CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 103/TT/2018

Coram:

Shri P. K. Pujari, Chairperson
Shri A. K. Singhal, Member
Dr. M. K. Iyer, Member

Date of Order: 8.10.2018

In the matter of:

Approval of transmission tariff for 2 x 240 MVAR Switchable Line Reactor with 950 ohms NGR at Aurangabad Sub-station along with associated bays under "Inter-Regional System Strengthening Scheme for WR and NR (Part-A)" for tariff period 2014-19 in Western Region under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014.

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.,
   Shakti Bhawan, Rampur, Jabalpur - 482 008.

2. Madhya Pradesh Power Transmission Company Ltd.,
   Shakti Bhawan, Rampur, Jabalpur - 482 008.

3. Madhya Pradesh Audyogik Kendra Vikas Nigam (Indore) Ltd.,
   3/54, Press Complex, Agra-Bombay Road, Indore - 452 008.

4. Maharashtra State Electricity Distribution Co. Ltd.,
   Hongkong Bank Building, 3rd Floor, M.G. Road, Fort,
   Mumbai - 400 001.

5. Maharashtra State Electricity Transmission Co. Ltd.,
   Prakash Ganga, 6th Floor, Plot No. C-19, E-Block,
   Bandra Kurla Complex, Bandra (East), Mumbai - 400 051.

6. Gujarat Urja Vikas Nigam Ltd.,
   Sardar Patel Vidyut Bhawan, Race Course Road,
   Vadodara - 390 007.

7. Gujarat Energy Transmission Corporation Ltd.,
   Sardar Patel Vidyut Bhawan, Race Course Road,
   Vadodara - 390 007.

8. Electricity Department,
   Government of Goa, Vidyuti Bhawan, Panaji, Goa - 403 001.

9. Electricity Department,
   Administration of Daman & Diu, Daman - 396 210.

10. Electricity Department,
    Administration of Dadra Nagar Haveli, U.T., Silvassa - 396 230.

11. Chhattisgarh State Electricity Board,
    P.O. Sunder Nagar, Dangania, Raipur, Chhattisgarh - 492 013.

12. Chhattisgarh State Power Transmission Co. Ltd.,
    Office of The Executive Director (C&P),
    State Load Despatch Building, Dangania, Raipur - 492 013.

13. Chhattisgarh State Power Distribution Co. Ltd.,
    P.O. Sunder Nagar, Dangania, Raipur, Chhattisgarh - 492 013.

……**Respondents**

Parties present : Shri Vivek Kumar Singh, PGCIL
Shri S. K. Venkatesan, PGCIL
Shri S. S. Raju, PGCIL
Shri A. Choudhary, PGCIL
Shri Rakesh Prasad, PGCIL
Ms. K. Kiran, PGCIL

ORDER

The petitioner, Power Grid Corporation of India Limited (PGCIL) has filed the instant petition for approval of transmission tariff for 2 x 240 MVAR Switchable Line Reactor with 950 ohms NGR at Aurangabad S/S along with associated bays under “Inter-Regional System Strengthening Scheme for WR and NR (Part-A)” for tariff block 2014-19 in Western Region (hereinafter referred to as “transmission system”) for 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”).

2. The Investment Approval (IA) for implementation of the project was accorded by the Board of Directors of the petitioner company (in its 292nd meeting held on 23.10.2013) vide Memorandum Ref.: C/CP/Investment/Solapur dated 31.10.2013, at an estimated cost of ₹ 1315.90 Crores including IDC of ₹ 79.42 Crores, based on June, 2013 price level. As per IA, the transmission asset was scheduled to be commissioned within 36 months from the date of IA, i.e. by 23.10.2016.

3. The petitioner was entrusted with the implementation of “Inter-Regional System Strengthening Scheme for WR and NR (Part-A)”. The scheme was discussed and agreed in the 24th WRPC meeting held on 9.10.2013.

