CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 13/TT/2016

Coram:
Shri A.S. Bakshi, Member
Dr. M.K. Iyer, Member

Date of Hearing : 13.06.2016
Date of Order : 30.06.2016

In the matter of:

Determination of transmission tariff for **Asset-I**: Re-conductoring of one circuit (Ckt-I) Farakka- Malda 400 kV D/C with HTLS conductor and upgradation/ replacement of associated bay equipment at Farakka and Malda (COD – 2.4.2016) & **Asset-II:** Re-conductoring of one circuit (Ckt-II) Farakka- Malda 400 kV D/C with HTLS conductor and up gradation/replacement of associated bay equipment at Farakka and Malda under "Eastern Region Strengthening Scheme-XIII" (ERSS XIII) in Eastern Region (COD - 2.4.2016) for the 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999.

And in the matter of:

Power Grid Corporation of India Ltd.
'SAUDAMINI', Plot No-2,
Sector-29, Gurgaon -122 001 (Haryana). **………Petitioner**

Versus

1. Bihar State Power (Holding) Company Limited,
(Formerly Bihar State Electricity Board- BSEB)
Vidyut Bhawan, Bailey Road
Patna- 800 001

2. West Bengal State Electricity Distribution Company Limited
Bidyut Bhawan, Bidhan Nagar
Block DJ, Sector-II, Salt Lake City,
Kolkata-700 091

3. Grid Corporation of Orissa Ltd.
Shahid Nagar,
Bhubaneswar- 751 007

4. Damodar Valley Corporation
DVC Tower, Maniktala
Kolkata- 700 054

5. Power Department
Government of Sikkim, Gangtok- 737 101

6. Jharkhand State Electricity Board
In front of Main Secretariat,
Doranda, Ranchi- 834002 **……….Respondents**

The following were present:-

For Petitioner: Shri Amit Yadav, PGCIL
Shri M.M. Mondal, PGCIL
Shri S.S. Raju, PGCIL
Shri Rakesh Prasad, PGCIL
Shri Jasbir Singh, PGCIL

For Respondent: Shri R.B. Sharma, Advocate, BSP(H)CL

ORDER

This petition has been filed by Power Grid Corporation of India Ltd. ("the petitioner") for determination of tariff for re-conductoring of one circuit (Ckt-I) Farakka-Malda 400 kV D/C with HTLS conductor and upgradation/replacement of associated bay equipment at Farakka and Malda (referred as "**Asset-I")** & Re-conductoring of one circuit (Ckt-II) Farakka-Malda 400 kV D/C with HTLS conductor and up gradation/replacement of associated bay equipment at Farakka (referred as "**Asset-II")** and Malda under "Eastern Region Strengthening Scheme-XIII" (ERSS XIII) in Eastern Region for 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff)

Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) for the period starting from COD to 31.3.2019.

2. The respondents are distribution licensees, or centralised power procurement companies of States who are procuring transmission service from the petitioner, mainly beneficiaries of the Eastern Region.

3. The brief facts of the case are as follows:-

(a) The investment approval for the project was accorded by Board of Directors of the petitioner’s company vide Memorandum No. C/CP/ERSS-XIII Part-A dated 19.5.2014 with an estimated cost of ₹12138 lakh including Interest during Construction of ₹772 lakh, based on February, 2014 price level. The scheme was discussed in the 25th ERPC Meeting held on 20th and 21st September 2013 and SCM of Eastern Region.

(b) The scope of the instant project is “re-conductoring of Farakka-Malda 400 kV D/C with HTLS conductor and upgradation/replacement of associated bay equipment at Farakka and Malda”.

