

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 263/TT/2017

Coram:

**Shri P. K. Pujari, Chairperson
Shri A. K. Singhal, Member
Shri A. S. Bakshi, Member
Dr. M. K. Iyer, Member**

Date of Order: 22.06.2018

In the matter of:

Truing up of transmission tariff for 2009-14 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 and determination of transmission tariff for 2014-19 tariff period under Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 of **Asset I:**LILO of Meramundali-Jeypore 400 kV S/C line at Angul Sub-station,**Asset II:** one no. of 125 MVAR Reactor (1st) and associated bays at Angul Sub-station,**Asset III:** one no. of 125 MVAR Reactor (2nd) and associated bays at Angul Sub-station,**Asset IV:** one no. of 125 MVAR Reactor (3rd) and associated bays at Angul Sub-station, **Asset VI:** LILO-I (Ckt.-III) of Rourkela-Raigarh 400 kV D/C line at Jharsuguda Sub-station, **Asset-VII:**LILO-II (Ckt.-I) of Rourkela-Raigarh 400 kV D/C line at Jharsuguda Sub-station, **Asset-VIII:**one no. of 125 MVAR Reactor (1st) and associated bays at Jharsuguda Sub-station, **Asset-IX:**one no. of 125 MVAR Reactor (2nd) and associated bays at Jharsuguda Sub-station under Transmission System for Phase-I Generation Projects in Orissa-Part-Aunder Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999.

And in the matter of:

Power Grid Corporation of India Limited,
"Saudamini", Plot No. 2,
Sector 29, Gurgaon-122001
Haryana

....Petitioner

Vs

1. GMR Kamalanga Energy Ltd.
Skip House, 25/1, Museum Road,
Bangalore, Karnataka- 560025



2. Monnet Power Company Ltd.
Monnet Marg, Mandir Hasaud,
Raipur, Chattisgarh- 492101
3. Lanco Babandh Power Ltd.
Plot No. 397, Phase-III, 2nd Floor,
Udyog Vihar, Gurgaon,
Haryana- 120016
4. Ind Barath Energy (Utkal) Ltd.
Plot No. 30-A, Road No.1,
Film Nagar, Jubilee Hills,
Hyderabad, Andhra Pradesh- 500033
5. Navbharat Power Private Ltd.
Navbharat Chambers, 6-3-1109/1,
3rd floor Left Wing, Rajbhawan Road,
Somajiguda, Hyderabad, Andhra Pradesh- 500082
6. Jindal India Thermal Power Ltd.,
Plot No. 12, Sector- B, Pocket- 1,
Local Shopping Complex,
Vasant Kunj, New Delhi- 110070
7. Sterlite Energy Limited,
Sipcot Industrial Complex,
Tuticorin, Tamil Nadu - 628002
8. Bihar State Power (Holding) Company Ltd
(Formerly Bihar State Electricity Board -BSEB)
Vidyut Bhavan, Bailey Road, Patna – 800 001
9. West Bengal State Electricity Distribution Company Limited
Bidyut Bhawan, Bidhan Nagar
Block DJ, Sector-II, Salt Lake City
Calcutta - 700 091
10. Grid Corporation of Orissa Ltd.
Shahid Nagar, Bhubaneswar - 751 007
11. Damodar Valley Corporation
DVC Tower, Maniktala
Civic Centre, VIP Road, Calcutta - 700 054
12. Power Department
Government of Sikkim, Gangtok - 737 101



13. Jharkhand State Electricity Board
In Front of Main Secretariat
Doranda, Ranchi – 834002

...**Respondents**

For Petitioner : Shri Vivek Kumar Singh, PGCIL
Shri S.S. Raju, PGCIL
Shri S. K. Venkatesan, PGCIL
Shri Rakesh Prasad, PGCIL
Shri V.P. Rastogi, PGCIL

For Respondent : None

ORDER

The present petition has been filed by Power Grid Corporation of India Ltd. (“the petitioner”) for trueing up of capital expenditure of the period 1.4.2013 to 31.3.2014 and for determination of tariff for the 2009-14 tariff period for **Asset I**: LILO of Meramundali-Jeypore 400 kV S/C line at Angul Sub-station, **Asset II**: one 125 MVAR Reactor (1st) and associated bays at Angul Sub-station, **Asset III**: one 125 MVAR Reactor (2nd) and associated bays at Angul Sub-station, **Asset IV**: one 125 MVAR Reactor (3rd) and associated bays at Angul Sub-station, **Asset VI**: LILO-I (Ckt.-III) of Rourkela-Raigarh 400 kV D/C line at Jharsuguda Sub-station, **Asset-VII**: LILO-II (Ckt.-I) of Rourkela-Raigarh 400 kV D/C line at Jharsuguda Sub-station, **Asset-VIII**: one 125 MVAR Reactor (1st) and associated bays at Jharsuguda Sub-station, **Asset-IX**: one 125 MVAR Reactor (2nd) and associated bays at Jharsuguda Sub-station under Transmission System for Phase-I Generation Projects in Orissa-Part-A in Eastern Region (hereinafter referred as “transmission asset”) under Regulation 6 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter



referred to as “the 2009 Tariff Regulations”) and Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”) for the combined assets.

2. The respondents are distribution licensees and power departments, who are procuring transmission services from the petitioner, mainly beneficiaries of Eastern and Northern Region.

3. 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 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 27.2.2018. None of the respondents have filed any reply to the petition. Having heard the representatives of the petitioner and perused the material on record, we proceed to dispose of the petition.

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

- (a) The investment approval for the project was accorded by Board of Directors of the petitioner company vide letter No. C/CP/IA/Odisha Project dated 17.9.2010 for ₹207486 lakh including an IDC of ₹12820 lakh. The petitioner has developed the transmission assets in the Eastern Region. The details of COD of the instant assets are as under:-



Assets	Date of commercial operation
Asset I:	1.4.2013
Asset II	1.11.2013
Asset III	1.6.2013
Asset IV	1.5.2013
Asset VI	1.4.2013
Asset VII	1.6.2013
Asset VIII	1.5.2013
Asset IX	1.6.2013

(b) Tariff from the date of COD to 31.3.2014 was granted for instant assets vide order dated 7.10.2015 in Petition No. 112/TT/2013. In order dated 7.10.2015, the Commission directed the petitioner to file certain information at the time of truing up. The relevant portions of the order dated 7.10.2015 are extracted hereunder :-

“20. The interest during construction, accrued upto COD and to be discharged after COD will be considered as undischarged liability once it is discharged subject to prudence check and submission of the relevant information i.e. detailed working corresponding to the IDC in respect of all loans deployed including Foreign Loans and cash expenditure in Form-14A at the time of truing-up by the petitioner.

21. The petitioner has not submitted detailed computations for admissible IEDC. In the absence of detailed computation of IEDC by the petitioner, the percentage on Hard Cost indicated in the Abstract Cost Estimate, as submitted by the petitioner, is considered as the allowable limit of the IEDC. In the instant petition, 5% IEDC is claimed by the petitioner in the abstract cost estimates. Thus, in the absence of sufficient details, IEDC claim is restricted to 5% of Hard Cost or the amount claimed, whichever is lower, upto date of commercial operation and allowed for the purpose of tariff calculation in the instant petition.”

“23. Regulation 9 of the 2009 Tariff Regulations provides for the treatment of undischarged liabilities after the same are discharged. However, as the petitioner has not submitted the required information with regard to the IDC/IEDC actually discharged, we are not inclined to allow the amount of IDC/IEDC as claimed by the petitioner. The petitioner is directed to submit the amount of IDC/IEDC paid specific to the transmission asset considered in this petition upto date of commercial operation and balance IDC/IEDC discharged after date of commercial operation. The petitioner is directed to submit year wise details of actual IEDC paid till COD of the instant assets. IDC/IEDC now allowed will be reviewed at the time of truing up on submission of complete and adequate



information by the petitioner in respect of interest during construction and incidental expenses during construction at the time of truing-up.”

(c) The capital cost of ₹6939.52 lakh, ₹832.48 lakh, ₹659.07 lakh, ₹629.86 lakh, ₹6848.40 lakh, ₹2874.88 lakh, ₹639.01 lakh, ₹674.60 lakh for Assets-I, II, III, IV, VI, VII, VIII and IX respectively was considered as on COD for determination of tariff in order dated 7.10.2015 in Petition No. 112/TT/2013.

(d) The tariff determined for the instant assets from their respective COD to 31.3.2014 in accordance with the 2009 Tariff Regulations are as under:-

Particulars	(₹ in lakh)							
	Asset-I 2013-14 (pro-rata)	Asset-II 2013-14 (pro-rata)	Asset-III 2013-14 (pro-rata)	Asset-IV 2013-14 (pro-rata)	Asset-VI 2013-14 (pro-rata)	Asset-VII 2013-14 (pro-rata)	Asset-VIII 2013-14 (pro-rata)	Asset-IX 2013-14 (pro-rata)
Depreciation	145.37	19.39	36.99	39.94	251.94	145.03	40.17	37.34
Interest on Loan	468.98	18.60	35.03	36.67	398.08	135.75	25.49	25.60
Return on Equity	427.43	19.23	36.70	39.63	403.19	143.84	39.80	37.00
Interest on WC	30.85	2.76	5.39	5.85	31.71	16.23	5.61	5.19
O&M Expenses	137.43	27.28	54.55	60.01	148.44	123.70	60.01	54.55
Total	1210.06	87.86	168.66	182.10	1233.35	564.55	171.09	159.68

(e) The MAT rate applicable as on 2008-09 was considered to arrive at rate of return on equity for the tariff period 2009-14, is adjusted as per the actual MAT rate applicable for the respective year in this order.

Truing up of Annual Fixed Charges for Tariff Period 2009-14

5. The truing up of tariff for the 2009-14 tariff period for the assets has been determined as discussed below.

Capital Cost

6. The petitioner in the instant petition has claimed the capital cost of ₹7131.41



lakh, ₹852.57 lakh, ₹720.69 lakh, ₹661.73 lakh, ₹7267.66 lakh, ₹2983.74 lakh, ₹663.60 lakh and ₹722.04 lakh for Assets I, II, III, IV, VI, VII, VIII and IX as on the date of commercial operation of 1.4.2013, 1.11.2013, 1.6.2013, 1.5.2013, 1.4.2013, 1.6.2013, 1.5.2013 and 1.6.2013 respectively.

