

CENTRAL ELECTRICITY REGULATORY COMMISSION

NEW DELHI

Petition No. 99/TT/2014

Coram:

Shri A.S. Bakshi, Member

Dr. M.K. Iyer, Member

Date of Hearing : 14.03.2016

Date of Order: 29.04.2016

In the matter of:

Determination of transmission tariff for 2019 for 1 No. of 400/220 kV, 315 MVA ICT-II along with associated bays at Hamirpur Sub-station in Northern Region 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. Rajasthan Rajya Vidyut Prasaran Nigam Limited
Vidyut Bhawan, Vidyut Marg, Jaipur- 302005
2. Ajmer Vidyut Vitran Nigam Limited
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur
3. Jaipur Vidyut Vitran Nigam Limited
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur
4. Jodhpur Vidyut Vitran Nigam Limited
400 kV GSS Building (Ground Floor), Ajmer Road,
Heerapura, Jaipur



5. Himachal Pradesh State Electricity Board
Vidyut Bhawan, Kumar House Complex Building II
Shimla- 171004
6. Punjab State Power Corporation Limited
Thermal Shed Tia, Near 22 Phatak
Patiala- 147001
7. Haryana Power Purchase Centre
Shakti Bhawan, Sector- 6
Panchkula (Haryana)- 134109
8. Power Development Department
Government of Jammu and Kashmir
Mini Secretariat, Jammu
9. Uttar Pradesh Power Corporation Limited
(Formerly Uttar Pradesh State Electricity Board)
Shakti Bhawan, 14, Ashok Marg
Lucknow- 226001
10. Delhi Transco Limited
Shakti Sadan, Kotla Road
New Delhi- 110002
11. BSES Yamuna Power Limited
BSES Bhawan, Nehru Place
New Delhi
12. BSES Rajdhani Power Limited
BSES Bhawan, Nehru Place
New Delhi
13. North Delhi Power Limited
Power Trading & Load Dispatch Group
CENNET Building, Adjacent to 66/11 kV Pitampura-3 Grid Building
Near PP Jewellers, Pitampura
New Delhi- 110034
14. Chandigarh Administration
Sector- 9, Chandigarh
15. Uttarakhand Power Corporation Limited
Urja Bhawan, Kanwali Road
Dehradun



16. North Central Railway
Allahabad
17. New Delhi Municipal Council
Palika Kendra, Sansad Marg,
New Delhi- 110002

....Respondents

The following were present:-

For Petitioner: Shri S.S. Raju, PGCIL
Shri Rakesh Prasad, PGCIL
Shri Jasbir Singh, PGCIL
Shri Aryaman Saxena, PGCIL
Shri M.M. Mondal, PGCIL

For Respondent: None

ORDER

The present petition has been filed by Power Grid Corporation of India Ltd. ("the petitioner") for determination of tariff for 1 No. of 400/220 kV, 315 MVA ICT-II along with associated bays at Hamirpur Sub-station in Northern Region (referred as "Asset I") under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as "the 2014 Tariff Regulations") for the period from date of commercial operation to 31.3.2019.



1. The respondents are distribution licensees or electricity departments or power procurement companies of States, who are procuring transmission service from the petitioner, mainly beneficiaries of Northern Region.

2. 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 company, vide Memorandum dated 22.10.2010 at an estimated cost of ₹18268 lakh including an IDC of ₹1120 lakh based on 2nd quarter, 2010 price level. The total approved apportioned cost for the instant asset is ₹4019.92 lakh.

(b) The scope of work covered under “The scope of work covered under “NRSS-XX” in Northern region is as follows:-

Transmission Lines:

i) LILO of one circuit of Parbati Pooling Station-Amritsar 400 kV D/C at Hamirpur Sub-station.