4. The scope of work covered under the instant project is as follows:

Transmission Line: Aurangabad-Solapur 765kV D/C line.

Substation: Bay extensions at 765kV Solapur and Aurangabad substations.

Reactive Compensation: 240 MVAR, 765kV Switchable line reactor with 950 Ohms NGR on both ends and both circuits of Aurangabad-Solapur 765kV D/C line.

5. The details of petitions already filed before the Commission for determination of transmission tariff is as under:

Name of assets	Petition no.	COD	Date / Status of CERC Order
765 kV D/C Solapur-Aurangabad TL along with 2 x 240 MVAR Switchable Line Reactor with associated bays at Solapur S/S	248/TT/2015	07.10.2015 (actual)	30.5.2016 (Final Order)
2 x 240 MVAR Switchable Line Reactor along with associated bays at Aurangabad S/S	248/TT/2015	15.3.2016 (Ant.)	Commission vide order dated 30.5.2016, directed the petitioner to file separate petition for this asset i.e. Asset-II after actual commissioning of the asset.

6. The instant petition covers the following asset:

Name of Asset	Actual COD
2x240 MVAR Switchable Line Reactor with 950 ohms NGR at Aurangabad S/S along with associated bays	25.8.2017

7. Annual Fixed Charges was allowed for the instant asset in provisional

order dated 6.6.2018 under Regulation 7(7) of the 2014 Tariff Regulations for inclusion in the PoC computation as under:

(₹ in lakh)

2017-18 (pro-rata)	2018-19
692.29	1232.21

8. 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. The Respondent No. 1 (MPPMCL) has filed the information/reply vide affidavit dated 12.4.2018 and the petitioner has filed its rejoinder to the said reply. The petition was heard on 31.7.2018 and the Commission after directing the petitioner to file certain additional information, reserved the order in the petition. In compliance with the above directions, the petitioner vide affidavit dated 13.8.2018 has filed the additional information. Based on the documents available on record and after considering the submission of the parties, we dispose of the claim of the petitioner in the present petition as stated in the subsequent paragraphs.

9. The details of the transmission charges claimed by the petitioner (vide affidavit dated 23.1.2018) are as under:

(₹ in lakh)

Particulars	2017-18 (pro-rata)	2018-19
Depreciation	191.55	350.98
Interest on Loan	205.33	356.84

Return on Equity	219.06	403.29
Interest on Working Capital	25.16	44.35
O&M Expenses	224.26	384.80
Total	**865.36**	**1540.26**

10. The details of the Interest on Working Capital claimed by the petitioner are as under:

(₹ in lakh)

Particulars	2017-18 (pro-rata)	2018-19
Maintenance Spares	55.86	57.72
O&M Expenses	31.04	32.07
Receivables	239.52	256.71
Total	**326.42**	**346.50**
Rate of Interest	12.80%	12.80%
Interest on Working Capital	**25.16**	**44.35**

11. The Commission vide its provisional tariff order dated 6.6.2018 had directed the petitioner to submit additional information/clarification. Acting accordingly, the petitioner vide its affidavit dated 27.6.2018 has submitted the necessary information/clarification.

12. Based on the above and other submission of the petitioner and reply of MPPMCL, we proceed to determine the tariff of the asset in terms of the provisions of the 2014 Tariff Regulations.

<u>Date of Commercial operation</u>

13. Regulation 4(3) of the 2014 Tariff Regulations provides as follows:

"**4. Date of Commercial Operation**: The date of commercial operation of a generating station or unit or block thereof or a transmission system or element thereof shall be determined as under:

xxx]

(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:

(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 endeavour 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 for 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."

14. The petitioner vide affidavit dated 23.1.2018 has submitted that the asset has been commissioned and the date of the commercial operation of the said transmission asset is 25.8.2017. The petitioner has submitted the RLDC certificate dated 30.8.2017 issued by WRLDC in support of the claim of commercial operation in accordance with Regulation 6.3A(5) of the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010 which indicates the completion of successful trial operation. The petitioner has also submitted the CEA certificate dated

11.8.2017 under Regulation 43 of CEA (Measures relating to Safety and Electric Supply) Regulations, 2010 and CMD certificate as required under Grid Code.

