

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 111/TT/2018

Coram:

Shri P.K. Pujari, Chairperson

Dr. M. K. Iyer, Member

Shri I.S. Jha, Member

Date of Order: 1.11.2019

In the matter of:

Approval under Regulation 86 of CERC (Conduct of Business) Regulations, 1999 and CERC (Terms and Conditions of Tariff) Regulations, 2014 for determination of Transmission Tariff from COD to 31.3.2019 for **Asset 1: ±300 MVAR STATCOM** at 400 kV Aurangabad Sub-station, **Asset 2: ±200 MVAR STATCOM** at 400 kV Gwalior Sub-station, **Asset 3: ±300 MVAR STATCOM** at 400 kV Satna Substation, and **Asset 4: ±300 MVAR STATCOM** at 400 kV Solapur Sub-station under "Installation of STATCOMs in Western Region".

And in the matter of:

Power Grid Corporation of India Limited
"Saudamini", Plot No.2,
Sector-29, Gurgaon -122 001

.....Petitioner

Vs

1. Madhya Pradesh Power Management Company Ltd.(MPPMCL),
Shakti Bhawan, Rampur,
Jabalpur-482008
2. Madhya Pradesh Power Transmission Company Ltd.,
Shakti Bhawan, Rampur,
Jabalpur-482008
3. Madhya Pradesh Audyogik Kendra Vikas Nigam (Indore) Ltd.,
3/54, Press Complex,
Agra-Bombay Road, Indore-452008



4. Maharashtra State Electricity Distribution Co. Ltd.,
Hong Kong Bank Building, 3rd Floor,
M.G. Road, Fort, Mumbai-400001
5. Maharashtra State Electricity Transmission Co. Ltd.,
Prakashganga, 6th Floor, Plot No. C-19, E-Block,
Bandra Kurla Complex, Bandra (East),
Mumbai-400051
6. Gujarat Urja Vikas Nigam Ltd.,
Sardar Patel Vidyut Bhawan,
Race Course Road, Vadodara-390007
7. Gujarat Energy Transmission Corporation Limited,
Sardar Patel Vidyut Bhawan,
Race Course Road, Vadodara-390007
8. Electricity Department,
Govt. of Goa, Vidyut Bhawan,
Panaji, Near Mandvi Hotel, Goa-403001
9. Electricity Department,
Administration of Daman & Diu
Daman-396210
10. Electricity Department,
Administration of Dadra Nagar Haveli
U.T., Silvassa-396230
11. Chhattisgarh State Electricity Board,
P.O. Sunder Nagar, Dangania,
Raipur, Chhattisgarh-492013
12. Chhattisgarh State Power Transmission Co. Ltd.,
Office of the Executive Director (C&P),
State Load Dispatch Building,
Dangania, Raipur-492013
13. Chhattisgarh State Power Distribution Co. Ltd.,
P.O. Sunder Nagar, Dangania,
Raipur, Chhattisgarh-492013

.....Respondents

Parties present:

For Petitioner: Shri Pankaj Sharma, PGCIL,
Shri S. S. Raju, PGCIL



Shri Zafrul Hasan, PGCIL

Shri B. Dash, PGCIL

For Respondent: None

ORDER

The instant petition has been filed by the Petitioner, Power Grid Corporation of India Limited (hereinafter referred to as "PGCIL") for determination of transmission tariff for 4 nos. of Transmission Assets from COD to 31.3.2019 under "Installation of STATCOMs in Western Region" for tariff block 2014-19 in terms of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as the "2014 Tariff Regulations").

2. The Petitioner has made the following prayers:-

- i. Approve the Transmission Tariff for the tariff block 2014-19 block for the assets covered under this petition.*
- ii. Admit the capital cost as claimed in the petition and approve the Additional Capitalization incurred/projected to be incurred.*
- iii. Allow the Petitioner to approach the Commission for suitable revision in the norms for O & M expenditure for claiming the impact of wage hike, if any, during period 2014-19.*
- iv. 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 under clause 25 of the Tariff regulations 2014.*
- v. Approve the reimbursement of expenditure by the beneficiaries towards petition filing fee, and expenditure on publishing of notices in newspapers in terms of Regulation 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, and other expenditure (if any) in relation to the filing of petition.*



- vi. *Allow the Petitioner to bill and recover Licensee fee and RLDC fees and charges, separately from the Respondents in terms of Regulation 52 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.*
- vii. *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 2014-19 period, if any, from the Respondents.*
- viii. *Allow the Petitioner to bill and recover GST on Transmission charges separately from the respondents, if GST on Transmission of electricity is withdrawn from the exempted (negative) list at any time in future. Further any taxes and duties including cess, etc. imposed by any Statutory/Govt. Municipal Authorities shall be allowed to be recovered from the beneficiaries.*
- ix. *Allow tariff up to 90% of the Annual Fixed Charges in accordance with clause 7 (i) of Regulation 7 Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for purpose of inclusion in the PoC charges.*
- x. *Allow the Petitioner to bill Tariff from anticipated DOCO and also the Petitioner may be allowed to submit revised Auditor Certificate and tariff Forms (as per the Relevant Regulation) based on actual DOCO.*

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

Background

3. The Investment Approval (IA) for implementation of "Installation of STATCOMs in Western Region" was accorded by the Board of Directors of the Petitioner in 311th meeting held on 4.3.2015 for ₹1071.24 crore including IDC (Interest during Construction) of ₹57.68 crore based on October, 2014 price level. (Communicated vide Memorandum no. C/CP/STATCOM-WR dated 9.3.2015)

4. The scope of the scheme was discussed and agreed in the 36th meeting of Standing Committee on Power System Planning in Western Region held on 29.8.2013 and 24th WRPC meeting held on 9.10.2013. The Petitioner has been entrusted with the implementation of the said scheme.



