

**CENTRAL ELECTRICITY REGULATORY COMMISSION**

**NEW DELHI**

**Petition No. 92/TT/2016**

**Coram:**

**Shri A.S. Bakshi, Member**

**Dr.M.K. Iyer, Member**

**Date of Hearing : 11.07.2016**

**Date of Order : 28.07.2016**

**In the matter of:**

Determination of transmission tariff for 2019 for LILO of Gladni — Hiranagar 220 kV S/C line at 400/220 kV Samba (POWERGRID) Sub-station (the lines are to be terminated at existing 220 kV line bays at samba Substation) under "Northern Region System Strengthening Scheme —XXXIV (NRSS-XXXIV) 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. Himachal Pradesh State Electricity Board  
Vidyut Bhawan,  
Shimla-171004 (H.P.)
2. Punjab State Power Corporation Limited  
Thermal Shed Tia, Near 22 Phatak  
Patiala-147001
3. Haryana Power Purchase Centre, II Floor  
Shakti Bhawan, Sector~6  
Panchkula (Haryana) 134109



4. Power Development Deptt.  
Janipura Grid Station,  
Jammu (Tawi) 180007
  5. Uttar Pradesh Power Corporation Ltd.  
10<sup>th</sup> Floor Shakti Bhawan Extn.  
14, Ashok Marg  
Lucknow - 226001
  6. Delhi Transco Ltd  
Shakti Sadan, Kotla Road,  
New Delhi-110002
  7. Chandigarh Administration  
Sector -9, Chandigarh.
  8. Uttarakhand Power Corporation Ltd.  
Urja Bhawan, Kanwali Road, Dehradun.
  9. Rajasthan Power Procurement Centre  
Vidyut Bhawan, Janpath, Jaipur
  10. Ajmer Vidyut Vitran Nigam Limited  
400 kV GSS Building, Ajmer Road,  
Heerapura, Jaipur
  11. Jodhpur Vidyut Vitran Nigam Ltd  
400 kV GSS Building, Ajmer Road,  
Heerapura, Jaipur
  12. Jaipur Vidyut Vitran Nigam Ltd  
400 kV GSS Building, Ajmer Road,  
Heerapura, Jaipur.
  13. North Central Railway, Allahabad.
  14. BSES Yamuna Power Ltd,  
BSES Bhawan, Nehru Place ,  
New Delhi.
  15. BSES Rajdhani Power Ltd,  
BSES Bhawan, Nehru Place,  
New Delhi
  16. HOG (PMG)  
Tata Power Delhi Distribution Ltd.
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33 kV Substation, Building  
Hudson Lane Kingsway Camp  
North Delhi - 110009

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 M. M. Mondal, PGCIL  
Shri Rakesh Prasad, PGCIL  
Shri Jasbir Singh, 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 LILO of Gladni — Hiranagar 220 kV S/C line at 400/220 kV Samba (POWERGRID) Sub-station (the lines are to be terminated at existing 220 kV line bays at samba Substation) under "Northern Region System Strengthening Scheme —XXXIV (NRSS-XXXIV) 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.



2. 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.

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 company, vide Memorandum dated 9.3.2015 with an estimated cost of ₹14876.00 lakh including an IDC of ₹924.00 lakh, based on price level of December-2014. As per the investment approval, the transmission asset was scheduled to be commissioned within 28 months from the date of investment approval, i.e. by 8.7.2017.

(b) The scope of work covered under Northern Region System Strengthening Scheme —XXXIV (NRSS-XXXIV) is as follows:-

**Transmission line:**

- (i) LILO of Agra - Bharatpur 220 kV S/C line at Agra (Power Grid) Sub-station.
- (ii) LILO of Sarna — Hiranagar 220 kV S/C line at 400/220 kV Samba (POWERGRID) Sub-station (the lines are to be terminated at existing 220 kV line bays at samba Substation)
- (iii) LILO of one circuit of Parbati Pooling Station - Amritsar 400 kV D/C line at Jalandhar (Power Grid) Sub-station.

**Substations:**

- (i) Agra 400/200 kV Sub-station

**400 kV**

- 1x315 MVA, 400/220 kV ICT 1 no.



