

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 142/TT/2014

Coram:

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

Date of Hearing : 14.03.2016

Date of Order : 21.03.2016

In the matter of:

Determination of transmission tariff for Extension of bays at 765/400 kV Indore Sub-station including Switchable Line Reactor (3*80 MVAR, 765 kV) at Indore (initially charged as Bus Reactor under Interim Contingency Scheme till readiness of 765 kV S/C Indore-Vadodara transmission line)& 765 kV Indore-Vadodara transmission line (for direct inter-connection with 400 kV D/C Vadodara-Asoj transmission line) by-passing Vadodara Pooling Sub-station under Interim contingency scheme under IPP projects in MP & Chhattisgarhin Western 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. Madhya Pradesh Power Management Company Ltd.
Shakti Bhawan, Rampur,
Jabalpur-482008
2. Maharashtra State Electricity Distribution Co. Ltd.
Prakashgad, 4th Floor, Andheri(East),
Mumbai-400052
3. Gujarat Urja Vikas Nigam Ltd.
Sardar Patel Vidyut Bhawan,



Race Course Road
Vadodara- 390007

4. Electricity Department
Govt. Of GOA,
Vidyut Bhawan, Panaji- 403001
5. Electricity Department
Administration of Daman & Diu,
Daman- 396210
6. Electricity Department
Administration of Dadar Nagar Haveli,
U.T., Silvassa- 396230
7. Chhattisgarh State Electricity Board
P.O Sunder Nagar, Dangania, Raipur
Chhatisgaarh-492013
8. Madhya Pradesh Audyogik Kendra Vikas Nigam (Indore) Ltd.
3/54, Press Complex, Agra-Bombay road
Indore-452008

.....**Respondents**

The following were present:-

For Petitioner: Shri Piyush Awasthi, PGCIL
 Mohd. Mohsin, PGCIL
 Shri Pankaj Sharma, PGCIL
 Shri A. M. Pavgi, PGCIL
 Shri P.V. Nath, PGCIL
 Smt. Archana Kumari, PGCIL
 Shri Amit Yadav, PGCIL
 Shri S.S. Raju, PGCIL
 Shri Rakesh Prasad, PGCIL
 Shri Jashbir 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 Extension of bays at 765/400 kV Indore Sub-station including Switchable Line Reactor (3*80 MVAR, 765 kV) at Indore (initially charged as Bus Reactor under Interim Contingency Scheme till readiness of 765 kV S/C Indore-Vadodara transmission line)& 765 kV Indore-Vadodara transmission line (for direct inter-connection with 400 kV D/C Vadodara-Asoj transmission line) by-passing Vadodara Pooling Sub-station under Interim contingency scheme under IPP projects in MP & Chhattisgarhin Western Region for 2014-19 tariff period (hereinafter referred as “transmission asset”)under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) for the period from COD 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 Western 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 no. C/CP/IPP/MO-CH dated 2.9.2011 at an estimated cost of ₹136634 lakh, which included IDC of ₹6477 lakh. The Revised Cost Estimate have been approved and accorded by Board of Directors of the petitioner’s company C/CP/RCE



MP-CH dated 9.12.2014 at an estimated cost of ₹160638 lakh including an IDC of ₹11371 lakh. The revised apportioned approved cost for Asset-I and Asset-II is ₹61975.56 lakh and ₹4446.35 lakh respectively.

(b) The scope of the instant project is as under:-

Transmission line

- (i) Vadodara-Pirana 400 kV D/C (Quad) line
- (ii) Indore-Vadodara 765 kV S/C line

Sub-station

- (i) Establishment of 765/400 kV, 2 x 1500 MVA GIS Sub-station at Vadodara
- (ii) Extension of 765/400 kV Indore Sub-station
- (iii) Extension of 400 kV Pirana Sub-station

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

(₹ in lakh)

Particulars (Asset-I)	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Depreciation	2765.57	3181.2	3251.23	3251.23	3251.23
Interest on Loan	3203.44	3420.59	3210.06	2911.64	2617.54
Return on Equity	3180.43	3658.18	3738.69	3738.69	3738.69
Interest on Working Capital	221.03	248.07	247.07	240.62	234.27
O&M Expenses	188.77	215.54	222.44	229.99	237.57
Total	9559.24	10723.58	10669.49	10372.17	10079.3

(₹ in lakh)