5. The scope of work covered under the scheme “Installation of STATCOMs in Western Region” are as follows:-

Sub-station	Mechanically Switched Compensation		Dynamic Compensation (STATCOM)
	Reactor x125 MVAR	Capacitor x 125 MVAR	+/- MVAR
400 kV Aurangabad	2	1	300
400 kV Gwalior	2	1	200
400 kV Satna	2	1	300
400 kV Solapur	2	1	300

6. The Petitioner had filed the instant petition in respect of 4 assets initially claiming anticipated COD. However, vide affidavit dated 12.10.2018, the Petitioner has claimed the actual COD of all the assets except Asset-2 whose actual COD was claimed vide affidavit dated 15.4.2019. The same has been summarized as under:-

Name of the Assets	Anticipated DOCO as per Petition	SCOD (as per IA)	COD claimed (Actual)
Asset-1: ±300 MVAR STATCOM at 400 kV Aurangabad substation	1.1.2018	3.9.2017	1.4.2018
Asset-2: ±200 MVAR STATCOM at 400 kV Gwalior Substation	1.4.2018	3.9.2017	26.12.2018
Asset-3: ±300 MVAR STATCOM at 400 kV Satna substation	1.1.2018	3.9.2017	31.3.2018
Asset-4: ±300 MVAR STATCOM at 400 kV Solapur substation	1.1.2018	3.9.2017	15.4.2018

Note: the Petitioner has made submission that all the Assets of the instant project are covered in the instant petition.

7. Vide Order dated 5.11.2018, the Annual Transmission Charges were allowed under the proviso (i) to Regulation 7(7) of the 2014 Tariff Regulations for inclusion in the POC charges in respect of the instant assets.

8. The Petitioner has claimed the following transmission charges for the instant assets:-



(₹ in lakh)

Particulars	Asset-1	Asset-2	Asset-3		Asset-4
	2018-19	2018-19	2017-18	2018-19	2018-19
Depreciation	1023.31	208.01	2.30	943.37	930.41
Interest on Loan	1033.39	224.35	2.33	924.45	917.96
Return on Equity	1155.18	233.53	2.56	1055.90	1047.79
Interest on Working Capital	73.51	15.64	0.17	69.79	66.69
O&M Expenses	137.42	36.57	0.36	137.42	132.08
Total	3422.81	*718.10	*7.72	3130.93	*3094.93

*pro-rata basis

9. The details of the interest on working capital claimed by the Petitioner for the instant assets are as under:-

(₹ in lakh)

Particulars	Asset-1	Asset-2	Asset-3		Asset-4
	2018-19	2018-19	2017-18	2018-19	2018-19
Maintenance Spares	20.61	20.61	20.09	20.61	20.61
O and M expenses	11.45	11.45	11.16	11.45	11.45
Receivables	570.47	449.72	478.62	521.82	536.69
Total	602.53	481.79	509.87	553.89	568.76
Rate of Interest	12.20%	12.20%	12.60%	12.60%	12.20%
Interest on working capital	73.51	*15.64	*0.17	69.79	*66.69

*pro-rata basis

10. The Petitioner has served the copy of the petition upon the Respondents and notice of this tariff application has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003 ("the Act"). No comments or suggestions have been received from the general public in response to the notices published by the Petitioner under Section 64 of the Electricity Act, 2003. Reply to the petition has been filed by MPPMCL (Respondent no 1) vide their affidavit dated 28.9.2018 and the Petitioner vide its affidavit dated 18.10.2018 filed its rejoinder in the matter.

11. The petition was last heard on 8.8.2019 and the Commission reserved the order in the petition.



12. This order has been issued after considering the main petition dated 3.1.2018, and Petitioner's affidavit dated 16.2.2018, 12.10.2018, 18.10.2018, 26.11.2018, 15.4.2019, 23.8.2019 and reply dated 28.9.2018 of the respondent, MPPMCL.

13. Having heard the Petitioner and perused the material on record, we proceed to decide the petition.

Analysis and Decision

Date of Commercial Operation ("COD")

14. Clause (3) of Regulation 4 of the 2014 Tariff Regulations provides as under:-

"(3) date of commercial operation in relation to a transmission system shall mean the date declared by the transmission licensee from 0000 hour of which an element of the transmission system is in regular service after successful trial operation for transmitting electricity and communication signal from sending end to receiving end: Provided that:

- i) Where the transmission line or substation is dedicated for evacuation of power from a particular generating station, the generating company and transmission licensee shall endeavor to commission the generating station and the transmission system simultaneously as far as practicable and shall ensure the same through appropriate Implementation Agreement in accordance with Regulation 12(2) of these Regulations:
- ii.) in case a transmission system or an element thereof is prevented from regular service or reasons not attributable to the transmission licensee or its supplier or its contractors but is on account of the delay in commissioning of the concerned generating station or in commissioning of the upstream or downstream transmission system, the transmission licensee shall approach the Commission through an appropriate application for approval of the date of commercial operation of such transmission system or an element thereof."