Substations:

i) New 2 X 315 MVA, 400/220 kV Hamirpur 400/220 kV Gas insulated Sub-station

Reactive Compensation:

Line Reactor	Line Reactor from bus	Line Reactor to bus
LILO of one circuit of Parbati Pooling Station-Amritsar 400 kV D/C/ at Hamirpur Sub-station		
(a) Parbati pooling station-Haamirpur 400 kV D/C line	Nil	Nil
(b) Hamirpur-Amritsar 400 kV D/C line	50	50
Bus Reactor		
80 MVAR Bus Reactor at Hamirpur Sub-station		



(c) The petitioner has claimed the transmission charges as under:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	133.90	141.48	143.82	143.82	143.82
Interest on Loan	162.7	159.22	148.54	134.74	120.96
Return on Equity	148.63	157.84	160.46	160.46	160.46
Interest on Working Capital	25.24	26.04	26.43	26.64	26.87
O&M Expenses	271.35	280.35	289.67	299.26	309.21
Total	741.82	764.93	768.92	764.92	761.32

(d) 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
O & M Expenses	22.61	23.36	24.14	24.94	25.77
Maintenance Spares	40.70	42.05	43.45	44.89	46.38
Receivables	123.64	127.49	128.15	127.49	126.89
Total	186.95	192.9	195.74	197.32	199.04
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	25.24	26.04	26.43	26.64	26.87

3. The annual fixed charges for the instant assets was allowed under Regulation 7(7) of the 2014 Tariff Regulations for inclusion in the PoC charges vide order dated 23.6.2014 based on actual COD. The petitioner has submitted the cash IDC, Auditor Certificates, and revised tariff forms vide its affidavit dated 10.3.2016 and the same has been considered for the purpose of computation of tariff.



4. The petitioner has served the petition to 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 12.6.2014. Respondent No. 6, PSPCL has filed its reply vide affidavit dated 13.6.2014. The petitioner has filed its rejoinder vide affidavit dated 12.2.2015. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

Commercial Operation Date ("COD")

5. The petitioner has claimed the date of the commercial operation of the instant transmission asset as 1.4.2014.

6. 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:

Provided that:

(i) where the transmission line or substation is dedicated for evacuation of power from a particular generating station, the generating company and transmission licensee shall endeavour to commission the generating station and the transmission system simultaneously as far as practicable and shall ensure the same through appropriate Implementation Agreement in accordance with Regulation 12(2) of these Regulations :



(ii) in case a transmission system or an element thereof is prevented from regular service for reasons not attributable to the transmission licensee or its supplier or its contractors but is on account of the delay in commissioning of the concerned generating station or in commissioning of the upstream or downstream transmission system, the transmission licensee shall approach the Commission through an appropriate application for approval of the date of commercial operation of such transmission system or an element thereof.

xxx
xxx”

7. PSPCL, in its reply to the petition, raised the issue of underutilization of the transmission assets covered in the petition due to non-completion of downstream system in the scope of State utilities. PSPCL further submitted that as per Section 38 of the Electricity Act, 2003 it is the responsibility of the petitioner, as a CTU, to coordinate with the State agencies. In its response the petitioner has submitted that it has already initiated formal communication with the State utilities and other concerned agencies regarding the commissioning of the assets. The petitioner has also submitted that usually the transmission schemes are approved at the Standing Committee level and they are discussed at RPC level where the State utilities were also present.

8. After considering the submissions of respondents and the petitioner, vide its letter dated 4.7.2014, the Commission noted that the assets covered in the petition have been charged after consultation with the CEA and put under commercial operation. The Commission held that as regards the compliance of the provisions of Regulation 4 (3) of the 2014 Tariff Regulations for Tariff order in the subject petition declaring commercial operation of the subject asset, it is not possible to take a view on the basis of the available record. The Commission directed the petitioner to file detailed affidavit in terms of Regulation 4 (3) of the



2014 Tariff Regulations clearly delineating the deliberation at different forums and the discussion with the developers of the downstream transmission lines.

9. In response, the petitioner vide its affidavit dated 12.3.2015 submitted that the subject asset i.e. 400/220 kV, 315 MVA ICT –II along with associated bays at Hamirpur substation is declared under commercial operation and w.e.f. from 1.4.2014 and is under operation since its commissioning. The petitioner has submitted that for the subject asset the activity prior to COD was accomplished as per then existed Regulation. The petitioner also submitted additional information regarding utilization of the subject asset.