(ICT shall be provided from the spared ICT's available after replacement of ICTs at Ballabgarh/ Mandaula Sub-station and shall be refurbished before installation)

- ICT bays :1 no.

**220 kV**

- ICT bays :1 no.
- Line bays : 2 no.

(ii) Kaithal 400/ 220 kV Sub-station

**400 kV**

- 1x315 MVA, 400/220 kV ICT 1 no.  
(ICT shall be provided from the spared ICT's available after replacement of ICTs at Ballabgarh/ Mandaula Sub-station and shall be refurbished before installation)
- ICT bays :1 no.

**220 kV**

- ICT bays :1 no.
- Line bays : 2 no.

(c) The petitioner has submitted that it was discussed and agreed in 31<sup>st</sup> and 32<sup>nd</sup> Standing Committee meeting dated 2.1.2013 and 31.8.2013 on Power system planning in Northern Region to change the scope from "LILO of Sarna - Hiranagar" to "LILO of Gladni - Hiranagar".

(d) The transmission charges claimed by the petitioner are as under:-

Particulars	(₹ in lakh)		
	2016-17 (pro-rata)	2017-18	2018-19
Depreciation	39.13	65.57	69.25
Interest on Loan	43.38	68.81	67.20
Return on Equity	43.60	73.05	77.15
Interest on Working Capital	2.88	4.68	4.82
O&M Expenses	2.49	3.12	3.22
<b>Total</b>	<b>131.48</b>	<b>215.23</b>	<b>221.64</b>



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

Particulars	(₹in lakh)		
	2016-17 (pro-rata)	2017-18	2018-19
O & M Expenses	0.25	0.26	0.27
Maintenance Spares	0.45	0.47	0.48
Receivables	26.56	35.87	36.94
Total	27.27	36.60	37.69
Rate of Interest (%)	12.80	12.80	12.80
<b>Interest</b>	2.88	4.68	4.82

4. The petitioner has submitted the actual COD, IDC on cash basis, Auditor Certificates and tariff forms for instant assets vide affidavit dated 27.7.2016 and the same has been considered for the purpose of computation of tariff.

5. 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 11.7.2016. None of the respondents have filed their reply.

#### **Commercial Operation Date ("COD")**

6. Clause (3) of Regulation 4 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”

7. The petitioner, vide affidavit dated 27.7.2016 has submitted that instant asset was commissioned on 4.6.2016. Hence tariff is worked out for the instant asset from the COD to 31.3.2019. The petitioner has submitted RLDC trial run operation certificate dated 21.6.2016.

### **Capital Cost**

8. The petitioner has claimed the capital cost ₹627.33 lakh for instant asset as on actual COD. In the auditor certificate and tariff forms the petitioner has claimed the following cost:-

(₹ in lakh)

Asset	Approved apportioned cost	Exp. up to COD	Additional Capital Expenditure			Total estimated completion cost
			2016-17	2017-18	Total	
Asset	1655.46	627.33	547.31	136.83	684.14	1311.47

9. Regulation 9 (1), 9(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.”

### **Time over-run**

10. As per the investment approval, the commissioning schedule of the project is 28 months from the date of investment approval. The investment approval was accorded on 9.3.2015 and hence the schedule date of commercial operation





comes as 8.7.2017. The petitioner has submitted that instant asset was commissioned on 4.6.2016. Hence, there is no time over-run in commissioning of the instant asset.

### **IDC and IEDC**

11. The petitioner, vide affidavit dated 27.7.2016, has submitted the details with regard to IEDC and IDC based on actual COD and undischarged liabilities. Hence we have considered IDC and IEDC as per Auditor's Certificate dated 27.7.2016 as follows:-

(₹ in lakh)		
Asset	IEDC up to COD	IDC up to COD
Asset	15.88	8.78

12. The petitioner has submitted that IEDC claimed is based on the actual COD. The IDC discharged on cash basis as below:-

(₹ in lakh)			
Asset	IDC discharged up to COD	IDC discharged during 2016-17	IDC discharged during 2017-18
Asset	6.13	0.12	2.53

13. Based on the above submissions of the petitioner, IDC is being capitalised up to COD and IDC discharged during 2016-17 and 2017-18 has been added to the additional capital expenditure during 2016-17 and 2017-18. Capital Cost after adjustment of IDC is as follows:-

(₹ in lakh)			
Asset	Capital Cost as on COD after adjustment of IDC	Additional Capital Expenditure after adjustment of IDC	
		FY 2016-17	FY 2017-18
Asset	624.68	547.43	139.36



### **Cost over-run**

14. The petitioner, vide Auditor's certificate dated 27.7.2016 has submitted that total estimated completion cost as on 31.3.2019 is ₹1311.47 lakh against apportioned approved cost of ₹1655.46 lakh. Hence there is no cost overrun.

