

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 86/TT/2017

Coram:

**Shri Gireesh B. Pradhan, Chairperson
Shri A. K. Singhal, Member
Shri A. S. Bakshi, Member
Dr. M. K. Iyer, Member**

Date of Order : 07.09.2017

In the matter of:

Truing up of transmission tariff of 2009-14 tariff period under Regulation 6 of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 and determination of transmission tariff for 2014-19 tariff period under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 for **Asset-1**: 765/400 kV, 1500 MVA ICT-1 along with associated bays at Jabalpur Pooling Sub-station (New) and **Asset-2**: 400 kV D/C (Quad) Jabalpur Pooling Sub-station (New)-Jabalpur (Existing) Sub-station Transmission line along with associated bays covered in order dated 29.1.2016 in Petition No. 303/TT/2013 and **Asset-3**: 400 kV 125 MVAR Bus Reactor-1 with associated bays at Jabalpur 765/400 kV PS and **Asset-4**: 765 kV 3x80 MVAR Bus Reactor-2 with associated bays at Jabalpur 765/400 kV Pooling Sub-station covered in order dated 18.3.2016 in Petition No. 48/TT/2014 under "Transmission System for Phase-1 Generation Project in Orissa Part-B" in Western region under Regulation 86 of Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999.

And in the matter of:

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

.....**Petitioner**

Vs

1. Madhya Pradesh Power Management Company Limited,
Shakti Bhawan, Rampur
Jabalpur-482 008

2. Maharashtra State Electricity Distribution Company Limited,
5th floor, Prakashgad,



Bandra (East),
Mumbai-400 052

3. Gujarat Urja Vikas Nigam Limited,
Sardar Patel Vidyut Bhawan,
Race Course Road,
Vadodara-390 007
4. Electricity Department,
Government of Goa,
Vidyut Bhawan, Panaji,
Near Mandvi Hotel, Goa-403 001
5. Electricity Department,
Administration of Daman and Diu,
Daman-396 210
6. Electricity Department,
Administration of Dadra Nagar Haveli,
U.T., Silvassa-396 230
7. Chhattisgarh State Electricity Board,
P.O. Sunder Nagar, Dangania, Raipur
Chhattisgarh-492 013
8. Madhya Pradesh Audyogik Kendra
Vikas Nigam (Indore) Limited,
3/54, Press Complex, Agra - Bombay Road
Indore-452 008

.....**Respondents**

For Petitioner : Shri S.K. Venkatesan, PGCIL
Shri S. S. Raju, PGCIL
Shri Jasbir singh, PGCIL
Shri Rakesh Prasad, PGCIL

For Respondents : Shri Rishabh Dommel Singh, MPPMCL



ORDER

The present petition has been filed by Power Grid Corporation of India Ltd. (“the petitioner”) for truing up of capital expenditure of 2009-14 tariff period for **Asset-1**: 765/400 kV, 1500 MVA ICT-1 along with associated bays at Jabalpur Pooling Sub-station (New) and **Asset-2**: 400 kV D/C (Quad) Jabalpur Pooling Sub-station (New)-Jabalpur (Existing) Sub-station Transmission line along with associated bays covered in order dated 29.1.2016 in Petition No. 303/TT/2013 and **Asset-3**: 400 kV 125 MVAR Bus Reactor-1 with associated bays at Jabalpur 765/400 kV PS and **Asset-4**: 765 kV 3x80 MVAR Bus Reactor-2 with associated bays at Jabalpur 765/400 kV Pooling Sub-station covered in order dated 18.3.2016 in Petition No. 48/TT/2014 under “Transmission System for Phase-1 Generation Project in Orissa Part-B” in Western region (hereinafter referred to as “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”) based on actual capital expenditure for the period from COD to 31.3.2014, and for determination of tariff for the period from 1.4.2014 to 31.3.2019 under the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as “the 2014 Tariff Regulations”).

2. The Investment Approval of the project (i.e. Transmission System for Phase-1 Generation Project in Orissa Part-B” in Western region) was accorded by Board of Directors vide Memorandum no. C/CP/Orissa Phase-I IPPs (Part-B)



dated 15.12.2010 at an estimated cost of ₹274319 lakh that includes IDC of ₹18092 lakh (based on 3rd Quarter, 2010 price level). Subsequently, RCE of the project was approved vide Memorandum No. C/CP/RCE-Orissa Phase-I IPPs (Part-B) dated 11.3.2016 at an estimated cost of ₹338471 lakh including IDC of ₹32182 lakh at October 2015 price level.

3. Details of the assets covered in the project and the petitions under which the assets are covered are summarized below:-

Name of Asset	COD	Covered in Petition No.	Date of final tariff order
Assets commissioned during 2009-14 Period (covered in instant petition)			
765/400 kV, 1500 MVA ICT-1 along with associated bays at Jabalpur Pooling Sub-station (New)	1.1.2014	303/TT/2013	29.1. 2016
400 kV D/C (Quad) Jabalpur Pooling Sub-station (New)-Jabalpur (Existing) Sub-station Transmission Line along with associated bays	1.1.2014		
400 kV 125 MVAR Bus Reactor -1 with associated bays at Jabalpur 765/400 kV PS	1.1.2014	48/TT/2014	18.3. 2016
765 kV 3*80 MVAR Bus Reactor-2 with associated bays at Jabalpur 765/400 kV Pooling Sub-station	1.3.2014		
Assets commissioned during 2014-19 Period			
1500 MVA, 765/400 kV ICT-2 with one spare unit at Jabalpur 765/400 kV PS	1.4.2014 (provisional)	244/TT/2014	26.4. 2016
3*80 MVAR, 765 kV Line Reactor to be used as Bus Reactor at Jabalpur PS for Dharamjaygarh ckt.#1	1.4.2014 (provisional)		
765 kV, 3*110 MVAR, Bus Reactor-1 at Dharamjaygarh Sub-station alongwith associated bays and LILO of 765 kV S/C Ranchi-WR PS (near Sipat) Transmission Line at Dharamjaygarh	1.4.2014 (provisional)		
765kV, 3*110 MVAR Bus Reactor-2 at Dharamjaygarh Sub-station along with associated bays	18.4.2014		
Circuit-1 of 765 kV D/C Jharsuguda PS-Dharamjaygarh (near Korba) Line	30.7.2014		
Circuit-2 of 765 kV D/C Jharsuguda Pooling	31.7.2014		



Station – Dharamjaygarh (near Korba) Line			
400 kV 125 MVAR (3 Ph) Bus Reactor -2 with associated bays at Jabalpur 765/400 kV PS	31.12.2014	409/TT/2014	28.4. 2016
765 kV 3*80+1*80 (spare) MVAR Bus Reactor-1 with associated bays at Jabalpur PS	6.5.2015		
765 kV, 3x80 MVAR Line Reactor and associated 765 kV, 1 no. bay for Dharamjaygarh Ckt#2 (Interim Contingency as Bus Reactor) at 765/400 kV Jabalpur Pooling Sub-station.	1.12.2014		
765 kV D/C Dharamjaygarh-Jabalpur PS Transmission Line and 2*330 MVAR Switchable Line Reactors with associated bays at Dharamjaygarh Sub-station and line bays at Dharamjaygarh Sub-station only	17.10.2015	266/TT/2015	26.5. 2016

4. Details of the assets covered in the instant petition along with the actual COD are furnished below:-

Name of Asset	COD	Covered in Petition No.	Final order dated
Asset-1: 765/400 kV, 1500 MVA ICT-1 along with associated bays at Jabalpur Pooling Sub-station (New).	1.1.2014	303/TT/2013	29.1.2016
Asset-2: 400 kV D/C (Quad) Jabalpur Pooling Sub-station (New)-Jabalpur (Existing) Sub-station Transmission Line along with associated bays.	1.1.2014		
Asset-3: 400 kV 125 MVAR Bus Reactor -1 with associated bays at Jabalpur 765/400 kV PS.	1.1.2014	48/TT/2014	18.3.2016
Asset-4: 765 kV 3*80 MVAR Bus Reactor-2 with associated bays at Jabalpur 765/400 kV Pooling Sub-station.	1.3.2014		

5. The details of the capital cost of the instant assets considered by the Commission in orders dated 29.1.2016 and 18.3.2016 are summarized hereunder:-



Asset	Approved Apportioned Cost (FR)	Admitted Cost as on COD	Allowed Add Cap for 2013-14	Total Cost as on 31.3.2014	Excess initial spares
Asset 1	14173.11	10207.99	357.72	10565.71	-
Asset 2	4431.00	4431.00	0.00	4431.00 [#]	-
Asset 3	779.22	566.68*	35.58	602.26	3.99
Asset 4	4638.74	1528.86*	49.48	1578.34	35.39
Total	24022.07	16734.53	442.78	17177.31	39.38

[#]After restricting capital cost as per apportioned approved cost as per FR

*After adjustment of excess initial spares.

6. The details of the transmission charges allowed in aforesaid orders for the instant assets are summarized hereunder:-

Particulars	(₹ in lakh)			
	Asset-1	Asset-2	Asset-3	Asset-4
	(order date 29.1.2016)		(order dated 18.3.2016)	
	2013-14	2013-14	2013-14	2013-14
Depreciation	119.98	58.61	7.71	6.84
Interest on Loan	108.61	53.48	8.57	8.26
Return on Equity	152.76	65.17	8.60	7.62
Interest on Working Capital	10.70	7.77	1.44	0.92
O & M Expenses	39.28	70.02	16.37	7.64
Total	431.33	255.04	42.69	31.37

7. No comments or suggestions have been received from the general public in response to the notices published by the petitioner under Section 64 of the Electricity Act, 2003 ("the Act"). The petitioner has served the petition on the respondents. Madhya Pradesh Power Management Company Limited (MPPMCL), Respondent No. 1 has filed reply vide affidavit dated 1.5.2017. The petitioner has filed its rejoinder to the reply filed by MPPMCL vide affidavit dated 18.5.2017.