Particulars (Asset-II)	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	173.54	221.85	234.77	234.77	234.77
Interest on Loan	205.45	246.56	241.15	219.15	197.3
Return on Equity	199.6	255.17	270.02	270.02	270.02
Interest on Working Capital	22.65	26.29	27.13	26.95	26.79
O&M Expenses	168.84	174.44	180.24	186.22	192.4
Total	770.08	924.31	953.31	937.11	921.28



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

(₹ in lakh)

Particulars (Asset-I)	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	31.26	32.33	33.37	34.5	35.64
O & M Expenses	17.36	17.96	18.54	19.17	19.8
Receivables	1758.67	1787.26	1778.25	1728.7	1679.88
Total	1807.29	1837.55	1830.16	1782.37	1735.32
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	221.03	248.07	247.07	240.62	234.27

(₹ in lakh)

Particulars (Asset-II)	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	25.33	26.17	27.04	27.93	28.86
O & M Expenses	14.07	14.54	15.02	15.52	16.03
Receivables	128.35	154.05	158.89	156.19	153.55
Total	167.75	194.76	200.95	199.64	198.44
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	22.65	26.29	27.13	26.95	26.79

4. The petitioner has submitted revised tariff forms vide affidavit dated 16.9.2015. The AFC for the instant asset was allowed under Regulation 7(7) of the 2014 Tariff Regulations for inclusion in the PoC charges vide order dated 26.9.2014. The petitioner has submitted additional information vide affidavits dated 16.9.2015 and 16.3.2016.

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 14.3.2016. None of the



respondents have filed their reply. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

Commercial Operation Date (“COD”)

6. The petitioner has claimed the date of the commercial operation as 5.5.2014 and 1.4.2014 for Asset-I and Asset-II respectively. Regulation 4(3) of the 2014 Tariff Regulations provides as follows:-

“4. Date of Commercial Operation: The date of commercial operation of a generating station or unit or block thereof or a transmission system or element thereof shall be determined as under:

xxx

(3) Date of commercial operation in relation to a transmission system shall mean the date declared by the transmission licensee from 0000 hour of which an element of the transmission system is in regular service after successful trial operation for transmitting electricity and communication signal from sending end to receiving end:

xxx

xxx”

7. The petitioner has submitted RLDC certificate issued by WRLDC, POSOCO vide letter dated 12.6.2014 in support of the claim of commercial operation in accordance with Regulation 5(2) of the 2014 Tariff Regulations indicating completion of successful trial operation for Asset-I. Further, for Asset-II the petitioner has submitted Regional Inspectorial Organisation energisation certificate. Accordingly, the commercial operation date of the transmission asset has been considered as 5.5.2014 and 1.4.2014 for Asset-I and Asset-II



respectively. The tariff is worked out from 5.5.2014 to 31.3.2019 and 1.4.2014 to 31.3.2019 for Asset-I and Asset-II respectively.

Capital Cost

8. The petitioner has claimed ₹56707.53 lakh and ₹2616.44 lakh for Asset-I and Asset-II respectively as on COD vide Auditor Certificate dated 27.5.2014 and 23.4.2015 respectively. The petitioner has included the cost of initial spares, interest during construction and incidental expenditure during construction. The petitioner has submitted item wise break up of each element of capital cost in form 5 of the petition.

9. 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.”

10. The capital cost of ₹56707.53 lakh and ₹2616.44 lakh for Asset-I and Asset-II has been considered subject to prudence check as discussed in subsequent paragraph.

Time over-run

11. 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 2.9.2011 and the schedule date of commercial operation was 2.12.2013 against which the Asset-I and Asset-II was commissioned on 5.5.2014 and 1.4.2014 respectively. Hence there is a time over-run of 155 days and 121 days in case of Asset-I and Asset-II respectively in commissioning of the assets. The petitioner has submitted following reasons for the delay:

Asset-I

Forest Clearance

12. The main reason submitted by the petitioner for delay is getting clearance from Forest Dept. (Stage I/Stage II) i.e. around 25 months from the date of



submission of forest case (from Feb-2012) and final forest approval issued on March-2014 (Dahod-Vadodara portion)/ Dec-2013 (Indore-Dahod portion) and within 35 days, the transmission line was charged and commissioned initially at 400kV level as per the approved contingency scheme in line with 36th Standing committee meeting held on 29/08/13 and 24th WRPC meeting held on 09/10/2013 under interim contingency scheme by passing Vadodara Pooling Sub-station and direct interconnection with Asoj Sub-station near Vadodara end and Indore (MPPTCL) Sub-station near Indore end.