7. Clause (1) of Regulation 7 of the 2009 Tariff Regulations provides that:-

“(1) Capital cost for a project shall include:

(a) the expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange risk variation during construction on the loan - (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, - up to the date of commercial operation of the project, as admitted by the Commission, after prudence check;

(b) capitalised initial spares subject to the ceiling rates specified in regulation 8; and

(c) additional capital expenditure determined under regulation 9:

Provided that the assets forming part of the project, but not in use shall be taken out of the capital cost.”

Interest During Construction (IDC)

8. The petitioner has submitted the information related to IDC duly certified and mentioned the year-wise discharge of the entire IDC claimed. On the basis of the information submitted by the petitioner, the IDC has been worked out on cash basis up to scheduled COD for all the assets taking into consideration the loan details mentioned in Form-13 and the working sheet of the IDC. The asset-wise details of IDC claimed as per Auditor's certificate and IDC worked out and considered for tariff purpose, are as follows:-



(₹ in lakh)

	IDC claimed	Disallowed due to time over-run	IDC allowed on cash basis as on COD	IDC allowed on cash basis during 2013-14 as Add Cap
Asset-I	269.30	0.00	93.72	175.58
Asset-II	48.75	22.46	26.29	0.00
Asset-III	37.25	3.89	20.44	12.92
Asset-IV	25.25	0.00	13.28	11.97
Asset-VI	501.20	0.00	390.54	110.66
Asset-VII	175.11	22.86	113.90	38.35
Asset-VIII	18.75	2.54	12.49	3.72
Asset-IX	13.15	0.46	7.77	4.92

Incidental Expenditure During Construction (IEDC)

9. The "IEDC limit" indicated in the "Abstract Cost Estimate", which is 5.00% of the hard cost is considered in the instant case. As the IEDC claimed for all the assets as on COD is higher than 5.00% of the hard cost, the IEDC claimed has been reduced to 5.00% of the hard cost. The details of the IEDC claimed and allowed are given below:-

(₹ in lakh)

Asset	Claimed as per Auditor's certificate (Hard Cost)	Claimed as per Auditor's certificate (IEDC)	IEDC Allowed subject to 5% of the Hard Cost	Disallowed
Asset-I	8685.44	432.86	432.86	0.00
Asset-II	995.34	32.49	32.49	0.00
Asset-III	993.58	68.43	49.68	18.75
Asset-IV	1005.57	48.93	48.93	0.00
Asset-VI	7758.08	510.74	387.90	122.84
Asset-VII	3505.64	170.93	170.93	0.00
Asset-VIII	983.29	49.88	49.16	0.72
Asset-IX	983.29	68.82	49.16	19.66

Initial spares

10. The petitioner was directed vide ROP dated 27.2.2018 to clarify whether entire



liability pertaining to initial spares has been discharged as on COD and to submit the year-wise details of discharging the same among the sub-stations and transmission lines separately. In response, the petitioner vide affidavit dated 11.4.2018 has submitted that the entire amount of initial spares was discharged upto COD.

11. The petitioner has claimed initial spares of ₹31.16 lakh (SS) and ₹8.32 lakh (TL), ₹10.28 lakh (SS), ₹13.64 lakh (SS), ₹10.28 lakh (SS), ₹29.52 lakh (SS) and ₹20.96 lakh (TL) , ₹16.42 lakh (SS) and ₹20.18 lakh (TL), ₹13.64 lakh (SS), ₹13.64 lakh (SS) pertaining to Assets-I, II, III, IV, VI, VII, VIII and IX respectively. The petitioner has submitted that since the project is complete, the initial spares may be considered for the project as a whole.

12. Regulation 8 of the 2009 tariff Regulations provides that:-

“Initial spares shall be capitalised as a percentage of the original project cost, subject to following ceiling norms:

- (iv) Transmissionsystem (a)Transmission line -0.75%
- (b) Transmission Sub-station -2.5%
- (c) Series Compensation devices and HVDC Station -3.5%.....”

13. We have considered the submissions of the petitioner. The petitioner has submitted that entire amount claimed against initial spare was discharged as on COD. Accordingly, the excess initials spare claimed has been adjusted from the capital cost as on COD. The details of the initial spares claimed and allowed for the instant assets are summarized in the table below:-



(₹ in lakh)

Assets	Element	Capital Cost Claimed as on Cut-off date / 31.3.2014	Initial Spares Claimed against Capital Cost Claimed as on Cut-off date / 31.3.2014	Ceiling Limit as per the 2009 Tariff Regulations	Initial Spares worked out	Excess Initial Spares claimed
Asset-I	T/L	1313.73	8.32	0.75%	9.86	-
	S/S	1998.09	31.16	2.50%	50.43	-
Asset-II	S/S	995.34	10.28	2.50%	25.26	-
Asset-III	S/S	993.58	13.64	2.50%	25.13	-
Asset-IV	S/S	1005.57	10.28	2.50%	25.52	-
Asset-VI	T/L	2576.76	20.96	0.75%	19.31	1.65
	S/S	2270.29	29.52	2.50%	57.46	-
Asset-VII	T/L	2345.17	20.18	0.75%	17.57	2.61
	S/S	1220.32	16.42	2.50%	30.87	-
Asset-VIII	S/S	983.29	13.64	2.50%	24.86	-
Asset-IX	S/S	983.29	13.64	2.50%	24.86	-

Additional Capital Expenditure

14. The petitioner has claimed additional capitalization of ₹718.83 lakh, ₹95.35 lakh, ₹301.15 lakh, ₹328.61 lakh, ₹945.08 lakh, ₹490.89 lakh, ₹278.74 lakh and ₹249.72 lakh for Assets-I, II, III, IV, VI, VII, VIII and IX respectively for 2013-14 on account of balance and retention payment within cut-off date under Regulation 9(1) of the 2009 Tariff Regulations.

15. Clause (1), sub-clause(i) of Regulation 9 of the 2009 Tariff Regulations provides that:-

“Additional Capitalisation.(1) The capital expenditure incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

(i) Undischarged liabilities...;”

16. The claim of additional capitalization falls within the meaning of Regulation 9(1) of the 2009 Tariff Regulations and hence, additional capitalization is allowed



under Regulation 9(1)(i) of the 2009 Tariff Regulations as shown in the table below:-

(₹ in lakh)

Assets	Capital Cost claimed (a)	IDC disallowed (b)	IDC discharged during 2013-14 (Undischarged as on COD)-(c)	Initial Spares disallowed (d)	IEDC disallowed (e)	Capital cost as on COD (f)=(a-b-c-d-e)	Add Cap claimed/ allowed (g)	Capital cost as on 31.3.2014 (h)=(f+g+c)
Asset-I	7131.41	0.00	175.58	0.00	0.00	6955.83	718.83	7850.24
Asset-II	852.57	22.46	0.00	0.00	0.00	830.11	95.35	925.46
Asset-III	720.69	3.89	12.92	0.00	18.75	685.13	301.15	999.20
Asset-IV	661.73	0.00	11.97	0.00	0.00	649.76	328.61	990.34
Asset-VI	7267.66	0.00	110.66	1.65	122.84	7032.52	945.08	8088.26
Asset-VII	2983.74	22.86	38.35	2.61	0.00	2919.92	490.89	3449.16
Asset-VIII	663.60	2.54	3.72	0.00	0.72	656.62	278.74	939.09
Asset-IX	722.04	0.46	4.92	0.00	19.66	697.00	249.72	951.65

Debt: Equity Ratio

17. Clause 1 and 3 of Regulation 12 of the 2009 Tariff Regulations provide as follows:-

“(1) For a project declared under commercial operation on or after 1.4.2009, 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 where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff:

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

.....

(3) Any expenditure incurred or projected to be incurred on or after 1.4.2009 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation.”

18. The petitioner has claimed true up Annual Fixed Charge based on debt-equity ratio of 70:30 admitted as on COD in order dated 3.2.2015 in Petition No. 112/TT/2013 and order dated 7.10.2015. The debt:equity ratio of 70:30 as on COD for the assets is in accordance with the 2009 Tariff Regulations and is considered



for the purpose of truing up of the approved tariff of 2009-14 period, as given under:-

(₹ in lakh)

Particulars	Asset-I		Asset-II		Asset-III		Asset-IV	
	Amount	(%)	Amount	(%)	Amount	(%)	Amount	(%)
Debt	4869.08	70.00	581.08	70.00	479.59	70.00	454.84	70.00
Equity	2086.75	30.00	249.03	30.00	205.54	30.00	194.92	30.00
Total	6955.83	100.00	830.11	100.00	685.13	100.00	649.76	100.00

(₹ in lakh)

Particulars	Asset-VI		Asset-VII		Asset-VIII		Asset-IX	
	Amount	(%)	Amount	(%)	Amount	(%)	Amount	(%)
Debt	4922.76	70.00	2043.94	70.00	449.64	70.00	487.90	70.00
Equity	2109.75	30.00	875.98	30.00	196.99	30.00	209.10	30.00
Total	7032.52	100.00	2919.92	100.00	656.62	100.00	697.00	100.00

19. The overall debt-equity ratio as on 31.3.2014 for the assets including additional capitalization is as under:-

(₹ in lakh)

Particulars	Asset-I		Asset-II		Asset-III		Asset-IV	
	Amount	(%)	Amount	(%)	Amount	(%)	Amount	(%)
Debt	5495.17	70.00	647.83	70.00	699.44	70.00	693.24	70.00
Equity	2355.07	30.00	277.64	30.00	299.76	30.00	297.10	30.00
Total	7850.24	100.00	925.46	100.00	999.20	100.00	990.34	100.00

(₹ in lakh)

Particulars	Asset-VI		Asset-VII		Asset-VIII		Asset-IX	
	Amount	(%)	Amount	(%)	Amount	(%)	Amount	(%)
Debt	5661.78	70.00	2414.41	70.00	657.36	70.00	666.15	70.00
Equity	2426.48	30.00	1034.75	30.00	281.73	30.00	285.49	30.00
Total	8088.26	100.00	3449.16	100.00	939.09	100.00	951.65	100.00

Interest on Loan (IOL)

20. Regulation 16 of the 2009 Tariff Regulations provides the methodology for working out weighted average rate of interest on loan.