15. Accordingly, taking into consideration the RLDC certificate, CEA certificate and CMD certificate for the instant asset, the COD of the asset under consideration is approved as 25.8.2017 and has been considered for the purpose of tariff computation from COD till 31.3.2019.

Time over-run

16. As stated above, the transmission asset was scheduled to be commissioned within 36 months from the date of IA, i.e. by 23.10.2016, however the actual COD is 25.8.2017. Thus, there is a time over-run of 10 months and 2 days.

17. The reasons for the delay as submitted by the petitioner are as under:

(i) The subject project (IPP-D) consists of 765kV D/C Solapur-Aurangabad Line along with associated bays at Solapur and Aurangabad along with 2x240 MVAR Line reactors at both ends with schedule completion of October, 2016. Further, another project (IPP-E) was also under implementation consisting of 765kV D/C Padge- Aurangabad along with 2x240 MVAR Line reactors at both ends with scheduled completion of August, 2014.

However, the Solapur-Aurangabad line was completed on 7.10.2015 i.e. about 12 months before schedule COD of 23.10.2016. In order to terminate the line, the 2 nos. associated bays at Aurangabad end could not be preponded by 12 months as the same was being executed under different contract. Incidentally, the 2 nos. line bays at Aurangabad under IPP-É for termination of Padge- Aurangabad line was commissioned earlier in August, 2014 as per its scheduled completion date, although, the matching line (Padge-Aurangabad) could not be completed in August, 2014 due to severe RoW issues/ court cases. Therefore, these 2 bays were utilised for charging the line reactors as bus reactors for voltage control / system stability and transmission tariff was approved by Commission vide order dated 27.4.2016 in petition no. 115/TT/2014, from their respective COD. Hence, it was prudent to terminate the other line from Solapur-Aurangabad at these already commissioned bays on 7.10.2015 for the larger benefit of the Grid. This has also been approved by CERC in order dated 30.5.2016 in petition no. 248/TT/2015. Further, the efforts were being made to expedite the construction of Padge-Aurangabad line (IPP-E) together with the remaining 2 nos. line bays at Aurangabad S/S under IPP-D. During July/August 2017 the 2 no. 765 kV line bays for Solapur-Aurangabad line as well as

765kV Padge-Aurangabad line were nearing completion. However, severe RoW issues could not be resolved and the line got further delayed. Meanwhile, the testing and commissioning activities of 2 nos. 765 kV bays were completed and it was not possible to further postpone the COD due to contractual exigencies as it would have attracted additional claims by the sub-station agency. Accordingly, the COD of the above mentioned subject assets (2 nos. line bays at Aurangabad under IPP-D) was declared on 25.8.2017 along with 2 nos. 2 x 240 MVAR switchable line reactors at Aurangabad and terminating 765kV D/c Solapur-Aurangabad line.

(ii) Subsequent to above, the 2 no. line bays alongwith 2 nos. 240 MVAR switchable line reactors earlier connected to Solapur-Aurangabad line was rendered free and was restored as 2 x 240 MVAR Bus reactor bays already approved in the Commission's order dated 27.4.2016 in Petition No. 115/TT/2014. These bays alongwith 2 nos. 240 MVAR switchable line reactors have been utilised for terminating the 765 kV D/C Padge-Aurangabad line (COD 31.12.2017) for which separate petition is being filed by the petitioner under the System Strengthening in North/West Part of Western Region for IPP Projects in Chhattisgarh (IPP-E).

