

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 85/TT/2017

Coram:

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

Date of Order : 27.06.2018

In the matter of:

Petition for determination of transmission tariff from COD to 31.3.2019 for 1x1500 MVA, 765/400 kV ICT at Vindhyachal Pooling Station along with associated bays, under "Transmission System associated with Vindhyachal-V (500 MW) project of NTPC (Part-A)" 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 Limited
Shakti Bhawan, Rampur
Jabalpur-482 008
2. NTPC Ltd.,
NTPC Bhawan
Core-7, Scope Complex
7, Institutional Area, Lodhi Road
New Delhi – 110003.
3. Maharashtra State Electricity Distribution Company Limited,
Hong Kong Bank Building, 3rd Floor,
M.G. Road, Fort, Mumbai-400 001.
4. Gujarat Urja Vikas Nigam Limited,
Sardar Patel Vidyut Bhawan,
Race Course Road,
Vadodara- 390 007.



5. Electricity Department,
Government of Goa,
Vidyut Bhawan, Panaji,
Near Mandvi Hotel, Goa- 403 001.
6. Electricity Department,
Administration of Daman and Diu,
Daman- 396 210.
7. Electricity Department,
Administration of Dadra Nagar Haveli,
U.T., Silvassa- 396 230.
8. Chhattisgarh State Electricity Board,
P.O. Sunder Nagar, Dangania, Raipur
Chhattisgarh- 492 013.
9. Madhya Pradesh Audyogik Kendra
Vikas Nigam (Indore) Limited,
3/54, Press Complex, Agra-Bombay Road
Indore- 452 008.

.....Respondents

For petitioner : Shri Vivek Kumar Singh, PGCIL
Shri S.K. Venkatesan, PGCIL
Shri S.S. Raju, PGCIL
Shri R. Prasad, PGCIL

For respondents : None

ORDER

The present petition has been filed by Power Grid Corporation of India Limited (the petitioner) seeking approval of transmission charges for 1x1500 MVA, 765/400 kV ICT at Vindhyachal Pooling Station along with associated bays (hereinafter referred to as “transmission asset”) under “Transmission System associated with Vindhyachal-V (500 MW) project of NTPC (Part-A)” in Western Region for tariff block 2014-19 from the date of commercial operation to 31.3.2019 based on 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 the said system was accorded by the Board of Directors of the petitioner vide Memorandum No C/CP/IA/IRSS, Vin-V dated 16.2.2015 at an estimated cost of ₹6673 lakh including an IDC of ₹406 lakh (based on October, 2014 price level). Further, long term access for Vindhyachal-V (500 MW) was granted to NTPC vide letter dated 29.5.2012. The project was scheduled to be put into commercial operation within 30 months from the date of IA. Therefore, the scheduled COD of the transmission system was 11.8.2017 against which the subject transmission system was put under commercial operation on 31.7.2017.

3. The scope of work covered under the original scheme is broadly as follows:-

Sub-Station Extension

Installation of 1x1500 MVA, 765/400 kV ICT at Vindhyachal Pooling Station

765 kV

- 1500 MVA 765/400 kV Transformer : 1 No.
- Transformer Bay : 1 No.

400 kV

- Transformer Bay : 1 No.

4. Annual Fixed Cost was granted for the instant transmission asset vide order dated 5.7.2017 under the first proviso to Regulation 7(7) of the 2014 Tariff Regulations for inclusion in the PoC charges.

