

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 102/TT/2014

Coram:

**Shri A.S.Bakshi, Member
Dr. M.K. Iyer, Member**

**Date of Hearing : 23.11.2015
Date of Order : 08.01.2016**

In the matter of:

Determination of transmission tariff for 2014-19 tariff period for LILO of existing Kolar-Sriperumbudur 400 kV S/C line at Thiruvalem along with associated bays under "SYSTEM STRENGTHENING-XIX" in Southern Region under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999 and Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2014.

And in the matter of:

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

.....**Petitioner**

Versus

1. Karnataka Power Transmission Corporation Ltd.
(KPTCL), KaveriBhavan, Bangalore- 560 009
2. Transmission Corporation of Andhra Pradesh Ltd.
(APTRANSCO), VidyutSoudha, Hyderabad- 500082
3. Kerala State Electricity Board(KSEB)
VaidyuthiBhavanam, Pattom,
Thiruvananthapuram- 695 004
4. Tamil Nadu State Electricity Board(TNEB)
NPKRR Maaligai, 800, Anna Salai,
Chennai- 600 002
5. Electricity Department
Government of Goa,
VidyutiBhawan, Goa- 403001



6. Electricity Department
Govt. Of Pondicherry,
Pondicherry- 605 001
7. Eastern Power Distribution Company of Andhra Pradesh Limited (APEPDCL)
P&T Colony, Seethmmadhara, Vishakhapatnam
8. Southern Power Distribution Company of Andhra Pradesh Limited (APSPDCL)
Tiruchanoor Road, Tirupati-517 501
9. Central Power Distribution Company of Andhra Pradesh
Mint Compound,
Hyderabad- 500 063
10. Northern Power Distribution Company of Andhra Pradesh
Chaitanyapuri, Kazipet
Warangal- 506 004
11. Bangalore Electricity Supply Company Ltd.
K.R.Circle
Bangalore- 560 001
12. Gulbarga Electricity Supply Company Ltd.
Station Main Road, Gulbarga
13. Hubli Electricity Supply Company Ltd.
Navanagar, P B Road, Hubli
14. MESCOM Corporate Office
Paradigm Plaza, AB Shetty Circle
Mangalore- 575 001
15. Chamundeswari Electricity Supply Corporation Ltd.
New KantharajUrs Road, Saraswatipuram,
Mysore-570 009

.....Respondents

The following were present:-

For Petitioner:	ShriJasbir Singh, PGCIL
	ShriAnshul Garg, PGCIL
	Shri S.S Raju, PGCIL
	Shri S.K Niranjan, PGCIL
	Shri M.M. Mondal, PGCIL
	Shri S.K. Venkatesan, PGCIL
	ShriRakesh Prasad, PGCIL



For Respondent: Shri S.Vallinayagam, Advocate, TANGEDCO

ORDER

The present petition has been preferred by Power Grid Corporation of India Ltd. (“the petitioner”), a transmission licensee, for determination of transmission tariff for LILO of existing Kolar-Sriperumbudur 400kV S/C line at Thiruvalem alongwith associated bays under “SYSTEM STRENGTHENING-XIX” in Southern Region (hereinafter referred as “transmission asset”) under Regulation 6 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014(hereinafter referred to as “the 2014 Tariff Regulations”) for the period from COD(1.4.2014) to 31.3.2019.

2. The respondents are distribution licensees and transmission licensees of States, who are procuring transmission service from the petitioner, mainly beneficiaries of Southern Region.

3. The petitioner has served the petition to the respondents and notice of this application has been published in the newspaper 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. None of the respondents have filed any reply to the petition. The hearing in this matter was held on 23.11.2015. During the hearing, the Commission directed the petitioner to submit replies to the queries on affidavit with copy to respondents by 30.11.2015. The respondents were directed to file their replies by



7.12.2015 and petitioner to file rejoinder if any, by 11.12.2015. In compliance to Commission direction, Respondent No.4 i.e., Tamil Nadu Generation and Distribution Corporation Ltd (TANGEDCO) filed an affidavit dated 20.11.2015. The concerns expressed by respondents are being addressed in the respective paragraphs of this order. In response, the petitioner has submitted the replies vide affidavit dated 18.12.2015 and rejoinder to replies filed by TANGADECO vide affidavit dated 8.12.2015. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