(c) The commercial operation date (COD) of the Asset-I and Asset-II are as under:-

Particulars	Date of Commercial Operation	
	Anticipated COD	Actual COD as per affidavit dated 10.6.2016
Asset-I	1.2.2016	2.4.2016
Asset-II	1.2.2016	2.4.2016

(d) The petitioner has combined both the assets covered in the petition and revised its claim of transmission charges vide affidavit dated 17.6.2016 for Combined Asset-I and II for the tariff period from actual COD to 31.3.2019 as under:-

(₹ in lakh)

Combined Asset I & II			
Particulars	2016-17	2017-18	2018-19
Depreciation	441.68	602.68	634.36
Interest on Loan	512.46	659.01	640.96
Return on Equity	494.51	674.76	710.23
Interest on Working Capital	31.58	42.21	43.28
O&M Expenses	0.00	0.00	0.00
Total	**1480.23**	**1978.66**	**2028.83**

(e) The details submitted by the petitioner in support of its claim for interest on working capital are given hereunder:-

(₹ in lakh)

Combined Asset I & II			
Particulars	2016-17	2017-18	2018-19
Maintenance Spares	0.00	0.00	0.00
O & M Expenses	0.00	0.00	0.00
Receivables	247.39	329.78	338.14
Total	247.39	329.78	338.14
Interest	31.67	42.21	43.28
Rate of Interest (%)	12.80	12.80	12.80
Pro-rata Interest	**31.58**	**42.21**	**43.28**

4. 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. The hearing in this matter was held on 13.6.2016. None of the respondents have filed their reply. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

5. The annual transmission charges for the instant asset was allowed under Regulation 7(7) of the 2014 Tariff Regulations for inclusion in the PoC charges vide order dated 31.3.2016 subject to adjustment.

6. The petitioner in the original petition had submitted the tariff forms on the basis of anticipated COD. As such, the petitioner was directed to submit Auditor's Certificate, revised tariff forms as per the actual COD and RLDC certificate. In response, the petitioner vide affidavit dated 10.6.2016, has submitted the energisation certificate issued by CEA. Further, the petitioner vide its affidavit dated 17.6.2016 had submitted revised tariff forms along with Auditor's Certificate for Combined Asset-I & II. In response to query regarding type of conductor used for re-conductoring, the petitioner had submitted that the INVAR type HTLS conductor is used for re-conductoring of Farakka Malda 400 kV D/C line. Further, the petitioner has submitted that RLDC certificate for trial operation will be submitted subsequently.

7. The petitioner further submitted that the original assets are covered under project Chukha transmission system in petition no. 60/TT/2015 and the de-capitalisation of the conductor has been carried out therein.

8. The petitioner has submitted that the actual COD of both the Combined Asset I and II is 2.4.2016. The petitioner has further submitted that out of total IDC of ₹136.32 lakh, ₹55.21 lakh has been discharged up to COD. The balance IDC of ₹81.11 lakh is to be discharged during 2016-17. The IEDC has been discharged upto COD. The petitioner submitted that both the assets are commissioned within the schedule time hence IDC and IEDC upto SCOD and beyond is not required. The petitioner has also submitted the documents in support of date of drawl of loan, interest rate and repayment schedule for the actual loan deployed.

Commercial Operation Date ("COD")

9. The petitioner has claimed the COD as 2.4.2016 for both the Assets. 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:
> xxx
> xxx"

10. The petitioner has submitted the certificate issued by CEA dated 28.3.2016 for energizing electrical installation (under Regulation 43) by Regional Inspectorial Organization (East) for both the Assets. The petitioner, vide affidavit dated 17.6.2016, has submitted that Regional Load Dispatch Centre (ERLDC)

Certificate in support of commercial operation, in accordance with Regulation 5(2) of the 2014 Tariff Regulations, of both the assets shall be submitted shortly. Therefore, the COD of the transmission asset has been provisionally admitted as 2.4.2016 for Combined Asset-I and II subject to receipt of RLDC certificate. The petitioner is directed to submit the required certificate at the time of truing up.

11. The tariff has been worked out from COD to 31.3.2019 in accordance with the 2014 Tariff Regulations as discussed in subsequent paragraphs.