### **Initial Spares**

15. The petitioner has claimed initial spares of ₹27.38 lakh pertaining to transmission line on the cut-off date of 31.3.2019 vide Auditor's certificate dated 27.7.2016.

16. Regulation 13 of the 2014 Tariff Regulations provide for ceiling norms for capitalization of initial spares. The ceiling limit of transmission line is 1.00% of the Plant and Machinery Cost of the element. Accordingly, the initial spares are allowed as specified in the 2014 Tariff Regulations and it is as under:-

<b>Particulars</b>	<b>(₹in lakh)</b>
	<b>Transmission Line</b>
Capital cost claimed as on cut-off date after deducting IDC,IEDC and civil works	1286.81
Initial spares as per Auditor`s Certificate	27.38
Ceiling limit as per Regulation 13 of 2014 regulations	1.00%
Initial spares worked out as per norms	12.72
Excess initial spares claimed	14.66

17. The initial spares claimed by the petitioner are in excess by ₹14.66 lakh as per the limits prescribed under Regulation 13 of the Tariff Regulation, 2014. Hence excess initial spares are deducted from the capital cost as on COD. Capital cost after deducting excess initial spares are as follows:-



(₹in lakh)

Assets	Capital cost on COD after adjusting IDC	Excess initial spares disallowed	Capital cost allowed as on COD for tariff determination purpose
Asset	624.68	14.66	610.02

### Additional Capital Expenditure

18. The petitioner has proposed additional capitalization of ₹684.14 lakh towards balance and retention payment under Regulation 14(1) (i) of 2014 Tariff Regulations.

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

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

Provided that the cut-off date may be extended by the Commission if it is proved on the basis of documentary evidence that the capitalisation could not be made within the cut-off date for reasons beyond the control of the project developer;”

20. The cut-off date of the transmission asset is 31.3.2019. The additional capital expenditure has been considered for 2016-17 and 2017-18. Accordingly, additional capitalization for the subject asset is allowed under Regulation 14(1)(i) of 2014 Tariff Regulations, subject to true up on actual basis, is as follows:-

(in ₹ lakh)

Asset	Approved Apportioned cost	Exp. up to COD	Additional Capital Expenditure			Estimated completion Cost
			2016-17	2017-18	Total	



<b>Asset</b>	1655.46	610.02	547.43	139.36	686.79	1296.81

### **Debt: Equity Ratio**

21. 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.”

22. The petitioner has considered debt:equity ratio as 70:30 as on COD and debt:equity ratio as 70:30 for additional capitalization during 2016-17 and 2017-18. Accordingly, we have considered the same for the purpose of tariff computation for the 2014-19 tariff period is as follows:-

(₹ in lakh)

Particulars	As on COD		Additional capitalization during 2014-19		As on 31.3.2019	
	Amount	(%)	Amount	(%)	Amount	(%)
<b>Debt</b>	427.02	70.00	480.75	70.00	907.77	70.00
<b>Equity</b>	183.01	30.00	206.04	30.00	389.04	30.00
<b>Total</b>	<b>610.02</b>	<b>100.00</b>	<b>686.79</b>	<b>100.00</b>	<b>1296.81</b>	<b>100.00</b>

### **Interest on Loan (“IOL”)**

23. 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.”