4. The brief facts of the case are as follows:

a. The investment approval for the transmission assets was accorded by the Board of Directors of the petitioner company vide Memorandum No. C/CP/SRSS-XIX dated 4.9.2012 with an estimated cost of ₹193535lakh including IDC of ₹11417lakh. The petitioner has built the transmission asset in the Southern Region under “SYSTEM STRENGTHENING-XIX” scheme. The scheme was discussed and agreed in the 32nd SCM and 17th SRPC meeting dated 6.7.2011 and 12.8.2011, respectively. The Asset was put under commercial operation w.e.f 1.4.2014.

b. The scope of work covered under the entire “SYSTEM STRENGTHENING-XIX” scheme in Southern Region is as follows:-

Transmission Lines:

- i. Kurnool- Thiruvalem 765 kV D/C line.
- ii. LILO of existing Kolar- Sriperumbudur 400 kV S/C line at Thiruvalem.

Sub-Station:



- i. Extension of 765/400 kV Sub-station at Kurnool.
- ii. Upgradation of 400 kV Sub-station at Thiruvallam to 765/400 kV with 2x1500 MVA, 765/400 kV portion- GIS & 400 kV portion-AIS.

Reactive Compensation

- i. 1x240 MVAR line reactors at both ends of each circuit of Kurnool-Thiruvallam 765 kV D/C line.
- c. As per the investment approval dated 4.9.2012, the scheduled completion of transmission system was within 27 months from the date of approval of Board of Directors. Therefore, the scheduled COD of the asset was 1.12.2014 against which the asset was put under commercial operation w.e.f. 1.4.2014.
- d. The instant petition has been filed for determination of tariff for the period 2014-19 for LILO of existing Kolar-Sriperumbudur 400kV S/C line at Thiruvallam along with associated bays under “SYSTEM STRENGTHENING-XIX” in Southern Region.
- e. The provisional tariff for the transmission asset from COD (1.4.2014) to 31.3.2019 was allowed vide order dated 19.6.2014 in Petition No. 102/TT/2014 in accordance with Regulation 7(7) of the 2014 Tariff Regulations. The tariff allowed for the tariff period 2014-19 is as under:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset	429.44	462.17	456.30	450.47	445.02

- f. The petitioner has filed this instant petition on 27.5.2014. The additional information was sought from the petitioner vide letter dated 16.11.2015 and vide ROP dated 26.11.2015.



- g. The petitioner vide affidavit dated 18.12.2015 has revised the Auditor's Certificate along with revised tariff forms for fixation of transmission tariff of the said asset.
- h. The petitioner was directed to submit the trial operation certificate issued by SRLDC as per Clause 2 of Regulation 5 of the 2014 Tariff Regulations. However, the petitioner has not submitted the trial run certificate and submitted that the trial run operation for the said asset was successfully done in the 2009-14 tariff period and the same was not required as per the 2009 Tariff Regulations, hence, the certificate is not issued. The petitioner has however submitted its notification of COD dated 31.3.2014 declaring successful commissioning of the asset and that the asset shall be under commercial operation w.e.f. 1.4.2014.
- i. Further with regard to trial run operation of the said asset, Respondent No.4 has submitted that, date of test charging the line, date of trial operation and actual date of putting the line in regular use for determination of COD to be submitted by the petitioner. The petitioner in response submitted in affidavit dated.8.12.2015 that, the asset is commissioned on 1.4.2014 and COD letter is submitted in the petition.
- j. The petitioner also submitted that, procedures/event of trial operation as defined in the 2014 Tariff Regulations is effective on or after 1.4.2014. But, procedures/events of trial run operation as defined in the 2014 Tariff Regulations is only possible for assets put under COD on or after 2.4.2014.



For the assets under COD on 1.4.2014, the activity (charging etc.) prior to COD was accomplished as per the then existing Regulations.