Capital Cost

12. The details of apportioned approved cost, capital cost as on date of commercial operation and estimated additional capital expenditure incurred or projected to be incurred for the instant asset are as under:-

(₹ in lakh)

Particulars	Approved apportioned cost	Capital cost as on COD	Additional capitalization			Total estimated completion cost
			2016-17	2017-18	Total	
Combined Asset-I& II	12138.00	6043.84	4770.46	1200.00	**5970.46**	**12014.30**

13. The petitioner has claimed capital cost of ₹5962.73 lakh for Combined Asset-I & II after adjusting the accrued IDC upto COD. The capital cost as on COD also includes the cost towards IDC, IEDC and initial spares.

14. Clause (1) and (2) of Regulation 9 and clause (1) of Regulations 10 of the 2014 Tariff Regulations specify as follows:-

“9. Capital Cost: (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-capitalisation determined in accordance with Regulation 14 of these regulations;
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.”

“10. Prudence Check of Capital Expenditure: The following principles shall be adopted for prudence check of capital cost of the existing or new projects:

(1) In case of the thermal generating station and the transmission system, prudence check of capital cost may be carried out taking into consideration the benchmark norms specified/to be specified by the Commission from time to time:
Provided that in cases where benchmark norms have not been specified, prudence check may include scrutiny of the capital expenditure, financing plan, interest during construction, incidental expenditure during construction for its reasonableness, use of efficient technology, cost over-run and time over-run, competitive bidding for procurement and such other matters as may be considered appropriate by the Commission for determination of tariff:”

<u>Time over-run</u>

15. As per the investment approval dated 19.5.2014, the commissioning schedule of the project was 30 months from the date of investment approval. Accordingly the scheduled date of commercial operation works out to 19.11.2016. The transmission assets were commissioned on 2.4.2016 for Asset-I

& II. The commissioning of the assets are within the timeline specified and hence, IDC and IEDC upto COD has been capitalized as claimed by the petitioner.

Cost Over-run

16. The approved apportioned cost of Combined Asset I and II is ₹12130 lakh and the estimated completion cost as on 31.3.2019 is ₹12014.30 lakh. Though the estimated completion cost is within the approved apportioned cost, there is cost variation in case of certain elements.
The petitioner has submitted that the variation in comparison to FR cost is mainly attributable to variation in quantities. The petitioner has submitted that as per policy of petitioner's company, the bid prices are invited for the complete scope of work on overall basis. The break-up of these prices are for the purpose of accounting and payment. The comparison of prices for a particular package is also done with its cost estimates on overall basis. As per the petitioner, this practice has been followed by the petitioner as per their internal policy documents. The petitioner has submitted that as per this internal policy documents, the recommended price of lowest bidder of techno-commercially responsive bid duly considering capability to perform shall be compared with the approved cost estimates. The comparison shall be done only between the total recommended price and total cost estimates. Price of individual item will not be compared for the above purpose. The petitioner, in order to indicate that it is following prudent practices, has submitted that the procurement procedure of the petitioner's company has been assessed by the World Bank. The petitioner has

submitted the commercial advantage for comparing prices on overall basis that similar items may not always have the same rate in different contracts awarded during the same period or even within the same contract. The difference between the rates is because of various market forces and the pricing strategies followed by bidder(s) to decide the spread of their total prices over different items. As such comparing the prices of individual items would not serve much purpose of ensuring the comparative position of bidder on overall basis gets served during the evaluation stage. The petitioner has submitted that a more realistic approach for analysing the prices would be to examine the prices for complete FR cost vis-a-vis the actual completed cost of the project instead of analysing the same on price component-wise basis as the procurement by the petitioner is done on overall basis.

17. With regard to variation in quantities, the petitioner has submitted that the cost variation in structures for switchyard is mainly attributable to the variation in quantity of excavation, reinforcement steel, cement and concrete due to actual site conditions. These components were not considered in FR cost. Further, there is increase in the cost of switchgear and Emergency D.G. set due to addition of 6 nos. of Circuit breaker, 12 nos. of CVTs, erection and hardware cost and we also considered power and control cables as per actual site conditions for both the assets which were not considered in the FR. The petitioner has further submitted that the FR costs of individual items/materials are exclusive of taxes and duties which have been indicated under a separate head while the cost of items as per the actual expenditure is inclusive of taxes and duties. Cost of

conductor increase of around ₹1600 lakh is mainly on account of actual taxes and custom duties paid. It is further submitted that the variation in cost is mainly due to the prices of the items in the FR cost were estimated on the previous contracts for respective items. The contracts for packages under this project comprising these items were awarded to the lowest evaluated and responsive bidder, on the basis of open competitive bidding. Thus, the award prices represent the lowest price available at the time of bidding of various packages depending upon prevailing market conditions.