8. MPPMCL has submitted that the petitioner has claimed additional capital expenditure of ₹5366.5 lakh under the head sub-station together and ₹1018.64



lakh under head of transmission line under Regulation 9(1)(i) of the 2009 Tariff Regulations and Regulation 14(1)(i) of the 2014 Tariff Regulations on account of Balance/Retention payment without providing proper details and justification. MPPMCL has submitted that the same may only be allowed in true-up when the petitioner comes up with the actual. In response, the petitioner has submitted that the petitioner has claimed additional capital expenditure for assets under instant petition as per Regulation 9(1)(i) of the 2009 Tariff Regulations and Regulation 14(1)(i) of the 2014 Tariff Regulations and the amount claimed pertains to retention amounts of sub-station civil works like control room building, foundation, roads, drains etc., and erection which are to be paid as per the provisions of contractual agreement. The petitioner has submitted that MPPMCL's contention to allow additional capital expenditure only on actual is not correct and as per Regulation 14 of the 2014 Tariff Regulations, the additional capital expenditure for asset may include capital expenditure incurred as well as projected to be incurred in respect of the project and tariff is allowed on projected additional capital expenditure provisionally. The petitioner has submitted that the Commission admits the actual additional capital expenditure only based on Auditor's Certificate at the time of true-up and requested to allow the entire tariff as claimed. We have considered the submissions made by MPPMCL and the petitioner. The additional capital expenditure is allowed as per Regulation 9(1)(i) of the 2009 Tariff Regulations and Regulation 14(1)(i) of the 2014 Tariff Regulations subject to true up. The petitioner is directed to submit the Auditor



Certificate for asset wise liability and its year wise discharge particulars at the time of truing-up.

9. The hearing in the matter was held on 23.5.2017. Having heard the representatives of the petitioner, respondents and perused the material on record, we proceed to dispose of the petition.

Truing-up of Annual Fixed Charges of 2009-14 tariff period

10. The tariff of 2009-14 has been trued up as discussed below.

Capital Cost

11. Regulation 6 of the 2009 Tariff Regulations provides as under:-

“6. Truing up of Capital Expenditure and Tariff.

(1) The Commission shall carry out truing up exercise along with the tariff petition filed for the next tariff period, with respect to the capital expenditure including additional capital expenditure incurred up to 31.3.2014, as admitted by the Commission after prudence check at the time of truing up.

Provided that the generating company or the transmission licensee, as the case may be, may in its discretion make an application before the Commission one more time prior to 2013- 14 for revision of tariff.

(2) The generating company or the transmission licensee, as the case may be, shall make an application, as per Appendix I to these regulations, for carrying out truing up exercise in respect of the generating station a unit or block thereof or the transmission system or the transmission lines or sub-stations thereof by 31.10.2014;

(3) The generating company or the transmission licensee, as the case may be, shall submit for the purpose of truing up, details of capital expenditure and additional capital expenditure incurred for the period from 1.4.2009 to 31.3.2014, duly audited and certified by the auditors;

(4) Where after the truing up, the tariff recovered exceeds the tariff approved by the Commission under these regulations, the generating company or the transmission licensee, as the case may be, shall refund to the beneficiaries or the transmission customers, as the case may be, the excess amount so recovered along with simple interest at the rates specified in the proviso to this regulation.



(5) Where after the truing up, the tariff recovered is less than the tariff approved by the Commission under these regulations, the generating company or the transmission licensee, as the case may be, shall recover from the beneficiaries or the transmission customers, as the case may be, the under-recovered amount along with simple interest at the rates specified in the proviso to this regulation.

(6) The amount under-recovered or over-recovered, along with simple interest at the rates specified in the proviso to this regulation, shall be recovered or refunded by the generating company or the transmission licensee, as the case may be, in six equal monthly installments starting within three months from Page 3 of 6 the date of the tariff order issued by the Commission after the truing up exercise.

Provided that the rate of interest, for clauses (4), (5) and (6) of this regulation, for calculation of simple interest shall be considered as under:

(i) SBI short-term Prime Lending Rate as on 01.04.2009 for the year 2009-10.

(ii) SBI Base Rate as on 01.07.2010 plus 350 basis points for the year 2010-11.

(iii) Monthly average SBI Base Rate from 01.07.2010 to 31.3.2011 plus 350 basis points for the year 2011-12.

(iv) Monthly average SBI Base Rate during previous year plus 350 basis points for the year 2012-13 & 2013-14.”

12. Details of approved apportioned cost, capital cost claimed by the petitioner vide Auditor Certificate dated 10.12.2016 in the instant true up petition as per provision of Regulation 7(1) of the 2009 Tariff Regulations are summarized below:-

(₹ in lakh)					
Asset	Approved cost (FR)	Approved apportioned cost as per (RCE)	Cost as on COD	Add Cap. during 2013-14	Total cost as on 31.3.2014
Asset 1	14173.11	18086.30	10446.49	357.72	10804.20
Asset 2	4431.00	7394.52	4586.28	154.34	4740.62
Asset-3	779.22	1124.23	582.92	34.97	617.89
Asset-4	4638.74	2793.50	1569.65	48.00	1617.65
Total	24022.07	29398.57	17185.34	595.03	17780.37

Interest During Construction (IDC)



13. The assets were scheduled to be commissioned within 36 months from the investment approval dated 15.12.2010 i.e. by 15.12.2013. The Assets-1, 2 and 3 were commissioned within scheduled time i.e. on 1.1.2014 and Asset-4 was commissioned on 1.3.2014 with time over-run of 2 months. The time over-run of 2 months due to delay in land acquisition was condoned in order dated 18.3.2016.

14. The allowable IDC has been worked out considering the information submitted by the petitioner. The loan details submitted in Form-13 for period 2009-14 were also considered for the purpose of IDC calculation on cash and accrued basis. The details of the IDC claimed and allowed are as follows:-

(₹ in lakh)

Asset	Total IDC claimed as per Auditor Certificate dated 10.12.2016	Entitled IDC as on COD as worked out	IDC disallowed as on COD due to computation difference and time over-run (A-B)	Undischar-ged portion of entitled IDC as on COD	IDC allowed on cash basis as on COD	Discharge of IDC: allowed as ACE during 2013-14	Discharge of IDC: allowed as ACE during 2014-15 (in 2014-19 period)
a	b	c	d=b-c	e	f=b-d-e	g	h
Asset-1	626.82	625.06	1.76	185.46	439.60	62.46	123.00
Asset-2	239.18	239.18	0.00	116.84	122.34	15.69	101.15
Asset-3	27.12	27.12	0.00	12.78	14.34	0.61	12.17
Asset-4	33.63	31.19	2.44	5.08	26.11	1.48	3.60
Total	926.75	922.54	4.21	320.16	602.39	80.24	239.92

Incidental Expenditure during Construction (IEDC)

15. The allowable IEDC has been worked out considering the information submitted by the petitioner. Usually, while granting transmission tariff, the IEDC limit mentioned in the 'Abstract Cost Estimate' is considered for allowing the



IEDC. In the instant case, the “IEDC limit” mentioned in the ‘Abstract Cost Estimate’ is 5.00% of the Hard Cost. The IEDC claimed by the petitioner as on COD is lower than 5.00% of the hard cost. Accordingly, the IEDC claimed is allowed to be capitalized in the present case. The details of the IEDC claimed by the petitioner and allowed are as follows:-

Asset	Claimed as per the Auditor's Certificate dated 10.12.2016	IEDC allowed
Asset-1	64.02	64.02
Asset-2	49.91	49.91
Asset-3	7.18	7.18
Asset-4	19.38	19.38

Initial Spares

16. Regulation 8 of 2009 Tariff Regulations provides that initial spares shall be capitalised as a percentage of the original project cost, subject to following ceiling norms:-

Transmission Sub-station	2.5%
Transmission line	0.75%

17. The petitioner has claimed initial spares pertaining to sub-station and transmission line. The details of the initial spares allowed for the sub-station and transmission line are summarized in the table below:-

Asset	(₹ in lakh)	
	Sub-station	Transmission line
Asset-1	349.92	0.00
Asset-2	56.68	28.84
Asset-3	19.05	0
Asset-4	74.95	0



18. The details of the year wise discharge of initial spares submitted by the petitioner:-

(₹ in lakh)

Asset	Particulars	Amount discharged as on COD
Asset-1	Sub-station	83.55
Asset-2	Transmission line	0.00
Asset-3	Sub-station	19.64
Asset-4	Sub-station	1.19
Asset-1	Sub-station	12.40

19. The details of the initial spares claimed by the petitioner based on the capital cost, the allowable initial spares as per the 2009 Tariff Regulations and the excess initial spares claimed are given hereunder:-

(₹ in lakh)

Initial Spares						
Asset	Transmission line			Sub-Station		
	Claimed	Allowed	Excess	Claimed	Allowed	Excess
Asset 1	0.00	0.00	0.00	349.92	349.92	0.00
Asset 2	28.84	28.84	0.00	56.68	55.7	0.98
Asset 3	0.00	0.00	0.00	19.05	18.82	0.23
Asset 4	0.00	0.00	0.00	74.95	61.02	13.93
Total	28.84	28.84	0.00	500.60	485.46	15.14

The excess initial spares claimed by the petitioner are adjusted during 2014-19 tariff period. Hence, no adjustment has been carried out during 2009-14 tariff period.