5. The petitioner has claimed transmission charges for the instant asset as under:-

Particulars	(₹ in lakh)	
	2017-18 (pro-rata)	2018-19
Depreciation	174.90	300.66
Interest on Loan	173.76	281.30
Return on Equity	195.75	336.32
Interest on working capital	17.46	28.64
O & M Expenses	106.84	164.91
Total	668.71	1111.83



6. The details submitted by the petitioner in support of its claim for interest on working capital are as under:-

(₹ in lakh)

Particulars	2017-18 (pro-rata)	2018-19
Maintenance Spares	23.94	24.74
O & M Expenses	13.30	13.74
Receivables	166.51	185.31
Total	203.75	223.78
Rate of Interest	12.80%	12.80%
Interest	17.46	28.65

7. The petitioner has served the petition on the respondents and notice of this application has been published in the newspapers in accordance with Section 64 of the Electricity Act, 2003 (“the Act”). No comments have been received from the public in response to the notices published by the petitioner under Section 64 of the Act. MP Power Management Company Limited, Respondent No. 1, (hereinafter referred to as “MPPMCL”) has filed reply vide affidavit dated 22.5.2017. The petitioner has filed its rejoinder to the reply of MPPMCL vide affidavit dated 31.5.2017. The issues raised by MPPMCL and the clarifications given by the petitioner are dealt in relevant paragraphs of this order.

8. Having heard the petitioner and perused the material on record, we proceed to dispose of the petition.

Date of Commercial Operation (“COD”)

9. The petitioner initially submitted that the anticipated COD of the instant asset is 1.6.2017. Later, the petitioner vide affidavit dated 28.7.2017 has submitted that the actual COD of the instant asset is 31.7.2017. The petitioner has also submitted the certificate of RLDC as per the 2014 Tariff Regulations, certificate of CEA under Regulation 43 of CEA (Measures Related to Safety and Electric Supply) Regulations,



2010 as well as certificate of CMD as required under the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010.

10. We have considered the submissions of the petitioner and have also gone through the certificate of CMD and the certificates issued by RLDC and CEA. In view of the submissions of the petitioner supported by documentary evidence, we approve the COD of the instant asset as 31.7.2017 for the purpose of tariff calculation.

Capital cost

11. 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; 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.



12. The details of the apportioned approved capital cost, capital cost as on the date of commercial operation and estimated additional capital expenditure incurred or projected to be incurred for the instant transmission asset as submitted by the petitioner in the CA certificate dated 21.9.2017 are as under:-

(₹ in lakh)				
Apportioned approved cost as per FR	Expenditure upto DOCO	Projected Add Cap		Total estimated completion cost as on 31.3.2019
		2017-18	2018-19	6070.01
6672.61	4612.34	773.05	684.62	

13. We have considered the submissions of the petitioner. It is observed that the projected completion cost of ₹6070.01 lakh is within the approved apportioned cost of ₹6672.61 lakh. The petitioner vide affidavit dated 29.3.2018 has submitted revised Form-5 and has given following justifications/reasons for reduction in cost:-

- a) Misc. civil works: As per FR, the estimated amount for Misc. civil works equipment was of ₹498.06 lakh. However, as per actual site requirement the actual amount incurred was only ₹318.21 lakh. Thus, resulting in decrease of overall cost by ₹179.85 lakh.
- b) Switchgear (CT, PT, Circuit breaker, Isolator etc.): As per FR, the estimated amount for 32 nos. of switchgear equipment was estimated at the rate of ₹15.18 lakh each amounting to ₹485.63 lakh. However, as per actual awarded value received in competitive bidding the rate increased to ₹23.79 lakh against FR rate of ₹15.18 lakh, thus resulting into an overall increase of actual cost by ₹275.72 lakh.
- c) Transformers (3X500 MVA): As per FR, the estimated amount for three 500 MVA transformer was ₹3999.71 lakh. However, as per actual awarded value received in competitive bidding the rate per transformer increased to ₹1377.86 lakh



against the FR rate of ₹1333.24 lakh, thus resulting in an overall increase of actual cost by ₹133.87 lakh.

d) Control, relay and protection panel: As per FR, the estimated amount for five control, relay and protection equipment was estimated at the rate of ₹11.71 lakh each amounting to ₹58.55 lakh. However, as per actual awarded value received in competitive bidding the rate decreased to ₹10.35 lakh leading to overall decrease of ₹6.78 lakh.