DETERMINATION OF ANNUAL TRANSMISSION CHARGES FOR 2014-19

5. The petitioner has claimed revised transmission charges as under:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	102.84	112.61	114.28	114.28	114.28
Interest on Loan	121.89	123.76	115.60	104.92	94.39
Return on Equity	115.92	127.66	129.80	129.80	129.80
Interest on Working Capital	14.98	15.75	15.90	15.90	15.92
O & M Expenses	129.18	133.47	137.90	142.49	147.20
Total	484.81	513.25	513.48	507.39	501.59

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	19.38	20.02	20.69	21.37	22.08
O & M expenses	10.77	11.12	11.49	11.87	12.27
Receivables	80.80	85.54	85.58	84.57	83.60
Total	110.95	116.68	117.76	117.81	117.95
Rate of Interest	13.50	13.50	13.50	13.50	13.50
Interest	14.98	15.75	15.90	15.90	15.92

Capital Cost

7. Regulations 9 and 10 of the 2014 Tariff Regulations provide 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) 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;
 - 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.

...

(6) The following shall be excluded or removed from the capital cost of the existing and new project:

- a) The assets forming part of the project, but not in use;
- b) Decapitalisation of Asset;
- c) In case of hydro generating station any expenditure incurred or committed to be incurred by a project developer for getting the project site allotted by the State government by following a two stage transparent process of bidding; and
- d) the proportionate cost of land which is being used for generating power from generating station based on renewable energy:
Provided that any grant received from the Central or State Government or any statutory body or authority for the execution of the project which does not carry any liability of repayment shall be excluded from the Capital Cost for the purpose of computation of interest on loan, return on equity and depreciation;

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.”

8. The petitioner in its petition has submitted capital expenditure of ₹1829lakh as on COD. In addition to this, the petitioner has claimed additional capitalization of ₹507.04 lakh during 2014-15 in the 2014-19 tariff period. The details of the capital cost claimed by the petitioner is as under:



(₹ in lakh)

Particulars	Approved Cost (Appportioned)	Expenditure up to DOCO (1.4.2014)	Add Cap (FY 2014-15)	Estimated Completion Cost
Assets	2889	1829 *	507	2336

(* Not claimed any initial spares and inclusive IDC of ₹61.64 lakh)

9. The petitioner was directed to submit quarterly computation of actual IDC/IEDC discharged upto COD on cash basis. The petitioner, vide its affidavit dated 18.12.2015, has submitted that out of total IDC of ₹61.64 lakh, ₹39.96 lakh has been discharged upto COD and the balance IDC of ₹21.68 lakh has been discharged in 2014-15. With regard to IEDC, the petitioner submitted that the IEDC cost included in the capital cost as on COD is on cash basis. Accordingly the petitioner revised the capital cost as on COD as shown in the table below:

(₹ in lakh)

Particulars	(in lakh)
Expenditure upto COD	1828.99
Less: Accrued IDC	21.68
Expenditure upto COD excluding accrued IDC	1807.31
Add Cap (2014-15)	304.47
Accrued IDC upto COD	21.68
Add Cap (2015-16)	72.93
Total Estimated Completion Cost	2206.39

10. The petitioner in its revised submission mentioned that transmission tariff has been re-calculated with IDC on cash basis and un-discharged IDC as on date of commercial operation has been reduced from the capital cost as on COD and is claimed as additional capitalization in 2014-15. The petitioner has also submitted Auditor's Certificate in support of capital cost incurred up to COD and additional capitalization projected for the 2014-19 tariff period.



11. The petitioner has not claimed any initial spares in this petition, so no initial spares have been considered as part of Capital Cost for calculation of transmission charges.

12. The petitioner, vide affidavit dated 18.12.2015, has submitted that, there has been no change in scope of works for assets covered in the petition. However, considering the narrow corridor availability due to presence of forests/hills on either side of the alignment and ROW limitations, the LILO of 400 kV Kolar-Sriperumbudur is considered with Nellore- Thiruvalam 400 kV (Quad) line on multi-circuit towers. Total line length of LILO of Kolar- Sriperumbudur is 12.138 km including multi-circuit portion. Further, it has submitted that the stringing of non-multi circuit portion pertaining to LILO line is for 2.48 km and balance 9.658 km is part of LILO portion considered in the multi-circuit portion of Nellore- Thiruvalam line.