18. Respondent no.1, MPPMCL vide affidavit dated 12.4.2018 has submitted that the petitioner has neither submitted any justification regarding delay due to RoW issues, nor has clarified how it delayed the COD of current asset under consideration. The petitioner has itself mentioned that to save the sub-station agency from extra claims, it was not possible to further postpone COD. This itself shows that the delay caused in COD could have been eliminated had the petitioner taken cognizance of the extra load on the beneficiaries due to increased IDC and IEDC as a result of delay.

19. In response the petitioner vide its rejoinder dated 10.5.2018 submitted the same reasons for delay as has been submitted in the petition. The petitioner further submitted that it has applied its prudence and best effort to see that the subject assets are commissioned in a way that it is utilised in the system and not simply commissioned and remain idle for the overall benefit of the beneficiaries. Therefore, the Commission has been requested to condone the delay.

<u>Analysis/Decision</u>

20. We have considered the submissions of the petitioner and respondents. As stated above the SCOD of the asset works out to 23.10.2016, as against which the asset has been commissioned on

25.8.2017. Thus there is a delay of 10 months and 2 days. The petitioner has not provided any satisfactory reason for the delay as required under Regulation 12 of the 2014 Tariff Regulations. Accordingly, the delay of 10 months and 2 days is not condoned.

Capital Cost

21. 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) capitalised Initial spares subject to the ceiling rates specified in Regulation 13 of these regulations;
>
> (f) expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 14 of these regulations;
>
> (a) 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."

22. The details of capital cost claimed by the petitioner in terms of the Cost Accountant's certificate dated 7.10.2017 (submitted vide affidavit dated 23.1.2018) as on actual COD and the estimated additional capital expenditure projected to be incurred for the said transmission asset is summarized below:

(₹ in lakh)

Asset	Apportioned approved cost	Expenditure as on COD	Estimated expenditure		Total estimated completion cost
			2017-18	2018-19	
Asset-I	9666.16	* 5689.16	# 989.47	@ 352.95	7031.58

* net of un-discharged liabilities of ₹434.40 lakh (₹352.37 pertaining to balance & retention payment and ₹82.03 pertaining to IDC liabilities). # inclusive of discharges of ₹381.48 lakh (₹352.37 pertaining to balance & retention payment and ₹29.11 pertaining to IDC liabilities). @ inclusive of discharges of ₹52.92 lakh (pertaining to IDC liabilities).

23. According to the Auditor Certificate, the expenditure up to COD has been verified from the books of accounts of the project and the projected expenditure is on the basis of estimates as furnished by the Management.

Cost over-run

24. The total estimated completion cost of the transmission asset under consideration is ₹7031.58 lakh as against the apportioned approved cost of ₹9666.16 lakh. Hence, there is no cost over-run in commissioning of the instant transmission assets.

25. The petitioner submitted that the cost under-run was mainly due to the inflationary trend prevailing during execution of project and market forces prevailing at the time of bidding process, actual site conditions and on account of variation in quantities of various items such as foundation structures, compensating equipment, switchgear, structure for switchgear, control, relay & protection panel etc. which were beyond control of petitioner.

26. The cost variation for the instant asset has been considered for the purpose of tariff.

Treatment of IDC and IEDC

27. The petitioner has claimed Interest during Construction (IDC) of ₹457.65 lakh for the instant asset on accrual basis and ₹375.62 lakh on cash basis. The petitioner submitted the discharge details of IDC as under:

(₹ in lakh)

IDC on accrual basis as per Auditor Certificate	**IDC discharged up to COD**	**IDC discharged in 2017-18**	**IDC discharged in 2018-19**
457.65	375.62	29.11	52.92

28. The petitioner has further submitted the statement showing IDC discharged up to COD for the asset in which the loan wise drawl date has also been mentioned. For the purpose of determining IDC, the loan wise drawl date as furnished by the petitioner has been considered as the date

of infusion of debt fund for the concerned loan. IDC amounting to ₹457.65 lakh have been worked out and allowed as on COD, on accrual basis, for the instant asset. However, considering the fact that time over-run of 10 month and 2 days has not been allowed to the petitioner the allowable IDC upto SCOD i.e. 23.10.2016 works out to ₹185.01 lakh on accrual basis and the corresponding value on cash basis works out to ₹182.25 lakh, the same has been considered for the purpose of tariff. The balance IDC of ₹2.76 lakh has been discharged after COD i.e. during 2017-18 and the same has been considered as the additional capital expenditure for the year 2017-18.