10. In its additional submission dated 6.4.2015 the petitioner has submitted summary record of discussions of 23rd Standing Committee Meeting of North Region held on 16.2.2018 where it was agreed that the norms of providing 220 kV bays with 400/220 kV transformers would be revised as per the following:

- For 2X315 MVA -6 nos. of line bays
- For 3rd 315 MVA transformer -2 line bays
- For 500 MVA transformer -4 nos. line bays

The petitioner has further submitted that it has claimed 6 nos. of 220 kV line bays in Hamirpur substation. The 2 nos. of 220 kV bays were declared under commercial operation on 1.4.2014 and is covered under petition no. 36/TT/2013. The 4 nos. line bays were declared under commercial operation on 1.4.2014 and are covered under the instant petition.



11. In its reply to the TV issued by the Commission on 9.4.2015, the petitioner has submitted that the facts related to utilization of the instant asset. The petitioner has further submitted that out of the 6 nos. line bays for Hamirpur substation, 2 nos. are connected with 220 kV Hamirpur (HPSEB) substation, 2 nos. line bays are connected to Jalandhar and the balance 2 nos. line bays are future bays for exclusive use of the STU in accordance with the planning criteria. In response to Commission's query with regards to non-invoking proviso 4 (3) of Tariff Regulation, 2014 the petitioner has enumerated the power flow in ICT /lines pursuant to its commissioning. The petitioner has further submitted that the power was already available for the commissioning of the subject asset and it was commissioned in accordance with the relevant procedures / policies as per the Regulations in vogue after successful charging on 8.3.2014.

12. The Commission has considered the averments made by the petitioner. It is observed that the date of the commercial operation of the instant transmission asset was 1.4.2014. The petitioner vide its affidavit dated 15.3.2016 has submitted self-certified COD letter in support of the claim of commercial operation of the instant asset. However, the petitioner has not submitted RLDC certificate in accordance with Regulation 5(2) of the 2014 Tariff Regulations indicating completion of successful trial operation, stating that bays were idle charged as the power flow could not be started due to non readiness of downstream system. The COD of the instant assets i.e. 1.4.2014 is provisionally admitted and the petitioner is directed to submit the RLDC at the time of truing up. Accordingly, the period of tariff worked is from 1.4.2014 to 31.3.2019.



Capital Cost

13. The petitioner has claimed the capital cost ₹2493.45 lakh for the instant transmission asset as on actual COD vide Auditor Certificate dated 8.5.2014. The petitioner has submitted the auditor certificate and revised tariff forms vide its affidavit dated 10.3.2016 and has claimed the following costs:-

Asset	Approved apportioned cost as per FR	Capital cost as on COD	Additional capital expenditure			(₹ in lakh)
			2014-15	2015-16	2016-17	Estimated completion cost as on 31.3.2019
Asset I	4019.92	2493.45	132.70	88.47	0.00	2714.62

14. Regulation 9 (1) and (2) and 10 (1) 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) 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.”



“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.”

15. The petitioner vide Auditor certificate dated 8.5.2014 has submitted IDC and IEDC upto COD on accrual basis for the instant transmission assets as ₹301.22 lakh and ₹81.77 lakh respectively. The petitioner has further submitted the IDC discharged on cash basis as below:

(₹ in lakh)

Asset	IDC discharged upto COD	Accrual IDC upto COD (to be discharged during 2014-15)
Asset I	235.15	66.07

16. For determination of tariff for the 2014-19 tariff period for the instant transmission assets we have considered the capital cost as on COD after adjusting the IDC discharged on cash basis for the instant asset.

Time over-run

17. As per the investment approval, the commissioning schedule of the project is 27 months from the date of investment approval. The investment approval was accorded on 22.10.2010 and hence the schedule date of commercial operation



was 21.1.2013. The COD for the instant transmission asset as submitted by the petitioner is 1.4.2014. Hence there is time over-run of 14 months and 10 days in case of the instant transmission asset.