13. Respondent No.4 vide affidavit dated 20.11.2015 submitted that, the petitioner in the instant petition has not furnished the approval for the apportioned cost, documents relating to break up of the cost approval in respect of the said asset. Respondent No.4 further submitted that, petitioner should be directed to file documents for the approval obtained. In response, the petitioner vide affidavit dated 8.12.2015, submitted that, investment approval for the scheme is for the project as a whole with due consideration to the individual elements in a project. There is no separate approval for apportioned approved cost of individual elements of the project. The petitioner further submitted that, on completion of an element the total FR estimate expenditure of the project is apportioned to the



element based on BOQ after considering share of common expenditure pertaining to the element. The apportioned approved cost of each element is specified in the instant petition and also in Form 5B, Form 6 etc. for comparison with actual expenditure. The petitioner also submitted that, there is no separate approval for apportioned approved cost.

14. The Commission, vide ROP dated 26.11.2015, sought clarification that the authority granting approval for removal of the said asset from the approved scheme and reason for commissioning it separately from the approved scheme. The petitioner, vide affidavit dated 18.12.2015, has submitted that there is no removal of the instant asset from the approved scheme. In the instant project, the Kolar- Sriperumbudur 400 kV S/C transmission line has been LILOed at Thiruvalem. The same is already approved in 32nd and 33rd SCM and 17th SRPC.

15. The Commission has considered the submissions of the petitioner and accordingly allowed capital cost of ₹1807.31 lakh as on COD after reducing un-discharged IDC of ₹21.68 lakh from the earlier submitted capital cost of ₹1829 lakh incurred up to COD. Accordingly, the Commission has considered ₹1807.31 lakh as on COD for the purpose of tariff computation for the 2014-19 tariff period. The un-discharged IDC has been dealt in the relevant Para of additional capital expenditure.

Additional Capital Expenditure

16. The petitioner had initially claimed additional capitalization of ₹507.04 lakh for 2014-15. Further, the petitioner has revised additional capitalization vide



affidavit dated 18.12.2015 to ₹326.15 lakh for 2014-15 and ₹72.93 lakh for 2015-16 on account of inclusion of un-discharged IDC and revised projection of balance and retention payments. In view of the above, the petitioner has claimed revised transmission tariff based on revised capital cost and revised additional capitalization vide affidavit dated 18.12.2015.

17. As regards balance and retention payment, the petitioner was directed vide letter dated 16.11.2015 to furnish additional information of details of the contract for which payment has been retained with reasons for withholding the payment, details of Retention Payment proposed to be made along with the contract details under which the retention payment shall be made and whether all the balance/retention payments for assets under this petition have been made along with the statement of balance and retention payments yet to be made and not included to be paid in 2014-15 and 2015-16. In this regard, the petitioner has submitted the required details including, amount of retention and payment made from COD to 31.3.2015 and to be made during 2015-16.

18. In this regard, Respondent No.4, has submitted that, the petitioner has claimed additional capital expenditure for the year 2014-15 on account of balance/retention payments, but has not submitted any documents in support of the outstanding dues along with proof of balance payment. Further, Respondent No.4 submitted, that the petitioner should provide the related documents to the beneficiaries in support of their claim. The petitioner in response, vide affidavit dated 8.12.2015 submitted that, additional capitalization in 2014-15 of ₹507 lakh is on account of balance/retention payments and the detailed break-up of amount



is already specified in Form 5 of the tariff forms. The petitioner, further submitted that, amounts pertaining to retention amounts of line and sub-station civil works like control room building works, foundation works, roads, drains etc, which are to be paid only after commissioning of line as per contractual agreement.

19. We have considered the submissions of the petitioner and Respondent No.4. Further, it is observed that total estimated completion cost of ₹2206.39 lakh including additional capitalization claimed by the petitioner for the transmission asset is within the approved apportioned cost of ₹2889 lakh. We therefore, approve the additional capitalization as claimed by the petitioner. As discussed, we have considered capital cost of ₹1807.31 lakh as on COD and total additional capitalization of ₹326.15 lakh for 2014-15 and ₹72.93 lakh for 2015-16 for tariff computation for the 2014-19 tariff period.