Capital Cost allowed as on COD

20. Based on the above, the summary of capital cost allowed as on COD are shown below:-



(₹ in lakh)

Asset	Capital cost as on COD claimed by petitioner	IDC disallowed due to difference in computation	Un-discharged IDC as on COD	IEDC disallowed on COD.	Excess Initial Spare disallowed	Capital cost as on COD considered for tariff calculation
1	2	3	4	5	6	7= (2-3-4-5-6)
Asset 1	10446.49	1.76	185.46	0.00	0.00	10259.27
Asset 2	4586.28	0.00	116.84	0.00	0.00	4469.44
Asset 3	582.92	0.00	12.78	0.00	0.00	570.14
Asset 4	1569.65	2.44	5.08	0.00	0.00	1562.13
Total	17185.34	4.21	320.16	0.00	0.00	16860.98

Additional capital expenditure

21. Clause (1) of Regulation 9 of the 2009 Tariff Regulations provides as under:-

“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;
- (ii) Works deferred for execution;
- (iii) Procurement of initial capital spares within the original scope of work, subject to the provisions of Regulation 8;
- (iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and
- (v) Change in Law.”

22. Clause (11) of Regulation 3 of the 2009 Tariff Regulations defines “cut-off” date as under:-

“cut-off date” means 31st March of the year closing after 2 years of the year of commercial operation of the project, and in case the project is declared under commercial operation in the last quarter of the year, the cut-off date shall be 31st March of the year closing after 3 years of the year of commercial operation”.

23. The “cut-off” in case of the instant assets is 31.3.2017.



24. The liability pertaining to IDC has been allowed as additional capital expenditure in the concerned financial year to the extent it has been actually discharged. Based on the information submitted for the purpose of truing up, the Additional Capital Expenditure allowed during the 2009-14 tariff period is summarized below:-

(₹ in lakh)

Particulars	Asset-1		Asset-2	
	Add Cap claimed during 2013-14 as per Auditor Certificate	Add Cap allowed during 2013-14.	Add Cap claimed during 2013-14 as per Auditor Certificate	Add Cap allowed during 2013-14.
Freehold Land	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00
Building & Other Civil Works	42.57	44.76	0.00	0.00
Transmission Line	0.00	0.00	70.14	80.70
Sub-Station Equipment	315.15	375.42	84.20	89.17
PLCC	0.00	0.00	0.00	0.16
Total	357.72	420.18	154.34	170.03

(₹ in lakh)

Particulars	Asset-3		Asset-4	
	Add Cap claimed during 2013-14 as per Auditor Certificate	Add Cap allowed during 2013-14	Add Cap claimed during 2013-14 as per Auditor Certificate	Add Cap allowed during 2013-14
Freehold Land	0.00	0.00	0.00	0.00
Leasehold Land	0.00	0.00	0.00	0.00
Building & Other Civil Works	0.00	0.00	0.00	0.00
Transmission Line	0.00	0.00	0.00	0.00
Sub-Station Equipment	34.97	35.58	48.00	49.48
PLCC	0.00	0.00	0.00	0.00
Total	34.97	35.58	48.00	49.48

Summary of capital cost considered for computation of tariff for the period from COD to 31.3.2014.

25. Based on the above, the capital cost as on COD and the additional capital expenditure considered for computation of tariff of the instant assets



are summarised as below:-

(₹ in lakh)			
Asset	Capital cost considered as on COD after adjusting IDC	Additional capitalization during 2013-14	Admitted Cost as 31.3.2014
Asset- 1	10259.27	420.18	10679.45
Asset-2	4469.44	170.03	4639.47
Asset-3	570.14	35.58	605.72
Asset-4	1562.13	49.48	1611.61
Total	16860.98	675.27	17536.25

Debt: Equity Ratio

26. Regulation 12(1) of the 2009 Tariff Regulations provides as follows:-

“12. Debt-Equity Ratio.

- (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.

Explanation.- The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.”

27. The debt:equity ratio of 70:30 allowed vide orders dated 29.1.2016 and 18.3.2016 in Petition Nos. 303/TT/2013 and 48/TT/2014 respectively has been trued up as provided in Regulation 12(1) of the 2009 Tariff Regulations. The



debt:equity ratio as on COD considered for the purpose of truing up of the tariff of the 2009-14 tariff period is as under:-

(₹ in lakh)

Particular	(%)	Asset-1	Asset-2	Asset-3	Asset-4
		Amount	Amount	Amount	Amount
Debt	70.00	7181.49	3128.61	399.10	1093.49
Equity	30.00	3077.77	1340.83	171.04	468.64
Total	100.00	10259.27	4469.44	570.14	1562.13

28. Similarly, in case of additional capital expenditure during 2013-14, 70:30 ratio has been considered. The overall debt:equity as on 31.3.2014 including additional capitalization is as under:-

(₹ in lakh)

Particular	(%)	Asset-1	Asset-2	Asset-3	Asset-4
		Amount	Amount	Amount	Amount
Debt	70.00	7475.62	3247.63	424.01	1128.12
Equity	30.00	3203.83	1391.84	181.71	483.48
Total	100.00	10679.45	4639.47	605.72	1611.61

Return on Equity (ROE)

29. 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:

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

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.”

30. The petitioner has submitted the MAT rate applicable during the various years. Return on equity has been worked out by considering year wise MAT rate submitted by the petitioner in accordance with Regulation 15 of the 2009 Tariff Regulations. The variation in the tax rate during the 2009-14 tariff period applicable to the petitioner as per the Finance Act of the relevant year for the purpose of grossing up of ROE is as follows:-

Year	MAT Rate (in %)	Grossed up ROE (Base rate/(1-t) (in %)
2009-10	16.995	18.674
2010-11	19.931	19.358
2011-12	20.008	19.377
2012-13	20.008	19.377
2013-14	20.961	19.610

31. The trued up ROE allowed for the instant transmission assets is given below:-

Particulars	(₹ in lakh)			
	Asset-1	Asset-2	Asset-3	Asset-4
	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)
Opening Equity	3077.77	1340.83	171.04	468.64
Addition due to Additional Capitalization	126.05	51.01	10.67	14.84
Closing Equity	3203.83	1391.84	181.71	483.48
Average Equity	3140.80	1366.33	176.38	476.06
Return on Equity (Base Rate)	15.50%	15.50%	15.50%	15.50%
Tax rate for the year 2013-14 (MAT)	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre-Tax)	19.610%	19.610%	19.610%	19.610%
Return on Equity (Pre-Tax)	153.98	66.98	8.65	7.78



Interest on Loan (“IOL”)

32. Regulation 16 of the 2009 Tariff regulations provides that,-

“16. (1) The loans arrived at in the manner indicated in regulation 12 shall be considered as gross normative loan for calculation of interest on loan.

(2) The normative loan outstanding as on 1.4.2009 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2009 from the gross normative loan.

(3) The repayment for the year of the tariff period 2009-14 shall be deemed to be equal to the depreciation allowed for that year:

(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed,.

(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each year applicable to the project:

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.

(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:



Provided that the beneficiary or the transmission customers shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of loan.”

33. The petitioner has claimed the IOL based on actual interest rates for each year during the 2009-14 period. We have considered the submissions of the petitioner and accordingly calculated the IOL based on actual interest rate, in accordance with Regulation 16 of the 2009 Tariff Regulations.

34. In the calculations, the interest on loan has been worked out as detailed below:-

- (i) Gross amount of loan, repayment of instalments and rate of interest and weighted average rate of interest on actual average loan have been considered as per the petition;
- (ii) Weighted average rate of interest on actual average loan worked out as per (i) above, is applied on the notional average loan during the year to arrive at the interest on loan.
- (iii) The repayment for the tariff period 2009-14 has been considered to be equal to the depreciation allowed for that period.

35. The details of weighted average rate of interest are given in **Annexure-I** to **Annexure-IV**. The IOL allowed under Regulation 16 of the 2009 Tariff Regulations is as follows:-



(₹ in lakh)

Particulars	Asset-1	Asset-2	Asset-3	Asset-4
	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)
Gross Normative Loan	7181.49	3128.61	399.10	1093.49
Cumulative Repayment upto Previous Year	0.00	0.00	0.00	0.00
Net Loan-Opening	7181.49	3128.61	399.10	1093.49
Addition due to Additional capitalisation	294.13	119.02	24.91	34.64
Repayment during the year	121.06	60.24	7.76	6.98
Net Loan-Closing	7354.56	3187.40	416.24	1121.14
Average Loan	7268.03	3158.00	407.67	1107.32
Weighted Average Rate of Interest on Loan	6.00%	6.97%	8.47%	9.14%
Interest	108.98	55.04	8.63	8.43

Depreciation

36. 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:-

- | | |
|--|-----------|
| (a) Coal/Lignite based thermal generating station | 25 years |
| (b) Gas/Liquid fuel based thermal generating station | 25 years |
| (c) AC and DC sub-station | 25 years |
| (d) Hydro generating station | 35 years |
| (e) Transmission line | 35 years” |

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

"(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.”

38. Assets-1, 2 and 3 were put under commercial operation on 1.1.2014 and Asset-4 on 1.3.2014 would complete 12 years beyond 2013-14. Accordingly, depreciation has been calculated annually based on Straight Line Method and at rates specified in The



2009 Tariff Regulations. The depreciation for the tariff period 2009-14 has been trued up in accordance with Regulation 17 of the 2009 Tariff Regulations based on admitted capital expenditure as under:-

Particulars	(₹ in lakh)			
	Asset-1 2013-14 (pro-rata)	Asset-2 2013-14 (pro-rata)	Asset-3 2013-14 (pro-rata)	Asset-4 2013-14 (pro-rata)
Opening Gross Block	10259.27	4469.44	570.14	1562.13
Addition during 2009-14 due to Projected Additional Capitalisation	420.18	170.03	35.58	49.48
Closing Gross Block	10679.45	4639.47	605.72	1611.61
Average Gross Block	10469.36	4554.46	587.93	1586.87
Rate of Depreciation	4.6253%	5.2905%	5.2800%	5.2800%
Depreciable Value	8366.76	4099.01	529.14	1428.18
Remaining Depreciable Value	8366.76	4099.01	529.14	1428.18
Depreciation	121.06	60.24	7.76	6.98

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

39. The petitioner has claimed the same O&M Expenses that was approved in orders dated 29.1.2016 and 18.3.2016 in Petition No. 303/TT/2013 and 48/TT/2014 for the year 2013-14. Accordingly, the O&M Expenses claimed by the petitioner, allowed and trued up are the same, and are as follows:-

Particulars	(₹ in lakh)			
	Asset-1 2013-14 (pro-rata)	Asset-2 2013-14 (pro-rata)	Asset-3 2013-14 (pro-rata)	Asset-4 2013-14 (pro-rata)
Approved vide orders dated 29.1.2016 and 18.3.2016	39.28	70.02	16.37	7.64
As claimed by petitioner	39.28	70.02	16.37	7.64
Allowed after true up	39.28	70.02	16.37	7.64

Interest on Working Capital (IWC)

40. The petitioner is entitled to claim interest on working capital as per Regulation 18 of the 2009 Tariff Regulations. The components of the working



capital and the petitioner's entitlement to interest thereon are discussed hereunder:-

(i) Receivables

Receivables as a component of working capital will be equivalent to two months fixed cost. The petitioner has claimed the receivables on the basis of 2 months' annual transmission charges. In the tariff being allowed, receivables have been worked out on the basis of 2 months' transmission charges.