18. The petitioner has attributed the delay in commissioning of the subject asset primarily on the land acquisition and ROW issues as described below:-

a) Delay in land acquisition

- i) The petitioner has submitted that the land acquisition process for the instant asset was initiated during April, 2009 before the investment approval.
- ii) The petitioner initially selected the site at Samrala for land acquisition. However, the petitioner faced stiff resistance from land owners. As a result, the State Government Authorities requested the petitioner to select an alternate land.
- iii) Afterwards, the petitioner selected alternate land at village Chowki Kankari and initiated the process in March, 2010. Notification under Section-4 of Land Acquisition Act was issued in March, 2011. The land was finally handed over to the petitioner in August, 2011.

b) ROW issues during widening of approach road

- i) The petitioner has submitted that it faced stiff resistance during acquisition of land for widening of the road. Therefore, the levelled land was ready progressively from November, 2011 to March, 2012.



19. We have considered the submissions of the petitioner with regards to the subject asset. As per the petitioner, delay due to land acquisition and ROW issues in widening of approach road have resulted in time over-run in commissioning of the subject asset.

20. The petitioner has submitted letters dated 11.4.2009, 11.6.2009, 29.6.2009, 5.10.2009, 6.10.2009, 26.12.2009 in support of its claim of the process followed for land acquisition at Samrala. The land acquisition at Samrala was not processed further post the agitation of the villagers. Afterward, the petitioner selected new site at Choki Kankari and initiated the process of land acquisition. The petitioner has submitted letters dated 3.3.2010, 6.3.2010, 20.3.2010, 18.3.2011, 28.3.2011, 6.4.2011, 26.5.2011 and 7.7.2011 in support of its claim of the process followed for land acquisition at Choki Kankari. Further, the petitioner has submitted that the payment disbursements to land owners and mutation of land were finally completed in August, 2011. The time over-run on account of delay in land acquisition was beyond the control of the petitioner therefore the time over-run due to delay in land acquisition is condoned.

21. As regards delay on account of ROW issues during widening of approach road, the petitioner has submitted its letter dated 21.10.2011 to support its claim. The time over-run on account of ROW issues was beyond the control of the petitioner therefore the time over-run due to ROW issues is condoned.



22. The petitioner in its letter dated 7.7.2011 had requested Land Collector cum SDPO, Hamirpur for mutation of the awarded land in its favour. By this time the petitioner was already awarded the land, therefore the petitioner should have expedited the commissioning of the instant asset in a progressive manner. However, the petitioner reported ROW issue for the approach road only on 21.10.2011, 3 months and 14 days after the request for mutation of land. Hence, the delay period of 3 months and 14 days is not condoned.

23. In view of the above, out of the total delay of 14 months and 10 days from the scheduled COD to actual COD, 3 months and 14 days delay is disallowed. Accordingly, IDC and IEDC for the remaining period of time over-run of 3 months and 14 days for the subject asset are disallowed. The IDC and IEDC disallowed are shown as follows:-

IDC/IEDC as CA certificate	Amount (₹ in lakh)	Period for IDC and IEDC infusion	Disallowed time over-run	Disallowed IDC and IEDC (in ₹ lakh)
IDC	301.22#	41 months 10 days*	3 months 14 days	25.38
IEDC	81.77#	41 months 9 days**		6.90
				32.28

IDC discharged as per Auditor Certificate

* From the date of infusion of IDC (21.10.2010) to the actual COD (1.4.2014)

** From the date of IA (21.10.2010) to the date of actual COD (1.4.2014)

24. The petitioner has submitted capital cost as on COD of ₹2493.45 lakh. The capital cost as on COD considered for tariff calculations is ₹2395.10 lakh, after deducting the total disallowed IDC and IEDC of ₹32.28 lakh and IDC disbursed on cash basis during 2014-15 after COD of ₹66.07 lakh.



Initial Spares

25. The petitioner has claimed initial spares for the instant transmission asset as ₹62.65 lakh which is 2.69% of the plant and machinery cost.