(₹in lakh)

Approved apportioned cost: ₹2889 lakh								
Particulars	Admitted capital cost as on COD	Additional capitalization					Total additional capitalization	Total capital cost including additional capitalization
		2014-15	2015-16	2016-17	2017-18	2018-19		
Asset	1807.31*	326.15	72.93	0.00	0.00	0.00	399.08	2206.39

(* Inclusive IDC of ₹39.96 lakh on cash basis)

Debt: Equity Ratio

20. Clause 1 of Regulation 19 of the 2014 Tariff Regulations is reproduced 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 was directed to submit an undertaking mentioning the actual equity infusion for total capital cost and additional capital cost considered in the petition. The petitioner vide affidavit dated 18.12.2015 submitted that as per Form -9C, total loan deployed is 70% of capital cost as on COD. Accordingly, actual equity infused for the total capital cost as on COD is 30% of the total cost indicated in Form-8. Further, the petitioner submitted that as per Clause 5 of Regulation 19 of the 2014 Tariff Regulations, additional capitalization on or after 1.4.2014 is to be considered with debt:equity ratio of 70:30.

22. The details of the debt:equity as on COD, which is also considered for the purpose of tariff for 2014-19 tariff period are as follows:-

(in ₹lakh)		
As on COD	Amount	(%)
Debt	1265.12	70.00
Equity	542.19	30.00
Total	1807.31	100.00

23. The debt:equity ratio for additional capitalization proposed during the tariff period 2014-19 is considered on normative basis, i.e.,70:30. By considering debt:equity of 70:30 for additional capitalization, the debt:equity ratio as on 31.3.2014 is worked out as under:

(in ₹lakh)		
As on 31.3.2019	Amount	(%)
Debt	1544.48	70.00



As on 31.3.2019	Amount	(%)
Equity	661.91	30.00
Total	2206.39	100.00

Interest on Loan (“IOL”)

24. Clause (5) and (6) of Regulation 26 of the 2014 Tariff Regulations are reproduced 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.”

25. The petitioner was directed to submit supporting documents for date of drawal, interest rate applicable from time to time in case of floating rate of interest, interest payable, repayment schedule in case of SBI loans, and details in case of any default in interest payment on loans. The petitioner, vide affidavit dated 18.12.2015, has submitted that documents are as submitted in the instant petition and there is no default in interest payment on loans.

26. The IOL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of weighted average rate of interest are



attached as **Annexure-I** and the IOL has been worked out and allowed as follows:-

	(₹in lakh)				
Details of Loan	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Normative Loan	1265.12	1265.12	1265.12	1265.12	1265.12
Cumulative Repayment upto Previous Year	0.00	102.83	215.44	329.72	444.00
Net Loan-Opening	1265.12	1390.60	1329.04	1214.76	1100.48
Addition due to Additional Capitalization	228.31	51.05	0.00	0.00	0.00
Repayment during the year	102.83	112.61	114.28	114.28	114.28
Net Loan-Closing	1390.60	1329.04	1214.76	1100.48	986.20
Average Loan	1327.86	1359.82	1271.90	1157.62	1043.34
Weighted Average Rate of Interest on Loan (%)	9.1797	9.1010	9.0930	9.0676	9.0527
Interest	121.89	123.76	115.65	104.97	94.45

Return on Equity (“ROE”)

27. 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 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....”

“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:

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

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



28. The petitioner has submitted that effective ROE is computed at the rate of 19.610% after grossing up the ROE with MAT rate of 20.961% as per the above Regulation. 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.

29. 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 during/after completion of income tax assessment of the financial year.

30. 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), then 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 based on



actual tax in accordance with Regulation 25 (3) of the 2014 Tariff Regulations.

Accordingly, the ROE as determined by the Commission is shown below:-

(₹in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	542.19	640.03	661.91	661.91	661.91
Addition due to Additional Capitalization	97.84	21.88	0.00	0.00	0.00
Closing Equity	640.03	661.91	661.91	661.91	661.91
Average Equity	591.11	650.97	661.91	661.91	661.91
Return on Equity Base Rate (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for the year(%)	20.961	20.961	20.961	20.961	20.961
Rate of Return of Equity(Pre-Tax)(%)	19.610	19.610	19.610	19.610	19.610
Return on Equity(Pre-Tax)	115.92	127.66	129.80	129.80	129.80

Depreciation

31. Clause 67 of Regulation 3 of the 2014 Tariff Regulations are as stated below:-

“**useful life**’ in relation to a unit of a generating station and transmission system from the COD shall mean the following, namely:-

-
- (c) AC and DC Sub-station: 25 years
 - (d) Gas Insulated Sub-station: 25 years
 - (e) Transmission line (including HVAC & HVDC): 35 years”

..

32. Clause (2), (5)&(6) of Regulation 27 of the 2014 Tariff Regulations are reproduced as below:-

"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.”