14. We have considered the submissions made by the petitioner regarding the variation in cost of certain elements. The cost variation is allowed as it is not within the control of the petitioner.

Initial spares

15. Regulation 13(d) of the 2014 Tariff Regulations provides that initial spares shall be capitalised as a percentage of plant and machinery cost upto cut-off date, subject to following ceiling norms:-

> "(a) Coal-based/lignite-fired thermal generating stations - 4.0%
> (b) Gas Turbine/Combined Cycle thermal generating stations - 4.0%
> (c) Hydro generating stations including pumped storage hydro station-4.0%
> (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%" |

16. The petitioner has claimed initial spares of ₹49 lakh, and ₹40.99 lakh for transmission line and sub-station (brownfield) for the instant assets. Initial spares

claimed for transmission line and sub-station for Asset-I and II are within the ceiling limit specified in the 2014 Tariff Regulations.

(₹ in lakh)

Description	Plant & Machinery cost as on cut-off date (a)	Initial spares claimed (b)	Ceiling limit (%) as per Regulation 13 of the 2014 Tariff Regulation (c)	Ceiling limit of Initial Spares (d)=*((a-b) *c) / (100-c)%	Excess initial Spares	Initial Spares Allowed Min [(b) & (d)]
Transmission Line (Asset-I&II)	4945.54	49.00	1.00%	49.46	0.00	49.00
Sub-station (Greenfield) (Asset-I&II)	935.53	40.99	6.00%	57.10	0.00	40.99

IDC and IEDC

17. The petitioner, vide affidavit dated 17.6.2016, has submitted the details of accrued IDC which is projected to be discharged beyond COD during 2016-17 and 2017-18. The petitioner also submitted that entire IEDC has been discharged as on COD for the said assets. Accordingly, the accrued IDC upto COD and projected to be discharged after COD, has been deducted from the capital cost as on COD and the same has been considered as part of additional capitalization in addition to the additional capitalization submitted as per the Auditor Certificate dated 16.6.2016 for Combined Assets as shown below:-

Particulars	**(₹ in lakh)**
Capital cost as on COD as per Auditor's Certificate	6043.84
Less: Accrual IDC to be discharged after COD	81.11
Less: Excess Initial spares	0.00
Capital Cost considered as on COD	**5962.73**

Additional Capital Expenditure

13. 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 recognized 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;
> (iv)Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law; and
> (v) Change in law or compliance of any existing law:"

14. Clause 13 of Regulation 3 of the 2014 Tariff Regulations defines

> "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 a year, the cut - off date shall be 31st March of the year closing after three years of the year of commercial operation:"

18. The petitioner has proposed additional capitalization of ₹4770.46 lakh from COD to 31.3.2017, ₹1200 lakh for the year 2017-18 for Combined Asset-I & II towards balance and retention payment under Regulation 14(1) of 2014 Tariff Regulations. The petitioner has claimed additional capitalization including the accrued IDC discharged during 2016-17 and 2017-18. It is observed that total estimated completion cost including additional capitalization for 2016-17 and 2017-18 is within the approved apportioned cost. The additional capitalization is towards the balance and retention payment for the work within the original scope of work.