21. The petitioner has claimed the IOL based on actual interest rates for each year during the 2009-14 tariff period. We have considered the submissions of the



petitioner and accordingly calculated the IOL based on gross amount of normative loan and normative repayment of installments and rate of interest submitted by the petitioner, in accordance with Regulation 16 of the 2009 Tariff Regulations. The details of weighted average rate of interest are given in **Annexure-I to VIII** and the IOL has been worked out and allowed as provided under Regulation 16 of the 2009 Tariff Regulations as under:-

(₹ in lakh)

Particulars	Asset-I	Asset-II	Asset-III	Asset-IV	Asset-VI	Asset-VII	Asset-VIII	Asset-IX
	2013-14	2013-14	2013-14	2013-14	2013-14	2013-14	2013-14	2013-14
Gross Normative Loan	4869.08	581.08	479.59	454.84	4922.76	2043.94	459.64	487.90
Cumulative Repayment up to Previous Year	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	4869.08	581.08	479.59	454.84	4922.76	2043.94	459.64	487.90
Addition due to Additional Capitalization	626.09	66.75	219.85	238.41	739.02	370.47	197.72	178.25
Repayment during the year	116.00	19.34	37.06	39.70	240.78	140.31	38.62	36.27
Net Loan-Closing	5379.17	628.49	662.38	653.54	5421.01	2274.10	618.74	629.88
Average Loan	5124.13	604.78	570.98	554.19	5171.88	2159.02	539.19	558.89
Weighted Average Rate of Interest on Loan	8.355%	7.397%	7.601%	7.388%	7.661%	7.241%	5.353%	5.562%
Interest	428.11	18.64	36.17	37.53	396.22	130.29	26.46	25.90

Return on Equity ("ROE")

22. Clause (3), (4) and (5) of Regulation 15 of the 2009 Tariff Regulations provides that:-

“(3) The rate of return on equity shall be computed by grossing up the base rate with the Minimum Alternate/Corporate Income Tax Rate for the year 2008-09, as per the Income Tax Act, 1961, as applicable to the concerned generating company or the transmission licensee, as the case may be.

(4) Rate of return on equity shall be rounded off to three decimal points and be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)



Where “t” is the applicable tax rate in accordance with clause (3) of this regulation.

(5) The generating company or the transmission licensee, as the case maybe, shall recover the shortfall or refund the excess Annual Fixed Charge on account of Return on Equity due to change in applicable Minimum Alternate/Corporate Income Tax Rate as per the Income Tax Act, 1961 (as amended from time to time) of the respective financial year directly without making any application before the Commission:

Provided further that Annual Fixed Charge with respect to the tax rate applicable to the generating company or the transmission licensee, as the case may be, in line with the provisions of the relevant Finance Acts of the respective year during the tariff period shall be trued up in accordance with Regulation 6 of these regulations.”

23. The petitioner has submitted that MAT rate of 11.330% applicable for 2008-09 was considered in the order dated 7.10.2015 in Petition No. 112/TT/2013. However, for truing up purpose, the computation of RoE for the tariff period 2009-14 has been done on the basis of actual MAT rate applicable during 2009-14. The petitioner has submitted the variation in the MAT rate during 2009-14 as per the Finance Act of the relevant year for the purpose of grossing up of ROE, as below:-

Particulars	MAT Rate (t) %	Grossed up ROE (Base rate/(1-t))
2013-14	20.961	19.610

24. We have considered the submissions of the petitioner and have approved ROE in accordance with the provisions of the 2009 Tariff Regulations. Accordingly, the ROE as trued up in accordance with the 2009 Tariff Regulations is shown in the table below:-

Particulars	(₹ in lakh)							
	Asset-I 2013-14	Asset-II 2013-14	Asset-III 2013-14	Asset-IV 2013-14	Asset-VI 2013-14	Asset-VII 2013-14	Asset-VIII 2013-14	Asset-IX 2013-14
Opening Equity	2086.75	249.03	205.54	194.92	2109.75	875.98	196.99	209.10
Addition due to Add Cap	268.32	28.61	94.22	102.17	316.72	158.77	84.74	76.39



Closing Equity	2355.07	277.64	299.76	297.10	2426.48	1034.75	281.73	285.49
Average Equity	2220.91	263.34	252.65	246.01	2268.12	955.36	239.36	247.30
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%
Tax rate	20.96%	20.96%	20.96%	20.96%	20.96%	20.96%	20.96%	20.96%
Rate of Return on Equity (Pre Tax)	19.610%	19.610%	19.610%	19.610%	19.610%	19.610%	19.610%	19.610%
Return on Equity (Pre Tax)	435.52	21.52	41.29	44.22	444.78	156.12	43.03	40.41

Depreciation

25. Clause (42) of Regulation 3 of the 2009 Tariff Regulations defines useful life as follows:-

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

.....

- | | | |
|-----|--------------------------|-----------|
| (c) | AC and DC sub-station | 25 years |
| (d) | Hydro generating station | 35 years |
| (e) | Transmission line | 35 years” |

26. Clause (4) of Regulation 17 of the 2009 Tariff Regulations provides as follows:-

"17. Depreciation:

...

(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-III 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 date of commercial operation shall be spread over the balance useful life of the assets.”

27. Depreciation was worked out in order dated 7.10.2015 in Petition No.112/TT/2013 in accordance with Regulation 17 of the 2009 Tariff Regulations.

28. The weighted average useful life of the transmission asset has been considered as per Regulations 3(42) and 17(4) of the 2009 Tariff Regulations. For



the purpose of calculation, the weighted average useful life of the asset as on COD has been considered as 35 years for Assets-I and Assets-VI to VII and 25 years for Assets-II to IV, Assets- VIII and IX. The depreciation for the tariff period 2009-14 has been worked out in accordance with Regulation 17 of the 2009 Tariff Regulations based on admitted capital expenditure as under:-

(₹ in lakh)

Particulars	Asset-I	Asset-II	Asset-III	Asset-IV	Asset-VI	Asset-VII	Asset-VIII	Asset-IX
	2013-14	2013-14	2013-14	2013-14	2013-14	2013-14	2013-14	2013-14
Opening Gross Block	6955.83	830.11	685.13	649.76	7032.52	2919.92	656.62	697.00
Addition during 2013-14	894.41	95.35	314.07	340.58	1055.74	529.24	282.46	254.64
Closing Gross	7850.24	925.46	999.20	990.34	8088.26	3449.16	939.09	951.65
Average Gross Block	7403.04	877.79	842.16	820.05	7560.39	3184.54	797.86	824.33
Rate of Depreciation	1.567%	5.287%	5.281%	5.281%	3.185%	5.287%	5.280%	5.280%
Depreciable Value	2086.35	790.01	757.95	738.05	4171.81	2866.08	718.07	741.89
Remaining Depreciable Value	2086.35	790.01	757.95	738.05	4171.81	2866.08	718.07	741.89
Depreciation	116.00	19.34	37.06	39.70	240.78	140.31	38.62	36.27

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

29. O & M Expenses allowed vide order dated 7.10.2015 in Petition No. 112/TT2013 has been considered for the purpose of tariff calculation. Accordingly, the O&M Expenses claimed by the petitioner, allowed and trued up are the same, and are as follows:-

(₹ in lakh)

Particulars	Asset-I	Asset-II	Asset-III	Asset-IV	Asset-VI	Asset-VII	Asset-VIII	Asset-IX
	2013-14	2013-14	2013-14	2013-14	2013-14	2013-14	2013-14	2013-14
Approved vide order dated 7.10.2015	137.43	27.28	54.55	60.01	148.44	123.70	60.01	54.55
As claimed by the petitioner	137.43	27.28	54.55	60.01	148.44	123.70	60.01	54.55



Allowed after trued up	137.43	27.28	54.55	60.01	148.44	123.70	60.01	54.55
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Interest on working capital (IWC)

30. Sub-clause (c) of clause (1) of Regulation 18 of the 2009 Tariff Regulations provides the components of the working capital for the transmission system and clause (3) of Regulation 18 of the 2009 Tariff Regulations provides for the rate of interest of working capital.

(i) Maintenance Expenses

Maintenance spares have been worked out based on 15% of Operation and Maintenance expenses specified in Regulation 19.

(ii) O & M Expenses

O&M expenses have been considered for one month of the allowed O&M expenses as per order dated 7.10.2015 in Petition No. 112/TT2013.

(iii) Receivables

The receivables have been worked out on the basis of 2 months' of annual transmission charges as worked out above.

(iv) Rate of Interest on Working Capital

SBI Base Rate (9.70%) as on 1.4.2012 Plus 350 Bps i.e. 13.20% has been considered as the rate of interest on working capital.

31. The IWC trued up is as under:-

Particulars	(₹ in lakh)							
	Asset-I 2013-14	Asset-II 2013-14	Asset-III 2013-14	Asset-IV 2013-14	Asset-VI 2013-14	Asset-VII 2013-14	Asset-VIII 2013-14	Asset-IX 2013-14
Maintenance Spares	20.61	9.82	9.82	9.82	22.27	22.27	9.82	9.82
O & M expenses	11.45	5.46	5.46	5.46	12.37	12.37	5.46	5.46



Receivables	191.09	35.83	34.92	34.08	210.43	113.34	31.60	32.48
Total	223.15	51.11	50.19	49.35	245.06	147.97	46.87	47.75
Rate of Interest	13.20%	13.20%	13.20%	13.20%	13.20%	13.20%	13.20%	13.20%
Interest	29.46	2.81	5.52	5.97	32.35	16.28	5.67	5.25

ANNUAL TRANSMISSION CHARGES FOR 2009-14 TARIFF PERIOD

32. The detailed computation of the various components of the trued up annual transmission charges for the Assets for the tariff period 2009-14 is summarized below:-

Particulars	(₹ in lakh)							
	Asset-I 2013-14	Asset-II 2013-14	Asset-III 2013-14	Asset-IV 2013-14	Asset-VI 2013-14	Asset-VII 2013-14	Asset-VIII 2013-14	Asset-IX 2013-14
Depreciation	116.00	19.34	37.06	39.70	240.78	140.31	38.62	36.27
Interest on Loan	428.11	18.64	36.17	37.53	396.22	130.29	26.46	25.90
Return on Equity	435.52	21.52	41.29	44.22	444.78	156.12	43.03	40.41
Interest on Working Capital	29.46	2.81	5.52	5.97	32.35	16.28	5.67	5.25
O & M Expenses	137.43	27.28	54.55	60.01	148.44	123.70	60.01	54.55
Total	1146.51	89.59	174.59	187.44	1262.56	566.69	173.78	162.39

DETERMINATION OF ANNUAL TRANSMISSION CHARGES FOR 2014-19

33. The petitioner has claimed the transmission charges for combined asset for the 2014-19 tariff period as under:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	886.80	953.65	996.55	1020.87	1030.34
Interest on Loan	1283.10	1300.91	1281.98	1232.97	1163.24
Return on equity	1478.75	1566.38	1630.53	1669.65	1689
Interest on Working Capital	122.70	127.95	131.31	133.01	133.49
O & M Expenses	700.82	724.10	748.14	773.01	798.59
Total	4472.17	4672.99	4788.51	4829.51	4814.66