33. As per Clause 67 of Regulation 3 of the 2014 Tariff Regulations, useful life for transmission line and sub-station is 35 years and 25 years, respectively. For the purpose of calculation, the life of PLCC has been considered as 25 years. In the present case, weighted average value of asset as on COD (1.4.2014) has been considered to work out the weighted average life of the transmission system as 31 years.

34. We have considered the submission made by the petitioner with reference to depreciation. Depreciation is allowed under Regulation 27 of the 2014 Tariff Regulations. The details of the depreciation allowed is given hereunder:-

(₹in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block	1807.31	2133.46	2206.39	2206.39	2206.39
Additions during the year due to projected additional capitalization	326.15	72.93	0.00	0.00	0.00
Closing Gross block	2133.46	2206.39	2206.39	2206.39	2206.39
Average Gross block	1970.39	2169.93	2206.39	2206.39	2206.39
Rate of Depreciation (%)	5.2188	5.1896	5.1794	5.1794	5.1794
Elapsed Life (Beginning of the year)	0	1	2	3	4
Weighted Balance Useful life of the assets	31	30	29	28	27
Depreciable Value	1773.35	1952.93	1985.75	1985.75	1985.75
Remaining Depreciable Value	1773.35	1850.10	1770.31	1656.03	1541.75
Depreciation	102.83	112.61	114.28	114.28	114.28
Cumulative Depreciation	102.83	215.44	329.72	444.00	558.28



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

35. The petitioner has computed normative O&M Expenses as per Sub-clause (a) of Clause (3) of Regulation 29 of the 2014 Tariff Regulations. Accordingly, O&M Expenses have been worked out as provided below:-

Particulars		2014-15	2015-16	2016-17	2017-18	2018-19
Actual line length (km)	400 kV, S/C, AC/DC Lines	12.138	12.138	12.138	12.138	12.138
Actual (No. of Sub-stations)	400 kV bays at Sub-stations	2	2	2	2	2
Norms as per Regulation	400 kV, S/C, AC/DC Lines	0.707	0.731	0.755	0.780	0.806
	400 kV Sub-stations	60.30	62.30	64.37	66.51	68.71
O&M Expenses	400 kV, S/C, AC/DC Lines (₹ lakh/km)	8.5816	8.8729	9.1642	9.4676	9.7832
	400 kV Sub-stations (₹ lakh/bay)	120.6	124.6	128.74	133.02	137.42
Total (₹ in lakh)		129.18	133.47	137.90	142.49	147.20

36. The petitioner has submitted that O&M Expenses for the tariff period 2014-19 have been arrived on the basis of normalized actual O&M Expenses during the period 2008-13. The petitioner has further submitted that the wage revision of the employees of the petitioner Company is due during 2014-19 and actual impact of wage hike, which will be effective at a future date, has not been factored in fixation of the normative O&M rate specified for the tariff period 2014-19. The petitioner has prayed to be allowed to approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase.



37. In this regard, Respondent No.4 submitted vide affidavit dated. 20.11.2015 that, there is no provision in Tariff Regulations for revising the normative O&M charges based on actual. Further, Respondent No.4 submits that, the Commission has arrived at the O&M expenses, which includes wage hike during the previous five years and a 10% margin over and above effective CAGR of O&M expenses allowed. So, the beneficiaries are already over-burdened due to exorbitant O&M expenses as compared to the rates of State Transmission Utilities. The respondent has requested the Commission to not revise the O&M rates further. The petitioner, in response, vide affidavit dated 8.12.2015 has submitted that, the norms for O&M expenditure for the transmission system are in accordance to Clause (3)(a) of Regulation 29 of 2014 Tariff Regulations for 2014-19 tariff period after considering (i) normalized actual O&M expenses on various projects and various regions during the year 2008-13. The petitioner has also submitted that, being a CPSU, the scheme of wage revision is binding on the petitioner. However, the actual impact of wage hike (due w.e.f 1.1.2017) has not been factored in fixation of the normative O&M rates prescribed for tariff period 2014-19. In line with Regulation 19(f)(ii) of the 2009 Tariff Regulations, for 2009-14, norms of O&M expenses for the year 2009-10 were derived considering impact of wage hike of the employees under PSUs.