29. The petitioner has claimed Incidental Expenditure During Construction (IEDC) of ₹253.03 lakh for the asset upto COD. However, considering the fact that time over-run of 10 month and 2 days has not been allowed to the petitioner the allowable IEDC upto SCOD i.e. 23.10.2016 works out to ₹158.41 lakh, the same has been considered for the purpose of tariff.

Treatment of initial spares

30. Regulation 13 of the 2014 Tariff Regulations specifies ceiling norms for capitalization of initial spares in respect of transmission system as under:

“**13. Initial Spares**

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

xxx]

(d) Transmission system

(i) Transmission line -1.00%

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

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

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

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

(vi) Communication system-3.5%.

Provided that:

(i) where the benchmark norms for initial spares have been published as part of the benchmark norms for capital cost by the Commission, such norms shall apply to the exclusion of the norms specified above:

(ii) where the generating station has any transmission equipment forming part of the generation project, the ceiling norm for initial spares for such equipments shall be as per the ceiling norms specified for transmission system under these regulations:

(iii) Once the transmission project is commissioned, the cost of initial spares shall be restricted on the basis of plant and machinery cost corresponding to the transmission project at the time of truing up:

(iv) for the purpose of computing the cost of initial spares, plant and machinery cost shall be considered as project cost as on cut-off date excluding IDC, IEDC, Land Cost and cost of civil works. The transmission licensee shall submit the break-up of head wise IDC & IEDC in its tariff application.

31. The details of initial spares claimed by the petitioner vide affidavit dated 25.4.2018 in terms of the CA certificate dated 19.4.2018 is as under:

(₹ in lakh)

Cost for Calculation of Initial Spares #	Initial Spares Claimed
5663.56	191.43 (5.65%)

#Total Cost (Plant and machinery cost excluding IDC, IEDC, land cost and cost of civil works for the purpose of initial spares).

32. The initial spares claimed by the petitioner are within the ceiling limits as specified under the 2014 Tariff Regulations, accordingly, the same has been allowed.

Capital cost as on COD

33. The detail of the capital cost considered as on COD after adjustment of IDC and IEDC is as follows:

(₹ in lakh)

Capital cost as on COD (on accrual basis)	Un-discharged IDC as on COD (corresponding to admitted capital cost)	Balance & retention payments as on COD	IDC disallowed	IEDC disallowed	Capital cost allowed as on COD
6123.56	2.76	352.37	272.64	94.62	5401.18

Additional capital expenditure

34. Clause (1) of Regulation 14 of the 2014 Tariff Regulations provides as under:

"(1) The capital expenditure in respect of the 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:

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

(ii) Works deferred for execution;

(iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 13;

(iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and

(v) Change in Law or compliance of any existing law:"

Provided that the details of works asset wise/work wise included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution shall be submitted along with the application for determination of tariff.

35. Clause (13) of Regulation 3 of the 2014 Tariff Regulations defines "cut-off" date as under:

"cut-off date" means 31st March of the year closing after two years of the year of commercial operation of whole or part of the project, and in case the whole or part of the project is declared under commercial operation in the last quarter of the year, the cut-off date shall be 31st March of the year closing after three years of the year of commercial operation".

