.81	26.81
Total	2745.35	139.52	526.36	3411.23		162.16	180.29	193.96	193.96	193.96
Weighted Average Rate of Depreciation (in %)						5.76	5.73	5.69	5.69	5.69
Average Gross Block (₹ in lakh)						2815.11	3148.05	3411.23	3411.23	3411.23