38. It is observed that the petitioner has wrongly claimed revision of O&M expenses under Regulation 19(f)(ii) of the 2009 Tariff Regulations, which is applicable for hydro generating stations. We would like to clarify that, O&M Expenses have been worked out as per the norms of O&M expenses specified in the 2014 Tariff Regulations. As regards impact of wage revision, we would like to



clarify that any application filed by the petitioner in this regard will be dealt with in accordance to the appropriate provisions of the 2014 Tariff Regulations.

39. The details of O&M Expenses allowed are given hereunder:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Asset	129.18	133.47	137.90	142.49	147.20

Interest on Working Capital (“IWC”)

40. 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

...(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;”

41. The petitioner has submitted that it has computed interest on working capital for the tariff period 2014-19 considering the SBI Base Rate as on 1.4.2014 plus 350 basis points. The rate of interest on working capital considered is 13.50%.

42. The interest on working capital is worked out in accordance with Regulation 28 of the 2014 Tariff Regulations. The rate of interest on working capital considered is 13.50% (SBI Base Rate of 10% plus 350 basis points). The interest on working capital as determined by the Commission is shown in the table below:-



(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	19.38	20.02	20.69	21.37	22.08
O & M expenses	10.77	11.12	11.49	11.87	12.27
Receivables	80.80	85.54	85.59	84.57	83.61
Total	110.94	116.69	117.77	117.82	117.96
Rate of Interest(%)	13.50	13.50	13.50	13.50	13.50
Interest	14.98	15.75	15.90	15.91	15.92

ANNUAL TRANSMISSION CHARGES FOR THE TARIFF PERIOD 2014-19

43. The detailed computation of the various components of the annual fixed charges for the transmission asset for the tariff period 2014-19 is summarised below:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block					
Opening Gross block	1807.31	2133.46	2206.39	2206.39	2206.39
Addition during 2014-19 due to Projected Additional Capitalization	326.15	72.93	0.00	0.00	0.00
Closing Gross block	2133.46	2206.39	2206.39	2206.39	2206.39
Average Gross block	1970.39	2169.93	2206.39	2206.39	2206.39
Depreciation					
Rate of Depreciation(%)	5.2188	5.1896	5.1794	5.1794	5.1794
Depreciable Value	1773.35	1952.93	1985.75	1985.75	1985.75
Elapsed Life (Beginning of the year)	0	1	2	3	4
Weighted Balance Useful life of the assets	31	30	29	28	27
Remaining Depreciable Value	1773.35	1850.10	1770.31	1656.03	1541.75
Depreciation	102.83	112.61	114.28	114.28	114.28
Cumulative Depreciation	102.83	215.44	329.72	444.00	558.28
Interest on Loan					
Gross Normative Loan	1265.12	1265.12	1265.12	1265.12	1265.12
Cumulative Repayment upto Previous Year	0.00	102.83	215.44	329.72	444.00
Net Loan-Opening	1265.12	1390.60	1329.04	1214.76	1100.48
Addition due to Additional Capitalization	228.31	51.05	0.00	0.00	0.00
Repayment during the year	102.83	112.61	114.28	114.28	114.28
Net Loan-Closing	1390.60	1329.04	1214.76	1100.48	986.20
Average Loan	1327.86	1359.82	1271.90	1157.62	1043.34



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Weighted Average Rate of Interest on Loan (%)	9.1797	9.1010	9.0930	9.0676	9.0527
Interest	121.89	123.76	115.65	104.97	94.45
Return on Equity					
Opening Equity	542.19	640.03	661.91	661.91	661.91
Additions	97.84	21.88	0.00	0.00	0.00
Closing Equity	640.03	661.91	661.91	661.91	661.91
Average Equity	591.11	650.97	661.91	661.91	661.91
Return on Equity (Base Rate) (%)	15.500	15.500	15.500	15.500	15.500
MAT Rate for respective year (%)	20.961	20.961	20.961	20.961	20.961
Return on Equity (Pre Tax) (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	115.92	127.66	129.80	129.80	129.80
Interest on Working Capital					
Maintenance Spares	19.38	20.02	20.69	21.37	22.08
O & M expenses	10.77	11.12	11.49	11.87	12.27
Receivables	80.80	85.54	85.59	84.57	83.61
Total	110.94	116.69	117.77	117.82	117.96
Interest	14.98	15.75	15.90	15.91	15.92
Annual Transmission Charges					
Depreciation	102.83	112.61	114.28	114.28	114.28
Interest on Loan	121.89	123.76	115.65	104.97	94.45
Return on Equity	115.92	127.66	129.80	129.80	129.80
Interest on Working Capital	14.98	15.75	15.90	15.91	15.92
O & M Expenses	129.18	133.47	137.90	142.49	147.20
Total	484.80	513.25	513.54	507.44	501.66