13. It is observed from the records of correspondences placed by the petitioner that the petitioner wrote a first letter to Superintendent, Kharmour Wildlife Sanctuary, Dhar for NOC for 765 kV Indore-Dahod line (Social Forest 3.190 hac. Jhabua Division + 9.050 Dhar Division) on 28.3.2012 i.e. after a period of 209 days from the date of investment approval (IA) i.e. 2.9.2011 and have received the final approval on 18.3.2014 i.e. after 721 days from 28.3.2012. Further, for 765 kV Dahod - Vadodara line (Reserve Forest 38.6188 hac. Baria Division + Social Forest 0.272 hac. Godhara Division + 0.787 hac. Dahod Division) the petitioner has applied for survey to DCF, Baria on 2.2.2012 i.e. after a period of 154 days from the date of I.A and have received the final approval on 20.3.2014 i.e. after 778 days from 2.2.2012. The petitioner has not submitted any justification for delay in filing of the application for forest clearances. Generally it is observed that a period of 3 months (90 to 92 days) is sufficient for detailed survey from the date of I.A, even if this is taken into account there is still a delay



of 2 months (60 to 61 days) in the instant case. In view of the above, out of total time over-run of 155 days, 62 days is not condoned for Asset-I.

Asset-II

14. The petitioner submitted that since the Indore-Vadodara 765kV S/C line was getting delayed for want of forest clearance, the line reactor at Indore Sub-station has been commissioned as bus reactor to control voltage profile prevailing in Indore Sub-station with the consent of CEA issued vide letter ref. no. 26/10/2013/SP&PA/237 dated 23.1.2014. It is observed that Asset-II was commissioned after 69 days from the date of CEA consent which can be considered and can be condoned. Therefore a time over-run of 121 days has been condoned in case of Asset-II.

Cost over-run

15. Initially, in the petition filed by the petitioner there was cost over-run for both Asset-I and Asset-II. With respect to Asset-I the petitioner has submitted that in 33rd Standing Committee meeting approval for introduction of D/C towers in the forest stretches was accorded due to ROW / Corridor constraints near Vadodara pooling Sub-station and Indore Sub-station. The petitioner further submitted that due to introduction of D/C in forest stretches, there is a increase of angle towers, tension insulators and conductors requirement from the estimated quantity and corresponding foundation activities has occurred resulting into increase in cost. The petitioner has submitted that the cost variation is also due to increase in award cost from ₹65021/MT to ₹84571/MT, received in competitive



bidding. Further, with respect to Asset-II the petitioner has submitted that the cost variation is due to increase in actual award cost. In this regard the petitioner was directed to submit the approval of Revised Cost Estimate (RCE). The petitioner has submitted the approval of RCE vide affidavit dated 16.9.2015. Further, the petitioner has also submitted RCE apportionment vide affidavit dated 16.3.2016. We have considered the revised apportioned approved cost as per RCE for the computation of tariff.

16. We have considered the capital cost of ₹55036.64 lakh as on 5.5.2014 after adjusting the accrued IDC of ₹1389.35 lakh and disallowed IDC and IEDC of ₹280.46 lakh and ₹1.07 lakh respectively from ₹56707.53 lakh (as per Auditor's Certificate) for determination of tariff for the 2014-19 tariff period for Asset-I. For Asset-II we have considered the capital cost of ₹2570.56 lakh as on 1.4.2014 after adjusting the accrued IDC of ₹45.88 lakh from ₹2616.44 lakh (as per Auditor's Certificate).

Treatment of Initial spares:

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

- “(a) Coal-based/lignite-fired thermal generating stations - 4.0%
- (b) Gas Turbine/Combined Cycle thermal generating stations - 4.0%
- (c) Hydro generating stations including pumped storage hydro generating station. - 4.0%
- (d) Transmission system
 - (i) Transmission line - 1.00%
 - (ii) Transmission Sub-station (Green Field) - 4.00%
 - (iii) Transmission Sub-station (Brown Field) - 6.00%



- (iv) Series Compensation devices and HVDC Station - 4.00%
- (v) Gas Insulated Sub-station (GIS) - 5.00%
- (vi) Communication system - 3.5%”

18. The petitioner has not claimed any initial spares for Asset-I, however for Asset-II the petitioner has claimed initial spares of 2.49% for Sub-station (brown field) which is within the ceiling limit specified in the 2014 Tariff Regulations.