19. The cut-off date for Combined Asset-I and II works out to be 31.3.2019. The additional capitalization claimed by the petitioner is within the cut-off date. The additional capitalization for 2016-17 and 2017-18 is allowed under Regulation 14(1) of the 2014 Tariff Regulations. The details of additional capitalization allowed is as follows:-

(₹ in lakh)

Cost as per Investment Approval is ₹12138.00 lakh					
Asset	Capital cost as on COD	Additional capitalisation projected			Total capital cost as on 31.3.2019
		2016-17	2017-18	Total	
As Claimed	5962.73 (6043.84-81.11*)	4851.57 (4770.46+ 81.11*)	1200	6051.57	12014.30
Approved in this order	5962.73	4851.57	1200	6051.57	12014.30

*Accrual IDC adjusted

Debt:Equity Ratio

20. 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."

21. The petitioner has considered debt:equity ratio as 70:30 as on COD and for additional capitalisation post COD. We have considered debt:equity ratio of

70:30 as on COD and for additional capitalization during 2016-17 and 2017-18. The details of the debt:equity as on the date of COD and 31.3.2019 considered for the purpose of tariff computation for the 2014-19 tariff period is as follows:-

(₹ in lakh)

Combined Asset I & II	As on COD		Additional capitalization during 2014-19		As on 31.3.2019	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	4173.91	70.00	4236.10	70.00	8410.01	70.00
Equity	1788.82	30.00	1815.47	30.00	3604.29	30.00
Total	5962.73	100.00	**6051.57**	100.00	**12014.30**	100.00

Interest on Loan (“IOL”)

22. Clause (5) & (6) of Regulation 26 of the 2014 Tariff Regulations provides as under:-

> “(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.”

23. We have considered the weighted average rate of IOL on the basis of rate prevailing as on 1.4.2016 for Combined Asset I and II. Further, the petitioner has prayed to allow it to bill and adjust impact on interest on loan due to change in interest rate on account of floating rate of interest applicable during 2015-19 period, if any from the respondents. The IOL has been worked out in accordance

with Regulation 26 of the 2014 Tariff Regulations. The petitioner's prayer to bill and adjust the impact on interest on loan due to change in interest rate on account of floating rate of interest applicable during 2015-19 period from the respondents will be considered at the time of truing up. The details of weighted average rate of interest are placed at **Annexure-1**for the assets covered in the instant petition and the IOL has been worked out as follows:-

(₹ in lakh)

Combined Asset I & II			
Particulars	2016-17 (Pro-Rata)	2017-18	2018-19
Gross loan opening	4173.91	7570.01	8410.01
Cumulative Repayment up to previous year	0.00	441.70	1044.38
Net Loan-Opening	4173.91	7128.31	7365.63
Additions during the year	3396.10	840.00	0.00
Repayment during the year	441.70	602.68	634.36
Net Loan-Closing	7128.31	7365.63	6731.28
Average Loan	5651.11	7246.97	7048.46
Rate of Interest (%)	9.093	9.093	9.093
Interest	**512.48**	**659.01**	**640.96**

Return on Equity("ROE")

24. Clause (1)& (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 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 returnof **0.50 %** shall be allowed, if such projects are completed within the timelinespecified in **Appendix-I**:”

“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.”

25. The petitioner has submitted grossed up ROE at the rate of 19.705% after grossing up the ROE of 15.50% with MAT rate as 21.34% of the year 2014-15. 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 2015-19 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.

26. 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.

27. 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, which shall be trued up with actual tax rate in accordance with Regulation 25 (3) of the 2014 Tariff Regulations. The grossed up ROE considered for computation of tariff is 19.610%. Hence, the ROE allowed for the instant transmission asset is given below:-

(₹ in lakh)

Particulars	2016-17 (Pro-Rata)	2017-18	2018-19
Opening Equity	1788.82	3244.29	3604.29
Additional Capitalization	1455.47	360.00	0.00
Closing Equity	3244.29	3604.29	3604.29
Average Equity	2516.56	3424.29	3604.29
Return on Equity (Base Rate) (%)	15.50	15.50	15.50
Tax rate for the year (%)	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax) (%)	19.610	19.610	19.610
Return on Equity (Pre Tax)	**492.14**	**671.50**	**706.80**

Depreciation

28. Clause (2), (5) and (6) of Regulation 27 of the 2014 Tariff Regulations provide as follows:-

"27. Depreciation:

(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"

"(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."