26. The total initial spares claimed by the petitioner for the instant asset is within the limits prescribed under Regulation 13 of the Tariff Regulation, 2014 and therefore allowed for capitalisation. Accordingly, the capital cost as on COD considered for tariff calculations is ₹2395.10 lakh, after deducting the total disallowed IDC and IEDC of ₹32.28 lakh and IDC disbursed on cash basis during 2014-15 after COD of ₹66.07 lakh.

Additional Capital Expenditure

27. The petitioner has proposed additional capitalization of ₹132.70 lakh and ₹88.47 lakh for the year 2014-15 and 2015-16 respectively towards balance and retention payment under Regulation 14(1) (i) of 2014 Tariff Regulations.

28. Clause 1, sub-clause (i) of Regulation 14 of the 2014 Tariff Regulations provides as follows:

“(3) The capital expenditure, in respect of existing generating station or the transmission system including communication system, incurred or projected to be incurred on the following counts after 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;

29. Clause 13 of Regulation 3 of the 2014 Tariff Regulations defines “cut-off” as follows:-



“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.”

30. Accordingly, the cut-off date for the instant asset is 31.3.2017. It is observed that total estimated completion cost of `2682.34 lakh including the additional capitalization of ₹287.24 lakh lies within the approved apportioned cost of ₹4019.92 lakh. Further, it is within the “cut-off” date. Accordingly, additional capitalization for the subject asset is allowed under Regulation 14(1) (i) of 2014 Tariff Regulations.

Debt: Equity Ratio

31. 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.”

32. The petitioner has considered debt:equity ratio as 70:30 as on COD and debt:equity ratio as 70:30 for additional capitalization during 2015-16. Accordingly, we have considered debt:equity ratio as 70:30 as on COD and debt:equity ratio as 70:30 for additional capitalization during 2014-15 and 2015-16. The details of the debt: equity as on the date of COD, i.e. 1.4.2014 and



31.3.2019 considered for the purpose of tariff computation for the 2014-19 tariff period is as follows:-

(₹in lakh)

Asset	As on COD		Additional capitalization during 2014-19		As on 31.3.2019	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	1676.57	70.00	201.07	70.00	1877.64	70.00
Equity	718.53	30.00	86.17	30.00	804.70	30.00
Total	2395.10	100.00	287.24	100.00	2682.34	100.00

Interest on Loan ("IOL")

33. 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.”

34. We have considered the weighted average rate of IOL on the basis of rate prevailing as on 1.4.2014. 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 2014-19 period, if any from the respondents. The petitioner has also prayed that they will approach the



Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase. 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 2014-19 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-I** and the IOL has been worked out as follows:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross loan opening	1676.57	1815.71	1877.64	1877.64	1877.64
Cumulative Repayment upto previous year	0.00	132.18	271.96	414.07	556.18
Net Loan-Opening	1676.57	1683.53	1605.68	1463.57	1321.46
Additions during the year	139.14	61.93	0.00	0.00	0.00
Repayment during the year	132.18	139.77	142.11	142.11	142.11
Net Loan-Closing	1683.53	1605.68	1463.57	1321.46	1179.35
Average Loan	1680.05	1644.60	1534.63	1392.52	1250.41
Rate of Interest (%)	9.5623%	9.5664%	9.5669%	9.5644%	9.5627%
Interest	160.65	157.33	146.82	133.19	119.57

Return on Equity("ROE")

35. 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:

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.”

36. The petitioner has claimed ROE at the rate of 20.961% after grossing up the ROE of 15.5% with MAT rate as per the above said 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.

37. 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.



38. 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. 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 ROE allowed for the instant transmission asset is given below:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	718.53	778.16	804.70	804.70	804.70
Additional Capitalization	59.63	26.54	0.00	0.00	0.00
Closing Equity	778.16	804.70	804.70	804.70	804.70
Average Equity	748.35	791.43	804.70	804.70	804.70
Return on Equity (Base Rate) (%)	15.500%	15.500%	15.500%	15.500%	15.500%
Tax rate for the year (%)	21.342%	21.342%	21.342%	21.342%	21.342%
Rate of Return on Equity (Pre Tax) (%)	19.610%	19.705%	19.705%	19.705%	19.705%
Return on Equity (Pre Tax)	146.75	155.96	158.57	158.57	158.57

Depreciation

39. 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.”