IDC & IEDC:

19. As held above, we have not condoned the delay from 5.3.2014 to 5.5.2014 i.e. for 62 days. Therefore the IDC and IEDC for the period of 62 days are not being allowed. The amounts of IDC and IEDC disallowed have been worked out on pro-rata basis and adjusted in the capital cost as given below:-

(₹ in lakh)			
Particulars	IDC	IEDC	Total
IDC and IEDC upto 5.5.2014 (COD)	4419.52	16.93	
IDC and IEDC disallowed from 5.3.2014 to 5.5.2014 (Pro-rata basis)	280.46	1.07	281.54

20. Accordingly, the details of the capital cost considered as on the date of COD after adjustment of IDC and IEDC disallowed and accrued IDC are as follows:-

(₹ in lakh)		
Particulars	Asset-I	Asset-II
Capital cost claimed as on COD	56707.53	2616.44
IDC to be discharged after COD	1389.35	45.88
Disallowed IDC & IEDC	281.54	0.00
Capital cost considered as on COD for tariff computation	55036.64	2570.56



Additional Capital Expenditure

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

(₹ in lakh)

Asset	Approved cost as per FR	Approved cost as per RCE	Capital cost as on COD	Additional capitalization		Total estimated completion cost
				2014-15	2015-16	
Asset-I	53987.15	61975.56	55036.64	3594.00	2651.35	61281.99
Asset-II	3516.07	4446.35	2570.56	1386.61	489.18	4446.35

22. The petitioner has proposed additional capitalization of ₹2204.65 lakh and ₹2651.35 lakh for Asset-I for the year 2014-15 and 2015-16 respectively towards balance and retention payment under Regulation 14(1)(i) of 2014 Tariff Regulations. Further, the petitioner has proposed additional capitalization of ₹1340.73 lakh and ₹489.18 lakh for Asset-II for the year 2014-15 and 2015-16 respectively towards balance and retention payment under Regulation 14(1)(i) of 2014 Tariff Regulations. It is observed that total estimated completion cost of ₹61281.99 lakh including additional capitalization of ₹3594.00 lakh and ₹2651.35 lakh for 2014-15 and 2015-16 is within the revised approved apportioned cost of ₹61975.56 lakh for Asset-I. Further, for Asset-II total estimated completion cost of ₹4446.35 lakh including the additional capitalization of ₹1386.61 lakh and ₹489.18 lakh for 2014-15 and 2015-16 is equal to the revised approved apportioned cost of ₹4446.35 lakh. The accrued IDC of ₹1389.35 lakh and ₹45.88



lakh for Asset-I and Asset-II respectively is also included in additional capitalization for 2014-15. Accordingly, additional capitalization of ₹3594.00 lakh and ₹2651.35 lakh for 2014-15 and 2015-16 respectively is allowed under Regulation 14(1)(i) of 2014 Tariff Regulations. Further the additional capitalization of ₹1386.61 lakh and ₹489.18 lakh for 2014-15 and 2015-16 is also allowed under Regulation 14(1)(i) of 2014 Tariff Regulations.

Cost as per revised Investment Approval for Asset-I is ₹61975.56 lakh							
Capital cost as on 5.5.2014 (COD)	Additional capitalisation projected					Total additional capitalisation	Total capital cost including additional capitalisation as on 31.3.2019
	2014-15	2015-16	2016-17	2017-18	2018-19		
55036.64	3594.00	2651.35	0.00	0.00	0.00	6245.35	61281.99

Cost as per revised Investment Approval for Asset-II is ₹4446.35 lakh							
Capital cost as on 1.4.2014 (COD)	Additional capitalisation projected					Total additional capitalisation	Total capital cost including additional capitalisation as on 31.3.2019
	2014-15	2015-16	2016-17	2017-18	2018-19		
2570.56	1386.61	489.18	0.00	0.00	0.00	1875.79	4446.35

Debt:EquityRatio

23. 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.”



24. The petitioner has considered debt:equity ratio as 70:30 as on COD. We have considered debt:equity ratio of 70:30 as on COD and for additional capitalization during 2014-15. The details of the debt:equity as on the date of COD and 31.3.2019 considered for the purpose of tariff computation for the 2014-19 tariff period is as follows:-

(₹ in lakh)

Asset-I	As on 5.5.2014		Additional capitalization during 2014-19		As on 31.3.2019	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	38525.65	70.00	4371.75	70.00	42897.40	70.00
Equity	16510.99	30.00	1873.60	30.00	18384.59	30.00
Total	55036.64	100.00	6245.35	100.00	61281.99	100.00

(₹ in lakh)

Asset-II	As on 1.4.2014		Additional capitalization during 2014-19		As on 31.3.2019	
	Amount	(%)	Amount	(%)	Amount	(%)
Debt	1799.39	70.00	1313.06	70.00	3112.45	70.00
Equity	771.17	30.00	562.73	30.00	1333.90	30.00
Total	2570.56	100.00	1875.79	100.00	4446.35	100.00

Interest on Loan ("IOL")

25. 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.”