e) Bus Bars/Conductors/Insulators: As per FR, the cost of one bus bar/conductor/insulator equipment was estimated to be ₹45.48 lakh. However, actual awarded value received in competitive bidding was ₹234.05 lakh. Thus, it resulted in an overall increase of actual cost by ₹188.57 lakh.

f) Structure for switchyard: As per FR, the cost of one switchyard equipment was estimated at the rate of ₹294.64 lakh. However, as per actual awarded value received in competitive bidding the rate decreased to ₹266.56 lakh. Thus, resulting in an overall decrease of ₹28.08 lakh.

g) Auxiliary System: As per FR, the estimated cost of Auxiliary System equipment was ₹105.86 lakh. However, the actual awarded value received in competitive bidding was ₹167.07 lakh, resulting in an overall increase of actual cost by ₹61.21 lakh.

14. We have considered the submissions of the petitioner. The cost variation appears to be beyond the control of the petitioner since it was obtained through competitive bids. Further, the total estimated completion cost is within the FR cost and hence the cost variation is approved.



15. As per Investment Approval, the scheduled COD the instant assets was 11.8.2017 against which subject asset was put under commercial operation on 31.7.2017. Hence, there is no time over-run.

Interest During Construction (IDC)

16. The petitioner has claimed IDC of ₹123.30 lakh and submitted the Auditors certificate dated 21.9.2017 in support. The petitioner has also submitted a statement showing IDC discharged up to COD which shows that out of ₹123.30 lakh, ₹89.14 lakh was discharged as on COD and the balance of ₹12.49 lakh and ₹21.66 lakh has been discharged during 2017-18 and 2018-19 respectively. The IDC statement includes SBI loan pertaining to Quarter 4, 2015-16 and the petitioner has shown multiple draws with floating rate of interest for SBI loan but no interest rate has been mentioned. However, we have considered the interest rate as given in Form-9C for all the drawl of SBI loans. Accordingly, the IDC allowed for tariff has been summarised as under:-

(₹ in lakh)				
IDC claimed as per the Auditor's Certificate	Entitled IDC as on COD as worked out	IDC Dis-allowed as on COD due to computation difference (A-B)	Un-discharged portion of entitled IDC as on COD	IDC allowed on cash basis as on COD
a	b	c=a-b	d	e=a-c-d
123.30	120.67	2.63	33.95	86.71

The undischarged IDC as on COD has been considered as ACE during the year in which it has been discharged. The IDC allowed shall be reviewed at the time of truing up subject to the submission of interest rate for SBI loan and discharge of IDC liability.



Incidental Expenditure During Construction (IEDC)

17. The petitioner vide Auditor's certificate dated 21.9.2017 has claimed IEDC of ₹47.44 lakh. The IEDC amount claimed is within the percentage on hard cost submitted in the abstract cost estimate. Therefore, amount of ₹47.44 lakh claimed towards IEDC for the instant asset is considered for tariff computation.

Treatment of Initial Spares

18. 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:

(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%

(i) 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.”



19. The petitioner has claimed initial spares amounting to ₹179.74 lakh corresponding to sub-station. The petitioner's claim of ₹179.74 lakh towards initial spare is within the ceiling limit of 6.00% of the capital cost as specified in the 2014 Tariff Regulations. Thus, the same is considered for the purpose of tariff in this order. The details of initial spares allowed are given below:-

(₹ in lakh)

Sub-station					
Total cost (Plant and machinery) (A)	Initial spares claimed (B)	Allowable limit (C)	Initial spares calculated (D)=((A-B)*C)/(1-C)	Excess initial spares (E)= (D)-(B)	Initial spares allowed
5933.84	179.74	6.00%	367.28	0.00	179.74

Capital Cost allowed as on COD

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

(₹ in lakh)

Capital cost as on COD claimed by Petitioner	IDC disallowed due to computation difference	Undischarged portion of IDC	IEDC Disallowed on COD	Excess Initial spares	Capital Cost as on COD considered for tariff calculation
1	2	3	4	5	6 = (1-2-3-4-5)
4612.34	2.63	33.95	0.00	0.00	4575.75

Additional capital expenditure

21. 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.”