36. Accordingly, the cut-off date for the above mentioned asset is considered as 31.3.2020.

37. The details of additional capital expenditure (ACE) claimed by the petitioner vide affidavit dated 13.8.2018 under Regulation 14(1) of 2014 Tariff Regulations are as under:

(₹ in lakh)

Particulars	2017-18	2018-19
ACE pertaining to deferred work for execution	607.99	300.03
Discharges of un-discharged IDC as on COD	29.11	52.92
Discharges towards balance & retention payments	352.37	0.00
ACE claimed	**989.47**	**352.95**

38. MPPMCL has raised queries vide reply dated 12.4.2018 wherein the

respondent requested Commission to allow the ACE claim only at the time of true-up when it comes on actual. In response petitioner vide its affidavit dated 10.5.2018 submitted its rejoinder.

39. We have considered the submissions of the parties. The additional capital expenditure incurred by the petitioner and projected to be incurred by the petitioner for the transmission asset is on the account of works deferred for execution, balance and retention payments and discharges of un-discharged liabilities corresponding to IDC. Further, the same is within the approved apportioned cost and is within the cut-off date. However, considering the fact that un-discharged liabilities corresponding to admitted capital cost as on COD of the asset is only ₹2.76 lakh, which has been discharged during the year 2017-18, discharges of IDC amounting to ₹2.76 lakh has only been considered for the purpose of tariff during the year 2017-18.

40. Based on the above, the additional capital expenditure allowed, subject to truing up, for 2017-19 is as under:

(₹ in lakh)

Particulars	**2017-18**	**2018-19**
ACE pertaining to deferred work for execution	607.99	300.03
Discharges of un-discharged IDC as on COD	2.76	0.00
Discharges towards balance & retention payments	352.37	0.00
ACE claimed	**963.12**	**300.03**

Capital cost for the tariff period 2014-19

41. Accordingly, the capital cost considered for the year 2017-19 (25.8.2017 till 31.3.2019), subject to truing up, is as under:

(₹ in lakh)

Particulars	2017-18	2018-19
Opening Capital Cost	5401.18	6364.29
Add: Projected ACE	963.12	300.03
Closing Capital Cost	**6364.29**	**6664.32**
Average Capital Cost	5882.73	6514.31

Debt-Equity Ratio

42. Clauses 1 and 5 of Regulation 19 of the 2014 Tariff Regulations specifies as follows:

> "(1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. 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."

"(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 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."

43. Considering the details of debt and equity as on COD as submitted by the petitioner, the debt-equity ratio as on COD works out to 70:30 and the same is allowed. Further, the admitted ACE has been considered in the debt-equity ratio of 70:30, subject to truing up. Accordingly, the details of debt-equity considered in respect of the assets under consideration, subject to truing up, is as under:

(₹ in lakh)

Particulars	%	As on COD	As on 31.03.2019
Debt	70.00	3780.82	4665.03
Equity	30.00	1620.35	1999.30
Total	**100.00**	**5401.18**	**6664.32**

<u>Return on equity</u>

44. Clause (1) and (2) of Regulation 24 and Clause (2) of Regulation 25 of the 2014 Tariff Regulations specify as under:

"**24. Return on Equity**: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation19.

(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of the 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:

(i) in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in Appendix-I:

(ii) the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:

(iii) additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:

(iv) the rate of return of a new project shall be reduced by 1% 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)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:

(v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:

(vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers."

"25. Tax on Return on Equity: (1) The base rate of return on equity as allowed by the Commission under Regulation 24 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 the 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 income on other income stream (i.e. income of non generation or non transmission business, as the case may be) shall not be considered 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:

Rate of pre-tax return on equity = 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.”

45. The petitioner has claimed RoE considering rate of 19.610% after grossing up the RoE of 15.5% (base rate) with MAT rate of 20.961% in terms of the above Regulations. The petitioner has further submitted that the grossed up RoE is subject to truing up based on the actual tax paid along with any additional tax or interest, duly adjusted for any refund of tax including the interest received from IT authorities, pertaining to the tariff period 2014-19 on actual gross income of any financial year. Any under-recovery or over recovery of grossed up ROE after truing up shall be recovered or refunded to the beneficiaries on year to year basis.