(ii) Maintenance spares

Regulation 28 of the 2014 Tariff Regulations provides for maintenance spares @ 15% per annum of the O&M expenses. The value of maintenance spares has accordingly been worked out.

(iii) O&M Expenses

O&M expenses have been considered for one month as a component of working capital. The petitioner has claimed O&M Expenses for 1 month of the respective year as claimed in the petition. This has been considered in the working capital.

(iv) Rate of interest on working capital:

The SBI Base Rate of 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.

41. The IWC tried up is as under:-



(₹ in lakh)

Particulars	Asset-1	Asset-2	Asset-3	Asset-4
	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)
Maintenance Spares	23.57	42.01	9.82	13.75
O & M expenses	13.09	23.34	5.46	7.64
Receivables	289.37	173.44	28.57	63.54
Total	326.03	238.79	43.85	84.93
Rate of Interest	13.20%	13.20%	13.20%	13.20%
Interest	10.76	7.88	1.45	0.93

Annual Transmission charges

42. In view of above, the annual transmission charges after truing up for the 2009-14 tariff period is as under:-

(₹ in lakh)

Particulars	Asset-1	Asset-2	Asset-3	Asset-3
	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)	2013-14 (pro-rata)
Depreciation	121.06	60.24	7.76	6.98
Interest on Loan	108.98	55.04	8.63	8.43
Return on Equity	153.98	66.98	8.65	7.78
Interest on Working Capital	10.76	7.88	1.45	0.93
O & M Expenses	39.28	70.02	16.37	7.64
Total	434.06	260.16	42.86	31.77

DETERMINATION OF ANNUAL TRANSMISSION CHARGES FOR 2014-19

43. The Commission has provided for combining of tariff of individual assets in a transmission project, commissioned prior to 1.4.2014, for the purpose of allowing single tariff for the 2014-19 tariff period in Regulation 6(1) of the 2014 Tariff Regulations. Regulation 6(1) of the 2014 Tariff Regulations provides as under:-



“6. Tariff determination

(1) Tariff in respect of a generating station may be determined for the whole of the generating station or stage or generating unit or block thereof, and tariff in respect of a transmission system may be determined for the whole of the transmission system or transmission line or sub-station or communication system forming part of transmission system:

Provided that:

(i) where all the generating units of a stage of a generating station or all elements of a transmission system have been declared under commercial operation prior to 1.4.2014, the generating company or the transmission licensee, as the case may be, shall file consolidated petition in respect of the entire generating station or transmissions system for the purpose of determination of tariff for the period 2014-15 to 2018-19:

xxx
xxx”

44. Accordingly, the Commission in order dated 29.2.2016 in Petition No. 181/TT/2014 approved the methodology of combining individual assets at the truing up stage. The same methodology has been adopted in the instant case.

45. Further, to determine a single transmission tariff for various individual assets after combining them, the concept of effective date of commercial operation and weighted average life were introduced in Regulation 27 of 2014 Tariff Regulations. The relevant portion of Regulation 27 of 2014-19 Tariff Regulations is reproduced hereunder:-

“27. Depreciation:

(1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units or elements thereof.



Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.

(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.

xxx

xxx

(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.

xxx

xxx”

46. As stated earlier, the tariff for the 2009-14 period was allowed individually for Assets-1 and 2 vide order dated 29.1.2016 in Petition No. 303/TT/2013 and for Assets-3 and 4 vide order dated 18.3.2016 in Petition No.48/TT2014 and tariff for 2009-14 tariff period has been trued up separately for the 2009-14 tariff period in the preceding paragraphs. The tariff of the these assets for the 2014-19 tariff period has been combined into a single tariff as provided for in Regulation 6(1) of the 2014 Tariff Regulations.

47. Some of the assets covered in the instant project were commissioned during 2009-14 tariff period and others in 2014-19 tariff period. The petitioner in the instant petition has claimed single tariff on consolidated capital cost of



all the assets put into commercial operation upto 31.3.2014 for the 2014-19 tariff period. Accordingly, consolidated tariff is allowed for the assets commissioned till 31.03.2014. The petitioner is directed to submit a single consolidated petition for the project as whole at the time of truing up at the end of 2014-19 tariff period.

48. For the purpose of calculation of single tariff, the Effective COD and Weighted Average Life of the combined four assets have been computed as discussed in the following paragraphs.

Effective Date of Commercial Operation (E-COD)

49. The petitioner has stated that E-COD of the combined assets works out to be 1.1.2014. However, based on the trued up capital cost and actual COD of the 4 individual assets, the E-COD has been worked out as 6.1.2014 and is shown below:-

(₹ in lakh)						
Asset	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- 1	1.1.2014	10683.12	60.96%	59	35.96	6.1.2014
Asset-2	1.1.2014	4626.55	26.40%	59	15.57	
Asset-3	1.1.2014	605.64	3.46%	59	2.04	
Asset-4	1.3.2014	1610.66	9.19%	0	0.00	
Total		17525.98	100.00%		53.58	

50. 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 6.1.2014.



Weighted Average Life (WAL)

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

52. 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 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.

53. 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 2014-19 Tariff Regulations. The element wise life as it was defined in Tariff Regulations prevailed at the time of actual COD of individual assets has been ignored for this purpose. The life as defined in 2014 Tariff Regulations has been considered for determination of WAL. Accordingly, the Weighted Average Life (WAL) of the all the assets commissioned during 2009-14 tariff period has been worked out as 25 years as shown below:-

(₹ in lakh)

Determination of Weighted Average Life of the Project							
Particulars	Asset 1	Asset 2	Asset 3	Asset 4	Combined Cost (a)	Life as per 2014 Tariff Regulations (b)	Weight (a) x (b)



Freehold Land	1172.96	0.00	0.00	0.00	1172.96	0	0.00
Leasehold Land	0.00	0.00	0.00	0.00	0.00	25	0.00
Building & Other Civil Works	363.18	0.00	0.00	0.00	363.18	25	9079.48
Transmission Line	0.00	3089.97	0.00	0.00	3089.97	35	108149.09
Sub-Station Equipment	9143.31	1503.78	605.72	1611.61	12864.42	25	321610.39
PLCC	0.00	45.72	0.00	0.00	45.72	15	685.79
Total	10679.45	4639.47	605.72	1611.61	17536.25	25.00	439524.74
Weighted Average life	25 Years						

54. It is assumed that, the Weighted Average Life 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 25 years.

Capital Cost as on 1.4.2014

55. Clause (1) & (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.”



56. The element wise capital cost (i.e. Land, Building, Transmission line, Sub-station and PLCC) as admitted by Commission as on 31.3.2014 of the individual assets are clubbed together and the combined capital cost has been considered as on 1.4.2014 as under:-.

(₹ in lakh)					
Particulars	Asset 1	Asset 2	Asset 3	Asset 4	Combined Cost (a)
Freehold Land	1172.96	0.00	0.00	0.00	1172.96
Leasehold Land	0.00	0.00	0.00	0.00	0.00
Building & Other Civil Works	363.18	0.00	0.00	0.00	363.18
Transmission Line	0.00	3089.97	0.00	0.00	3089.97
Sub-Station Equipment	9143.31	1503.78	605.72	1611.61	12864.42
PLCC	0.00	45.72	0.00	0.00	45.72
Total	10679.45	4639.47	605.72	1611.61	17536.25
Weighted Average life	25 years				

57. The total of the asset wise capital cost of ₹17536.25 lakh has been considered as the admitted capital cost as on 1.4.2014 for the Project as whole.

58. The element wise capital cost (i.e. Land, Building, Transmission line, Substation and PLCC) as admitted by Commission as on 31.3.2014 for Assets-1, 2, 3 and 4 are clubbed together and the combined capital costs has been considered as capital cost as on 1.4.2014.

(₹ in lakh)					
Particulars	Asset 1	Asset 2	Asset 3	Asset 4	Combined Cost (a)
Freehold Land	1172.96	0.00	0.00	0.00	1172.96
Leasehold Land	0.00	0.00	0.00	0.00	0.00
Building & Other Civil Works	363.18	0.00	0.00	0.00	363.18
Transmission Line	0.00	3089.97	0.00	0.00	3089.97
Sub-Station Equipment	9143.31	1503.78	605.72	1611.61	12864.42
PLCC	0.00	45.72	0.00	0.00	45.72
Total	10679.45	4639.47	605.72	1611.61	17536.25



Weighted Average life	25 years
------------------------------	----------

59. The total of such element wise capital cost ₹17536.25 lakh has been considered as the admitted capital cost as on 1.4.2014 for the project as whole.