15. The Petitioner has claimed the actual COD in respect of the assets covered under the instant petition as per the following details

Asset	Name of Asset	COD
Asset-1	±300 MVAR STATCOM at 400 kV Aurangabad sub-station	1.4.2018
Asset-2	±200 MVAR STATCOM at 400 kV Gwalior sub-station	26.12.2018
Asset-3	±300 MVAR STATCOM at 400 kV Satna sub-station	31.3.2018
Asset-4	±300 MVAR STATCOM at 400 kV Solapur sub-station	15.4.2018



16. In support of the COD of the instant assets, the Petitioner has submitted CEA energisation certificates under Regulation 43 of Central Electricity Authority (Measures relating to safety and electric supply), Regulations, 2010 and RLDC certificates as per the following details:-

Asset	CEA Certificate Dated	RLDC Certificate Dated	Notification of DOCO letter Dated
Asset-1	13.2.2018	13.6.2018	18.6.2018
Asset-2	26.11.2018	11.1.2019	11.1.2019
Asset-3	18.1.2018	26.4.2018	26.4.2018
Asset-4	26.3.2018	13.6.2018	18.6.2018

CMD certificate as required under Grid code has also been submitted by the Petitioner.

17. Taking into consideration of the CEA Energisation certificate, RLDC charging certificate as required under Grid Code and CMD Certificate, the COD of the Asset-1, Asset-2, Asset-3 and Asset-4 is approved as 1.4.2018, 26.12.2018, 31.3.2018 and 15.4.2018 respectively.

Capital Cost

18. Clause (1) and (2) of Regulation 9 of the 2014 Tariff Regulations provides as follows:-

“(1) The Capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of 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) Increase in cost in contract packages as approved by the Commission;

(d) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 11 of these regulations;

(e) capitalized Initial spares subject to the ceiling rates specified in Regulation 13 of these regulations;

(f) expenditure on account of additional capitalization and de-capitalization determined in accordance with Regulation 14 of these regulations; 39

(g) adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD as specified under Regulation 18 of these regulations; and

(h) adjustment of any revenue earned by the transmission licensee by using the assets before COD.”

19. The Petitioner vide affidavit dated 12.10.2018 submitted the Auditor certificates dated 25.7.2018, 11.6.2018 and 25.7.2018 along with tariff forms for Asset-1, Asset-3 and Asset-4 and vide affidavit dated 15.4.2019 submitted the Auditor Certificate dated 11.3.2019 along with tariff form for Asset-2. The details of apportioned approved cost, capital cost as on COD and estimated additional capital expenditure incurred or projected to be incurred during 2018-19, 2019-20 and 2020-21 as claimed by the Petitioner for the instant assets are as under:

Asset	Apportioned Approved Cost (FR)	Cost as on COD	Proposed Expenditure for FY			Estimated completion Cost
			2018-19	2019-20	2020-21	
Asset-1	26967.00	18674.00	2143.48	1279.77	--	22097.25
Asset-2	24101.00	14311.87	1328.43	2331.27	590.52	18562.09
Asset-3	27952.00	16543.34	3151.08	366.49	--	20060.91
Asset-4	28104.00	17107.45	3082.73	1721.92	--	21912.10
Total	107124.00	66636.66	9705.72	5699.45	590.52	82632.35



Cost Over-Run

20. We have considered the submissions of the Petitioner and noted that against the total apportioned approved cost as per RCE in respect of assets covered under the instant petition as mentioned in the table of Para 19 above, the estimated completed cost including additional capitalization is within the apportioned approved cost as per FR. Therefore, there is no cost over-run.

Time over-run

21. As per the investment approval dated 4.3.2015, the instant assets were scheduled to be commissioned within 30 months from the date of investment approval. Accordingly, commission schedule of the instant assets comes to 3.9.2017 against which the status of COD for these assets claimed by petitioner are as under:

Asset	SCOD as per IA	COD claimed (Actual)	Time Over-run
Asset-1	3.9.2017	1.4.2018	210 days
Asset-2	3.9.2017	26.12.2018	479 days
Asset-3	3.9.2017	31.3.2018	209 days
Asset-4	3.9.2017	15.4.2018	224 days

22. The Petitioner has submitted that the delay in completion of the instant assets is mainly due to implementation of new technology and development new manufacturing facility in India. The Petitioner has submitted the following details to substantiate its claims:

- a) **System Studies:** These STATCOM projects are large in capacity and are the first of its kind in India. During execution phase of projects, it was understood that extensive system studies was required to be carried out to finalize the STATCOM equipment design parameters. Being first project for



the Petitioner, a consultant of International repute (based in USA) was also engaged in finalizing the detailed design of STATCOM. To carry out extensive studies, detailed data from generating stations of western region was requested. Such generation data was received very late from the various utilities despite continuous follow up, which resulted in delay in completion of various studies, thereby delaying the timeline of implementation activities.

Data for harmonic and AC equivalent studies

- i. Petitioner submitted that RXPE (STATCOM provider) vide e-mail dated 15.10.2015 had requested to provide information regarding filter details, HVDC control parameters for nearby HVDCs to the various STATCOMs being installed in WR viz. Vindhyachal HVDC back to back link and Chandrapur-Padghe HVDC link (of MSETCL) and typical tower geometry of HVDC line for carrying out harmonic and AC equivalent studies.
- ii. Petitioner vide letter dated 15.10.2015 requested MSETCL to provide the requisite data for the Chandrapur-Padghe HVDC link. Data for Vindhyachal HVDC back to back link was compiled by Petitioner itself.
- iii. MSETCL vide letter dated 28.10.2015 furnished the requisite data pertaining to Chandrapur-Padghe HVDC link. The above data received from utilities were submitted to RXPE. Only upon receipt of the above data, RXPE commenced with the AC equivalent and Harmonic studies with respect to the STATCOMs in WR.