40. 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 system from 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 pumped Storage hydro generating stations 35 years
- (e) Transmission line (including HVAC & HVDC) 35 years
- (f) Communication system 15 years”

41. The petitioner has claimed depreciation considering capital expenditure of ₹2493.45 lakh as on COD and additional capitalization of ₹221.17 lakh for the 2014-19 tariff period.



42. We have computed depreciation considering capital expenditure of ₹2395.10 lakh as on COD and additional capitalization of ₹287.24 lakh for 2014-19 tariff period. The weighted average useful life of the asset has been considered as 25 years in accordance with the above regulation. The details of the depreciation allowed are given hereunder:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block	2395.10	2593.87	2682.34	2682.34	2682.34
Additional Capitalization	198.77	88.47	0.00	0.00	0.00
Closing Gross block	2593.87	2682.34	2682.34	2682.34	2682.34
Average Gross block	2494.49	2638.11	2682.34	2682.34	2682.34
Rate of Depreciation (%)	5.30%	5.30%	5.30%	5.30%	5.30%
Depreciable Value	2245.04	2374.30	2414.11	2414.11	2414.11
Elapsed Life of the assets at beginning of the year	25.00	24.00	23.00	22.00	21.00
Weighted Balance Useful life of the assets	0.00	1.00	2.00	3.00	4.00
Remaining Depreciable Value	2245.04	2242.11	2142.15	2000.04	1857.93
Depreciation	132.18	139.77	142.11	142.11	142.11

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

43. The instant petition covers one 400 kV bay and five 220 kV bay for the subject Asset. Regulation 29(4)(a) of the 2014 Tariff Regulations specifies the following norms for O&M Expenses for 400 kV and 220 kV bays :-

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Norm (₹ lakh/bay)					
400 kV	60.30	62.30	64.37	66.51	68.71
220 kV	42.21	43.61	45.06	46.55	48.10



44. The petitioner has claimed O&M Expenses as specified in sub-clause (a) of clause (4) of Regulation 29 of the 2014 Tariff Regulations. The details of O&M Expenses allowed are given hereunder:-

Asset	2014-15	2015-16	2016-17	2017-18	2018-19
Asset I: One 400 kV bay	60.30	62.30	64.37	66.51	68.71
Asset I: five 220 kV bays	211.05	218.05	225.30	232.75	240.50

45. The petitioner has submitted that norms for 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 is due during the 2014-19 tariff period and actual impact of wage hike, which will be effective at a future date, has not been factored in fixation of the normative O&M rate specified for the tariff period 2014-19. The petitioner has 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.

46. The 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, 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”)

47. 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 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the transmission system including 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 13.50% (SBI Base Rate of 10% plus 350 basis points).

48. The interest on working capital allowed is shown in the table below:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O & M expenses	22.60	23.35	24.13	24.93	25.76
Maintenance Spares	40.70	42.05	43.45	44.89	46.38
Receivables	122.67	126.55	127.24	126.61	126.04
Total	185.98	191.96	194.82	196.42	198.17
Rate of Interest (%)	13.500%	13.500%	13.500%	13.500%	13.500%
Interest	25.11	25.91	26.30	26.52	26.75