Treatment of initial spares

60. The petitioner has claimed initial spares pertaining to sub-station and transmission line starting from the actual COD till the cut-off date. The initial spares claimed by the petitioner for the sub-station and the transmission line are summarized in the table below:-

(₹ in lakh)

Asset	Sub-station	Transmission line
Asset-1	349.92	0.00
Asset-2	56.68	28.84
Asset-3	19.05	0
Asset-4	74.95	0

61. Year wise asset-wise discharged details of spares submitted by the petitioner:-

(₹ in lakh)

Asset		Year wise spares liability discharged upto cut-off date				Total
		Upto COD and included in Auditor Certificate upto COD	2014-15	2015-16	Balance liabilities	
Asset-1	SS	83.55	23.23	46.60	196.54	349.92
Asset-2	TL	0.00	25.96	0.00	2.88	28.84
	SS	19.64	6.53	15.50	15.01	56.68
Asset-3	SS	1.19	8.56	9.30	0.00	19.05
Asset-4	SS	12.40	28.65	13.86	20.04	74.95

62. Based on the above submission, the asset wise excess initial spare has been adjusted in the Additional Capital Expenditure as shown below, which is subject to true up:-



(₹ in lakh)

Asset	2015-16	2016-17
Asset-1	0.00	0.00
Asset-2	0.00	0.98
Asset-3	0.23	13.93
Asset-4	0.00	0.00
Total	0.23	14.91

Projected Additional Capital Expenditure

63. Sub-clause (i) of Clause 1 and sub-clause (ix) of Clause 3 of Regulation 14 of the 2014 Tariff Regulations provides as follows:-

“(1) The capital expenditure in respect of the new project or an existing project 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 recognized to be payable at a future date;”

“(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:

(ix) In case of transmission system, any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement due to obsolesce of technology, replacement of switchyard equipment due to increase of fault level, tower strengthening, communication equipment, emergency restoration system, insulators cleaning infrastructure, replacement of porcelain insulator with polymer insulators, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system;”

64. The details of the asset wise additional capital expenditure claimed by the petitioner as per the Auditor Certificate are as follows:-

(₹ in lakh)

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Asset 1	1260.57	2192.34	2015.43	364.80	0.00
Asset 2	515.16	543.7	480.66	0.00	0.00
Asset 3	93.83	39.2	2.22	0.00	0.00
Asset 4	421.79	277.07	138.24	0.00	0.00
Total	2291.35	3052.31	2636.55	364.80	0.00



65. The petitioner vide Form 7 has made the above claim under Regulation 14(1)(i) of the 2014 Tariff Regulations for the combined assets for 2014-19 tariff period. The cut-off date in case of all the instant assets is 31.3.2017. The petitioner has claimed projected additional capital expenditure beyond cut-off date (i.e. ₹364.80 during 2017-18) under Regulation 14(1)(i), whereas the said Regulation pertains to Add Cap before the cut-off date. Further, the petitioner has also not submitted the details of liability flow duly certified by the Auditor. We are unable to verify the claim made after cut-off date. Therefore, the petitioner's claim of ACE of ₹364.80 lakh during the year 2017-18 has been disallowed.

66. The IDC actually discharged has been allowed as additional capitalization in 2014-15. The additional capitalisation allowed for 2014-19 tariff period after adjusting initial spares and IDC in the respective financial year are summarized below:-

(₹ in lakh)					
Srl. No.	Asset	2014-15	2015-16	2016-17	2017-18
A	Claimed as per Auditor certificate	2291.35	3052.31	2636.55	364.80
B	Discharge of IDC	239.92	0.00	0.00	0.00
C	ACE disallowed	0.00	0.00	0.00	364.80
D	Excess initial spare	0.00	0.23	14.91	0.00
E	ACE allowed for tariff E=(A+B-C-D)	2531.27	3052.08	2621.64	0.00

67. The additional capital expenditure allowed is subject to true up. The petitioner is directed to submit the Auditor Certificate for asset wise liability and its year wise discharge particulars.

68. Based on the above, the capital cost as on 1.4.2014 and the additional



capital expenditure considered for tariff computation for the project as a whole are summarised as below:-

Particulars	Combined admitted capital cost as on 1.4.2014	Projected Additional capitalization				Admitted Cost as 31.3.2019
		2014-15	2015-16	2016-17	2017-18	
Combined asset	17536.25	2531.27	3052.08	2621.64	0.00	25741.24

Debt:Equity Ratio

69. 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.”

70. The petitioner has considered debt:equity ratio of 70:30 as on 31.3.2014 for the combined assets. 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. For additional capitalization, the petitioner has proposed normative debt:equity ratio of 70:30 and the same has been considered. The details of the debt:equity as on 1.4.2014 considered for the purpose of determination of tariff for the 2014-19 tariff period and as on 31.3.2019 are as follows:-

Particulars	Ratio (%)	(₹ in lakh)	
		As on 1.4.2014	As on 31.3.2019



Debt	70.00	12275.37	18018.87
Equity	30.00	5260.87	7722.37
Total	100.00	17536.25	25741.24

Return on Equity (“RoE”)

71. Clause (1) & (2) of Regulation 24 and Clause (2) and (3) 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:

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

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

xxxx

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2014-15 to 2018-19 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after trueing up, shall be recovered or refunded to beneficiaries or the long term transmission customers/DICs as the case may be on year to year basis.”



72. The petitioner has submitted that it is liable to pay income tax at MAT rate, the RoE has been calculated @ 19.610% after grossing up the RoE with MAT rate of 20.961% during 2013-14, as provided under Regulation 25(2)(i) of the 2014 Tariff Regulations. As per Regulation 25(3) of the 2014 Tariff Regulations, the grossed up rate of RoE at the end of the financial year shall be trued up based on actual tax paid together with any additional tax demand including interest thereon duly adjusted for any refund of tax including interest received from the IT authorities pertaining to the 2014-19 period on actual gross income of any financial year. 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.

73. We have considered the submissions made by the petitioner. The Return on Equity has been worked out in accordance with Regulation 24 and Regulation 25 of the 2014 Regulations. The rate of pre-tax return on equity for 2014-19 period has been determined by grossing up the base rate of 15.00% with effective tax rate of 20.961% (i.e. MAT rate applicable for the financial year 2013-14). This rate of pre-tax return on equity is subject to true up based on the effective tax rate of respective financial year applicable to the petitioner company

74. Accordingly, the following ROE is allowed for the combined assets for the 2014-19 tariff period:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Equity	5260.87	6020.26	6935.88	7722.37	7722.37
Additional Capitalization	759.38	915.62	786.49	0.00	0.00
Closing Equity	6020.26	6935.88	7722.37	7722.37	7722.37
Average Equity	5640.56	6478.07	7329.13	7722.37	7722.37
Return on Equity (Base Rate) (%)	15.50%	15.50%	15.50%	15.50%	15.50%
MAT rate for the financial year 2013-14 (%)	20.961%	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre Tax) (%)	19.610%	19.610%	19.610%	19.610%	19.610%
Return on Equity (Pre Tax)	1106.11	1270.35	1437.24	1514.36	1514.36

Interest on Loan (“IOL”)

75. Clause (5) & (6) of Regulation 26 of the 2014 Tariff Regulations provides as under:-

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

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

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

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

76. The actual loan portfolio as on 31.3.2014 of the instant assets has been combined and it has been considered as actual loan portfolio of combined assets as on 1.4.2014. Accordingly, the weighted average rate of interest has been calculated on the basis of the actual loan portfolio of the combined asset. The



IOL has been worked out in accordance with Regulation 26 of the 2014 Tariff Regulations by actual weighted average rate of interest during the 2014-15.

77. In the calculations, the interest on loan has been worked out as detailed below:-

- (i) Gross amount of loan, repayment of instalments and rate of interest on actual loans have been considered as per petition.
- (ii) The yearly repayment for the tariff period 2014-19 has been considered to be equal to the depreciation allowed for that year.
- (iii) Weighted average rate of interest on actual average loan worked out as per (i) above is applied on the normative average loan during the year to arrive at the interest on loan.
- (iv) The petitioner has shown the same Foreign exchange loans with different exchange rates in Form 9C. Therefore, the petitioner may be directed to submit the loan balance in INR as per the single exchange rate (i.e. as on 1.4.2014), at the time of filing the truing up petition.

78. The details of weighted average rate of interest are placed at **Annexure-V**. The IOL allowed for the combined asset for the 2014-19 tariff period is as follows:-

	(₹ in lakh)				
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Gross loan opening	12275.37	14047.26	16183.72	18018.87	18018.87



Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Cumulative Repayment upto previous year	196.04	1116.86	2166.32	3341.92	4578.41
Net Loan-Opening	12079.33	12930.41	14017.40	14676.95	13440.46
Additions during the year	1771.89	2136.46	1835.15	0.00	0.00
Repayment during the year	920.81	1049.46	1175.60	1236.49	1236.49
Net Loan-Closing	12930.41	14017.40	14676.95	13440.46	12203.97
Average Loan	12504.87	13473.90	14347.17	14058.70	12822.22
Rate of Interest (%)	6.836%	7.206%	7.524%	7.627%	7.594%
Interest	854.81	970.92	1079.43	1072.22	973.77

Depreciation

79. 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."

80. The cumulative depreciation for the combined assets commissioned till 31.3.2014 has been computed as shown below:-

Particulars as on 31.3.2014	(₹ in lakh)				
	Asset 1	Asset 2	Asset 3	Asset 4	Combined Asset
Cumulative Depreciation	121.06	60.24	7.76	6.98	196.04



81. The capital cost, E-COD, Weighted Average Life and lapsed life for combined assets commissioned till 31.3.2014 as determined in above paragraphs are considered for computation of depreciation for the 2014-19 tariff period.

82. The combined assets would complete the 12 years from the effective date of commercial operation beyond the 2014-19 tariff period. Accordingly, the depreciation for 2014-19 tariff period has been worked out based on Straight Line Method and at rates specified in Appendix-II to 2014 Tariff Regulations.