46. The petitioner has further submitted that adjustment due to any additional tax demand including interest duly adjusted for any refund of the tax including interest received from IT authorities shall be recoverable / adjustable after completion of income tax assessment of the financial year.

47. ROE has been computed at the rate of 19.610% for the period 2014-19 after grossing up the ROE with MAT rate in terms of the above Regulations. 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. The petitioner has submitted that MAT rate is applicable to the petitioner's company. Accordingly, the MAT rate applicable during 2013-14 has been considered for the purpose of return on equity. This is however subject to truing-up based on the actual tax rate in accordance with Regulation 25 (3) of the 2014 Tariff Regulations. Accordingly, ROE has been allowed, subject to truing up, as under:

(₹ in lakh)

Particulars	2017-18 (pro-rata)	2018-19
Opening Equity	1620.35	1909.29
Addition due to ACE	288.93	90.01
Closing Equity	**1909.29**	**1999.30**
Average Equity	1764.82	1954.29
Return on Equity (Base Rate)	15.500%	15.500%
Tax rate (MAT rate for FY 2013-14)	20.961%	20.961%
Rate of Return on Equity (Pre-tax)	19.610%	19.610%
Return on Equity (Pre-tax)	**207.65**	**383.24**

Interest on loan

48. Regulation 26 of the 2014 Tariff Regulations provides as under:

> “(1) The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.
>
> (2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.
>
> (3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding

year/period. In case of decapitalisation of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of decapitalisation of such asset.

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

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

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

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

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

49. In terms of the provisions of Regulation 26 of the 2014 Tariff Regulations, the petitioner's entitlement to interest on loan has been calculated on the following basis:

(i) Gross normative loan of ₹3780.82 lakh has been considered as on COD;

(ii) Gross actual loan, repayment of instalments and rate of interest as provided at Form-9C has been considered to arrive at the weighted average rate of interest;

(iii) The normative repayment for the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for that period.

50. Based on the above, interest on loan has been calculated, subject to

truing up, as follows:

(₹ in lakh)

Particulars	2017-18 (pro-rata)	2018-19
Gross Normative Loan	**3780.82**	**4455.01**
Cumulative Repayment upto previous Year	0.00	181.53
Net Loan-Opening	**3780.82**	**4273.48**
Addition due to ACE	674.18	210.02
Repayment during the year	181.53	333.38
Net Loan-Closing	**4273.48**	**4150.12**
Average Loan	4027.15	4211.80
Weighted Average Rate of Interest	8.056%	8.052%
Interest on Loan	**194.65**	**339.15**

<u>Depreciation</u>

51. Regulation 27 of the 2014 Tariff Regulations provide as follows:-

"27. Depreciation:

Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. 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 or elements thereof.

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

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

(4) In case of the existing projects, the balance depreciable value as on 1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.3.2014 from the gross depreciable value of the assets."

52. The instant transmission assets were put under commercial operation during 2017-18 (25.8.2017). Accordingly, the same will complete 12 years, during the year 2029 i.e. after the tariff period 2014-19. As such, depreciation has been calculated annually based on Straight Line Method at the rates specified in **Appendix-II** of the 2014 Tariff Regulations. Based on the above, the depreciation has been considered and allowed, subject to truing up, as under:

(₹ in lakh)

Particulars	2017-18 (pro-rata)	2018-19
Average Capital Cost	5882.73	6514.31
Rate of Depreciation	5.1429%	5.1176%
Depreciable Value	5294.46	5862.88
Remaining Depreciable Value	5294.46	5681.35
Depreciation	**181.53**	**333.38**

<u>Operation and Maintenance Expenses (O&M Expenses)</u>

53. The petitioner has claimed O&M Expenses as under:

(₹ in lakh)

Particulars	2017-18	2018-19
765 kV Bay – 4 nos.	224.26	384.80

54. Regulation 29 (4) (a) of the 2014 Tariff Regulations specifies the norms for O&M Expenses for the transmission system based on the type of sub-station and the transmission line. Norms specified in respect of the elements covered in the instant petition are as under:

(₹ in lakh)

Particulars	2017-18	2018-19
765 kV Bay (₹ lakh/Bay)	93.11	96.20

55. The petitioner's entitlement to O&M expenses has been worked out as hereunder:

(₹ in lakh)

Particulars	2017-18	2018-19
765 kV Bay – 4 nos.	223.46	384.80

<u>Interest on Working Capital (IWC)</u>

56. Clause 1 (c) of Regulation 28 and Clause 5 of Regulation 3 of the 2014 Tariff Regulations specify as follows:-

> "**28. Interest on Working Capital**
>
> (1)(c)(i) Receivables equivalent to two months of fixed cost;
>
> (ii) Maintenance spares @ 15% of operation and maintenance expenses specified in Regulation 29; and
>
> (iii) Operation and maintenance expenses for one month"
>
> "(5) "Bank Rate" means the base rate of interest as specified by the State Bank of India from time to time or any replacement thereof for the time being in effect plus 350 basis points;"

57. The petitioner is entitled to claim interest on working capital as per the 2014 Tariff Regulations. The components of the working capital and the petitioner's entitlement to interest thereon are discussed hereunder:

(i) **Receivables**

Receivables as a component of working capital will be equivalent to two months fixed cost. The petitioner has claimed the receivables on the basis of 2 months annual transmission charges. In the tariff being allowed, receivables have been worked out on the basis of 2 months transmission charges.

(ii) **Maintenance spares**

Regulation 28 of the 2014 Tariff Regulations provides for maintenance spares @ 15% per annum of the O&M expenses. The value of maintenance spares has accordingly been worked out.

(iii) **O & M expenses**

O&M expenses have been considered for one month as a component of working capital. The petitioner has claimed O&M expenses for one month of the respective year as claimed in the petition. This has been considered in the working capital.

(iv) **Rate of interest on working capital**

The rate of interest on working capital considered is 12.60% (SBI Base Rate of 9.10%, as on 1.4.2017 plus 350 basis points).

58. The interest on working capital, subject to truing up, has been worked out and allowed as under:

(₹ in lakh)

Particulars	2017-18 (pro-rata)	2018-19
Maintenance Spares	33.52	57.72
O&M expenses	18.62	32.07
Receivables	138.55	247.17
Total	**190.69**	**336.96**
Interest on Working Capital	**24.03**	**42.46**

Annual Transmission charges

59. In view of the above, the transmission charges allowed for the instant assets are as follows:

(₹ in lakh)

Particulars	2017-18 (pro-rata)	2018-19
Depreciation	181.53	333.38
Interest on Loan	194.65	339.15
Return on Equity	207.65	383.24
Interest on Working Capital	24.03	42.46
O&M Expenses	223.46	384.80
Total	**831.32**	**1483.01**

Filing fee and the publication expenses

60. 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.

License fee and RLDC Fees and Charges

61. The petitioner has prayed to allow the petitioner to bill and recover License fee and RLDC fees and charges, separately from the respondents. We are of the view that the petitioner shall be entitled for reimbursement of licence fee and RLDC fees and charges in accordance with Clause (2)(b) and (2)(a) of Regulation 52 of the 2014 Tariff Regulations.

Goods and Services Tax

62. The petitioner has prayed for reimbursement of tax, if any, on account of proposed implementation of GST. The petitioner has submitted that the Commission should allow to recover GST from the beneficiaries, if imposed on transmission charges under the proposed GST when implemented by Government of India. We are of the view that petitioner's prayer is premature.

Sharing of Transmission Charges

63. 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, as provided in Regulation 43 of the 2014 Tariff Regulations.

64. This order disposes of Petition No. 103/TT/2018.

Sd/-	***Sd/-***	***Sd/-***
(Dr. M. K. Iyer)	**(A. K. Singhal)**	**(P. K. Pujari)**
Member	**Member**	**Chairperson**