22. 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”.

23. The cut-off date in the case of instant asset is 31.3.2020.

24. The petitioner has claimed ACE based on the cost certified by Auditor. Further, the petitioner has claimed ACE towards discharge of IDC liability. The details of the ACE claimed by the petitioner is interpreted as under:-

Srl. No.	Particulars	(₹ in lakh)	
		2017-18 (COD to 31.3.2019)	2018-19
1	Regulation 14(1)(i) -Discharge of un-discharge liabilities on Hard cost	773.04	684.62
2	Regulation 14(1)(i) - Discharge of IDC Liability out of undischarged IDC as on COD	12.49	21.66
3	Total add-cap claimed as per Form 7 (1+2)	785.53	706.28

25. MPPMCL has submitted that the petitioner has not submitted the justification for additional capitalisation and hence it is liable to be rejected.



26. The petitioner has claimed the additional capital expenditure of ₹785.53 lakh and ₹706.28 lakh during 2017-18 and 2018-19 respectively under discharge of liability whereas the undischarged liability as on COD as mentioned in Form 4A is only ₹766.45 lakh. Further, Form 4A also mentions the fresh capitalization (i.e. addition in to Gross Block) during 2017-18 and 2018-19 amounting ₹40.75 lakh and ₹684.62 lakh respectively. Therefore, the addition into gross block has been provisionally allowed under Regulation 14(1)(ii) as deferred work. However, the petitioner at the time of true up has to clarify the regulations under which the addition into gross block is being made. Based on the information submitted in Auditor certificate, Form 4A, Form 7 and IDC statement, the additional capital expenditure for the purpose of tariff has been provisionally allowed as mentioned below, which is subject to true up.

(₹ in lakh)

Particulars	Regulation	2017-18 (pro-rata)	2018-19	Total
Discharge of IDC liabilities	Regulation 14(1)(i)	12.49	21.46	33.95
Discharge Hard cost Liability	Regulation 14(1)(i)	732.30	0.00	732.30
Addition of Gross block during the period	Regulation 14(1)(ii)	40.75	684.62	725.37
Total add-cap allowed		785.54	706.08	1491.62

27. As discussed above, the undischarged IDC as on COD has been allowed as additional capital expenditure during the year of discharge.

28. The capital cost considered for the purpose of computation of tariff is as follows:-

(₹ in lakh)

Capital Cost allowed as on COD	Add cap for 2017-18	Add cap for 2018-19	Total Estimated Completion Cost as on 31-03-2019
4575.75	785.54	706.08	6067.38



Debt: Equity Ratio

29. Regulation 19 (1) of the 2014 Tariff Regulations specifies as under:-

“19. Debt-Equity Ratio: (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.”

30. The petitioner has considered debt:equity ratio as 70:30 as on COD and debt:equity ratio as 70:30 for additional capitalization during 2017-18 and 2018-19. Accordingly, we have considered the same for the purpose of tariff computation for the 2014-19 tariff period. The details of debt:equity as on COD, as on 31.3.2019 and for additional capital expenditure is as follows:-

Particulars	(₹ in lakh)			
	Capital cost as on COD		Capital cost as on 31.3.19	
	Amount	(%)	Amount	(%)
Debt	3203.03	70.00	4247.17	70.00
Equity	1372.73	30.00	1820.21	30.00
Total	4575.75	100.00	6067.38	100.00

Return on Equity (“ROE”)

31. Clause (1) & (2) of Regulation 24 and Clause (2) of Regulation 25(2) 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 regulation 19.