Data for SSO studies

- i. As part of the STATCOM installations at the 400 kV Solapur, 400 kV Satna and 400 kV Aurangabad sub-stations, screening studies investigating possible Sub-synchronous oscillation in the network have to be performed. To conduct the SSO study, RXPE vide e-mail dated 29.12.2015 requested to share the generator (shaft) parameter and generator transformer parameters for generators in the vicinity of the three STATCOMs.
- ii. Accordingly, communications were sent to various generators as well as to MSETCL (for Maharashtra state generators) for the requisite generator detail. Data was received from M/s JPVL, NTPC and Reliance (Sasan) for their respective generation projects vide e-mail dated 12.1.2016, 5.1.2016 and 7.1.2016. Despite reminders, several generation developers did not furnish the required data. Accordingly, RXPE vide e-mail dated 27.1.2016 was intimated regarding list of generators to be considered for SSO study along with data for some of generators for which data had been received. It was further informed that for rest of generators typical parameters may be considered for SSO study.

In addition, STATCOM, being a new technology, requires detailed engineering and design for which a number of studies are required to be carried out (such as Harmonic study, AC equivalent study, Sub-synchronous oscillation (SSO) study, etc.) each of which requires network data/parameters in the vicinity of STATCOM location.



b) Make in India:

- i. Basic Design Report is Heart of Project, wherein Details of Equipment like Coupling transformers, MV Equipment's such as CT, PT, Isolator Circuit Breaker are decided. The Ratings envisaged in this project is unique and largest in world till now. Considering criticality of Equipment for Grid for finalization of BDR, Consultants of international reputation were engaged. After detailed deliberation with consultants & manufacturer of various equipments BDR was finalized. It took longer time for these discussions as the rating of equipment is unique and various manufacturers (Scattered across globe) took more than usual time to confirm possibility of manufacturing these equipments.
- ii. Under the Make in India initiative of Government of India, Rongxin Power Electronic Co., Ltd (RXPE) was required to establish manufacturing & testing facilities in India to supply STATCOM valves from their Indian factory. The factory was established in January, 2017. Subsequently, STATCOM valves were supplied from Indian factory and RTDS testing for all the projects were done in STATCOM RXPE's India factory.
- iii. Manufacturers for Instrument transformers of required rating for MV Switchgear application were not available in India. It took additional time to find manufacturers across the globe & finalize with them.
- iv. Under the project, there was unique requirement for MV equipment (low voltage and high current). All efforts were made to procure most of the MV equipments from India. Since, the Indian manufacture did not have



prior experience of such products, it took considerable time to finalise these equipments.

- v. None of the Indian Manufacturer had exposure for control and protection function requirements for a STATCOM project. Concerted effort was made with the help of M/s RXPE to develop indigenous manufacturer for supply of Control and Protection for STATCOM projects.
- vi. The above challenges could not be envisaged in the beginning. However, the above experience and development of Indian vendors for various equipments will enable timely completion of similar projects in future in the country.

23. MPPMCL vide affidavit dated 28.9.2018 has submitted that no CPM and PERT chart as well as details of events in chronological order has been submitted by the Petitioner in support of its claim. The Petitioner has not submitted details as to whether sincere and continuous efforts were made for early and timely receipt of data/studies report. Detail of correspondence/meetings with concerned officials has also not been submitted. The Petitioner was well aware that this was the first time the work being taken up by the Petitioner and the Petitioner had never done it earlier. The Petitioner was well conversant with the problems that may come in timely completion of the projects, and it could be well taken for granted that while deciding the time line of work, the learned Directors of the Board would have taken proper care of the same. Therefore, the present plea of the Petitioner is a pure after thought and is liable to be rejected out rightly. In addition, MPPMCL submitted that it is unbelievable that the Petitioner, engaged in transmission business for so long is



unaware of problems related to the technology of the items to be used. In fact, due to faulty planning of the Petitioner and overlooking the expected problems at the time of IA has resulted in delay of completion of project and now the Petitioner is trying to pass the burden of its inefficiency to the end consumers of the beneficiaries which is not acceptable.

24. In response, the Petitioner vide affidavit dated 18.10.2018 reiterated the submissions made in the Petition.

25. We have considered the submissions made by the Petitioner and MPPMCL. Taking the timeline of 30 months for completion of project, the SCOD was 3.9.2017 against which the Asset-1, Asset-2, Asset-3 and Asset-4 got commissioned on 1.4.2018, 26.12.2018, 31.3.2018 and 15.4.2018 respectively with a time over-run of 210 days, 479 days, 209 days and 224 days respectively. The Petitioner has submitted that, time over-run in subject petition is mainly due to late receiving of generation data from various utilities despite continuous follow up which resulted in delay in completion of various studies and also due to implementation of new technology and development, new manufacturing facility under Make in India initiative and time elapsed in collecting data from external agencies which were beyond the control of the Petitioner.

26. From the documents placed on record with respect to the Petitioner communication made with various utilities, it is observed that, the Petitioner sought data from various utilities in the month of October, 2015 and Jan, 2016 i.e. about 8-11 months after investment approval dated 4.3.2015 whereas various utilities of WR provided data within a time frame of 15 days which may be considered as a normal time taken. Petitioner's contention that, time overrun on account of system studies on



part of various utilities is not acceptable and time overrun is not condoned.