26. 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:-

(₹ in lakh)					
Particulars (Asset-I)	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross loan opening	38525.65	41041.45	42897.40	42897.40	42897.40
Cumulative Repayment upto previous year	0.00	2721.77	5888.32	9124.90	12361.48
Net Loan-Opening	38525.65	38319.68	37009.08	33772.50	30535.92
Additions during the year	2515.80	1855.95	0.00	0.00	0.00
Repayment during the year	2721.77	3166.55	3236.58	3236.58	3236.58
Net Loan-Closing	38319.68	37009.08	33772.50	30535.92	27299.34
Average Loan	38422.67	37664.38	35390.79	32154.21	28917.63
Rate of Interest (%)	9.0474	9.0466	9.0369	9.0225	9.0226
Interest	3152.45	3407.35	3198.23	2901.11	2609.13



(₹ in lakh)					
Particulars (Asset-II)	2014-15	2015-16	2016-17	2017-18	2018-19
Gross loan opening	1799.39	2770.02	3112.45	3112.45	3112.45
Cumulative Repayment upto previous year	0.00	172.33	394.19	628.95	863.72
Net Loan-Opening	1799.39	2597.69	2718.26	2483.50	2248.73
Additions during the year	970.63	342.43	0.00	0.00	0.00
Repayment during the year	172.33	221.85	234.77	234.77	234.77
Net Loan-Closing	2597.69	2718.26	2483.50	2248.73	2013.96
Average Loan	2198.54	2657.98	2600.88	2366.11	2131.35
Rate of Interest (%)	9.2798	9.2803	9.2761	9.2670	9.2628
Interest	204.02	246.67	241.26	219.27	197.42

Return on Equity("ROE")

27. 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."

28. 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.

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 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), 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 (Asset-I)	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Equity	16510.99	17589.19	18384.59	18384.59	18384.59
Additional Capitalization	1078.20	795.40	0.00	0.00	0.00
Closing Equity	17589.19	18384.59	18384.59	18384.59	18384.59
Average Equity	17050.09	17986.89	18384.59	18384.59	18384.59
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
Tax rate for the year (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax) (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	3032.07	3527.23	3605.22	3605.22	3605.22

(₹ in lakh)					
Particulars (Asset-II)	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	771.17	1187.15	1333.90	1333.90	1333.90
Additional Capitalization	415.98	146.75	0.00	0.00	0.00
Closing Equity	1187.15	1333.90	1333.90	1333.90	1333.90
Average Equity	979.16	1260.53	1333.90	1333.90	1333.90
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
Tax rate for the year (%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (Pre Tax) (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	192.01	247.19	261.58	261.58	261.58

Depreciation

31. 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.”

32. 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”

33. The petitioner has claimed depreciation considering capital expenditure of ₹56707.53 lakh as on 5.5.2014 with additional capitalization of ₹2204.65 lakh and ₹2651.35 lakh for 2014-15 and 2015-16 respectively for Asset-I. With respect to Asset-II the petitioner has claimed depreciation considering capital expenditure of



₹2616.44lakh as on 1.4.2014 with additional capitalization of ₹1340.73 lakh and ₹489.18 lakh for 2014-15 and 2015-16 respectively.

34. We have considered the submissions of the petitioner and have computed depreciation considering capital expenditure of ₹55036.64lakh as on 5.5.2014 after adjusting accrued IDC of ₹1389.35 lakh and IDC & IEDC disallowed from 5.3.2014 to 5.5.2014 of ₹281.54 lakh from ₹56707.53 lakh (as per Auditor's Certificate) for Asset-I. Further, we have considered additional capitalization of ₹3594.00 lakh and ₹2651.35 lakh for 2014-15 and 2015-16 respectively for Asset-I. With respect to Asset-II we have computed depreciation considering capital expenditure of ₹2570.56 lakh as on 1.4.2014 after adjusting accrued IDC of ₹45.88 lakh from ₹2616.44 lakh (as per Auditor's Certificate) with additional capitalization of ₹1386.61 lakh and ₹489.18 lakh for 2014-15 and 2015-16 respectively. The weighted average useful life of the asset has been considered as 35 years and 25 years for Asset-I and Asset-II respectively in accordance with the above regulation. The details of the depreciation allowed are given hereunder:-