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



(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	58.40	60.34	62.35	64.42	66.55
O & M expenses	105.12	108.62	112.22	115.95	119.79
Receivables	745.36	778.83	798.09	804.92	802.44
Total	908.88	947.79	972.66	985.29	988.78
Rate of Interest (%)	13.50	13.50	13.50	13.50	13.50
Interest	122.70	127.95	131.31	133.01	133.49

Effective Date of Commercial Operation (E-COD)

35. The petitioner has stated that E-COD of the combined assets works out to be 1.5.2013. However, based on the trued up capital cost and actual COD of the 8 individual assets, the E-COD has been worked out as 25.4.2013 and is shown below:-

(₹ in lakh)						
Assets	Actual COD	Trued up capital cost as on 31.3.2014 (in the instant petition)	Weight of the cost	No. of days from assets COD to project COD	Weighted days	Effective COD of Project (Project COD-Weighted days)
Asset-I	1.4.2013	7738.84	32.39%	214	69.31	25.4.2013
Asset-II	1.11. 2013	925.46	3.87%	0	0.00	
Asset-III	1.6.2013	980.27	4.10%	153	6.28	
Asset-IV	1.5.2013	970.79	4.06%	184	7.48	
Asset-VI	1.4.2013	8013.14	33.54%	214	71.77	
Asset-VII	1.6.2013	3410.11	14.27%	153	21.84	
Asset-VII	1.5.2013	919.95	3.85%	184	7.08	
Asset-IX	1.6.2013	934.21	3.91%	153	5.98	
TOTAL	1.11. 2013	23892.78	100.00%		189.74	

36. The E-COD has been used to determine the lapsed life (i.e. the number of completed years) of all the 4 assets as on 25.4.2013.

Weighted Average Life (WAL)

37. The life as defined in Regulation 27 of the 2014 Tariff Regulations has been considered for determination of Weighted Average Life.



38. The project as a whole, has multiple elements (i.e. Land, Building, Transmission line, Sub-station and PLCC) and each element may have different span of life. Therefore, in the 2014 Tariff Regulations, the concept of Weighted Average Life (WAL) has been introduced which has been used as the useful life of the project as whole.

39. The Weighted Average Life (WAL) has been determined based on the admitted capital cost of individual elements as on 31.3.2014 and their respective life as stipulated in the 2014 Tariff Regulations. The element wise life as defined in Tariff Regulations prevailing at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in the 2014 Tariff Regulations has been considered for determination of WAL. Accordingly, WAL of the all the assets commissioned during 2009-14 tariff period have been worked out as 19 years as shown below:-

(₹ in lakh)											
Particulars	Asset -I	Asset -II	Asset -III	Asset -IV	Asset -VI	Asset -VII	Asset -VIII	Asset -IX	Combined Cost (a)	Life (b)	Weight (a) x (b)
Freehold Land	5148.24	0.00	0.00	0.00	2947.87	0.00	0.00	0.00	8096.11	0	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25	0.00
Building & Other Civil Works	333.95	0.00	0.00	0.00	218.57	0.00	0.00	0.00	552.52	25	13813.06
Transmission Line	1306.15	0.00	0.00	0.00	3068.85	2480.78	0.00	0.00	6855.78	35	239952.24
Sub-Station Equipment	1061.90	919.26	998.31	989.43	1830.28	946.44	939.09	951.65	8636.35	25	215908.76
PLCC	0.00	6.20	0.89	0.91	22.69	21.94	0.00	0.00	52.63	15	789.51
Total	7850.24	925.46	999.20	990.34	8088.26	3449.16	939.09	951.65	24193.39	19	470463.56
WAL										19 Years	

40. It is assumed that, the WAL as on 1.4.2014 as determined above is applicable prospectively (i.e. for 2014-19 tariff period onwards) and no retrospective



adjustment of depreciation in previous tariff period is required to be done. Accordingly, the WAL has been used to determine the remaining useful life as on 31.3.2014 to be 19 years.

Capital Cost

41. Clause (1) and (3) of Regulation 9 of the 2014 Tariff Regulations specify as follows:-

“(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.”

“(3) The Capital cost of an existing project shall include the following:

- (a) the capital cost admitted by the Commission prior to 1.4.2014 duly trued up by excluding liability, if any, as on 1.4.2014;
- (b) additional capitalization and de-capitalization for the respective year of tariff as determined in accordance with Regulation 14; and
- (c) expenditure on account of renovation and modernisation as admitted by this Commission in accordance with Regulation 15.”

42. The petitioner has claimed capital cost of ₹7850.24 lakh, ₹947.92 lakh, ₹1021.84 lakh, ₹990.34 lakh, ₹8212.74 lakh, ₹3474.63 lakh, ₹942.34 lakh, ₹971.76 lakh as on 31.3.2014 and additional capitalization of ₹1459.54 lakh, ₹1510.72 lakh, ₹672.25 lakh, ₹657.75 lakh for Assets-I, II, III, IV, VI, VII, VIII and IX respectively for the 2014-19 tariff period.

43. The trued up capital cost of ₹7850.24 lakh, ₹925.46 lakh, ₹999.20 lakh, ₹990.34 lakh, ₹8088.26 lakh, ₹3449.16 lakh, ₹939.09 lakh and ₹951.65 lakh as on 31.3.2014 for Assets-I, II, III, IV, VI, VII, VIII and IX respectively, as on 31.3.2014 is considered to work out tariff for 2014-19 tariff period.



Additional Capital Expenditure

44. The petitioner has proposed combined additional capitalization of ₹1459.54 lakh, ₹1510.72 lakh, ₹672.25 lakh, ₹657.75 lakh for Assets-I, II, III, IV, VI, VII, VIII and IX for 2014-15, 2015-16, 2016-17 and 2017-18 respectively, towards balance and retention payments under Clause 1 of Regulation 14 of the 2014 Tariff Regulations for 2014-15 and 2015-16 and under clause 3 (v) for 2016-17 and 2017-18 of the 2014 Tariff Regulations.

45. 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;

Clause 3, sub-clause (v) Regulation 14 of the 2014 Tariff Regulations provides as follows:

“Any liability for works executed prior to the cut-off date, after prudence check of the details of such undischarged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.”

The petitioner was directed to submit the amount of balance and retention payment yet to be made along with the details of contract for which the payment has been retained. In response, the petitioner, vide affidavit dated 26.2.2018, has submitted that the details of additional capital expenditure beyond cut-off date of ₹672.25 lakh, ₹657.75 lakh in 2016-17 and 2017-18 lakh, respectively.

46. The total capital cost of the transmission asset including additional capitalization projected to be incurred during 2014-19 is shown below:-



(₹ in lakh)

Particulars	Approved Apportioned Cost as per RCE	Admitted capital cost as on 31.3.2014	Additional capitalization				Total capital cost including additional capitalization
			2014-15	2015-16	2016-17	2017-18	
Asset-I	10585.00	7850.24	296.18	1241.18	574.35	412.56	10374.51
Asset-II	1125.00	925.46	104.91	23.75	0.00	0.00	1054.12
Asset-III	1160.00	999.20	50.43	26.99	0.00	0.00	1076.62
Asset-IV	1131.00	990.34	50.43	38.98	0.00	0.00	1079.75
Asset-VI	9276.00	8088.26	497.12	60.16	48.95	234.30	8928.79
Asset-VII	4016.00	3449.16	316.89	60.16	48.95	10.89	3886.05
Asset-VIII	1139.00	939.09	74.23	29.75	0.00	0.00	1043.07
Asset-IX	1165.00	951.65	69.35	29.75	0.00	0.00	1050.75
Combined Asset	29597.00	24193.39	1459.54	1510.72	672.25	657.75	28493.65

Debt:Equity Ratio

47. Clause 3 of Regulation 19 of the 2014 Tariff Regulations specifies as under:-

“(3) In case of the generating station and the transmission system declared under commercial operation prior to 1.4.2014, debt-equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.”

48. The petitioner has considered debt:equity ratio as 70:30 as on 31.3.2014. The admitted debt:equity ratio of 70:30 after true-up for the tariff period ending 31.3.2014 has been considered as opening debt:equity ratio as on 1.4.2014. The details of the debt:equity as on 1.4.2014 considered for the purpose of tariff for the 2014-19 tariff period is as follows:-

(₹ in lakh)		
Particulars	Amount	(%)
Debt	16935.38	70.00
Equity	7258.02	30.00
Total	24193.39	100.00

49. The petitioner has proposed normative debt:equity ratio of 70:30 for additional capitalisation and the same has been considered. The details of the debt:equity



including additional capitalization as on 31.3.2019 is as follows:-

(₹ in lakh)		
Particulars	Amount	(%)
Debt	19945.56	70.00
Equity	8548.10	30.00
Total	28493.65	100.00

Interest on Loan (“IOL”)

50. Clause (5) & (6) of Regulation 26 of the 2014 Tariff Regulations are reproduced as under:-

“(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:

Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:

Provided further that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered.

(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.”

51. We have considered the weighted average rate of IOL on the basis of rate prevailing as on 1.4.2014. The IOL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations. The details of weighted average rate of interest are placed at **Annexure-IX** and the IOL has been worked out and allowed as follows:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross loan opening	16935.38	17957.05	19014.56	19485.13	19945.56
Cumulative Repayment up to previous year	821.08	1699.39	2644.27	3632.07	4644.20



Net Loan-Opening	16114.29	16257.67	16370.28	15853.06	15301.36
Additions during the year	1021.68	1057.50	470.58	460.43	0.00
Repayment during the year	878.30	944.89	987.80	1012.12	1021.58
Net Loan-Closing	16257.67	16370.28	15853.06	15301.36	14279.78
Average Loan	16185.98	16313.98	16111.67	15577.21	14790.57
Rate of Interest (%)	7.785%	7.835%	7.820%	7.779%	7.726%
Interest	1260.08	1278.12	1259.91	1211.70	1142.79

Return on Equity("ROE")

52. Clause (1) and (2) of Regulation 24 and Clause (2) of Regulation 25 of the 2014 Tariff Regulations specify as under:-

“24. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.
(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system”

“25. Tax on Return on Equity:

(2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:

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

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

53. The petitioner has submitted ROE at the rate of 19.610% after grossing up the ROE of 15.50% with MAT rate as per the above regulation. The petitioner has further submitted that the grossed up ROE is subject to truing up based on the actual tax paid along with any additional tax or interest, duly adjusted for any refund of tax including the interest received from IT authorities, pertaining to the tariff period 2014-19 on actual gross income of any financial year. Any under- recovery or over-



recovery of grossed up ROE after truing up shall be recovered or refunded to the beneficiaries on year to year basis.