Filing Fee and Publication Expenses

44. 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 vide letter dated 20.11.2015 submitted that an amount of ₹3.03 lakh is spent towards publication of notice of tariff alongwith supporting documents. The Commission is of the view that 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

45. The petitioner has requested to allow the petitioner to bill and recover Licence Fee and RLDC Fees and Charges, separately from the respondents.

46. In this regard, Respondent No.4, has submitted vide affidavit dated 20.11.2015 that, the petitioner should not be allowed the recovery of Licensee fee. The petitioner, in response vide affidavit dated 8.12.2015 submitted that, as per Regulation 52 of the 2014 Tariff Regulations, the application filing fee, expenses incurred on publication of notices in newspapers and licensee fee are to be recovered separately from the respondents.

47. The Commission is of the view that, the petitioner shall be entitled for reimbursement of Licence Fee and RLDC Fees and Charges in accordance with Clause (2)(a) and (2)(b) respectively of Regulation 52 of the 2014 Tariff Regulations.

Service Tax

48. 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.



49. Respondent No.4 vide affidavit dated 20.11.2015 submitted that, Govt. Of India, vide their notification dated 27.2.2010 has exempted transmission services from the purview of levy of service tax and hence future claims in this regard should be negated. In response, the petitioner vide affidavit dated. 8.12.2015 submitted that, as per para 8.5 of the petition, it is evident that, service tax is to be paid by the respondents only in case the same is paid by the petitioner. We are of the view that the petitioner's prayer is premature.

Deferred Tax Liability

50. The petitioner has sought recovery of deferred tax liability before 1.4.2009 from the beneficiaries or long term consumers/ DICs as and when materialized under Regulation 39 of the 2009 Tariff Regulations and Regulation 49 of the 2014 Tariff Regulations. It was observed that the asset was commissioned in 2014-15 and therefore, deferred tax liability pertaining to period prior to 2009 may not arise in the present case. Accordingly, the Commission directed the petitioner to clarify the same. The petitioner vide affidavit dated 7.12.2015 has submitted that since the assets have been commissioned after 31.3.2009, no deferred tax liability will be recovered.

Sharing of Transmission Charges

51. 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.



52. This order disposes of Petition No. 102/TT/2014.

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

Sd/-
(A.S. Bakshi)
Member



DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO

(₹ in lakh)

Particulars	Interest Rate(%)	Loan deployed as on COD	Additions during the tariff period	Total
SBI (21.3.2012)	10.25	336.19	0.00	336.19
BOND-XLII-Loan 1-	8.80	250.00	0.00	250.00
BOND-XLII-Loan 2-	7.93	100.00	0.00	100.00
BOND-XLIV-Loan 3	8.70	310.00	0.00	310.00
BOND-XLIV-Loan 4	9.65	268.93	0.00	268.93
BOND XLIX-ADDCAP FOR 2014-15 Add Cap- IDC	8.15	0.00	15.18	15.18
BOND XLIX-ADDCAP FOR 2014-15 Add Cap- IDC	8.15	0.00	213.13	213.13

CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR

TARIFF PERIOD 2014-19

(₹ in lakh)

Details of Loan	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	1265.12	1493.43	1493.43	1493.43	1493.43
Cumulative Repayments of loans upto previous year	0.00	0.00	0.00	30.56	91.86
Net Loans Opening	1265.12	1493.43	1493.43	1462.87	1401.57
Additions during the year	228.31	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	31.90	62.64	165.97
Net Closing Loan	1493.43	1493.43	1461.53	1400.23	1235.60
Average Net Loan	1379.28	1493.43	1477.48	1431.55	1318.59
Weighted Average Rate of Interest (%)	9.1797	9.1010	9.0930	9.0676	9.0527
Interest on Loan	126.61	135.92	134.35	129.81	119.37