(₹ in lakh)					
Particulars (Asset-I)	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Opening Gross block	55036.64	58630.64	61281.99	61281.99	61281.99
Additional Capitalization	3594.00	2651.35	0.00	0.00	0.00
Closing Gross block	58630.64	61281.99	61281.99	61281.99	61281.99
Average Gross block	56833.64	59956.32	61281.99	61281.99	61281.99
Rate of Depreciation (%)	5.281	5.281	5.281	5.281	5.281
Depreciable Value	51150.28	53960.69	55153.80	55153.80	55153.80
Elapsed Life of the assets at beginning of the year	0	1	2	3	4



Particulars (Asset-I)	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Weighted Balance Useful life of the assets	35	34	33	32	31
Remaining Depreciable Value	51150.28	51238.92	49265.47	46028.90	42792.32
Depreciation	2721.77	3166.55	3236.58	3236.58	3236.58

(₹ in lakh)

Particulars (Asset-II)	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block	2570.56	3957.17	4446.35	4446.35	4446.35
Additional Capitalization	1386.61	489.18	0.00	0.00	0.00
Closing Gross block	3957.17	4446.35	4446.35	4446.35	4446.35
Average Gross block	3263.87	4201.76	4446.35	4446.35	4446.35
Rate of Depreciation (%)	5.280%	5.280%	5.280%	5.280%	5.280%
Depreciable Value	2937.48	3781.58	4001.72	4001.72	4001.72
Elapsed Life of the assets at beginning of the year	0	1	2	3	4
Weighted Balance Useful life of the assets	25	24	23	22	21
Remaining Depreciable Value	2937.48	3609.25	3607.53	3372.76	3138.00
Depreciation	172.33	221.85	234.77	234.77	234.77

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

35. The petitioner has computed normative O&M Expenses as per Regulation 29(4)(a) of the 2014 Tariff Regulations. Accordingly, the petitioner’s entitlement to O&M expenses have been worked out as given hereunder:-

Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Asset-I					
Norm (₹ lakh/km)					
Single Circuit (Bundled Conductor with four sub conductors)	0.606	0.627	0.647	0.669	0.691
Double Circuit (Bundled conductor with four or more sub-conductors)	1.062	1.097	1.133	1.171	1.210
Line (kms)					



Particulars	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
765 kV S/C Indore-Vadodara TL	291.109	291.109	291.109	291.109	291.109
765 kV D/C Indore-Vadodara TL	30.094	30.094	30.094	30.094	30.094
Total O&M expense (Line) (₹ Lakh)	188.96	215.54	222.44	229.99	237.57
Asset-II					
Norm (₹ Lakh/Bay)					
765 kV	84.42	87.22	90.12	93.11	96.20
Bays					
765 kV	2	2	2	2	2
Total O&M expense (Bays) (₹ Lakh)	168.84	174.44	180.24	186.22	192.40

36. 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.

37. 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”)

38. 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).

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

(₹ in lakh)					
Particulars (Asset-I)	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	28.34	32.33	33.37	34.50	35.64
O & M expenses	15.75	17.96	18.54	19.17	19.80
Receivables	1551.78	1760.18	1750.98	1701.64	1653.19
Total	1595.87	1810.47	1802.88	1755.31	1708.63
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	215.44	244.41	243.39	236.97	230.66

(₹ in lakh)					
Particulars (Asset-II)	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	25.33	26.17	27.04	27.93	28.86
O & M expenses	14.07	14.54	15.02	15.52	16.03



Particulars (Asset-II)	2014-15	2015-16	2016-17	2017-18	2018-19
Receivables	126.60	152.71	157.46	154.77	152.13
Total	166.00	193.41	199.52	198.22	197.02
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	22.41	26.11	26.94	26.76	26.60