54. 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.

55. 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. Accordingly, the ROE allowed is given below:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	7258.02	7695.88	8149.10	8350.77	8548.10
Additional Capitalization	437.86	453.22	201.68	197.33	0.00
Closing Equity	7695.88	8149.10	8350.77	8548.10	8548.10
Average Equity	7476.95	7922.49	8249.93	8449.43	8548.10
Return on Equity (Base Rate) (%)	15.50%	15.50%	15.50%	15.50%	15.50%
MAT rate for the year(%)	20.96%	20.96%	20.96%	20.96%	20.96%
Rate of Return on Equity (Pre Tax) (%)	19.610%	19.610%	19.610%	19.610%	19.610%



Return on Equity (Pre Tax)	1466.23	1553.60	1617.81	1656.93	1676.28
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Depreciation

56. 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."

57. The depreciation is allowed considering capital expenditure of ₹23892.78 lakh as on 31.3.2014 under Regulation 27 of the 2014 Tariff Regulations. The details of the depreciation allowed are given hereunder:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross block	24193.39	25652.93	27163.65	27835.90	28493.65
Additional Capitalization	1459.54	1510.72	672.25	657.75	0.00
Closing Gross block	25652.93	27163.65	27835.90	28493.65	28493.65
Average gross block	24923.16	26408.29	27499.78	28164.78	28493.65
Rate of Depreciation (%)	3.52%	3.58%	3.59%	3.59%	3.59%
Depreciable Value	15144.35	16336.49	17174.36	25234.45	17841.15
Remaining Depreciable Value	14323.27	14637.11	14530.08	21602.38	13196.95
Depreciation	878.30	944.89	987.80	1012.12	1021.58



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

58. The O & M Expenses for combined 8 assets claimed by the petitioner for 2014-19 are as follows:-

(₹ in lakh)				
2014-15	2015-16	2016-17	2017-18	2018-19
700.82	724.10	748.14	773.01	798.59

59. The O & M Expenses worked out for the instant assets as per Regulation 29 (4) of the 2014 Tariff Regulations are as under:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
400 kV S/C twin conductor transmission lines (0.326 km)	663.30	685.30	708.07	731.61	755.81
400 kV D/C twin conductor transmission lines (52.886 km)	37.39	38.66	39.93	41.25	42.63
11 Nos. 400 kV bays at Angul & Jharsuguda	0.13	0.14	0.14	0.15	0.15
TOTAL	700.82	724.10	748.14	773.01	798.59

60. 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.



61. We have considered the submissions made by the petitioner. 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.

62. The details of O&M Expenses allowed for the instant assets are given hereunder:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
O&M Expenses Allowed	700.82	724.10	748.14	773.01	798.59

Interest on Working Capital ("IWC")

63. Clause 1 (c) of Regulation 28 and Clause 5 of Regulation 3 of the 2014 Tariff Regulations specify as follows:-

"28. Interest on Working Capital

(c)(i) Receivables equivalent to two months of fixed cost;

(ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29;and

(iii) Operation and maintenance expenses for one month"

"(5) Bank Rate" means the base rate of interest as specified by the State Bank of India from time to time or any replacement thereof for the time being in effect plus 350 basispoints;"

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



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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	105.12	108.62	112.22	115.95	119.79
O & M Expenses	58.40	60.34	62.35	64.42	66.55
Receivables	737.85	771.27	790.66	797.63	795.29
Total	901.38	940.23	965.23	978.00	981.63
Rate of Interest (%)	13.50%	13.50%	13.50%	13.50%	13.50%
Interest	121.69	126.93	130.31	132.03	132.52

Annual Transmission Charges

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

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	878.30	944.89	987.80	1012.12	1021.58
Interest on Loan	1260.08	1278.12	1259.91	1211.70	1142.79
Return on Equity	1466.23	1553.60	1617.81	1656.93	1676.28
Interest on Working Capital	121.69	126.93	130.31	132.03	132.52
O & M Expenses	700.82	724.10	748.14	773.01	798.59
Total	4427.12	4627.64	4743.97	4785.80	4771.76

Filing Fee and Publication Expenses

67. 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 is 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

68. 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.

FERV

69. The petitioner has sought to recover FERV on foreign loans deployed under Regulation 50 of the 2014 Tariff Regulations. The petitioner shall be entitled to recover the FERV as provided under Regulations 50 and 51 of the 2014 Tariff Regulations.

Sharing of Transmission Charges

70. The billing, collection and disbursement of the transmission charges approved shall be done as per mechanism provided in the Commission's order dated 21.2.2018 and corrigendum order dated 15.3.2018 in Petition No. 73/MP/2017.

71. This order disposes of Petition No. 263/TT/2017.

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

Sd/-
(A. S. Bakshi)
Member

Sd/-
(A. K. Singhal)
Member

Sd/-
(P. K. Pujari)
Chairperson



Annexure-I**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR
TARIFF PERIOD 2013-14 FOR ASSET-I**

(₹ in lakh)	
Particulars	2013-14
Bond XLI	
Gross loan opening	1877.21
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	1877.21
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	1877.21
Average Loan	1877.21
Rate of Interest	8.85%
Interest	166.13
Rep Schedule	12 annual installments from 19.10.2016
Bond XXXV	
Gross loan opening	60.00
Cumulative Repayment upto COD /previous year	0.00
Net Loan-Opening	60.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	60.00
Average Loan	60.00
Rate of Interest	9.64%
Interest	5.78
Rep Schedule	12 annual installments from 31.5.2015.
Bond XLI	
Gross loan opening	0.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	0.00
Additions during the year	122.90
Repayment during the year	0.00
Net Loan-Closing	122.90
Average Loan	61.45
Rate of Interest	8.85%
Interest	5.44
Rep Schedule	15 annual installments from 29.8.2016.
Bond XLIV	
Gross loan opening	0.00



Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	0.00
Additions during the year	503.18
Repayment during the year	0.00
Net Loan-Closing	503.18
Average Loan	251.59
Rate of Interest	8.70%
Interest	21.89
Rep Schedule	12 annual installments from 26.12.2015.
Bond XXXVIII	
Gross loan opening	80.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	80.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	80.00
Average Loan	80.00
Rate of Interest	9.25%
Interest	7.40
Rep Schedule	Bullet Payment as on 9.3.2027
Bond XXXIX	
Gross loan opening	330.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	330.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	330.00
Average Loan	330.00
Rate of Interest	9.40%
Interest	31.02
Rep Schedule	Bullet Payment as on 29.3.2027
Bond XL	
Gross loan opening	1220.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	1220.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	1220.00
Average Loan	1220.00
Rate of Interest	9.30%
Interest	113.46
Rep Schedule	12 annual installments



	from 28.6.2016
SBI	
Gross loan opening	460.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	460.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	460.00
Average Loan	460.00
Rate of Interest	10.29%
Interest	47.33
Rep Schedule	22 half yearly installment from 31.8.2016
FC-Bond (Exchange Rate Rs.54.91)	
Gross loan opening	841.77
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	841.77
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	841.77
Average Loan	841.77
Rate of Interest	4.10%
Interest	34.49
Rep Schedule	Bullet Payment as on 17.1.2023
Total Loan	
Gross loan opening	4868.98
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	4868.98
Additions during the year	626.08
Repayment during the year	0.00
Net Loan-Closing	5495.06
Average Loan	5182.02
Rate of Interest	8.3548%
Interest	432.95



Annexure-II**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR
TARIFF PERIOD 2013-14 FOR ASSET-II**

(₹ in lakh)	
Particulars	2013-14
Bond XLI	
Gross loan opening	95.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	95.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	95.00
Average Loan	95.00
Rate of Interest	8.85%
Interest	8.41
Rep Schedule	12 annual installments from 19.10.2016
Bond XXXIV	
Gross loan opening	20.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	20.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	20.00
Average Loan	20.00
Rate of Interest	8.84%
Interest	1.77
Rep Schedule	12 annual installments from 21.10.2014
Bond XXXV	
Gross loan opening	4.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	4.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	4.00
Average Loan	4.00
Rate of Interest	9.64%
Interest	0.39
Rep Schedule	12 annual installments from 31.5.2015.
Bond XXXVI	



Gross loan opening	10.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	10.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	10.00
Average Loan	10.00
Rate of Interest	9.35%
Interest	0.94
Rep Schedule	15 annual installments from 29.8.2016.
Bond XXXVII	
Gross loan opening	24.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	24.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	24.00
Average Loan	24.00
Rate of Interest	9.25%
Interest	2.22
Rep Schedule	12 annual installments from 26.12.2015.
Bond XXXVIII	
Gross loan opening	6.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	6.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	6.00
Average Loan	6.00
Rate of Interest	9.25%
Interest	0.56
Rep Schedule	Bullet Payment as on 9.3.2027
Bond XXXIX	
Gross loan opening	23.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	23.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	23.00
Average Loan	23.00
Rate of Interest	9.40%
Interest	2.16



Rep Schedule	Bullet Payment as on 29.3.2027
Bond XL	
Gross loan opening	80.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	80.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	80.00
Average Loan	80.00
Rate of Interest	9.30%
Interest	7.44
Rep Schedule	12 annual installments from 28.6.2016
Bond XLIII	
Gross loan opening	92.79
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	92.79
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	92.79
Average Loan	92.79
Rate of Interest	7.93%
Interest	7.36
Rep Schedule	12 annual installments from 28.5.2017
Bond XLV	
Gross loan opening	0.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	0.00
Additions during the year	66.75
Repayment during the year	0.00
Net Loan-Closing	66.75
Average Loan	33.38
Rate of Interest	9.65%
Interest	3.22
Rep Schedule	12 annual installments from 28.2.2018
SBI	
Gross loan opening	30.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	30.00
Additions during the year	0.00



Repayment during the year	0.00
Net Loan-Closing	30.00
Average Loan	30.00
Rate of Interest	10.24%
Interest	3.07
Rep Schedule	22 half yearly installment from 31.8.2016
FC-Bond (Exchange Rate Rs.62.36)	
Gross loan opening	200.18
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	200.18
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	200.18
Average Loan	200.18
Rate of Interest	4.10%
Interest	8.20
Rep Schedule	Bullet Payment as on 17.1.2023
Bond XLIII	
Gross loan opening	0.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	0.00
Additions during the year	4.19
Repayment during the year	0.00
Net Loan-Closing	4.19
Average Loan	2.10
Rate of Interest	7.93%
Interest	0.17
Rep Schedule	12 annual installments from 28.5.2017
Total Loan	
Gross loan opening	584.97
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	584.97
Additions during the year	70.94
Repayment during the year	0.00
Net Loan-Closing	655.91
Average Loan	620.44
Rate of Interest	7.3966%
Interest	45.89