24. 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 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:-

Particulars	(₹ in lakh)		
	2016-17 (Pro-rata)	2017-18	2018-19
Gross loan opening	427.02	810.22	907.77
Cumulative Repayment upto previous year	0.00	38.48	103.27
Net Loan-Opening	427.02	771.74	804.50
Additions during the year	383.20	97.55	0.00
Repayment during the year	38.48	64.79	68.47
Net Loan-Closing	771.74	804.50	736.02
Average Loan	599.38	788.12	770.26
Rate of Interest (%)	8.6302	8.6302	8.6302
<b>Interest on Loan</b>	<b>42.66</b>	<b>68.02</b>	<b>66.47</b>



## **Return on Equity (“ROE”)**

25. 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”

**“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.”

26. The petitioner has claimed ROE at the rate of 19.61% after grossing up the ROE of 15.50% 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.

27. 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.

28. 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 claimed that MAT rate of 20.96% is applicable to the petitioner's company during 2015-16. Accordingly, the MAT rate applicable during 2015-16 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:-

Particulars	(₹ in lakh)		
	2016-17 (pro-rata)	2017-18	2018-19
Opening Equity	183.01	347.24	389.04
Additional Capitalization	164.23	41.81	0.00
Closing Equity	347.24	389.04	389.04



Particulars	2016-17 (pro-rata)	2017-18	2018-19
Average Equity	265.12	368.14	389.04
Return on Equity (Base Rate) (%)	15.500	15.500	15.500
Tax rate for the year (%)	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax) (%)	19.610	19.610	19.610
<b>Return on Equity</b>	<b>42.88</b>	<b>72.19</b>	<b>76.29</b>

### Depreciation

29. 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.”

30. 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”

31. The weighted average useful life of the instant asset has been considered as 35 years in accordance with the above regulation. The details of the depreciation allowed are given hereunder:-

Particulars	(₹ in lakh)		
	2016-17 (pro-rata)	2017-18	2018-19
Opening Gross block	610.02	1157.45	1296.81
Additional Capitalization	547.43	139.36	0.00
Closing Gross block	1157.45	1296.81	1296.81
Average Gross block	883.74	1227.13	1296.81
Rate of Depreciation (%)	5.28	5.28	5.28
Depreciable Value	795.36	1104.42	1167.13
Balance useful life of the assets	35.00	34.00	33.00
Elapsed life	0.00	1.00	2.00
Remaining Depreciable Value	795.36	1001.15	995.39
Depreciation during the year	38.48	64.79	68.47
Cumulative depreciation	38.48	103.27	171.74

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

32. The petitioner has 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 from a future date has also not been factored in fixation of the normative O&M rate specified for the 2014-19 tariff period. The petitioner has also submitted that it will approach the Commission for suitable revision in the norms of O&M Expenses for claiming the impact of such increase.



33. We have considered the submissions of the petitioner. We would like to clarify that any application filed by the petitioner for revision of O&M Expenses on account of wage revision will be dealt with in accordance with the appropriate provisions of the 2014 Tariff Regulations. The O&M Expenses are allowed for the instant transmission assets as per the prevailing norms.

34. Clause 3(a) of Regulation 29 of the 2014 Tariff Regulations specify the norms for O&M Expenses for the transmission system. The total allowable O&M Expenses for the instant assets are as follows:-

(in ₹lakh)			
Particulars	2016-17	2017-18	2018-19
<b>S/C (Single Conductor)</b>			
Norms Line (Rs Lakhs per KM)	0.216	0.223	0.23

(in ₹lakh)			
Particulars	2016-17 (Pro-rata)	2017-18	2018-19
<b>S/C (Single Conductor)</b>			
Line (KM)	14.00	14.00	14.00
<b>Total O&amp;M Expenses</b>	<b>2.49</b>	<b>3.12</b>	<b>3.22</b>

### **Interest on Working Capital (“IWC”)**

35. 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).