27. The Petitioner has requested for condonation of time overrun stating that STATCOM was a new technology, was first of its kind in India, any manufacturer of this was not available in India and the project was under “Make in India” initiative. We are of the view that the Petitioner, in the initial phase at the time of planning of project was well aware that since it is a new project, it might take considerable time and accordingly, might have kept time line of project and the contract suitably. If the delay is by the manufacturer / contractor, contract must have the provision for L.D. etc. for the delay. Accordingly, the time over-run mentioned in table of Para 21 in respect of Asset-1, 2, 3 and 4 is not condoned.

Interest During Construction (IDC)

28. The Petitioner has claimed IDC on accrual basis as ₹965.87 lakh, ₹515.10 lakh, ₹741.88 lakh and ₹798.65 lakh and on cash basis as ₹746.16 lakh, ₹418.71 lakh, ₹400.92 lakh and ₹563.09 lakh in respect of Asset-1, Asset-2, Asset-3 and Asset-4 respectively. The Petitioner has submitted the discharge details of IDC as under:

Asset-1 (₹ in lakh)

IDC as per Auditor Certificate (on accrual Basis)	IDC Discharged		
	Up to COD	2018-19	2019-20
965.87	746.16	219.71	--

Asset-2 (₹ in lakh)

IDC as per Auditor Certificate (on accrual Basis)	IDC Discharged		
	Up to COD	2018-19	2019-20
515.10	418.71	72.20	24.19



Asset-3

(₹ in lakh)

IDC as per Auditor Certificate (on accrual Basis)	IDC Discharged		
	Up to COD	2018-19	2019-20
741.88	400.92	340.96	--

Asset-4

(₹ in lakh)

IDC as per Auditor Certificate (on accrual Basis)	IDC Discharged		
	Up to COD	2018-19	2019-20
798.65	563.09	235.55	--

29. The Petitioner has submitted "Statement showing IDC discharged upto DOCO" in respect of instant assets which consist of the name of the loan, drawl date, loan amount, interest rate and Interest claimed. While going through these statements, certain discrepancies have been observed such as the Petitioner has not specified the interest rate for SBI loan, HDFC loan and ICICI loan, perhaps, the Petitioner has claimed floating rate. The Petitioner has not furnished the computation of floating interest rate, moreover, documentary proofs submitted in this regard are not reconcilable. Therefore, for the purpose of determination of allowable IDC, the interest rates as mentioned in Form 9C against these loans have been considered for the instant assets. In addition, the loan portfolios as mentioned in IDC statements and as mentioned in Form 9C are not matching. Accordingly, the petitioner is directed to submit the detailed IDC statement by rectifying the above mentioned deviations, at the time of true up exercise.

30. Accordingly, the IDC claimed and considered as on COD and summary of discharge of IDC liability upto COD and thereafter, for the purpose of tariff determination, subject to revision at the time of trueing up is as below:



(₹ in lakh)

Asset	IDC claimed as per Auditor's Certificate	IDC allowed	IDC allowed as on COD	Un-discharged IDC as on COD	Discharged in 2018-19
Asset-1	965.87	388.78	338.31	50.46	50.46
Asset-2	515.10	24.30	14.75	9.55	9.55
Asset-3	741.88	237.17	158.71	78.46	78.46
Asset-4	798.65	405.16	378.74	26.42	26.42

Incidental Expenditure During Construction (IEDC)

31. The Petitioner has claimed IEDC of the Assets covered in the petition as per the tabulation given below. The allowable IEDC has been determined by considering the percentage of IEDC on Hard Cost as indicated in the Abstract Cost Estimate as per original investment approval, which is 5% for the instant assets. The details of IEDC claimed and allowed is mentioned below:

(₹ in lakh)

Asset	IEDC claimed as per Auditor Certificate	IEDC allowed as on COD	IEDC disallowed
Asset-1	291.32	236.63	54.69
Asset-2	587.92	385.33	202.59
Asset-3	231.72	188.39	43.33
Asset-4	331.95	266.32	65.63

Initial spares

32. The Petitioner has the claimed following the Initial spares for the assets covered in the instant petition:

(₹ in lakh)

Asset	Plant and Machinery Cost excluding IDC, IEDC and Land Exp. (Sub-station)	Initial spares claimed (Sub-station)	Ceiling limit (SS) as per Regulations (%)
Asset-1	19770.76	995.46	6.00%
Asset-2	16793.86	966.00	6.00%
Asset-3	18453.39	418.69	6.00%
Asset-4	20142.40	995.82	6.00%



33. MPPMCL vide affidavit dated 28.9.2018 has submitted that assets in the subject petition do not fall in the category of brown field and hence the initial spares shall be allowed only up to the ceiling limit of concerned category in place of brown field.

34. We have considered the submission made by the Petitioner and MPPMCL. The initial spares allowed for the purpose of tariff calculation after considering the Plant and Machinery cost excluding IDC, IEDC and Land expenses only up to 31.3.2019, subject to true-up are as under:-

(₹ in lakh)			
Asset	Plant and Machinery Cost excluding IDC, IEDC and Land Exp. (up to 31.3.2019)	Initial spares claimed	Initial spares allowed
Asset-1	18649.03	995.46	995.46
Asset-2	14208.21	966.00	845.25
Asset-3	18277.08	418.69	418.69
Asset-4	18499.29	995.82	995.82

Capital Cost allowed as on COD

35. Based on above, the capital cost allowed as on COD under Regulation 9(2) of the 2014 Tariff Regulations is summarized as under:

(₹ in lakh)						
Assets	Capital cost as per Auditor Certificate as on COD	Less: IDC Disallowed	Less: Un-discharged IDC as on COD	Less: IEDC Disallowed	Less: Excess Initial spares as on COD	Capital cost considered as on COD
Asset-1	18674.00	577.09	50.46	54.69	--	17991.76
Asset-2	14311.87	490.80	9.55	202.59	120.75	13488.18
Asset-3	16543.34	504.71	78.46	43.33	--	15916.84
Asset-4	17107.45	393.49	26.42	65.63	--	16621.90

Additional Capital Expenditure (ACE)

36. The cut-off date for the instant assets shall be as follows:



Asset	COD	Cut-off date
Asset-1	1.4.2018	31.3.2021
Asset-2	26.12.2018	31.3.2021
Asset-3	31.3.2018	31.3.2021
Asset-4	15.4.2018	31.3.2021

37. The Petitioner has claimed Additional Capital Expenditure (hereinafter referred to as “ACE”) as per Clause (1) of Regulation 14 of the 2014 Tariff Regulations based on Auditor Certificates dated 25.7.2018, 11.3.2019, 11.6.2018 and 25.7.2018 in respect of the instant assets. The ACE claimed by the Petitioner is summarized in the table below:

(₹ in lakh)

Asset	Year	Work/equipment proposed to be added after COD to cut off date/beyond cutoff date	Amount capitalized and proposed to be capitalized	Justification	Regulation under which covered
Asset-1	2018-19	Building	495.42	Balance & retention payment, Accrual IDC and unexecuted work	14(1)(i) & 14(1)(ii)
		Substation	1867.77		
		Total	2363.19		
Asset-2	2018-19	Building	67.90	Balance & retention payment and Accrual IDC	14(1)(i)
		Substation	1332.73		
		Total	1400.63		
Asset-3	2018-19	Building	443.74	Balance & retention payment, Accrual IDC and unexecuted work	14(1)(i) & 14(1)(ii)
		Substation	3048.30		
		Total	3492.04		
Asset-4	2018-19	Building	125.30	Balance & retention payment, Accrual IDC and unexecuted work	14(1)(i) & 14(1)(ii)
		Substation	3192.98		
		Total	3318.28		

38. MPPMCL vide affidavit dated 28.9.2018 has submitted that Petitioner has claimed the additional expenditure without providing proper details and justification

and such claims of the Petitioner may only be allowed in true-up when it comes up with actual numbers. In response, the Petitioner vide its rejoinder dated 18.10.2018, submitted that add-cap is mainly on account of balance and retention payments as covered under Regulation 14(1)(i) and same may be allowed.

39. We have considered the submission made by the Petitioner. The admissibility of ACE incurred after COD is to be dealt in accordance with provision of Regulation 14(1) and (2) of the 2014 Tariff Regulations. The ACE incurred and projected to be incurred for the transmission asset claimed by the Petitioner is within the cut-off date, it is within the approved cost and it is on account of balance and retention payment. Hence, ACE claimed by the Petitioner for period 2018-19 is allowed under Regulation 14(1) of the 2014 Tariff Regulations. Since, F.Y. 2019-20 falls beyond tariff period 2014-19 and is not covered under the 2014 Tariff Regulations, the projected ACE claimed by the Petitioner for F.Y. 2019-20 has not been considered for the purpose of tariff and the same shall be dealt during the next tariff period as per the extent Tariff Regulations and corresponding claim by the Petitioner.

40. The un-discharged IDC as on COD has been allowed as ACE during the respective year of its discharge. Accordingly, the ACE allowed has been summarized as under, which shall be reviewed at the time of true up:-

(₹ in lakh)

Allowed Add-cap	Asset-1	Asset-2	Asset-3	Asset-4
	2018-19	2018-19	2018-19	2018-19
Discharge of Liability on Hard Cost	1686.15	1328.43	2205.74	3062.63
Add cap to the extent of unexecuted work	457.34	--	945.34	20.10
Discharge of un discharge liabilities-IDC.	50.46	9.55	78.46	26.42
Total allowed add-cap	2193.95	1337.98	3229.54	3109.15

Capital cost for the tariff period 2014-19

41. Accordingly, the capital cost considered for the tariff period 2014-19, subject to trueing up, is as under:

(₹ in lakh)

Asset	Capital Cost allowed as on COD	Add Cap for 2018-19	Total Estimated Completion Cost up to 31.3.2019
Asset-1	17991.76	2193.95	20185.71
Asset-2	13488.18	1337.98	14826.16
Asset-3	15916.84	3229.54	19146.38
Asset-4	16621.90	3109.15	19731.05

Debt-Equity Ratio

42. The Petitioner has claimed Debt-Equity ratio of 70:30 as on the date of commercial operation. There is a mismatch between the amount of loan claimed in Form-6 and amount of loan as specified in Statement showing IDC discharged up to DOCO (IDC Calculations) in respect of instant assets.