83. The details of the depreciation allowed for the combined assets for the 2014-19 tariff period are given hereunder:-

Particulars	(₹ in lakh)				
	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Gross Block	17536.25	20067.52	23119.60	25741.24	25741.24
Addition during 2014-19 due to Projected Additional Capitalisation	2531.27	3052.08	2621.64	0.00	0.00
Closing Gross Block	20067.52	23119.60	25741.24	25741.24	25741.24
Average Gross Block	18801.88	21593.56	24430.42	25741.24	25741.24
Rate of Depreciation	4.90%	4.86%	4.81%	4.80%	4.80%
Depreciable Value	15828.10	18296.18	20783.43	21903.75	21903.75
Remaining Depreciable Value	15632.06	17179.32	18617.11	18561.82	17325.34
Depreciation	920.81	1049.46	1175.60	1236.49	1236.49

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

84. 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 2008-09 to 2012-13. The petitioner has further submitted that the wage revision of the employees of the petitioner Company 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.

85. We have considered the submissions of 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. The petitioner has claimed O&M Expenses as specified in Regulation 29(4) of the 2014 Tariff Regulations and accordingly, the same is considered for the purpose of computation of tariff. The details of O&M Expenses for the combined assets allowed are as follows:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
O & M Expenses	547.05	565.20	583.97	603.38	623.36

Interest on Working Capital (“IWC”)

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

“28. Interest on Working Capital

- (c)(i) Receivables equivalent to two months of fixed cost;
- (ii) Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and
- (iii) Operation and maintenance expenses for one month”



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

87. The petitioner is entitled to claim interest on working capital as per the 2014 Tariff Regulations. The components of the working capital and the petitioner’s entitlement to interest thereon are discussed hereunder:-

(i) Maintenance spares

Regulation 28 of the 2014 Tariff Regulations provides for maintenance spares @ 15% per annum of the O&M expenses. The value of maintenance spares has accordingly been worked out.

(ii) O & M expenses

Operation and maintenance expenses have been considered for one month as a component of working capital. The petitioner has claimed O&M expenses for 1 month of the respective year as claimed in the petition. This has been considered in the working capital.

(iii) Receivables

Receivables as a component of working capital will be equivalent to two months fixed cost. The petitioner has claimed the receivables on the basis of 2 months’ annual transmission charges. In the tariff being allowed, receivables have been worked out on the basis of 2 months’ transmission charges.



(iv) Rate of interest on working capital

As provided in Regulation 28(3) of the 2014 Tariff Regulations, SBI Base Rate (10.00%) as on 1.4.2014 plus 350 Bps i.e. 13.50 % have been considered as the rate of interest on working capital.

88. The interest on working capital allowed for the combined assets is shown in the table below:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Maintenance Spares	82.06	84.78	87.60	90.51	93.50
O & M expenses	45.59	47.10	48.66	50.28	51.95
Receivables	587.56	660.48	732.25	757.96	744.69
Total	715.20	792.36	868.51	898.75	890.14
Interest	96.55	106.97	117.25	121.33	120.17

Annual Transmission Charges

89. The details of Annual Transmission Charges allowed for the combined assets for the 2014-19 tariff period is summarised below:-

(₹ in lakh)					
Particulars	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	920.81	1049.46	1175.60	1236.49	1236.49
Interest on Loan	854.82	970.92	1079.43	1072.22	973.77
Return on Equity	1106.11	1270.35	1437.24	1514.36	1514.36
Interest on Working Capital	96.55	106.97	117.25	121.33	120.17
O & M Expenses	547.05	565.20	583.97	603.38	623.36
Total	3525.35	3962.91	4393.49	4547.78	4468.14

Filing Fee and Publication Expenses

90. The petitioner has sought reimbursement of fee paid by it for filing the petition and publication expenses, in terms of Regulation 52 of the 2014 Tariff Regulations. The petitioner shall be entitled for reimbursement of the filing fees and publication expenses in connection with the present petition, directly from the



beneficiaries on pro-rata basis in accordance with clause (1) of Regulation 52 of the 2014 Tariff Regulations.

Licence Fee and RLDC Fees and Charges

91. 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.

Sharing of Transmission Charges

92. The billing, collection and disbursement of the transmission charges approved shall be governed by the provisions of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010, as amended from time to time, as provided in Regulation 43 of the 2014 Tariff Regulations.

93. This order disposes of Petition No. 86/TT/2017.

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

sd/-
(A.S. Bakshi)
Member

sd/-
(A.K. Singhal)
Member

sd/-
(Gireesh B. Pradhan)
Chairperson



ANNEXURE-I**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN
FOR TARIFF PERIOD 2009-14**

(₹ in lakh)

	Details of Loan	2013-14
1	Bond - XXXIV - LOAN -1	
	Gross loan opening	276.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	276.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	276.00
	Average Loan	276.00
	Rate of Interest	8.84%
	Interest	24.40
	Rep Schedule	12 Annual installments from 21.10.2014
2	Bond XXXVII - LOAN - 2	
	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	12 Annual installments from 26.12.2015
3	Bond XXXVIII - LOAN - 3	
	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	9.25%
	Interest	0.93
	Rep Schedule	9.3.2027 Bullet Payment



4	Bond XXXIX - LOAN - 4	
	Gross loan opening	85.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	85.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	85.00
	Average Loan	85.00
	Rate of Interest	9.40%
	Interest	7.99
	Rep Schedule	29.3.2027 Bullet Payment
5	Bond XLIII - LOAN -11	
	Gross loan opening	188.92
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	188.92
	Additions during the year	94.24
	Repayment during the year	0.00
	Net Loan-Closing	283.16
	Average Loan	236.04
	Rate of Interest	7.93%
	Interest	18.72
	Rep Schedule	12 Annual installments from 20.05.2017
6	SBI (21.3.2012)	
	Gross loan opening	220.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	220.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	220.00
	Average Loan	220.00
	Rate of Interest	10.25%
	Interest	22.55
	Rep Schedule	22 annual installments from 31.8.2016
7	Bond XL	
	Gross loan opening	2264.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	2264.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	2264.00
	Average Loan	2264.00
	Rate of Interest	9.30%



	Interest	210.55
	Rep Schedule	12 Annual installments from 28.6.2016
10	IFC (IFC-A Loan) (31419-00)	
	Gross loan opening	350.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	350.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	350.00
	Average Loan	350.00
	Rate of Interest	3.280%
	Interest	11.48
	Rep Schedule	20 Half yearly equal installments from 15.09.2017
11	IFC (IFC-B Loan) (31419-01)	
	Gross loan opening	1210.01
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	1210.01
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1210.01
	Average Loan	1210.01
	Rate of Interest	2.43%
	Interest	29.35
	Rep Schedule	4 Half yearly equal installments from 15.9.2015
	IFC (ICFF Loan) (31419-02)	
12	Gross loan opening	510.01
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	510.01
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	510.01
	Average Loan	510.01
	Rate of Interest	3.28%
	Interest	16.71
	Rep Schedule	20 Half yearly equal installments from 15.09.2017
13	FC Bond (17.1.2013)	
	Gross loan opening	2020.02
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	2020.02
	Additions during the year	0.00



	Repayment during the year	0.00
	Net Loan-Closing	2020.02
	Average Loan	2020.02
	Rate of Interest	4.097%
	Interest	82.75
	Rep Schedule	Bullet payment on 17.1.2023
14	Bond XLV - ADD CAP FOR 2013-14	
	Gross loan opening	0.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	199.88
	Repayment during the year	0.00
	Net Loan-Closing	199.88
	Average Loan	99.94
	Rate of Interest	9.65%
	Interest	9.64
	Rep Schedule	12 Annual installments from 28.02.2018
	Total Loan	
	Gross loan opening	7183.96
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	7183.96
	Additions during the year	294.12
	Repayment during the year	0.00
	Net Loan-Closing	7478.08
	Average Loan	7331.02
	Weighted Average Rate of Interest	5.9977%
	Interest	439.70



**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN
FOR TARIFF PERIOD 2009-14**

(₹ in lakh)

	Details of Loan	2013-14
1	Bond - XXXIV - LOAN - 1	
	Gross loan opening	208.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	208.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	208.00
	Average Loan	208.00
	Rate of Interest	8.84%
	Interest	18.39
	Rep Schedule	12 Annual installments from 21.10.2014
2	Bond XXXVII - LOAN - 2	
	Gross loan opening	25.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	25.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	25.00
	Average Loan	25.00
	Rate of Interest	9.25%
	Interest	2.31
	Rep Schedule	12 Annual installments from 26.12.2015
3	Bond XXXVIII - LOAN - 3	
	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	9.25%
	Interest	0.93
	Rep Schedule	9.3.2027 Bullet Payment
4	Bond XXXIX - LOAN - 4	
	Gross loan opening	40.00



	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	40.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	40.00
	Average Loan	40.00
	Rate of Interest	9.40%
	Interest	3.76
	Rep Schedule	29.3.2027 Bullet Payment
5	Bond XLIII - LOAN -11	
	Gross loan opening	1641.81
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	1641.81
	Additions during the year	10.98
	Repayment during the year	0.00
	Net Loan-Closing	1652.79
	Average Loan	1647.30
	Rate of Interest	7.93%
	Interest	130.63
	Rep Schedule	12 Annual installments from 20.05.2017
6	SBI (21.3.2012)	
	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	10.25%
	Interest	10.25
	Rep Schedule	22 annual installments from 31.8.2016
7	Bond XL	
	Gross loan opening	220.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	220.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	220.00
	Average Loan	220.00
	Rate of Interest	9.30%
	Interest	20.46
	Rep Schedule	12 Annual installments from 28.6.2016