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

(₹ in lakh)

Particulars	2016-17 (pro-rata)	2017-18	2018-19
O & M expenses	0.25	0.26	0.27
Maintenance Spares	0.45	0.47	0.48
Receivables	26.14	35.46	36.54
Total	26.85	36.19	37.29
Rate of Interest (%)	12.80	12.80	12.80
<b>Interest on Working Capital</b>	<b>2.83</b>	<b>4.63</b>	<b>4.77</b>

### Annual Transmission Charges

37. 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	2016-17 (Pro-rata)	2017-18	2018-19
<b>Depreciation</b>			
Opening Gross Block	610.02	1157.45	1296.81
Additional Capitalisation	547.43	139.36	0.00
Closing Gross Block	1157.45	1296.81	1296.81
Average Gross Block	883.74	1227.13	1296.81
Rate of Depreciation (%)	5.28	5.28	5.28
Depreciable Value	795.36	1104.42	1167.13
Balance useful life of the asset	35	34	33



Particulars	2016-17 (Pro-rata)	2017-18	2018-19
<b>Depreciation</b>			
Elapsed life	0	1	2
Remaining Depreciable Value	795.36	1001.15	995.39
Depreciation during the year	38.48	64.79	68.47
Cumulative depreciation	38.48	103.27	171.74
<b>Interest on Loan</b>			
Gross Normative Loan	427.02	810.22	907.77
Cumulative Repayments upto Previous Year	0.00	38.48	103.27
Net Loan-Opening	427.02	771.74	804.50
Additions	383.20	97.55	0.00
Repayment during the year	38.48	64.79	68.47
Net Loan-Closing	771.74	804.50	736.02
Average Loan	599.38	788.12	770.26
Weighted Average Rate of Interest on Loan (%)	8.6302	8.6302	8.6302
Interest on Loan	42.66	68.02	66.47
<b>Return on Equity</b>			
Opening Equity	183.01	347.24	389.04
Additions	164.23	41.81	0.00
Closing Equity	347.24	389.04	389.04
Average Equity	265.12	368.14	389.04
Return on Equity (Base Rate) (%)	15.500	15.500	15.500
MAT Rate for respective year (%)	20.961	20.961	20.961
Rate of Return on Equity (%)	19.610	19.610	19.610
Return on Equity	42.88	72.19	76.29
<b>Interest on Working Capital</b>			
O & M Expenses	0.25	0.26	0.27
Maintenance Spares	0.45	0.47	0.48
Receivables	26.14	35.46	36.54
Total Working Capital	26.85	36.19	37.29
Rate of Interest (%)	12.80	12.80	12.80
Interest of working capital	2.83	4.63	4.77
<b>Annual Transmission Charges</b>			
Depreciation	38.48	64.79	68.47
Interest on Loan	42.66	68.02	66.47
Return on Equity	42.88	72.19	76.29



Particulars	2016-17 (Pro-rata)	2017-18	2018-19
<b>Depreciation</b>			
Interest on Working Capital	2.83	4.63	4.77
O & M Expenses	2.49	3.12	3.22
<b>Total</b>	<b>129.34</b>	<b>212.76</b>	<b>219.23</b>

### **Filing Fee and Publication Expenses**

38. 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**

39. 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**

40. 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**

41. 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.

42. This order disposes of Petition No. 92/TT/2016

**(Dr. M. K. Iyer)**  
**Member**

**(A.S. Bakshi)**  
**Member**



## ANNEXURE-I

### DETAILS OF LOAN BASED ON ACTUAL LOAN PORTFOLIO 2014-19

(in ₹ lakh)

Particulars	Interest Rate (%)	Loan deployed as on 1.4.2016	Additions during the tariff period	Total
SBI 10000 (01.05.2014)	9.55	154.03	0.00	154.03
Proposed Loan 2016-17 (8.13%)	8.13	283.24	0.00	283.24
<b>Total</b>		<b>431.27</b>	<b>0.00</b>	<b>437.27</b>

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

(₹in lakh)

Summary	2016-17	2017-18	2018-19
Gross Opening Loan	437.27	437.27	437.27
Cumulative Repayments of Loans upto Previous Year	0.00	0.00	0.00
<b>Net Loans Opening</b>	<b>437.27</b>	<b>437.27</b>	<b>437.27</b>
Add: Draw(s) during the Year	0.00	0.00	0.00
Less: Repayments of Loan during the year	0.00	0.00	0.00
<b>Net Closing Loan</b>	<b>437.27</b>	<b>437.27</b>	<b>437.27</b>
Average Net Loan	437.27	437.27	437.27
Rate of Interest on Loan (%)	8.6302	8.6302	8.6302
<b>Interest on Loan</b>	<b>37.74</b>	<b>37.74</b>	<b>37.74</b>