Annual Transmission Charges

40. 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 (Asset-I)	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Gross Block					
Opening Gross Block	55036.64	58630.64	61281.99	61281.99	61281.99
Additional Capitalization	3594.00	2651.35	0.00	0.00	0.00
Closing Gross Block	58630.64	61281.99	61281.99	61281.99	61281.99
Average Gross Block	56833.64	59956.32	61281.99	61281.99	61281.99
Depreciation					
Rate of Depreciation (%)	5.281	5.281	5.281	5.281	5.281
Depreciable Value	51150.28	53960.69	55153.80	55153.80	55153.80
Elapsed Life of the assets at beginning of the year	0	1	2	3	4
Weighted Balance Useful life of the assets	35	34	33	32	31
Remaining Depreciable Value	51150.28	51238.92	49265.47	46028.90	42792.32
Depreciation	2721.77	3166.55	3236.58	3236.58	3236.58
Interest on Loan					
Gross Normative Loan	38525.65	41041.45	42897.40	42897.40	42897.40
Cumulative Repayment upto Previous Year	0.00	2721.77	5888.32	9124.90	12361.48
Net Loan-Opening	38525.65	38319.68	37009.08	33772.50	30535.92
Additions	2515.80	1855.95	0.00	0.00	0.00
Repayment during the year	2721.77	3166.55	3236.58	3236.58	3236.58
Net Loan-Closing	38319.68	37009.08	33772.50	30535.92	27299.34
Average Loan	38422.67	37664.38	35390.79	32154.21	28917.63
Weighted Average Rate of	9.0474	9.0466	9.0369	9.0225	9.0226



Particulars (Asset-I)	2014-15 (pro-rata)	2015-16	2016-17	2017-18	2018-19
Interest on Loan (%)					
Interest	3152.45	3407.35	3198.23	2901.11	2609.13
Return on Equity					
Opening Equity	16510.99	17589.19	18384.59	18384.59	18384.59
Additions	1078.20	795.40	0.00	0.00	0.00
Closing Equity	17589.19	18384.59	18384.59	18384.59	18384.59
Average Equity	17050.09	17986.89	18384.59	18384.59	18384.59
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
MAT Rate for the year 2013-14(%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	3032.07	3527.23	3605.22	3605.22	3605.22
Interest on Working Capital					
Maintenance Spares	28.34	32.33	33.37	34.50	35.64
O & M expenses	15.75	17.96	18.54	19.17	19.80
Receivables	1551.78	1760.18	1750.98	1701.64	1653.19
Total	1595.87	1810.47	1802.88	1755.31	1708.63
Interest	215.44	244.41	243.39	236.97	230.66
Annual Transmission Charges					
Depreciation	2721.77	3166.55	3236.58	3236.58	3236.58
Interest on Loan	3152.45	3407.35	3198.23	2901.11	2609.13
Return on Equity	3032.07	3527.23	3605.22	3605.22	3605.22
Interest on Working Capital	215.44	244.41	243.39	236.97	230.66
O & M Expenses	188.96	215.54	222.44	229.99	237.57
Total	9310.69	10561.08	10505.86	10209.87	9919.17

(₹ in lakh)

Particulars (Asset-II)	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Block					
Opening Gross Block	2570.56	3957.17	4446.35	4446.35	4446.35
Additional Capitalization	1386.61	489.18	0.00	0.00	0.00
Closing Gross Block	3957.17	4446.35	4446.35	4446.35	4446.35
Average Gross Block	3263.87	4201.76	4446.35	4446.35	4446.35
Depreciation					
Rate of Depreciation (%)	5.280	5.280	5.280	5.280	5.280
Depreciable Value	2937.48	3781.58	4001.72	4001.72	4001.72



Particulars (Asset-II)	2014-15	2015-16	2016-17	2017-18	2018-19
Elapsed Life of the assets at beginning of the year	0	1	2	3	4
Weighted Balance Useful life of the assets	25	24	23	22	21
Remaining Depreciable Value	2937.48	3609.25	3607.53	3372.76	3138.00
Depreciation	172.33	221.85	234.77	234.77	234.77
Interest on Loan					
Gross Normative Loan	1799.39	2770.02	3112.45	3112.45	3112.45
Cumulative Repayment upto Previous Year	0.00	172.33	394.19	628.95	863.72
Net Loan-Opening	1799.39	2597.69	2718.26	2483.50	2248.73
Additions	970.63	342.43	0.00	0.00	0.00
Repayment during the year	172.33	221.85	234.77	234.77	234.77
Net Loan-Closing	2597.69	2718.26	2483.50	2248.73	2013.96
Average Loan	2198.54	2657.98	2600.88	2366.11	2131.35
Weighted Average Rate of Interest on Loan (%)	9.2798	9.2803	9.2761	9.2670	9.2628
Interest	204.02	246.67	241.26	219.27	197.42
Return on Equity					
Opening Equity	771.17	1187.15	1333.90	1333.90	1333.90
Additions	415.98	146.75	0.00	0.00	0.00
Closing Equity	1187.15	1333.90	1333.90	1333.90	1333.90
Average Equity	979.16	1260.53	1333.90	1333.90	1333.90
Return on Equity (Base Rate) (%)	15.50	15.50	15.50	15.50	15.50
MAT Rate for the year 2013-14(%)	20.961	20.961	20.961	20.961	20.961
Rate of Return on Equity (%)	19.610	19.610	19.610	19.610	19.610
Return on Equity (Pre Tax)	192.01	247.19	261.58	261.58	261.58
Interest on Working Capital					
Maintenance Spares	25.33	26.17	27.04	27.93	28.86
O & M expenses	14.07	14.54	15.02	15.52	16.03
Receivables	126.60	152.71	157.46	154.77	152.13
Total	166.00	193.41	199.52	198.22	197.02
Interest	22.41	26.11	26.94	26.76	26.60
Annual Transmission Charges					
Depreciation	172.33	221.85	234.77	234.77	234.77
Interest on Loan	204.02	246.67	241.26	219.27	197.42