10	IFC (IFC-A Loan) (31419-00)	
	Gross loan opening	75.02
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	75.02
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	75.02
	Average Loan	75.02
	Rate of Interest	3.280%
	Interest	2.46
	Rep Schedule	20 Half yearly equal installments from 15.09.2017
11	IFC (IFC-B Loan) (31419-01)	
	Gross loan opening	260.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	260.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	260.00
	Average Loan	260.00
	Rate of Interest	2.43%
	Interest	6.31
	Rep Schedule	4 Half yearly equal installments from 15.9.2015
	IFC (ICFF Loan) (31419-02)	
12	Gross loan opening	110.03
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	110.03
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	110.03
	Average Loan	110.03
	Rate of Interest	3.28%
	Interest	3.60
	Rep Schedule	20 Half yearly equal installments from 15.09.2017
	FC Bond (17.1.2013)	
	Gross loan opening	439.99
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	439.99
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	439.99
	Average Loan	439.99
	Rate of Interest	4.097%



	Interest	18.02
	Rep Schedule	Bullet payment on 17.1.2023
	Bond XLV - ADD CAP FOR 2013-14	
	Gross loan opening	0.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	108.04
	Repayment during the year	0.00
	Net Loan-Closing	108.04
	Average Loan	54.02
	Rate of Interest	9.65%
	Interest	5.21
	Rep Schedule	12 Annual installments from 28.02.2018
	Total Loan	
	Gross loan opening	3129.85
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	3129.85
	Additions during the year	119.02
	Repayment during the year	0.00
	Net Loan-Closing	3248.87
	Average Loan	3189.36
	Weighted Average Rate of Interest	6.9712%
	Interest	222.34



ANNEXURE-III**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN
FOR TARIFF PERIOD 2009-14**

		(₹ in lakh)
Details of Loan		2013-14
1	Bond - XXXIV - LOAN - 1	
	Gross loan opening	40.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	40.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	40.00
	Average Loan	40.00
	Rate of Interest	8.84%
	Interest	3.54
	Rep Schedule	12 Annual installments from 21.10.2014
2	Bond XXXVII - LOAN - 2	
	Gross loan opening	2.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	2.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	2.00
	Average Loan	2.00
	Rate of Interest	9.25%
	Interest	0.19
	Rep Schedule	12 Annual installments from 26.12.2015
3	Bond XXXVIII - LOAN - 3	
	Gross loan opening	1.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	1.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1.00
	Average Loan	1.00
	Rate of Interest	9.25%
	Interest	0.09
	Rep Schedule	9.3.2027 Bullet Payment



4	Bond XXXIX - LOAN - 4	
	Gross loan opening	2.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	2.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	2.00
	Average Loan	2.00
	Rate of Interest	9.40%
	Interest	0.19
	Rep Schedule	29.3.2027 Bullet Payment
5	Bond XLIV	
	Gross loan opening	308.35
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	308.35
	Additions during the year	0.43
	Repayment during the year	0.00
	Net Loan-Closing	308.78
	Average Loan	308.57
	Rate of Interest	8.70%
	Interest	26.85
	Rep Schedule	12 Annual installments from 20.05.2017
6	SBI (21.3.2012)	
	Gross loan opening	13.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	13.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	13.00
	Average Loan	13.00
	Rate of Interest	10.25%
	Interest	1.33
	Rep Schedule	22 annual installments from 31.8.2016
7	Bond XL	
	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	9.30%
	Interest	0.56
	Rep Schedule	12 Annual installments from 28.6.2016
10	IFC (IFC-A Loan) (31419-00)	
	Gross loan opening	2.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	2.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	2.00
	Average Loan	2.00
	Rate of Interest	3.280%
	Interest	0.07
	Rep Schedule	20 Half yearly equal installments from 15.09.2017
11	IFC (IFC-B Loan) (31419-01)	
	Gross loan opening	4.99
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	4.99
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	4.99
	Average Loan	4.99
	Rate of Interest	2.43%
	Interest	0.12
	Rep Schedule	4 Half yearly equal installments from 15.9.2015
12	IFC (ICFF Loan) (31419-02)	
	Gross loan opening	4.99
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	4.99
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	4.99
	Average Loan	4.99
	Rate of Interest	3.28%
	Interest	0.16
	Rep Schedule	20 Half yearly equal installments from 15.09.2017
13	FC Bond (17.1.2013)	
	Gross loan opening	14.98
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	14.98



	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	14.98
	Average Loan	14.98
	Rate of Interest	4.097%
	Interest	0.61
	Rep Schedule	Bullet payment on 17.1.2023
14	Bond XLV - ADD CAP FOR 2013-14	
	Gross loan opening	0.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	0.00
	Additions during the year	24.48
	Repayment during the year	0.00
	Net Loan-Closing	24.48
	Average Loan	12.24
	Rate of Interest	9.65%
	Interest	1.18
	Rep Schedule	12 Annual installments from 28.02.2018
	Total Loan	
	Gross loan opening	399.31
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	399.31
	Additions during the year	24.91
	Repayment during the year	0.00
	Net Loan-Closing	424.22
	Average Loan	411.77
	Weighted Average Rate of Interest	8.4714%
	Interest	34.88



ANNEXURE-IV**CALCULATION OF WEIGHTED AVERAGE RATE OF INTEREST ON LOAN
FOR TARIFF PERIOD 2009-14****(₹ in lakh)**

	Details of Loan	2013-14
1	Bond - XXXIV - LOAN - 1	
	Gross loan opening	40.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	40.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	40.00
	Average Loan	40.00
	Rate of Interest	8.84%
	Interest	3.54
	Rep Schedule	12 Annual installments from 21.10.2014
2	Bond XXXVII - LOAN - 2	
	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	12 Annual installments from 26.12.2015
3	Bond XXXVIII - LOAN - 3	
	Gross loan opening	1.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	1.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	1.00
	Average Loan	1.00
	Rate of Interest	9.25%
	Interest	0.09
	Rep Schedule	9.3.2027 Bullet Payment
4	Bond XXXIX - LOAN - 4	
	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	9.40%
	Interest	0.94
	Rep Schedule	29.3.2027 Bullet Payment
6	SBI (21.3.2012)	
	Gross loan opening	40.00
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	40.00
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	40.00
	Average Loan	40.00
	Rate of Interest	10.25%
	Interest	4.10
	Rep Schedule	22 annual installments from 31.8.2016
7	Bond XL	
	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	9.30%
	Interest	4.65
	Rep Schedule	12 Annual installments from 28.6.2016
10	IFC (IFC-A Loan) (31419-00)	
	Gross loan opening	6.01
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	6.01
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	6.01
	Average Loan	6.01
	Rate of Interest	3.280%
	Interest	0.20
	Rep Schedule	20 Half yearly equal installments from 15.09.2017



11	IFC (IFC-B Loan) (31419-01)	
	Gross loan opening	25.12
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	25.12
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	25.12
	Average Loan	25.12
	Rate of Interest	2.43%
	Interest	0.61
	Rep Schedule	4 Half yearly equal installments from 15.9.2015
12	IFC (ICFF Loan) (31419-02)	
	Gross loan opening	10.02
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	10.02
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	10.02
	Average Loan	10.02
	Rate of Interest	3.28%
	Interest	0.33
	Rep Schedule	20 Half yearly equal installments from 15.09.2017
13	FC Bond (17.1.2013)	
	Gross loan opening	45.17
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	45.17
	Additions during the year	0.00
	Repayment during the year	0.00
	Net Loan-Closing	45.17
	Average Loan	45.17
	Rate of Interest	4.097%
	Interest	1.85
	Rep Schedule	Bullet payment on 17.1.2023
14	Bond XLV - ADD CAP FOR 2013-14	
	Gross loan opening	852.89
	Cumulative Repayment upto COD/previous year	0.00
	Net Loan-Opening	852.89
	Additions during the year	34.64
	Repayment during the year	0.00
	Net Loan-Closing	887.53



Average Loan	870.21
Rate of Interest	9.65%
Interest	83.98
Rep Schedule	12 Annual installments from 28.02.2018
Total Loan	
Gross loan opening	1085.21
Cumulative Repayment upto COD/previous year	0.00
Net Loan-Opening	1085.21
Additions during the year	34.64
Repayment during the year	0.00
Net Loan-Closing	1119.85
Average Loan	1102.53
Weighted Average Rate of Interest	9.1373%
Interest	100.74



ANNEXURE-V

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

(₹ in lakh)