43. The amount of loan as mentioned in the IDC Calculations has been considered for working out Debt-Equity ratio which works out to 70.83:29.17, 70.47:29.53, 71.47:28.53 and 70.98:29.02 in respect of Asset-1, Asset-2, Asset-3 and Asset-4 respectively. The same shall be reviewed at the time of trueing up exercise. For the purpose of ACE, Debt-Equity ratio of 70:30 has been considered for the instant assets. The details of debt and equity considered is as under:

Asset-1 (₹ in lakh)

Particular	Capital cost as on COD	Capital cost as on 31.3.2019
	Amount	Amount
Debt	12744.17	14279.94
Equity	5247.58	5905.77
Total	17991.76	20185.71

Asset-2		(₹ in lakh)	
Particular	Capital cost as on COD	Capital cost as on 31.3.2019	
	Amount	Amount	
Debt	9505.75	10442.34	
Equity	3982.43	4383.82	
Total	13488.18	14826.16	

Asset-3		(₹ in lakh)	
Particular	Capital cost as on COD	Capital cost as on 31.3.2019	
	Amount	Amount	
Debt	11376.26	13636.93	
Equity	4540.58	5509.45	
Total	15916.84	19146.38	

Asset-4		(₹ in lakh)	
Particular	Capital cost as on COD	Capital cost as on 31.3.2019	
	Amount	Amount	
Debt	11797.78	13974.18	
Equity	4824.13	5756.87	
Total	16621.90	19731.05	

Return on Equity

44. This has been dealt with in line of Clause (1) and (2) of Regulation 24 and Clause (2) of Regulation 25 of the 2014 Tariff Regulations.

45. The Petitioner has submitted that it is liable to pay income tax at MAT rate, the RoE has been calculated @ 19.61% after grossing up the RoE of 15.50% with MAT rate of 20.961% as provided under Regulation 25(2)(i) of the 2014 Tariff Regulations. As per Regulation 25(3) of the 2014 Tariff Regulations, the grossed up rate of RoE at the end of the 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 the 2014-19 period

on actual gross income of any financial year.

46. Regulation 24 read with Regulation 25 of the 2014 Tariff Regulations provides for grossing up of return on equity with the effective tax rate for the purpose of return on equity. It further provides that in case the generating company or transmission licensee is paying Minimum Alternative Tax (MAT), the MAT rate including surcharge and cess will be considered for the grossing up of return on equity. Accordingly, the MAT rate applicable during 2013-14 has been considered for the purpose of return on equity, which shall be trued up with actual tax rate in accordance with Regulation 25(3) of the 2014 Tariff Regulations. Accordingly, the RoE allowed is as follows:-

(₹ in lakh)

Particulars	Asset-1	Asset-2	Asset-3		Asset-4
	2018-19	2018-19	2017-18	2018-19	2018-19
Opening Equity	5247.58	3982.43	4540.58	4540.58	4824.13
Addition due to Additional Capitalization	658.18	401.39	--	968.86	932.75
Closing Equity	5905.77	4383.82	4540.58	5509.45	5756.87
Average Equity	5576.68	4183.12	4540.58	5025.02	5290.50
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Tax Rate (MAT)	20.961%	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre-tax)	19.610%	19.610%	19.610%	19.610%	19.610%
Return on Equity (Pre-tax)	1093.59	*215.75	*2.44	985.41	*997.67

*pro-rata basis

Interest on loan (IOL)

47. Interest on loan has been dealt with in line of Regulation 26 of the 2014 Tariff Regulations.

48. IOL has been worked out as under:-

- a. Gross amount of loan, repayment of installments and rate of interest on actual average loan have been considered as per the petition;

- b. The yearly repayment for the tariff period 2014-19 has been considered to be equal to the depreciation allowed for that year; and
- c. The gross opening loan as on COD as stated at Form-9C is different from the amount of loan as shown at Statement showing IDC Discharged upto DOCO. The Petitioner has also not furnished the applicable rate of interest in respect of loans carrying floating rates. The weighted average rate of interest as claimed by the Petitioner has been considered for the purpose of tariff which shall be reviewed at the time of true up exercise.

49. Accordingly, details of IOL calculated are as follows:-

Particulars	(₹ in lakh)				
	Asset-1 2018-19	Asset-2 2018-19	Asset-3		Asset-4
	2018-19	2018-19	2017-18	2018-19	2018-19
Gross Normative Loan	12744.17	9505.75	11376.26	11376.26	11797.78
Cumulative Repayment up to previous Year	--	--	--	2.30	--
Net Loan-Opening	12744.17	9505.75	11376.26	11373.95	11797.78
Addition due to Additional Capitalization	1535.76	936.59	--	2260.68	2176.41
Repayment during the year	994.68	195.11	2.30	921.36	913.11
Net Loan-Closing	13285.25	10247.23	11373.95	12713.27	13061.07
Average Loan	13014.71	9876.49	11375.11	12043.61	12429.42
Weighted Average Rate of Interest on Loan	7.808%	8.155%	7.650%	7.646%	7.637%
Interest on Loan	1016.25	*211.84	*2.38	920.90	*912.80

*pro-rata basis

Depreciation

10. The depreciation has been calculated annually based on Straight Line Method at the rates specified in Appendix-II in the 2014 Tariff Regulations. Details of the depreciation allowed are as under:

(₹ in lakh)

Particulars	Asset-1	Asset-2	Asset-3		Asset-4
	2018-19	2018-19	2017-18	2018-19	2018-19
Opening Gross Block	17991.76	13488.18	15916.84	15916.84	16621.90
Additional Capital expenditure	2193.94	1337.98	--	3229.54	3109.15
Closing Gross Block	20185.70	14826.16	15916.84	19146.38	19731.05
Average Gross Block	19088.73	14157.17	15916.84	17531.61	18176.48
Rate of Depreciation	5.211%	5.239%	5.280%	5.255%	5.224%
Depreciable Value	17179.85	12741.45	14325.16	15778.45	16358.83
Remaining Depreciable Value	17179.85	12741.45	14325.16	15776.15	16358.83
Depreciation	994.68	*195.11	*2.30	921.36	*913.11