(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: xxx
xxx ”

“25. Tax on Return on Equity:

(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.”

32. The petitioner has claimed ROE at the rate of 19.61% for the 2017-19 period after grossing up the ROE of 15.50% with MAT rate as per the above said Regulation. 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.

33. We have considered the submissions made by the petitioner. 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 given follows:-

Particulars	(₹ in lakh)	
	2017-18 (pro-rata)	2018-19
Opening Equity	1372.73	1608.39
Additional Capitalization	235.66	211.83
Closing Equity	1608.39	1820.21
Average Equity	1490.56	1714.30
Return on Equity (Base Rate) (%)	15.50%	15.50%
Tax rate for the year (%)	20.961%	20.961%
Rate of Return on Equity (Pre Tax) (%)	19.610%	19.610%
Return on Equity	195.40	336.17

Interest on Loan (“IOL”)

34. Regulation 26 of the 2014 Tariff Regulations are 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 decapitalization 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.”

35. The petitioner’s entitlement to IoL has been calculated as per the provisions of Regulation 26 of the 2014 Tariff Regulations as detailed below:-

- (i) The Gross Normative loan has been considered as per the Loan amount determined based on the debt equity ratio applied on the allowed capital cost;
- (ii) The depreciation of every year has been considered as Normative repayment of loan of concerned year; and
- (iii) The weighted average rate of interest on actual loan portfolio has been worked out by considering the Gross amount of loan, repayment & rate of interest as mentioned in the petition, which has been applied on the Normative average loan during the year to arrive at the interest on loan.

36. The petitioner has submitted that the IoL has been considered on the basis of rate prevailing as on COD i.e. 31.7.2017 and the change in interest due to floating rate of interest applicable, if any, needs to be claimed/ adjusted over the tariff block 2014-19. The IoL has been calculated on the basis of rate prevailing as on the date of commercial operation. Any change in rate of interest subsequent to the date of commercial operation will be considered at the time of truing-up.

37. Detailed calculations in support of interest on loan have been calculated as given at **Annexure.**



38. The details of IoL calculated are as under:-

Particulars	(₹ in lakh)	
	2017-18 (Pro-rata)	2018-19
Gross Normative Loan	3203.03	3752.91
Cumulative Repayment upto previous year	0.00	174.59
Net Loan-Opening	3203.03	3578.32
Additions during the year	549.88	494.26
Repayment during the year	174.59	300.54
Net Loan-Closing	3578.32	3772.04
Average Loan	3390.67	3675.18
Rate of Interest (%)	7.6524%	7.6511%
Interest on Loan	173.45	281.19

Depreciation

39. Regulation 27 of the 2014 Tariff Regulations with regard to depreciation specifies as follows:-

"27. Depreciation:

(1) 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) 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 in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:



Provided further 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 generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and 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-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.

(6) 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

40. The petitioner has claimed actual depreciation as a component of annual fixed charges. Depreciation has been calculated in accordance with Regulation 27 of the 2014 Tariff Regulations extracted above. The instant transmission asset was put under commercial operation on 31.7.2017. Accordingly, it will complete 12 years after 2018-19 tariff block. As such, depreciation has been calculated annually based on Straight Line Method at the rates specified in Appendix-II to the 2014 Tariff Regulations.

41. The details of the depreciation worked out are as under:-

Particulars	(₹ in lakh)	
	2017-18 (pro-rata)	2018-19
Opening Gross block	4575.75	5361.29
Additional Capitalization	785.54	706.08
Closing Gross block	5361.29	6067.38
Average Gross block	4968.52	5714.34
Rate of Depreciation (%)	5.2564%	5.2593%
Depreciable Value	4471.67	5142.90
Remaining Depreciable Value	4471.67	4968.32
Depreciation	174.59	300.54



Operation & Maintenance expenses (O&M Expenses)