29. Clause (67) of Regulation 3 of the 2014 Tariff Regulations defines useful life as follows:-

"(67) **'Useful life'** in relation to a unit of a generating station and transmission systemfrom the COD shall mean the following, namely:

(a) Coal/Lignite based thermal generating station 25 years
(b) Gas/Liquid fuel based thermal generating station 25 years
(c) AC and DC sub-station 25 years
(d) Gas Insulated Substation (GIS) 25 years
(d) Hydro generating station including pumpedStorage hydro generating stations 35 years
(e) Transmission line (including HVAC & HVDC) 35 years
(f) Communication system 15 years"

30. The petitioner has claimed depreciation considering capital expenditure of ₹5962.73lakh,as on COD for combined Asset-I&II and additional capitalization of ₹4851.57 lakh (including accrual IDC) and ₹1200 lakhfor2016-17and 2017-18 respectively for combined Asset-I& II.

31. We have considered the submissions of the petitioner and have computed depreciation considering capital expenditure as on COD and additional capitalization approved for 2016-17 and 2017-18. The weighted average useful life of the asset has been considered as 33 years for all the assets in accordance with the above regulation. The details of the depreciation allowed for the asset is given hereunder:-

(₹ in lakh)

Combined Asset I & II			
Particulars	2016-17 (Pro-Rata)	2017-18	2018-19
Opening Gross block	5962.73	10814.30	12014.30
Additional Capitalization	4851.57	1200.00	0.00
Closing Gross block	10814.30	12014.30	12014.30
Average Gross block	8388.52	11414.30	12014.30
Rate of Depreciation (%)	5.280	5.280	5.280
Depreciable Value	7549.66	10272.87	10812.87
Elapsed Life of the assets at beginning of the year	0	1	2
Weighted Balance Useful life of the assets	33	32	31
Remaining Depreciable Value	7549.66	9831.17	9768.49
Depreciation	**441.70**	**602.68**	**634.36**

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

32. The petitioner has not claimed any O&M expenses for Combined Asset-I and II. As the O&M charges of the 400 kV D/C transmission line had already been claimed under Chukha Transmission System (Vide Petition No. 60/TT/2015 for 2014-19 period).

Interest on Working Capital ("IWC")

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

(i) Receivables

As per Regulation 28(1)(c)(i) of the 2014 Tariff Regulations, receivables will be equivalent to two months average billing calculated on target availability level. The petitioner has claimed the receivables on the basis of 2 months transmission charges claimed in the petition. In the tariff being allowed, receivables have been worked out on the basis of 2 months transmission charges.

(ii) Maintenance Spares

Regulation 28(1)(c)(ii) of the 2014 Tariff Regulations provides for maintenance spares @ 15% per annum of the O&M Expenses from 1.4.2014. The petitioner has claimed maintenance spares for the instant asset and value of maintenance spares has accordingly been worked out as 15% of O&M Expenses.

(iii) O & M Expenses

Regulation 28(1)(c)(iii) of the 2014 Tariff Regulations provides for operation and maintenance expenses for one month to be included in the working capital. The petitioner has claimed O & M Expenses for the instant asset and value of O & M Expenses has accordingly been worked out by considering 1 month O&M Expenses.

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

Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2016 or as on 1st April of the year during the tariff period 2016-17 to 2018-19 in which the transmission system including sub-station, communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later. Further, the 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. The rate of interest on working capital considered is 12.80% (SBI Base Rate of 9.30% plus 350 basis points) for combined Asset I and II. The interest on working capital allowed for the asset is shown in the table below:-

(₹ in lakh)

Combined Asset I & II			
Particulars	2016-17 (Pro-Rata)	2017-18	2018-19
Maintenance Spares	0.00	0.00	0.00
O & M expenses	0.00	0.00	0.00
Receivables	246.31	329.22	337.55
Total	246.31	329.22	337.55
Rate of Interest (%)	12.80	12.80	12.80
Interest	**31.53**	**42.14**	**43.21**