Annexure-III**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR
TARIFF PERIOD 2013-14 FOR ASSET-III**

(₹ in lakh)	
Particulars	2013-14
Bond XLV	
Gross loan opening	0.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	0.00
Additions during the year	210.81
Repayment during the year	0.00
Net Loan-Closing	210.81
Average Loan	105.41
Rate of Interest	9.65%
Interest	10.17
Rep Schedule	12 annual installments from 19.10.2016
Bond XXXIV	
Gross loan opening	55.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	55.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	55.00
Average Loan	55.00
Rate of Interest	8.84%
Interest	4.86
Rep Schedule	12 annual installments from 21.10.2014
Bond XXXV	
Gross loan opening	4.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	4.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	4.00
Average Loan	4.00
Rate of Interest	9.64%
Interest	0.39
Rep Schedule	12 annual installments from 31.5.2015.
Bond XXXVI	



Gross loan opening	10.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	10.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	10.00
Average Loan	10.00
Rate of Interest	9.35%
Interest	0.94
Rep Schedule	15 annual installments from 29.8.2016.
Bond XXXVII	
Gross loan opening	27.50
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	27.50
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	27.50
Average Loan	27.50
Rate of Interest	9.25%
Interest	2.54
Rep Schedule	12 annual installments from 26.12.2015.
Bond XXXVIII	
Gross loan opening	6.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	6.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	6.00
Average Loan	6.00
Rate of Interest	9.25%
Interest	0.56
Rep Schedule	Bullet Payment as on 9.3.2027
Bond XXXIX	
Gross loan opening	23.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	23.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	23.00
Average Loan	23.00
Rate of Interest	9.40%
Interest	2.16



Rep Schedule	Bullet Payment as on 29.3.2027
Bond XL	
Gross loan opening	80.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	80.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	80.00
Average Loan	80.00
Rate of Interest	9.30%
Interest	7.44
Rep Schedule	12 annual installments from 28.6.2016
SBI	
Gross loan opening	30.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	30.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	30.00
Average Loan	30.00
Rate of Interest	10.26%
Interest	3.08
Rep Schedule	22 half yearly installment from 31.8.2016
Bond XLI	
Gross loan opening	57.21
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	57.21
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	57.21
Average Loan	57.21
Rate of Interest	8.85%
Interest	5.06
Rep Schedule	22 half yearly installment from 31.8.2016
FC-Bond (Exchange Rate Rs.56.95)	
Gross loan opening	200.01
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	200.01
Additions during the year	0.00



Repayment during the year	0.00
Net Loan-Closing	200.01
Average Loan	200.01
Rate of Interest	4.097%
Interest	8.19
Rep Schedule	Bullet Payment as on 17.1.2023
Bond XLI	
Gross loan opening	0.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	0.00
Additions during the year	11.76
Repayment during the year	0.00
Net Loan-Closing	11.76
Average Loan	5.88
Rate of Interest	8.85%
Interest	0.52
Rep Schedule	22 half yearly installment from 31.8.2016
Total Loan	
Gross loan opening	492.72
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	492.72
Additions during the year	222.57
Repayment during the year	0.00
Net Loan-Closing	715.29
Average Loan	604.00
Rate of Interest	7.6011%
Interest	45.91



Annexure-IV**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR
TARIFF PERIOD 2013-14 FOR ASSET-IV**

(₹ in lakh)	
Particulars	2013-14
Bond XLI	
Gross loan opening	57.85
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	57.85
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	57.85
Average Loan	57.85
Rate of Interest	8.85%
Interest	5.12
Rep Schedule	12 annual installments from 19.10.2016
Bond XXXIV	
Gross loan opening	20.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	20.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	20.00
Average Loan	20.00
Rate of Interest	8.84%
Interest	1.77
Rep Schedule	12 annual installments from 21.10.2014
Bond XXXV	
Gross loan opening	4.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	4.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	4.00
Average Loan	4.00
Rate of Interest	9.64%
Interest	0.39
Rep Schedule	12 annual installments from 31.5.2015.
Bond XXXVI	
Gross loan opening	10.00



Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	10.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	10.00
Average Loan	10.00
Rate of Interest	9.35%
Interest	0.94
Rep Schedule	15 annual installments from 29.8.2016.
Bond XXXVII	
Gross loan opening	24.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	24.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	24.00
Average Loan	24.00
Rate of Interest	9.25%
Interest	2.22
Rep Schedule	12 annual installments from 26.12.2015.
Bond XXXVIII	
Gross loan opening	6.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	6.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	6.00
Average Loan	6.00
Rate of Interest	9.25%
Interest	0.56
Rep Schedule	Bullet Payment as on 9.3.2027
Bond XXXIX	
Gross loan opening	23.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	23.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	23.00
Average Loan	23.00
Rate of Interest	9.40%
Interest	2.16



Rep Schedule	Bullet Payment as on 29.3.2027
Bond XL	
Gross loan opening	80.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	80.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	80.00
Average Loan	80.00
Rate of Interest	9.30%
Interest	7.44
Rep Schedule	12 annual installments from 28.6.2016
SBI	
Gross loan opening	30.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	30.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	30.00
Average Loan	30.00
Rate of Interest	10.28%
Interest	3.08
Rep Schedule	22 half yearly installment from 31.8.2016
Bond XLI	
Gross loan opening	0.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	0.00
Additions during the year	238.41
Repayment during the year	0.00
Net Loan-Closing	238.41
Average Loan	119.21
Rate of Interest	8.85%
Interest	10.55
Rep Schedule	22 half yearly installment from 31.8.2016
FC-Bond (Exchange Rate Rs.54.24)	
Gross loan opening	199.98
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	199.98
Additions during the year	0.00



Repayment during the year	0.00
Net Loan-Closing	199.98
Average Loan	199.98
Rate of Interest	4.097%
Interest	8.19
Rep Schedule	Bullet Payment as on 17.1.2023
Total Loan	
Gross loan opening	454.83
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	454.83
Additions during the year	238.41
Repayment during the year	0.00
Net Loan-Closing	693.24
Average Loan	574.04
Rate of Interest	7.3884%
Interest	42.41



**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR
TARIFF PERIOD 2013-14 FOR ASSET-VI**

(₹ in lakh)	
Particulars	2013-14
Bond XLI	
Gross loan opening	0.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	0.00
Additions during the year	29.74
Repayment during the year	0.00
Net Loan-Closing	29.74
Average Loan	14.87
Rate of Interest	8.85%
Interest	1.32
Rep Schedule	12 annual installments from 19.10.2016
Bond XXXIV	
Gross loan opening	700.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	700.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	700.00
Average Loan	700.00
Rate of Interest	8.84%
Interest	61.88
Rep Schedule	12 annual installments from 21.10.2014
Bond XXXV	
Gross loan opening	250.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	250.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	250.00
Average Loan	250.00
Rate of Interest	9.64%
Interest	24.10
Rep Schedule	12 annual installments from 31.5.2015.
Bond XXXVI	



Gross loan opening	500.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	500.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	500.00
Average Loan	500.00
Rate of Interest	9.35%
Interest	46.75
Rep Schedule	15 annual installments from 29.8.2016.
Bond XXXVII	
Gross loan opening	845.56
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	845.56
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	845.56
Average Loan	845.56
Rate of Interest	9.25%
Interest	78.21
Rep Schedule	12 annual installments from 26.12.2015.
Bond XXXVIII	
Gross loan opening	300.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	300.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	300.00
Average Loan	300.00
Rate of Interest	9.25%
Interest	27.75
Rep Schedule	Bullet Payment as on 9.3.2027
Bond XXXIX	
Gross loan opening	500.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	500.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	500.00
Average Loan	500.00
Rate of Interest	9.40%
Interest	47.00



Rep Schedule	Bullet Payment as on 29.3.2027
Bond XL	
Gross loan opening	32.37
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	32.37
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	32.37
Average Loan	32.37
Rate of Interest	9.30%
Interest	3.01
Rep Schedule	12 annual installments from 28.6.2016
SBI	
Gross loan opening	300.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	300.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	300.00
Average Loan	300.00
Rate of Interest	10.29%
Interest	30.87
Rep Schedule	22 half yearly installment from 31.8.2016
IFC (IFC - A Loan)(31419-00) (Exchange Rate Rs.54.91)	
Gross loan opening	582.05
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	582.05
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	582.05
Average Loan	582.05
Rate of Interest	3.310%
Interest	19.27
Rep Schedule	Bullet Payment as on 17.1.2023
FC-Bond (Exchange Rate Rs.54.91)	
Gross loan opening	1000.02
Cumulative Repayment upto COD/previous year	0.00



Net Loan-Opening	1000.02
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	1000.02
Average Loan	1000.02
Rate of Interest	4.097%
Interest	40.97
Rep Schedule	Bullet Payment as on 17.1.2023
Bond XL	
Gross loan opening	0.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	0.00
Additions during the year	47.73
Repayment during the year	0.00
Net Loan-Closing	47.73
Average Loan	23.87
Rate of Interest	9.30%
Interest	2.22
Rep Schedule	12 annual installments from 28.6.2016
Bond XXXIV	
Gross loan opening	0.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	0.00
Additions during the year	661.56
Repayment during the year	0.00
Net Loan-Closing	661.56
Average Loan	330.78
Rate of Interest	8.70%
Interest	28.78
Rep Schedule	12 annual installments from 21.10.2014
Total Loan	
Gross loan opening	5010.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	5010.00
Additions during the year	739.03
Repayment during the year	0.00
Net Loan-Closing	5749.03
Average Loan	5379.51
Rate of Interest	7.6610%
Interest	412.12



Annexure-VI**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR
TARIFF PERIOD 2013-14 FOR ASSET-VII**

Particulars	(₹ in lakh)
	2013-14
Bond XLI	
Gross loan opening	122.74
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	122.74
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	122.74
Average Loan	122.74
Rate of Interest	8.85%
Interest	10.86
Rep Schedule	12 annual installments from 19.10.2016
Bond XXXIV	
Gross loan opening	180.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	180.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	180.00
Average Loan	180.00
Rate of Interest	8.84%
Interest	15.91
Rep Schedule	12 annual installments from 21.10.2014
Bond XXXV	
Gross loan opening	60.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	60.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	60.00
Average Loan	60.00
Rate of Interest	9.64%
Interest	5.78
Rep Schedule	12 annual installments from 31.5.2015.
Bond XXXVI	
Gross loan opening	100.00



Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	100.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	100.00
Average Loan	100.00
Rate of Interest	9.35%
Interest	9.35
Rep Schedule	15 annual installments from 29.8.2016.
Bond XXXVII	
Gross loan opening	150.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	150.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	150.00
Average Loan	150.00
Rate of Interest	9.25%
Interest	13.88
Rep Schedule	12 annual installments from 26.12.2015.
Bond XXXVIII	
Gross loan opening	50.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	50.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	50.00
Average Loan	50.00
Rate of Interest	9.25%
Interest	4.63
Rep Schedule	Bullet Payment as on 9.3.2027
Bond XXXIX	
Gross loan opening	140.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	140.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	140.00
Average Loan	140.00
Rate of Interest	9.40%
Interest	13.16



Rep Schedule	Bullet Payment as on 29.3.2027
Bond XL	
Gross loan opening	200.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	200.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	200.00
Average Loan	200.00
Rate of Interest	9.30%
Interest	18.60
Rep Schedule	12 annual installments from 28.6.2016
SBI	
Gross loan opening	200.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	200.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	200.00
Average Loan	200.00
Rate of Interest	10.26%
Interest	20.52
Rep Schedule	22 half yearly installment from 31.8.2016
SBI	
Gross loan opening	0.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	0.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	0.00
Average Loan	0.00
Rate of Interest	10.05%
Interest	0.00
Rep Schedule	22 half yearly installment from 31.8.2016
IFC (IFC - A Loan)(31419-00) (Exchange Rate Rs.56.95)	
Gross loan opening	243.01
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	243.01



Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	243.01
Average Loan	243.01
Rate of Interest	3.300%
Interest	8.02
Rep Schedule	Bullet Payment as on 17.1.2023
FC-Bond (Exchange Rate Rs.56.95)	
Gross loan opening	600.02
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	600.02
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	600.02
Average Loan	600.02
Rate of Interest	4.097%
Interest	24.58
Rep Schedule	Bullet Payment as on 17.1.2023
Bond XLI	
Gross loan opening	0.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	0.00
Additions during the year	42.85
Repayment during the year	0.00
Net Loan-Closing	42.85
Average Loan	21.43
Rate of Interest	8.85%
Interest	1.90
Rep Schedule	12 annual installments from 19.10.2016
Bond XLIV	
Gross loan opening	0.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	0.00
Additions during the year	343.62
Repayment during the year	0.00
Net Loan-Closing	343.62
Average Loan	171.81
Rate of Interest	8.70%



Interest	14.95
Rep Schedule	
Total Loan	
Gross loan opening	2045.77
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	2045.77
Additions during the year	386.47
Repayment during the year	0.00
Net Loan-Closing	2432.24
Average Loan	2239.00
Rate of Interest	7.2414%
Interest	162.13



Annexure-VII**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR
TARIFF PERIOD 2013-14 FOR ASSET-VIII**

(₹ in lakh)	
Particulars	2013-14
Bond XXXIV	
Gross loan opening	5.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	5.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	5.00
Average Loan	5.00
Rate of Interest	8.84%
Interest	0.44
Rep Schedule	12 annual installments from 21.10.2014
Bond XXXV	
Gross loan opening	15.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	15.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	15.00
Average Loan	15.00
Rate of Interest	9.64%
Interest	1.45
Rep Schedule	12 annual installments from 31.5.2015.
Bond XXXVI	
Gross loan opening	9.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	9.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	9.00
Average Loan	9.00
Rate of Interest	9.35%
Interest	0.84
Rep Schedule	15 annual installments from 29.8.2016.
Bond XXXVII	



Gross loan opening	18.51
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	18.51
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	18.51
Average Loan	18.51
Rate of Interest	9.25%
Interest	1.71
Rep Schedule	12 annual installments from 26.12.2015.
Bond XXXVIII	
Gross loan opening	1.23
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	1.23
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	1.23
Average Loan	1.23
Rate of Interest	9.25%
Interest	0.11
Rep Schedule	Bullet Payment as on 9.3.2027
Bond XXXVIII	
Gross loan opening	0.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	0.00
Additions during the year	3.77
Repayment during the year	0.00
Net Loan-Closing	3.77
Average Loan	1.89
Rate of Interest	9.25%
Interest	0.17
Rep Schedule	Bullet Payment as on 9.3.2027
Bond XLV	
Gross loan opening	0.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	0.00
Additions during the year	195.12
Repayment during the year	0.00
Net Loan-Closing	195.12
Average Loan	97.56
Rate of Interest	9.65%
Interest	9.41



Rep Schedule	Bullet Payment as on 9.3.2027
IFC (IFC - A Loan)(31419-00) (Exchange Rate Rs.54.24)	
Gross loan opening	132.02
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	132.02
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	132.02
Average Loan	132.02
Rate of Interest	3.310%
Interest	4.37
Rep Schedule	Bullet Payment as on 17.1.2023
FC-Bond (Exchange Rate Rs.54.24)	
Gross loan opening	279.99
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	279.99
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	279.99
Average Loan	279.99
Rate of Interest	4.097%
Interest	11.47
Rep Schedule	Bullet Payment as on 17.1.2023
Total Loan	
Gross loan opening	460.75
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	460.75
Additions during the year	198.89
Repayment during the year	0.00
Net Loan-Closing	659.64
Average Loan	560.20
Rate of Interest	5.3527%
Interest	29.99



Annexure-VIII**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR
TARIFF PERIOD 2013-14 FOR ASSET-IX**

Particulars	(₹ in lakh)
	2013-14
Bond XXXIV	
Gross loan opening	5.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	5.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	5.00
Average Loan	5.00
Rate of Interest	8.84%
Interest	0.44
Rep Schedule	12 annual installments from 21.10.2014
Bond XXXV	
Gross loan opening	15.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	15.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	15.00
Average Loan	15.00
Rate of Interest	9.64%
Interest	1.45
Rep Schedule	12 annual installments from 31.5.2015.
Bond XXXVI	
Gross loan opening	9.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	9.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	9.00
Average Loan	9.00
Rate of Interest	9.35%
Interest	0.84
Rep Schedule	15 annual installments from 29.8.2016.
Bond XXXVII	



Gross loan opening	20.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	20.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	20.00
Average Loan	20.00
Rate of Interest	9.25%
Interest	1.85
Rep Schedule	12 annual installments from 26.12.2015.
Bond XXXVIII	
Gross loan opening	5.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	5.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	5.00
Average Loan	5.00
Rate of Interest	9.25%
Interest	0.46
Rep Schedule	Bullet Payment as on 9.3.2027
Bond XXXIX	
Gross loan opening	20.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	20.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	20.00
Average Loan	20.00
Rate of Interest	9.40%
Interest	1.88
Rep Schedule	Bullet Payment as on 29.3.2027
SBI	
Gross loan opening	10.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	10.00
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	10.00
Average Loan	10.00
Rate of Interest	10.26%
Interest	1.03



Rep Schedule	22 half yearly installment from 31.8.2016
BOND XLI	
Gross loan opening	5.01
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	5.01
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	5.01
Average Loan	5.01
Rate of Interest	8.85%
Interest	0.44
Rep Schedule	
IFC (IFC - A Loan)(31419-00) (Exchange Rate Rs.56.95)	
Gross loan opening	132.01
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	132.01
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	132.01
Average Loan	132.01
Rate of Interest	3.300%
Interest	4.36
Rep Schedule	Bullet Payment as on 17.1.2023
FC-Bond (Exchange Rate Rs.56.95)	
Gross loan opening	280.02
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	280.02
Additions during the year	0.00
Repayment during the year	0.00
Net Loan-Closing	280.02
Average Loan	280.02
Rate of Interest	4.097%
Interest	11.47
Rep Schedule	Bullet Payment as on 17.1.2023
BOND XLI	
Gross loan opening	0.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	0.00



Additions during the year	4.38
Repayment during the year	0.00
Net Loan-Closing	4.38
Average Loan	2.19
Rate of Interest	8.85%
Interest	0.19
Rep Schedule	
BOND XLI	
Gross loan opening	0.00
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	0.00
Additions during the year	174.80
Repayment during the year	0.00
Net Loan-Closing	174.80
Average Loan	87.40
Rate of Interest	9.65%
Interest	8.43
Rep Schedule	
Total Loan	
Gross loan opening	501.04
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	501.04
Additions during the year	179.18
Repayment during the year	0.00
Net Loan-Closing	680.22
Average Loan	590.63
Rate of Interest	5.5615%
Interest	32.85



Annexure-IX**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN FOR
TARIFF PERIOD 2014-19 FOR COMBINED ASSETS**

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Bond XXXIV					
Gross loan opening	985.00	985.00	985.00	985.00	985.00
Cumulative Repayment upto COD/previous year	0.00	82.08	164.16	246.24	328.32
Net Loan-Opening	985.00	902.92	820.84	738.76	656.68
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	82.08	82.08	82.08	82.08	82.08
Net Loan-Closing	902.92	820.84	738.76	656.68	574.60
Average Loan	943.96	861.88	779.80	697.72	615.64
Rate of Interest	8.84%	8.84%	8.84%	8.84%	8.84%
Interest	83.45	76.19	68.93	61.68	54.42
Bond XXXIV					
Gross loan opening	412.00	412.00	412.00	412.00	412.00
Cumulative Repayment upto COD/previous year	0.00	0.00	34.33	68.66	102.99
Net Loan-Opening	412.00	412.00	377.67	343.34	309.01
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	34.33	34.33	34.33	34.33
Net Loan-Closing	412.00	377.67	343.34	309.01	274.68
Average Loan	412.00	394.84	360.51	326.18	291.85
Rate of Interest	9.64%	9.64%	9.64%	9.64%	9.64%
Interest	39.72	38.06	34.75	31.44	28.13
Bond XXXVI					
Gross loan opening	648.00	648.00	648.00	648.00	648.00
Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	43.20	86.40
Net Loan-Opening	648.00	648.00	648.00	604.80	561.60
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	43.20	43.20	43.20
Net Loan-Closing	648.00	648.00	604.80	561.60	518.40
Average Loan	648.00	648.00	626.40	583.20	540.00
Rate of Interest	9.35%	9.35%	9.35%	9.35%	9.35%