42. 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 assets are as under:-

Norms for sub-stations (in ₹ in lakh per bay)	2017-18	2018-19
765 kV Sub-station	93.11	96.20
400 kV Sub-station	66.51	68.71

43. The petitioner claimed the following O&M Expenses in the instant petition:-

	(₹ in lakh)	
Particulars	2017-18	2018-19
O&M Expenses	106.84	164.91

44. As per Regulation 29(4) of 2014 Tariff Regulation, the allowable O&M Expenses for the asset covered in the instant petition are as under:-

	(₹ in lakh)	
Elements	2017-18 (pro-rata)	2018-19
One 765 kV bay	62.24	96.20
One 400 kV bay	44.46	68.71
Total	106.70	164.91

*Pro-rata has been calculated by taking total number of days from 31.7.2017 to 31.3.2018=244 days/365 respective no. of bays for 765 kV and 400 kV.

45. The petitioner has 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. The petitioner has further submitted that the wage revision of the employees is due during 2014-19 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. 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.

46. MPPMCL has submitted that there is no order for wage revision for 2017 and as such petitioner's prayer for wage revision is premature and not justified. MPPMCL submitted that in the earlier order for wage revision, it was directed that the profit making company should pay by their own. PGCIL is a profit making Public Sector Company. As such, the petitioner should bear the burden of wage revision of its employees and the Commission has no control over the wage hike allowed by the petitioner to its employees and hence, no blanket approval may be accorded for enhancement in O&M Expenses at a later stage. Further, Ministry of Heavy Industries and Public Enterprises in its office memorandum dated 26.11.2008 has issued instructions to PSUs to bear the financial implications and hence respondents are not liable to bear the burden under this account and on the basis of similar analogy it is requested to reject the plea of petitioner as the CPSE concerned has to bear the additional financial implication on account of pay revision from their own resources.

47. In response, the petitioner has submitted that the wage revision of the employees of the petitioner company is due w.e.f. 1.1.2017 and actual impact of wage hike which will be effective from a future date has also not been factored in fixation of the normative O&M rates prescribed for the tariff block 2014-19. Further, the scheme of wage revision applicable to CPSUs being binding on the petitioner, the petitioner would approach the Commission for suitable revision in the norms for O&M Expenses for claiming the impact of wage hike from 1.1.2017 onwards.



48. We have considered the submissions made by the petitioner and MPPMCL. The O&M Expenses have been worked out as per the norms specified in the 2014 Tariff Regulations. As regards impact of wage revision, any application filed by the petitioner in this regard will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations.

Interest on Working Capital (“IWC”)

49. 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) The working capital shall cover:

(c) Hydro generating station including pumped storage hydro electric generating station and transmission system including communication system:

- (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

(4) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 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.

(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;

50. The petitioner is entitled to claim IWC 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 of



annual transmission charges.

(ii) Rate of interest on working capital

The petitioner has claimed 12.80% of interest on working capital of interest on working capital. As per Regulation 28(3) of the 2014 Tariff Regulations, SBI Base rate of 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.

51. Accordingly, the interest on working capital as determined is as under:-

(₹ in lakh)

Particulars	2017-18 (pro-rata)	2018-19
O & M expenses	23.94	24.74
Maintenance Spares	13.30	13.74
Receivables	166.37	185.17
Total	203.61	223.64
Rate of interest	12.60%	12.60%
Interest on Working Capital	17.15	28.18

Transmission charges

52. The transmission charges allowed for the instant transmission asset are summarized as under:-

(₹ in lakh)

Particulars	2017-18 (Pro-rata)	2018-19
Depreciation	174.59	300.54
Interest on Loan	173.45	281.19
Return on Equity	195.40	336.17
Interest on Working Capital	17.15	28.18
O & M Expenses	106.70	164.91
Total	667.29	1110.99

53. The petitioner has submitted that the claim for transmission charges and other charges is exclusive of incentive, late payment surcharge, FERV, any statutory taxes, levies, duties, cess, filing fees, license fee, RLDC fees and charges or any other kind of impositions etc. The same if imposed shall be borne and additionally paid by the



respondents. The petitioner is entitled to FERV as provided under Regulation 50 of the 2014 Tariff Regulations and the petitioner can make other claims as per the 2014 Tariff Regulations.