Particulars (Asset-II)	2014-15	2015-16	2016-17	2017-18	2018-19
Return on Equity	192.01	247.19	261.58	261.58	261.58
Interest on Working Capital	22.41	26.11	26.94	26.76	26.60
O & M Expenses	168.84	174.44	180.24	186.22	192.40
Total	759.61	916.26	944.78	928.59	912.77

Filing Fee and Publication Expenses

41. 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

42. 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

43. 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

44. 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.

45. This order disposes of Petition No. 142/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 (Asset-I)	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXXVII-1-	9.25%	3601	0	3601.00
BOND XXXIX-2-	9.40%	2003	0	2003.00
SBI (21.3.2013)-3-	10.25%	5521	0	5521.00
BOND XL-4-	9.30%	5091	0	5091.00
BOND XLI-5-	8.85%	4434	0	4434.00
BOND XLII-6-	8.80%	9412	0	9412.00
BOND XLIII-7-	7.93%	4087	0	4087.00
BOND XLIV-8-	8.70%	5328	0	5328.00
PROPOSED LOAN 2014-15 (10.25%)-Loan 9-	10.25%	218.27	0	218.27
Total		39695.27	0.00	39695.27

Particulars (Asset-II)	Interest Rate (%)	Loan deployed as on COD	Additions during the tariff period	Total
BOND XXXVII-Loan 1-	9.25%	148	0	148.00
BOND XXXIX-Loan 2-	9.40%	82	0	82.00
SBI (21.3.2013)-Loan 3-	10.25%	12	0	12.00
SBI (21.3.2013)-Loan 4-	10.25%	215	0	215.00
BOND XL-Loan 5-	9.30%	209	0	209.00
BOND XLI-Loan 6-	8.85%	222	0	222.00
BOND XLII-Loan 7-	8.80%	363	0	363.00
BOND XLII-Loan 8-	8.80%	108	0	108.00
BOND XLIII-Loan 9-	7.93%	205	0	205.00
BOND XLIV-Loan 10-	8.70%	267.51	0	267.51
Total		1831.51	0.00	1831.51



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

(₹ in lakh)

Particulars (Asset-I)	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	39695.27	39695.27	39695.27	39695.27	39695.27
Cumulative Repayment of loan upto previous year	0	0	300.08	1895.83	3832.16
Net Loan Opening	39695.27	39695.27	39395.19	37799.44	35863.11
Additions during the year	0	0	0	0	0
Repayment during the year	0	300.08	1595.75	1936.33	3750.52
Net Loan Closing	39695.27	39395.19	37799.44	35863.11	32112.59
Average Loan	39695.27	39545.23	38597.32	36831.27	33987.85
Rate of Interest (%)	9.0474%	9.0466%	9.0369%	9.0225%	9.0226%
Interest	3591.4	3577.5	3488	3323.1	3066.6

Particulars (Asset-II)	2014-15	2015-16	2016-17	2017-18	2018-19
Gross Opening Loan	1831.51	1831.51	1831.51	1831.51	1831.51
Cumulative Repayment of loan upto previous year	0	0	83.17	206.23	333.87
Net Loan Opening	1831.51	1831.51	1748.34	1625.28	1497.64
Additions during the year	0	0	0	0	0
Repayment during the year	0	83.17	123.06	127.64	150.14
Net Loan Closing	1831.51	1748.34	1625.28	1497.64	1347.5
Average Loan	1831.51	1789.925	1686.81	1561.46	1422.57
Rate of Interest (%)	9.2798%	9.2803%	9.2761%	9.2670%	9.2628%
Interest	169.96	166.11	156.47	144.7	131.77