Interest	60.59	60.59	58.57	54.53	50.49
Bond XXXVII					
Gross loan opening	1109.57	1109.57	1109.57	1109.57	1109.57
Cumulative Repayment upto COD/previous year	0.00	0.00	92.46	184.92	277.38
Net Loan-Opening	1109.57	1109.57	1017.11	924.65	832.19
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	92.46	92.46	92.46	92.46
Net Loan-Closing	1109.57	1017.11	924.65	832.19	739.73
Average Loan	1109.57	1063.34	970.88	878.42	785.96
Rate of Interest	9.25%	9.25%	9.25%	9.25%	9.25%
Interest	102.64	98.36	89.81	81.25	72.70
Bond XXXVIII					
Gross loan opening	458.00	458.00	458.00	458.00	458.00
Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	458.00	458.00	458.00	458.00	458.00
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	458.00	458.00	458.00	458.00	458.00
Average Loan	458.00	458.00	458.00	458.00	458.00
Rate of Interest	9.25%	9.25%	9.25%	9.25%	9.25%
Interest	42.37	42.37	42.37	42.37	42.37
Bond XXXIX					
Gross loan opening	1059.00	1059.00	1059.00	1059.00	1059.00
Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	1059.00	1059.00	1059.00	1059.00	1059.00
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	1059.00	1059.00	1059.00	1059.00	1059.00
Average Loan	1059.00	1059.00	1059.00	1059.00	1059.00
Rate of Interest	9.40%	9.40%	9.40%	9.40%	9.40%
Interest	99.55	99.55	99.55	99.55	99.55
SBI					
Gross loan opening	1060.00	1060.00	1060.00	1060.00	1060.00
Cumulative Repayment	0.00	0.00	0.00	96.36	192.72



upto COD/previous year					
Net Loan-Opening	1060.00	1060.00	1060.00	963.64	867.28
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	96.36	96.36	96.36
Net Loan-Closing	1060.00	1060.00	963.64	867.28	770.92
Average Loan	1060.00	1060.00	1011.82	915.46	819.10
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
Interest	108.65	108.65	103.71	93.83	83.96
Bond XL					
Gross loan opening	1740.00	1740.00	1740.00	1740.00	1740.00
Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	145.00	290.00
Net Loan-Opening	1740.00	1740.00	1740.00	1595.00	1450.00
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	145.00	145.00	145.00
Net Loan-Closing	1740.00	1740.00	1595.00	1450.00	1305.00
Average Loan	1740.00	1740.00	1667.50	1522.50	1377.50
Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
Interest	161.82	161.82	155.08	141.59	128.11
Bond XLI					
Gross loan opening	2665.06	2665.06	2665.06	2665.06	2665.06
Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	222.09	444.18
Net Loan-Opening	2665.06	2665.06	2665.06	2442.97	2220.88
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	222.09	222.09	222.09
Net Loan-Closing	2665.06	2665.06	2442.97	2220.88	1998.79
Average Loan	2665.06	2665.06	2554.02	2331.93	2109.84
Rate of Interest	8.85%	8.85%	8.85%	8.85%	8.85%
Interest	235.86	235.86	226.03	206.38	186.72
IFC					
Gross loan opening	582.05	582.05	582.05	582.05	582.05
Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	58.20
Net Loan-Opening	582.05	582.05	582.05	582.05	523.85
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	58.20	58.20
Net Loan-Closing	582.05	582.05	582.05	523.85	465.65



Average Loan	582.05	582.05	582.05	552.95	494.75
Rate of Interest	3.23%	3.23%	3.23%	3.23%	3.23%
Interest	18.82	18.82	18.82	17.88	16.00
IFC					
Gross loan opening	243.01	243.01	243.01	243.01	243.01
Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	24.30
Net Loan-Opening	243.01	243.01	243.01	243.01	218.71
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	24.30	24.30
Net Loan-Closing	243.01	243.01	243.01	218.71	194.41
Average Loan	243.01	243.01	243.01	230.86	206.56
Rate of Interest	3.23%	3.23%	3.23%	3.23%	3.23%
Interest	7.86	7.86	7.86	7.46	6.68
IFC					
Gross loan opening	132.02	132.02	132.02	132.02	132.02
Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	13.20
Net Loan-Opening	132.02	132.02	132.02	132.02	118.82
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	13.20	13.20
Net Loan-Closing	132.02	132.02	132.02	118.82	105.62
Average Loan	132.02	132.02	132.02	125.42	112.22
Rate of Interest	3.23%	3.23%	3.23%	3.23%	3.23%
Interest	4.27	4.27	4.27	4.06	3.63
IFC					
Gross loan opening	132.01	132.01	132.01	132.01	132.01
Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	13.20
Net Loan-Opening	132.01	132.01	132.01	132.01	118.81
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	13.20	13.20
Net Loan-Closing	132.01	132.01	132.01	118.81	105.61
Average Loan	132.01	132.01	132.01	125.41	112.21
Rate of Interest	3.23%	3.23%	3.23%	3.23%	3.23%
Interest	4.27	4.27	4.27	4.06	3.63



FC Bond DOCO -I					
Gross loan opening	1080.06	1080.06	1080.06	1080.06	1080.06
Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	1080.06	1080.06	1080.06	1080.06	1080.06
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	1080.06	1080.06	1080.06	1080.06	1080.06
Average Loan	1080.06	1080.06	1080.06	1080.06	1080.06
Rate of Interest	4.10%	4.10%	4.10%	4.10%	4.10%
Interest	44.24	44.24	44.24	44.24	44.24
FC Bond DOCO -I					
Gross loan opening	1841.90	1841.90	1841.90	1841.90	1841.90
Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	1841.90	1841.90	1841.90	1841.90	1841.90
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	1841.90	1841.90	1841.90	1841.90	1841.90
Average Loan	1841.90	1841.90	1841.90	1841.90	1841.90
Rate of Interest	4.10%	4.10%	4.10%	4.10%	4.10%
Interest	75.45	75.45	75.45	75.45	75.45
FC Bond DOCO -I					
Gross loan opening	479.97	479.97	479.97	479.97	479.97
Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	479.97	479.97	479.97	479.97	479.97
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	479.97	479.97	479.97	479.97	479.97
Average Loan	479.97	479.97	479.97	479.97	479.97
Rate of Interest	4.10%	4.10%	4.10%	4.10%	4.10%
Interest	19.66	19.66	19.66	19.66	19.66
FC Bond DOCO -I					
Gross loan opening	200.18	200.18	200.18	200.18	200.18
Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	0.00



Net Loan-Opening	200.18	200.18	200.18	200.18	200.18
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	200.18	200.18	200.18	200.18	200.18
Average Loan	200.18	200.18	200.18	200.18	200.18
Rate of Interest	4.10%	4.10%	4.10%	4.10%	4.10%
Interest	8.20	8.20	8.20	8.20	8.20
Bond XLIII					
Gross loan opening	0.00	7.64	7.64	7.64	7.64
Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	0.64
Net Loan-Opening	0.00	7.64	7.64	7.64	7.00
Additions during the year	7.64	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.64	0.64
Net Loan-Closing	7.64	7.64	7.64	7.00	6.36
Average Loan	3.82	7.64	7.64	7.32	6.68
Rate of Interest	7.93%	7.93%	7.93%	7.93%	7.93%
Interest	0.30	0.61	0.61	0.58	0.53
Bond XLIII					
Gross loan opening	96.98	96.98	96.98	96.98	96.98
Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	8.08
Net Loan-Opening	96.98	96.98	96.98	96.98	88.90
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	8.08	8.08
Net Loan-Closing	96.98	96.98	96.98	88.90	80.82
Average Loan	96.98	96.98	96.98	92.94	84.86
Rate of Interest	7.93%	7.93%	7.93%	7.93%	7.93%
Interest	7.69	7.69	7.69	7.37	6.73
Bond XLIV					
Gross loan opening	1508.36	1508.36	1508.36	1508.36	1508.36
Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	1508.36	1508.36	1508.36	1508.36	1508.36
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	502.79



Net Loan-Closing	1508.36	1508.36	1508.36	1508.36	1005.57
Average Loan	1508.36	1508.36	1508.36	1508.36	1256.97
Rate of Interest	8.70%	8.70%	8.70%	8.70%	8.70%
Interest	131.23	131.23	131.23	131.23	109.36
Bond XLV					
Gross loan opening	647.48	647.48	647.48	647.48	647.48
Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	53.96
Net Loan-Opening	647.48	647.48	647.48	647.48	593.52
Additions during the year	0.00	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	53.96	53.96
Net Loan-Closing	647.48	647.48	647.48	593.52	539.56
Average Loan	647.48	647.48	647.48	620.50	566.54
Rate of Interest	9.65%	9.65%	9.65%	9.65%	9.65%
Interest	62.48	62.48	62.48	59.88	54.67
Bond XLVI					
Gross loan opening	0.00	1021.68	1021.68	1021.68	1021.68
Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	0.00	1021.68	1021.68	1021.68	1021.68
Additions during the year	1021.68	0.00	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	1021.68	1021.68	1021.68	1021.68	1021.68
Average Loan	510.84	1021.68	1021.68	1021.68	1021.68
Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
Interest	47.51	95.02	95.02	95.02	95.02
Bond LI					
Gross loan opening	0.00	0.00	1057.50	1057.50	1057.50
Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	0.00	0.00	1057.50	1057.50	1057.50
Additions during the year	0.00	1057.50	0.00	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	1057.50	1057.50	1057.50	1057.50
Average Loan	0.00	528.75	1057.50	1057.50	1057.50
Rate of Interest	0.00%	8.40%	8.40%	8.40%	8.40%



Interest	0.00	44.42	88.83	88.83	88.83
FC Bond DOCO -I					
Gross loan opening	0.00	0.00	0.00	470.59	470.59
Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	0.00
Net Loan-Opening	0.00	0.00	0.00	470.59	470.59
Additions during the year	0.00	0.00	470.59	0.00	0.00
Repayment during the year	0.00	0.00	0.00	0.00	0.00
Net Loan-Closing	0.00	0.00	470.59	470.59	470.59
Average Loan	0.00	0.00	235.30	470.59	470.59
Rate of Interest	0.00%	0.00%	8.13%	8.13%	8.13%
Interest	0.00	0.00	19.13	38.26	38.26
Total Loan					
Gross loan opening	17080.65	18109.97	19167.47	19638.06	19638.06
Cumulative Repayment upto COD/previous year	0.00	82.08	290.95	1006.47	1893.57
Net Loan-Opening	17080.65	18027.89	18876.52	18631.59	17744.49
Additions during the year	1029.32	1057.50	470.59	0.00	0.00
Repayment during the year	82.08	208.87	715.52	887.10	1389.89
Net Loan-Closing	18027.89	18876.52	18631.59	17744.49	16354.60
Average Loan	17554.27	18452.21	18754.06	18188.04	17049.55
Rate of Interest	7.79%	7.83%	7.82%	7.78%	7.73%
Interest	1366.61	1445.64	1466.54	1414.79	1317.32