Filing Fee and the Publication Expenses

54. 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

55. 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.

Service Tax

56. The petitioner has sought to recover service tax on transmission charges separately from the respondents, if at any time service tax on transmission is withdrawn from negative list in future. MPPMCL has submitted that the petitioner's claim is premature. We have considered the submission of the petitioner and MPPMCL. Service tax is not levied on transmission. Further, service tax is subsumed by GST and hence petitioner's prayer has become infructuous.

Goods and Services Tax

57. The petitioner has prayed for reimbursement of tax, if any, on account of



implementation of GST. MPPMCL has submitted that the petitioner's claim is premature. GST is not levied on transmission at present and as such we are of the view that petitioner's prayer is premature.

Sharing of Transmission Charges

58. 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.

59. This order disposes of Petition No. 85/TT/2017.

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

sd/-
(A. S. Bakshi)
Member

sd/-
(A. K. Singhal)
Member

sd/-
(P. K. Pujari)
Chairperson



ANNEXURE

**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR
TARIFF PERIOD 2014-19**

	Details of Loan	2017-18	2018-19
1	Bond LIII		
	Gross loan opening	63.00	63.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	63.00	63.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	63.00	63.00
	Average Loan	63.00	63.00
	Rate of Interest	8.13%	8.13%
	Interest	5.12	5.12
	Rep Schedule	12 annual instalments from 25.04.2020	
2	Bond LIV		
	Gross loan opening	65.00	65.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	65.00	65.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	65.00	65.00
	Average Loan	65.00	65.00
	Rate of Interest	7.97%	7.97%
	Interest	5.18	5.18
	Rep Schedule	12 annual instalments from 15.07.2021	
3	Bond LVII		
	Gross loan opening	2.65	2.65
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	2.65	2.65
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	2.65	2.65
	Average Loan	2.65	2.65



	Rate of Interest	7.20%	7.20%
	Interest	0.19	0.19
	Rep Schedule	12 annual instalments from 21.12.2021	
4	SBI Loan 01.05.2014		
	Gross loan opening	540.00	540.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	540.00	540.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	540.00	540.00
	Average Loan	540.00	540.00
	Rate of Interest	8.90%	8.90%
	Interest	48.06	48.06
	Rep Schedule	NA	
5	Bond LIX		
	Gross loan opening	2366.08	2374.82
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	2366.08	2374.82
	Additions during the year	8.74	15.16
	Repayment during the year	0.00	0.00
	Net Loan-Closing	2374.82	2389.98
	Average Loan	2370.45	2382.40
	Rate of Interest	7.30%	7.30%
	Interest	173.04	173.92
	Rep Schedule	12 annual instalments from 18.10.2026	
6	Bond LII		
	Gross loan opening	168.00	168.00
	Cumulative Repayment upto DOCO/previous year	0.00	0.00
	Net Loan-Opening	168.00	168.00
	Additions during the year	0.00	0.00
	Repayment during the year	0.00	0.00
	Net Loan-Closing	168.00	168.00
	Average Loan	168.00	168.00
	Rate of Interest	8.32%	8.32%
	Interest	13.98	13.98
	Rep Schedule	NA	
	Total Loan		
	Gross loan opening	3204.73	3213.47



Cumulative Repayment upto DOCO/previous year	0.00	0.00
Net Loan-Opening	3204.73	3213.47
Additions during the year	8.74	15.16
Repayment during the year	0.00	0.00
Net Loan-Closing	3213.47	3228.63
Average Loan	3209.10	3221.05
Rate of Interest	7.6524%	7.6511%
Interest	245.57	246.45