*pro-rata basis

Operation and Maintenance Expenses (O & M Expenses)

50. The Petitioner has claimed the O & M Expenses for 2014-19 period, as per Regulation 29(4) (a) of the 2014 Tariff Regulations. The Petitioner has claimed following O & M Expenses in the petition:

(₹ in lakh)

Name of the Assets	2017-18	2018-19
Asset-1	--	137.42
Asset-2	--	36.57
Asset-3	0.36	137.42
Asset-4	--	132.08

51. The Petitioner has submitted that O & M Expenses for the tariff period 2014-19 has been arrived on the basis of normalized actual O & M Expenses during the period 2008-09 to 2012-13. The Petitioner has further submitted that the wage revision of the employees is due during the 2014-19 tariff period and actual impact of wage hike, which will be effective at a future date, has not been factored in fixation of the normative O & M rate specified for the tariff period 2014-19. The Petitioner has submitted that it would approach the Commission for suitable revision in norms for O



& M Expenses for claiming the impact of wage hike during 2014-19, if any.

52. MPPMCL vide affidavit dated 28.9.2018 has been submitted that any increase in employee cost, if any, due to wage revision must be taken care by increasing the productivity levels of the Petitioner company and the beneficiaries should not be burdened over and above the provisions in the 2014 Tariff Regulations. In response, the Petitioner vide its rejoinder dated 18.10.2018 submitted that O & M expenses for the tariff period 2014-19 had been arrived at on the basis of normalized actual O & M Expenses during the period 2008-09 to 2012-13 and actual impact of wage hike effective from a future date has not been factored in fixation of the normative O & M rates specified for the tariff block 2014-19.

53. The O & M Expenses have been worked out as per the norms specified in the 2014 Tariff Regulations. Accordingly, the O & M expenses allowed are as follows:

(₹ in lakh)

Asset	2017-18	2018-19
Asset-1	--	137.42
Asset-2	--	*36.14
Asset-3	*0.36	137.42
Asset-4	--	*132.14

*pro-rata basis

Interest on Working Capital (IWC)

54. As per the 2014 Tariff Regulations the components of the working capital and the interest thereon are discussed hereinafter:-

a) Maintenance spares:

Maintenance spares @ 15 % of Operation and Maintenance Expenses specified in Regulation 28.



b) O and M Expenses:

O and M expenses have been considered for one month of the O and M Expenses.

c) Receivables:

The receivables have been worked out on the basis of 2 months of annual fixed cost as worked out above.

d) Rate of interest on working capital:

As per Clause 28 (3) of the 2014 Tariff Regulations, SBI Base Rate 9.10% as on 1.4.2017 Plus 350 Bps i.e. 12.60 % has been considered as the rate of interest on working capital for Asset-3 and SBI Base Rate 8.70% as on 1.4.2018 Plus 350 Bps i.e. 12.20% have been considered for Asset-1, Asset-2 and Asset-4 covered in the petition.

55. Accordingly, the interest on working capital is summarized as under:-

(₹ in lakh)

Particulars	Asset-1	Asset-2	Asset-3		Asset-4
	2018-19	2018-19	2017-18	2018-19	2018-19
Maintenance Spares	20.61	5.42	0.05	20.61	19.82
O and M expenses	11.45	3.01	0.03	11.45	11.01
Receivables	552.20	112.26	1.28	505.47	503.49
Total	584.27	120.70	1.36	537.53	534.32
Rate of Interest	12.20%	12.20%	12.60%	12.60%	12.20%
Interest on working capital	71.28	*14.72	*0.17	67.73	*65.19

*pro-rata basis

Annual Transmission charges

56. Accordingly, the annual transmission charges allowed for the instant assets are summarized hereunder:-



(₹ in lakh)

Particulars	Asset-1	Asset-2	Asset-3		Asset-4
	2018-19	2018-19	2017-18	2018-19	2018-19
Depreciation	994.68	195.11	2.30	921.36	913.11
Interest on Loan	1016.25	211.84	2.38	920.90	912.80
Return on Equity	1093.59	215.75	2.44	985.41	997.67
Interest on Working Capital	71.28	14.72	0.17	67.73	65.19
O and M Expenses	137.42	36.14	0.36	137.42	132.14
Total	3313.21	*673.57	*7.66	3032.82	*3020.91

*pro-rata basis

Filing Fee and Publication Expenses

57. The Petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 52 of the 2014 Tariff Regulations. 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 clause (1) of Regulation 52 of the 2014 Tariff Regulations.

Licence Fee and RLDC Fees and Charges

58. The Petitioner has requested to allow the Petitioner to bill and recover License fee and RLDC fees and charges, separately from the Respondents. The Petitioner shall be entitled for reimbursement of licence fee and RLDC fees and charges in accordance with Clause (2) (b) and (2) (a) respectively of Regulation 52 of the 2014 Tariff Regulations.

Goods and Services Tax

59. The Petitioner has prayed for reimbursement of tax, if any, on account of implementation of GST. GST is not levied on transmission service at present and we are of the view that the Petitioner's prayer is premature.



Sharing of Transmission Charges

60. The transmission charges for all the assets allowed in this order shall be recovered on monthly basis in accordance with Regulation 43 of the 2014 Tariff Regulations. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 as amended from time to time.

61. This order disposes of Petition No. 111/TT/2018.

Sd/-
(I.S. Jha)
Member

Sd/-
(Dr. M. K. Iyer)
Member

Sd/-
(P. K. Pujari)
Chairperson