	Details of Loan	2014-15	2015-16	2016-17	2017-18	2018-19
1	Bond XXXIV					
	Gross loan opening	564.00	564.00	564.00	564.00	564.00
	Cumulative Repayment upto COD/previous year	0.00	47.00	141.00	188.00	141.00
	Net Loan-Opening	564.00	517.00	423.00	376.00	423.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	47.00	47.00	47.00	47.00	47.00
	Net Loan-Closing	517.00	470.00	376.00	329.00	376.00
	Average Loan	540.50	493.50	399.50	352.50	399.50
	Rate of Interest	8.84%	8.84%	8.84%	8.84%	8.84%
	Interest	47.78	43.63	35.32	31.16	35.32
	Rep Schedule	12 annual installments from 10.10.2014				
2	Bond XXXVII					
	Gross loan opening	82.00	82.00	82.00	82.00	82.00
	Cumulative Repayment upto COD/previous year	0.00	0.00	6.83	13.67	20.50
	Net Loan-Opening	82.00	82.00	75.17	68.33	61.50
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	6.83	6.83	6.83	6.83
	Net Loan-Closing	82.00	75.17	68.33	61.50	54.67
	Average Loan	82.00	78.58	71.75	64.92	58.08
	Rate of Interest	9.25%	9.25%	9.25%	9.25%	9.25%
	Interest	7.59	7.27	6.64	6.00	5.37
	Rep Schedule	12 annual installments from 26.12.2015				
3	Bond XXXVIII					
	Gross loan opening	22.00	22.00	22.00	22.00	22.00
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	22.00	22.00	22.00	22.00	22.00
	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	22.00	22.00	22.00	22.00	22.00
	Average Loan	22.00	22.00	22.00	22.00	22.00
	Rate of Interest	9.25%	9.25%	9.25%	9.25%	9.25%
	Interest	2.04	2.04	2.04	2.04	2.04
	Rep Schedule	Final payment on 9.3.2027				
4	FC Bond					
	Gross loan opening	2520.16	2520.16	2520.16	2520.16	2520.16
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	2520.16	2520.16	2520.16	2520.16	2520.16
	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	2520.16	2520.16	2520.16	2520.16	2520.16
	Average Loan	2520.16	2520.16	2520.16	2520.16	2520.16
	Rate of Interest	4.10%	4.10%	4.10%	4.10%	4.10%
	Interest	103.24	103.24	103.24	103.24	103.24
	Rep Schedule	Final payment on 17.1.2023				
5	Bond XXXIX					
	Gross loan opening	137.00	137.00	137.00	137.00	137.00
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	137.00	137.00	137.00	137.00	137.00
	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	137.00	137.00	137.00	137.00	137.00
	Average Loan	137.00	137.00	137.00	137.00	137.00
	Rate of Interest	9.40%	9.40%	9.40%	9.40%	9.40%
	Interest	12.88	12.88	12.88	12.88	12.88
	Rep Schedule	Final payment on 29.3.2027				
6	SBI (2015-16) ADD CAP					
	Gross loan opening	373.00	373.00	441.87	441.87	441.87
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	40.17	80.34
	Net Loan-Opening	373.00	373.00	441.87	401.70	361.53
	Additions during the year	0.00	68.87	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	40.17	40.17	40.17
	Net Loan-Closing	373.00	441.87	401.70	361.53	321.36
	Average Loan	373.00	407.44	421.79	381.62	341.45
	Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
	Interest	38.23	41.76	43.23	39.12	35.00



	Rep Schedule	22 semiannual installments from 31.8.2016				
7	BOND XL					
	Gross loan opening	2540.00	2540.00	2540.00	2540.00	2540.00
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	211.67	423.33
	Net Loan-Opening	2540.00	2540.00	2540.00	2328.33	2116.67
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	211.67	211.67	211.67
	Net Loan-Closing	2540.00	2540.00	2328.33	2116.67	1905.00
	Average Loan	2540.00	2540.00	2434.17	2222.50	2010.83
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	236.22	236.22	226.38	206.69	187.01
	Rep Schedule	12 annual Installments from 28.6.2016				
8	BOND XLIII					
	Gross loan opening	1935.95	2089.70	2089.70	2089.70	2089.70
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	174.14
	Net Loan-Opening	1935.95	2089.70	2089.70	2089.70	1915.56
	Additions during the year	153.75	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	174.14	174.14
	Net Loan-Closing	2089.70	2089.70	2089.70	1915.56	1741.42
	Average Loan	2012.83	2089.70	2089.70	2002.63	1828.49
	Rate of Interest	7.93%	7.93%	7.93%	7.93%	7.93%
	Interest	159.62	165.71	165.71	158.81	145.00
	Rep Schedule	12 annual Installments from 20.5.2017				
9	Bond XLIV					
	Gross loan opening	308.78	316.93	316.93	316.93	316.93
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	308.78	316.93	316.93	316.93	316.93
	Additions during the year	8.15	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	105.64
	Net Loan-Closing	316.93	316.93	316.93	316.93	211.29
	Average Loan	312.86	316.93	316.93	316.93	264.11
	Rate of Interest	8.70%	8.70%	8.70%	8.70%	8.70%
	Interest	27.22	27.57	27.57	27.57	22.98
	Rep Schedule	12 annual Installments from 15.7.2018				
10	Bond XLV					
	Gross loan opening	1219.93	1219.93	1219.93	1219.93	1219.93



	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	101.66
	Net Loan-Opening	1219.93	1219.93	1219.93	1219.93	1118.27
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	101.66	101.66
	Net Loan-Closing	1219.93	1219.93	1219.93	1118.27	1016.61
	Average Loan	1219.93	1219.93	1219.93	1169.10	1067.44
	Rate of Interest	9.65%	9.65%	9.65%	9.65%	9.65%
	Interest	117.72	117.72	117.72	112.82	103.01
	Rep Schedule	12 Installments from 28.2.2018				
11	IFC (IFC-A Loan) (31419-00)					
	Gross loan opening	433.03	433.03	433.03	433.03	433.03
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	43.30
	Net Loan-Opening	433.03	433.03	433.03	433.03	389.73
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	43.30	43.30
	Net Loan-Closing	433.03	433.03	433.03	389.73	346.42
	Average Loan	433.03	433.03	433.03	411.38	368.08
	Rate of Interest	3.23%	3.23%	3.23%	3.23%	3.23%
	Interest	13.99	13.99	13.99	13.29	11.89
	Rep Schedule	20 Half yearly equal installments from 15.9.2017				
12	IFC (IFC-B Loan) (31419-01)					
	Gross loan opening	1500.12	1500.12	1500.12	1500.12	1500.12
	Cumulative Repayment upto COD/previous year	0.00	0.00	750.06	1500.12	1500.12
	Net Loan-Opening	1500.12	1500.12	750.06	0.00	0.00
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	750.06	750.06	0.00	0.00
	Net Loan-Closing	1500.12	750.06	0.00	0.00	0.00
	Average Loan	1500.12	1125.09	375.03	0.00	0.00
	Rate of Interest	2.43%	2.43%	2.43%	2.43%	2.43%
	Interest	36.45	27.34	9.11	0.00	0.00
	Rep Schedule	4 Half yearly equal installments from 15.9.2015				
13	IFC (ICFF Loan) (31419-02)					



	Gross loan opening	635.05	635.05	635.05	635.05	635.05
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	63.51
	Net Loan-Opening	635.05	635.05	635.05	635.05	571.55
	Additions during the year	0.00	0.00	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	63.51	63.51
	Net Loan-Closing	635.05	635.05	635.05	571.55	508.04
	Average Loan	635.05	635.05	635.05	603.30	539.79
	Rate of Interest	3.28%	3.28%	3.28%	3.28%	3.28%
	Interest	20.83	20.83	20.83	19.79	17.71
		20 Half yearly equal installments from 15.9.2017				
14	Bond XLVI Add cap 2014-15					
	Gross loan opening	0.00	1464.40	1464.40	1464.40	1464.40
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	1464.40	1464.40	1464.40	1464.40
	Additions during the year	1464.40	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	1464.4	1464.4	1464.4	1464.4	1464.4
	Average Loan	732.20	1464.40	1464.40	1464.40	1464.40
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	68.09	136.19	136.19	136.19	136.19
	Rep Schedule	3 equal installments on 4.9.2019, 4.9.2024 and 4.9.2029				
15	Bond XLVI Add cap 2015-16					
	Gross loan opening	0.00	0.00	67.95	67.95	67.95
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	0.00	67.95	67.95	67.95
	Additions during the year	0.00	67.95	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.0	68.0	68.0	68.0	68.0
	Average Loan	0.00	33.98	67.95	67.95	67.95
	Rate of Interest	9.30%	9.30%	9.30%	9.30%	9.30%
	Interest	0.00	3.16	6.32	6.32	6.32
	Rep Schedule	3 equal installments on 4.9.2019, 4.9.2024 and 4.9.2029				
16	Bond XLVII					
	Gross loan opening	0.00	0.00	896.01	896.01	896.01



	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	0.00	896.01	896.01	896.01
	Additions during the year	0.00	896.01	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	74.67
	Net Loan-Closing	0.0	896.0	896.0	896.0	821.3
	Average Loan	0.00	448.01	896.01	896.01	858.68
	Rate of Interest	8.93%	8.93%	8.93%	8.93%	8.93%
	Interest	0.00	40.01	80.01	80.01	76.68
	Rep Schedule	12 annual installment 20.10.2018				
17	Bond XLVIII					
	Gross loan opening	0.00	0.00	882.40	882.40	882.40
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	0.00	882.40	882.40	882.40
	Additions during the year	0.00	882.40	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	0.0	882.4	882.4	882.4	882.4
	Average Loan	0.00	441.20	882.40	882.40	882.40
	Rate of Interest	8.20%	8.20%	8.20%	8.20%	8.20%
	Interest	0.00	36.18	72.36	72.36	72.36
	Rep Schedule	4 installments 23.1.2020, 23.1.2022, 23.1.2025 and 23.1.2030				
18	Bond XLIX					
	Gross loan opening	0.00	139.54	360.93	360.93	360.93
	Cumulative Repayment upto COD/previous year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Opening	0.00	139.54	360.93	360.93	360.93
	Additions during the year	139.54	221.39	0.00	0.00	0.00
	Repayment during the year	0.00	0.00	0.00	0.00	0.00
	Net Loan-Closing	139.5	360.9	360.9	360.9	360.9
	Average Loan	69.77	250.24	360.93	360.93	360.93
	Rate of Interest	8.15%	8.15%	8.15%	8.15%	8.15%
	Interest	5.69	20.39	29.42	29.42	29.42
	Rep Schedule	3 installments 9.3.2020, 9.3.2025 and 9.3.2030				
	Total Loan					
	Gross loan opening	12271.02	14036.86	16173.48	16173.48	16173.48
	Cumulative Repayment upto COD/previous year	0	47.00	850.89	1906.62	2594.90



	Net Loan-Opening	12271.02	13989.86	15322.59	14266.86	13578.58
	Additions during the year	1765.84	2136.62	0.00	0.00	0.00
	Repayment during the year	47.00	803.89	1055.73	688.28	868.59
	Net Loan-Closing	13989.86	15323	14267	13579	12710
	Average Loan	13130.44	14656.23	14794.72	13922.72	13144.28
	Rate of Interest	6.84%	7.21%	7.52%	7.63%	7.59%
	Interest	897.58	1056.12	1113.10	1061.85	998.23