Annual Transmission Charges

49. 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	2395.10	2593.87	2682.34	2682.34	2682.34
Additional Capitalization	198.77	88.47	0.00	0.00	0.00
Closing Gross Block	2593.87	2682.34	2682.34	2682.34	2682.34
Average Gross Block	2494.49	2638.11	2682.34	2682.34	2682.34
Depreciation					
Rate of Depreciation (%)	5.30%	5.30%	5.30%	5.30%	5.30%
Depreciable Value	2245.04	2374.30	2414.11	2414.11	2414.11
Elapsed Life of the assets at beginning of the year	0.00	1.00	2.00	3.00	4.00
Weighted Balance Useful life of the assets	25.00	24.00	23.00	22.00	21.00
Remaining Depreciable Value	2245.04	2242.11	2142.15	2000.04	1857.93
Depreciation	132.18	139.77	142.11	142.11	142.11
Interest on Loan					
Gross Normative Loan	1676.57	1815.71	1877.64	1877.64	1877.64
Cumulative Repayment upto Previous Year	0.00	132.18	271.96	414.07	556.18
Net Loan-Opening	1676.57	1683.53	1605.68	1463.57	1321.46
Additions	139.14	61.93	0.00	0.00	0.00
Repayment during the year	132.18	139.77	142.11	142.11	142.11
Net Loan-Closing	1683.53	1605.68	1463.57	1321.46	1179.35
Average Loan	1680.05	1644.60	1534.63	1392.52	1250.41
Weighted Average Rate of Interest on Loan (%)	9.5623%	9.5664%	9.5669%	9.5644%	9.5627%
Interest	160.65	157.33	146.82	133.19	119.57
Return on Equity					
Opening Equity	718.53	778.16	804.70	804.70	804.70



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Additions	59.63	26.54	0.00	0.00	0.00
Closing Equity	778.16	804.70	804.70	804.70	804.70
Average Equity	748.35	791.43	804.70	804.70	804.70
Return on Equity (Base Rate) (%)	15.500%	15.500%	15.500%	15.500%	15.500%
MAT Rate for the year 2013-14(%)	21.342%	21.342%	21.342%	21.342%	21.342%
Rate of Return on Equity (%)	19.610%	19.705%	19.705%	19.705%	19.705%
Return on Equity (Pre Tax)	146.75	155.96	158.57	158.57	158.57
Interest on Working Capital					
Maintenance Spares	22.60	23.35	24.13	24.93	25.76
O & M expenses	40.70	42.05	43.45	44.89	46.38
Receivables	122.67	126.55	127.24	126.61	126.04
Total	185.98	191.96	194.82	196.42	198.17
Interest	25.11	25.91	26.30	26.52	26.75
Annual Transmission Charges					
Depreciation	132.18	139.77	142.11	142.11	142.11
Interest on Loan	160.65	157.33	146.82	133.19	119.57
Return on Equity	146.75	155.96	158.57	158.57	158.57
Interest on Working Capital	25.11	25.91	26.30	26.52	26.75
O & M Expenses	271.35	280.35	289.67	299.26	309.21
Total	736.05	759.32	763.47	759.64	756.22

Filing Fee and Publication Expenses

50. 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

51. 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

52. 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

53. The transmission charges for the instant assets shall be borne by the beneficiary Discom till the commissioning of the downstream system. Once the downstream system is commissioned 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.

54. This order disposes of Petition No. 99/TT/2014.

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

Sd/-
(A.S. Bakshi)
Member



ANNEXURE-I**DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO 2014-19**

Particulars	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXXIV-LOAN 1	8.84	103.00	0.00	103.00
BOND XXXVII-LOAN 2	9.25	67.00	0.00	67.00
SBI (21.03.2012)- LOAN 5-	10.25	655.00	0.00	655.00
BOND XL- LOAN 3-	9.30	331.00	0.00	331.00
BOND XLI- LOAN 4-	8.85	320.00	0.00	320.00
BOND XLIII- LOAN 6-	7.93	39.00	0.00	39.00
BOND XLV- LOAN 7-	9.65	99.72	0.00	99.72
PROPOSED LOAN 2014-15- LOAN 8-	9.65	130.69	0.00	130.69
Total		1745.41	0.00	1745.41

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

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	1745.41	1745.41	1745.41	1745.41	1745.41
Cumulative Repayment of loan upto previous year	0.00	8.58	22.74	150.70	290.22
Net Loan Opening	1745.41	1736.83	1722.67	1594.71	1455.19
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	8.58	14.16	127.96	139.52	150.41
Net Loan Closing	1736.83	1722.67	1594.71	1455.19	1304.78
Average Loan	1741.12	1729.75	1658.69	1524.95	1379.99
Rate of Interest	9.5623%	9.5664%	9.5669%	9.5644%	9.5627%
Interest	166.49	165.47	158.69	145.85	131.96