Annual Transmission Charges

34. The detailed computation of the various components of the annual fixed charges for the asset for the tariff period 2016-19is summarised below:-

(₹ in lakh)

Combined Asset I & II			
Particulars	2016-17 (Pro-Rata)	2017-18	2018-19
Gross Block			
Opening Gross Block	5962.73	10814.30	12014.30
Additional Capitalisation	4851.57	1200.00	0.00
Closing Gross Block	10814.30	12014.30	12014.30
Average Gross Block	8388.52	11414.30	12014.30
Rate of Depreciation	5.280%	5.280%	5.280%
Depreciable Value	7549.66	10272.87	10812.87
Elapsed Life of the assets at beginning of the year	0	1	2
Weighted Balance Useful life of the assets	33	32	31
Remaining Depreciable Value	7549.66	9831.17	9768.49
Depreciation	441.70	602.68	634.36
Interest on Loan			
Gross Normative Loan	4173.91	7570.01	8410.01
Cumulative Repayment upto Previous Year	0.00	441.70	1044.38
Net Loan-Opening	4173.91	7128.31	7365.63
Additions	3396.10	840.00	0.00
Repayment during the year	441.70	602.68	634.36
Net Loan-Closing	7128.31	7365.63	6731.28
Average Loan	5651.11	7246.97	7048.46
Weighted Average Rate of Interest on Loan (%)	9.093	9.093	9.093
Interest	512.48	659.01	640.96
Return on Equity			
Opening Equity	1788.82	3244.29	3604.29
Additions	1455.47	360.00	0.00
Closing Equity	3244.29	3604.29	3604.29
Average Equity	2516.56	3424.29	3604.29
Return on Equity (Base Rate) (%)	15.50%	15.50%	15.50%
MAT Rate for the year 2013-14 (%)	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre Tax) (%)	19.610%	19.610%	19.610%

Combined Asset I & II			
Particulars	2016-17 (Pro-Rata)	2017-18	2018-19
Return on Equity (Pre Tax)	492.14	671.50	706.80
Interest on Working Capital			
Maintenance Spares	0.00	0.00	0.00
O & M expenses	0.00	0.00	0.00
Receivables	246.31	329.22	337.55
Total	246.31	329.22	337.55
Interest	**31.53**	**42.14**	**43.21**
Annual Transmission Charges			
Depreciation	441.70	602.68	634.36
Interest on Loan	512.48	659.01	640.96
Return on Equity	492.14	671.50	706.80
Interest on Working Capital	31.53	42.14	43.21
O & M Expenses	0.00	0.00	0.00
Total	**1477.85**	**1975.33**	**2025.32**

Filing Fee and Publication Expenses

35. 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

36. 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

37. 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. We are of the view that the petitioner's prayer of service tax is premature.

Sharing of Transmission Charges

38. 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.

39. This order disposes of Petition No. 13/TT/2016.

Sd/-	**Sd/-**
(Dr. M. K. Iyer)	**(A.S. Bakshi)**
Member	**Member**

ANNEXURE-1

DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO 2015-19

Asset-I	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
SBI (2014-15)-Doco Loan 2-	9.55	2517.31	0.00	2517.31
BOND L-Doco Loan-	8.40	165.00	0.00	165.00
BOND LI-Doco Loan 1-	8.40	1491.60	0.00	1491.60
Total		**4173.91**	**0.00**	**4173.91**

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR TARIFF PERIOD 2016-19

(₹ in lakh)

Combined Asset- I & II			
Particulars	2016-17	2017-18	2018-19
Gross Opening Loan	4173.91	4173.91	4173.91
Cumulative Repayment of loan upto previous year	0.00	0.00	0.00
Net Loan Opening	4173.91	4173.91	4173.91
Additions during the year	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00
Net Loan Closing	4173.91	4173.91	4173.91
Average Loan	4173.91	4173.91	4173.91
Rate of Interest (%)	9.0936	9.0936	9.0936
Interest	379.56	379.56	379.56